

TECHNICAL EXCELLENCE, PASSION AND PERFORMANCE UNRIVALLED IN THE AUTOMOTIVE INDUSTRY

We have a proven track record taken from almost 60 years experience in motor racing, producing our own cars and working for hundreds of clients in the automotive industry and beyond. Engineering excellence, innovation and design flair is instilled into everything we do, from powertrain and chassis design, driving dynamics, electrical and electronic integration, through to production and final manufacture.

Lotus Engineering can focus on the design and development of a single component, or employ the full capability of our engineering specialisms to take concepts through to the final completion of your product. Only we can do this, because we are the only engineering consultancy that designs and manufactures our own cars and each is proof of our quest for perfection.

Lotus Engineering focuses on four core engineering competencies: Lightweight Architectures, Efficient Performance, Electrical and Electronic Integration and Driving Dynamics. We can tackle projects within each individual area or combine them to give us an unmatched ability to deliver anything from a component or system to a complete powertrain solution or whole vehicle programme.



A DIFFERENT PERSPECTIVE

Lotus Engineering has a clear advantage; not only do we design and develop engineering solutions, we also manufacture and sell our own cars to very enthusiastic customers worldwide.

Lotus cars embody our engineering ethos: to produce enthralling vehicles notable for their excellent driving dynamics and efficient performance. It is the purity of the Lotus driving experience which captivates our customers and inspires the press to shower accolades on our cars.

So, whether you need us to create an intelligent body structure that is both lightweight and rigid, use our development expertise to improve the performance and efficiency of a mass produced engine, or combine all of our engineering competencies into a complete product design, we are able to assist and understand your needs from the perspective of a vehicle manufacturer.

THE LOTUS HERITAGE

Lotus has a fine heritage of building exciting, desirable cars. We bring together our world-renowned engineering expertise to create cars with a unique character that communicate with the driver and, above all, are fun to drive.

Our skills are not just reserved for sports cars. We can apply the lessons we have learned from the last 60 years of engineering to any conventional car for our clients. Our sensitivity to brand and character helps because we live by it with every car that carries our badge.

From creating the template for the modern Formula 1 car to spearheading 4-valve technology, from pioneering active suspension to bringing bonded aluminium structures to vehicle production, Lotus has thrust breakthrough after breakthrough into the automotive arena.

FULL PROGRAMMES THE TOTAL PACKAGE

Our four core competencies and the wider skills within Lotus provide a depth of experience and expertise to engineer whole vehicles across a range of vehicle types, market sectors and production volumes.

We have the management capability and processes to deliver programmes using combinations of both our

internal engineering teams and external partners and suppliers, to provide the best delivery solution for the client.

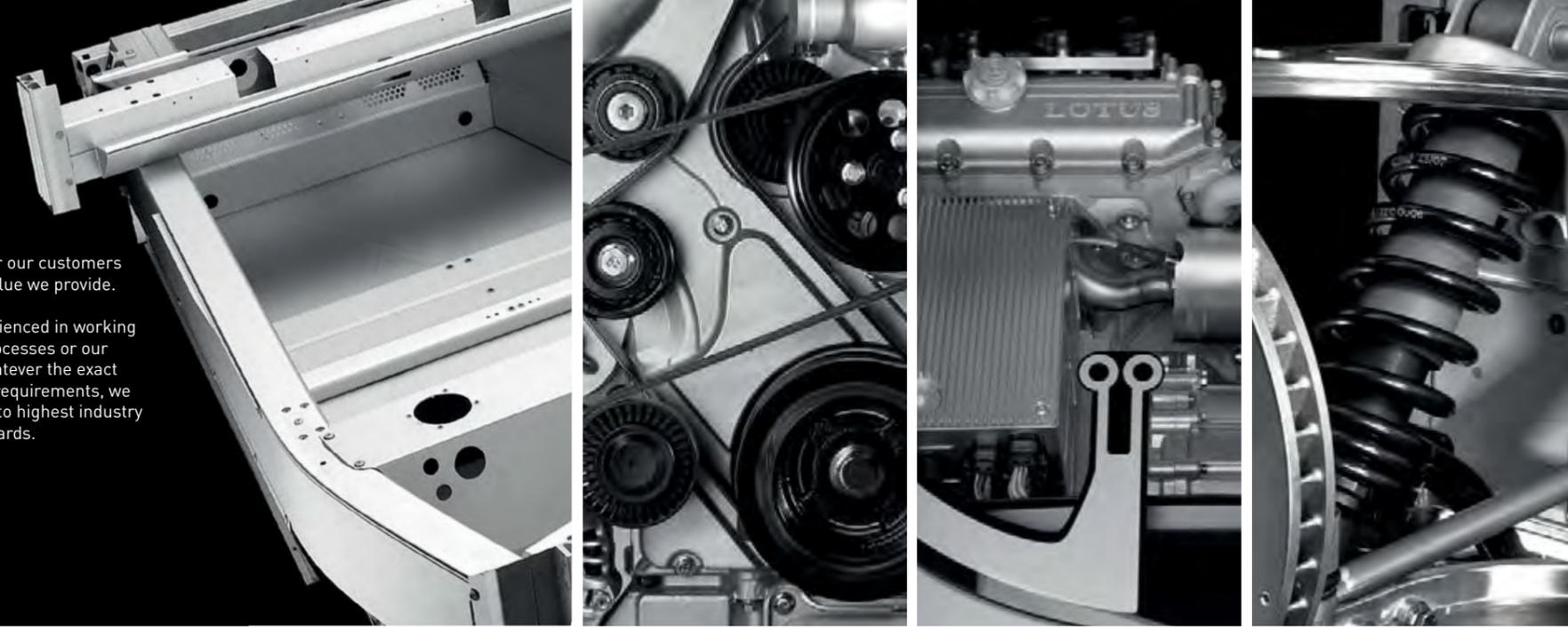
For low volume products, or vehicles most closely aligned to our own sports cars, we typically undertake the vast majority of the engineering activity using our in-house teams. For higher volume

