

NET ZERO MOBILITY WALES

2023 | TRADE & INVEST | Good people do their best work in Wales





Vaughan
Gething MS
Minister for Economy

Ministerial Foreword

The mobility sector is undergoing fundamental change as we race to achieve our Net Zero Targets. The resulting technology shift towards alternative drive systems, including electric vehicles, hydrogen-powered vehicles, and other alternatively fuelled vehicles, as well as the development of infrastructure to support these vehicles, will require a diverse range of solutions.

The mobility sector in Wales is of vital importance to the Welsh economy and we are immensely proud of our world-leading ecosystem. It is a high potential network, translating state-of-the-art research and innovation capabilities into world-class Welsh manufacturing for new and emerging global technology markets.

Wales will continue to invest in infrastructure to bridge academic discovery and commercial application, supporting companies to develop innovative products for new markets. We will also encourage collaboration through adopting open innovation practices to ensure Welsh industry is at the forefront of technological change to ensure it remains competitive on the global stage.

This directory, produced in collaboration with the Welsh Automotive Forum, showcases Welsh capability in terms of design, development, and manufacture across the new technology areas critical for the mobility sector transition, and acts as a guide for companies looking to source partners or components in the future.

What Wales is doing today, we hope the world will do tomorrow.

Vaughan Gething

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The mobility solutions industry, which encompasses aerospace, automobiles, commercial vehicles, marine vessels, trains and more, is undergoing significant change as operators, customers, and users increasingly adopt net zero products and solutions. This presents an opportunity for companies that can adapt and innovate, and to succeed in the new landscape of net zero mobility solutions.

The Welsh Government have produced this directory to showcase the Net Zero Mobility Supply Chain in Wales. The directory serves as a guide for companies seeking to source industrial partners or components, or looking to expand their business in a country with a strong industrial ecosystem which includes opportunities for academic collaboration, support with technology adoption and capital investment and a highly skilled labour force.

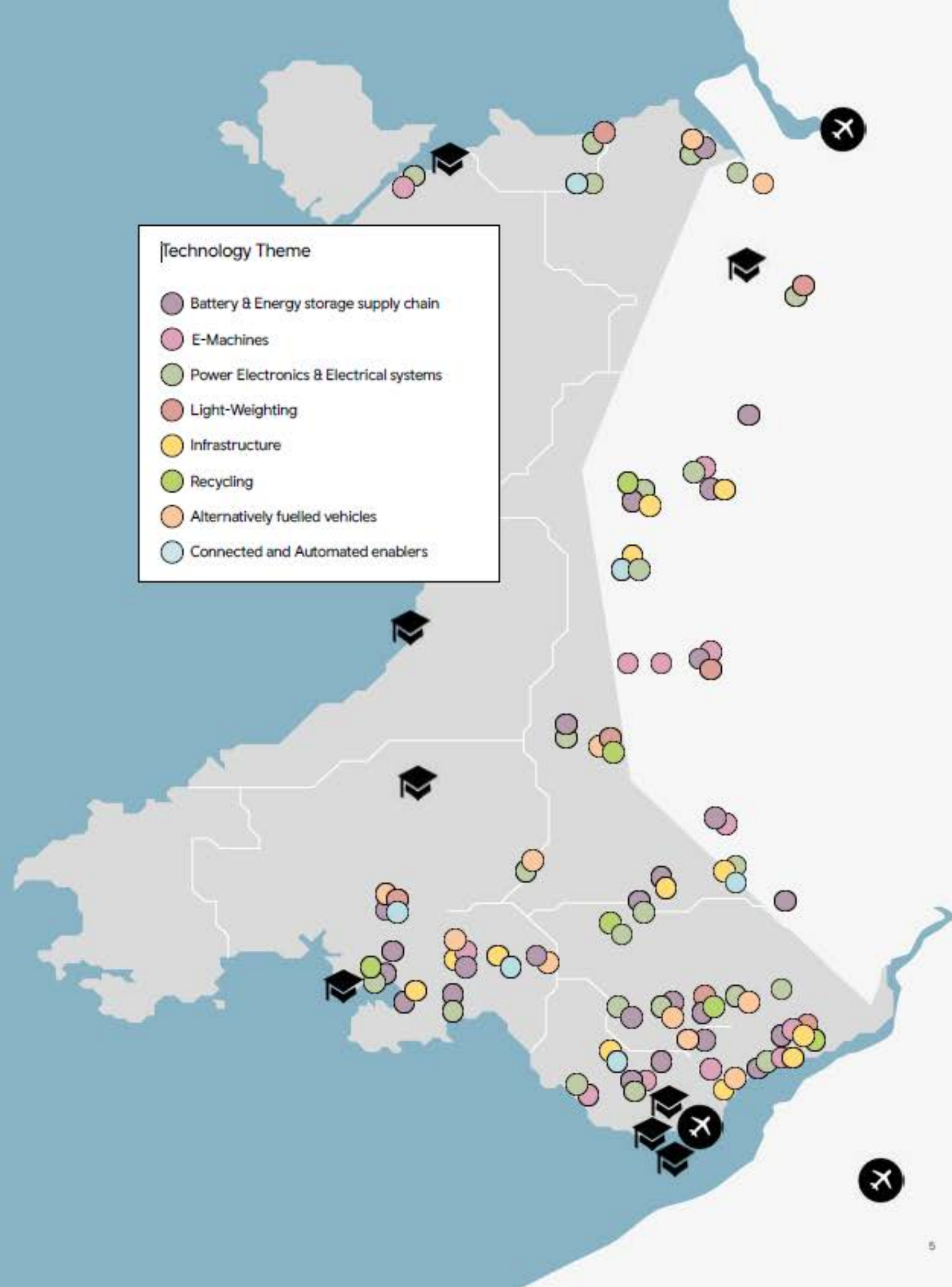
The directory has been organised into Technology Pillars to reflect the fact that technology providers in different sectors may have core technologies that are very similar, and therefore solutions which support multiple sectors.

The Technology Theme Pillars are:

- Battery & Energy storage supply chain
- Power Electronics & Electrical systems – Controllers & invertors through to Electrical Harnesses
- E-Machines – Motors & Generators
- Infrastructure – Off vehicle technology (e.g., charging systems)
- Alternatively fuelled vehicle technology – includes fuel cells
- Light-Weighting – Innovate Products and Processes
- Connected and Automated enablers- Software. Sensors, control systems
- Recycling – Includes all aspects of recovery and recycling.

The Technology Theme Map identifies industrial clusters associated with each of these themes, which can catalyse collaboration and accelerate best or new practises and business opportunities, while the capability matrix gives an overview of each company's areas of expertise.

Individual company listings, including contact details are available in Technology Pillar sections.



