

KARSAN Cooperation Profile

Cooperation Profile Request Form		
1.	Short Summary of your company	<p>Karsan is a Turkish automotive company that produces and exports eco-friendly vehicles. It is the first and only company in Europe to have a full range of electric vehicles from 6 meters to 18 meters. In addition to vehicle production, they also manufacture vehicles for other brands and focus on sustainable transportation. Karsan is committed to its vision of staying one step ahead in the future of mobility, and has more than 700 e-buses around the world in more than 21 countries.</p>
2.	Full description of your offer or request	<p>KARSAN produces environmentally friendly electric vehicle models, this showcases their dedication to reducing emissions and contributing to a zero-emission world, have a global presence with a track record of international service, prioritize innovation and staying ahead in the mobility industry, offer a diverse product portfolio, including buses and cars</p> <p>Karsan can provide services such as;</p> <ul style="list-style-type: none"> - In Engineering and Design processes - Vehicle development and Prototype Production - R&D Studies - Process studies in Vehicle Development <p>We can be partners or project coordinators in projects related to these topics.</p>
3.	Advantages And Innovation of your product/company	<p>Karsan acts with the vision of being one step ahead in the mobility of the future; It leads the industry in electric, <i>autonomous and hydrogen vehicles</i>. In this context, our globally recognized brands are as follows;</p> <ul style="list-style-type: none"> - e-JEST - e-ATAK - e-ATA - e- ATAK AUTONOMOUS

4.	Stage of development of your product	<input type="checkbox"/> Concept Stage <input type="checkbox"/> Under Development <input type="checkbox"/> Lab Tested <input type="checkbox"/> Available for Demonstration <input checked="" type="checkbox"/> Already on Market
5.	IPR Status	<input type="checkbox"/> No IPR applied <input checked="" type="checkbox"/> Secret know-how <input checked="" type="checkbox"/> IPR applied but not granted yet <input checked="" type="checkbox"/> IPR applied
6.	Expected role of the partner	<p>Karsan is a company that specializes in making improvements in R&D activities by establishing strategic partnerships. It aims to become a leader in the sector by combining its current areas of expertise with the work of companies in other disciplines. The most important feature we look for in our partners is that they are experts in its field of work and They are opened to work together.</p> <p><u>The expectations are listed;</u></p> <ul style="list-style-type: none"> - Connected Vehicles - Remote Control - Cybersecurity - Safety - Sensor Limitations in Challenging Weather Conditions - Complex social interactions and Scenarios - Open to collaboration for any stacks in the development of the AV framework - Ability to provide analysis services, technical support when needed - R&D studies for fuel cell and battery, thermal and structural modeling & simulation. - Bench tests for fuel cell and battery. - Analysis and simulation services -
7.	Type of Partnership	<input checked="" type="checkbox"/> Commercial Agreement <input checked="" type="checkbox"/> Outsourcing Agreement <input type="checkbox"/> IPR applied but not granted yet <input type="checkbox"/> IPR applied
8.	Type and Size of the Company	<input checked="" type="checkbox"/> Big Company <input type="checkbox"/> Other <input type="checkbox"/> R&D Institution <input type="checkbox"/> SME 11-49 <input type="checkbox"/> SME 50-249

		<input type="checkbox"/> University
9.	Targeted Countries	Europe, America
10.	Calls for Preparation	<p><u>EUREKA CALLS;</u></p> <ol style="list-style-type: none"> 1. https://www.eurekanetwork.org/open-calls/clusters-ITEA-2023-nov 2. https://www.eurekanetwork.org/open-calls/clusters-eurogia-2023-nov 3. https://www.eurekanetwork.org/open-calls/clusters/smart-2024 4. https://www.eurekanetwork.org/open-calls/eurostars-funding-programme-2023-call-6 5. https://www.eurekanetwork.org/open-calls/network-projects-all-year <p><u>EU PROJECT CALLS;</u></p> <ol style="list-style-type: none"> 1. HORIZON-CL5-2024-D3-01-03 2. CL5-2024-D5-01-06 3. DUT Call - (Driving Urban Transitions-DUT) 2023 <p><u>What Karsan Can Do in This Call;</u></p> <ul style="list-style-type: none"> - The optimized design of the vehicle according to passengers' needs. - The sensor configuration and calibration for the alternative designs in autonomous vehicles. - The implementation and modifications of the algorithms, not only in perception but also in planning. - The development of the combined solutions of the software and hardware for the expected outputs. - The design of the alternative approaches/algorithms for specific tasks from the system to the software in the AV framework. - The use of the data from the vehicles and sensors to build state-of-the-art methods and unique solutions. - Support to develop the AI algorithms to automatize identification and extraction from real data. - Use its wide range of vehicles equipped with high-technology sensors to collect data from urban and rural traffic. - Assist in the creation of ODDs for harsh weather conditions via the system engineers. - Build virtual scenarios using the simulation program to simulate a real traffic environment - Implement sensor fusion to make sensors work in harmony. - Use the fused data to understand and interpret the environment via machine learning. - Put its vehicles into operation to get to many places to observe rare scenarios.

- Use data from the vehicles and sensors to build state-of-the-art methods and unique solutions.
- Embed high-technology sensors into the vehicles and calibrate them for effective use.
- Perform sensor fusion method(s) to bring together inputs from multiple sensors.
- Implement point cloud mapping to build a point cloud map of an environment from sensor data that conveys information about the surroundings of a perceiving agent.
- Use the SLAM algorithms to precise road information to help self-driving vehicles identify the static object with good accuracy.
- Provide real-time traffic information on other cars on the road, pedestrians, and cyclists which can help avoid accidents in critical situations through quick response times
- Effectively use AI-based techniques for sustainable mobility, especially in autonomous systems.
- Perform optimization algorithms to bring sub-optimal solutions for transportation networks.
- Use its wide range of electric vehicles equipped with the desired high-technology sensors in urban and rural traffic.
- Adapt the different types of vehicles into a simulation environment.
- Analyze energy consumption, used time, and key information from the vehicles.
- Propose novel approaches in the field of algorithm development to make the process better or faster.
- Draw a general picture of the public transportation network in many places via a wide market network of KARSAN.
- Build the ML models for specific tasks according to given data.
- Flexible AI-based solution for both passengers and drivers including image processing and deep learning techniques using high-technology sensors.
- Engineering and design studies of zero emission M₂ and M₃ class vehicles, vehicle architecture, in-vehicle software development.
- Vehicle integration and validation, vehicle testing, on-board testing of fuel cells and other components.
- Studies on in-vehicle control mechanism development, power management and consumption reduction.
- On-vehicle hydrogen system layout
- To experience hydrogen fuel cells and hydrogen filling stations first-hand as an end-user.

		<ul style="list-style-type: none">- Integration of products produced with advanced production technology into their own vehicles and in-vehicle tests.
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