projects, we carefully manage the delivery of some elements by key partners or production suppliers.

In all cases, we can take responsibility for the whole project and will always look to undertake those parts of the programme that fall within our areas of key expertise. It is important that the cars

we deliver for our customers reflect the value we provide.

We are experienced in working to clients' processes or our own, and whatever the exact programme requirements, we always work to highest industry quality standards.



A traditional Lotus solution is 'one with the least number of parts, effectively deployed'. With ever-tightening emission and environmental targets to consider, this core philosophy is more relevant today than it has ever been to the automotive industry.

Reductions in mass result in tangible improvements in fuel economy and emissions performance. As a car manufacturer, we understand the need to find the most efficient and cost-effective solutions.

Lotus is technology and process independent.

NEW PLATFORM ENGINEERING

LOTUS SMALL CAR PLATFORM

LOTUS EVORA PLATFORM

WEIGHT REDUCTION ENGINEERING

LOW VOLUME LIGHTWEIGHT ASSEMBLIES



Improving efficiency while maximising performance – this has always been at the heart of Lotus' philosophy.

Today, this has more relevance than ever before, as there is a real urgency to slow the decline of fossil fuel reserves and reduce emissions. As a car manufacturer, Lotus understands the need to find efficient and cost-effective solutions to meet these challenges while maintaining a viable business case.

This means we are ideally placed to help our clients

produce more efficient vehicles and powertrains that do not sacrifice performance.

Lotus Engineering's approach for minimising the CO2 impact of transport is to focus on improvements in the areas of engine efficiency, alternative powertrains and reducing the CO2 footprint of the fuel or energy source for the vehicle.

There is currently much investigation into alternative forms of propulsion, but making conventional internal combustion engines even more efficient remains a priority.

ADVANCED POWERTRAIN ENGINEERING

ENGINE UPGRADES AND NEW APPLICATIONS

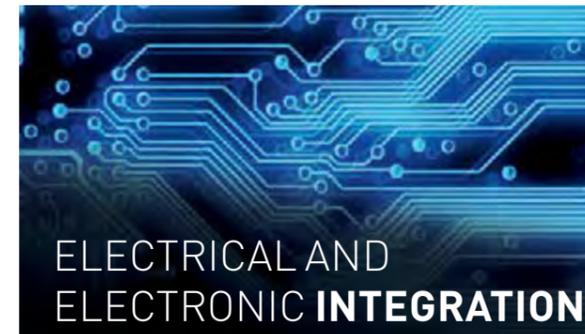
POWERTRAIN PROFILE AND STRATEGY DEVELOPMENT

ADVANCED RESEARCH AND DEVELOPMENT

EVALUATION AND DEVELOPMENT OF NEXT GENERATION TECHNOLOGIES

CALIBRATION AND CONTROL SYSTEMS

POWERTRAIN MANUFACTURING CONSULTANCY



Lotus Engineering is an established industry leader in creating hybrid and electric vehicles incorporating a range of technologies. Integration of new drivetrain solutions presents a perfect opportunity for Lotus Engineering's combined skills to shine.