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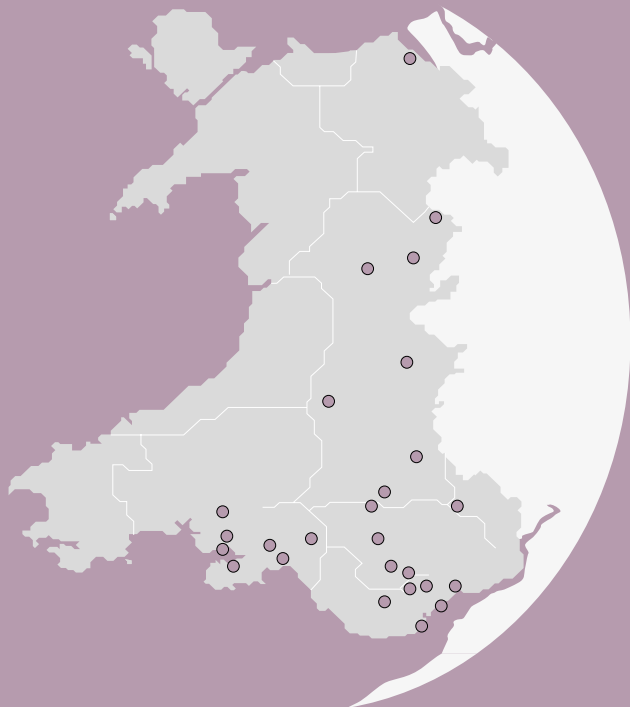
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Battery & Energy Storage Supply Chain



ATC Drivetrain
Llanelli Gate
Dafen
Llanelli
SA14 8LQ

No. of employees: 24

Contact
Email:
info@taengineering.co.uk

Phone: +44(0)1554 775 938

Website:
www.atcdrivetrain.com

Battery & Energy Storage Supply Chain



Largest global remanufacturer of powertrain and drivetrain products

ATC Drivetrain provides environmentally friendly remanufacturing solutions for powertrain and drivetrain products regardless of the technology powering the vehicle, including batteries, electric drive units, engines, transmissions, and other driveline products. ATC Drivetrain also offers engineering services that include warranty root cause analysis and testing, quality audits, production rework and recycling. ATC Drivetrain serves the global automotive industry from its facilities in the USA, United Kingdom and China, and supports automotive OEMs for in-warranty and out-of-warranty products, IAM distributors and individual consumers.

ATC Drivetrain locations within Llanelli, Wales, Treharne Automotive Engineering, EV Marine and EV Recycling, specialise in the areas of mechatronic/electronic systems with the ability to design and develop systems and equipment for automotive and marine manufacturers. ATC Drivetrain engages in complete HV battery lifecycle and can support customers as they transition to an EV portfolio.

Fields of competence

Products	Markets	Capabilities
HV Battery – Testing, equipment	Automotive (Pass car & Light Commercial)	Design & Development
	Commercial vehicles (>3500kg)	Software Engineering / Development
	Off Road and Construction	Equipment and Tooling suppliers
	Bus & Coach	Testing / Homologation



Battery & Energy Storage Supply Chain



Bergstrom (Europe) Ltd
41, Sycamore Close
Dyffryn Business Park
Ystrad Mynach
CF82 7RJ

No. of employees: 182 (2023)

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General enquiries:
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Phone: +44(0)1554 775 938

Website:
www.bergstrom-europe.com

Design and Manufacture of Battery Energy Storage Thermal Management and AirCon Systems

Battery Energy Storage System (BESS) plays a vital role in going carbon neutral as it can bank lots of renewable energy for later use. Proper thermal management is necessary for BESS as it improves the overall performance of the system and provides a long cycle life.

With state-of-the-art capabilities in engineering and manufacturing – not only end products, but also core components – honed over the past 70+ years in the climate control industry, Bergstrom has developed a series of energy storage air cooled systems and liquid cooled systems to meet the needs of different BESS

applications with precise temperature control, high efficiency and reliability.

BESTic – Bergstrom Energy Storage Thermal AC System comes in three versions: air-cooled (BESTic), liquid-cooled (BESTic+) and direct-cooled (BESTic++).

We are ISO9001, ISO14001 and ISO45001 certified, and we pride ourselves on our world class manufacturing processes which deliver the right fit product.

We are supporting projects with OEMs..

Fields of competence

Products	Markets	Capabilities
BESS Thermal Management Modules	Off Road and Construction	Design & Development
BES Air Conditioner	Automotive (Pass car & Light Commercial)	Component Manufacturing
	Commercial vehicles (>3500kg)	Testing / Homologation
	Bus & Coach	System Integration / Assembly



Battery & Energy Storage Supply Chain



CAPSE is a nationally recognised independent research, development, test and certification house

CAPSE’s mission is to support business and organisations to develop the next generation of low carbon technologies, supporting the creation of new jobs and economic opportunities.

Based at a private and secure site in Aberdare, CAPSE prides itself on specialised facilities and equipment, as well as a commitment to ongoing research and development, which empowers professional engineers and support staff to deliver innovative products and services.

We are committed to working closely with industry leaders to meet the challenges

in the transport and energy sectors, and prioritise our customers’ needs by providing a flexible and bespoke range of services to deliver a greener and more sustainable future.

CAPSE can deliver a significant range of testing and advisory services focused around automotive, energy storage, power electronics, control systems design and advanced communications.

Our work evidences our key role in supporting the ever-increasing demand for producing low carbon technologies and energy storage solutions.

Fields of competence

Products	Markets	Capabilities
Powertrain	Automotive (Pass car & Light Commercial)	Testing / Homologation
Energy Systems	Off Road and Construction	End of life Management
Energy Storage	Commercial vehicles (>3500kg)	Software Engineering / Development
	Specialist Vehicles	Design & Development



Battery & Energy Storage Supply Chain



CastAlum
Unit 5 Buttington Cross
Enterprise Park
Welshpool, Powys,
SY21 8SL

No. of employees: 150

Contact: Nathan Field,
Innovation Lead
Email:
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General Enquiries:
info@castalum.com

Website:
www.castalum.com

We manufacture die cast and machined components that no one else can

Our investment and understanding of Additive Material Technology to aid with conformal cooling has allowed us to change what is viewed as achievable within our industry. Consequently, we now have a wealth of experience and data to support the development of lightweight casting technology, without sacrificing properties or durability.

Over the years, we have been entrusted with the manufacture of a wide variety of castings for prestigious automotive marques. These include customers such as VAG, BMW,

Ford, General Motors, Fiat, Renault, Porsche, Mercedes, Jaguar Land Rover, as well as other non-automotive customers, with 90% of our production being for export.

Through our innovative approach, we have been able to realise light-weighting opportunities for our customers that had been considered impossible. These advancements have included advancements in light-weighting through the integration of cooling methods and reduction of components in assemblies.

Fields of competence

Products	Markets	Capabilities
Squeeze castings	Automotive (Pass car & Light Commercial)	Component Manufacturing
Battery trays	Motorcycles	Design & Development
Safety-critical components	Rail	System Integration / Assembly
Inverter casings	Other Mobility Solutions / enablers	Testing / Homologation



Battery & Energy Storage Supply Chain



Charcroft Electronics Ltd
Dol-y-Coed,
Llanwrtyd Wells
Powys
LD5 4TH

No. of employees: 85

Email:
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Email:
sales@charcroft.com

Website:
www.charcroft.com
www.icw ltd.com

Manufacturer of bespoke DC-LINK Film Capacitors – enabling high-performance inverter design

Since being established in 1974, Charcroft has a long heritage of supplying electronic components to military and aerospace customers in the UK and beyond. Remaining 100% UK based and privately owned positions the company quite uniquely. Over recent years, Charcroft has made acquisitions to add manufacturing capability – including wound plastic film capacitors, mica capacitors and precision FOIL resistors.

The existing business for the film capacitors (ICW) includes customers in Aerospace, Audio, Automotive, Industrial and Rail markets.

We are seeking opportunities to work with customers on bespoke DC-LINK capacitor designs, providing the flexibility to allow optimisation of performance and mechanical design.

We remain a distributor of electronic components including passives, electro-mechanical, sensors and high-temperature semiconductors – so have a wide product portfolio with which to support our customers.

