ENTRANCE

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[D4.4] Activity report of training & brokerage events I

WP n° and title	WP4: Phase 2 – Engage
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01	04/05/2022	CTECH/PNO ES	Table of contents
02	31/05/2022	CTECH/PNO ES/CFH	First full draft for internal review.
03	27/06/2022	PNO ES	Deliverable updated with latest information about activities and events.
Final	30/06/2022	PNO ES	Final format check before submission.

QUALITY CHECK REVIEW

Reviewer (s)	Main changes
Pieter VAN DE GLIND	Mostly small textual improvements. The document provides a clear overview of the activities under this deliverable and captures the impacts of the new strategy well. The one improvement I would suggest is to clearly (and briefly) outline how the ENTRANCE project evolution is increasing our ability to connect the buyers, innovators, and financers. Maybe this could be a short separate chapter or be added more clearly to the introduction and conclusion. This is our chance to show confidence that we are on the right track!
Tedora Aibu	Minor grammatical corrections applied, and clarification is needed in certain aspects of the document, e.g., challenge and support services, training events and open calls.

DISCLAIMER AND COPYRIGHT

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LIST OF ABBREVIATIONS AND DEFINITIONS

Abbreviation	Definition
DoA	Description of Action
EC	European Commission
EIB	European Investment Bank
EIC	European Innovation Council
EISMEA	European Innovation Council and SMEs Executive Agency
EU	European Union
GHG	Greenhouse Gas
GLEC	Global Logistics Emissions Council
H2020	Horizon 2020
TRL	Technology Readiness Leve

Short name and name of beneficiaries

Short name	Name
CIAOTECH/CTECH	CIAOTECH SRL
PNO ES	PNO INNOVATION S.L.
ITA	INSTITUTO TECNOLOGICO DE ARAGON
RG	ASSOCIACIO RAIL GRUP
ALICE	ALLIANCE FOR LOGISTICS INNOVATION THROUGH COLLABORATION IN EUROPE
ESC	EUROPEAN COUNCIL OF TRANSPORT USERS-CONSEIL EUROPEEN DES USAGERS DES TRANSPORTS
CFH	CROWDFUNDINGHUB BV
EITUM	EIT KIC URBAN MOBILITY SL
IWT	EUROPEAN INLAND WATERWAY TRANSPORT(IWT) PLATFORM

* CIAOTECH and PNO ES are both parts of PNO group. The content of this deliverable sometimes refers to "PNO group" or “PNO” intended as both companies.

1. EXECUTIVE SUMMARY

This document describes the activities performed in the ENTRANCE project between the M1 (January 2021) until M18 (June 2022) in the framework of the Task 4.1 (Training & brokerage events). In particular, this deliverable focuses on reporting all the training webinars, events, and open calls or competitions that have been organizes within the project with the aim of:

- Increasing the business capacity of the solutions providers,
- Promoting networking opportunities between the solutions providers and potential buyers that can lead to potential investment and commercial partnerships deals.
- Present the relevant European funding programmes in collaboration with the funding authorities.
- Broaden the cooperation and clustering activities with European networks and initiatives in the transport and mobility sector.

This document will be updated during the second half of the project execution to include the future events and the results of the matchmaking and networking activities established.

2. INTRODUCTION

ENTRANCE was designed as a hub for accelerating market uptake of first-of-a-kind transport and mobility zero or near-zero emission solutions. In order to achieve this objective and maximise the project's impact, one of the activities performed is the organisation of online events. In this sense different types of events have been organised:

- Online training webinars to increase the business capacity of the solution providers by presenting European funding programmes created to finance the market uptake of the innovative solutions.
- Open calls with the aim of promoting opportunities between the solutions providers, potential buyers and investors that can lead to potential investment and commercial partnerships deals.
- Online questionnaires to gain further knowledge on the market solutions and establish contact with the solutions providers and potential buyers.

These activities have been executed in close collaboration with European transport, mobility and logistics association and networks that represent the market stakeholders (both buyers and solution providers). The project has established direct connection with these stakeholders that have facilitated the contact with the targeted audiences for the project through expanded visibility of ENTRANCE's activities (see also D4.6). The most appropriate collaboration is based on a win-win relationship for all actors involved and, most importantly, that targeted users can perceive an enhanced added value from the project's activities.

All the activities performed during the first period of the project are summarised in this deliverable.

This document will be updated during the project and will have a new consolidated version under D4.5 - Activity report on liaison and external collaboration activities II delivered by M36 of the project (December 2023). This document includes references to Deliverable 'D4.6 - Activity report on liaison and external collaboration activities'. This will avoid duplicated information across multiple documents reporting the activities under the same WP.

3. ENTRANCE NEW STRATEGY IN RELATION TO TRAINING, BROKERAGE AND MATCHMAKING EVENTS

Based on the feedback received after the initial months of execution of the ENTRANCE project, the strategy of the project was finetuned to enhance project impact in the market of transport and mobility solutions. This is reflected in five main steps that are illustrated in the following figure:

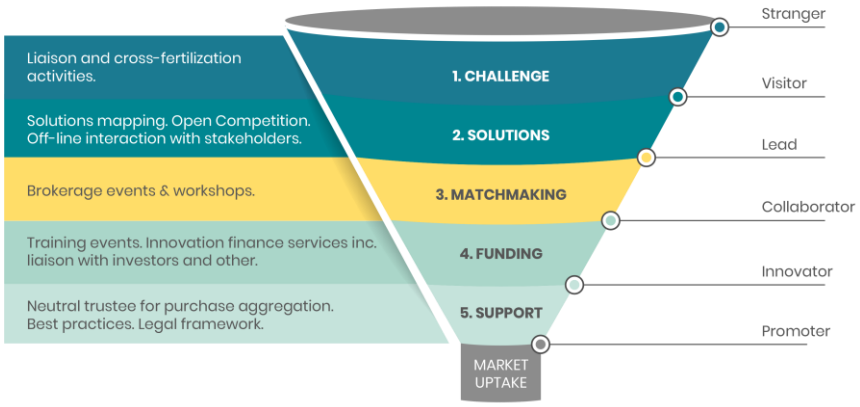

Figure 1. ENTRANCE strategy represented as an accelerator funnel for sustainable transport, mobility and logistics solutions.

More specifically, the activities that are reported in this deliverable remain a cornerstone for achieving the expected impacts with this project, as these are directly involved with the later stages of the funnel for accelerating market uptake of sustainable solution. Thus, webinars, brokerage events and open calls can contribute to identification of solutions, matchmaking between buyers and solutions providers, identification and promotion of funding opportunities and facilitate agreements between these actors. Within the new strategy, the two first phases (identification of buyers' challenges and available innovative solutions), are directly related to step three – matchmaking, which is reported in this deliverable. The challenges identified and the solutions to these challenges are the basis for launching the matchmaking events and obtain first-of-a-kind innovative solutions. For this reason, in this deliverable, we also report on Phase 1 and 2 that includes the identification of the challenge and the initial market analysis of "first-of-a-kind" solutions.

The following section provides a summary of the scope of the assessment and overview of the ENTRANCE market analysis methodology following the new strategy. This assessment, in the framework of the ENTRANCE project, has the aim of finding the most innovative solutions that are capable of lowering the environmental impacts of the transport and mobility sector and selecting the stakeholders that are either developing and providing or implementing these "state-of-the-art" technologies.

The main objective of the assessment is therefore to establish and identify how a technology can be defined as more innovative than others in the different modes of transport identified and described during the stakeholder analysis.

To ensure that the mapping of the cutting-edge solutions, and the solution providers, ENTRANCE carries out a process that is made up of the different steps described below:

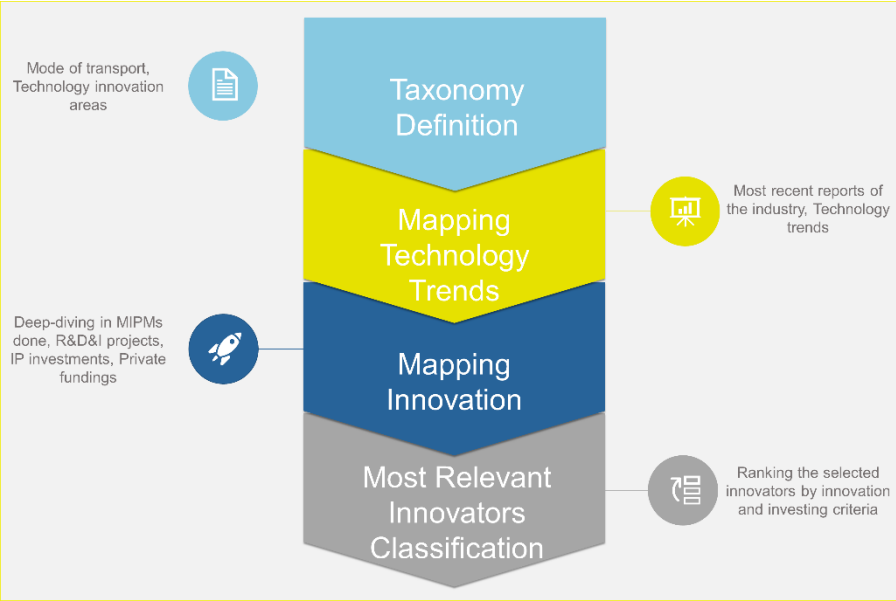

Figure 2: Snapshot of the PNO approach for carrying out the ENTRANCE market analysis

1. **Taxonomy definition**

   As a first step the technological macro areas to be explored have been defined by an overall ENTRANCE taxonomy that can be found in annex 1. This taxonomy takes into consideration all categories of "first-of-a-kind" solutions (technologies, business models and services) as defined in the European strategies and roadmaps for research and innovation that are applied to the transport and mobility sector in Europe as well as the EU Taxonomy Climate Delegated Act.

2. **Mapping technology trends**

   Preliminary assessments of technological trends have been carried out for each innovation macro-area to be explored, first collecting the most recent (last 1-2 years) reports and documents from the industry and then extrapolating the most observed and most interesting solutions considered by the main actors of each field analysed .

3. **Mapping innovation**

   Once the research described in the previous step has been carried out, the findings have been compared with the solutions identified in the stakeholder analysis and included in the various market analysis made: if they are present, the providers are selected again. Subsequently, new searches have been launched on the various tools owned and licensed by PNO to map additional providers and identify if their solutions have a TRL compatible with the ENTRANCE objective (TRL > 6-7). In this phase a new search of R&D&I projects, IP investments and private fundings (e.g. VC capital back-ups and financing) have been done.

4. **Most relevant innovators classification**

   Once the most innovative solutions have been identified and the providers compatible with the ENTRANCE market analysis objective mapped, they have been integrated with those extracted from the market analysis, if any, and evaluated according to the same criteria in order to build a

ranking and establish who has the highest degree of innovation among the selected, then shown on fine-tuned or new market analysis.

Finally, any new providers of innovative technologies can be added to the organizations identified in the stakeholder analysis (D3.1) within the ENTRANCE platform, obviously making them fall into the **supply category**.

4. ONLINE EVENTS

ENTRANCE has defined multiple online activities to engage a critical mass of active solution providers, buyers, and investors whose business capacity will increased through online training, calls and brokerage events that will increase networking to boost the market uptake and scale up of innovative transport and mobility solutions. In the following chapters all the events organised by ENTRANCE are explained.

4.1. TRAINING WEBINARS

In this chapter all the training webinars organised in the framework of ENTRANCE are explained. In addition to these events, the project partners have participated in several events organised by other entities (those will be reported in deliverables for WP6 of the project related to communication and dissemination activities). Three main training webinars have been developed by project partners:

4.1.1. EIB funding mechanisms for providers of sustainable transport & mobility solutions to boost EU uptake.

Figure 3: Social media card for the event

Date: 22nd June 2021

Objective:

Presentation of EIB funding mechanisms for innovative solution providers of sustainable transport & mobility solutions, focused on high TRL products that needs support to reach the market and thereby boost EU uptake.

Agenda and speakers:

- Presentation of the ENTRANCE Matchmaking Platform – Jeanett Bolther. PNO Innovation.
- Presentation of EIB funding mechanisms and presentation of examples of deployment projects scaling up innovative transport solutions - Juliet Dow-Madu and Özhan Yılmaz. European Investment Bank.

- Q&A and Discussions on EIB Financing including Future Mobility Facility **EIC.**

Website publication: Link[1]

The webinar was recorded and can be found on the ENTRANCE website: **Link[2]**

4.1.2. Countries and regions initiatives supporting zero emission road freight and logistics. Series of workshops.

This is the first of a serie of workshops co-organised by ALICE, EMEurope, the ENTRANCE project and POLIS network. **The aim** is to bring together representatives of companies, research, cities, and (national/regional) policymakers to share information on current and planned incentive schemes, especially about research and innovation (R&I) programmes to accelerate the transition towards zero-emission road freight transport and logistics in European regions and countries.

The **first** workshop was held on the **1st of June 2022** when teaser information about the national and regional workshops was shared, and countries/regions and dates were announced. A brief overview of current situation and challenges concerning zero emission road freight and logistics were given by the co-organisers followed by an introduction, aim and the framework of the countries and regions workshops.

1st of June workshop agenda[3]

- 15.45 Virtual meeting room open
- 16.00 Welcome and Introduction
- 16.25 Teaser of national and regional workshops
- 16.45 Q&A and Discussions
- 17.00 Closing

The **second** workshop of the series was the **20th of June 2022** focused on Austria, the next two workshops will be organised in the last quarter of 2022 centred in Sweden and Italy. During 2023, more workshops will be co-organised focusing on the national programmes and funding to promote transition to a sustainable and innovative transport and logistics sector.

Agenda and speakers

16.00 Welcome and Introduction

- EMEurope, Marcia Giacomini and Peter Wilbers
- ETP-ALICE, Fernando Liesa

[1] https://www.entrance-platform.eu/event/knowledge-round-investment-for-sustainable-transport-with-the-european-investment-bank/

[2] https://www.youtube.com/watch?v=YPhw5SR4C5M

[3] https://www.etp-logistics.eu/launching-workshop-countries-and-regions-initiatives-supporting-zero-emission-road-freight-and-logistics-june-1-2022-16-17-h/

16.10 Overview of Austria's Strategic Plans for the mobility sector

- Austria's 2030 Mobility Master Plan – Realigning the mobility sector, Reiner
- Reinbrecht
- Status Quo on Austrian Master Plan for Freight Transport – WG on Road,
- Claudia Nemeth
- The Austrian R&I Mobility Strategy 2030, Sarah Bittner-Krautsack

16.30 Q&A

16.40 Measures to foster zero emission logistic and freight

- E-Mobility Offensive, Reiner Reinbrech
- Upcoming Call for emission-free commercial vehicles and infrastructure,
- Reiner Reinbrech
- Zero Emission Mobility – Open Call & Highlights, Reiner Reinbrech
- Highlights from the R&I program Mobility of the Future & Open Call on R&I Mobility or Perspectives from R&I, Constanze Kiener

17.15 Q&A and Discussions

17.30 End of workshop

4.1.3. EIC Accelerator: The funding for the Innovation Champions in Transport, Logistics & Mobility.

Figure 4: Social media card for the event

Date: 8th June 2022

Objective: Discover substantial financial support for sustainable transport and mobility solutions. Learn about how the EIC Accelerator provides blended finance for the Innovation Champions in Transport, Logistics & Mobility.

Agenda:

- Welcome and brief introduction on ENTRANCE
- Introduction on the EIC Accelerator Programme
- Examples of previous projects funded in the transport, logistics and mobility sector
- Tricks and advice on how to apply for the EIC Accelerator Programme
- EIC business coaching services
- National support for the EIC Accelerator Programme
- Round up and indication on how to sign up for the ENTRANCE online platform.

Speakers:

- Jeanett Bolther from PNO Innovations
- Elitsa Bayska from EISMEA
- Piedad Rivas from EISMEA
- Ignacio Hernández from partner ITA.

Website publication: Link[4]

Publication: Link[5]

[4] https://www.entrance-platform.eu/event/webinar-with-european-innovation-council-and-smes-excecutive-agency-eismea-on-eic-accelerator-the-funding-for-the-innovation-champions-in-transport-logistics-mobility/

[5] EMEurope_-Workshop-EMEurope-ALICE-POLIS-BMK_20-Jun-2022_Agenda-draft_v3-1.pdf (electricmobilityeurope.eu)

4.1.4. Introduction on how to calculate GHG reduction from sustainable transport innovation

Figure 5: Social media card for the event

Date: 20th June 2022

Objective:

The training webinar aimed to help innovation investors, buyers, and owners to develop a common understanding on how to develop a comprehensive understanding of how to assess impacts of innovative solutions on emissions reduction, thus using the impact assessment for facilitating innovation uptakes.

Agenda and speakers:

- Alan Lewis, Technical Director at Smart Freight Centre, "*the Global Logistics Emissions Council (GLEC) Framework"*
- Andrea Fossa, CEO of GreenRouter, "*Use of GLEC Framework to help our clients in reporting emission reduction"*
- Ross Mathison, Baillie Gifford, "*Sustainable logistics – an investor's perspective"*
- Mariia Cutivet, Sustainable Expert at EINRIDE, "*How do we calculate the emission reductions from our innovation*?"
- Lukas Kramer, Sustainability Innovation Lead at Transporeon: "*Showcase: How data quality helps to manage transport emissions for IKEA and Girteka*"

Website publication: Link[6]

[6] https://www.entrance-platform.eu/event/webinar-with-european-innovation-council-and-smes-excecutive-agency-eismea-on-eic-accelerator-the-funding-for-the-innovation-champions-in-transport-logistics-mobility/

4.2. BROKERAGE AND MATCHMAKING EVENTS

The first brokerage event of ENTRANCE was planned to take place in November 2021. The aim was to facilitate the uptake of innovation transport and mobility solutions. However, the event was cancelled after the feedback received from the European Commission in initial months of ENTRANCE project which mandated necessary changes in project's approach.

The first big brokerage event would include the following:

- The first set of sessions would be structured as training webinars to present relevant European funding opportunities as well as training session that will provide knowledge that may boost the scale up, uptake and facilitate the environmental assessment of innovation transport solutions:
    - How to make an elevator pitch to present a transport and mobility solution?
    - How to make an economical and environmental assessment of a transport and mobility solution?
    - How to access to finance for scale up and uptake of innovative transport and mobility solutions?
- Presentations of the events transport & mobility innovation challenges.
- Pitches from selected solution providers to attract investors and potential buyers (winners of the Open Innovation Competition).
- Brokerage sessions with one-to-one meetings between solution provider-buyers, provider-investor, and buyer-buyer.

However, due to the adaptation to the new project strategy, the brokerage event was postponed and in the future individual smaller brokerage events will be planned as necessary for each individual challenge identified (and each market analysis).

4.3. ENTRANCE OPEN COMPETITIONS / OPEN CALLS

This section provides a list of the ENTRANCE Open Calls and Competitions. It is important to mention that the implementation of the new project strategy has had an important impact to this project activity. The initial project strategy included Open Competitions to identify solution providers to which the project would provide individualized finance advice and support. However, with the new strategy the Open Competitions have now been converted into Open Calls and these will have two different purposes:

1. Open calls directed towards solution providers that will have as an objective to gather technical specifications for the "first-of-a-kind" solutions that have been identified in the initial market analysis. These technical details will provide further information to the market analysis that the project delivers, thereby providers the potential buyers with a greater overview of the capabilities of the identified solutions and making it easier to select the solution that fits the necessities of each potential buyer.

2. Open calls directed towards the potential buyers to identify more end-users that could have an interest in implementing and purchasing the “first-of-a-kind” solutions. This also provides a greater overview of buyers that can be matched with the solution providers which will be beneficial for the organization of the networking and brokerage events.

The open calls are therefore directly linked to several other project activities.

The status of the calls is the following:

- **Finalised:**
  - ENTRANCE 1st Open Competition (2021)
  - ENTRANCE & EIT Urban Mobility on cycling solutions(2022)

- **Ongoing:**
  - ENTRANCE & EIT Urban Mobility on Intelligent Transport Systems (ITS) with the potential cooperation from ERTICO (2022)
  - ENTRANCE & Big Buyers Initiative on electric heavy-duty vehicles for waste collection (2022)
  - ENTRANCE & ALICE ETP on heavy-duty zero emission vehicles for long distance and urban logistics with the collaboration of the Drive to Zero Initiative (2022)

- **Planned:**
  - ENTRANCE & RAILGRUP on rail solutions (to be further defined) (end 2022)
  - ENTRANCE & IWT on inland waterways solutions (to be further defined) (end 2022)
  - ENTRANCE on Shared mobility business models (beginning 2023)
  - ENTRANCE, ALICE ETP & EIT Urban Mobility on Urban Delivery Solutions (beginning 2023)
  - ENTRANCE & VIL (to be further defined) (beginning 2023)
  - ENTRANCE & the ASSURED UAM project on Urban Air Mobility that will be executed in collaboration with (mid 2023)
  - ENTRANCE & AEROSPACE VALLEY on air transport solutions (mid 2023)

This list of Open Calls is only tentative and can be expanded and adapted through the remaining duration of the ENTRANCE project.

The details on each call are included as follows.

4.3.1. 2021. ENTRANCE 1st Open Competition

During the first 18 months of the ENTRANCE project, an Open Competition was held resulting in five winners[7]. Each of those winners received finance support services. The overarching goal of providing these services is to lower barriers preventing access to finance for innovators and companies that provide innovative and sustainable mobility and transportation solutions. The services are described in D5.1: *intermediate summary of the innovation finance support services*.

Preparatory activities for the first Open Competition were completed in September 2021, to ensure the correct and timely execution. This included contacts with similar initiatives to discuss potential cooperation as well as initial discussions on the application and evaluation procedures. This resulted in an overview providing an introduction to ENTRANCE, the Open Competition, and the application process later used for dissemination.

Figure 6: Open invitation for the 1st Open Competition

The following eligibility criteria for participation were established:

1. Are legally based in Europe.
2. Have signed up to the ENTRANCE matchmaking platform.
3. Are able to share a pitch deck.
4. Are willing to create and share a 1–2-minute video to introduce yourself and your innovative solution to the jurors.
5. Are able to attend and pitch at the ENTRANCE digital event on the 26th of November 2021.
6. Can pitch an innovative and sustainable last mile distribution solution that covers, at least, one or more of the following areas:
    - Air quality
    - Clean, alternative & low or zero-carbon fleet, including electrification and sustainable new fuels and new smart vehicles

[7] https://www.entrance-platform.eu/news/congratulations-to-our-winners-of-the-entrance-1st-open-competition/

- Space management and consolidation
- Data (what to share and in what form) to achieve flows consolidation
- Stakeholders Collaboration
- Urban planning, infrastructure and systems
- City/district/transport systems
- New business models, approaches and services
- Urban delivery solutions
- Digitalisation and smart solution

The Open Competition including the requirements and evaluation criteria are still available on the ENTRANCE website and in the annex 2 of this document.

Since September 2021, a jury was assembled, and the Open Competition scoring matrix was developed to ensure a fair and transparent selection process. The following table compile the evaluation criteria considered:

Table 1: Evaluation criteria considered in the Open Competition

Criteria	Weight
How compelling is the story behind the innovation?	x 2
How would you assess the quality of the organization/company behind the innovation?	-
How is the problem the innovation aims to solve described?	-
What is the quality of the innovative solution provided by the innovator?	-
How would you rate the environmental sustainability of the solution?	x 2
What is the market potential (size & competitive advantages) of the innovation (in combination with the innovator)?	x 2
To what extent are risks, such as competition, clarified and mitigated?	-
What do you think about the product?	-
How would you assess the traction of the product?	-
What is the quality of the business model?	x 2
How would you assess the financial forecast of the innovator?	-
Do you have a clear picture of other current and previous investors?	-
How would you assess the quality of how the innovator intends to spend the money invested?	-
What is the quality of the people behind the innovation?	x 2

This scoring matrix was designed for the evaluation of ENTRANCE Open Competition entries. Jury members were asked to complete an assessment form for each entry. This included both general entries, and entries that applied for one of the sector/technology specific prices.

In the assessment of Open Competition entries, jury members were asked to score the entries on a range of factors. Some scores were weighed, and the total possible score for an entry was 190. The following scoring principles were used during this process:

Table 2 Scoring principles of the open competition

Score	Scoring Principles
0	Rejected – No information is given.
1-3	Poor – Low quality, and a lack of information require the reviewer to make assumptions.
4-6	Satisfactory – The quality is acceptable, but not convincing.
7-8	Good – The quality meets expectations sufficiently.
9-10	Outstanding – The quality fully meets or even exceeds expectations.

Having evaluated individual entries, jury members were asked to order these according to their score and indicate whether an entry is eligible for one of the specific challenges.

For the sponsor price, the juror who acts on behalf of the sponsor had the final say on selecting the winners. In the general category, all jurors had an equal say.

After all the evaluations were completed. The jury came together in a digital consensus meeting to agree on the final verdict.

The final evaluation was the following, considering the 5th winners:

Five innovative solutions provided met the inclusion criteria and were selected by the jurors as winners of the first round of the ENTRANCE Open Competition. The winners received personalised funding advice from the ENTRANCE ecosystem suitable for funding from 100,000 up to 10,000,000 euro. They were granted the opportunity to pitch their innovative solution during upcoming ENTRANCE events and the winners were able to demonstrate their solution to dozens of potential funders and partners on the ENTRANCE Matchmaking Platform.

The winners of the 1st Open Competition were:

- CONTAI
- SpotVessels GmbH
- Alterkraft
- Last Mile Team S.L.
- PEOPLE

Figure 7: 1st Open Competition winners

In the next table, the final score of the open challenge is shown:

Table 3: Final score OPEN CHALLENGE

Rank	Solution	Score (max. 10)
1	Spotvessels	7.7
2	Alterkraft	6.9
3	PEOPLE	6.5
4	Contai	5.5
5	LastMile	4.3

For the prize competition only two were able to obtain the reward, in the next table the final score of the prize challenge is shown:

Table 4: Final score PRIZE CHALLENGE

Rank	Solution	Score (max. 10)
1	Contai	5.5
2	LastMile	4.3

In addition, CONTAI won the financial prize of 5,000 euro and a meet-and-greet with a potential investor.

4.3.2. 2022: ENTRANCE & EIT Urban Mobility on Intelligent Transport Systems (ITS)

During the first half of 2022, the Open Competition was reshaped into an Open Call to better link both innovators and buyers of innovative first-of-a-kind transport solutions. I addition, the open calls were completely aligned with the initial phases of the project challenges and solutions. In this sense, the first step was to assess the challenges that the cities have, with this aim an open call for cities was launched in order to assess the challenges that the cities face in urban logistics. The open called was named:

Connecting cities to innovators for sustainable city logistics, in annex 3 more information can be found. Six cities participated providing information of the innovative solutions that the cities were interested.

