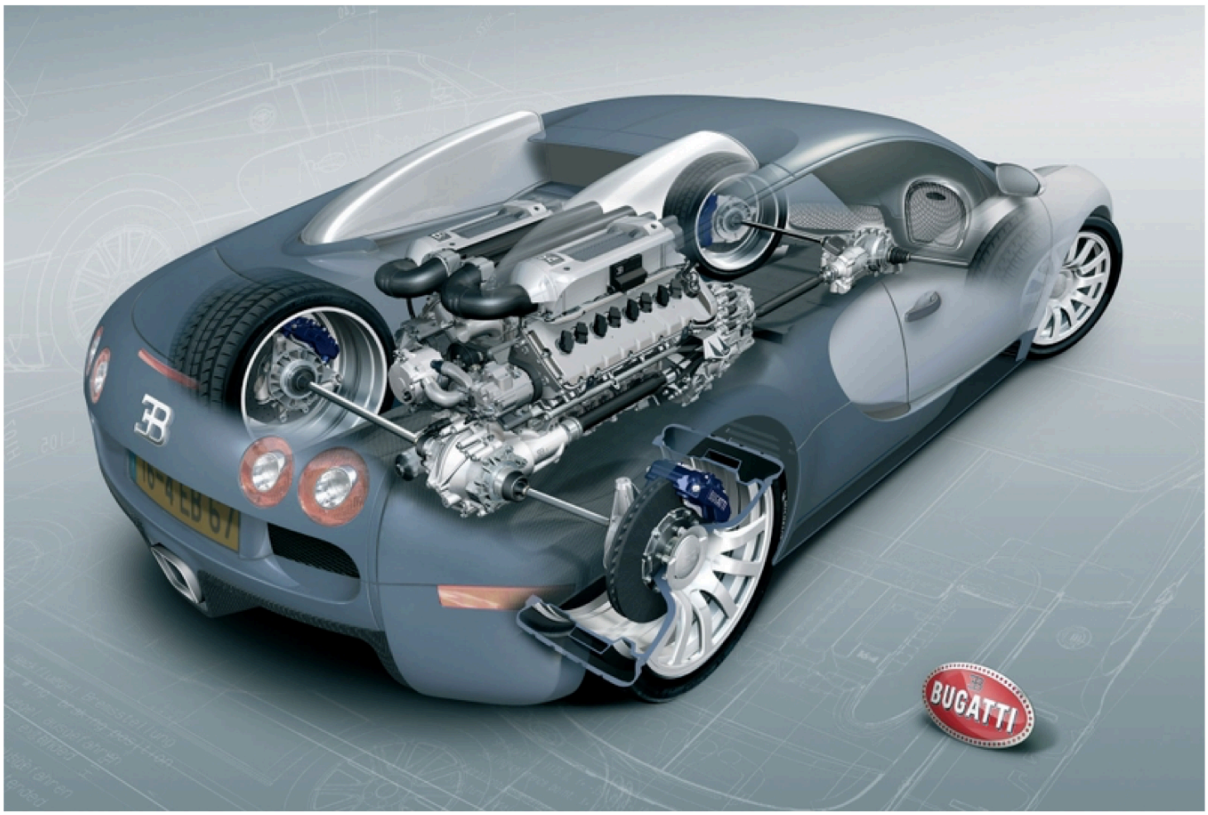
A 2016/17 HMRC Advanced Assured Seed Enterprise Investment Scheme

VN-KERB Turbo Solutions Ltd

1st Round SEIS Raise



Bugatti Veyron with Compound Boosting

The Company proposes to raise an initial £150,000 via a single SEIS raise by issuing 150 Ordinary Shares at £1000 per share. This will fund Phase 1 Rig testing to Technology Readiness Level 4, (TRL4) starting in April 2017, finishing in April 2019. This is a 'Go – No Go' break point. If the trial is successful it will deliver sufficient results to move the project onto Phase 2 and a further EIS round of funding by the end of 2018.

HMRC Advanced Assurance for Seed Enterprise Investment Scheme (SEIS) has been confirmed.

