



AN INTRODUCTION TO RICARDO

NAATBATT ANNUAL MEETING

FEBRUARY 2023

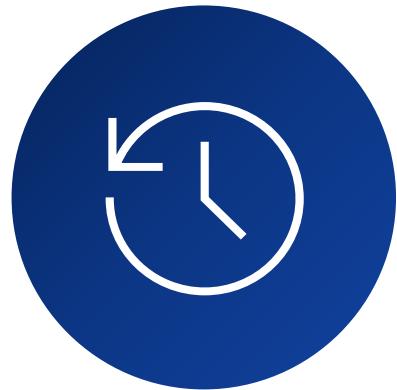


WHO WE ARE

RICARDO IS A GLOBAL STRATEGIC, ENVIRONMENTAL AND ENGINEERING CONSULTING COMPANY

Our global team of consultants, environmental specialists, engineers and scientists support our clients to solve the most complex and dynamic challenges to help achieve a safe and sustainable world.

OUR BUSINESS AT A GLANCE



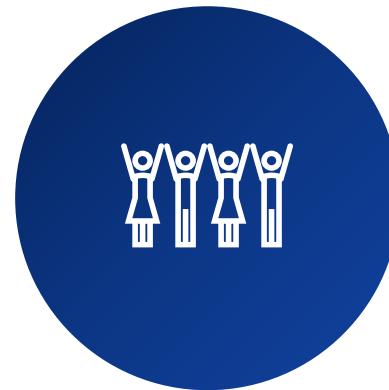
105

years of
innovation



23

countries
worldwide



3000

colleagues
worldwide



2500

live projects

OUR GLOBAL PRESENCE



SERVING A WIDE RANGE OF INDUSTRIES & MARKETS

AUTOMOTIVE



Passenger vehicles | Commercial vehicles | High-performance vehicles | Off highway vehicles | Motorsports | Motorcycles

RAIL & TRANSIT



Urban rail | High speed rail | Conventional rail | Freight rail

AEROSPACE & DEFENSE



Aviation | Airports | Defense

MARITIME



Ports | Marine

ENERGY, UTILITIES & WASTE



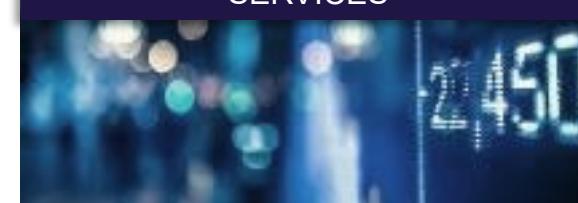
Clean & renewable energy | Energy storage | Energy infrastructure | Water utilities | Waste & resource management

GOVERNMENT & PUBLIC SECTOR



Central government | Cities & regional government | International development

FINANCE & PROFESSIONAL SERVICES



Banking & capital markets | Wealth & asset management | Professional consultancies | Infrastructure services

INDUSTRIAL & MANUFACTURING



Mining & resources | Chemical manufacturing | Product & retail

OUR CORE CAPABILITIES SPAN ACROSS THE PRODUCT DEVELOPMENT CYCLE

CONSULTING & ADVISORY

Delivering data driven analytics & insights, technical, strategic and management consulting services

Strategic consulting

Environmental consulting

Infrastructure

Policy

Modelling & measurement

Technical insights & analysis

DESIGN & ENGINEERING

Engineering and technical design expertise from concept feasibility to manufacture and product launch

Product engineering

Product design & development

Systems engineering & integration

Calibration, verification & validation

Software development & applications

PROJECT DELIVERY

Experts in complex project management across the entire lifecycle

Lifecycle logistics

Operations & maintenance

Asset management

ASSURANCE & TESTING

Globally recognized and fully accredited to deliver independent assurance and testing requirements

Independent assurance

Certification

Testing

Digital resilience

NICHE PRODUCT CAPABILITY

Specialists in high-performance, niche volume manufacturing

Precision manufacturing

Advanced assembly

Special vehicle prototype

Industrialization

WE APPLY OUR TECHNICAL EXPERTISE TO A RANGE OF STRATEGIC CONSULTING SERVICES

Ricardo's Strategic Consulting team functions at the intersection of technical and commercial realms, and works along two broad themes –

improving the fitness of your current business...

....and helping you move the business forward to a successful future

Supply Chain Management & New Product Introduction



- Solving complex supply chain and product launch challenges for a range of industry stakeholders
- Established toolkit to bring products to market on-time, on-budget and at high quality

Cost Reduction



- Holistic/collaborative cost reduction, built on a unique combination of strategic/technical depth
- Provides full range of cost reduction and profit/cashflow improvement solutions, with actionable plans

Operational Improvement



- Improving operating margins by collaborating with our clients to achieve operational excellence
- Comprehensive toolkit of industry best practices, from Lean approaches to Industry 4.0 technology

Business Transformation Strategy



- Achieve lasting change via the development and implementation of robust, actionable and strategically sound transformation plans
- Clients able to adapt and grow in a dynamic industry environment

Scenario Planning



- Develop a structured and informed long-term strategy during this current changing environment
- Methodical and proven approach to prepare for future uncertainties

Disruptive Technologies



- Provide profound and comprehensive insights to understand the impact and opportunities of future disruptive technologies
- Tailored action plan to advance your technological positioning in market

Future Mobility



- Identify impact of technological advancements on people and goods movement
- Clear strategy of how to adapt business models and system architectures to align with future mobility trends

M&A and Investor Support



- Provide deep technical expertise, market insight, and business acumen to achieve your strategic business objectives
- Segregate technological substance from commercial hype

WE ARE WELL POSITIONED TO ASSIST CLIENTS IN THE BATTERY INDUSTRY



- Direct experience with the design, development and validation of a variety of battery systems and other technologies across the vehicle, as well as at a full system level
- In-house battery team provides understanding of skillset required to successfully deliver in this space, from concept through to production
- Experience with the planning and establishment of battery manufacturing facilities for low, medium and high-volume applications
- Managed launch of multiple battery pack assembly facilities, including quality strategy, supply chain establishment, and sourcing approaches
- Wide network of relationships with investment community, and deep knowledge of funding sources for all stages of technology, both private and public
- In-house due diligence team, specializing in technical evaluation, business and operational model scrutiny, and rapid red-flag assessments; operate on both buy and sell sides
- Large active network in the battery industry, both internal and external
- Database of costs associated with battery manufacture, including equipment, labor rates, component costs etc.
- Comprehensive understanding of competitor battery designs through teardown program
- Deep experience with developing business cases for manufacturing facilities, particularly with make vs. buy evaluations
- Able to bring best practices for techno-economic modelling, as well as understanding the sensitivities associated with those models

KEY THEMES FROM OUR WORK IN THE LAST 12 MONTHS

Manufacturing Strategy

- Gigafactory planning
- Vertical integration business cases
- Supply chain establishment & robustness



Connectivity Opportunities

- Smart operations strategies (inc. EOL)
- Cost reduction opportunities
- Warranty issue mitigation



Market Entry

- Supporting start-ups with entering markets
- New opportunities for incumbent players



Due Diligence

- Technical DD for public sector (>\$4bn total)
- Pre-diligence assistance for start-ups
- PE & VC buy-side support



Reorganization

- Product development process improvement
- Digitalization



Launch Management

- EV product launch support
- Warranty issue management



CONTACT US TO SEE HOW WE CAN HELP



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