INNOVATIVE SOLUTION	CITY					
	Tartu	Jelgava	Adana	Logroño	Lindau	Braga
Collaborative or digital platform - connectivity platforms for data sharing tools to improve real-time awareness of last mile deliveries	X			X		
Decision Support System for route planning			X			
Digital cameras		X		X		
Ultra-low emission zone control monitoring and geofencing				X		x
Vehicle power/re-charging systems, operations and and infrastructure	X			X		
Vehicle propulsion, Battery electric vehicles (BEV), including trucks	X					
Infrastructure management systems	X	X	X	X		
Intelligent Transport Systems (ITS)	X	X	X		X	x
Systems and Technologies for Interconnected Logistics						
Innovative units, including innovative containers, load units and carriers, pallets, creates, etc.						
Combined passengers and goods delivery	X		X	X		
Urban delivery solutions		X	X	X	X	x
Asset sharing including cargopooling						
Cargo handling solutions						
Intelligent ports, terminals and (micro)hubs			X		X	
Logistics as a service (LaaS)			X			x
Multimodal hub and network solutions	X		X	X	X	
Sustainable ports, terminals and (micro)hubs			X		X	
Autonomous Delivery Robots and its related infrastructure				X	X	x
Cargo bikes	X			X	X	x
Drones	X	X		X		
Other (please specify)						
RESULTS	9	5	9	11	7	6

Table 5: Results of "Connecting cities to innovators for sustainable city logistics"

The next step was to find solutions on the topics selected by the cities. In this sense a specific market analysis on “Intelligent Transport Systems (ITS) Solution Providers for Sustainable City Logistics” was done. The ITS technologies have to focus on traffic management, traffic monitoring and route optimization solutions for urban areas, considering if they are applied in urban logistics. A total amount of 132 companies were selected and analysed, the market analysis can be found in annex 5.

Taking into consideration the challenges and the solutions identified in the market analysis, two new open calls were launched in 2022 with the aim of calling on all solution providers ready to provide European cities with Intelligent Transport Systems (ITS) for sustainable city logistics and the second one calling for buyers to those solutions.

OPEN CALL on all solution providers ready to provide European cities with Intelligent Transport Systems (ITS) for sustainable city logistics

In this call, ENTRANCE project is looking for ITS suppliers to provide solutions to European cities. They will benefit from:

- A solution that is part of the market analysis and will be presented in various European public institutions and city administrations that can become your new clients.
- An invitation to a brokerage event where you can meet potential buyers with common interests.
- Access to a detailed overview of funding opportunities, a legislative framework, and best practices.
- If a specific collaboration emerges with an interested public institution or city administration, the ENTRANCE team will offer free personalized funding advice that includes public, private and alternative financing solutions.

The eligibility criteria of this call is similar to that of the previous call:

1. Be a European organization, with an interest in providing innovative ITS solutions to cities.
2. Interested in reducing the negative environmental impact of city logistics.
3. Have signed up to the ENTRANCE matchmaking platform.
4. Have provided us with the technical specifications of your solution

The requirement and evaluation criteria can be found on the website[8] and in the annex 4 of this document

OPEN CALL on all cities looking for suppliers of Intelligent Transport Systems (ITS) for sustainable city logistics

In this Open call the main topics were Intelligent Transportation Systems (ITS) and information and communication technologies applied in:

- the field of road transport including infrastructure vehicles and users.
- In traffic and mobility management.
- for interfaces with other modes of transport.

The requirements to be eligible were:

1. Be a European public institution / administration with an interest in purchasing an innovative European ITS solution.
2. Interested in reducing the negative environmental impact of city logistics.https://open.spotify.com/track/0wA3AZzA0gp0wfSS0SpZt5
3. Have signed up to the ENTRANCE matchmaking platform.
4. Have provided us with your contact data using.

[8] https://www.entrance-platform.eu/news/entrance-eit-urban-mobility-are-calling-on-all-solution-providers-ready-to-provide-european-cities-with-intelligent-transport-systems-its-for-sustainable-city-logistics/

The requirement and evaluation criteria can be found on the website[9] and in the annex 6 of this document.

The call for buyers is still open, while the call for solution providers is already closed. The results obtained are being analysed in order to ensure that first-of-a-kind solutions has been obtained. As soon as both calls will be closed, a matchmaking event will be organised in order to join the ITS solution providers with the potential buyers. This event will be organised at the end of 2022 or beginning of 2023.

4.3.3. ENTRANCE & the Big Buyers Initiative are calling on all solution providers ready to provide European cities with electric heavy-duty vehicles for waste collection

The ENTRANCE project in collaboration with Big Buyers are actively attracting European public institutions and city administrations that are interested in implementing innovative electric heavy-duty vehicles for waste collection to make their daily operations greener and more sustainable. As part of a detailed market analysis, they will receive a state-of-the-art overview of European electric vehicle solution providers.

Previous to this open call, a market analysis on the innovative electric waste collectors was done. More than 70 vehicles were identified, the analysis considers the following aspects per each vehicle identified:

- Type of Vehicle/ fuel
- Vehicle Size
- RCV Category
- Manufacture
- Model
- Manufacture / production location
- OEM / Retrofit
- Maximum weight [tonnes]
- Payload [tonnes]
- Dimensions (length, width, height) mm
- Power / output engine
- Battery size [kWh]
- Expected lifetime battery [years]
- Charging Time
- Maximum charging power DC [kW]
- Maximum charging power AC [kW]
- Range (WLTP) [km]
- Known to be delivered as waste collection vehicle [Yes/no]
- Prize [€] (+ waste compactor equipment)
- Possible waste (ton) capacity
- Extra cost in TCO compared to fossil

[9] https://www.entrance-platform.eu/news/entrance-eit-urban-mobility-are-calling-on-all-cities-looking-for-suppliers-of-intelligent-transport-systems-its-for-sustainable-city-logistics/

- Comments
- Contact

The market analysis can be found in annex 7.

This initial market analysis has been shared with the potential public buyers from the Big Buyers initiative and unfortunately their initial feedback was every satisfactory in regard to the quality of the market analysis. However, their feedback in regard to the available innovative solutions was not satisfactory as they do not consider that the available solutions can sufficiently support the cities in reaching their sustainability goals for 2030. The conclusion has therefore been to not proceed with a brokerage event considering that the buyers are already rejecting the possibility of investing in the solutions and instead organize a workshop & debate panel to comment on the gap between the market needs and the solutions available on the market in order to achieve the sustainability goals set by the European Commission. The initial ideas (tentative for changes) for this workshop are the following:

- Presentation of the market analysis made (main conclusions) for zero emission waste collection vehicles for urban services by the ENTRANCE project.
- Presentation of the main conclusions on behalf of the buyers by the Big Buyers Initiative. Important aspects that they would highlight are:
    a. The overall reluctancy and rejection on behalf of the buyers in investing in the currently available innovative technologies, due to:
        i. The batteries are not ready.
        ii. There is not enough financing to buy an entire fleet of new vehicles so there is also need for retrofitting as a mid-term solution (retrofit for 5-6 years) until it is possible to purchase the new vehicles.
        iii. There is a lack of mid-sized vehicles which are the ones that the cities need.
        iv. The charging infrastructures are also lacking.
- Presentation of examples of cities, operators and producers that already have ZE-waste trucks in operation to share their case study.
    - Netherlands No dirt in the air in 2030 • Rotterdam. Make it Happen. (rotterdammakeithappen.nl); DAF CF Electric refuse collection truck in Rotterdam, The Netherlands - YouTube
    - Denmark Copenhagen's refuse trucks to be made fully electric (scania.com)
    - An example form Southern Europe has to be identified.
- A representative from the BATT4EU - Batteries European Partnership Association (BATT4EU) should present their strategic agenda and timeline, considering that the main barrier for uptake is the lack of the batteries.
- Discussion panel on the existing gap between the available solutions and the market needs. Panelist for this would include:
    - Drive to ZeroTM

- Zero Emission Freight Programme - C40 Cities
- Community of Interest - Urban Freight - (tda-mobility.org)
- Urban Freight - POLIS Network
- BATT4EU - Batteries European Partnership Association (BATT4EU)

- Funding opportunities, including a discussion on both the pre-commercial procurement option and the procurement of innovation possibility, as well as how to finance the upfront costs (for example prolong the contract time, return on investment) etc.

ENTRANCE will create a report with the conclusions from the analysis as well as the workshop & debate panel and make it available to solution providers, potential buyers, and policy makers.

If it is later considered of interest, ENTRANCE would launch the open call to foster the matchmaking between innovative providers and clients. The premises of the call are prepared. This Open Call could be an opportunity to showcase waste collection vehicles to a range of European cities. The main benefits participating in the call will be:

- The vehicle will be part of the market analysis that will be presented to various European public institutions and city administrations that can become new clients.
- An invitation to a brokerage event where to meet potential buyers with common interests.
- Access to a detailed overview of funding opportunities, a legislative framework, and best practices.
- If a specific collaboration emerges with an interested public institution or city administration, the ENTRANCE team will offer free personalized funding advice that includes public, private and alternative financing solutions.

Requirements to be eligible for participation would initially be:

1. Be a European organization, with an interest in providing innovative electric waste collection vehicles to cities. This may include both electric heavy and smaller vehicles for door-to-door collection and electric street cleaning vehicles and sweepers.
2. Interested in supporting the greening of the waste collection, street cleaning, and maintenance activities in the European cities.
3. Have signed up to the ENTRANCE matchmaking platform.
4. Have provided us with the technical specifications of the solution

Annex 8 shows the draft information sheet of the call prepared to be launch in the second term of the year.

Nevertheless, in regard to the zero emission waste collection vehicles for urban services analysis, appears that the interest of the buyers is not relevant for the uptake of any of the available solutions. It seems that the technology does simply not make it possible for the potential buyers to reach their sustainability objectives. However, ENTRANCE is planning to make a presentation of the market analysis results and

combine it with a workshop to discuss the gaps between the market availability and the needs of the potential buyers.

4.3.4. Call for Proposals for #ChallengeMyCity

EIT Urban mobility launched a call for pilots in the framework of ENTRANCE project with the aim of address Cycling Challenges in the Cities of Toulouse and Milan. The cities were seeking to pilot innovative solutions providing safer bike parking facilities, and safer bike lane markings and devices. The pilots will last 6-8 months. A total of 150,000 EUR is available for the three best solutions.

The call closed in February 2022.

More information related to the call of pilots can be found on the webpage of ENTRANCE: Link[10]

In collaboration to this call, ENTRANCE project developed a market analysis of the solution providers of safer technologies for cycling sector available in the market. A list of 30 solution providers which developed technologies befitting to the scope of this call were identified. The solutions were mainly of two types: safer bike parking facilities and safer bike lane markings and devices. The analysis can be found in annex 10.

In the following images a claim of participants launched by ENTRANCE project is shown:

[10] https://www.entrance-platform.eu/news/dont-miss-challengemycity-call-for-pilots-cycling-challenges-in-the-cities-of-toulouse-and-milan/

Don´t miss: #ChallengeMyCity Call for Pilots
Cycling Challenges in the Cities of Toulouse and Milan

Dear Mobility & Transport Innovators,

We would like to inform you that the #ChallengeMyCity Call for Pilots supported by **EIT Urban Mobility** is still open for applications! This is a **funding opportunity** to perform a pilot in a city's urban environment and in real conditions. For this call, the cities of Toulouse and Milan are participating. They are seeking to pilot innovative solutions providing **safer bike parking facilities**, and **safer bike lane markings and devices**.

The pilots are expected to last 6-8 months. A total of **150,000 EUR is available** for the three best solutions.

Get all information here.

Figure 8. Communication campaign of the #ChallengeMyCity Call for Pilots.

Further information as well in the webinar recording (pw: Rx3!0^RD).

The call will be open until **8 February 2022.**

Brought to you by the EIT Urban Mobility Marketplace & the ENTRANCE project.

ENTRANCE

eit Urban Mobility

The ENTRANCE project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement

Figure 9: Dissemination activity.

4.3.5. Heavy-duty zero emission vehicles for long distance and urban logistics

ENTRANCE, in close collaboration with ETP ALICE, has launched a questionnaire to gather interest from shippers, freight forwarders, logistics service providers and mainly carrier owning fleets willing to transition road transport to zero emissions (Battery Electric Vehicles (BEV), Fuel Cell Electric Vehicles (FCEV) or hybrid BEV-FCEV).

Complementary to this questionnaire, ENTRANCE and ALICE also launched a survey targeting vehicle OEMs and other stakeholders to gather the availability of this first-of-a-kind of these zero emissions vehicles, hence facilitating the matchmaking. In addition, within this information, a market analysis was elaborated. In this market analysis 126 vehicles were identified, and the following aspects were considered:

- Type of Vehicle/ fuel
- Vehicle Type
- Manufacture
- Model Manufacture / production location
- OEM / Retrofit Maximum vehicle weight [tonnes]
- Payload [tonnes]
- Dimensions (length, width, height) mm
- Power / output engine Battery size [kWh]
- Expected lifetime battery [years]
- Charging Time Maximum charging power DC [kW]
- Maximum charging power AC [kW]
- Range (WLTP) [km] Prize [€]
- Extra cost in TCO compared to fossil
- Comments
- Source
- Company type
- Contact Person

The market analysis can be found in annex 9.

As a follow up action, ENTRANCE supported the interested parties in collaborative initiatives to:

- Ease access for trials to first-of-a-kind and near to market Zero Emissions vehicles.
- Aggregate demand of zero emission vehicles and work on collaborative purchase initiatives.
- Finding funding and financing schemes to facilitate transition in an affordable way to the parties interested.

Following these actions, a collaboration agreement with the Drive to ZeroTM has been established. Drive to zero initiative has also performed a market analysis on zero emission vehicles, the first step will be complemented both analysis with the results obtained. Secondly, a joint workshop to present the market

analysis to potential buyers will be executed in on the 15th of September 2022. If considered of interest, subsequently a brokerage event will be organized.

4.3.6. Open Call Urban Delivery Solutions

The Open Call aims to collect information about companies which currently have urban delivery solutions that can be implemented either directly or with limited configuration, TRL 8 or above, including the first-in-kind of market solution. To provide buyers or potential customers of innovative solution products and services available on the market while owners of innovative solutions reach out potential customers, favouring market uptake and scaling up of innovation.

The open call will be launched in 2023, including the collaboration of EIT Urban Mobility. The call will look for innovative solution like:

Table 6 Intervention area and example of solutions.

INTERVENTION AREA	EXAMPLE OF SOLUTIONS
Clean and alternative fleet	New business models for the adoption of electric/FCEV vans and trucks, cargo bikes
	Energy storage and e-charging infrastructure
	Small EVs. Cargo bikes and walking carrier
	Autonomous vehicles (drones and robots)
Logistics operation	Freight flows consolidation
	Consolidation centres/hubs and micro-hubs
	Decoupling transport and delivery (pick up points, lockers)
Purposed oriented data acquisition and sharing	Data collection and data sharing
	Data-driving decision making
	Fast-track dynamic planning and access to urban spaces/resources

Information required to participate:

Table 7: information required for the call.

Basic information	Name of the company
	Adress ans country
	Size of the company
	Contact, website, social media
Description of individual solution	Technical description
	Type of customer
	Expected impact/benefit to customers
	Any implementation cases if any applicable

Additional information	

The complete information sheet can be found in the annex 11.

4.3.7. Next steps

The official reports on the market analysis are still pending to be published on the ENTRANCE Matchmaking Platform. In addition, two workshops are to be organized in the last quarter of 2022 to present the results of the market analysis. A similar activity is very likely to be organized for the other market analysis that have taken place.

Also, as previously mentioned, numerous upcoming Open Calls are already planned to take place in the next 18 months. The list of these upcoming calls may very likely be expanded as individual meetings with the advisory board members and other collaborating networks are taking place to identify synergies for these activities.

These upcoming activities will ensure that all the transport modes will be covered with a market analysis of “first-of-a-kind” sustainable solutions.

5. METRICS ANALYSIS

In this chapter, some of the registration and level of audience of the events organised are shown. At this stage only one of the webinars took place, the others are planned for June or later, so the metrics are not available yet. As this is a living document, the figures will be updated and reported in the next updated version of the deliverable in M36.

5.1. EIB FUNDING MECHANISMS FOR PROVIDERS OF SUSTAINABLE TRANSPORT & MOBILITY SOLUTIONS TO BOOST EU UPTAKE. 22ND JUNE 2021

Overview

	22 Jun 10:00 CEST
Subscribers	187
Unique viewers	95
Live viewers	95
Replay viewers	0

Figure 10 Number of registrations.

Figure 11: Number of registrations and origin.

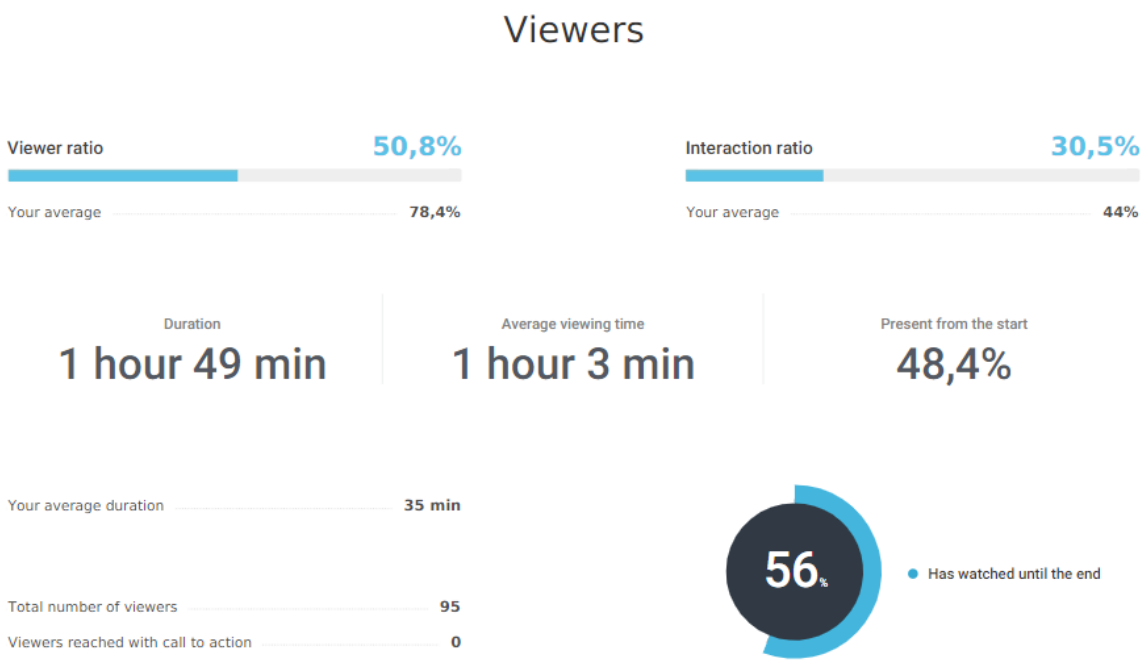

Figure 12: Analysis of the attendees to the webinar.

5.2. ENTRANCE WEBINAR ON EIC ACCELERATOR: THE FUNDING FOR THE INNOVATION CHAMPIONS IN TRANSPORT, LOGISTICS & MOBILITY. 8TH JUNE 2022

	08 Jun 12:00 CEST
Subscribers	52
Unique viewers	38
Live viewers	38
Replay viewers	1

Figure 13: Number of registrations.

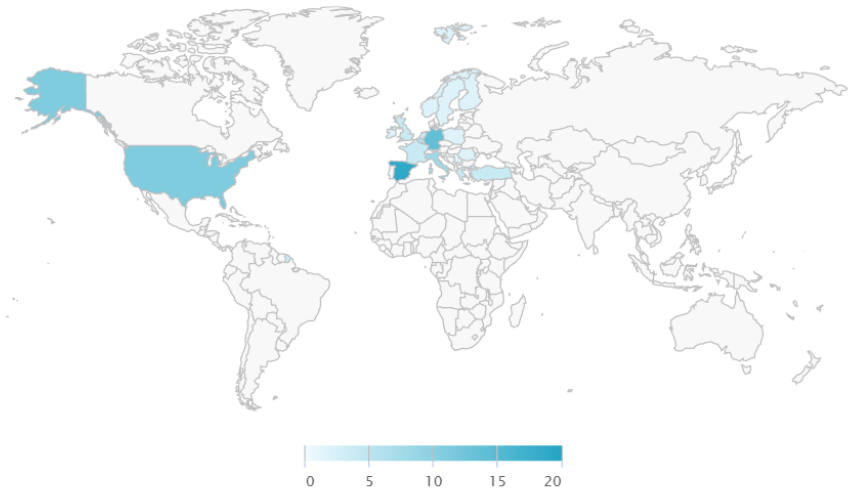

Figure 14: Number of registrations and origin

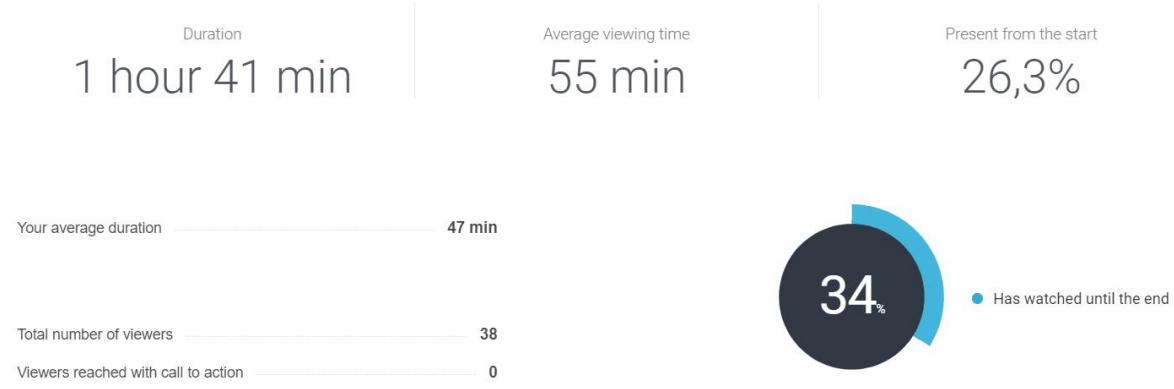

Figure 15: Analysis of the attendees to the webinar.

5.3. ENTRANCE - WEBINAR: INTRODUCTION - HOW TO CALCULATE GHG REDUCTION FROM SUSTAINABLE TRANSPORT INNOVATION. 20TH JUNE 2022

	~~20 Jun~~ ~~14:30 CEST~~
Subscribers	70
Unique viewers	0
Live viewers	0
Replay viewers	0

Figure 16: Number of registrations

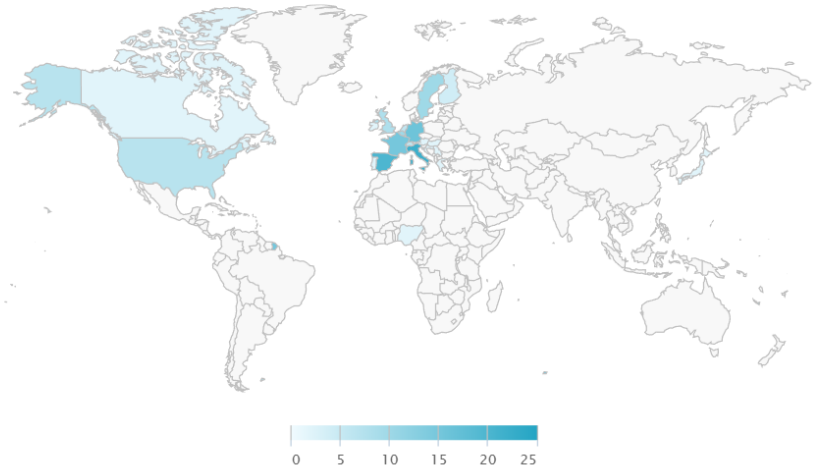

Figure 17: Number of registrations and origin

The webinar last 1hour 30 minutes and around 35 people were connected in the webinar since the end.

6. CONCLUSIONS

Along these 18 months, several activities have been organized with the aim of promoting the matchmaking and networking activities between solutions providers, investors, users, and buyers in order to uptake to the market innovative sustainable mobility solutions. At the same time, following the objectives and addressing the specific challenges of the new ENTRANCE strategy. The activities organized combine open calls (competitions) to map innovative mobility solutions in the different transport modes, training activities to showcase funding opportunities and the next step will be to organize a brokerage event to promote the matchmaking activities between the stakeholders involved and pursue the market uptake of the innovative mobility solutions.

This deliverable is a living document, and it will be updated, including the metric analysis of the events, the results of the open calls and the future events that will be organized until the end of the project.

