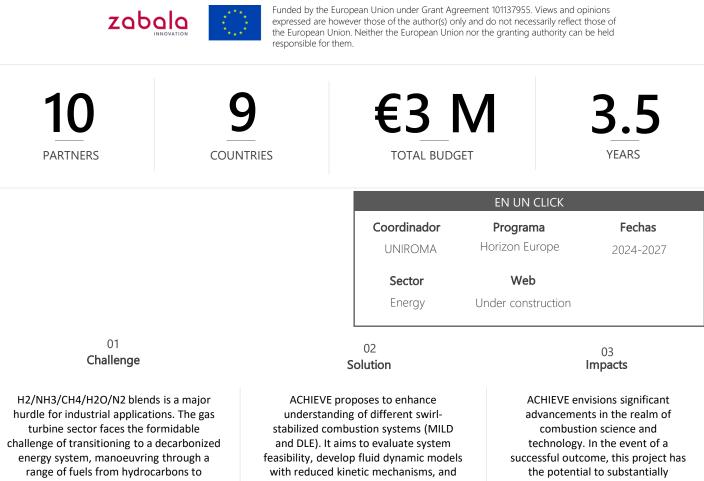


Advancing the Combustion of Hydrogen-AmmonIa blEnds for improved **Emissions and stability**

ACHIEVE aims at developing the fundamental knowledge to enable a transition to unconventional carbonfree fuel blends based around H2 and NH3 to achieve zero carbon emissions, ultra-low Nox emissions, and stable gas turbine operation.



intricate blends of hydrogen, ammonia, and methane. The pressing task is to devise solutions enabling gas turbines to adeptly handle unconventional fuel mixtures, meeting strict emission constraints. Despite progress, the burning properties of unconventional H2 blends remain elusive, necessitating focused research to refine models and unlock the full potential of diverse fuel combinations.

validate them with unique datasets. Special focus is on exhaust gas recirculation's impact on a second combustion stage in heavy-duty GTs. The project also aims to develop and validate a real-time monitoring concept for fuelflexible operation at MILD and conventional conditions (TRL 4).

elevate gas turbine efficiency, resulting in heightened overall performance and a notable reduction in the environmental footprint associated with such technologies.