Fields of competence

Products	Markets	Capabilities
Resistors for current & voltage sensing	Automotive (Pass car & Light Commercial)	Design & Development
DC-link capacitors	Aerospace	Component Manufacturing
DC-contactors	Specialist Vehicles	Testing / Homologation
Power resistors for discharge	Bus & Coach	



Battery & Energy Storage Supply Chain



Clayton Power
Unit K2
Southpoint industrial estate
Foreshore Road
Cardiff
CF10 4LQ

No. of employees: 6 in the UK (50+ in Europe)

Contact: Karl Jones (Head of Sales)
Email: kj@claytonpower.com

Phone: 07738386098

Email:
ukinfo@claytonpower.com

Website:
www.claytonpower.com

Eliminate emissions, reduce noise with our all-in-one lithium power solutions

Our all-in-one battery and inverter systems provide a clean and efficient energy solution that helps eliminate roadside emissions, reduce noise pollution, and increase your fleet's sustainability. Our systems are designed to replace traditional petrol generators, providing a more reliable, emission free and long-lasting source of power for your fleet's operations.

By switching to zero emission technology your fleet will benefit from cleaner, greener energy that is designed to meet the demands of a tough working environment. The easy installation and integration process ensures that your fleet will be up and running with minimal disruption whether installed from new or retrofitted. Our expert technical support will provide peace of mind when you need it. Our auxiliary power systems have been trusted by the largest fleets in the country for years and have received numerous awards for innovation and sustainability, making us a leader in the industry.

Fields of competence

Products	Markets	Capabilities
Lithium Power Supply (LPS) 1500W – 100Ah	Automotive (Pass car & Light Commercial)	Design & Development
Lithium Power Supply (LPS) 2500W – 100Ah	Specialist Vehicles	Software Engineering / Development
Lithium Power Supply (LPS) 3000W – 160Ah	Commercial vehicles (>3500kg)	System Integration / Assembly
G4 280Ah lithium Battery	Other Mobility Solutions / enablers	



Battery & Energy Storage Supply Chain



Dawson Shanahan (Wales) Ltd
Henfaes Lane
Welshpool
Powys
SY21 7BE

No. of employees: 98

Contact: Jeff Kiernan – Commercial Director
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info@dawson-shanahan.co.uk

Website: www.dawson-shanahan.co.uk

Dawson Shanahan Manufacturer of Electrical Connectors – Custom engineered for use throughout Emobility

We have been working with major global connector companies since 2014 on high power connectors for EV passenger and commercial vehicles, energy, and data storage. In this time, we have worked with our customers in the design, development, and production of connectors, having produced over 10 million parts to date.

Our in-house design, process simulation and tooling manufacturing capability, combined with our extensive range of Cold Forming and CNC machines, provides our customers with a one-stop shop in the design, development, prototype, and series production phases of a project.

Cold forming of High Conductivity Oxygen Free copper alloys has unique benefits in the manufacture of connectors. Connector designers can utilize the process benefits to incorporate complex features without increasing a connector's cost, which can be associated with using only CNC machining processes.

In addition, our technical capabilities enable us to offer our customers advice on assembly including brazing, bonding and heat treatment processes, cleaning and special packing requirements.

We supply global customers and export over 80% of our sales, offering them consignment stock and delivered-to-the-door terms. Recent investment in rotary transfer CNC machine technology has enabled us in 2023 to win a new 5-year contract to supply a key EV connector to an OEM in the EV supply chain. ISO 9001, IATF 16949, ISO 14001 Accreditation.

Fields of competence

Products	Markets	Capabilities
Power Connectors EV	Automotive (Pass car & Light Commercial)	Design & Development
Terminal connectors	Bus & Coach	Component Manufacturing
Charging Connectors	Commercial vehicles (>3500kg)	Equipment and Tooling suppliers
Connectors for EV systems	Off Road and Construction	



Battery & Energy Storage Supply Chain



DG Innovate
Unit 2 De Clare Court,
Pontygwindy Industrial
Estate
Caerphilly,
CF83 3HU

No. of employees: 18 (2023)

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Martin Boughtwood
Chief Technical Officer
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Website: www.dgipcl.com

Sustainable and environmentally friendly advances in electric drives and energy storage

DG Innovate’s current activities are broadly split into two areas: Enhanced Drive Technology (EDT) and Enhanced Battery Technology (EBT).

EDT paves the way for electric vehicles that have greater range, lower manufacturing costs and increased reliability. The Pareta® system comprises a novel motor with integrated high-power inverter and control electronics. The system’s unique architecture divides the motor and inverter functionality between multiple segments, each of which can be powered and controlled individually. This ground-breaking design brings:

- Exceptional power density – up to 12 kW/kg
- High efficiency – up to 98.5%

- Lower energy input for higher torque output
- Built-in redundancy and reliability
- Reduced EMI
- High- or low-voltage operation

EBT is focused on the development of a family of hard carbon anode materials produced from sustainable bio-waste. The materials are primarily intended for use in sodium-ion batteries but can also be used in lithium-ion batteries.

Fields of competence

Products	Markets	Capabilities
Hard carbon anode material	Commercial vehicles (>3500kg)	Design & Development
	Bus & Coach	Testing / Homologation
	Specialist Vehicles	Component Manufacturing
	Automotive (Pass car & Light Commercial)	System Integration / Assembly



Electric Classic Cars Limited
Unit 37 Mochdre Industrial
Estate,
Newtown, Powys,
SY16 4LE

No. of employees: 13
(January 2023)

Contact: Sophia Pert (Office Manager)
Email: sophia@electricclassiccars.co.uk

Jon Peck (Sales)
Email: sales@electricclassiccars.co.uk

Website: www.electricclassiccars.co.uk

Battery & Energy Storage Supply Chain



World’s largest converter of classic cars to electric

At Electric Classic Cars we’re the pioneers of classic car electrification; steering the industry as the world’s market leader. Established in 2015 by our founder Richard Morgan, whose desire to be able to drive his classic cars as a daily driver without the worries of reliability and high maintenance

was the inception of ECC. Our customers’ response has meant that we’ve rapidly evolved into the largest converter of classic cars in the world having now converted over 70 vehicles. We also develop and supply numerous bolt-in conversion kits to companies around the world.

Fields of competence

Products	Markets	Capabilities
Plug and play bolt-in kits for classic cars conversions	Automotive (Pass car & Light Commercial)	System Integration / Assembly
Classic car conversions to electric	Off Road and Construction	Design & Development
Components supply	Specialist Vehicles	Component Manufacturing
Retro charge stations	Bus & Coach	Raw material supply chain



Battery & Energy Storage Supply Chain



FSG Tool and Die Ltd
Unit 5
Llantrisant Business Park
Llantrisant
Mid Glamorgan
CF72 8LF

No. of employees: 98

Contact: Prof Paul Byard
Email: Paul.byard@fsgtoolanddie.co.uk

admin@fsgtoolanddie.co.uk

Website:
www.atcdrivetrain.com

FSG Tool and Die Ltd are a high precision engineering solutions provider

Founded in 1961 FSG Tool and Die Ltd provides engineering solutions to a wide range of companies. From concept to component, the business constantly translates the voice of the customer and provides an innovative, agile and bespoke approach.

FSG Tool and Die Ltd has unique design and tooling services to support Automotive, Industrial, Food and Drink, Pharmaceutical and Medical sectors. FSG provides a range of tooling solutions from Injection Mould Tooling, Press Tool design and manufacture, Thermoforming tooling and system integration into customer’s production facilities.

Every day the business engages technical challenges that require complete teamwork to exploit the sum of the expertise that FSG has built over many years.