7. ANNEXES

ANNEX 1: ENTRANCE TAXONOMY

Type of solution - Level 1	Type of solution - Level 2	Rail transport	Type of transport - Level 2			
			Passenger Rail Transport (including interurban)	Rail Freight Transport	Rail vehicles	Infrastructure enabling low-carbon rail transport
Alternative fuels and vehicles	Alternative fuel	x			x	
Alternative fuels and vehicles	Alternative fuel re-fueling infrastructure	x				x
Alternative fuels and vehicles	Fuel cell system	x			x	
Alternative fuels and vehicles	Hydrogen infrastructure	x				x
Alternative fuels and vehicles	Vehicle propulsion, Fuel cell electric vehicle (FCEV)	x			x	
Alternative fuels and vehicles	Vehicle propulsion, Fuel cell vehicle (FCV)	x			x	
Decarbonisation	Carbon footprint calculation	x	x	x		x
Decarbonisation	Transport pollution and emission monitoring	x	x	x		
Digitalisation	5G	x	x			x
Digitalisation	Artificial Intelligence (AI)	x	x		x	
Digitalisation	Big Data	x	x	x		
Digitalisation	Blockchain	x	x	x		
Digitalisation	Collaborative or digital platform - connectivity platforms	x	x	x		
Digitalisation	Cooperative, Connected and Automated Mobility (CCAM)	x			x	
Digitalisation	Decision Support System	x	x	x		
Digitalisation	Internet of Things (IoT)	x	x	x		
Digitalisation	Satellite Positioning	x			x	
Digitalisation	Signalling	x	x			x
Electrification	Batteries	x			x	
Electrification	Vehicle power/re-charging systems, operations and and infrastructure	x				x
Electrification	Vehicle propulsion, Battery electric vehicle (BEV)	x			x	
Electrification	Vehicle to Grid (V2G)	x			x	
Innovative Materials	Innovative Materials	x	x		x	
Management Systems	Infrastructure management system	x	x			x
Management Systems	Intelligent Transport Systems (ITS)	x	x	x		
N/A	Other (please specify)	x				
N/A	Resilience	x	x	x	x	x
N/A	Safety system	x			x	x
Smart solutions	Boxes	x		x		
Smart solutions	Combined passengers and goods delivery	x	x	x		
Smart solutions	Container	x		x		
Smart solutions	Load carriers	x		x		
Smart solutions	Load units	x		x		
Smart solutions	Pallet	x		x		
Smart solutions	Transport crate	x		x		
Smart solutions	Urban delivery solutions	x	x	x		
Transport & logistics operations	Cargo handling	x		x		x
Transport & logistics operations	Corridor management	x				x
Transport & logistics operations	Intelligent ports, terminals and (micro)hubs	x				x
Transport & logistics operations	Logistics as a service (LaaS)	x		x		
Transport & logistics operations	Logistics nodes management	x				x
Transport & logistics operations	Mobility as a Service (MaaS)	x	x			
Transport & logistics operations	Physical Internet	x		x		
Transport & logistics operations	Pipeline as a Service (PaaS)	x		x		
Transport & logistics operations	Routing	x	x	x		
Transport & logistics operations	Smart contracts	x		x		
Transport & logistics operations	Sustainable ports, terminals and (micro)hubs	x				x
Transport & logistics operations	Systems and Technologies for Interconnected Logistics	x		x		
Transport & logistics operations	Transport infrastructure equipment/machinery, including cranes, etc.	x				x
Transport & logistics operations	Transport Management Information System	x	x			
Vehicle design	Other green vehicles, including cargobike, etc.	x			x	
Vehicle design	Rail vehicle design	x	x		x	
Vehicle design	Retrofitting	x	x		x	
Vehicle design	Unmanned vehicle	x			x	
Vehicle technology	Platooning	x			x	
Vehicle technology	Power train technology	x			x	
Vehicle technology	Rail control systems	x	x		x	

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006681

Type of solution - Level 1	Type of solution - Level 2	Road transport	Type of transport - Level 2				
			Freight transport services by road	Urban and suburban transport, road passenger transport	Intersuburban transport, road passenger transport	Transport by road vehicles, including bicycles, motorbikes, passenger cars, public transport and (light) commercial road vehicles	Infrastructure enabling low-carbon road transport and public transport, incl. infrastructure for personal mobility (cycle logistics
Alternative fuels and vehicles	Alternative fuel	x				x	
Alternative fuels and vehicles	Alternative fuel re-fueling infrastructure	x		x			x
Alternative fuels and vehicles	Fuel cell system	x				x	
Alternative fuels and vehicles	Hydrogen infrastructure	x		x			x
Alternative fuels and vehicles	Vehicle propulsion, Fuel cell electric vehicle (FCEV)	x				x	
Alternative fuels and vehicles	Vehicle propulsion, Fuel cell vehicle (FCV)	x				x	
Decarbonisation	Carbon footprint calculation	x	x	x	x		
Decarbonisation	Transport pollution and emission monitoring	x	x	x	x		
Digitalisation	5G	x		x			x
Digitalisation	Advanced Driver Assistance System	x				x	
Digitalisation	Artificial Intelligence (AI)	x		x		x	
Digitalisation	Big Data	x	x	x	x		
Digitalisation	Blockchain	x	x	x	x		
Digitalisation	Collaborative or digital platform - connectivity platforms	x	x	x	x		
Digitalisation	Cooperative, Connected and Automated Mobility (CCAM)	x				x	
Digitalisation	Decision Support System	x	x	x	x		
Digitalisation	Internet of Things (IoT)	x	x	x			
Digitalisation	Satellite Positioning	x		x		x	
Digitalisation	Signalling	x		x			x
Electrification	Batteries	x					
Electrification	Vehicle power/re-charging systems, operations and and infrastructure	x		x			
Electrification	Vehicle propulsion, Battery electric vehicle (BEV)	x					
Electrification	Vehicle to Grid (V2G)	x					
Innovative Materials	Innovative Materials	x		x		x	
Management Systems	Infrastructure management system	x		x			x
Management Systems	Intelligent Transport Systems (ITS)	x	x	x	x		
N/A	Other (please specify)	x					
N/A	Resilience	x	x	x	x	x	x
N/A	Safety system	x				x	x
Smart solutions	Boxes	x	x	x			
Smart solutions	Combined passengers and goods delivery	x	x	x	x		
Smart solutions	Container	x	x	x			
Smart solutions	Load carriers	x	x	x			
Smart solutions	Load units	x	x				
Smart solutions	Pallet	x	x				
Smart solutions	Parking management	x	x	x	x		x
Smart solutions	Transport crate	x	x				
Smart solutions	Urban delivery solutions	x	x	x			
Transport & logistics operations	Asset sharing including carpooling and cargopooling (cars, trucks, trailers, etc.)	x	x	x	x		
Transport & logistics operations	Cargo handling	x	x				x
Transport & logistics operations	Corridor management	x		x			x
Transport & logistics operations	Intelligent ports, terminals and (micro)hubs	x		x			x
Transport & logistics operations	Logistics as a service (LaaS)	x	x	x			
Transport & logistics operations	Logistics nodes management	x		x			x
Transport & logistics operations	Mobility as a Service (MaaS)	x		x			
Transport & logistics operations	Physical Internet	x	x	x			
Transport & logistics operations	Pipeline as a Service (PaaS)	x	x				
Transport & logistics operations	Routing	x	x	x	x		
Transport & logistics operations	Smart contracts	x	x				
Transport & logistics operations	Sustainable ports, terminals and (micro)hubs	x		x			x
Transport & logistics operations	Systems and Technologies for Interconnected Logistics	x	x				
Transport & logistics operations	Transport Management Information System	x		x	x		
Vehicle design	Other green vehicles, including cargobike, etc.	x		x		x	
Vehicle design	Retrofitting	x		x		x	
Vehicle design	Unmanned vehicle	x		x		x	
Vehicle technology	Delivery Robots	x		x		x	
Vehicle technology	Platooning	x				x	

Type of solution - Level 1	Type of solution - Level 2	Waterborne transport	Type of transport - Level 2					
			Inland passenger water transport	Inland freight water transport	Sea and coastal passenger water transport	Sea and coastal freight water transport	Waterborne vessels	Infrastructure enabling low carbon water transport
Alternative fuels and vehicles	Alternative fuel	x					x	
Alternative fuels and vehicles	Alternative fuel re-fueling infrastructure	x						x
Alternative fuels and vehicles	Fuel cell system	x					x	
Alternative fuels and vehicles	Hydrogen infrastructure	x						x
Alternative fuels and vehicles	Vehicle propulsion, Fuel cell electric vehicle (FCEV)	x					x	
Alternative fuels and vehicles	Vehicle propulsion, Fuel cell vehicle (FCV)	x					x	
Decarbonisation	Carbon footprint calculation	x	x	x	x	x		x
Decarbonisation	Transport pollution and emission monitoring	x	x	x	x	x		x
Digitalisation	5G	x						x
Digitalisation	Advanced Driver Assistance System	x					x	
Digitalisation	Artificial Intelligence (AI)	x					x	
Digitalisation	Big Data	x	x	x	x	x		
Digitalisation	Blockchain	x	x	x	x	x		
Digitalisation	Collaborative or digital platform - connectivity platforms	x	x	x	x	x		
Digitalisation	Cooperative, Connected and Automated Mobility (CCAM)	x					x	
Digitalisation	Decision Support System	x	x	x	x	x		
Digitalisation	Internet of Things (IoT)	x		x		x		
Digitalisation	Satellite Positioning	x					x	
Digitalisation	Signalling	x						x
Electrification	Batteries	x					x	
Electrification	Vehicle power/re-charging systems, operations and and infrastructure	x						x
Electrification	Vehicle propulsion, Battery electric vehicle (BEV)	x					x	
Electrification	Vehicle to Grid (V2G)	x					x	
Innovative Materials	Innovative Materials	x					x	
Management Systems	Infrastructure management system	x						x
Management Systems	Intelligent port systems	x						x
Management Systems	Intelligent Transport Systems (ITS)	x	x	x	x	x		
N/A	Other (please specify)	x						
N/A	Resilience	x	x	x	x	x	x	x
N/A	Safety system	x					x	x
Smart solutions	Boxes	x		x		x		
Smart solutions	Combined passengers and goods delivery	x	x	x	x	x		
Smart solutions	Container	x		x		x		
Smart solutions	Load carriers	x		x		x		
Smart solutions	Load units	x		x		x		
Smart solutions	Pallet	x		x		x		
Smart solutions	Transport crate	x		x		x		
Smart solutions	Urban delivery solutions	x		x				
Transport & logistics operations	Cargo handling	x		x		x		x
Transport & logistics operations	Corridor management	x						x
Transport & logistics operations	Intelligent ports, terminals and (micro)hubs	x						x
Transport & logistics operations	Logistics as a service (LaaS)	x		x		x		
Transport & logistics operations	Logistics nodes management	x						x
Transport & logistics operations	Mobility as a Service (MaaS)	x	x		x			
Transport & logistics operations	Physical Internet	x		x		x		
Transport & logistics operations	Pipeline as a Service (PaaS)	x		x		x		
Transport & logistics operations	Routing	x	x	x	x	x		
Transport & logistics operations	Smart contracts	x		x		x		
Transport & logistics operations	Sustainable ports, terminals and (micro)hubs	x						x
Transport & logistics operations	Systems and Technologies for Interconnected Logistics	x		x		x		
Transport & logistics operations	Transport infrastructure equipment/machinery, including cranes, etc.	x						x
Transport & logistics operations	Transport Management Information System	x	x		x			
Vehicle design	Autonomous and semi-autonomous sailing	x					x	
Vehicle design	Other green vehicles, including cargobike, etc.	x					x	
Vehicle design	Retrofitting	x					x	
Vehicle design	Ship design	x					x	
Vehicle design	Ship/vessel wheelhouse	x					x	
Vehicle design	Unmanned vehicle	x					x	
Vehicle technology	Platooning	x					x	

Type of solution - Level 1	Type of solution - Level 2	Air transport	Type of transport - Level 2			
			Passenger Air Transport	Freight Air Transport	Air transport vehicles,including Unmanned Aerial Vehicle (UAV)	Infrastructure enabling low-carbon air transport
Alternative fuels and vehicles	Alternative fuel	x			x	
Alternative fuels and vehicles	Alternative fuel re-fueling infrastructure	x				x
Alternative fuels and vehicles	Fuel cell system	x			x	
Alternative fuels and vehicles	Hydrogen infrastructure	x				x
Alternative fuels and vehicles	Vehicle propulsion, Fuel cell electric vehicle (FCEV)	x			x	
Alternative fuels and vehicles	Vehicle propulsion, Fuel cell vehicle (FCV)	x			x	
Decarbonisation	Carbon footprint calculation	x	x	x		
Decarbonisation	Transport pollution and emission monitoring	x	x	x		
Digitalisation	5G	x				x
Digitalisation	Advanced Driver Assistance System	x			x	
Digitalisation	Artificial Intelligence (AI)	x			x	
Digitalisation	Big Data	x	x	x		
Digitalisation	Blockchain	x	x	x		
Digitalisation	Collaborative or digital platform - connectivity platforms	x	x	x		
Digitalisation	Cooperative, Connected and Automated Mobility (CCAM)	x			x	
Digitalisation	Decision Support System	x	x	x		
Digitalisation	Internet of Things (IoT)	x		x		
Digitalisation	Satellite Positioning	x			x	
Digitalisation	Signalling	x				x
Electrification	Batteries	x			x	
Electrification	Vehicle power/re-charging systems, operations and and infrastructure	x				x
Electrification	Vehicle propulsion, Battery electric vehicle (BEV)	x			x	
Electrification	Vehicle to Grid (V2G)	x			x	
Innovative Materials	Innovative Materials	x			x	
Management Systems	Infrastructure management system	x				x
Management Systems	Intelligent Transport Systems (ITS)	x	x	x		
N/A	Other (please specify)	x				
N/A	Resilience	x	x	x	x	x
N/A	Safety system	x			x	x
Smart solutions	Boxes	x		x		
Smart solutions	Combined passengers and goods delivery	x	x	x		
Smart solutions	Container	x		x		
Smart solutions	Load carriers	x		x		
Smart solutions	Load units	x		x		
Smart solutions	Pallet	x		x		
Smart solutions	Transport crate	x		x		
Smart solutions	Urban delivery solutions	x		x	x	
Transport & logistics operations	Aircraft operations	x	x	x		
Transport & logistics operations	Cargo handling	x		x		x
Transport & logistics operations	Corridor management	x				x
Transport & logistics operations	Intelligent ports, terminals and (micro)hubs	x				x
Transport & logistics operations	Logistics as a service (LaaS)	x		x		
Transport & logistics operations	Logistics nodes management	x				x
Transport & logistics operations	Mobility as a Service (MaaS)	x	x			
Transport & logistics operations	Physical Internet	x		x		
Transport & logistics operations	Pipeline as a Service (PaaS)	x		x		
Transport & logistics operations	Routing	x	x	x		
Transport & logistics operations	Smart contracts	x		x		
Transport & logistics operations	Sustainable ports, terminals and (micro)hubs	x				x
Transport & logistics operations	Systems and Technologies for Interconnected Logistics	x		x		
Transport & logistics operations	Transport infrastructure equipment/machinery, including cranes, etc.	x				x
Transport & logistics operations	Transport Management Information System	x	x			
Vehicle design	Aircraft propulsion	x			x	
Vehicle design	Cabin and cockpit design	x			x	
Vehicle design	Other green vehicles, including cargobike, etc.	x			x	
Vehicle design	Retrofitting	x			x	
Vehicle design	Unmanned vehicle	x			x	

Type of solution - Level 1	Type of solution - Level 2	Modality	Type of transport - Level 2								
			Combined transport	Multimodality	Intermodality	Synchromodality	Co-modality	Urban Logistics - Last Mile Distribution	Urban Mobility	Pipeline transport	Low carbon logistic nodes infrastructure
Alternative fuels and vehicles	Alternative fuel re-fueling infrastructure	x						x	x		x
Alternative fuels and vehicles	Hydrogen infrastructure	x						x	x		x
Decarbonisation	Carbon footprint calculation	x	x	x	x	x	x	x	x		
Decarbonisation	Transport pollution and emission monitoring	x	x	x	x	x	x	x	x		
Digitalisation	5G	x						x	x		x
Digitalisation	Big Data	x	x	x	x	x	x	x	x		
Digitalisation	Blockchain	x	x	x	x	x	x	x	x		
Digitalisation	Collaborative or digital platform - connectivity platforms	x	x	x	x	x	x	x	x		
Digitalisation	Decision Support System	x	x	x	x	x	x	x	x		
Digitalisation	Internet of Things (IoT)	x	x	x	x	x	x	x			
Digitalisation	Satellite Positioning	x						x	x		
Electrification	Vehicle power/re-charging systems, operations and and infrastructure	x						x	x		x
Management Systems	Infrastructure management system	x						x	x		x
Management Systems	Intelligent Transport Systems (ITS)	x	x	x	x	x	x	x	x		
N/A	Other (please specify)	x									
N/A	Resilience	x	x	x	x	x	x	x	x	x	x
N/A	Safety system	x									x
Smart solutions	Boxes	x	x	x	x	x	x	x			
Smart solutions	Combined passengers and goods delivery	x	x	x	x	x	x	x	x		
Smart solutions	Container	x	x	x	x	x	x	x			
Smart solutions	Load carriers	x	x	x	x	x	x	x			
Smart solutions	Load units	x	x	x	x	x	x	x			
Smart solutions	Pallet	x	x	x	x	x	x	x			
Smart solutions	Parking management	x									x
Smart solutions	Transport crate	x	x	x	x	x	x	x			
Smart solutions	Urban delivery solutions	x	x	x	x	x	x	x			
Transport & logistics operations	Asset sharing including carpooling and cargopooling (cars, trucks, trailers, etc.)	x	x	x	x	x	x	x	x		
Transport & logistics operations	Cargo handling	x	x	x	x	x	x	x			x
Transport & logistics operations	Corridor management	x	x	x	x	x	x	x	x		x
Transport & logistics operations	Intelligent ports, terminals and (micro)hubs	x						x	x		x
Transport & logistics operations	Logistics as a service (LaaS)	x	x	x	x	x	x	x			
Transport & logistics operations	Logistics nodes management	x									x
Transport & logistics operations	Mobility as a Service (MaaS)	x	x						x		
Transport & logistics operations	Multimodal hub and network solution	x	x	x	x	x	x	x	x		x
Transport & logistics operations	Physical Internet	x	x	x	x	x	x	x			
Transport & logistics operations	Pipeline as a Service (PaaS)	x	x	x	x	x	x	x			
Transport & logistics operations	Routing	x	x	x	x	x	x	x	x		
Transport & logistics operations	Smart contracts	x	x	x	x	x	x	x			
Transport & logistics operations	Sustainable ports, terminals and (micro)hubs	x						x	x		x
Transport & logistics operations	Systems and Technologies for Interconnected Logistics	x	x	x	x	x	x	x			
Transport & logistics operations	Transport infrastructure equipment/machinery, including cranes, etc.	x									x
Transport & logistics operations	Transport Management Information System	x	x						x		
Vehicle technology	Delivery Robots	x						x			

ANNEX 2: 1ST OPEN COMPETITION INCLUDING THE REQUIREMENTS AND EVALUATION CRITERIA

European matchmaking platform for innovative transport and mobility tools and services

ENTRANCE

Launch of the ENTRANCE Open Competition: Connecting innovators to funding opportunities

On September 30, the ENTRANCE Open Competition was launched. Giving you and other innovators alike the chance to speed up your journey improving the sustainability of Europe's transport & mobility sector. On November 26th, 2021, Europe's sustainable transport sector will come together at the next ENTRANCE digital event. During this high-speed event, open competition finalists will get the chance to pitch their innovative solution to investors and buyers.

THE ENTRANCE PROJECT

The transport and mobility sector plays an important role for European employment and GDP, as it directly employs 10 million people and accounts for about 5% of GDP. However, this sector also represents almost a quarter of Europe's greenhouse gas emissions and is the main cause of air pollution in cities.

Accelerating the uptake and deployment of innovative transport products and services is a prerequisite to achieve the European environmental objectives; however, it remains a bottleneck, due to the lack of visibility of the existing innovative solutions, risks associated with the uptake of "first of a kind" solutions, and low access to finance.

ENTRANCE boots the implementation of innovation solutions that contribute to the ambitious goals envisaged by the European Commission for reducing the transport CO2 emissions by 2030 and 2050 and respond to the increasing mobility needs of people and goods thereby strengthening the European competitiveness and boosting growth and jobs.

ENTRANCE offers a common and legitimate European Matchmaking Platform and complementary off-line services designed to mobilise financial resources to accelerate the market access and scale up of "first of a kind" sustainable transport solutions. The overall concept focus of the ENTRANCE project lies in the "supply-demand-finance" triangle that is envisaged for all transport and mobility modes and all relevant stakeholders.

THE ENTRANCE OPEN COMPETITION

The goal of the ENTRANCE Open Competition is to attract and connect innovators, buyers, and investors. The winners of the ENTRANCE Open Competition will:

- Receive personalised funding advice from the heart of the ENTRANCE ecosystem. Our experts will guide you through the funding landscape, help you with identifying potential funding opportunities and potentially connect you with suitable partners. This covers public and private funding including innovative financing models such as crowdfunding.
- Get the opportunity to pitch your innovate solution during the next ENTRANCE digital event in November 2021.
- Get the opportunity to demonstrate your solution to dozens of potential funders and partners on the ENTRANCE platform. The video content generated during the Open Competition will enrich your profile on the ENTRANCE matchmaking platform.
- *The winner of the Prize Challenge will win a financial price of €5.000 and a meet and greet with a potential investor. Participants in the Prize Challenge automatically take part in the Open Challenge.*

The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

PNO

1

European matchmaking platform for innovative transport and mobility tools and services

OPEN CHALLENGE: SCALE YOUR INNOVATIVE TRANSPORT & MOBILITY SOLUTION!

Do you believe your "first-of-a-kind" solution has the potential to revolutionize the European transport and mobility sector? Do you have an innovative solution that may decarbonize the transport and mobility sector, and that's related to alternative fuels or materials for transport vehicles? Do you work with an innovative solution for the design or technology for vehicles? Or have you created an innovative management system or smart or digital solution? Is your innovative product related to the transport & mobility operations or the electrification of the transport?

If yes, we're looking for you and are excited to open up our network and expertise to help scale your solution!

Transport is a fundamental sector for and of the European economy. Transport services embrace a complex network of around 1.2 million private and public companies in the EU, employing around 11 million people and providing goods and services to citizens and businesses in the EU and its trading partners. Transport also provides mobility for Europeans, thus contributing significantly to the free movement of persons within the internal market. Efficient transport services and infrastructure are vital to exploiting the economic strengths of all regions of the European Union, to supporting the internal market and growth, and to enabling economic and social cohesion. However, the main external costs of transport are those linked to greenhouse gas emissions, local air pollution, congestion, capacity bottlenecks, accidents and noise. In particular, the significant impact of transport on energy use and climate change has to be addressed. In 2016, at least 33% of the final energy consumption and 24% of greenhouse gas emissions (26% more greenhouse gas emissions than in 1990) in the EU stemmed from transport. Addressing these challenges will help pursue sustainable growth in the EU.

Challenging times call for unconventional solutions

The ENTRANCE Open Competition gives opportunities to innovative transport solutions in all corners of Europe, to show their solutions to solve the 21st century transport & mobility sustainability challenges.

To be eligible for participation, you:

1. Are legally based in Europe.
2. Have signed up to the ENTRANCE matchmaking platform.
3. Have an innovative solution that covers one or more of the following goals: Increase the efficiency of the transport and mobility system. | Integrate transport and mobility planning. | Encourage the shift to lower emission transport modes. | Boost the deployment of low-emission alternative energy for transport and mobility. | Remove obstacles to the electrification of transport and the use of alternative fuels. | Move towards zero-emission vehicles to accelerate the transition towards low- and zero-emission vehicles. |Optimise the use of transport infrastructures, corridors as well as hubs and terminals. | Boost the transport network collaboration and coordination. | Pursue global efforts to control and improve emissions from international aviation and maritime transport. |Support the European Green Deal. *Please notice that ENTRANCE will not cover innovative solutions for transport safety and security if it is not directly related to an additional environmental impact.*
4. Are able to share a pitch deck.
5. Are willing to create and share a 1–2-minute video to introduce yourself and your innovative solution to the jurors.
6. Are able to attend and pitch at the ENTRANCE digital event on the 26th of November 2021.

Interested? Read on to learn how you can apply to the ENTRANCE Open Competition.

The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

PNO 2

European matchmaking platform for innovative transport and mobility tools and services

PRIZE CHALLENGE: IMPROVE URBAN LOGISTICS IN EUROPE BY SCALING YOUR INNOVATIVE LAST MILE DISTRIBUTION SOLUTION!

SPONSORED BY

CIMALSA
Logística i mobilitat

Do you believe your "first-of-a-kind" solution has the potential to support achieving CO2-free city logistics? Do you have an innovative vehicle or smart or digital solution that may reduce the EU CO^2 emissions caused by urban logistics? Is your innovative product related to the optimisation of urban freight and logistics? Or do you work with a solution for the clean, alternative & low or zero-carbon city logistics fleets?

If yes, we're looking for you and are excited to open up our network and expertise to help scale your solution!

Environment, pollution and congestion are high on the agenda of both cities and private stakeholders that are joining forces to address the challenge collaboratively. Cities need to ensure good quality of life which means securing healthy conditions while providing citizens with easy access to services and goods. Industry needs to reach their customers while keeping their selves highly competitive and sustainable. Policies to address air pollution, congestion and safety challenges are gaining importance in cities having important implications to freight transport and logistics. In particular, the 2011 White Paper on Transport of the European Commission has established the target to reach CO2-free city logistics in major urban environments by 20301. Most cities are embracing this (or similar) objectives and industry is also progressing to freight transport and logistics decarbonization. Pollution is raising concern due to health implications and several cities have taken fast action and implemented zero or low emissions zones.

Zero emission urban freight and logistics requires alternative solutions

To address these challenges the ENTRANCE Open Competition gives opportunities to innovative urban freight and logistics solutions in all corners of Europe, to show their solutions and together work towards a *European zero emission last mile distribution*.

Prize

The winner of this Challenge will receive a monetary prize of 5.000€ (VAT excluded) that has been sponsored by Centrals I Infraestructuras per a la Mobilitat Logistiques SAU (CIMALSA). This prize will be transferred to the winner by wire transfer to the company's official bank account.

The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

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European matchmaking platform for innovative transport and mobility tools and services

ENTRANCE

To be eligible for participation, you:

1. Are legally based in Europe.
2. Have signed up to the ENTRANCE matchmaking platform.
3. Are able to share a pitch deck.
4. Are willing to create and share a 1–2-minute video to introduce yourself and your innovative solution to the jurors.
5. Are able to attend and pitch at the ENTRANCE digital event on the 26th of November 2021.
6. Can pitch an innovative and sustainable last mile distribution solution that covers, at least, one or more of the following areas:
   - Air quality
   - Clean, alternative & low or zero-carbon fleet, including electrification and sustainable new fuels and new smart vehicles
   - Space management and consolidation
   - Data (what to share and in what form) to achieve flows consolidation
   - Stakeholders Collaboration
   - Urban planning, infrastructure and systems
   - City/district/transport systems
   - New business models, approaches and services
   - Urban delivery solutions
   - Digitalisation and smart solution

CIMALSA
Logística i mobilitat

Interested? Read on to learn if and how you can apply to the ENTRANCE Open Competition.

Please notice that those legal entities that do not win this competition will automatically participate in the Open Challenge.

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PNO

4

European matchmaking platform for innovative transport and mobility tools and services

Applying to the ENTRANCE Open Competition: On your way to funding and collaboration

Are you ready for funding and collaboration?

Then get ready for the ENTRANCE Open Competition. Your opportunity to become part of Europe's latest and biggest effort to match the supply-demand-finance triangle of our entire transport and mobility ecosystem.

How serious are our jurors?

Your submission will go through a transparent and fair selection process considering the business case, financial aspects, and the technical solution aspects of the solutions. The Open Competition jurors will have a good look at all the elements that make up a good business plan as described below. The exact evaluation criteria are available in the annex below.

How can you enter?

Breathe, and take a few seconds. Life is too short to spend time filling forms. So let's keep it simple. For you, and for the jurors. To apply for the ENTRANCE Open Competition there are three things you need to do:

1. **Sign up to the ENTRANCE matchmaking platform**. Yes, this does mean you have to fill in some forms. The good news is that this already makes you a winner. Why? By signing up you gain instant access to relevant information and partners that can help you reach the market or scale up your solution. You also gain access to our matchmaking events and our complimentary and impartial orchestrator service that enables potential purchase aggregation. What? Well, purchase aggregation means that multiple investors and partners can co-invest in and co-purchase your innovation.
2. **Share your pitch deck**. Make sure it looks good. Don't forget to include information on: your company, the problem, the solution, market size, competition, competitive advantages, the product, traction, the business model, a basic financial forecast, other investors, use of funds, and who is involved. The better insight you provide, the stronger your application will be. For more instructions, read Alejandro Cremades' advice on building a pitch deck (published in Forbes Magazine). Please indicate if the pitch deck can be shared beyond the jurors or not.
3. **Show yourself**. Create a 1 to 3 minutes video and tell us about: Who you are, why you are doing this, how you will do it, when it will be done and what it will look like. Make sure the quality is good enough to keep our jurors happy, and keep in mind that the video can be used on your ENTRANCE profile. Online tools such as Vonmats can make it easier to create the video.

The application deadline is 30th October, 2021.

Please send your pitch deck and video to: secretariat@entrance-platform.eu.

Before November 12th, 2021. you will learn if you have made it to the final.

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European matchmaking platform for innovative transport and mobility tools and services

ANNEX:
Evaluation Criteria

How compelling is the story behind the innovation?	x 2
How would you assess the quality of the organization/company behind the innovation?	-
How is the problem the innovation aims to solve described?	-
What is the quality of the innovative solution provided by the innovator?	-
How would you rate the environmental sustainability of the solution?	x 2
What is the market potential (size & competitive advantages) of the innovation (in combination with the innovator)?	x 2
To what extent are risks, such as competition, clarified and mitigated?	-
What do you think about the product?	-
How would you assess the traction of the product?	-
What is the quality of the business model?	x 2
How would you assess the financial forecast of the innovator?	-
Do you have a clear picture of other current and previous investors?	-
How would you assess the quality of how the innovator intends to spend the money invested?	-
What is the quality of the people behind the innovation?	x 2

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ANNEX 3: CONNECTING CITIES TO INNOVATORS FOR SUSTAINABLE CITY LOGISTICS

European matchmaking platform for innovative transport and mobility tools and services

Connecting cities to innovators for sustainable city logistics

Are you interested in obtaining a detailed market analysis for innovative solutions in the area of sustainable city logistics?
Are you in the search for collaborators for the EIT Urban Mobility's Open Call for Innovation for the Business Plan 2023-2025 to finance your innovative projects?

