Expression of interest

Contact details

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Short description of the organisation

Provide a short description of the equipment available, the relations with the industry, the profile of the main researchers

The City of Istanbul, at the intersection of the European and Asian continents, has hosted different cultures for centuries. Thus, this ancient city, which has been the capital of three empires, has a unique heritage with ten thousand years of experience. Istanbul combines this unique heritage with a vibrant investment environment and municipal expertise.

Istanbul is bigger than 38 countries in Europe and the Türkiye's largest city with a population of more than **16 million** and makes up the **%30** of the country's GDP. The city and its municipality has extensive experience in managing a diverse and complex city structure. Additionally, the city has received a total of **1.49 billion United States dollars** in 2021, composing **96.13%** of all investment received by Türkiye that same year (1.55 billion U.S. dollars).

The Istanbul Metropolitan Municipality (IMM) is also like a city in itself, with the entire provincial territory spanning a total area of **5,461 km²**. The municipality has more than **88.800 employees, 30 subsidiary and 2 affiliate companies**.

IMM is providing and collecting data on transport modes, infrastructure & mobility services regarding one of the service area in the city as transportation and mobility. The datasets are used to examine the existing projects and develop new alternative ones with the aim of increasing the quality of life in the city. IMM coordinates the strategy and policy development of the city (SUMP, Smart City Master Plan, etc.) with the goal of using new innovative solutions/technologies to reshape mobility services with citizen engagement.

IMM, a pioneer in smart transportation systems in the world and a leader in Turkey, has been using sensors to automatically detect the current traffic conditions since 2003. With these sensors established in order to obtain numerical data on the traffic flow on the road network online, vehicle speeds, vehicle numbers, vehicle classifications, traffic density and travel durations can be obtained instantly. All data obtained is stored, used as input for projects, and shared with universities for scientific studies.

In order to obtain traffic information, radar, image processing and Bluetooth based sensors are used. In addition, the data obtained from our mobile applications and vehicle tracking systems are converted to information with software and are used as a sensor.

With GPRS communication infrastructure from sensors on the land, instant traffic data received by the Transport Management Centre allows for the Istanbul Traffic to be monitored numerically 24/7.

Istanbul is the city with the most traffic monitoring cameras. Cameras at critical locations have been mounted to 20 metre poles in order to allow their efficient usage during disaster situations. With 360 degree horizontal and 130 degree vertical movement in the cameras used, a wide range of visibility is possible.

Specific skills related to the project

*Indicate the specific skills and competence in relation with **"HORIZON-CL5-2024-D6-01-06: Optimising multimodal network and traffic management, harnessing data from infrastructures, mobility of passengers and freight transport"** topic*

Istanbul Metropolitan Municipality is the principal public organization in planning, designing, implementing, and operating Istanbul's transportation sector. The municipality has 30 subsidiary companies and 2 affiliated organizations that allows it to impact urban life more efficiently, with a large portion of these companies and organizations working on transportation issues. Such issues nclude planning, land-use, integration with different sectors, traffic regulation, logistics, and transportation in different modalities like active mobility.

Multimodal network and traffic management services have shown that they have the potential to meet citizens' needs while at the same time bring about a more efficient use of transportation modes. The existing transport structure of Istanbul is highly concentrated on private car usage. There are plenty of incentives to encourge people to use public transportation, micro and active mobility modes.

The city of Istanbul is considered as a real life test bed area to provide a realistic and real-time smart city environment for researchers and entrepreneurs. Istanbul is a space where researchers and entrepreneurs are welcome to perform multiple studies and evaluate their results in a realistic environment. In that sense, IMM would like to support entrepreneurs and researchers to conduct their studies with real-life pilots and demonstrations. In that sense, IMM is very open to explore and deploy new solutions for newly designed or existing transport infrastructure to accommodate new and shared mobility services.

In 2019, Istanbul joined EIT Urban Mobility as a core partner. From 2019 to 2022, the city has been taking part in many different projects across a variety of subjects. Istanbul is a highly useful and effective test-bed with a diverse population of over 16 million. The city and the municipality always encourage entrepreneurs so that they can test their products, receive useful feedback and improve their solutions. For this reason, IMM aims to provide its best support by taking part in Horizon Europe and EIT Urban Mobility consortia.

