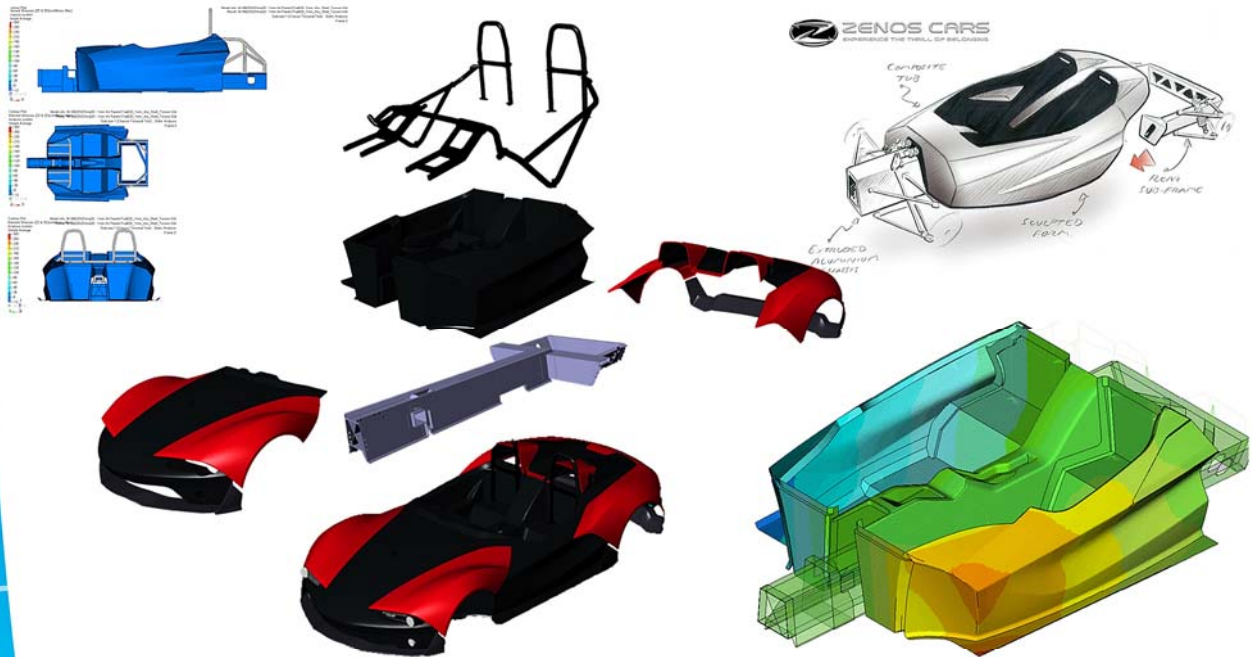
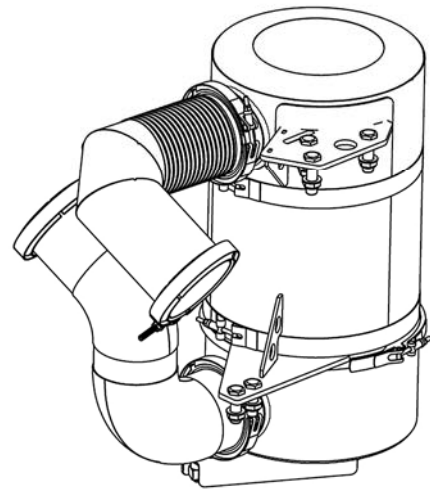
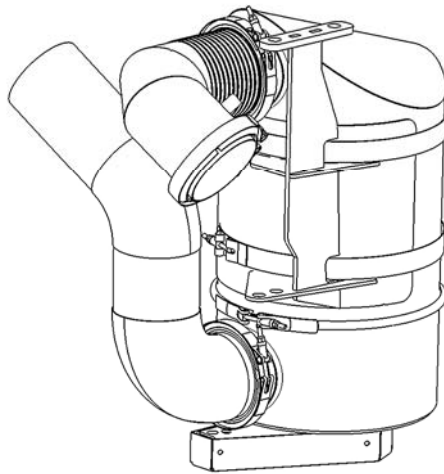


Lightweight Composite/ Aluminium Niche Vehicle Platform



This project investigated the integration of a hybrid of advanced and recycled materials as part of an innovative vehicle architecture, delivering a proof of concept fully functional running prototype.