If yes, the ENTRANCE project is excited to provide you with the necessary support to identify the most suitable innovative solution providers that you need to obtain a sustainable city logistics!

How can you participate?

Breathe, and take a few seconds. Life is too short to spend time filling in long forms. So, let's keep it simple. To participate there is only one thing that you would you need to do: Please fill in your interests in innovative solutions in the following table by indicating an "X ":

	Collaborative or digital platform - connectivity platforms for data sharing tools to improve real-time awareness of last mile deliveries
	Decision Support System for route planning
	Digital cameras
	Ultra-low emission zone control monitoring and geofencing
	Vehicle power/re-charging systems, operations and and infrastructure
	Vehicle propulsion, Battery electric vehicles (BEV), including trucks
	Infrastructure management systems
	Intelligent Transport Systems (ITS)
	Systems and Technologies for Interconnected Logistics
	Innovative units, including innovative containers, load units and carriers, pallets, creates, etc.
	Combined passengers and goods delivery
	Urban delivery solutions
	Asset sharing including cargopooling
	Cargo handling solutions
	Intelligent ports, terminals and (micro)hubs
	Logistics as a service (LaaS)
	Multimodal hub and network solutions
	Sustainable ports, terminals and (micro)hubs
	Autonomous Delivery Robots and its related infrastructure
	Cargo bikes
	Drones
	Other (please specify)

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This information should be sent to secretariat@entrance-platform.eu.

What's next?

In the cases where common interests are identified amongst several cities ENTRANCE will carry out a detailed market analysis and open call for solution providers to identify specific innovative solutions that fit with your needs and interests. This information will only be provided to the cities who participate. Thereafter, the project will facilitate the introduction to the solution providers that are of your interest through a specific online matchmaking event. The only thing left is for you to apply for the necessary funding.

How is this related to the EIT Urban Mobility's Open Call for Innovation for the Business Plan 2023-2025?

Please notice that all of the suggested solutions are directly related to the areas of the open call and therefore the market analysis will provide you with wide opportunities to identify collaborators for your proposals:

- *Provide solutions to increase freight intermodality with a focus on zero-emission last-mile transport.*
- *Reduce last-mile freight transport volumes, congestion, pollution from e-commerce, e.g., freight hubs unmanned collection and drop-off points, community brokerage, collaboration with retail to reduce / deal with returns, optimized delivery services, etc.*
- *Design a commercial logistics brokerage for data sharing between cities and logistics companies to enable more efficient freight logistics, as well as collaborative logistics models.*
- *Provide innovative logistics solutions for urban areas with specific challenges such as dense historic city centers and use of waterways*
- *Deliver reduced freight demand for waste management services by supporting local production, aggregate management, citizen engagement, circular economy etc.*
- *Accelerate the adoption of real-time enforcement of freight demand and access restriction measures including digital cameras, ultra-low emission zone control monitoring and geofencing.*
- *Demonstration of solutions that optimize routes based on reducing emissions and noise pollution.*

THE ENTRANCE PROJECT

The transport and mobility sector plays an important role for European employment and GDP, as it directly employs 10 million people and accounts for about 5% of GDP. However, this sector also represents almost a quarter of Europe's greenhouse gas emissions and is the main cause of air pollution in cities.

Accelerating the uptake and deployment of innovative transport products and services is a prerequisite to achieve the European environmental objectives; however, it remains a bottleneck, due to the lack of visibility of the existing innovative solutions, risks associated with the uptake of "first of a kind" solutions, and low access to finance.

ENTRANCE boots the implementation of innovation solutions that contribute to the ambitious goals envisaged by the European Commission for reducing the transport CO2 emissions by 2030 and 2050 and respond to the increasing mobility needs of people and goods thereby strengthening the European competitiveness and boosting growth and jobs.

https://www.entrance-platform.eu/

The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

ANNEX 4: OPEN CALL ON CITIES, REQUIREMENTS AND EVALUATION CRITERIA

European matchmaking platform for innovative transport and mobility tools and services

ENTRANCE

ENTRANCE & EIT Urban Mobility are calling on all cities looking for suppliers of Intelligent Transport Systems (ITS) for sustainable city logistics

Are you interested in a detailed market analysis of ITS solution for your city?

If the answer is yes, read on!

The ENTRANCE project is carrying out a detailed market analysis of innovative Intelligent Transport Systems (ITS) that are available on the European market which will provide cities looking for suppliers the opportunity to receive a state-of-the-art overview of European solution providers. Cities will meet potential solution providers, get access to the ENTRANCE Matchmaking Platform, and receive innovative financing support services to help with the funding of the solution.

Intelligent Transportation Systems (ITS) are information and communication technologies applied in the (1) field of road transport including infrastructure vehicles and users, (2) in traffic and mobility management, and (3) for interfaces with other modes of transport.

Benefits of responding to the Open Call:

- A detailed market analysis of current Intelligent Transport Systems in Europe. This can help you identify suppliers that can help tackle local challenges.
- Access to a detailed overview of funding opportunities, a legislative framework, and best practices.
- An invitation to a brokerage event where you can meet suppliers and other potential buyers with common interests.
- If a specific collaboration emerges with a solution provider, the ENTRANCE team will offer free personalized funding advice that includes public, private and alternative financing solutions. Click here for more information.

Are you eligible?

To be eligible for participation, you must:

1. Be a European public institution / administration with an interest in purchasing an innovative European ITS solution.
2. Interested in reducing the negative environmental impact of city logistics.
3. Have signed up to the ENTRANCE matchmaking platform.
4. Have provided us with your contact data using (use form below).

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PNO

1

European matchmaking platform for innovative transport and mobility tools and services

How can you apply?

Breathe, and take a few seconds. Life is too short to spend time filling forms. So, let's keep it simple. To apply for the Open Call there are two things you need to do:

1. **Complete the application form below** and return it to secretariat@entrance-platform.eu.
2. **Sign up to the ENTRANCE matchmaking platform**. By signing up you gain access to public, private, and alternative funding opportunities; a matchmaking platform for buyers, funders, and solution providers of European sustainable and innovation transport & mobility solutions; a public funding secretariat and you'll be the first to learn about new brokerage events and open calls. When you find a match, you can receive offline funding and additional support for implementing the solution in your city.

Application form ENTRANCE X EITUM Open Call	
Name	...
Job title	...
Organization	...
Department	...
Email	...
Phone	...
Website	...
Type	Are you a facilitator of the implementation of ITS solution in your city or do you represent a potential buyer? (*Please indicate facilitator or buyer*)

Your data will be taken care of in compliance with the General Data Protection Regulation (GDPR).

Eligible applicants will be given access to the market analysis and will be invited to the upcoming brokerage event.

About ENTRANCE

ENTRANCE boosts the implementation of innovation solutions that contribute to the ambitious goals envisaged by the European Commission for reducing the transport CO2 emissions by 2030 and 2050 and respond to the increasing mobility needs of people and goods thereby strengthening the European competitiveness and boosting growth and jobs.

ENTRANCE offers a common and legitimate European Matchmaking Platform and complementary off-line services designed to mobilise financial resources to accelerate the market access and scale up of "first of a kind" sustainable transport solutions. The overall concept focus of the ENTRANCE project lies in the "supply-demand-finance" triangle that is envisaged for all transport and mobility modes and all relevant stakeholders.

www.entrance-platform.eu

The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

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European matchmaking platform for innovative transport and mobility tools and services

About EIT Urban Mobility

EIT Urban Mobility is an initiative of the European Institute of Innovation and Technology (EIT). Since January 2019 it has been working to encourage positive changes in the way people move around cities in order to make them more liveable places. Its aim is to become the largest European initiative transforming urban mobility. Co-funding of up to € 400 million (2020-2026) from the EIT, a body of the European Union, will help make this happen. EIT Urban Mobility:

- Creates systemic solutions that will move more people around the city more efficiently and free up public space.
- Brings all key players in urban mobility together to avoid fragmentation and achieve more.
- Engages cities and citizens from the word go, giving them the opportunity to become true agents of change.

www.eiturbanmobility.eu

Please notice that EIT Urban Mobility's Open Call for Innovation for the Business Plan 2023-2025

Please notice that all of the suggested solutions are directly related to the open call for funding of EIT Urban Mobility and therefore the market analysis can provide you with wide opportunities to identify collaborators for your potential proposals: https://www.eiturbanmobility.eu/call-for-innovation-for-the-business-plan-2023-2025/

The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

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ANNEX 5: MARKET ANALYSIS INTELLIGENT TRANSPORT SYSTEMS (ITS) SOLUTION PROVIDERS FOR SUSTAINABLE CITY LOGISTICS

The ITS technologies have to focus on traffic management, traffic monitoring and route optimization solutions for urban areas (well if they're applied in urban logistics) *Companies founded in less than 5 years are classified as start-ups*

Solution Provider	Type	Country (EU)	Website	Solution Deepening
A4 Mobility Srl (A4 Holding)	Large Company	Italy	https://www.a4mobility.it/en/about-us	**Traffic monitoring and management system**. A4 Mobility is a global player with ten years' experience in designing, developing and managing services and solutions in the field of ITS (Intelligent Transport Systems).
AGD Systems Limited	SME	United Kingdom	https://www.agd-systems.com/applications/traffic-pedestrian-control/	AGD makes easy-to-integrate, globally compatible ITS (**intelligent traffic systems**) product solutions designed to help create safer, greener, more efficient traffic and transport environments. AGD is one of the UK's most successful manufacturers of ITS products, delivering solutions for Smart Cities, Smart Highways and strategic transport initiatives around the world. Products serve Urban Traffic and Pedestrian Control, Highways and Enforcement environments, and applications such as tunnel and track.
Aimsun SL	SME	Spain	https://www.aimsun.com/real-time-transportation-management/	**Aimsun Live** is the only predictive transportation management solution that combines AI techniques with simulation in real time. This unique flexibility provides traffic control rooms with the highest levels of accuracy both under recurrent and non-recurrent conditions, and the ability to compare and rank multiple response plans. By combining these live transport data feeds, Artificial Intelligence (AI) and Machine Learning (ML) techniques as well as high-speed simulations with emulation of congestion/incident mitigation strategies Aimsun Live can accurately forecast the future transport network status that will result from specific management or information provision strategy.
Airmee	SME	Sweden	https://www.airmee.com/how-airmee-works/	**Airmee**'s world-class tech platform optimizes millions of deliveries and automates complex manual processes. Routes are optimized in real-time to ensure minimum travel distance and maximize vehicle capacity to ensure the fastest and most sustainable deliveries. Their platform is flexible and can be used by retailers, logistics providers and other businesses with logistics flows to ensure efficient operations at a low cost as well as being used by their small fleet of couriers.
Ais Alfaplan GmbH	SME	Germany	https://ais-alfaplan.de/de/branchen/spedition	**AIS alfaplan** creates great benefits for logisticians in terms of sustainability and ecological logistics through efficient route planning thanks to the use of intelligent algorithms. It collaborates with both international freight forwarders and with those involved in home delivery.
Alpega Group	Large Company	Belgium	https://www.alpegagroup.com/en/tms/solutions/alpega-tms/transport-planning/	**Alpega TMS** software allows the daily optimization of shipments. Developer and provider of transport management software and services. The company's software specializes in freight exchange, carrier allocation, planning and optimization, transport execution, cost optimization and SRM (Supplier Relationship Management) that enables freight forwarders, logistics providers or shippers throughout the supply chain.
ALUVISA	SME	Spain	http://aluvisagrupo.com/#smartmobility	Aluvisa provides a **real-time adaptive system** for regulating traffic flows. Software platform for centralized management of all types of devices with ITS functionality. Non-intrusive traffic sensor systems.
APM PRO Sp. ZOO	SME	Poland	https://apm.pl/en/	**Control Pro** – Traffic Management Systems are integrated solutions from the Intelligent Transport Systems area. Implemented software allows to connect different detection, monitoring and control subsystems, thus creating a multimodal traffic management platform. **OnDynamic** – Multimodal Traffic Monitoring System – an intelligent architecture of sensors and specialized software, which guarantee computing large quantities of various and scattered traffic data.
Applicat	SME	Israel	https://www.applicat.com/use-cases/last-mile-delivery/	**Right-First-Time AI™** platform is a set of technologies to yield feasible, real-world routes based on accurate delivery locations, not unverified ship-to addresses. It involves, among the others, TruAddress™, an AI-based routing optimization tool for last-mile deliveries.
Armis Group	SME	Portugal	https://www.armisgroup.com/intelligent-transport-systems/	**ARMIS ITS** is committed to the digitalization and decarbonization of transport and mobility, by bringing together updated Information and Communication Technologies knowledge and experience with research and deployment of advanced solutions to enhance mobility management in to highly complex transport systems, in accordance to European Commission ITS Regulations in favor of safe, clean, efficient, inclusive, affordable and sustainable transport.
ARS Traffic & Transport Technology	Large Company	Netherlands	https://ars-traffic.com/solutions/planning-and-logistics/	**Lyncxx Fleet Management** is a state-of-the-art solution for fleet tracking and fleet management. Lyncxx Fleet Management provides an in-car solution that tracks vehicle movements and a secure cloud-based solution that allows communication with all vehicles, records of the vehicle movements and provides management information. The Lyncxx in-car module can be installed on a range of onboard units (OBUs). As a result,

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				the Lyncxx in-car module is used to remotely track and manage vehicles and vehicle sub-system. The Lyncxx Fleet Management smartphone app module allows direct control of the in-car unit through NFC and Bluetooth.
ASIMOB (Advanced Services in Mobility S.L.)	SME	Spain	https://asimob.es/en/asimob/	ASIMOB connects road managers with their infrastructure, so that they can have updated information and evidence of the conditions in the roads. On-board equipment, that includes IoT components (sensors and camera) installed in the vehicles, to gather data of the road: visibility of the traffic signs, potholes and other irregularities in the surface of the rod, water or ice layers… Our processing algorithms and models in the Cloud collect and analyse the video and data using Computer Vision and Data Analytics.
Asya Trafik A.Ş.	SME	Turkey	https://www.asyatrafik.com/en/products/intelligent-traffic/intelligent-traffic-management-unit-centris.html	Intelligent Traffic Management Unit, **CENTRIS** is an image processing based, Intelligent intersection Control Module, which is an 'Intelligent Traffic System' works by making calculations that are based on the crowdedness on the intersection instead of fixed signalization times. The decision produced by the Central Processing Unit, CENTRIS is based on the video image gathered by the cameras (SERIS modules), which in turn gathers values, as vehicle numbers, and average vehicle speeds.
A-to-Be	SME	Portugal	https://www.a-to-be.com/	**ITS solutions** that range from urban mobility to traffic management, including the last-mile delivery. Suite of solutions for **Advanced Traffic Management Information System** and operational management platform for a complete view of operational scenarios, designed for traffic flow and safety –whether by taking action on its own or by allowing operators to take preventive and proactive actions.
AVT Stoye GmbH	SME	Germany	https://www.avt-group.de/loesungen#verkerhsmanagement	The **PENTAtraffic** city manager is the ideal modular platform that takes over all the tasks of a traffic computer and can be expanded into a complete traffic management system.
Axis Communications	Large Company	Sweden	https://www.axis.com/solutions/traffic	Axis offers many solutions to **manage traffic intelligently,** through the use of smart cameras within cities.
BeMobile Group	SME	Belgium	https://be-mobile.com/solutions/logistics-platform	Developer of **traffic management platform** designed to offer a wide array of smart mobility solutions. The company provides solutions for traffic management, tolling platform, logistics platform, traveler information, mobility payments and more. The logistics platform is designed around the central building blocks: smart route planning, traffic information, truck navigation, estimated time of arrival (ETA) and C-ITS.
Bercman Technologies AS	SME	Estonia	https://www.bercman.com/products/traffic-sensing-with-v2x/	**TRAFFIC SENSING WITH V2X**: traffic monitoring system so human error in the traffic environment will be reduced to almost zero. An intelligent roadside unit fitted with high-tech detection sensors and communication modules can be used to provide extra perception for increased safety. Essentially Bercman Road Side Units can be used to "see" through buildings and around corners. By tracking the road users and predicting their most probable trajectories RSU is able to communicate this information in real-time to relevant road users.
BigTRI IT	Start-up	Turkey	https://www.bigtri.net/domain/Mobility/	In BigTRI, we work on various emerging technologies to make transportation and mobility smarter in terms of management, efficiency, and safety. It develops C-ITS, V2X and other systems.
Bright Cape	SME	Netherlands	https://www.eitdigital.eu/fileadmin/files/2018/factsheets/digital-industry/AWARD-Factsheet.pdf	EIT Digital-supported **AWARD (Automating warehousing and last-mile delivery) platform** increases efficiency of the logistics process from warehouse to last-mile delivery. The easy to implement solution uses intelligent planning algorithms, machine learning and smart robotics (i.e. drones and AGVs).
CGI Lietuva	Large Company	Lithuania	https://www.cgi.com/en/transportation-and-logistics/intelligent-transport-systems	The evolution of **intelligent transport systems (ITS)** is transforming transportation networks, and CGI is at the forefront, using space, wireless, radar, sensor and other advanced technologies to drive innovation in a wide range of ITS areas.
Citelum SA (by EDF)	Large Company	France	https://www.citelum.com/cities/our-services/mobility-range/traffic-management/	Citelum supports cities in their urban **traffic management** and offers them new connected solutions to ease traffic flow, mainly based on traffic management by traffic light system and traffic management by video analysis.

Solution Provider	Type	Country (EU)	Website	Solution Deepening
Citilog	SME	France	https://www.citilog.com/solutions-products#Solutions	**Intelligent Traffic Systems** (ITS) solutions for traffic management, traffic safety and in a broader sense improving mobility is a moving target requiring adaptive solutions and innovative products.
Civic Integrated Solutions Ltd	SME	Ireland	https://civic.ie/traffic-management	Civic Group installs and mantains lots of **traffic management and control solutions** in urban areas.
Clearview Intelligence Ltd	SME	United Kingdom	https://www.clearview-intelligence.com/solutions/traffic/	**Traffic flow monitoring solutions** provide data and analysis to help traffic managers, road maintenance contractors and even road users make informed judgements and better decisions.
COMARK Srl	SME	Italy	https://www.comarkud.it/en/portfolio/counting-and-classifying-vehicles/	COMARK is able to provide complete solutions for **traffic monitoring systems** including **sensors**, control units for data collection and servers with data analysis softwares. More specifically, COMARK offers a broad portfolio of sensors based on different technologies that cover different needs in terms of accuracy, collected data and price.
DATIK INFORMACIÓN INTELIGENTE, S.L.	SME	Spain	https://www.datik.es/en/home	A non-conformist team constantly seeking out new and better solutions for **intelligent and efficient management of transport**.
DriverNet	Start-up	United Kingdom	https://www.driver-net.com/delivery	**DriverNet** is a software which transforms the journey planning. The company's platform and mobile application offer powerful productivity features such as time tracking, automated notifications, dependencies, timeline views and integrations, enabling teams to improve planning, optimize vehicle usage, eliminate waste while improving the environment. DriverNet enables delivery operations to seamlessly optimise routes, track locations and monitor progress in one user-friendly system. It optimises courier operations in cities.
Dropon	Start-up	Belgium	https://www.dropon.io/features/	**Dropon platform** organize your routes, monitor delivery operations and offer a superior customer experience, using autonomous and intelligent algorithms.
ELTODO AS	Large Company	Czech Republic	https://www.eltodo.cz/en/products-and-services/traffic-systems/traffic-operation-in-cities/	Our technologies can improve traffic flow and reduce traffic jams, reduce the number of accidents, increase road safety, minimize transport emissions and noise, reduce time lost waiting at traffic lights, make public transport more attractive and preferable, and save costs through the use of modern technologies.
Escher Group	SME	Ireland	https://www.eschergroup.com/logistic-solutions/track-trace-last-mile-delivery/	**Track, Trace, and Last-Mile Delivery** is a cloud-based suite of parcel tracking and traceability solutions that help postal operators meet the rapidly changing business requirements for first and last-mile delivery. With integration to transportation logistic planning software, Track, Trace and Last-Mile Delivery enables real-time dynamic optimization of parcel delivery routes.
FARA AS	SME	Norway	https://fara.no/about-us/	FARA is a leading provider of comprehensive, **intelligent transport systems** in the Nordics and beyond. From Account-Based Ticketing (ABT) to Real Time Information (RTI) and Fleet Management, we have delivered innovative mobility solutions to improve information flow, passenger experience and transport infrastructure for over 20 years.
Fastvan	SME	United Kingdom	https://www.fastvan.com/	**Cloud-based platform** with Automated AI Driven Dynamic Route Planning & Optimisation: Plan & optimise multiple shipments from multiple stops and distribution hubs; Consolidate multi-stop intermodal shipments from first mile all the way to last mile orders; Planning parameters with real world constraints taken into account business rules.
FEIG Electronic	Large Company	Germany	https://www.feig.de/en/applications/traffic-data-acquisition/	**Powerful traffic management** thanks to comprehensive capture of relevant vehicle data. **Induction loop sensors** reliably capture all relevant vehicle data thanks to the induction loops embedded in the lanes in order to provide situational control for gantries.
FiLogic	SME	Netherlands	https://filogic.nl/voor-wie/last-mile-delivery/	**Filogic OpenTMS** allows quick and intelligent planning and route optimization. With **Filogic OpenTMS** you can plan the best and most efficient routes quickly and easily. You always have detailed information on locations, customers, schedules and loads. In addition, you can send invoices in no time and see in real time what turnover and profit you are making.

Solution Provider	Type	Country (EU)	Website	Solution Deepening
FLIR Systems (Teledyne)	Large Company	Belgium	https://www.flir.com/products/trafione/	**FLIR TrafiOne** is an all-round detection sensor for traffic monitoring and dynamic traffic signal control. FLIR TrafiOne helps traffic engineers to improve traffic flows, reduce vehicle idling time, monitor congestion, enhance safety for vulnerable road users, collect data and measure travel & delay times for different transport modes.
Genyz Transport Solution	SME	United Kingdom	https://genyztransport.com/traffic-management/	Genyz Transport Solutions is pioneering the **Intelligent Traffic Management** paradigm which involves the application of multiple intervention strategies using a range of tools, technologies and policies to ensure maximum value is obtained from the strategic road network in terms of capacity and safety.
GeoConcept SA (Nomadia)	SME	France	https://en.geoconcept.com/route-optimisation-last-mile-delivery	**GEOCONCEPT's planning optimization solution** use intelligent tools to overcome traffic congestion, traffic restrictions, parking problems, absent customers, etc.
GEOTAB Telematics	Large Company	Italy	https://www.geotab.com/industries/courier-delivery-fleet/	**Courier and delivery fleet management**: Complete visibility of workforce, assets, and costs; Dispatching, navigation and route optimization; Collision detection & notification, driver safety scorecard; High-performance GPS technology; Advanced dashboard reports; Open platform for easy data integration; Marketplace Apps and Add-Ons.
GMV Innovating Solutions	Large Company	Spain	https://www.gmv.com/en/sectors/intelligent-transportation-systems	GMV is a leader in the design, development, implementation, and rollout of **Intelligent Transportation Systems** (ITS) that guarantee compliance with sector standards. GMV offers integrated, fully operational custom and Software as a Service solutions, involved in the complete development of the project and including development hardware and software and its own manufacturing.
GoodVision Ltd	Start-up	United Kingdom	https://goodvisionlive.com/	GoodVision provides automation tools in all stages of traffic projects, from AI traffic data collection to traffic modelling and real-time traffic control
Gordian Logistics Optimisation Systems	Start-up	Sweden	https://www.thegordian.io/	**DeepTech software** based on proprietary movement data analytics and AI that makes transport planning easy and effective by untangling millions of movement traces. It provides consolidated logistics planning.
Gordon Services AB	SME	Sweden	https://gordontech.io/?utm_source=gordondelivery	The **Last Mile Platform** from Gordon allows the e-retailers to control logistics flow and follow the deliveries from start to finish. The platform uses AI e ML optimizing routes and managing capacity.
GoSwift OU	SME	Estonia	https://www.goswift.eu/	GoSwift designs, deploys and operates **intelligent transportation management systems** including scheduling, booking, queue management and automated access solutions for vehicles at traffic bottlenecks. Our systems will ensure just-in-time access to transport gateways with efficient and secure traffic flow in border checkpoints, ports, logistic centres and industrial complexes.
Green Future Logistics SA	Start-up	Switzerland	https://green-soft.bubbleapps.io/loop	**LOOP** is a fleet management software which, among the others, thanks to artificial intelligence it manages to create optimal routes for all vehicles in a fleet.
Grupa Eldro	SME	Poland	https://eldro.pl/services/	**ITS systems** (e.g., traffic and information management systems, parking systems, height, and weight preselection tools, ANPR technology and CCTV systems)
GRUPO ETRA SA	Large Company	Spain	http://www.grupoetra.com/en/	GRUPOETRA has developed a set of solutions, ranging from intelligent and adaptive **traffic management systems** to genuinely integrated Smart Mobility solutions encompassing all elements forming part of the urban mobility ecosystem: Public transport, pedestrians, electric vehicles, bicycles, etc.
HERE Technologies	Large Company	Netherlands	https://www.here.com/applications/last-mile	**HERE Last Mile** is a unique real-time route planning platform that uses maps, location and traffic data and algorithms for fast and efficient multi-vehicle operations. The platform organizes jobs across vehicles in your fleet, replacing manual processes with automated tools that save time and money.
HEUSCH BOESEFELDT GmbH	SME	Germany	https://www.heuboe.de/en/products-	Heusch Boesefeldt specializes in developing **traffic management systems**. Heusch/Boesefeldt´s high-performance systems provide the functionality for central data acquisition, data analysis and data provision for cooperative traffic management.