Fields of competence

Products	Markets	Capabilities
Tool systems for steel battery housings	Automotive (Pass car & Light Commercial)	Equipment and Tooling suppliers
		Design & Development



Battery & Energy Storage Supply Chain



GS Yuasa Battery Manufacturing UK Ltd.
Unit 22, Rassau Industrial Estate
Ebbw Vale
Gwent
NP23 5SD

No. of employees: 13,600 (400 Wales)

Contact: Shaun Gardner
Email: shaun.gardner@gs-yuasa.uk

General Enquiries: info@gs-yuasa.uk

Website: www.gs-yuasa.eu

Powering everyday lives and a sustainable future through advanced battery technologies

GS Yuasa are a world-leading battery manufacturer based in Japan and with factories worldwide, including a state-of-the-art facility in Ebbw Vale, Wales. They produce Valve Regulated Lead-Acid (VRLA), lithium-ion (Li-ion) and lithium-ion starter batteries for a wide range of vehicle and industrial applications.

With sales companies across Europe and over 40 years of experience, GS Yuasa is a market leader in the industrial and motorcycle sectors. Their comprehensive industrial range provides reliable backup power and energy storage solutions in a wide range of applications including uninterruptible power supply (UPS), renewable energy, security alarms, and telecommunications. Many of these battery types are produced at their Ebbw Vale facility, which opened in 1981.

GS Yuasa are also an Original Equipment supplier to top vehicle marques, including BMW, Honda, Jaguar, Mercedes Benz, Ducati, and Yamaha. Their Yuasa and GS ranges are specially designed for cars, vans, caravans, and boats.

Fields of competence

Products	Markets	Capabilities
Lead-acid batteries	Automotive (Pass car & Light Commercial)	Component Manufacturing
Lithium-ion batteries	Motorcycles	Design & Development
ESS and UPS systems	Commercial vehicles (>3500kg)	Infrastructure installation
Off-vehicle charging systems		



Battery & Energy Storage Supply Chain



GTS Flexible Materials Ltd
Unit 41 Rassau Industrial Estate
Ebbw Vale
Gwent
NP23 5SD
UK

No. of employees: 130

Contact: Simon Titman
Email:
simontitman@gtsflexible.com

General Enquiries
sales@gtsflexible.com

Website:
www.gtsflexible.com

Technical foil solutions for battery cell connections in BEV

GTS Flexible Materials is a leading supplier of flexible copper laminates and insulation materials to the automotive and power distribution markets.

With over 50 years’ experience we have a range of products ideally suited to the increasing growth in general automotive electronics, EV battery power and sensing

applications. As a market leader in insulations for laminated bus-bars, our materials are also widely used in the renewable energy sector. Our in-house team of researchers are on hand to design customised solutions where required.

Our recently expanded and refurbished design and manufacturing facility is approved to ISO9001, IATF16949, ISO14001 and ISO45001.

Fields of competence

Products	Markets	Capabilities
Flexible Laminates and Coverlays	Automotive (Pass car & Light Commercial)	Design & Development
Flexible Insulations	Bus & Coach	Component Manufacturing
	Commercial vehicles (>3500kg)	
	Rail	



Battery & Energy Storage Supply Chain



Haydale
Clos Fferws
Parc Hendre
Capel Hendre
Ammanford
SA18 3BL

No. of employees: 75 (2023)

Contact: David Davies
UK Managing Director
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John-Mark Seymour
UK Site Director
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Website: www.haydale.com

Using revolutionary plasma functionalisation to provide technological solutions to improve people’s lives

Graphene and other 2D materials have revolutionised the world of materials science with their exceptional properties, such as high strength, flexibility, conductivity, and transparency.

Haydale is a global technology solutions company passionate about creating the next generation of advanced materials to improve mechanical, thermal and electrical properties for our customers. We specialise in the design, development, and commercialisation of advanced materials using graphene and other nanomaterials.

Our patented plasma functionalisation technology unlocks the potential of nanomaterials, enabling us to provide a wide range of graphene-based materials designed to enhance and improve various products from our facility in Ammanford, Wales.

Whether you are looking for high-performance batteries, composites, conductive inks, thermal management solutions, our functionalised materials are produced to stringent quality control procedures including ISO 9001:2015 and ISO 14001:2015 and managed by an experienced team offering a dedicated end-to-end service.

Fields of competence

Products	Markets	Capabilities
Battery Units	Automotive (Pass car & Light Commercial)	Raw material supply chain
Supercapacitors	Commercial vehicles (>3500kg)	Design & Development
	Aerospace	Testing / Homologation
	Marine	System Integration / Assembly



Battery & Energy Storage Supply Chain



Hydro Aluminium UK Ltd
Pantglas Industrial Estate,
Bedwas
Caerphilly
CF83 8DR
United Kingdom

General Enquiries:
Marketing.extrusion.uk@hydro.com

Barnaby Struthers
Email: Barnaby.struthers@hydro.com

Website: www.hydro.com

Aluminium fabrication and surface treatment with low carbon and recycled content offerings

Extensive list of in-house offerings for aluminium components including design support, bending and forming, CNC machining, welding, anodising and more. Over 50 years’ experience in developing aluminium extrusion profiles into fabricated applications for a variety of industries including automotive products and electric vehicle components.

At Bedwas, a large majority of our work is for the automotive sector. Our formed and machined aluminium extrusions can be found in many of today’s models

to produce products such as; bumper armatures, bumper beams, chassis, chassis components, sunroofs, window assemblies, A, B, C & D posts, division channels, roof racks, sports carriers, door frames, window frames, sun surrounds, crush cans, floor pans, and steering column supports.

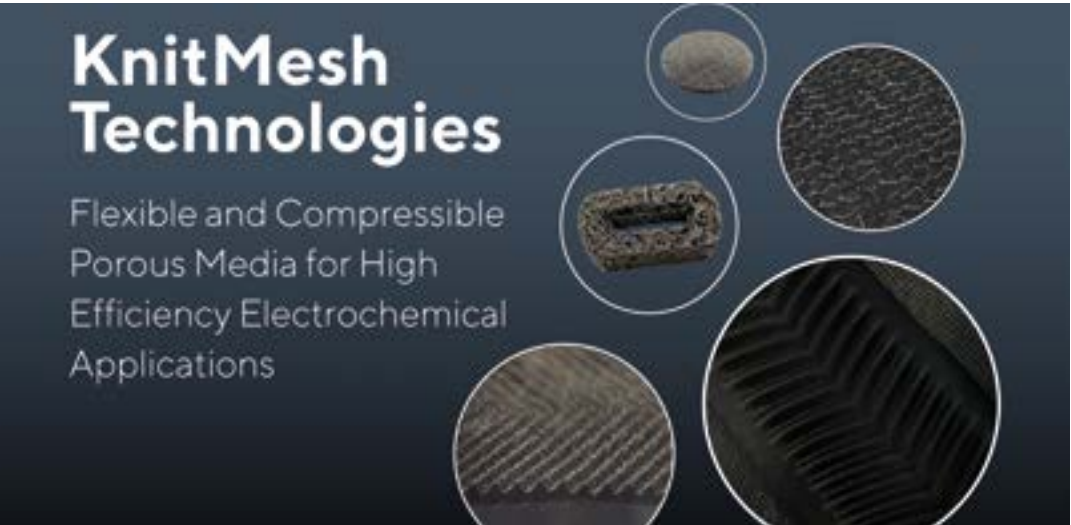
We provide component part and sub-assemblies made from aluminium extrusion, and help our customers to benefit from sustainable solutions with our low carbon aluminium and recycled content aluminium.

Fields of competence

Products	Markets	Capabilities
Battery boxes	Automotive (Pass car & Light Commercial)	Design & Development
Automotive Chassis	Bus & Coach	Component Manufacturing
Bumper beams	Off Road and Construction	Raw material supply chain
Roof racks	Rail	Equipment and Tooling suppliers



Battery & Energy Storage Supply Chain



KnitMesh Technologies Ltd.
Coast Road,
Greenfield,
Flintshire
CH8 9DP

No. of employees: 92 (2022)

Sales:
enquiries@knitmesh.com

Lucy Heald
Email: lucy.heald@knitmesh.com

Website:
knitmeshtechnologies.com

KnitMesh Technologies – flexible and compressible porous media for high efficiency electrochemical applications

KnitMesh Technologies has a proud history of innovation in specialised engineering. For over 60 years, we have been developing innovative and bespoke products to help our customers achieve their goals.