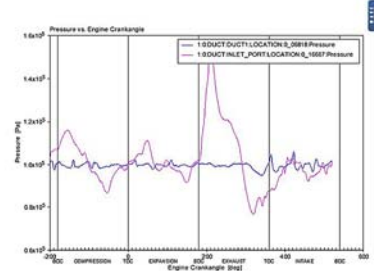
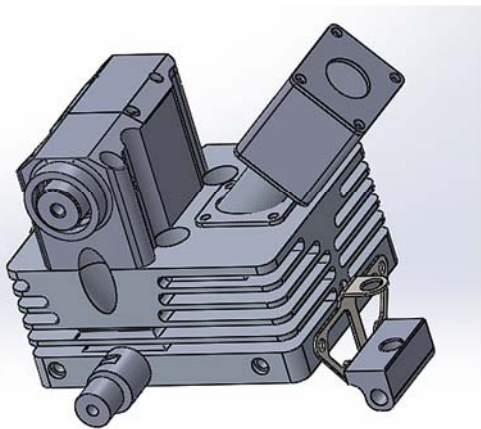
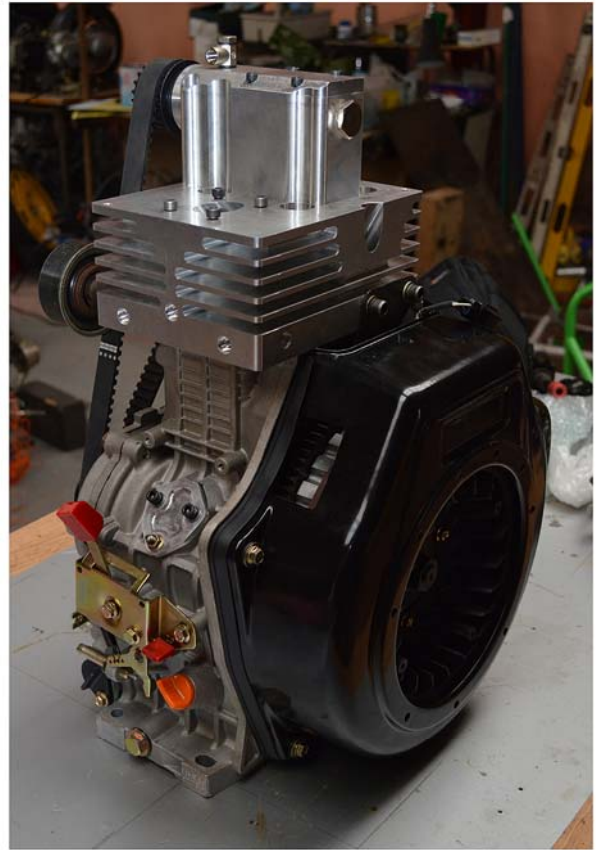
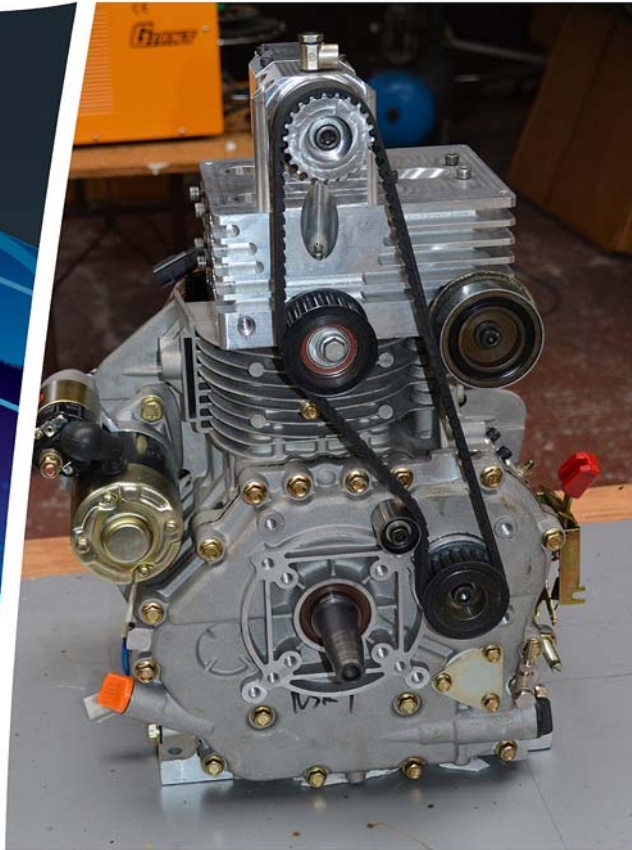
The completed vehicle optimised chassis weight, torsional rigidity and unit manufacturing cost, with an inherent flexibility suitable for low volume manufacturing.



The objective of this project was to design, manufacture, install and test a novel and complex exhaust after-treatment system for the reduction of methane emissions from dual-fuel diesel/natural gas engines for heavy duty vehicles.

The project delivered a prototype system, which demonstrated, verified and validated its catalytic and mechanical operation.

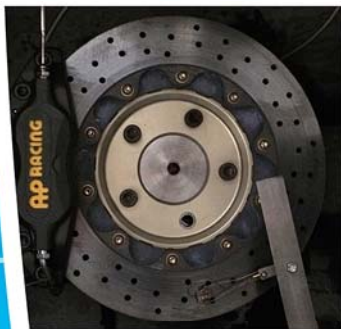
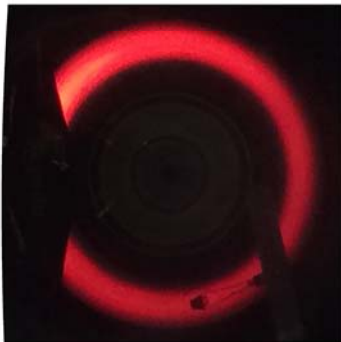
Pulsar Range Extender Modelling for Optimisation (PREMO)



The PREMO project simulated and prototyped a high efficiency engine concept that applies a novel gas dynamic and combustion system to 4-stroke engine architecture.

The prototype immediately bettered power and emissions performance of market leading small engines and showed exceptional fuel efficiency of 234g/kwhr, despite having scope for considerable further optimisation.

Development of a Lightweight High-Performance Carbon-Ceramic Brake System for Ultra-lightweight Vehicles



The project aimed to develop a carbon-ceramic brake system for lightweight niche vehicles; reducing unsprung weight and improving handling and performance for both road and track applications.

Working in collaboration the partners successfully designed a new brake disc 60% lighter than the original steel disc, saving 2.5kg per unsprung corner.