Solution Provider	Type	Country (EU)	Website	Solution Deepening
			services/its-architecture.html	
INDRA Sistemas SA	Large Company	Spain	https://www.indracompany.com/en/mova-traffic	**Mova Traffic** solutions, built on open systems, stand out for their flexibility in terms of integration and comprehensive coordination of operations with maximum efficiency and reliability. We are leaders in transforming mobility, using cutting-edge technology to manage and regulate traffic and infrastructure, in roads, tunnels and cities, including Smart solutions and solutions for connected vehicles. We also specialise in operational solutions for airports and ports. We promote the optimisation of transport solutions with multimodal planning and optimisation systems
InfoTripla OY (Aebi Schmidt Group)	Large Company	Finland	http://infotripla.fi/?lang=en https://www.aebi-schmidt.com/en/	InfoTripla provides lots of **Smart Traffic technologies**.
Infracontrol AB	SME	Sweden	https://www.infracontrol.com/en/its/	**Traffic management, control and information solutions** that provide full control over traffic flows.
INRIX	Large Company	Spain	https://inrix.com/industries/deliveries-and-logistics/	INRIX provides a leading on-demand analytics platform for making data-driven decisions and managing mobility to keep the world moving smarter, safer and more efficiently. We help delivery and rideshare companies outsmart congestion to ensure packages and people will always arrive on time. We'll help you see the big picture so you can plan the best delivery route for each day, time, and location. Use our comprehensive parking data to know exactly where loading zones are located and what their predicted availability is.
IntelliGo	Start-up	Denmark	https://intelli-go.dk/	**Urban mobility management software** powered by AI dedicated to optimising signal-based intersections maximises urban mobility by increasing the capacity of traffic intersections and minimising the impact of city traffic on the environment by decreasing CO2 emission due to less 'stop and go' traffic in urban areas.
Intetra Electronics AS	SME	Turkey	http://www.intetra.com.tr/en/akilli-ulasim-sistemleri/	Intetra provides several **intelligent transportation systems**.
InTraffic	SME	Netherlands	https://www.intraffic.nl/english/	InTraffic designs and builds applications for **Traffic Management**, Infrastructure Monitoring and Travel Information.
ISSD - Integrated Systems & Systems Design	SME	Turkey	https://www.issd.com.tr/en	ISSD® provides solutions for **Intelligent Transportation Systems (ITS)** such as active traffic management, dynamic junction management, automated number plate recognition.
ITS Teknik A/S	SME	Denmark	https://www.its-teknik.dk/trafikregistrering/	ITS Teknik sells and installs all types of equipment for temporary and permanent recording of all types of traffic. We can provide counting equipment that collects data via coils, hoses or radar sensing, eg. counting machines from Marksman, MetroCount and DataCollect as well as our ITS-Count counting stations.
Kapsch Trafficom AG	Large Company	Austria	https://www.kapsch.net/en/solutions/traffic-management	**Kapsch TrafficCom**'s traffic management solutions: Urban areas - Managed lanes and integrated mobility management solutions provide an overview of a city's overall traffic situation – and thereby contribute to an optimal steering of traffic and thus the prevention of congestion and the reduction of emissions. Highways - Our solutions were designed to reduce travel time and improve the safety of high-speed traffic. Bridges and tunnels. We implement all-in-one solutions for traffic monitoring, road user protection and emergency measures.
Kardinal	SME	France	https://kardinal.ai/solutions/	**Always-On Route Optimization Solution** is designed to completely incorporate your background and processes, making fine tuned and relevant optimization possible in real-time and at all stages of the process.
LACROIX - City	Large Company	France	https://www.lacroix-city.com/activities/traffic/urban-traffic/	Specialising in **traffic management** for over 30 years, LACROIX City's Traffic Division offers a complete range of products for securing, supervising and streamlining traffic flows for all road users (vehicles, public transport, active mobility).
LOCALYSE	SME	Belgium	https://localyse.eu/odiq/	**ODIQ** is the perfect traffic monitoring tool for government organizations, utility and road construction companies that want to monitor accessibility and improve it where they can, for contractors that want to show that their interventions have had a positive impact on traffic, and for traffic experts who want to analyze traffic situations in context.

Solution Provider	Type	Country (EU)	Website	Solution Deepening
Locus	SME	United Kingdom	https://locus.sh/use-cases/last-mile-delivery-routing/	Locus is an **intelligent decision-making and automation platform** for logistics. **Locus DispatchIQ** is a Route Planning Software. The company has been founded in 2015 in India but has already reached several million dollar of fundings.
Logistics Reply SpA	Large Company	Italy	https://www.reply.com/lea-reply/en/Platform-and-solutions/last-mile	**LEA Reply™ Last Mile** is the solution designed to facilitate last mile delivery management and certification available on smartphones (Android App) and rugged terminals. It manages trip composition, route optimisation, loading, returns/pick-ups, real-time status updates to customers, driver notifications, different forms of payment and certified digital signatures for proof of delivery.
MACQ S.A./N.V.	SME	Belgium	https://mobility.macq.eu/	Macq is a Belgian family-runned company providing highly reliable and innovative products for high-end applications in the Smart Mobility & ITS sector around the world. We distinguish ourselves by developing the software and hardware in-house, which gives us the freedom to easily adapt our products to the needs of our customers.
Milkman SpA	SME	Italy	https://www.milkmantechnologies.com/last-mile-operations/	**Milkman Home-Delivery Platform** for Last-Mile Operations uses AI, ML and Hyper-Automation technologies to analyse traffic patterns and data gathered from the fleet driver's historical service time for future planning and optimising delivery routes.
Mobility Sensing BV	SME	Netherlands	https://www.mobilitysensing.com/solutions/smart-traffic-monitoring/	**StreetSense** will monitor traffic in every street. Its sensor pods were designed to keep installation and operational costs to a minimum.
Monotch	SME	Belgium	https://www.monotch.com/solution/tlex-i2v/	The **TLEX I2V** platform is a highly scalable platform specially designed to connect roadside equipment to information brokers, the automotive industry, road authorities and ultimately road users. All of this is bi-directional, continuously, real-time and vendor-independent. Today, TLEX connects all Dutch Smart traffic lights to road users and road authorities: informing road users, prioritising traffic, and optimising traffic flow with the first countrywide implementation worldwide. In addition, TLEX technology is also used in other European countries and is often used in international C-ITS pilots and showcases.
Movyon SpA (Gruppo Autostrade per l'Italia)	Large Company	Italy	https://www.movyon.com/en/traffic-management	We are building a smart network with **traffic management technologies** both in cities and suburban areas, to provide drivers with all the information they might need to travel safely and to be informed about the conditions of traffic in real time.
Municipia SpA (Gruppo Engineering)	Large Company	Italy	https://municipia.eng.it/portfolio-2/	Municipia designs and develops hardware, software and IoT technologies to give life to Smart Mobility, Smart Parking and City Logistics projects. Thanks to the suite of integrated and modular products, based on Cloud, sensing and RFID technologies, it creates innovative and return-on-investment solutions. Solutions which optimise access, payment and control systems, road safety, the environmental impact of urban mobility through the design and management of LTZ with public-private partnership and project financing formulas.
Myloc AB	SME	Sweden	https://myloc.se/en/myloc-city-logistics-eng/	**Myloc City Logistics** is a cloud service and a digital logistics platform for municipalities and companies that want to work efficiently with their city logistics, regardless of whether the business has it under its own auspices, or has outsourced the task to a logistics player. More goods can be delivered with fewer vehicles and greater safety to the various businesses. The purpose is to streamline deliveries within an area and at the same time create several positive effects for the municipalities and companies.
Nabla Quadro S.r.l.	SME	Italy	http://www.nablaquadro.it/en/mobility/	Developer of a **wireless sensor for traffic flow monitoring** designed to create a network of intelligent transport systems. The company's sensors provides information about intersection management and occupancy detection of parking spaces, enabling users to practice smart mobility.
NeoGLS	SME	France	https://www.neogls.com/en/products/	The company is imperative in the field of the **C-ITS** today by being the leading player of the next technological revolution in France. NeoGLS proposes innovative solutions for: The management of the road (Real-time patrol car and snowplow computerized handrail); The transportation of goods in particular dangerous goods; The management of Cooperative Intelligent Transport Systems (C-ITS).
Neurosoft PL	SME	Poland	https://en.neurosoft.pl/activities/intelligent-transportation-systems/	Use of **artificial neural networks technology** in intelligent transportation systems and road safety solutions.
Nicander Limited	SME	United Kingdom	https://www.nicander.co.uk/	Nicander is a specialist UK-based software systems company delivering a range of **intelligent transport**, asset management and industrial software solutions from simple desktop applications for fault and service operations management through to complex IT systems for effective regional and national transport information and control.

Solution Provider	Type	Country (EU)	Website	Solution Deepening
Nota AI GmbH	Start-up	Germany	https://www.nota.ai/its	**Real-time lightweight ITS solutions** based on our AI technology improve traffic flow, saving city traffic-congestion-related costs and reducing the time spent by drivers stuck in traffic.
OmniOpti d.o.o.	Start-up	Slovenia	https://omniopti.si/	The core competence of OmniOpti is Logistics / Mobility, specifically **advanced algorithm for alternative routes**, which can be used in route optimization process.
OnTruck	SME	Spain	https://www.ontruck.com/en/why-ontruck/transportation-management-technology	State-of-the-art software to digitalise transport management, using artificial intelligence and machine learning applied to freight transport. Their algorithms allow to optimise vehicle capacity and delivery routes.
Optiyol	SME	Turkey	https://www.optiyol.com/last-mile-operations	Optiyol is a **B2B Software** solution which helps retailers and carriers for end-to-end optimization of logistics; from planning with advanced algorithms to execution with a driver app. Optiyol is a next-generation approach to last-mile transportation optimization that integrates driver preferences, business strategies, variability of demand and traffic to create both efficient and practical route plans autonomously.
ORTANA	SME	Turkey	http://www.ortana.com/new/index.php/en/solutions/its	Ortana is one of the leading **intelligent and integrated traffic management systems** supplier company. The Company presents ITS solutions with fiber optic, copper and wireless communication infrastructures based on TCP/IP or serial communication such as Profibus.
P. Ducker Systems Ltd	SME	United Kingdom	https://pdslimited.co.uk/proud-of-work/its/	Innovative **Intelligent Transport Systems** and technologies from the control room to the road side. Traffic Management Systems – Integrating disparate assets along the road network into a fully integrated environment. Providing a clear and concise operator interface enabling users to quickly identify any operational issues on the network and be guided through a workflow to quickly and safely resolve the situation.
Peek Traffic (Dynniq Mobility)	Large Company	Netherlands	https://www.peektraffic.eu/what-we-do/adaptive-traffic-control/	**ImFlow** is an adaptive traffic control application using state of the art control algorithms to manage traffic flows. To optimize the traffic flow, the algorithms use a mix of real-time traffic data and prediction models. With a decentralized approach, ImFlow does not require a traffic control center for optimization.
Plotwise BV	SME	Netherlands	https://www.plotwise.com/	Powering the future of **urban logistics**. Next generation **planning platform** that grows your same & next day delivery business from day one.
Prisma Solutions	SME	Germany	https://www.prisma-solutions.com/en/	**TRAFF-X®** is a modular software solution platform for cooperative traffic management in administration. Designed and used by traffic experts - ranging from user interface and business logic to data management.
PTV Group	Large Company	Germany	https://company.ptvgroup.com/en/products#c2871	Set of **state-of-the-art software for planning and optimizing transport logistics**. From logistics process chains to freight transport scheduling and route planning until the last mile to the customer. PTV Navigator is a professional navigation solution available for trucks and for fleets. It guides your drivers to their destination safe and sound, and on time. The software navigates them turn-by-turn and only on routes suited to their vehicle profile. PTV Map&Market enables you to: make well-informed strategic decisions thanks to extensive data; find ideal locations for stores, warehouses and depots; ensure balanced and geographically compact sales areas; plan optimised schedules and routes for your field staff automatically.
Q-Free ASA	Large Company	Norway	https://www.q-free.com/traffic-management/	**Intelligent traffic management solutions** and **Cooperative intelligent transport systems (C-ITS)** for urban and inter-urban environments that make it easier for towns and cities to create safe and less congested traffic networks while balancing the needs of many different types of travelers.
Quantum Software SA	SME	Poland	https://quantum-software.com/en/system-tms-qguar/	**Qguar TMS** is a system designed to support planning, monitoring and settling accounts of transport processes. Qguar TMS (Transport Management System) is a piece of comprehensive software for transport management that offers its users an entire range of solutions that facilitate daily work within transport tasks, realized in company offices, dispatch rooms or reloading hubs. The Mobile version allows one to exchange information with a central TMS system, concerning the route, unloading and loading operations, transport efficiency and potential atypical events faced during realization of shipment tasks, managing the ship orders in real time, also during last mile delivery.
Redflex (Verra Mobility)	Large Company	United Kingdom	https://redflex.com/	**Urban traffic management** is a key issue facing most local councils and cities, with a focus on improving traffic flows, curbside management, including parking efficiency and air quality (Low Emission Zones). Redflex's smart solutions are increasingly playing an important role in creating more intelligent traffic systems and improving mobility in urban centres.

Solution Provider	Type	Country (EU)	Website	Solution Deepening
RTB	SME	Germany	https://www.rtbsafetraffic.com/	RTB develops, produces and markets innovative **traffic solutions** in four areas. We are an international company offering solutions in the traffic lights, detection, parking and e-mobility segments.
Scandinavian Automation Intelligence	SME	Denmark	http://saintelligence.com/	SAI is a sister company of INTETRA. Intetra engineers, based in Istanbul, design and develop high-tech mobility solutions for the World of Mobility, and is the leading ITS partner for both private and public players in the industry. SAI engineers in Copenhagen, bring Intetra products and solutions to the European markets, as well as develop new solutions utilising the production facilities in Istanbul.
Sensys Gatso Group AB	Large Company	Sweden	https://www.sensysgatso.com/solutions-road-safety-enforcement	Sensys Gatso is the leading provider of **automated traffic enforcement solutions** with a strong global presence. Our mission is saving lives by changing the driving behavior of motorists. We are firmly committed to improving road safety by reducing vehicle speed and red light negation, by optimizing traffic flows and by contributing to a sustainable urban environment, always in close partnership with governments and other authorities all over the world.
SICE	Large Company	Spain	https://www.sice.com/en/business-areas/intelligent-traffic-systems/urban-traffic	**ADIMOT** is an integral **smart mobility management tool** developed by SICE by applying the highest levels of technology and traffic engineering. In addition to the centralized management of a city's traffic signals, this system allows other systems such as access control, public transport priority, enforcement, user information through message panels, traffic surveillance cameras, etc. to be integrated and operated. In other words the platform facilitates centralized control for full city mobility management; it improves levels of service and contributes to energy efficiency by decreasing delays and providing detailed real time information to users.
Siemens Logistics	Large Company	Germany	https://www.siemens-logistics.com/en/parcel-logistics/digital-solutions/last-mile-optimization	**Last Mile Optimization software** is designed to support the daily generation of optimized delivery zones. - Possibility of different optimization targets according to needs; - Possibility of different optimization targets according to needs; - Consideration of different areas of responsibility, for example with areas assigned to different delivery organizations; Selection of the best-fit optimization results via a GIS-based user interface and defined KPIs; - Assignment of delivery staff to defined delivery zones; - Automatic generation of sorting instructions
Simacan B.V.	SME	Netherlands	https://www.simacan.com/solutions/home-delivery	**Simacan** is an **open and vendor-independent cloud platform** for digital cooperation in transport & logistics. Simacan enables fast and secure digital cooperation with – and between – transport companies and shippers to tackle industry-wide challenges, such as reducing transportation costs, optimizing the transport supply chain and reducing CO2. Simacan delivers transport visibility and manages en-route exceptions. It also provides safety warnings, last-mile delivery instructions and in-cabin information whilst taking into account traffic accidents, congestion and transport regulations. Using Simacan means you are able to analyse your fleet data and optimize transport operations for a smarter supply chain.
Simplifai Systems Limited	Start-up	United Kingdom	http://www.simplifaisystems.com/	Using artificial intelligence, Simplifai generates **real-time traffic control strategies** to solve complex issues that are currently poorly managed. Simplifai could be used to address the following common traffic problems: Relieving routine or unexpected congestion; Moving people to and from major events such as concerts or sports matches, quickly and safely; Reducing air pollution or redistributing it to areas where it causes less human harm; Maintaining effective traffic flow around roadworks or traffic incidents; Getting people home safely in advance of inclement weather; Evacuating a city in an emergency
SINELEC SpA (ASTM Group)	Large Company	Italy	https://www.sinelec.it/en/	Electronic Tolling, **Intelligent Transportation Systems** (roads, tunnels and bridges), Telecommunications and IT solutions. The development of innovative solutions for a safe and smart management of traffic and transportation infrastructures is one of our priorities since we believe, in line with the Group vision, that the creation of a sustainable mobility model is a key prerequisite for the country growth and for the well-being of citizens.
SmartMonkey.io	SME	Spain	https://smartmonkey.io/en/	Managing the last-mile, end to end. **Plan and Optimize routes** in the easiest way: Optimize your routes in seconds; So flexible that you could change the entire planning at anytime; You will have your planning under control in a grade you have never dream it before; Reduce up to 30% your carbon footprint.
Sprint SA	SME	Poland	https://sprint.pl/en/services/aplikacja-sprint-its	The **SPRINT/ITS/SCATS traffic management system** is dedicated for cities - it is an ITS system configured according to specific city needs, while the traffic control layer is based on the SCATS system supplemented with additional functionalities.
SupplyStack (by Transporeon)	SME	Belgium	https://www.supplystack.com/tms-extended	All-in-one Transportation Management Platform, **SupplyStack's TMS+** CORE layer is capturing all relevant events from several systems. It's like your central nervous system, sensing what is happening in your transportation network. With SupplyStack Home Screens everyone can create their own operational dashboard, giving them a personalized view on what is important for them. SupplyStack's modern TMS combines state of the art technology with an impressive UX/UI that presents the right information, to the right people at the right time.

Solution Provider	Type	Country (EU)	Website	Solution Deepening
SWARCO AG	Large Company	Germany	https://www.swarco.com/solutions/traffic-management/urban-traffic-management	SWARCO's well-thought-out **Urban Mobility Management** stands for intelligent, sustainable traffic solutions. From smart intersections to the connected Smart City. New technologies, ranging from traffic light assistance systems in cars, that inform you about the status of traffic lights ahead of you, to building more efficient and more reliable intersection, allows us to actively shape the future of mobility. It also provides C-ITS.
T.net SpA	SME	Italy	https://www.tnet.it/en/engineering-iot/	T.net designs the "Smart" services of today and tomorrow, **IoT solutions** and projects, focusing primarily on solutions for Smart Farming, Smart Mobility and Infrastructures for the Intelligent Transport System that will make it simpler, safer and more efficient. experience of people in the relationship with technologies and their environment.
TagMaster	SME	Sweden	https://tagmaster.com/traffic-solutions/	TagMaster provides innovative and flexible solutions for **traffic systems**. Our technology features the highest quality in Radio Frequency Identification (RFID), Automatic Number Plate Recognition (ANPR) and Traffic Monitoring. The company develops and sells advanced sensor systems and solutions based on radio, radar and camera technologies for traffic management and monitoring. It has acquired Citilog and Magsys in France, two companies operating in ITS field.
Technolution BV	SME	Netherlands	https://www.technolution.com/move/traffic-management/	**MobiMaestro** is the most widely used platform for traffic management in the Netherlands, and it is gaining international momentum as well. Thanks to its modular structure, multimodal character and open architecture, MobiMaestro provides insight, overview and control over all your policy goals regarding traffic, environment and city management.
TECSEN Srl	SME	Italy	http://www.tecsen.it/index.php	**Intelligent Transport Systems** for the management of mobility in urban and extra-urban areas.
Tecsidel ITS	Large Company	Spain	https://tecsidel.com/en/toll-systems-its/its-systems/its/	The **ITS+ Intelligent Traffic System** provided by Tecsidel is the state-of-the-art monitoring and control system that gives updates on the transit status in an entire network of roads and informs users, in real time, through the integration of different equipment installed on the road or in a tunnel. Tecsidel Logistics Systems give a complete cover and are a secure option: . They are orientated to achieving better performance. They provide predictability, traceability and visibility to the operations of customers. They comprise smart systems and technologies for the planning, operational management and simulation in plants, warehouses, yards and transport. They allow sectorial configurations and are complemented with modules to cover specific aspects.
Telegroup Ltd	Large Company	Serbia	https://www.telegroup-ltd.com/intelligent-transportation-systems/	**ITS solutions** which help traffic and public transportation authorities to manage their traffic flows efficiently, ensure safety and reduce environmental impact in urban and inter-city areas. Intelligent transportation systems include a wide and growing suite of technologies and applications which need reliable infrastructure to connect existing isolated ITS systems into one unique ecosystem.
Telelink City	Large Company	Bulgaria	https://telelink-city.com/smart-transportation-traffic-lights/	**Intelligent transportation systems** which include: Classification of vehicles; Counting of vehicles; Speed and traffic direction measurement; Licence plates recognition; Traffic control software; Traffic simulation software; Traffic lights controllers, priority green light, etc.
THETIS IT SRL	SME	Italy	https://www.thetisit.com/our_solution/smart-mobility/	Thetis develops and delivers solutions for sustainable mobility of people and goods, applied to urban and maritime transport, with the aim to provide innovative services of traffic management, infomobility, safety and security towards a smarter use of transport networks and a more sustainable urban mobility.
TomTom	Large Company	Germany	https://www.tomtom.com/it_it/	**TomTom Traffic**: TomTom provides the most accurate, biggest coverage and the highest update frequency for real time traffic information in the world; helping governments & enterprises to manage traffic flows and plan travel routes efficiently.
TRAFFEST OU	SME	Estonia	https://www.traffest.com/?lang=en	TRAFFEST deals with the integration of different systems into a complete **traffic management system** in order to make these systems fulfil the final aims established for the whole. Typical examples of integration of different systems: – adaptive traffic light systems for intersections (traffic lights, traffic sensors); – coordinated traffic management systems for intersections; – border crossing point traffic information systems (barriers, cameras, variable message signs, traffic lights, license plate recognition); – traffic event detection and response systems (AID, cameras, variable mesaage signs, traffic lights); – highway traffic management systems (highway weather stations, traffic sensors, variable message signs).
Traffic Technology	SME	Germany	https://www.trafficteches services.com/	The company's **Personal Freeway Assistant and Personal Signal Assistant product** is a cloud based patented prediction process that allows for immediate vehicle-to-infrastructure (V2I) integration and connected vehicle applications.

Solution Provider	Type	Country (EU)	Website	Solution Deepening
Services Europe GmbH				
TrafficLab	SME	Italy	https://trafficlab.eu/prodotti/traffic-flow/	**Traffic FLOW**: Traffic monitoring, parking management, incident detection, urban security and much more. Traffic FLOW server can be easily configured through a graphical interface to give you all the information in no time.
Trafsys AS	SME	Norway	https://www.trafsys.se/en/traffic-management-4	**Trafvision** is a powerful modular system for efficient control and monitoring of traffic and systems in tunnels and on roads and bridges.
Trapeze Group Europe	Large Company	United Kingdom	https://www.trapezegroup.eu/intelligent-transport-systems/	The **Trapeze ITS solution** is specifically designed to manage all aspects of the network, covering planning, operations, Automatic Vehicle Location and Control (AVLC), ticketing, headway management, real-time passenger information (RTPI), disruption response, depot management and business intelligenc
Tritium Systems	SME	Czech Republic	https://tritiumsystems.cz/nase-cinnost/smartcity/	Tritium Systems offer several solutions for smart cities: Information Systems; Traffic management; Parking; Cooperative systems; Systems integration.
T-Systems Digital Solutions	Large Company	Germany	https://www.t-systems.com/de/en/industries/travel-transport-and-logistics/smart-logistics	Digital solutions (IoT combined with AI) to optimize transport and logistics sector, from pick-up to the last mile.
Urban Radar	Start-up	France	https://urbanradar.io/private-solutions/	An independent third-party visualization, data analytics and AI solution, **Urban Radar cloud-based software** aggregates real-time mobility and infrastructure data into a platform for planners. We provide visualization, analytics and predictive features. Our platform works with different products. Three of them are dedicated to the challenges of logistics in cities. One is dedicated to 15 minutes cities planning. The city of Barcelona has already started a collaboration with them to improve and make more sustainable the urban logistics.
Urbantz S.A.	SME	Belgium	https://urbantz.com/platform/control-tower/	**Last Mile Delivery Management Platform** which manage and monitor the entire delivery operation with their Digital Control Tower module. Optimise all fleets, create hierarchical logistic structures and regain control over the entire operation. Optimise for cost, low CO2 emission or for better customer service. Automatically plan your delivery tasks taking into account any constraint: vehicle type and capacity, the driver's experience, traffic situation, customer requests, delivery & pickup slots.
UTI Grup	Large Company	Romania	https://www.uti.eu.com/business-lines/intelligent-transportation-solutions/urban-traffic-management/	The **traffic control systems** provided by UTI ensure adaptation to changing traffic situations and leads to the desired effects, also contributing to increased safety.
VARS BRNO AS (part of VINCI Energies Group)	SME	Czech Republic	https://www.vars.cz/en/intelligent-transportation-systems	**SMARTiC** is designed for centralized and regional traffic control rooms, for city traffic centres and for regional control rooms for road network management.
Verra Mobility	Large Company	United Kingdom	https://www.verramobility.com/traffic-management/	**Traffic Management**: We collect traffic information from our roadside sensors. Each sensor captures multiple forms of valuable data and meta data to best assist clients in their traffic management needs.
VIA Technologies	Large Company	Germany	https://www.viatech.com/en/industries/transportation/last-mile/	**VIA Mobile360** accelerates the development and deployment of innovative last mile autonomous delivery vehicles and services integrating advanced situational awareness, situational intelligence, and automated driving technologies. Combining durable, low-power systems designed

Solution Provider	Type	Country (EU)	Website	Solution Deepening
				for dependable operation in demanding urban and industrial conditions with advanced AI, Computer Vision, and Cloud integration features, VIA Mobile360 solutions provide highly integrated platforms for powering the new wave of hypermobility applications and services.
Vitronic GmbH	Large Company	Germany	https://www.vitronic.com/en-us/traffic-technology/intelligent-traffic-management	**Intelligent Traffic Management** solutions from VITRONIC can optimize and reduce urban traffic flows. Existing traffic monitoring systems help with accurate collection of the data you need to control and optimize traffic. Data is collected in real time and sent to a central location for processing.
Vivacity Labs Limited	SME	United Kingdom	https://vivacitylabs.com/	**AI-based Traffic monitoring solution** supports congestion reduction schemes.
VoLTRA solusions GmbH	SME	Germany	http://voltra-solutions.com/multisens_en.html	**MultiSens** is the right solution for all application areas in which highly precise traffic data is required. Its modular approach and combination of radar and laser technology allows MultiSens to provide excellent counting and classification precision, even under the most challenging traffic conditions.
Volue Industrial IoT (formarly Scanmatic AS)	SME	Norway	https://www.scanmatic.no/traffic/?lang=en	Volue Industrial IoT uses cutting-edge expertise within sensor technology, data processing and data communications to design and deliver instrumentation and communication solutions for the transport sector. Typical deliveries to the traffic sector are climate stations, SRM systems (Control, Regulation and Monitoring) for tunnels and bridges, ITV systems, sign management systems and other security and surveillance systems.
Vonzu Tech SL	Start-up	Spain	https://vonzu.io/en/features/	**Last Mile Logistics Management Platform**: Empowering digitalization in the urban distribution of goods. Vonzu allows Intelligent Business Process Automation to integrate, orchestrate and improve the logistic chain. Real-time visualizing and managing of the distribution operations from one single tool to achieve higher control over the process. The solution also includes a billing module and a data analysis module: Manual and/or automatic route assignation; Route optimization; Real-time tracking; Management of delivery personnel; Management of incidences; Branding.
Wasko SA	Large Company	Poland	https://www.waskogroup.com/offer/products/intelligent-transport-system/	**ITS system** allows efficient traffic and public transport management, improvement of traffic conditions for vehicles and other road users, applying priority to public transport, informing passengers about available means of public transport, informing drivers about current traffic conditions, planning, and development of transport infrastructure thanks to having rich analytical material.
WeAreDots	SME	Latvia	https://traffic.wearedots.com/	**Fits** is a neutral software back-office platform that connects a variety of road traffic sensors together and enables efficient and reliable data processing to improve capabilities of Traffic Authorities, Law Enforcement and Traffic Management Centres.
YoGoKo	SME	France	https://www.yogoko.com/transport/first-last-km-logistic/	**Y-SMART** combines hybrid communication technologies based on the most recent Cooperative ITS, Internet and IoT standards. Y-SMART technology manages data acquisition and transmission for large variety of needs, from road safety to traffic efficiency through data fusion for new services such as : cooperative ADAS, eCall, telematic services, High Definition map update, remote monitoring and control, EV charging management, fleet management, autonomous driving. Y-SMART includes the latest V2X communication standards to exchange data directly between vehicles and their surrounding environment. This V2X technology is also useful for first and last km logistic.
Yunex Traffic (a Siemens Business)	Large Company	Germany	https://www.yunextraffic.com/global/en/portfolio/traffic-management/centrals	**Intelligent traffic management**: Yunex Traffic has designed and built more than 1,000 traffic control centers all over the world – more than any other company. This unrivaled expertise has enabled us to create our traffic center platform in its current form, and we will continue to tap into it for future developments. What makes our traffic control centers outstanding is their high level of flexibility, scalability, openness and ease of use.
Last Mile Team	Start-up	Spain	https://lastmile.team	**Last Mile Digital Platform**© enables cities and companies to build, risk and investment-free digital twins of fairer, smarter and greener urban logistics and last mile delivery business models. Last Mile Digital Platform© integrates and orchestrates all technologies that Brands,

Solution Provider	Type	Country (EU)	Website	Solution Deepening
				Manufacturers and Brick-and-Mortar Retailers need to manage their mission-critical delivery operations and achieve logistical excellence across the entire delivery ecosystem.
Transmetrics	SME	Bulgaria	https://www.transmetrics.ai/solution/last-mile-planning/	Specifically designed for last-mile resource optimization, **Transmetrics' last-mile module** predicts the shipments ready for next-day delivery based on ZIP code grouping for each last-mile hub in the network. For dispatchers, we provide a customized user-friendly web interface to help them with their deliveries. One of the benefits is the reduction of last-mile vans used due to higher utilization.