The transport industry is changing, and KnitMesh Technologies has developed a new range of products to support our customers in the drive to zero emissions. Our new products include:

- Flame and spark filters to protect battery technologies from uncontrolled fire

- Electrolyser components for the generation of green hydrogen including current carriers, gas diffusion layers, electrodes and stack tolerance compensators
 - Porous conductive media battery components for EV applications
 - Improved transportation components for vibration control, sealing, and filtration
- Many EV components are produced in nickel, titanium and special grades of stainless steel.

Fields of competence

Products	Markets	Capabilities
Conductive porous media for hydrogen electrolyser – electrodes, gas diffusion layers, flow fields	Automotive (Pass car & Light Commercial)	Component Manufacturing
Elastic compressible meshes for hydrogen electrolyzers – electrodes, gas diffusion layers, flow fields	Aerospace	Design & Development
Conductive porous media for electrochemical applications	Specialist Vehicles	
	Rail	



Battery & Energy Storage Supply Chain



Marelli Automotive Systems UK Ltd
Llethri Road
Llanelli
Carmarthenshire
SA14 8HU

No. of employees: 54,000
GLOBALLY (354 based in Wales) 2022

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Website: www.marelli.com

POWERING PROGRESS TOGETHER
Transforming the future of mobility with our customers and partners

Marelli is one of the world’s leading global independent suppliers to the automotive sector.

Marelli is driving co-creation with its customers and suppliers, focused on early phase collaboration to inform future developments. We enable co-creation through design-led experiences, digital tools, and roadmap alignment, supported by our portfolio of modular, flexible, cost-effective components.

With a strong and established track record in innovation and manufacturing excellence, our mission is to transform the future of mobility through working with customers and partners to create a safer, greener and better-connected world.

This approach drives innovation, resiliency, sustainability, and actionable insights to produce tangible business results.

With around 50,000 employees worldwide, the Marelli footprint includes 170 facilities and R&D centres across Asia, the Americas, Europe, and Africa.

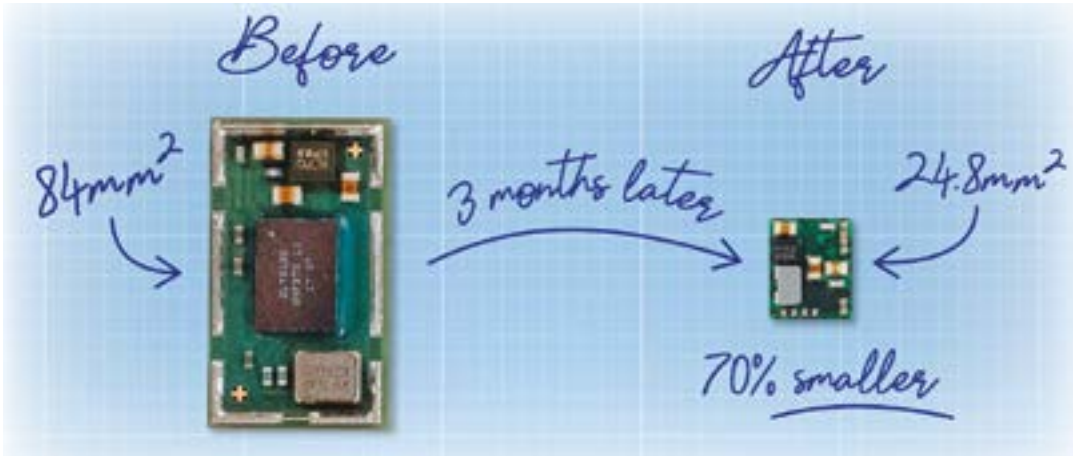
Marelli combines the best of Italian and Japanese heritage. Calsonic Kansei and Magneti Marelli united in May 2019 to create a leading player in the industry.

Fields of competence

Products	Markets	Capabilities
Engine cooling modules	Automotive (Pass car & Light Commercial)	Component Manufacturing
Battery cooling plates		System Integration / Assembly
Heat exchange products (automotive)		Design & Development
		Testing / Homologation



Battery & Energy Storage Supply Chain



Microchip Technology Caldicot Limited
Phase 2
Castlegate Business Park
Unit 4
Caldicot
NP26 5YW

No. of employees: 19,500 (140+)

Contact: Mr.Pagu Chidambaram
Email: pagu.chidambaram@microchip.com

Email: info-caldicot@microchip.com

Website: www.microchip.com/aps

Let us help design, develop, assemble, and test your advanced electronic assembly and packaging solutions

Our world-class products meet your specific Size, Weight, Power, Cost, and Cooling (SWaP-C2) requirements, taking your design from prototypes to volume production quickly. At our facility located in Caldicot, Wales (UK), we deliver a competitive advantage for customers through miniaturising electronic circuits, enabling wireless connectivity and custom/complex power modules with a track record of successful designing, developing next generation miniaturised electronic modules

and pioneering power modules. This includes custom ASICs, FPGAs, RF modules and ICs, power and photonic modules and multi-chip packages.

Microchip Technology Inc., HQ is a leading provider of smart, connected and secure embedded control solutions. The company serves more than 120,000 customers across industrial, automotive, consumer, aerospace and defence, communications and computing markets.

Fields of competence

Products	Markets	Capabilities
Microelectronics assembly and packaging Services	Aerospace	System Integration / Assembly
Custom power module design and manufacturing Services	Automotive (Pass car & Light Commercial)	Design & Development
Miniaturisation services using Embedded SiP Technology	Commercial vehicles (>3500kg)	Testing / Homologation
	Off Road and Construction	Component Manufacturing



Battery & Energy Storage Supply Chain



Northern Industrial Battery Services Ltd
Unit 1, Four Crosses
Business Park
Four Crosses
Llanymynech
Powys
SY22 6ST

No. of employees: 21

Email: sales@nibsltd.com

Website: www.nibsltd.com

Specialists in standby power, bringing significant technical knowledge for various battery requirements

Northern Industrial Battery Services Ltd is an accredited specialist standby power company that offers a range of products and services.

Our expert team provide independent technical advice, to meet various standby battery requirements. We are able to provide a complete battery “life cycle service” from the design, supply, predelivery testing, installation through to ongoing routine maintenance, inspections, testing, decommissioning and disposals. NiBS facilities have expanded over the years and includes a significant production, testing

and warehousing capacity. Here we can provide a variety of battery testing to suit customer requirements, this can save time and resources on site. Our warehouse facility supports our customers’ ever-growing need for storage.

With our efficient storage solutions, NiBS can hold strategic spares on behalf of customers to support requirements without the lead time. NiBS operate in many different industries including Nuclear Processing Plants, Power Stations, Petrochemical Industries, Hospitals, Scientific Installations and Data Centres.

Fields of competence

Products	Markets	Capabilities
Life Cycle Service	Other Mobility Solutions / enablers	Infrastructure installation
Installation	Specialist Vehicles	Testing / Homologation
Routine Maintenance Inspections		System Integration / Assembly
		Design & Development



Qualitek Engineering Ltd
Llanelli
Carmarthenshire
SA14 9TD
UK

No. of employees: 25

Email: Leyton.thomas@qualitekeng.co.uk

Email: info@qualitekeng.co.uk

Website: www.qualitekeng.co.uk

Battery & Energy Storage Supply Chain



Developing solutions for industry via integrated supply chain design and manufacturing partnerships

Qualitek Engineering are an engineering solution provider with over 50 years’ experience within multiple industry sectors. Our organisation values align with our passion to be involved with striving for net zero mobility objectives. We are an exceptionally customer focussed, extremely experienced team here at Qualitek who continually endeavour to support our clients’ business goals. Our collaboration mindset ensures that clients’ expectations are at the forefront of all we do.

