Expression of interest

Contact details

Country	TURKEY
Name of the organisation	Dokuz Eylül University Maritime Faculty
Name of the contact	Dr. Duygu Şahan
Phone	+90 232 301 88 24 - Mobile Phone?
Email	duygu.sahan@deu.edu.tr

Short description of the organisation

Dokuz Eylül University Maritime Faculty was established as the first higher education unit of Turkish Republic in Turkey to provide education in the field of maritime business administration in 1988. There are four undergraduate departments: Maritime Business Administration, Logistics Management, Marine Transportation Engineering and Marine Engineering. The total number of academic staff of the faculty is 54 and this staff consists of 8 professors, 6 associate professors, 22 assistant professors and 15 research assistants. Based on the relatively low total number of students compared to the number of academic staff, and accordingly the relatively low academic course load, the time that academic staff can devote to research activities is high. Annual figures of scholarly output can be considered as a reflection of this, since a total of 172 articles by faculty members were published in 2022, and 40 projects were completed in the same year.

Dokuz Eylül University Maritime Faculty has strong connections with the logistics and maritime industry through its alumni organization DEFMED established in 2002. Details can be found on: https://www.defmed.org/. Due to the close relations with the industry, we are able to obtain various mobility data in addition to other collaborations such as sponsorships for new research facilities.

Moreover, our faculty has 20 laboratories in total, all of them functioning as means of education and research. Logistics-based laboratory designed for gamification in lectures, port modelling and simulation laboratories, logistics operations laboratory and innovation laboratory are examples of facilities used for scientific research.

Specific skills related to the project

Faculty members are specialized in various applications in transport domain as well as the industrial projects. Specifically, maritime transport, multimodal transport, sustainability and innovation concepts related to transport management, analysis of the various industries based on their logistical requirements and developmets. Apart from research and development, close relations between the faculty and transportation industry stakeholders (including both public and private organizations), enable the faculty to take a role in testing and transfering technology.

Faculty members with PhD degrees are specialized in multimodal transportation, transport infrastructure, route optimization and transport policy. Faculty members participate in the initiatives of businesses in technology development areas that receive funding from national organizations such as Small and Medium Enterprises Development Organization of Türkiye (KOSGEB) and İzmir Development Agency (İZKA).

Articles have been published in distinguished international journals on innovation management in logistics and multimodal transportation by faculty members. Total number of articles published in 2022 on the aforementioned research areas is 48, whereas the number of projects completed within the same year is 10.

We can support the call: HORIZON-CL5-2024-D6-01-06: Optimising multimodal network and traffic management, harnessing data from infrastructures, mobility of passengers and freight transport as;

- Assessing and simulating the effects on multimodal network and traffic management of new forms of mobility (e.g. zero-emission, connected and automated vehicles and vessels, car sharing/pooling, active-/micro-mobility, sustainable land/air transport modes and drones), as well as of innovative services (e.g. Mobility/Logistics as a Service), in different urban and rural environments, considering the socio-economic acceptability and different user needs (including vulnerable and gender groups).
- Performing simulations for network-wide optimisation of traffic models, aiming towards a "social optimum" and an evaluation of mobility options for multimodal mobility and freight flows (including last-mile), enabling a modal shift to more sustainable modes (leveraging public transport), while addressing planned and unplanned events of mobility and freight systems under disruption.
- Demonstrating the collection, aggregation, analysis and use of network-wide data from infrastructures, vehicles/vessels and users (using ICT and EU satellite-based systems), from across transport modes (modal and intermodal data), stakeholders and national borders, while preserving data privacy, security and confidentiality to data providers, thereby enabling effective and intelligent multimodal network and traffic management, and even further data exchanges with other sectors (e.g. energy and telecoms).
- Evaluating the qualitative and quantitative impact of the proposed measures and project results, including on reducing travel delay, transport emissions and energy consumption, with a clear baseline for each use case.

Proposed activities for the project

Since there is an increasing awareness regarding the greening of transport both in passenger and freight terms as well as the mobility concept which highlights the easiness of passenger or freight moving across a transportation system, innovative approaches and analysis concentrating on the integration of various modes of transport within the city of Izmir are needed. Main motives behind such need can be listed as; Izmir being the third biggest city in Turkey in terms of population and number of immigrants with regards to internal migration; being home to critical logistical infrastructures including seaports; being home to many production facilities and universities.

As a developing country, Turkey aims to strengthen its multimodal and intermodal transportation network. Our faculty is in İzmir which is one of the most important gateways of Turkey. As an important hub, İzmir needs a well developed multimodal network. We aim to make simulations on the effects of new forms of multimodal solutions in different residential areas (rural and urban) in İzmir based on General Equilibrium Modeling technique. Moreover, the attitudes of potential users are to be measured by qualitative techniques. In that way, the soft factors will also be considered in the quantitative model to provide policy variations depending on user perceptions.

References

Project acronym / starting date	Main objectives	Main activities	Role in the project
Analysis of Need for Logistics for Wind Energy Sector in İzmir Province supported by Republic of Turkey Ministry of Industry and Technology İzmir Development Agency, March 2021- August 2021			
5th National/1st International Congress on Ports (4-5 November 2021)			
Creating a Digital Platform to give "Ship-Port and Route" Advice to the International Maritime Transportation Users Supported by KOSGEB, May 2022- Ongoing			
Creating a Digital Platform to Monitor Instant Emission Levels Sourced from International Maritime Transportation in Any Region (Blue Growth Programme) Supported by IZKA, May 2022- Ongoing			
Feasibility Analysis of Çandarlı Port Supported by İZKA, Apr 2022- June 2022			
Analyzing the Importance of Environmental Sensitivity Criterion in Carrier Selection in International Maritime Transportation Supported by Turkey's Scientific and Technological Research Council, Apr 2021- Feb 2022			