ANNEX 6: ENTRANCE & EIT URBAN MOBILITY ARE CALLING ON ALL SOLUTION PROVIDERS READY TO PROVIDE EUROPEAN CITIES WITH INTELLIGENT TRANSPORT SYSTEMS (ITS) FOR SUSTAINABLE CITY LOGISTICS

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ENTRANCE

ENTRANCE & EIT Urban Mobility

are calling on all solution providers ready to provide European cities with

Intelligent Transport Systems (ITS) for sustainable city logistics

Are you able to become an ITS suppliers for European cities and ready to take on new clients?

If the answer is yes, read on!

The ENTRANCE project in collaboration with EIT Urban Mobility are actively attracting European public institutions and city administrations that are interested in implementing innovative Intelligent Transport Systems (ITS). As part of a detailed market analysis, they will receive a state-of-the-art overview of European solution providers.

This Open Call is your opportunity to showcase your ITS solution to a range of European cities.

Benefits of responding to the Open Call:

- Your solution will be part of the market analysis that will be presented to various European public institutions and city administrations that can become your new clients.
- An invitation to a brokerage event where you can meet potential buyers with common interests.
- Access to a detailed overview of funding opportunities, a legislative framework, and best practices.
- If a specific collaboration emerges with an interested public institution or city administration, the ENTRANCE team will offer free personalized funding advice that includes public, private and alternative financing solutions. Click here for more information.

Are you eligible?

To be eligible for participation, you must:

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PNO

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1. Be a European organization, with an interest in providing innovative ITS solutions to cities.
2. Interested in reducing the negative environmental impact of city logistics.
3. Have signed up to the ENTRANCE matchmaking platform.
4. Have provided us with the technical specifications of your solution (use form below).

How can you apply?

Breathe, and take a few seconds. Life is too short to spend time filling forms. So, let's keep it simple. To apply for the Open Call there are two things you need to do:

1. **Complete the application form below** and return it to secretariat@entrance-platform.eu.

2. **Sign up to the ENTRANCE matchmaking platform.** By signing up you gain access to public, private, and alternative funding opportunities; a matchmaking platform for buyers, funders, and solution providers of European sustainable and innovation transport & mobility solutions; a public funding secretariat, and you'll be the first to learn about new brokerage events and open calls. When you find a match, you can receive offline funding and additional support to start implementing your solution.

Application form ENTRANCE X EITUM Open Call

COMPANY DETAILS	
Company name	
Representative name	
Job title	
Department	
Email	
Phone	
Address	
Website	

SOLUTION DETAILS	
Name	
Short description	
Competitive advantages	
ITS service area(s). Please select with an "X"	
Commercial Vehicle Operations	
Parking Management	
Traveller Information	
Data Management	
Public Safety	
Sustainable Travel	
Vehicle Safety	

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Maintenance and Construction	
Public Transportation	
Traffic Management	
Weather	
Other	Please specify

User service type(s). Please describe the user services that your ITS system offers. 2 Examples are added.

Category	User services
Example 1: Mobility	*– Advanced Traveller Information System* *– Intelligent Traffic Signal System (I-SIG)* *– Signal Priority (transit, freight)*
Example 2: Environment	*– Dynamic Eco-Routing (light vehicle, transit, freight)* *– Eco-Approach and Departure at Signalized Intersections* *– Eco-Traffic Signal Timing – Eco-Traffic Signal Priority*

Technical characteristics on radiocommunication technologies. 2 examples are added.

Service type(s)	Radio communication technologies	Information	Radio Coverage	Message Latency
Example 1: Traffic Information Service	*TPEG*	*Data Broadcasting*	*Wide (~100 km)*	*Medium (~1 s)*
ETC	*DSRC*	*Bi-directional data*	*Small (~100 m)*	*Low (<100ms)*

Technical features of ITS communication system

Communication architecture	Functions	Communication technologies
Physical layer		
MAC layer		
Networking layer		
Facility layer		
Security layer		
Application layer		
Additional comments		

Communication media type. Please select with an "X" and comment if considered necessary

Wireline or wireless (fixed-to-fixed)	

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Wide area wireless (fixed-to-mobile)	
Dedicated short range communications (fixed-to-mobile)	
Vehicle-to-vehicle (mobile-to-mobile)	
Additional comments	
Wireless communication networks. Please select with an "X" and comment if considered necessary	
Direct	
Peer-to-peer communication	
Cellular network communication and Broadcasting transmissions	

Technical requirements and characteristics of radio technologies for the ITS systems. Select and describe

Type	System configuration	Technical characteristics
Dedicated short range communication (DSRC)		
V2X (V2I/V2V)		
ITS related cellular communication		
Broadcasting		
Millimetre-wave vehicle radar		
Road radar		

Characteristics

Item	*Technical characteristics*
Carrier frequencies	
RF carrier spacing (channel separation)	
Allowable occupied bandwidth	
Modulation method	
Data transmission speed (bit rate)	
Data coding	
Duplex separation	
Communication type	
Maximum e.i.r.p.	
Frequency Band	
Frequency Range	
Connectivity	
Duplexing	
Modulation	
Data transmission speed	
Maximum RF Power	
Data Latency	
Radio coverage	
Other characteristics, if relevant	

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Transmitter characteristics	
Parameter	*Value*
Other characteristics and/or specifications	
Operational	*Technical*

Please notice that by submitting this information you agree to having all details included in the ENTRANCE market analysis.

About ENTRANCE

ENTRANCE boosts the implementation of innovation solutions that contribute to the ambitious goals envisaged by the European Commission for reducing the transport CO2 emissions by 2030 and 2050 and respond to the increasing mobility needs of people and goods thereby strengthening the European competitiveness and boosting growth and jobs.

ENTRANCE offers a common and legitimate European Matchmaking Platform and complementary off-line services designed to mobilise financial resources to accelerate the market access and scale up of "first of a kind" sustainable transport solutions. The overall concept focus of the ENTRANCE project lies in the "supply-demand-finance" triangle that is envisaged for all transport and mobility modes and all relevant stakeholders.

www.entrance-platform.eu

About EIT Urban Mobility

EIT Urban Mobility is an initiative of the European Institute of Innovation and Technology (EIT). Since January 2019 it has been working to encourage positive changes in the way people move around cities in order to make them more liveable places. Its aim is to become the largest European initiative transforming urban mobility. Co-funding of up to € 400 million (2020-2026) from the EIT, a body of the European Union, will help make this happen. EIT Urban Mobility:

- Creates systemic solutions that will move more people around the city more efficiently and free up public space.
- Brings all key players in urban mobility together to avoid fragmentation and achieve more.
- Engages cities and citizens from the word go, giving them the opportunity to become true agents of change.

The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

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www.eiturbanmobility.eu

Please notice EIT Urban Mobility's Open Call for Innovation for the Business Plan 2023-2025

Please notice that all of the suggested solutions are directly related to the open call for funding of EIT Urban Mobility and therefore the market analysis can provide you with wide opportunities to identify collaborators for your potential proposals: https://www.eiturbanmobility.eu/call-for-innovation-for-the-business-plan-2023-2025/

The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

ANNEX 7: MARKET ANALYSIS ON ZERO EMISSION WASTE COLLECTION VEHICLES FOR URBAN SERVICES

Type of Vehicle/ fuel	Vehicle Size	RCV Category	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum weight [tonnes]	Payload [tonnes]	Dimensions (lenght, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Known to be delivered as waste collection vehicle [Yes/no]	Comments
BEV/FCEV	Heavy-duty	GT	E-Trucks Europe NV/BVBA	E-Trucks	Netherlands / Belgium	OEM / Retrofit	28	20 m3		150 KW (205 pK)	160		8 hours				Yes	E-Trucks builds hydrogen-hybrid vehicles and 100% electric powertrains for heavy vehicles and use the refuse compactors of Geesink Norba for waste collection. It has several use cases which can be all observed on the website (they provide useful indications on E-Trucks waste collector). **Hydrogen fuel cells used as range extender**.
BEV/FCEV	Heavy-duty	GT	Electra Commercial Vehicles		United Kingdom	Retrofit	44										Yes	100% Electric commercial vehicles build up on OEM bodies. Electra manufactures bespoke electric bodies on glider chassis developed by major OEMs, including Mercedes-Benz, Iveco, Dennis Eagle and Isuzu. **Hydrogen fuel cells used as range extender**.
BEV	Heavy-duty	GT	Mack Trucks	Mack LR Electric (only for American market?)	USA	OEM					376				536 peak hp		Yes	
BEV	Heavy-duty	GT	SEA Electric	SEA EV Refuse Truck		Retrofit	26			125-350 KW	138-220						Yes	SEA Electric's refuse collection vehicles can be built on new OEM cab chassis platforms such as the Dennis Eagle, Econic, IVECO Acco and Hino F Series.
BEV/FCEV	Heavy-duty	GT	Geesinknorba		Netherlands	Retrofit	22,5				200					180	Yes	100% electric refuse collection waste built up on the GINAF electric chassis. Geesinknorba provides its full electric RCV for several chassis types. Furthermore, it agreed with Hyzon for the provision of H2-based electric garbage truck for European market.
BEV	Heavy-duty	GT	DAF Trucks NV	DAF CF Electric		OEM	28			210 KW	170		80% in 30 minutes				Yes	DAF CF Electric 6x2 waste collection truck fitted with VDL E-power driveline
BEV	Heavy-duty	GT	VDL Translift		Netherlands	Retrofit				210 KW	170		80% in 30 minutes					The DAF CF Electric features a VDL electric powertrain alongside a fully electric VDL refuse collection superstructure.
BEV	Large	Sweeper	GINAF Trucks Netherlands BV	eSweeper	Netherlands	Retrofit	15				200					250	Yes	GINAF convert traditional truck chassis (mainly DAF LF and Mecedes Benz Ateco and Econic) in fully electric.
BEV	Heavy-duty	GT	GINAF Trucks Netherlands BV	eWaste Collect Series	Netherlands	Retrofit	22,5-26				200					220	Yes	GINAF convert traditional truck chassis (mainly DAF LF and Mecedes Benz Ateco and Econic) in fully electric.
FCEV	Heavy-duty	GT	Hyzon Motors	Hyzon Garbage Truck	USA	OEM				250 KW + 60 KW	140					125 miles	Yes	During three-year contract term, Hyzon will be Geesinknorba's exclusive hydrogen-powered electric garbage vehicle provider
BEV	Heavy-duty	GT	BYD Motors	BYD 8R Refuse Truck	USA	OEM	33			402 hp							Yes	
BEV	Medium	GT	BYD Motors	BYD 6R Refuse Truck	USA	OEM	12			523 hp							Yes	
BEV	Large	GT	Battle Motors	Battle LNT EV (only for American market?)	USA	OEM				500 hp							Yes	
BEV	Medium	GT	Lion Electric	Class 6 (only for North American market?)	Canada	OEM	12			250 KW	252					200 miles	Yes	
BEV	Heavy-duty	GT	Lion Electric	Class 8 (only for North American market?)	Canada	OEM	27			350 KW	336					170 miles	Yes	

Type of Vehicle/ fuel	Vehicle Size	RCV Category	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum weight [tonnes]	Payload [tonnes]	Dimensions (lenght, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Known to be delivered as waste collection vehicle [Yes/no]	Comments
BEV/FCEV	Heavy-duty	GT	FAUN (Kirchhoff Gruppe)	BLUEPOWER	Germany	Retrofit		11			85 KWh + 3 fuel cell modules (with 30 KW each) and a hydrogen tank (for 400-1000 KWh)						Yes	Combined battery and hydrogen fuel cell technology built up on a Mercedes Benz chassis. The fuel cells are provided by Cummins.
FCEV	Heavy-duty	GT	ULEMCo		United Kingdom	Retrofit												Diesel-based DAF for garbage collection and sweeper converted to run in hydrogen
BEV	Extra-small	GT	Alke Electric Vehicles	ATX models	Italy	OEM	0,7	1,7-2,8 m3								130	Yes	
BEV	Extra-small	GT	Goupil EV	G4/G6	France	OEM	1,2	9 m3								80	Yes	
BEV	Extra-small	GT	Carryway (MTS Group)	Melex 3 Series Cargo	United Kingdom	OEM		0,62 (3,6 m3)								37 miles	Yes	
BEV	Extra-small	GT	Carryway (MTS Group)	Carryall series	United Kingdom	OEM		0,45	LxWxH (cm): 349.3 x 127.7 x 119.6	14,9 KW							Yes	
BEV	Heavy-duty	GT	Dennis Eagle Ltd	eCollect	United Kingdom	OEM	26	20		200 KW	300					8 hours	Yes	
BEV	Large	GT	Smith Electric Vehicles	Smith Newton	United Kingdom	OEM		7								120 miles		The Smith Newton is designed for a wide range of applications including waste management.
BEV	Extra-small	GT	Addax Motors	MT15n	Belgium	OEM	0,9	0,75 (2 m3)	LxHxW: 3741x1990x1390	12 KW	14,4					132	Yes	
BEV	Extra-small	GT	Malex Sp. Zoo	SPECIAL	Poland	OEM		0,45		2,3-7,2 KW					5		Yes	
BEV	Extra-small	GT	Garia Utility	L7e	Denmark	OEM		0,8		15 KW	9,2-12,2					200	Yes	
BEV	Heavy-duty	GT	Peterbilt Motor Co.	Model 520EV (only for American market?)	USA	OEM					396						Yes	
BEV	Large	GT	Curbtender	eQuantum (only for American market?)	USA	Retrofit					180						Yes	Battery-electric refuse vehicle equipped with an XL Electric propulsion system and a Curbtender Quantum rear loader refuse truck body, built up on a Ford chassis.
BEV	Large	GT	XL Fleet	eQuantum (only for American market?)	USA	Retrofit					180						Yes	Battery-electric refuse vehicle equipped with an XL Electric propulsion system and a Curbtender Quantum rear loader refuse truck body, built up on a Ford chassis.
BEV	Extra-small	GT	Esagono Energia Srl	Gastone Pick-Up	Italy	OEM		0,6 (3,2 m3)	3890 x 1200 x 1940			5				180	Yes	
BEV	Small	Sweeper	Ladurner Equipment	LS2e	Italy	Retrofit	3,5	2 m3	5100×1660×2180		48,8						Yes	It was born from a collaboration between Ladurner Ambiente and Zoomlion, a Chinese mechanics and automation partner, for the marketing in the Italian and European market of the vehicles converted by the latter for use in waste collection.
BEV	Small	GT	Ladurner Equipment	LV5e	Italy	Retrofit	3,5	5 m3	5850x1998x2200	100 KW	56					160	Yes	
BEV	Small	GT	Ladurner Equipment	LC5e	Italy	Retrofit	6	5 m3	5950x1927x2200	120 KW	125					250	Yes	
BEV	Heavy-duty	GT	Futuricum (Designwerk Products AG)	Futuricum Medium Cab Collect 26E (6x2R)	Switzerland	OEM	26	18,5		500 KW	255-450		2 350kW: 0,8 h CCS Type 2 150kW: 1,2-2 h			150-250	Yes	It produces electric trucks for various applications. For waste collection there are also other types that they can customize by requests

Type of Vehicle/ fuel	Vehicle Size	RCV Category	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum weight [tonnes]	Payload [tonnes]	Dimensions (lenght, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Known to be delivered as waste collection vehicle [Yes/no]	Comments
													Type 2 AC 44kW: 5,5-9,7 h Type 2 AC 22kW: 10-19 h					
BEV	Heavy-duty	GT	Futuricum (Designwerk Products AG)	Futuricum Medium Cab Collect Crane 32E (8x2R)	Switzerland	OEM	32	22,5		500 KW	255-455		CCS Type 2 350kW: 0,8 h CCS Type 2 150kW: 1,2-2 h Type 2 AC 44kW: 5,5-9,7 h Type 2 AC 22kW: 10-19 h			150-250	Yes	
BEV	Large	Sweeper	Futuricum (Designwerk Products AG)	Futuricum Medium Cab Sweeper 18E (4x2R)	Switzerland	OEM	19	10,5		500 KW	255-450		CCS Type 2 350kW: 0,8 h CCS Type 2 150kW: 1,2-2 h Type 2 AC 44kW: 5,5-9,7 h Type 2 AC 22kW: 10-19 h			150-250	Yes	
BEV	Heavy-duty	GT	E-Force One AG	EF26 KSF Refuse Truck	Switzerland	OEM	26			440/550 KW	170-340			<1 h @ 350 kW	up to 8 h @ 44 kW	450	Yes	Numerous projects, such as an electrically powered refuse truck with a Geesinknorba body, are currently in development or nearing completion.
FCEV	Heavy-duty	GT	PVI (Groupe Renault)	C-LESS 27	France	OEM	27		8228x2550x3162	103-118 + 60 KW	125		10-15 minutes to recharge hydrogen			200	Yes	The CLESS is a 27-ton 100% electric chassis marketed in Europe by PVI, fitted for urban garbage collection
BEV	Medium	GT	Irizar e-Mobility	IE Truck (4-wheels, 2-axes)	Spain	OEM	10,5			160 KW	300		2 hours			250	Yes	
BEV/GV	Medium	GT	Irizar e-Mobility	IE Truck (6-wheels, 3-axes)	Spain	OEM				240 KW	400		3 hours			250	Yes	Tthe battery packs are intermittently charged by a generator driven by a compressed natural gas (CNG) engine.
BEV	Small	GT	ORTEN Electric Trucks	ORTEN ET 55 M	Germany	Retrofit	5,5	1,265		81 KW	58		4 hours		22 KW	100	Yes	ORTEN Electric-Trucks electrifies new or used diesel-driven commercial vehicles and turns diesel trucks into 100% e-trucks.
BEV	Small	GT	ORTEN Electric Trucks	ORTEN ET 35 M	Germany	Retrofit	5	0,9		81 KW	87		4 hours			150	Yes	
BEV/FCEV	Large	GT	Quantron AG	Q-Medium	Germany	OEM/Retrofit	18			235-350 KW	130-280					230	Yes	Quantron AG converts used and existing vehicles in e-mobility vehicles and also offers new e-commercial vehicles

Type of Vehicle/ fuel	Vehicle Size	RCV Category	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum weight [tonnes]	Payload [tonnes]	Dimensions (lenght, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Known to be delivered as waste collection vehicle [Yes/no]	Comments
BEV/FCEV	Heavy-duty	GT	Quantron AG	Q-Heavy	Germany	OEM/Retrofit	27			350 KW	200-280					200	Yes	
BEV	Heavy-duty	GT	Rampini		Italy	Retrofit	27									150	Yes	Rampini converts a combustion powered municipal waste collection, compaction and transport vehicle into a 100% electric vehicle.
BEV	Heavy-duty	GT	NTM Group	Electric Hybrid	Finland	Retrofit											Yes	The truck chassis recharges the battery from the braking energy when the vehicle is mooving
BEV	Extra-small	GT	Evum Motors	aCar	Germany	OEM		1		20 KW			2-4 hours			91-110		
BEV	Heavy-duty	GT	FRAMO GmbH	FRAMO eTrucks	Germany	OEM	27			400 KW						140	Yes	
BEV	Extra-small	GT	SEVIC Systems SE	V500	Germany	OEM	0,7-0,9	0,5-0,7	3705*1366*1995mm	15 KW	13-33		>2 hours			120-300		The V500e uses a smart vehicle architecture with interchangeable cargo structures. Cargo boxes for last mile deliveries, custom boxes for postal services, flatbeds for municipalities and many more custom solutions are available.
BEV	Extra-small	GT	Cenntro Automotive Europe GmbH	TERRAMAK		OEM		1 (3,1 m3)	3990×1580×2050mm	7,5 KW	10					20		
BEV	Small	GT	CBL Electric Vehicles	Nissan Cabstar	United Kingdom	Retrofit	3,5	1,2				5				100		CBL Electric Vehicles is also able to upgrade your current vehicles into quiet, efficient electric vehicles. We've converted 3.5 tonne Nissan Cabstars into electric special project vehicles
BEV	Large	GT	pepper motion GmbH		Germany	Retrofit												etrofit®, the innovative retrofit kit for commercial vehicles, turns existing diesel vehicles into electric vehicles. To date, it suitable for Mercedes-Benz Actros MP3-MP5 and Mercedes-Benz Atego, which are also used for garbage collection
BEV	Medium	Sweeper	Fayat Environmental Solutions (Groupe Fayat)	RAVO 5 eSeries	Netherlands	OEM	11,4	10,2 m3		70 KW	100		2-4,5 hours	50 KW/h = 2 hours	22 KW/h = 4,5 hours		Yes	
GV	Large	Sweeper	Fayat Environmental Solutions (Groupe Fayat)	Scarab Merlin 62 CNG	United Kingdom	Retrofit	16	5,5-8,5 (6,2 m3)									Yes	
GV	Medium	Sweeper	Dulevo International SpA	Dulevo 6000 CNG	Italy	OEM		4,8 m3									Yes	
BEV	Small	Sweeper	Dulevo International SpA	Dulevo D.zero2	Italy	OEM		1,26 m3									Yes	
BEV	Small	Sweeper	Bucher Municipal	CityCat v20e		OEM	4,8	2,1			63				22 KW	8 hours	Yes	
BEV	Small	Sweeper	Bucher Municipal	CityCat VS20e		OEM	3,5	1 (2 m3)			45		2-3 hours		22 KW	6 hours	Yes	
BEV	Large	Sweeper	Bucher Municipal	MaxPowa V65e		OEM	16	6			200		4-9 hours		63A / 44kW charging 10-100% Charge Time: 4-5 hours 32A / 22kW charging 10-100% Charge Time: 8-9 hours	200 km	Yes	
BEV	Small	Sweeper	Green Machines	500ZE		OEM	2,3-2,6		3330x1200x1980	15 KW							Yes	
FCEV	Small	Sweeper	Green Machines	500 H2		OEM	2,3		3330x1200x1980								Yes	

Type of Vehicle/ fuel	Vehicle Size	RCV Category	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum weight [tonnes]	Payload [tonnes]	Dimensions (lenght, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Known to be delivered as waste collection vehicle [Yes/no]	Comments
BEV	Small	Sweeper	Hako GmbH	Citymaster 1650 ZE		OEM	3,5									9 hours	Yes	
BEV	Small	GT	SAIC Mobility Europe SARL	MAXUS EV80		OEM	3,5	1	5700x1998x2345	60 KW	56					20 km		The Maxus EV80 for the European market has a variant for urban waste collection.
BEV	Small	Sweeper	Aebi Schmidt Group	eSwingo 200+	Switzerland	OEM	5				75					10 hours	Yes	
BEV	Small	Sweeper	Tenax International SpA	Electra 2,0 EVOS	Italy	OEM		2 m3								9-10 hours	Yes	-
BEV	Small	GT	I SEE Electric Trucks GmbH	e-Movano	Germany	Retrofit		0,6-1,2	6000x2100x2400		40-55	7	45 min-2/3 hours			200 km		Numerous electric versions of the Opel Movano, which is also used as dump truck
BEV	Heavy-duty	GT	Banke ApS		Denmark	Retrofit	19-27			190-250 KW	192+64 or 192+192		3-11 hours	3 – 4 hours (Max 95 KW)	11 hours (22 kW AC charging)		Yes	Conversion of Mercedes Benz Econic Euro 5 and Euro 6 in fully electric garbage truck. It is fittable also for other OEM's chassis
BEV	Large	GT	Motiv Power Systems	(only for American market?)	USA	Retrofit		9			200		8 hours			60 miles	Yes	Vehicle designed and developed by Motiv PS, built up on a Crane Carrier chassis.
BEV	Small	GT	Hyva Mechanics	RCM04 Electric		Retrofit	4,3	4 m3	5180x1850x2140				1,5			280	Yes	Electric RCV on BYD's chassis.
BEV	Small	GT	Hyva Mechanics	RCM0502 Electric		Retrofit	7,3	2-5 m3	6340x2260x2410				2			245	Yes	Electric RCV on ISUZU's chassis
BEV	Large	GT	Hyva Mechanics	RC 1113 Electric		Retrofit	18	13	8780x2530x3120				2			178	Yes	Electric RCV on DFM's chassis
BEV	Small	GT	Isuzu	CGJ5070ZYSABEV (only for Asian and African market?)	Japan	OEM	7,3	3 (5 m3)	6755X2020X2460	110 KW							Yes	

ANNEX 8: ENTRANCE & THE BIG BUYERS INITIATIVE ARE CALLING ON ALL SOLUTION PROVIDERS READY TO PROVIDE EUROPEAN CITIES WITH ELECTRIC HEAVY-DUTY VEHICLES FOR WASTE COLLECTION

European matchmaking platform for innovative transport and mobility tools and services

ENTRANCE & the Big Buyers Initiative are calling on all solution providers ready to provide European cities with electric heavy-duty vehicles for waste collection

Are you able to become an ITS suppliers for European cities and ready to take on new clients?

If the answer is yes, read on!

The transport sector in the EU is responsible for approximately 27% of CO2 emissions – electric mobility of one of the key solutions to be fostered in the fight against climate change. Cities, which are confronted with the negative externalities caused by traffic (pollution, congestion, noise, etc.), can be frontrunners in the promotion of electric mobility, with which they can reach their ambitious goals in terms of reducing carbon emissions and exhaust gases.

Waste collection, street cleaning, and maintenance vehicles are used on a daily basis in urban areas and most public authorities are looking at changing their city fleet towards electric in the short term. With substantial vehicle fleets of their own, local governments and other public sector organisations, are perfectly positioned to effect change by purchasing EVs. Local governments represent a major market for specialist heavy-duty vehicles, such as waste trucks, street-sweepers and snow-ploughs, as well as for more standard light and heavy duty delivery vehicles.

The ENTRANCE project in collaboration with Big Buyers' working group on electric heavy-duty vehicles for waste collection are actively attracting European public institutions and city administrations that are interested in implementing innovative vehicles to make their daily operations greener and more sustainable. As part of a detailed market analysis, they will receive a state-of-the-art overview of European electric vehicle solution providers.

This Open Call is your opportunity to showcase your waste collection vehicle(s) to a range of European cities.

Benefits of responding to the Open Call:

- Your vehicle will be part of the market analysis that will be presented to various European public institutions and city administrations that can become your new clients.
- An invitation to a brokerage event where you can meet potential buyers with common interests.
- Access to a detailed overview of funding opportunities, a legislative framework, and best practices.
- If a specific collaboration emerges with an interested public institution or city administration, the ENTRANCE team will offer free personalized funding advice that includes public, private and alternative financing solutions. Click here for more information.