Present sectors serviced include;
Automotive, Defence, Flood Prevention, Security, Construction and multiple sector

Original Equipment Manufacturers (OEMs). Many of our clients use our skills and experience to enhance their designs and develop their products to optimised manufacturing.

We are based within South Wales, UK, within a 2,500 sq m manufacturing facility. Qualitek Engineering and are accredited to the following standards:

ISO 9001:2015
EN 1090 Ex Class 2 (Construction welding standard)
BS 8555 (Environmental Standard)

Fields of competence

Products	Markets	Capabilities
Battery storage racking systems	Automotive (Pass car & Light Commercial)	Equipment and Tooling suppliers
Fabricated & precision machined components	Marine	Component Manufacturing
Fabricated & precision machined structures	Bus & Coach	Design & Development



Battery & Energy Storage Supply Chain



Senior Flexonics
1B Oakwood Close
Pen-Y-Fan Industrial Estate
Crumlin
UK
NP11 3HY

Global Employees: 6361
(2022)

Contact: Eric Gillam
Email: EGillam@seniorflexonics.co.uk

Lewis Evans
Email: LEvans@seniorflexonics.co.uk

Website:
www.seniorflexonics.co.uk

An international engineering solutions provider of innovative thermal management and fluid conveyance products

We are an international, market-leading, engineering solutions provider with 26 operating businesses in 12 countries.

We help engineer the transition to a sustainable world for the benefit of all our stakeholders.

We do this by:

- Using our technology expertise in fluid conveyance and thermal management to provide safe and innovative products for demanding applications in some of the most hostile environments
- Enabling our customers, who operate in some of the hardest-to-decarbonise sectors, to transition to low carbon and clean energy solutions.

- Staying at the forefront of climate disclosure and action by ensuring our own operations achieve our Net Zero commitments

Our Flexonics portfolio spans a wide range of fluid conveyance and thermal management components and sub-systems, as well as complex precision machined parts, for conventional and advanced land vehicle propulsion systems, petrochemical, renewable energy, and a variety of other industrial applications.

Fields of competence

Products	Markets	Capabilities
Battery Thermal Management	Automotive (Pass car & Light Commercial)	Design & Development
Power Electronics Thermal Management	Commercial vehicles (>3500kg)	Component Manufacturing
Hydrogen Thermal Management	Off Road and Construction	Testing / Homologation
Fluid Conveyance	Bus & Coach	System Integration / Assembly



T S Henderson & Co Ltd
Forest Road
Hay-on-Wye
Hereford
HR3 5DS

No. of employees: 16

Email:
rob@tshenderson.com

Website:
www.tshenderson.com

Battery & Energy Storage Supply Chain



Working with customers to produce their components to a high standard

We relocated to our current headquarters in Hay-on-Wye in 1998 and have continued to grow our customer base by developing a strong reputation in the market for quality, reliability, and flexibility.

We specialise in the machining and manufacture of components for the automotive and other sectors. We have the capability to undertake a wide range of engineering projects. We machine materials from mid steel through to high tensile and stainless steels, brass, bronze, alloys, specialist metals and plastics.

Our company is able to respond quickly to customers' requirements due to stock holding and control. We pride ourselves in a quick turnaround of orders.

We work with partner organisations to provide a total order fulfilment service, including heat treatment and plating. We provide a customer focused service. Our company is accredited with ISO9001 for: CNC turning, Milling, Thread rolling, Conventional machining, General engineering services.

Fields of competence

Products	Markets	Capabilities
Turned and milled Sub contract components manufactured	Off Road and Construction	Component Manufacturing
	Automotive (Pass car & Light Commercial)	



Battery & Energy Storage Supply Chain



Tata Steel
Llanwern House
Llanwern Works
Newport
NP19 4QZ
UK

No. of employees: 8000

Email: automotiveuk@tatasteeleurope.com

Website: www.tatasteeleurope.com

Tata Steel offers sustainable steel solutions for electric vehicles. Your partner for electrification

Tata Steel is one of the few steel suppliers that offers advanced steel solutions for electric motors, energy storage and conversion systems, crash-management components and outer panels. This integrated product offering, supported with in-depth application knowledge and engineering services, makes Tata Steel the preferred partner in your electrification journey.

Fields of competence

Products	Markets	Capabilities
Plating products for battery cells	Automotive (Pass car & Light Commercial)	Raw material supply chain
*under consideration	Commercial vehicles (>3500kg)	Testing / Homologation
	Off Road and Construction	Design & Development
	Bus & Coach	SEnd of life Management



Battery & Energy Storage Supply Chain



Tri-Wall UK Ltd
77 Wonastow Road
Monmouth
Monmouthshire
NP25 5TW

No. of employees: 300 UK - 5000 global

General enquiries:
Email: csduk@tri-wall.co.uk
batteries@tri-wall.co.uk

Website: www.tri-wall.co.uk

Helping businesses protect their products with high-quality, multi-material packaging solutions

Whether made-to-measure or standardised, we always design around our customers’ needs – for smarter, stronger, flexible and more sustainable solutions. Combining the strategic capability of an EcoVadis silver accredited global packaging network with UK-wide, personal service.

From our manufacturing facility in Wales, we produce a full range of fully recyclable packaging solutions utilising our industrial grate corrugated board in combination with timber, metals and plastics where required. Our onsite UKAS accredited dangerous goods testing facilities can replicate the conditions your packaging may be exposed to – testing for strength, hot and cold temperatures, moisture, high humidity, even blast and corrosion resistance.

Our range of automotive packaging solutions are specially designed and tested for lithium-ion cylindrical, pouch and prismatic cells, modules, full vehicle battery packs, off-highway and static storage solutions. All of which are production line ready, tested and fully customisable.

The box is just the beginning.

Fields of competence

Products	Markets	Capabilities
Packaging	Automotive (Pass car & Light Commercial)	Raw material supply chain
Battery Packaging	Commercial vehicles (>3500kg)	Design & Development
UN Dangerous Goods Packaging	Bus & Coach	Testing / Homologation
UN Dangerous Goods Testing	Specialist Vehicles	



Battery & Energy Storage Supply Chain



Vale Europe Ltd
Clydach
Swansea
SA6 5QR

No. of employees: 200 (2023)

Contact:
Sherryll Sobie Cooke
Email: Sherryll.Sobie.Cooke@Vale.com

Darren Poland
Email: Darren.Poland@vale.com

Website: www.vale.com/united-kingdom

We are a sustainable global mining company with a refinery producing class 1 nickel in Clydach, Swansea, Wales

Vale has mining operations in more than 20 countries and employs over 100,000 people worldwide. Our Clydach Refinery, where we produce 99.9% pure class 1 nickel, is one of the largest in the world. The purity of our products is ideal for high-nickel alloys, plating, stainless steel applications and, increasingly important, the electric vehicle (EV) market.

As the world races to course-correct climate change, we are stepping in with our premium nickel. On the “Critical mineral” watchlist for the U.K. government, it is used in the manufacturing of batteries for the EV market.

Our commitment to sustainability can also be seen in our remediation work and good water quality – both recognised by Natural Resources

Wales, and our ISO14001 certification (for environmental performance).