Successful Proof-of Concept study has taken the technology to TRL 3	Proven Market Opportunity	Licence Fee Revenue Model

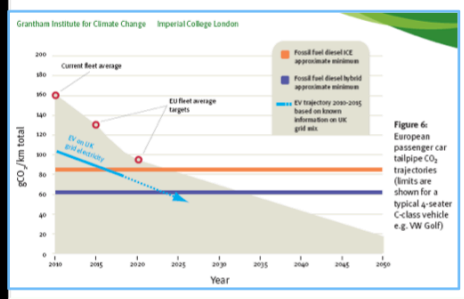
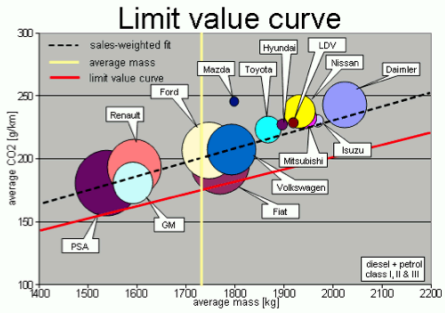


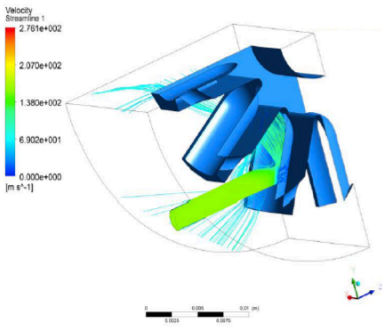
Figure 6: European passenger car tailpipe CO_2 trajectories (limits are shown for a typical 4-seater C-class vehicle e.g. VW Golf)



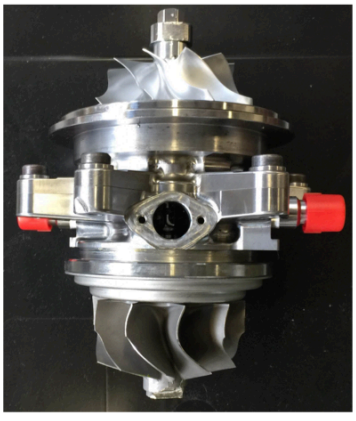
What is the opportunity & why does it exist?

- The automotive manufacturing industry is being driven by global legislation to reduce the amount of CO_2 their vehicles emit.
- Efforts to date have produced mixed results, but many manufacturers have not reached the 130g/km required. Post 2015 legislation requires a further 30% reduction from the 130g/km figure to 95g/kg
- As seen in the recent news Volkswagen, Audi, Hyundai, Seat and many others manufacturers are unable to meet the emission requirements today without 'CHEATING'
- Engine right-sizing is a key trend in the automotive industry, both in the Light and Heavy duty sectors, this will see the majority of road cars fitted with new engine solutions in Europe and other key regions by 2020

What is the technology and how proven is it?



- The VN-KERB-TS uses existing technologies to recover vehicle braking energy, and then utilises this energy to spin-up the turbocharger ready for the next acceleration event, thereby eliminating turbocharger lag in a clean and efficient way.
- Following 2 years of R&D by Professor Alasdair Cairns, the project is focused on delivering an automotive-ready solution, in line with the industry established Automotive Technology Readiness Levels. (Complete guide in Schedule 4 of the IM).
- A Successful Proof-of Concept study has taken the technology to TRL 3.
- A prototype turbocharger has now been retrofitted with the Pelton system and is being prepared for steady state rig tests.



How & When will the project make money?

- With 2 Patent applications already applied for, VN-KERB-Turbo Solutions will deliver revenues through licence sales to Passenger Car Automotive Manufacturers.
- 3-6 years in development before revenues generated.
- On successful delivery of TRL 6 there is a potential investor exit via a trade sale.

For further information on the VN-KERB Turbo Solutions Ltd opportunity or any other VN-Capital Partners sponsored project please contact us on: 0207 993 5307 or email to EIS@vn-cp.co.uk