Big Buyers for Climate and Environment has received funding from the European Commission under N° GROW/2020/OP/0009. The ENTRANCE project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°101006681.

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European matchmaking platform for innovative transport and mobility tools and services

Are you eligible?

To be eligible for participation, you must:

1. Be a European organization, with an interest in providing innovative electric waste collection vehicles to cities. This may include both electric heavy and smaller vehicles for door-to-door collection and electric street cleaning vehicles and sweepers.
2. Interested in supporting the greening of the waste collection, street cleaning, and maintenance activities in the European cities.
3. Have signed up to the ENTRANCE matchmaking platform.
4. Have provided us with the technical specifications of your solution (use form below).

How can you apply?

Breathe, and take a few seconds. Life is too short to spend time filling forms. So, let's keep it simple. To apply for the Open Call there are two things you need to do:

1. **Complete the application form below** and return it to secretariat@entrance-platform.eu.

2. **Sign up to the ENTRANCE matchmaking platform**. By signing up you gain access to public, private, and alternative funding opportunities; a matchmaking platform for buyers, funders, and solution providers of European sustainable and innovation transport & mobility solutions; a public funding secretariat, and you'll be the first to learn about new brokerage events and open calls. When you find a match, you can receive offline funding and additional support to start implementing your solution.

Application form for electric heavy-duty vehicles for waste collection

COMPANY DETAILS	
Manufacturer	
OEM or Retrofit	
Representative name	
Company type	(Start-up = < 5 years, SME = < 250 employees / < 50 M turnover, Large = >250 employees / >50 M)
Job title	
Department	
Email	
Phone	
Address	
Website	

VEHICLE DETAILS	
Model	
Short description	
URL for details on vehicle	
Production location (Country)	

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European matchmaking platform for innovative transport and mobility tools and services

Type of Vehicle (BEV/FCEV/GV)	(BEV = Battery electric vehicle, FCEV = Fuel cell electric vehicle, GV = Gas vehicle)
Vehicle size	(Heavy-duty = >20t; Large = >15t <20t; Medium = >8t <15t; Small = >2t <8t; Extra-small = <2t)
RCV Category (Refuse Collection Vehicle)	(Garbage truck, Sweeper, Other)
Weight (Tons)	
Payload (Tons)	
Possible waste capacity (Tons)	
Dimensions (Length, width, height) mm	
Engine power/output (KW / hp)	
Range (WLTP) (Km)	
Prize (€)	
How long do you expect your vehicle to be able to operate before it needs to be charged?	
Is the electric drivetrain fully integrated with waste compactors or other utilities requiring hydraulic oil pressure to function?	
How do you expect the vehicle performance to change in various temperatures?	
Does the vehicle have regenerative braking? Is it possible to adjust the level of regeneration?	
MAINTENANCE	
Maintenance requirements (Battery + Vehicle)	
Minimum maintenance contract duration as a client for which an assignment is interesting for you?	
Minimum nº trucks to be purchased within a contract for which a contract is of interest to you?	
Maintenance location(s)	
CHARGING NETWORK	
Required charging capacity per truck	

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European matchmaking platform for innovative transport and mobility tools and services

Charging Time from 20-100% (Minutes)	
Maximum charging power DC (kW)	
Maximum charging power AC (kW)	
Optimal charging output for the battery	
How much longer can the vehicle operate if you fast charge it for approximately half an hour during the workday?	
BATTERIES	
Does the vehicle come with several battery options? What are the different options?	
Battery size (kWh)	
Expected lifetime of battery pack (Years)	
Do you have control of your supply chain regarding the raw materials for the batteries? Is it possible to guarantee that you comply with social and ethical standards?	
Does the weight of the battery pack affect the net payload?	
Does the battery come with a guarantee?	

Please notice that by submitting this information you agree to having all details included in the ENTRANCE market analysis.

Application deadline

2022

About the ENTRANCE project

ENTRANCE boosts the implementation of innovation solutions that contribute to the ambitious goals envisaged by the European Commission for reducing the transport CO_2 emissions by 2030 and 2050 and respond to the increasing mobility needs of people and goods thereby strengthening the European competitiveness and boosting growth and jobs.

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European matchmaking platform for innovative transport and mobility tools and services

ENTRANCE offers a common and legitimate European Matchmaking Platform and complementary off-line services designed to mobilise financial resources to accelerate the market access and scale up of "first of a kind" sustainable transport solutions. The overall concept focus of the ENTRANCE project lies in the "supply-demand-finance" triangle that is envisaged for all transport and mobility modes and all relevant stakeholders.

www.entrance-platform.eu

About the Big Buyers Initiative

Big Buyers for Climate and Environment is a European Commission Initiative for promoting collaboration between big public buyers in implementing strategic public procurement for sustainable solutions.

Public procurement can be a key tool in driving the development of innovative goods and services on the European market. By working together, and pooling their resources, cities, central purchasing bodies, and other major public procurers can maximise their market power and impact.

ICLEI and EUROCITIES are currently running the initiative on behalf of the European Commission, DG Internal Market, Industry Entrepreneurship and SMEs (DG GROW). The initiative aims to work together with existing networks and organisations active in this area.

https://bigbuyers.eu/working-groups/past/electric-heavy-duty-vehicles

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ANNEX 9: HEAVY-DUTY ZERO EMISSION VEHICLES FOR LONG DISTANCE AND URBAN LOGISTICS MARKET ANALYSIS

Type of Vehicle/ fuel	Vehicle Type	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum vehicle weight [tonnes]	Payload [tonnes]	Dimensions (lenght, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Prize [€]	Extra cost in TCO compared to fossile	Comments
BEV	Van	Arrival	Arrival Van	United Kingdom	OEM		9,3			130			87 KW	11 KW	160-300			UPS announced a minority investment in Arrival as well as a commitment to purchase 10,000 electric vehicles to be purpose built for UPS with priority access to purchase additional electric vehicles.
BEV	Truck	Battle Motors	BATTLE Delivery (only for American market?)	USA	OEM	11,8-18			310-500 hp	240-400		80% in 60 min			185 miles			
BEV	Van	Blue Arc EV (Shyft Group)	Blue Arc™ (available in 2023) (only for American market?)	USA	OEM					120-240 (+1-2kWh solar roof option)	5 years	2-6 hrs			150 miles			
BEV	Van	Bollinger Motors	Deliver-E (only for American market?)	USA	OEM					70-210			100 KW		200 miles			Production starts this year.
BEV	Van	BrightDrop (General Motors)	ZEVO 600 (only for American market?)	USA	OEM	4,5	17 m3		300 hp				120	23	250 miles			It gives its for developing charging infrastructure. FedEx has ordered 500 ZEVO electric delivery trucks. Also Wallmart is a client.
BEV	Truck	BYD Motors	8TT/8TT+ ER		OEM	47			483 hp	422-563		2,5-3,5 hrs	185 KW					-
BEV	Truck	BYD Motors	BYD Class 6F		OEM	11,8			390 KW			3 hrs	120 kW CCS1					
BEV	Truck	BYD Motors Europe	ETM 6		OEM	7,5	4	5950x 2095x 2940	150 KW	126		1,2 hrs	120 KW		200			
BEV	Van	Canoo Inc.	MPDV Lines (available in 2023)	USA	OEM		12,7 m3		200 hp	40-80		28 min (20% to 80%)	80 KW		190-230 miles	$33,000		Canoo states that limited availability of the vehicle will begin in 2022, with full production planned for 2023.
BEV	Van	Cenntro Electric Group	Logistar 400		OEM	6,5	14 m3	5998x 2060x 2730	85 KW	80,6					200			Class 4 truck designed primarily for urban delivery and freight. It can be used as cab over/forward trucks for box delivery and cutaway delivery vans.

Type of Vehicle/ fuel	Vehicle Type	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum vehicle weight [tonnes]	Payload [tonnes]	Dimensions (lenght, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Prize [€]	Extra cost in TCO compared to fossile	Comments
BEV	Truck	CityFreighter Europe GmbH	CF1 Full Electric (available in 2023)	Belgium	OEM	4,25		6585x 2000x 2700										The CF1 combines the space advantages of a box truck with the excellent maneuverability of a cargo van.
BEV	Truck	DAF Trucks NV	DAF CF Electric		OEM	9,7			210 KW	170		Normal: 1,5 hrs Fast: 30 min			200			DAF Trucks has delivered two fully electric trucks to Contargo (Rhenus Group) in Germany. The DAF CF Electric featuring E-Power Technology from VDL is used for container transport around hinterland terminals in the German Lower Rhine area.
BEV	Truck	DAF Trucks NV	DAF LF Electric	Netherlands	OEM	19	11,7		260 KW	222-282		20% to 80% in 1 hour	150 KW		220-280			
BEV	Truck	Designwerk Products AG	HC/MC Logistics (fomerly under Futuricum brand)	Switzerland	Retrofit	18-44			500 KW	255-900		max 4 hrs with DC max 18 hrs with AC	150 KW	44 KW	250-500			Distribution logistics e-trucks based on the chassis of the Volvo FM, Volvo FMX and Volvo FH series as well as the low-entry chassis of the Econic from Daimler Trucks AG. It has already provided delivery vehicles for DPD Schweiz and Post Company Cars.
BEV	Truck	DongFeng Motor Corporation	Captain E-Star (only for Asian market?)	China	OEM		20,3 m3											
BEV	Van	DongFeng Motor Corporation	EM23 (only for Asian market?)	China	OEM	3,5		5200x 1700x 2240	50-90 KW	45,8		2-3 hrs with DC 8-10 hrs with AC			205			
BEV	Truck	DongFeng Motor Corporation	EV350 (only for Asian market?)	China	OEM			5995x 2200x 3000	50-100 KW	86-94					275-310			
BEV	Truck	E-Force One AG	EF18	Switzerland	Retrofit	18			550 KW	170-340			<1 h @ 350 kW	up to 8 h @ 44 kW	350-500			Household names such as Feldschlösschen, Coop, Pistor and Lidl already rely on the strength of the first-generation E18 on a day-to-day basis.
BEV	Truck	E-Force One AG	EF18 SZM	Switzerland	Retrofit	18			440-550 KW	170-340			<1 h @ 350 kW	up to 8 h @ 44 kW	450-500			The EF18 SZM is specially designed to cater to individual requirements in the combined transport sector.
BEV	Truck	E-Force One AG	EF26	Switzerland	Retrofit	26			440-550 KW	170-340			<1 h @ 350 Kw	up to 8 h @ 44 kW	450-500			Based on the chassis of the three-axle IVECO Stralis and the body can be selected according to the application and requirements. For urban and

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																		regional delivery and general cargo sector.
BEV	Truck	Einride AB	Einride T-POD (AET 1,2,3,4)	Sweden	OEM	26	16			200					200			Einride vehicles are based on autonomous, all-electric technology, coordinated by intelligent routing software that integrates customer data and traffic data to optimize delivery time, battery life and energy consumption which can be remotely controlled by drivers, through Einride's SAGA platform. Through this platform Einride already manages some electric trucks fleets.
BEV	Truck	Einride AB	Einride Trailer (available in late 2023)	Sweden	OEM				350 KW			30 min			650			
BEV	Truck	Einride AB	Einride Truck	Sweden	Retro fit	24												Einride manages a fleet of electric trucks, the retrofitted DAF's trucks with EMOSS electric technology, and makes them more efficient and autonomous through the platform developed (SAGA). It makes this together with Oatly.
BEV/FCEV	Truck	Electra Commercial Vehicles	eCargo	United Kingdom	Retro fit	12,5-19				140-315								100% Electric commercial vehicles build up on OEM bodies. For the logistics services we can consider Electra eCargo, built up on the Iveco Eurocargo's base chassis, available in both right and left drive.
BEV	Truck	Electric Last Mile Solutions (ELMS)	The Urban Utility	USA	OEM	5	2,6		60 KW	89	8 years	1 hour DC			125 miles			
BEV	Truck	EMOSS		Netherlands	Retro fit	19									180-200			Emoss develops, manufactures and supplies fully electric powertrains and hybrid powertrains. It converts traditional trucks in fully-electric. In Netherland more delivery companies (Breytner, Technische Unie and CWS) are using EMOSS trucks for delivering their goods.

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BEV	Truck	Endera Motors	L Series (only for American market?)	USA	OEM	6,5	3			86-129		50 min with DC 8 hrs with AC	50 KW		150 miles			
FCEV	Truck	ESORO AG	BZ-LKW	Switzerland	Retrofit	35			250 KW + 100 KW (FC)	120					400			In June 2017 the Zurich engineering company ESORO received the road approval for the world's first fuel cell heavy-duty vehicle. It built and developed the fuel cell truck in the 35-tonne category with the necessary load capacity able to fulfil Coop's logistical requirements. Not clear if the model is still operating or not.
BEV	Truck	E-Trucks Europe NV/BVBA	E-Trucks	Netherlands / Belgium	OEM / Retrofit	10,08 (Unloaded)			150 KW (205 pK)	136		Normal: 8 hrs Fast: 2 hrs						For delivery services, E-Trucks has provided two fully electric trucks: one to CityDepot, a Belgian logistics service provider, and one to Hintzen Logistik, a German logistics operator that mainly transports sensitive goods.
BEV	Truck	Farizon Auto (Geely)	HomTruck (available in 2024)	China	OEM													Geely has already announced that the truck will target also European customer. Next to production (2024). No technical features have been disclosed.
BEV/FCEV	Truck	FAUN (Kirchhoff Gruppe)	BLUEPOWER	Germany	Retrofit					85 KWh + 3 fuel cell modules (with 30 KW each) and a hydrogen tank (for 400-1000 KWh)						800000		Combined battery and hydrogen fuel cell technology built up on a Mercedes Benz chassis. The fuel cells are provided by Cummins. It is mainly provided for waste collection services but the technology is also configured for delivery services.
BEV	Van	Fiat (Stellantis NV)	e-Ducato		OEM	4,25	17 m3			47-79		0,5-1,25 hrs with DC 4,5-8 hrs with AC	50 KW	11 KW	235-370			-
BEV	Van	Fiat (Stellantis NV)	e-Scudo		OEM		5,3 m3			50-75		30 min with DC 5-7,5 hrs with AC	100 KW	11 KW	230-330			-
BEV	Van	Flux Mobility AG	e-Van	Switzerland	OEM		2,5								350			
BEV	Van	Ford	E-Transit		OEM	4,25	15,1 m3			50-68	8 years	34 min (15% to 80%)			200-317	40000		Ford delivers customizable charging solution for the E-Transit.

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BEV	Truck	FRAMO GmbH	FRAMO eTrucks	Germany	OEM	27			400 KW						200			Together its eTrucks, it also provides charging stations, battery, service and financing solutions.
BEV	Truck	Freightliner Trucks (a Daimler brand)	eCascadia®	USA	OEM	29-37			240-350 KW	291-438		80% in 90 min (180 KW) 80% in 150 min (270 KW)			155-230 miles			Available in single or tandem drive.
BEV	Truck	Freightliner Trucks (a Daimler brand)	eM2®	USA	OEM	11,8-15			224 KW	194-291	5 years	80% in 60 min			150-230 miles			
BEV	Truck	GINAF Trucks Nederland B.V.	DuraTrucks (E-Trucks)	Netherlands	Retrofit	12,5-21			280 KW	120-240		2-9 hrs	66 KW	22 KW	110-280			GINAF convert traditional truck chassis (mainly DAF LF and Mecedes Benz Ateco and Econic) in fully electric.
BEV	Van	GINAF Trucks Nederland B.V.	DuraTrucks (E-Vans)	Netherlands	Retrofit	7			100 KW	90		5 hrs		35 KW	185			GINAF convert traditional truck chassis (mainly DAF LF and Mecedes Benz Ateco and Econic) in fully electric.
BEV	Truck	GINAF Trucks Nederland B.V.	eCity Heavy Duty Serie	Netherlands	Retrofit	16-50			280 KW	130-250		2-9 hrs	66 KW	22 KW	150-300			GINAF convert traditional truck chassis (mainly DAF LF and Mecedes Benz Ateco and Econic) in fully electric.
BEV	Truck	GINAF Trucks Nederland B.V.	eCity Serie	Netherlands	Retrofit	18			280 KW	130-250		2-9 hrs	66 KW	22 KW	160-300			GINAF convert traditional truck chassis (mainly DAF LF and Mecedes Benz Ateco and Econic) in fully electric.
BEV	Van	Green Power Motor Company	EV Star Cargo (only for American market?)	USA	OEM	6,5	3		150 KW	118		2-2,5 hrs with DC 8 hrs with AC	55-61 KW	11 KW	150 miles			-
BEV	Van	Groupe Renault	Master ZE	France	OEM	3,1-3,5	1-1,35		57 KW	33		6 hrs		32A/7.4 kW	120			
FCEV	Truck	Hino / Toyota	Profia FCEV (next to production)		OEM	25									600			Next to production.
FCEV	Truck	Hino / Toyota	XL8 (available in 2024-2025)	USA	OEM	25												A fuel cell powered version of the Hino XL Series.
BEV	Van	Hino Motors Ltd. (Toyota)	Dutro Z EV	Japan	OEM	3,5		4700x 1700x 2300	50 KW	40								Hino's solution for the future of last mile logistics, is scheduled to be introduced in the Japan market in early summer 2022.

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FCEV	Truck	Hyundai Motor (Hyundai Hydrogen Mobility)	Xcient Fuel Cell		OEM	36		9745x2600x3730	350 KW + 180 KW	72		8-20 min (refuelling)			400			The first XCIENT FC trucks operate in Switzerland thanks to the venture done between Hyundai and H2 Energy (Hyundai Hydrogen Mobility)
FCEV	Truck	Hyundai Motor Truck & Bus	HDC-6 Neptune (prototype shown in 2019)		OEM	(Class 8)									1300			Not sure when the truck will entry on the market. Model presented in 2019.
FCEV	Truck	Hyzon Motors	FCET 6	USA	Retrofit	13,6			450 KW + 100 KW	55	5 years				350 miles			
FCEV	Truck	Hyzon Motors	FCET 8 (only for American market?)	USA	Retrofit	37			450 KW + 120 KW	110	5 years				500 miles			
FCEV	Truck	Hyzon Motors	Hyzon HyMax Series	USA	Retrofit	44-66		7000x2450x2900	450 KW + 240 KW	140					600-680			Hyzon Motors Europe BV will supply two HyMax-250 fuel cell electric trucks, built on a 6x4 vehicle chassis, to MaserFrakt, a major Swedish transport group. Through 98 kilograms of hydrogen stored onboard, the 64-ton trucks are expected to have a range of up to 680 kilometers. It has also signed a MoU with the UK-based John G Russell Transport. Built up on DAF CF chassis.
BEV	Van	IVECO	Daily Electric	Italy	OEM	5,6	19,6 m3			91		2 hrs			200-280			
BEV	Truck	JAC Motors	N55 EV	China	OEM	5,5	2,5		65-130 KW	97		2 hrs			200			
BEV	Truck	JAC Motors Iberia	eJAC 7,5	Spain	OEM	7,5	4,5		107 KW						200			
BEV	Truck	Kenworth Trucks	K270E / K370E (only for American market?)	USA	OEM	4,5-9,5			355-469 hp	141-282		1-2 hrs	120 KW		100-200 miles			It collaborates with PACCAR, EnTech Solutions and Schneider Electric to provide comprehensive battery charging solutions.
BEV/FCEV	Truck	Kenworth Trucks	T680E (only for American market?)	USA	OEM	37			536 hp	396		3,3 hrs	120 KW		150 miles			It collaborates with PACCAR, EnTech Solutions and Schneider Electric to provide comprehensive battery charging solutions.
BEV	Truck	Lightning eMotors Inc	Class 6 Cargo Truck (only for American market?)	USA	Retrofit	11,8			220 KW	128-192	5 years	1,5-2,25 hrs with DC			88-130 miles			Built up on a Isuzu FTR / Chevrolet 6500XD chassis. It also provide charging infrastructure.

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BEV	Truck	Lightning eMotors Inc	E-450 Box Truck / Step Van (only for American market?)	USA	Retro fit	6,5			180 KW	100-157	5 years	2-4 hrs with DC 7,5-11 hrs with AC	80 KW	13,2 KW	130-160 miles			Built up on Ford E-450 chassis. It also provide charging infrastructure.
BEV	Van	Lightning eMotors Inc	F-53/F-59 Step Van (only for American market?)	USA	Retro fit	10			180 KW	128-192	5 years	1,5-2,25 hrs with DC			110-170 miles			Built up on Ford Model F-53/F-59 Commercial Stripped Chassis. It also provide charging infrastructure.
BEV	Truck	Lion Electric	Class 6 (only for North American market?)	Canada	OEM	12			250 KW	252					200 miles			
BEV	Truck	Lion Electric	Class 8 (only for North American market?)	Canada	OEM	27			350 KW	336					170 miles	300000 $		
BEV	Truck	Mack Trucks (Volvo Group)	LR Electric (only for American market?)	USA	OEM	30	11,5		400 KW				150 KW					Mainly built for waste collection services but also fitted for commercial deliveries.
BEV	Truck	MAN Truck & Bus	CitE	Germany	OEM	15									100			Not clear if it is in operation or not. Model presented and awarded in 2018.
BEV	Van	MAN Truck & Bus	eTGE	Germany	OEM	3,5	13,5 m3	3280x 2060x 2000	100 KW	35,8		45 min (80% with DC) 4,5 hrs with AC	40	7,2	115-130			
BEV	Truck	MAN Truck & Bus	eTGM	Germany	OEM	26			264 KW	185		1 hrs with DC 8 hrs with AC	150	22	190			Since October 2018, the MAN eTGM has been operating for nine Austrian companies in the sectors of commerce, logistics and production of the CNL (Council for Sustainable Logistics).
BEV	Truck	Mercedes-Benz (Daimler Trucks)	eActros	Germany	OEM	19-27			330-400 KW	420		From 20% to 80% in 1 hour	160		400			Delivered from this year to DB Schenker and Dachser for parcel deliveries.
BEV	Truck	Mercedes-Benz (Daimler Trucks)	eEconic (soon available on the market)	Germany	OEM	27			330-400 KW	336		From 20% to 80% in 1 hour	160		100-150			

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FCEV	Truck	Mercedes-Benz (Daimler Trucks)	GenH2 (trials in 2023 and marketization in 2027)	Germany	OEM	26-40									1000			The GenH2 truck will begin trials in 2023 and will be commercialised in 2027. Meanwhile, Daimler is investing in H2 MOBILITY Deutschland for boosting the production of hydrpgen refuelling stations in Germany.
BEV	Van	Mercedes-Benz (Daimler)	eSprinter		OEM		11 m3		85 KW	35-47		6-8 hrs From 10% to 80% in 20 min with DC	80	7,4	158			Amazon has ordered 1800 electric vans from Mercedes for its deliveries: 600 medium-sized eVito electric vans and more than 1,200 vehicles of the large-size van eSprinter electric vans.
BEV	Van	Mercedes-Benz (Daimler)	eVito Panel		OEM		6,6 m3		85 KW	60		6,5 hrs From 10% to 80% in 35 min	80	11	314			
BEV	Truck	Mercedes-Benz (Daimler)	Urban eTruck		OEM	28,6			335 hp	212					124 miles			Not clear if it is in operation or not. Model presented in 2016.
BEV	Truck	Mitsubishi Fuso Truck and Bus Corporation (a Daimler brand)	eFUSO Vision ONE (next to production)		OEM	23	11			300					350			Next to production.
BEV	Truck	Mitsubishi Fuso Truck and Bus Corporation (a Daimler brand)	FUSO eCanter	Portugal	OEM	7,5	4,1		129 KW	82,8		1,45 hrs with DC 9 hrs with AC	50	7,2	100			In use in Europe since 2018, the eCanter has relevant clients in postal and deliveries field such as DB Schenker, DPD or Dachser in Germany.
FCEV	Truck	Mitsubishi Fuso Truck and Bus Corporation (a Daimler brand)	FUSO Vision F-CELL		OEM	7,5			75kW (fuel cell) + 135kW (3 HV battery)					300				
BEV	Truck	Motiv Power Systems	Box Truck (only for American market?)	USA	Retro fit	6,5			295 KW	127			60 KW	19.2 Kw				Built up on a Ford E450, for B2B services companies — including parcel delivery, food & beverage, linen/uniform services, and many more.
BEV	Van	Motiv Power Systems	Step Van (only for American market?)	USA	Retro fit	6,5-10				127					105 miles			All-electric step van fleets can include large parcel/delivery, linen/uniform, food/beverage, and specialty applications such as food trucks, bookmobiles, medical, and more.