Proposed activities for the project
Indicate which activities you would like to implement during the project

As a result of numerous analyses made for the creation of *IMM 2020-2024 Strategic Plan*, 44% of all Istanbul citizens prioritize transportation as the issue they care most about. Moreover, when we look at the number of car ownership and number of cars in the traffic, the rate of the car ownership and the number of car in the traffic are quite high in Istanbul. According to Turkish Statistical Institute (TUIK), there are more than 4 million registered vehicles in Istanbul. It has been determined that Istanbul's vehicle amount corresponds to the total population of approximately 21 Turkish provinces. The pandemic has further exacerbated the usage of privately owned cars in the city.

IMM is working on numerous initiatives and projects to encourage people to use alternative modes of transport such as public transport, bicycles and scooters. The municipality supports the creation of a safer, more sustainable, and more multimodal transportation system in Istanbul by encouraging citizens to use different modes of transportation.

As IMM's Smart City Department, we aim to implement a Smart City Lab in Istanbul to develop projects that fit Istanbul's smart city vision, and produce innovative products that add value to the local people's lives. The municipality seeks to make this lab beneficial towards making urban mobility more environmentally-friendly, efficient, and safer. The lab's approach is holistic and highly inclusive, incorporating entrepreneurs and citizens in every step of a solution's conception and implementation, from R&D, to production and testing.

IMM aims to support the proposed solution or project in terms of providing a test bed area in Istanbul. This will be an opportunity for innovators to have a chance to test their solutions in Istanbul which is bigger than 38 countries in Europe and the Türkiye's largest city. Istanbul has also hosted different cultures for centuries that is why the city is very rich in termsof cultural diversity. This means that any product tested and successful in Istanbul can work in many other regions and cities of the world.

References
Previous research project

Project acronym / starting date	Main objectives	Main activities	Role in the project
CO-APS - EIT UM Project (July 2020 – December 2020)	To provide public transport operators and city officials with a dataset to improve safety throughout the pandemic, by providing actionable information to optimize public transport services operations and promote social distancing without compromising people's privacy.	- Providing related data sets - Conducting and managing pilot study in Istanbul	Istanbul was one of the pilot cities in the project.
Decidium – EIT UM Project (January 2020 – December 2020)	To engage citizens on urban mobility innovation by participative democracy tools, channels and activities	- Providing data	Istanbul was one of the pilot cities in the project.
AI-TraWell - EIT UM Project (January 2021 – December 2021)	To promote long-term health and well-being by providing quality transport services for all citizens living in our cities.	- Conducting surveys to receive citizens subjective data regarding their mobility choices - Sharing data sets with UCL to analyse the Istanbul's mobility data	Istanbul was one of the pilot cities in the project.
Istanbul Sustainable Urban Mobility Plan (SUMP) – December 2021	- To create an innovative and inclusive transportation system focused on people and the environment, offering a mixed structure of safe, integrated, accessible, and affordable mobility options that are compatible with Istanbul's unique geography and historical values.	- Implementing sustainable practices to bring economic, environmentally friendly, and safe transportation to life for Istanbul residents.	Istanbul was the creator of the plan.

		- Disseminating bicycle kits for Istanbul residents. - Distributing rewards to participating residents based on their cycling performances. - Organizing and managing cycling events for the public.	
Bicification – EIT UM Project (January 2022 – December 2022)	To support a permanent transition towards green and active mobility through a solution of patented hardware and software and a reward-based gamification system to reliably monitor cycling trips and reward cyclists.	- Disseminating bicycle kits for Istanbul residents. - Distributing rewards to participating residents based on their cycling performances. - Organizing and managing cycling events for the public.	Istanbul was one of the pilot cities in the project.
Decarbomile – Horizon (2022–2026)	To create a collaborative urban consolidation framework that will include ICT and IoT vehicles in the last kilometre logistics with 31 partners from 10 different countries in the journey of decarbonizing urban logistics with green transportation vehicles and new solutions and delivery methods to be developed.	- Creating a logistics center, and planning where such a center would be located. - Providing data.	Istanbul was one of the pilot cities in the project.
Sustainable Urban Mobility Plan	To enhance life quality as making human oriented planning instead of car-oriented plans.. It builds on existing planning practices and takes due consideration of integration, participation and evaluation principles.	- Creating a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better life quality.	Istanbul was the creator of the plan.
Logistics Master Plan	To create solutions which is effective, environment friendly and compatible with the strategic plan decisions taken at the upper scale, in order to allow optimal logistics, focus to be solved at terminal points, as avoiding ineffective logistics.	- Creating a logistics plan designed to optimize logistics and avoiding inefficiency.	Istanbul was the creator of the plan.