



1. Project description

Project: Hydrogen Corridor

The project consists of connecting local hydrogen production sites in a dedicated hydrogen pipeline network for bottleneck areas along the Hamburg - Stockholm stretch of the EU ScanMed TEN-T road freight corridor. Low cost hydrogen storage will be an important aspect in this project, and natural salt caverns could be a potential solution to investigate. The project will create jobs and economic growth, and learnings can be applied for other TEN-T corridors in Europe.

Infrastructure for hydrogen transport

If hydrogen is to play a key role in the EU's decarbonization endeavour, it must be made available across the continent at the lowest possible cost. The cost of transporting hydrogen is a key challenge. Two options exist: either hydrogen production becomes highly decentralized or significant investment in pipeline infrastructure is required. The European Network of Transmission System Operators for Gas (ENTSO-G) has suggested building a dedicated network of hydrogen pipelines, the European Hydrogen Backbone, which could enable an efficient EU internal hydrogen market.

Enable hydrogen-based heavy road transport on the Scan-Med corridor

One industry for which the availability of low cost of hydrogen will be crucial to successfully decarbonize is heavy road transport. Trucks, buses, and coaches emit 25% of the CO2 emissions from EU road transport and 6% of total EU emissions. Emissions from the sector are expected to increase due to increased road freight traffic. The north-south freight axis, the Scandinavian-Mediterranean Corridor, is essential for the European economy. For hydrogen to make a breakthrough in EU's heavy road transport, it is imperative to establish hydrogen infrastructure along the Scan-Med corridor. Ramboll is already involved in the Nordic Hydrogen Corridor, which is an initiative to create the beginning of a network of hydrogen fuelling stations in the Scandinavian end.

Please select which part of the value chain for hydrogen your project focuses on (select one or more, where applicable):

- | | | | | | | |
|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| Production | Transmission | Industrial application | Mobility | Energy | Housing application | Other |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |



2. Partnerships and spillover effects

Partnership: Ramboll is seeking partners across the value chain from third party logistics companies and others interested in deploying fuel cell vehicles for heavy transport, refuelling station operators, gas transmission operators (TSOs and DSOs), gas storage solution providers, renewable energy and green hydrogen production companies as well as certification bodies to guarantee the origin and traceability of the renewable source of energy used.

About Ramboll: Leading international engineering and consultancy company that leverages the deep industry knowledge and technical expertise of our 16,000 employees to create tomorrow's sustainable world. Ramboll has extensive experience with managing large energy and transport infrastructure project across Europe, including gas pipeline and storage projects, the Baltic Pipe being a recent example. In the proposed project we will conduct market survey, assess the technical feasibility, and calculate the socioeconomic business case, conduct traffic analysis, design of fuelling stations, site selection, safety, and cost estimation. Finally, we will plan and execute the project by connecting the dots between the different sectors energy production, energy transport/storage and energy consumer, who in this case will be the transport and logistics sector.