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BEV	Truck	Navistar (International Trucks)	eMV Series	USA	OEM	11,8-15			335 hp	210		90 min	125 KW		135 miles			
FCEV	Truck	Nikola Motor	Nikola One (only for American market?)	USA	OEM	35			1000 hp	320					320+1900			Designed together with US Express. It's unclear if the truck is already in operation or not. Model presented in 2016.
FCEV	Truck	Nikola Motor	Nikola Two (available in 2024, only for American market?)	USA	OEM	36			1000 hp	250		20 min (refuelling)			750-1200			Production started in 2021.
BEV/FCEV	Truck	Nikola Motor / Iveco (Nikola Iveco Europe GmbH)	Nikola Tre	Germany	OEM	40			480 KW	753		2 hrs BEV 45 min FCEV	240		350 mil (BEV) 500 mil (FCEV)			Born from a collaboration between Nikola Motor and Iveco (CNH Industrial) for European market. The fuel cell model, that will entry in the market by 2023, has already been booked by Gruber Logistics for international transports. Nikola Motor gives its help for building infrastructures.
BEV	Van	Opel (STELLANTIS Group)	Opel Movano-e	Germany	OEM		17 m3		90 KW	37-70					117-224			
BEV	Truck	Orange EV	All-Electric Class 8 Yard Trucks (only for American market?)	USA	OEM	36					7,5 years	2 hrs						
BEV	Truck	ORTEN Electric Trucks	ORTEN E 120 LF	Germany	Retro fit	12	4,2		81 KW	145-217		7-10 hrs			200			
BEV	Truck	ORTEN Electric Trucks	ORTEN E 180 AX	Germany	Retro fit	18	7		305 KW	122-244		6-11 hrs			200			ORTEN Electric-Trucks electrifies new or used diesel-driven commercial vehicles (Mercedes Axor) and turns diesel trucks into 100% e-trucks.
BEV	Truck	ORTEN Electric Trucks	ORTEN E 75 AT	Germany	Retro fit	7,5	2		90 KW	72-116		6 hrs			150			ORTEN Electric-Trucks electrifies new or used diesel-driven commercial vehicles (Mercedes Atego) and turns diesel trucks into 100% e-trucks.
BEV	Truck	ORTEN Electric Trucks	ORTEN ET 35 Range	Germany	Retro fit	4,2-5			81 KW	58-87		4 hrs			100-150			

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BEV	Truck	pepper motion GmbH		Germany	Retro fit													etrofit®, the innovative retrofit kit for commercial vehicles, turns existing diesel vehicles into electric vehicles. To date, it suitable for Mercedes-Benz Actros MP3-MP5 and Mercedes-Benz Atego.
BEV	Truck	Peterbilt Motor Co.	579EV (only for American market?)	USA	OEM	37			536 hp	400		3 hrs			150 miles			
BEV	Truck	Peterbilt Motor Co.	Model 220EV (only for American market?)	USA	OEM	11,7-15				141-282					100-200 miles			Ideal for pickup & delivery, regional haul and food & beverage applications.
BEV/FCEV	Truck	Quantron AG	QARGO 4 EV	Germany	Retro fit	3,5-7,2	1,6		120 KW	81		1-2 hrs	60 KW		230			
BEV/FCEV	Truck	Quantron AG	Q-Heavy	Germany	Retro fit	44			235-550 KW	130-630		1 hrs (150 KW)	150 KW		500			
BEV/FCEV	Truck	Quantron AG	Q-Medium	Germany	Retro fit	18			235-350 KW	130-280					250			Quantron AG converts used and existing vehicles in e-mobility vehicles and also offers new e-commercial vehicles
BEV/FCEV	Van	Ram Trucks (Stellantis NV)	2023 Ram ProMaster® (available in 2023/2024)	USA	OEM	4,2	2,1		276 hp			5-7,3 hrs (3 min to refuel H2)			230-300 (400 H2 version)			Amazon will be the first commercial costumer of the Ram ProMaster.
BEV	Truck	Renault Trucks	E-Tech D Wide ZE	France	OEM	26	11		370 KW	200-265		2 hrs with DC 9 hrs with AC	150	22	120			
BEV	Truck	Renault Trucks	E-Tech D ZE	France	OEM	16	11		185 KW	200-400		2 hrs with DC 9 hrs with AC	150	22	400			
BEV	Van	Rivian	Rivian EDV (first vehicles available in late 2022) (only for American market?)	USA	OEM		20 m3											Rivian is building three different sizes of delivery vans for Amazon. It hopes to have 10,000 vehicles dropping off your purchased items as early as 2022 and eventually have all 100,000 promised vans on the road by 2030. Also other companies can order theri vans.
BEV	Truck	Scania	Battery Electric		OEM	19-29			295 KW	165-300 (5-9 batteries)		130		250			Scania helps	

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			Truck (L- and P-Series)														clients plan a full solution, with grid connection, charging hardware and even green energy contracts.	
BEV	Van	SEA Electric	SEA Ford Transit EV		Retro fit	4,6			75-134 KW	88	4 years				300			Powered by the SEA-Drive® 70, the SEA Ford Transit EV is built on the Ford Transit cargo van, cutaway, or passenger van/shuttle bus.
BEV	Truck	SEA Electric	SEA Hino EV Range (only for USA, Oceania and Asia market?)	Australia/ USA	Retro fit	6,5-27			80-350 KW	138-220	4 years				200-320			Powered by the SEA-Drive 120a and 180b, the SEA electric trucks are built on HINO chassis and are provided for multiple tipes of deliveries (reefer, dry, etc…)
BEV	Truck	Smith Electric Vehicles	Smith Newton	United Kingdom	OEM		7								120 miles			The Smith Newton is designed for a wide range of urban delivery applications.
BEV	Truck	Solo AVT Inc.	SD1 (alpha vehicle available n 2024)	USA	OEM										500 miles			It is built for autonomous driving.
BEV	Truck	Terberg Special Vehicles	YT203-EV	Netherlands	OEM	40						3-4 hrs			100			It was born as a yard (terminal) truck, but is used by BMW, in collaboration with SCHERM Gruppe, to transport various car parts from one BMW hub to another in Germany.
BEV	Truck	Tesla	Tesla Semi (production in 2023)	USA	OEM	36						80% in 30 min			480-800	150000-180000 $ (2 years payback)	Several logistics companies have already booked the truck. For fast charging, Tesla also provides its solar-powered	

Type of Vehicle/ fuel	Vehicle Type	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum vehicle weight [tonnes]	Payload [tonnes]	Dimensions (length, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Prize [€]	Extra cost in TCO compared to fossile	Comments
																	"Tesla Megacharger" charging station.	
BEV	Truck	Tevva Motors	BEV/REX	United Kingdom	OEM	7.5-19						5 hrs (10% to 90%)			250-500			Tevva trucks are integrated with range extender technology,
FCEV	Truck	Toyota Motor North America	Hydrogen Fuel Cell Truck (Available in 2023, only for American market?)	USA	OEM/ Retrofit	36			670 hp	12					480			Class 8 tractors using a Kenworth T680 chassis and a cab and chassis from Toyota's Hino truck subsidiary. It will use the same FC technology of the Mirai sedan.
BEV	Truck	Urban Mobility Systems	Zolution	Netherlands	Retrofit		18 m3								140			
BEV	Truck	VDL Translift		Netherlands	Retrofit				210 KW	170		Normal: 1,5 hrs Fast: 30 min			100			The DAF CF Electric features a VDL electric powertrain.
BEV	Van	VIA Motors	Class 4/5/6 Electric Commercial Vehicle (available in 2024)	USA	OEM		4,5											
BEV	Van	Volkswagen Commercial Vehicles	e-Crafter		OEM		4 (10,7 m3)		100 KW	35,8		80% in 45 min			160			
BEV	Truck	Volkswagen Truck & Bus	e-Delivery (only for Brazilian market)	Brazil	OEM	14			80-300 KW	170		80% in 45 min			200			
BEV	Truck	Volta Trucks AB	Volta Zero (available in 2023)	Sweden	OEM	16		9200x 2550x 3470		150-225					150-200			Created specifically for urban freight distribution.
BEV	Van	Voltia Automotive SRO	Voltia XL Model Range	Slovakia	Retrofit		11 m3		50 KW	75		80% in 30 min with DC	100 KW	7 KW - 11 KW	280			All Voltia XL vans are built on the trusted Stellantis eK0 platform that is shared across models from Opel, Vauxhall, Citroen, Peugeot, and Toyota.
BEV	Truck	Volvo Trucks	Volvo FE Electric		OEM	27			225 KW	200-265 (3-4 batteries)		2 hrs with DC 11 hrs with AC	150	22	200		Mainly built for waste collection services but also	

Type of Vehicle/ fuel	Vehicle Type	Manufacture	Model	Manufacture / production location	OEM / Retrofit	Maximum vehicle weight [tonnes]	Payload [tonnes]	Dimensions (lenght, width, height) mm	Power / output engine	Battery size [kWh]	Expected lifetime battery [years]	Charging Time	Maximum charging power DC [kW]	Maximum charging power AC [kW]	Range (WLTP) [km]	Prize [€]	Extra cost in TCO compared to fossile	Comments
																	fitted for urban deliveries.	
BEV	Truck	Volvo Trucks	Volvo FH Electric		OEM	44-60			330-490 KW	180-540 (2-6 batteries)	2,5 hrs with DC 9,5 hrs with AC	250	44	300			For moving goods between logistic hubs and city or from city to city.	
BEV	Truck	Volvo Trucks	Volvo FL Electric		OEM	16,7			130 KW	200-395 (3-6 batteries)	2 hrs with DC 11 hrs with AC	150	22	300			For city (door-to-door) deliveries.	
BEV	Truck	Volvo Trucks	Volvo FM Electric		OEM	44			330-490 KW	180-540 (2-6 batteries)	2,5 hrs with DC 9,5 hrs with AC	250	43	380			For managing large volumes between cities or deliver in busy urban environments	

ANNEX 10: SOLUTION PROVIDERS OF SAFER TECHNOLOGIES FOR THE CYCLING SECTOR

Company	Website	Type	Country	Core Business	Relation to the Scope	Solution Area	Link to Solution
Roll2Go AG	https://roll2go.ch/	Start-up	SWITZERLAND	Developer of a data analytics platform designed to monitor the shared micro-mobility operation in a city. The company's platform automates the operation of micro-mobility vehicles enabling city authorities to monitor the safety of these vehicles by generating customized reports and real time map tracking.	Multiple modes of transport interact with each other and create conflicts at different infrastructure levels. It is a major challenge for cities to efficiently manage the limited urban space: to guarantee safety, optimise mobility, and promote sustainable modes of transport. Our data-centric platform enables city authorities and transport planners to test critical strategic decisions and continuously evaluate the operation. The result is more efficient, resilient, and sustainable urban mobility with less infrastructure investment.	Safe Lane Devices	https://roll2go.ch/smart-city/
Wöhr Autoparksysteme GmbH	https://woehr.de/en/	Large Company	GERMANY	WÖHR has been developing, building, and installing convenient, space-saving parking systems for six decades. WÖHR's core competencies lie in creating customer-specific and project-specific solutions that increase sustainability in parking.	In their particularly comfortable and automatic Bikesafe, bicycles are stored safely and space-saving behind locked doors. The tower version of the WÖHR Bikesafe stores more than 120 bicycles on up to 8 parking levels. The design of the Bikesafe requires only a very small footprint and is therefore very space-saving.	Safe Parking Facilities	https://woehr.de/en/product/woehr-bikesafe.html
VelopA (CROWD Group BV)	https://www.velopa.com/	SME	NETHERLANDS	Designer and manufacturer of street furniture intended for open public spaces. The company offers bicycle parking systems, bicycle sheds, street furniture, traffic and infrastructure and sports and games, ensuring to encourage exercise with sustainable products.	Different types and dimensions of bycicle parking and shelters.	Safe Parking Facilities	https://www.velopa.com/products/bicycle-parking/
Sharelock	https://www.sharelock.co/	Start-up	FRANCE	Operator of a network of shared padlocks intended to provide reliable, simple, and secure bicycle parking. The company's subscription-based service is accessible through a mobile app, enabling users to find a lock available to park their bike at any time.	Provider of shared padlocks intended to provide reliable, simple, and secure bicycle parking.	Safe Parking Facilities	https://www.sharelock.co/fr/stationnement-velo
Nielsen Concept SAS	https://nielsenconcept.com/language/en/home/	SME	FRANCE	Manufacturer of an innovative, secure, multi-service and ready-to-install bicycle shelter. The company's services include providing secure bike sheds to park vehicles, offers electric bikes suitable for all ages and for all uses and advice of mobility management areas for developers, enabling people to put cycling as part of their routine.	Mobilypod: their secure Mobilypod bike hubs offer more than just shelter. It is a user experience that we intended to be responsible and solidary-based, while offering an unparalleled level of security. An infrastructure intended for companies, communities transport operators who strives to offer serenity, service and convenience to their users.	Safe Parking Facilities	https://nielsenconcept.com/language/en/shelters-velos-securises-and-trottinettes/
La Ruche à Vélos SAS	https://larucheavelos.fr/	Start-up	FRANCE	Developer of an automated storage system intended to save floor space and provides optimum safety for users.	The company's automated bicycle parking facilities allow easy safe deposit and collection of bicycles, electrically-assisted bicycles, and scooters, enabling cyclists to improve their daily	Safe Parking Facilities	https://larucheavelos.fr/nos-realisations

Company	Website	Type	Country	Core Business	Relation to the Scope	Solution Area	Link to Solution
					life and support active mobility and reduce carbon emissions.		
Intelligent Parking SL	https://parkingverde.es/	SME	SPAIN	Developer of an intelligent parking application designed to make parking cars and bicycles easier. The company's application provides mobile payment, gate access and closed-circuit television camera capabilities, parking directory, enabling customers to pay, access and monitor their bicycle or car from their mobile phone.	Intelligent Parking offers two models of bicycle parking, with a unique and patented technology, in a safe, controlled and guarded place. It also offers: Universal use for any user, through a mobile application (IOS and Android) and / or a web registration for user identification and registration (registration) in the system; Complete monitoring, the owner knows the status of the parking network in real time; Occasional use or prolonged temporary use (subscriptions), which can be purchased through the app itself; 24 × 7 service, available 24 hours a day, 365 days a year.	Safe Parking Facilities	https://parkingverde.es/parking-para-bicicletas/
Hitsa A/S	https://hitsa.com/	SME	DENMARK	HITSA designs and manufactures urban furniture and cycling products. Our benches, bollards, bicycle racks and shelters provide attractive outdoor environments and good functionality for people in urban spaces.		Safe Parking Facilities	https://hitsa.com/project-type/bicycle-parking/
Cyclepods Ltd (CROWD Group)	https://www.cyclepods.co.uk/	SME	UNITED KINGDOM	Provider of bicycle parking systems in the United Kingdom. The company offers space-saving cycle storage systems and bike stands, helping cyclists in safely parking their bikes in public location and open spaces.		Safe Parking Facilities	https://www.cyclepods.co.uk/case-studies/lewes-cyclehub/
Cyclehoop Ltd	https://www.cyclehoop.com/	SME	UNITED KINGDOM	Cyclehoop create innovative cycle parking and infrastructure. Our focus is on making cycling safe, secure and convenient. To enable people to experience the social and environmental benefits of cycling.		Safe Parking Facilities	https://www.cyclehoop.com/case-studies/
CROWD Group BV.	https://www.crowdoutside.com/	SME	NETHERLANDS	Provider of outdoor space infrastructure development services based in Leiderdorp, Netherlands. The company specializes in the designing of various public spaces including bicycle parking, shelters, benches, planters, outdoor gyms and parks.		Safe Parking Facilities	https://www.crowdoutside.com/
Clean Energy Planet	https://www.cleanenergyplanet.com/en/	SME	FRANCE	Developer of multimodal e-bike (electronic) docking station designed to park and charge bicycles. The company's docking stations automatically lock the bicycle and charge the battery and features software that provides usage statistics and allows monitoring the usage and proper functioning of the electricity pool in real-time, enabling clients to reduce carbon		Safe Parking Facilities	https://www.cleanenergyplanet.com/products/secure/

Company	Website	Type	Country	Core Business	Relation to the Scope	Solution Area	Link to Solution
				emission and keep an electric bike secure while charging it at the same time.			
vadeCity SL	https://vadecity.com/en/	SME	SPAIN	vadeCity is a start-up born in 2014 in Barcelona with the mission of transforming cities through mobility, while promoting sustainability, health and progress. Under our motto Smart Cities. Smart Solutions, we develop intelligent solutions that respond to the needs of citizens, organizations and municipalities in matters of mobility.	vadeCity has developed vadeBike, its first project focused on providing secure and smart bike parkings.	Safe Parking Facilities	https://vadebike.es/
WSM – Walter Solbach Metallbau GmbH	https://www.wsm.eu/en/	Large Company	GERMANY	WSM is a leading enterprise in metal system construction and, since 1958, a full-service manufacturer in four product areas: mobile room systems, shelter systems, bicycle parking systems and information systems.	Bicycle garages or BikeBoxes from WSM made of robust sheet steel offer bicycles, pedelecs and e-bikes optimal protection from rain, theft or vandalism.	Safe Parking Facilities	https://www.wsm.eu/en/application-examples/bicycle-parking-systems/bicycle-garages/
Klaver Bicycleparking	https://www.klaverfietsparkeren.com/	SME	NETHERLANDS	Klaver Bicycleparking is a unique Dutch company with expertise in the field of bicycle mobility. For more than 30 years we have been leading and innovative in the bicycle parking world. By introducing front fork support, we have provided a suitable bicycle parking solution for many renowned companies at home and abroad.	Klaver Bicycle Parking is specialized in the design, installation and maintenance of safe and user-friendly bicycle parking facilities.	Safe Parking Facilities	https://www.klaverfietsparkeren.com/
NEKO Design	https://www.neko-europe.com/	SME	SPAIN	Neko is an international industrial design studio designing elements to improve public spaces.	Neko has worked with its clients to design everything from 2-bike racks to entire massive parking facilities with controlled access. Their cycle parking designs have won awards in Spain, Belgium and Mexico. It also produce cycling infrastructure solutions that everyone can use, such as lane dividers.	Safe Parking Facilities	https://www.neko-europe.com/urban-cycling-solution/
Bikeep OÜ	https://bikeep.com/	SME	ESTONIA	Developer of bike-sharing rack and bike locks created to make bike parking easy and secure. The company's bike racks are integrated with a mobile application and can be locked via a mobile phone or local transportation card so only specific people can use it and users are able to charge their e-bikes and even grab a rental bike, enabling businesses and public areas to become more bike-friendly and therefore attract more cyclists.	Bikeep locks the bike from the frame and from the wheel. Each station is equipped with sensors, loudspeaker alarm, distress signal forwarding and surveillance camera. Each station is connected to the internet. This allows us to monitor the status, deal with any issues that users have and collect valuable data for you.	Safe Parking Facilities	https://bikeep.com/bike-lockers/
Copenhagenize Design Co.	https://copenhagenize.eu/	SME	DENMARK	Their speciality lies in advising and inspiring cities, governments and organisations about the re-	Copenhagenize Design Co. offers bicycle planning and design services for municipalities, regions or private developers. From city-wide	Safe Lane Markings	https://copenhagenize.eu/project-gallery

Company	Website	Type	Country	Core Business	Relation to the Scope	Solution Area	Link to Solution
				establishment of the bicycle as a normal form of urban transport	bicycle strategies to designing a single street or district, incorporating urban cycling into the heart of your project.		
Parkis UAB	https://parkis.eu/	SME	LITHUANIA	PARKIS is a bicycle lift.	PARKIS is a game-changer. It is an automatized space-saving bicycle lift designed for graceful and uncluttered living.	Safe Parking Facilities	https://parkis.eu/
SWARCO	https://www.swarco.com/	Large Company	AUSTRIA	Our products, systems, services and turnkey solutions offer orientation, safety and convenient travelling for all people on the move. The traffic technology group SWARCO headquartered in Wattens near Innsbruck / Austria has an international network of production facilities, offices and partners on all continents and offers one of the most complete solution portfolios for road marking, signage, urban traffic management, parking, highway and tunnel management, and public transport.	SWARCO offers a wide range of products suitable for bicycle lanes. Our bicycle lane marking materials are elastic and are not only ideal for bicycle path markings but for any large area markings.	Safe Lane Markings	https://www.swarco.com/stories/safer-cycling-modern-infrastructure-only-option
Röhm AG (Evonik)	https://www.degaroute.com/en/degaroute-road-markings	Large Company	GERMANY	Rohm supplies metacrylates worldwide.	Evonik has developed DEGAROUTE® coating, now commercialised by the subsidiary company Rohm, for new cycle lanes.	Safe Lane Markings	https://corporate.evonik.de/en/safe-bike-lanes-built-quickly-1091.html
3M	https://www.3m.com/	Large Company	UNITED STATES	3M Company, (formerly known as Minnesota Mining and Manufacturing Company), is a US multinational company with a worldwide presence, founded in 1902. It operates in the industrial sector, producing products and solutions, such as: personal protective equipment, adhesives, abrasives , reflective films, fire protection, dental products, electrical materials and electronic circuits.	3M develops and produces a wide range of innovative pavement markings tapes with the aiming of improving the safety for cyclists.	Safe Lane Markings	https://www.3m.com/3M/en_US/road-safety-us/applications/urban-mobility/protected-bike-lanes/
STRABAG SE	https://www.strabag-international.com/	Large Company	AUSTRIA	STRABAG SE is a European-based technology partner for construction services, a leader in innovation and financial strength. Our services span all areas of the construction industry and cover the entire construction value chain.	Strabag provides strips for cycle paths made of fluorescent materials. This material absorbs the sun's rays during the day and then emits them at night, improving the visibility of cycle lanes on the road.	Safe Lane Markings	https://www.bikecitizens.net/glowing-cycling-lanes-when-bike-paths-light-up/
Continental Tires	https://www.continental-tires.com/bicycle	Large Company	GERMANY	Continental is the European leading in providing tires for automotive industry. It also develops intelligent technologies to improve safety on roads.	Continental has developed the 77 Gigahertz (GHz) short-range radar that detects movement direction and speed, making it the perfect gadget to help you turn or merge lanes in urban traffic confidently.	Safe Lane Devices	https://www.continental-tires.com/car/stories/cycling/bikesafety
Ennis-Flint EMEA	https://www.ennisflintemea.com/	Large Company	UNITED KINGDOM	Ennis-Flint® manufactures and supplies a full line of durable thermoplastic products containing 100% solid, environmentally-friendly and user safe compounds.	Ennis-Flint develops Cycletrack, a hot screed, specialist hand applied surface treatment consisting of a polymer modified plasticised rosin ester, incorporating a blend of high PSV aggregates and mineral extender. It provides a well textured durable matrix typically 2-3mm	Safe Lane Markings	https://www.ennisflintemea.com/by-use/bus-routes/cycletrack

Company	Website	Type	Country	Core Business	Relation to the Scope	Solution Area	Link to Solution
					thick. The system can be readily applied to asphalt, macadam and concrete surfaces and is available in a variety of colours.		
Geveko Markings	https://www.geveko-markings.com/	Large Company	DENMARK	Geveko Markings offers full range of materials for road markings, line markings and horizontal decoration. We are marking the future with cold plastic, thermoplastic, water borne paint, preformed thermoplastic and tactile markings.	Geveko develops and produces preformed materials, commercialised under different brand names, used for safety markings in cycle paths.	Safe Lane Markings	https://www.geveko-markings.com/fileadmin/root/common/pdf/brochures/022021_Micromobility.pdf
Dow	https://corporate.dow.com/en-us.html	Large Company	UNITED STATES	Dow is a worldwide leading chemical company.	Dow has developed new DURATRACK™ two-component (2K) technology for broad area markings, including green bike lanes.	Safe Lane Markings	https://corporate.dow.com/en-us/seek-together/green-bike-lanes-improve-road-safety-case-study.html
Cycle Data B.V.	https://cycledata.nl/en/	SME	NETHERLANDS	Our work is based on innovative radar technology, providing high-quality, accurate and actual data of vehicles on cycle paths, which our clients can use to make policy decisions regarding traffic & safety in a Smart City environment.	With the Signum, Cycledata provides you with high-quality actual data of vehicles on cycle paths. We do this with an accuracy of more than 95%, even during peak hours and without any application of algorithms. You gain insight into how many vehicles are travelling on the cycle path in which direction, at what speed and at what time. The i-Signum is installed in front of the iVRI (smart traffic controller). The more vehicles detected on the cycling path, the higher the priority that can be given to the traffic signal. The Signum is powered with solar panels and the generated data is automatically sent to a server, so that it can be analysed through the “My Cycle Traffic” online web-based interface.	Safe Lane Devices	https://cycledata.nl/en/i-signum/
Heijmans BV	https://www.heijmans.nl/nl/	Large Company	NETHERLANDS	Heijmans is a listed company that operates in property development, (non-) residential building, roads and civil engineering in the fields: living, working and connecting.	Fairytrail has an impact absorbing surface made of rubber and is mixed with fluorescent and glow-in-the-dark effects. It makes places where we move, sports and play safer and more beautiful. It goes against light pollution. Made in a concrete surface, Fairytrail is ideal for use on squares, pedestrian areas, cycle paths and hiking trails.	Safe Lane Markings	https://www.bekina-compounds.com/en/news/glow-in-the-dark-rubber
See.Sense	https://seesense.cc/	SME	UNITED KINGDOM	See.Sense was founded in 2013 by Philip and Irene McAleese, to improve cycling safety, starting with intelligent cycle lighting.	See.Sense creates cycling tech products that make cycling safer, and that engage our community to share powerful data insights to improve conditions for cycling. Our products contain patented, AI-enabled sensor technology, that monitors the rider's environment up to 800 times per second. As well as providing a range of benefits to riders by using our products, our technology provides highly granular insights into the rider's experience, including braking, swerving, collisions, and road surface conditions.	Safe Lane Devices	https://seesense.cc/pages/about-us
Easypath BV	https://www.easypath.nl/	SME	NETHERLANDS	Easypath specializes in the supply and installation of prefabricated elements for cycle paths in high quality reinforced concrete.	Easypath® markets sustainable precast concrete cycle lane elements with integrated solar panels under the SolarPath® brand.	Safe Lane Devices	https://www.easypath.nl/product/solarpath/

Company	Website	Type	Country	Core Business	Relation to the Scope	Solution Area	Link to Solution
Bike.Box	https://www.bike-box.nl/	SME	NETHERLANDS	Bike.box is founded in The Netherlands in 2017 and specializes in innovative and design driven solutions for bicycle parking.	Bike.box offers a complete range from a fully automated Bike.tower and the underground Bike.tunnel to the smart Pedal.clip system.	Safe Parking Facilities	https://www.bike-box.nl/collections

ANNEX 11: OPEN CALL URBAN DELIVERY SOLUTIONS

Proposal for Open Call
Urban Delivery Solutions

Urban delivery has been experiencing a shift toward more sustainable modes. The shift is encouraged by both innovative solutions and policies (e.g. zero emission zones in city centres). New delivery solutions proliferate, jointly driven by technology development and business needs. Users of urban logistics services are looking for innovative solutions to meet their demands and their ambitions in climate action.

It is noted that buyers or potential customers of innovative solutions are not aware of all products and services available on the market while owners of innovative solutions cannot reach out potential customers, preventing market uptake and scaling up of innovation.

ALICE, as part of its activities within ENTRANCE project is therefore, is plan to launch an Open Call to collect current urban delivery solutions available on the market, aiming to bolster innovative solutions for zero emission logistics.

The Scope of the Open Call

The Open Call aims to collect information about companies who currently have urban delivery solutions that can be implemented either directly or with limited configuration, i.e. Technology Readiness Level (TRL) 8 or above, including first in kind of market solution. Any companies who provide solutions in urban delivery are welcome to submit information according to the template shown below.

Table 1: Information required (Solution Template):

Basic information	Name of the company
	Address & Country
	Size of the company
	Contact, website, social media
Description of individual solution	Technical description
	Type of customer
	Expected impacts/benefits to customers
	Any implementation cases if any applicable
Additional information	

Examples of solutions the Open Call looks for is list in the following table. The examples shown are based in *ALICE-POLIS Joint Guide for advancing together towards zero-emission urban logistics by 2030*[1].

Table 2: Examples of solutions the Open Call looking for

[1] Available at: https://www.etp-logistics.eu/wp-content/uploads/2021/12/POLIS_ALICE_Guide-Zero-Emission-Urban-Logistics_Dec2021-low.pdf

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Intervention area	Example of solutions
Clean and alternative fleet	New business models for the adoption of electric/FCEV vans and trucks, cargo bikes
	Energy storage and e-charging infrastructure
	Small EVs, cargo bikes and walking carrier
	Autonomous vehicles (drones and robots)
Logistics operations	Freight flows consolidation
	Consolidation centres/hubs & micro-hubs
	Decoupling transport and delivery (Pick up points, lockers)
Purpose oriented data acquisition and sharing	Data collection and data sharing
	Data-driving decision making
	Fast-track dynamic planning and access to urban spaces/resources

Plan to launch the call

Before launch:
The information will be collected and shared through an online platform (ALICE Innovation Market Place and ENTRANCE platform). After scope and information template are defined, the online platform will be developed, tested and validated. All the information is public (free-of-charge and no registration is required for viewing). Registration is only required for submitting information. ALICE will cluster the solutions received and share them with its members, networks and communications to generate matchmaking opportunities.

Communication about the Open Call:
The Open Call will be launched in March 2022 and communication will include but not limited to:
- ALICE dissemination channels including marketing emails to all ALICE contacts, ALICE website, newsletter, social media;
- ALICE's mirror groups and logistics clusters in Member States;
- Members of ENTRANCE advisory board and liaison project consortia;

Events:
A dedicated information webinar will be organised after the launch. At the webinar, potential buyers (customers) will present their challenges and why such Open Call will help them.

ALICE Knowledge Platform:
All companies are current available on ALICE Knowledge Platform will be contacted about the call and encourage them to submit their solutions if applicable.

Next steps & exploitation plan

The online platform for the Open Call will be active at least till end of 2023. ALICE will monitor the usage of the platform and regularly collect feedbacks from users if any companies have been able to find customers through the platform. If there are positive feedbacks, a reminder of the Open Call will be disseminated regularly to ensure that the latest information is available. The online platform will be fully integrated with ALICE Innovation Market place.

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