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ORGANIZATION: Rhoé

WORKSHOP NAME: Workshop#4 - Smart Mobility

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Description of the Organisation

Rhoé is a cutting-edge consultancy specializing in mobility innovation and sustainable transportation solutions. Based in Thessaloniki, Greece, Rhoé operates at the nexus of technology, engineering, and policy to address pressing challenges in modern mobility. Rhoé offers a comprehensive range of services and products designed to revolutionize how people and goods move across urban and regional environments.

Rhoé's multidisciplinary team brings together engineers, economists, data scientists, and project managers, combining expertise in transportation infrastructure, spatial planning, digital platforms, and market analysis. This integrated approach ensures the delivery of practical, innovative, and customized solutions that effectively address the unique needs of stakeholders.

Integrated Mobility Planning: Rhoé designs future-ready transportation systems, including electric vehicle charging networks, autonomous vehicle pathways, and public transit optimization.

Smart Data Analytics: Leveraging machine learning and mathematical/statistical modeling, Rhoé provides actionable insights through predictive modeling, enabling smarter decisions for infrastructure investments and operational efficiency.

Innovation Consulting: Rhoé assists organizations in the transport industry in participating in and managing research projects, securing funding, and integrating cutting-edge outcomes into their business strategies to drive growth and competitiveness.

Economic and Policy Analysis: Rhoé assesses the market impact of mobility innovations and policies, offering strategies that align with economic and environmental objectives.

Sustainability Consulting: Expertise in reducing emissions and advancing green mobility through innovative technologies like battery swapping, digital twins, and fast-charging systems.

Your Teams' Expertise

Our team is comprised of highly qualified professionals with extensive academic and practical experience across various disciplines, including Civil Engineering, Finance and Accounting, Economics, Agricultural and Surveying Engineering, Spatial Planning and Development, Information Technology, and Mechanical Engineering. This interdisciplinary approach allows us to deliver comprehensive solutions, effectively addressing complex projects through expertise in both technical and economic matters.



Transportation Engineers: Design and implement sustainable transportation systems, using GIS tools to optimize urban mobility and reduce environmental impact.

Web Developers: Create digital tools for real-time transportation monitoring and data visualization, improving efficiency and decision-making.

Data Scientists: Use AI to optimize transportation systems through predictive models, enhancing efficiency and sustainability.

Economists: Analyze economic impacts of policies and technologies, guiding decisions on infrastructure, pricing, and market growth.

Project Managers: Oversee transportation projects, ensuring they meet timelines, budgets, and sustainability goals.



Your Research Fields

AI & Smart Analytics

Machine learning, predictive modeling, route optimization.



Digital Twins & Infrastructure

Logistics optimization, port resilience, emergency management.



Sustainable Transport

Battery swapping, EV charging, green logistics.



Mobility Policy & Economics

Transport policy, urban planning, regulatory compliance.



Your On-going Projects

- **Current Direct (EU):** Development of advanced lithium-ion battery cells for waterborne transport with an Energy-as-a-Service (EaaS) platform, enabling efficient battery swapping for electric vessels.
- **HYPOBATT (EU):** Electrification of ferry routes through standardized multi-megawatt fast-charging systems, integrating Digital Twin technology for improved system design and operational efficiency.
- **ZEV-UP (EU):** Battery Electric Vehicle (BEV) affordability enhancement via Battery-as-a-Service solutions, promoting market uptake through consumer-driven research.
- **SAFARI (EU):** Creation of a digital platform for emergency management, strengthening port resilience against extreme weather conditions with pilot sites in Dunkirk, Seville, and Lisbon.
- **SwapWave (EL):** Exploration of battery-swapping technology for coastal and short-sea shipping in the Ionian Islands, reducing vessel downtime and improving energy flexibility.
- **Street21 (EL):** Redesign of urban intersections to accommodate both conventional and automated vehicles, aligning with the European Green Deal objectives.
- **EVCIP (EL):** Optimization of EV charging infrastructure placement under the European Commission's Green Agreement, ensuring spatial and functional efficiency.
- **OPSPS (EL):** Holistic mapping and organization of urban public spaces to enhance accessibility and usability.
- **HiHELIOS (EU):** Demonstration of hybrid battery systems for multi-functional grid applications, integrating second-life NMC batteries with LFP batteries or supercapacitors.
- **ENERGENIUS (EU):** Development of a digital platform combining energy, healthcare, traffic, and other data streams for AI-driven optimization in community energy transitions.

Project Idea

Call Topic: HORIZON-CL5-2026-01-D6-08

BEE-FLOW is an initiative focused on accelerating digital innovation in freight transport and logistics by enhancing the adoption of electronic Freight Transport Information (eFTI) frameworks. The project aims to streamline logistics, reduce administrative burdens, and improve compliance through AI-driven data sharing, real-time route optimization, and automation.

Deadline Dates: -

☐ **Objectives:**

Expand eFTI functionalities to simplify compliance and encourage digital transformation. Improve interoperability between logistics stakeholders. Reduce carbon emissions and enhance sustainability. Validate solutions through large-scale demonstrations in multimodal logistics corridors and urban distribution hubs.

☐ **Expected Results:**

25% increase in eFTI adoption. 20% reduction in administrative overhead. 15% improvement in route efficiency. 30% fewer compliance errors. 20% decrease in CO₂ emissions per ton-km.

Consortium – required partners

Logistics Companies & SMEs – To validate solutions and participate in pilot tests.

Technology Providers & AI Developers – To integrate AI-driven analytics and ensure system interoperability.

Public Authorities & Regulatory Bodies – To facilitate regulatory compliance and policy alignment.

Research Institutions & Universities – To conduct impact assessments and support evaluation.

IT & Cybersecurity Firms – To ensure secure data exchange and cybersecurity.

Standardization Committees & Policy Advisors – To translate project outcomes into industry standards.

Environmental Consultancies – To assess sustainability impacts and carbon reduction strategies.

Industry Associations & Training Institutes – To promote broad adoption and provide training programs.



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