Our refinery has the proud mantle of being the birthplace of nickel carbonyl production, where the process was developed more than 120 years ago. Our heritage has placed us at the heart of the communities around us and we proudly give back to the communities in which we operate, monetarily and through volunteer work.

Above all, our obsession with safety is the foundation of our business. Our Clydach Refinery is ISO45001 certified (for health and safety) and an Upper Tier COMAH site with a well-established safety culture supporting excellent safety performance.

Fields of competence

Products	Markets	Capabilities
Premium class 1 nickel pellets	Automotive (Pass car & Light Commercial)	Component Manufacturing
Premium class 1 nickel powder	Aerospace	Raw material supply chain
	Other Mobility Solutions / enablers	



Wall Colmonoy Ltd
Alloy Industrial Estate
Pontardawe
Swansea
SA84HL

No. of employees: 197 (2023)

Contact:
Dr. Lewis Berry
Business Development Manager
Email: lewisberry@wallcolmonoy.co.uk

General enquiries:
alloyproductsales@wallcolmonoy.co.uk

Website:
www.wallcolmonoy.com

Battery & Energy Storage Supply Chain



Making Metals Work Harder Since 1938.
The World Leader in Nickel Brazing Miller Metals since 1950

Wall Colmonoy (WCL) is a materials engineering company engaged in the manufacture of nickel, cobalt and iron-based superalloy products with a turnover of £40mil exporting >85% of its products.

WCL has full supply chain coverage with the ability to carry out development, scale up and volume manufacturing of components.

WCL provides OEM products & services:
Alloy Products:

- Microbraz® Brazing Alloys – Nickel filler metals for brazing of thermal management systems (heat exchangers, cold plates, heat sinks)
- Surfacing Alloys – Lifetime extension of wear components via Colmonoy® & Wallex® superalloys

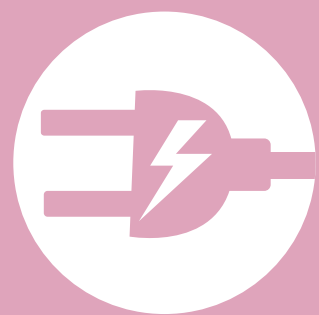
- Aerobraz:**
- Aluminium, Stainless Steel, Inconel Heat Exchangers
 - Dissimilar Metal & Material Brazing
 - Total manufacture of hard-wearing coatings via flame, HVOF and laser

- Precision Components:**
- Manufacture of Wallex® & Colmonoy® components via investment, sand & centrifugal casting & fully machined to print

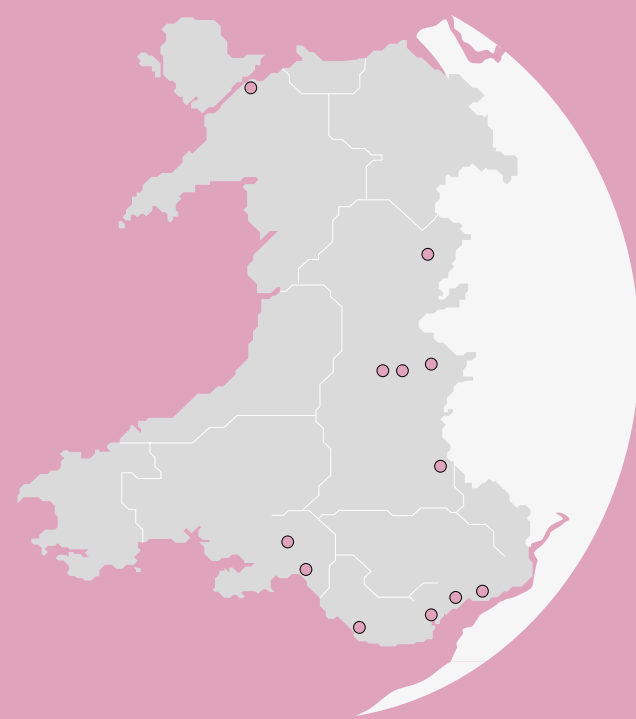
- Additive:**
- Additive Layer component manufacturing via Binder Jet & Laser Powder Bed Fusion

Fields of competence

Products	Markets	Capabilities
Microbraz® Brazing Alloys	Aerospace	Raw material supply chain
Surfacing Alloys	Automotive (Pass car & Light Commercial)	Component Manufacturing
Engineered Technologies	Bus & Coach	Design & Development
	Commercial vehicles (>3500kg)	



E-Machines



CastAlum
Unit 5 Buttington Cross
Enterprise Park
Welshpool, Powys,
SY21 8SL

No. of employees: 150

Contact: Nathan Field,
Innovation Lead

Email:
nathan.field@castalum.com

General Enquiries:
info@castalum.com

Website:
www.castalum.com

E-Machines



We manufacture die cast and machined components that no one else can

Our investment and understanding of Additive Material Technology to aid with conformal cooling has allowed us to change what is viewed as achievable within our industry. Consequently, we now have a wealth of experience and data to support the development of lightweight casting technology, without sacrificing properties or durability.

Over the years, we have been entrusted with the manufacture of a wide variety of castings for prestigious automotive marques. These include customers such as VAG, BMW,

Ford, General Motors, Fiat, Renault, Porsche, Mercedes, Jaguar Land Rover, as well as other non-automotive customers.

We have invested in a range of capabilities, including high pressure die casting, squeeze die casting, machining, and several other supporting operations such as shotblasting and x-ray. We can supply aluminium components as cast, machined, or assembled and tested according to the needs of our customers, with 90% of our production being for export.

Fields of competence

Products	Markets	Capabilities
Powertrain products	Automotive (Pass car & Light Commercial)	Component Manufacturing
Gearbox housings	Motorcycles	Design & Development
E-motor housings	Rail	System Integration / Assembly
Suspension and steering elements	Other Mobility Solutions / enablers	Testing / Homologation



Compact Orbital Gears Limited
Bryn berth
Enterprise Park
Rhayader, Powys
LD6 5EW
UK

No. of employees: 11-50

Email: info@compactorbitalgears.com

Email: sales@compactorbitalgears.com

Phone: +44 (0)1597 811676

Website: www.compactorbitalgears.com

E-Machines



Committed to developing the best and most efficient solutions for the most difficult applications, as well as supplying high-quality, durable, and trustworthy goods

Technology, invention, design, and development of compact epicyclic gearing systems form the foundation of our business. Suppliers of specialised test rig applications and high-speed aerospace and motorsport gearboxes.

Many of the items we sell have speeds greater than 120,000 rpm, and our industrial gearboxes frequently provide 2 MW or more of power. Pioneers in the design and production of wind turbine epicyclic gears.

We are experts in improving performance, efficiency, and extending service life for all types of wind turbine gearboxes through repair and refurbishment. We are dedicated to providing customers with high-quality, durable, and dependable products, and we work together with them to create the most suitable and efficient solutions for even the most challenging applications. Our clients include the top Tier 1 and Tier 2 manufacturers in their respective industries and spread around the globe.

Fields of competence

Products	Markets	Capabilities
Epicyclic and parallel shaft gearing	Automotive (Pass car & Light Commercial)	Design & Development
Specialist bespoke prototype geared products	Commercial vehicles (>3500kg)	Testing / Homologation
Gearboxes and test rigs for automotive, industrial, aerospace and wind turbine applications	Aerospace	System Integration / Assembly
Gearbox service and maintenance	Specialist Vehicles	Component Manufacturing



Dawson Shanahan (Wales) Ltd
Henfaes Lane
Welshpool
Powys
SY21 7BE

No. of employees: 98

Contact: Jeff Kiernan – Commercial Director

Email: jeff.kiernan@dawson-shanahan.co.uk

info@dawson-shanahan.co.uk

Website: www.dawson-shanahan.co.uk

E-Machines



Dawson Shanahan Manufacturer of Electrical Connectors – Custom engineered for use throughout Emobility

We have been working with major global connector companies since 2014 on high power connectors for EV passenger and commercial vehicles, energy, and data storage. In this time, we have worked with our customers in the design, development, and production of connectors, having produced over 10 million parts to date.