Hybrid and electric vehicles pose a unique set of challenges on many fronts, ranging from unconventional packaging, control systems, software and strategy through to wider-ranging manufacturing issues.

However, our electrical and electronic integration expertise extends far beyond propulsion systems into vehicle control systems, comfort systems, infotainment and creating

advanced human machine interface systems.

Niche and premium applications are often where emerging technology is first implemented to give vehicle users new functionality. It is this area where our electrical and electronic control technologies and expertise are invaluable in helping clients quickly bring integrated solutions to production.

Our ability to integrate next generation technologies using a whole-vehicle perspective not only helps our clients deliver on their environmental promise, but also creates desirable, customer-focused vehicles.

LOTUS RANGE EXTENDER ENGINE

HYBRID AND ELECTRIC VEHICLES

NETWORKED COMMUNICATION INTEGRATION

INTEGRATION OF CAN-BUS COMPONENTS

POWER AND ENERGY MANAGEMENT

LOTUS CONTROLLERS



We are the world-leading consultancy for driving dynamics. It is a core part of our brand and no-one offers a more comprehensive understanding of the delicate interaction that exists between vehicle and driver.

Driving dynamics are vital; not only do they help satisfy customer desires, they add to vehicle safety and help define the values of the product and brand.

They encompass how the car performs and responds, how it sounds and how it makes the driver or passenger feel.

It is an art and a science to create the dynamic character to define a vehicle and meet the needs of the user.

Lotus has a deep understanding of how to unite all aspects of driving dynamics – ergonomics, vehicle dynamics, aerodynamics, NVH, performance and safety – to create the right overall driver experience for the vehicle.

At Lotus, we are skilled at manipulating all the elements of driving dynamics to create a driving experience that matches our client's expectations and those of the vehicle occupants.

DEFINING THE VEHICLE ATTRIBUTES

CHASSIS CONCEPTS AND DESIGN

DYNAMICS ATTRIBUTES DEVELOPMENT

ENHANCING DYNAMICS WITH ACTIVE SYSTEMS

TRAINING IN DYNAMICS ASSESSMENT AND VEHICLE CONTROL

TROUBLESHOOTING AND PROBLEM SOLVING



DRIVING INNOVATION

Underpinning every achievement we have made, every exciting product we have developed and every innovation that we have championed, have been the relentless passion and vision for which Lotus is famous.

We have always created performance through light weight, and have always insisted that cars should be fun to drive and possess real character. These virtues are as important and relevant in today's global automotive industry as they ever were.

With the creation of a new generation of our own cars marking the next exciting chapter for Lotus Engineering, we remain uniquely placed to support the industry in addressing and solving the complex challenges of the evolving automotive world.



FUTURE THINKING

Innovation has always been at the heart of Lotus and is needed now more than ever as the automotive world faces up to new environmental challenges. Whether it is new technologies in engine design or control, changes to automotive energy sources or examining and pushing the boundaries of new types of vehicles such as electric cars and hybrids, we are at the forefront of many automotive technologies.

We have always recognised that lighter vehicles are cleaner and more efficient, and this is more relevant today than ever before. We are also looking at ways to make lightweight structural composites viable for higher volume applications. Sustainable materials are now an important part of our research activity, and across all aspects of transport technology we are developing detailed understanding of the whole life cycle impact of transport technologies on the environment.

LOTUS IS A TRULY GLOBAL BUSINESS

We sell our sports cars in 40 countries around the world and they are engineered to meet the many different market and legislative requirements that each country demands.

This global presence is reflected in Lotus Engineering's consultancy business. Our clients include all the major automotive manufacturers, with newer companies from the emerging markets such as China and India forming an increasingly substantial part of our business.

It is not just being geographically close to the client that counts; we work hard to deliver our expertise and our innovation in a way that fits both culturally and practically. Lotus Engineering's competencies are relevant across most global markets, but we realise that the way they are relevant can vary. We understand this and always work closely with clients to find the solution that best suits them.

LIGHTWEIGHT ARCHITECTURES - EFFICIENT PERFORMANCE - ELECTRICAL AND ELECTRONIC INTEGRATION - DRIVING DYNAMICS



UNITED KINGDOM

Potash Lane
Hethel, Norwich
NR14 8EZ

Phone: +44 (0)1953 608423
eng-uk@lotuscars.com