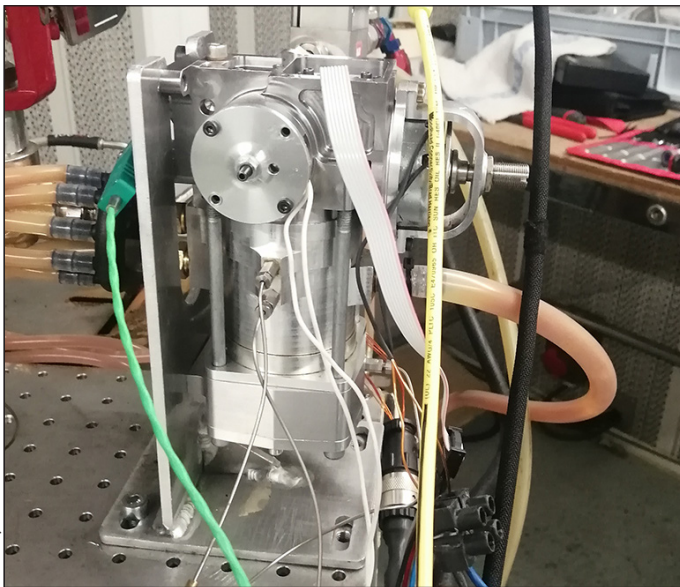


Valvijet

A robust **cost** estimate, preamble to industrialisation

Valvijet asked Cetim to carry out a reliable and objective cost estimate for the components of its technology, an essential prerequisite for discussions with its partners.



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Business activity

Valvijet is developing a high-energy turbulent jet ignition system designed to optimise the efficiency of internal combustion engines for automotive applications, particularly hybrid vehicles. Its R&D investments amount to tens of millions of euros. Fifteen patent families cover all components of Valvijet's technology across fifteen strategic countries.

Developed since 2018, the Valvijet high-energy turbulent jet ignition system aims to improve the efficiency of automotive internal combustion engines. By 2025, its reliability, proven over several hundred hours of testing, will make industrial production a viable prospect. *"To convince manufacturers, demonstrating performance is not enough. Cost remains one of their main concerns, emphasises Vianney Rabhi, founder of Valvijet. It is therefore essential to carry out a very detailed cost analysis to initiate discussions."* He turned to Cetim to determine the production cost of

the 80 parts, divided into four mechanical sub-assemblies, with a view to manufacturing in three distinct regions: Europe, Eastern Europe and Japan.

From prototype to design to cost

Cetim carried out a detailed industrial analysis of the parts, manufactured using a variety of processes: machining, sheet metal forming, casting, forging, plastic injection moulding, metal additive manufacturing and surface treatments. With a view to large-scale production, certain parts were redesigned and all cost items, from materials to packaging, were broken down to inform a 'Design to Cost' approach. Several technological scenarios were compared to optimise the design and manufacture of certain components and significantly reduce their unit

cost. *"Cetim has no financial stake in the matter. It holds nothing back, proceeding with complete objectivity and through open dialogue,"* notes Vianney Rabhi. Today, this study is being shared with all of Valvijet's partners, for whom Cetim's credibility is a mark of reliability. The collaboration will continue across other aspects of the project.

Cetim's asset



As an independent trusted third party, Cetim draws on a wide range of complementary expertise to support manufacturers in identifying avenues for product redesign with a view to industrialisation, acting with complete objectivity and free from any technological or economic bias.