Our in-house design, process simulation and tooling manufacturing capability, combined with our extensive range of Cold Forming and CNC machines, provides our customers with a one-stop shop in the design, development, prototype, and series production phases of a project.

Cold forming of High Conductivity Oxygen Free copper alloys has unique benefits in the manufacture of connectors. Connector

designers can utilize the process benefits to incorporate complex features without increasing a connector's cost, which can be associated with using only CNC machining processes.

In addition, our technical capabilities enable us to offer our customers advice on assembly including brazing, bonding and heat treatment processes, cleaning and special packing requirements.

We supply global customers and export over 80% of our sales, offering them consignment stock and delivered-to-the-door terms. Recent investment in rotary transfer CNC machine technology has enabled us in 2023 to win a new 5-year contract to supply a key EV connector to an OEM in the EV supply chain. ISO 9001, IATF 16949, ISO 14001 Accreditation.

Fields of competence

Products	Markets	Capabilities
Power Connectors EV	Automotive (Pass car & Light Commercial)	Design & Development
Terminal connectors	Bus & Coach	Component Manufacturing
Charging Connectors	Commercial vehicles (>3500kg)	Equipment and Tooling suppliers
Connectors for EV systems	Off Road and Construction	



Denis Ferranti Group
Caernarfon Road
Bangor
Gwynedd
North Wales
LL57 4SP

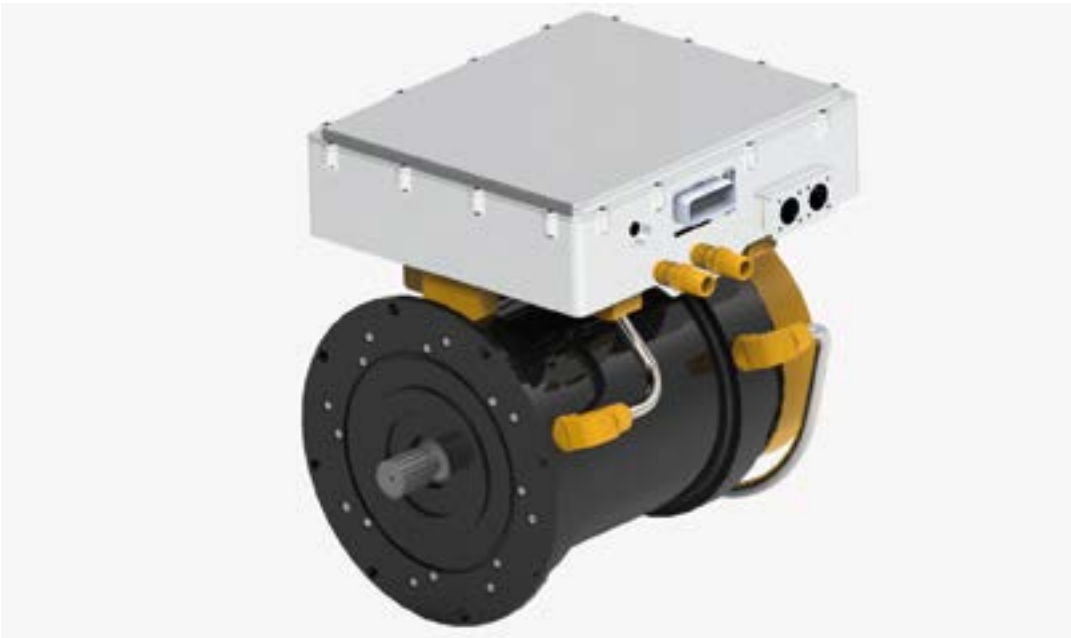
No. of employees: 30-40

Contact: Bob Austin Senior
Business Manager
Email:
bob.austin@dfm-ltd.co.uk

General sales office:
sales@dfm-ltd.com

Website:
www.dferrantigroup.com

E-Machines



High power density electric motor and generator systems for aircraft and vehicles

The drive for aircraft and vehicle electrification has resulted in higher power electric motors becoming a key electric powertrain component. Increasing power and decreasing mass and space requirements see conventional power density limits being pushed with efficient thermal management critical to ensuring reliability and robustness. Advanced liquid cooling systems are needed to meet these requirements.

DFG designs and manufactures customer-specific high power density permanent magnet electric motors with novel liquid cooling

systems for aircraft and vehicle applications. This patent pending slot, end winding and rotor liquid cooling architecture drives up current density and, in turn, torque density. When combined with high rotational speeds (dependent on system level trades) this results in high power density (kW/kg) and optimum power volume density (kW/L).

We are using this technology to meet the high-performance requirements of electric road and track cars and long distance heavy duty electric trucks emphasising efficiency, safety and reliability.

Fields of competence

Products	Markets	Capabilities
High power density permanent magnet traction motors	Aerospace	Design & Development
High voltage DC generators	Automotive (Pass car & Light Commercial)	Component Manufacturing
Rare earth-free Induction traction motors	Commercial vehicles (>3500kg)	Testing / Homologation
Electric machine control systems (controllers, invertors)	Marine	Software Engineering / Development



DG Innovate
Unit 2 De Clare Court,
Pontywindy Industrial
Estate
Caerphilly,
CF83 3HU

No. of employees: 18 (2023)

Contact: Peter Tierney
Chief Executive Officer
Email:
petertierney@dgiplc.com

Martin Boughtwood
Chief Technical Officer
Email: martinboughtwood@dgiplc.com

Website: www.dgiplc.com

E-Machines



Sustainable and environmentally friendly advances in electric drives and energy storage

DG Innovate's current activities are broadly split into two areas: Enhanced Drive Technology (EDT) and Enhanced Battery Technology (EBT).

EDT paves the way for electric vehicles that have greater range, lower manufacturing costs and increased reliability. The Pareta® system comprises a novel motor with integrated high-power inverter and control electronics. The system's unique architecture divides the motor and inverter functionality between multiple segments, each of which can be powered and controlled individually. This ground-breaking design brings:

- Exceptional power density – up to 12 kW/kg
- High efficiency – up to 98.5%

- Lower energy input for higher torque output
- Built-in redundancy and reliability
- Reduced EMI
- High- or low-voltage operation

EBT is focused on the development of a family of hard carbon anode materials produced from sustainable bio-waste. The materials are primarily intended for use in sodium-ion batteries but can also be used in lithium-ion batteries.

Fields of competence

Products	Markets	Capabilities
Electric drive systems	Commercial vehicles (>3500kg)	Design & Development
Motors	Bus & Coach	Testing / Homologation
Integrated inverters	Specialist Vehicles	Component Manufacturing
	Automotive (Pass car & Light Commercial)	System Integration / Assembly



Marrill Powys Ltd.
Ffordd-Y-Cain
Llanfyllin
Powys
SY22 5DH

No. of employees: 120

Email: Edward.myatt@marrillpowys.co.uk

Neil.davies@marrillpowys.co.uk

Website:
www.marrill.co.uk

E-Machines



Supplier of aluminium and steel pressings and painted assemblies for all applications

Marrill Powys is a dedicated manufacturing facility offering a complete range of pressings, full assembly solutions and EPD paint.

We supply niche volume through to series production, in both steel and aluminium.

- Press machines from 2500 tonne to 400 tonne

A full range of assembly equipment, including:

- 5 axis laser cutting, robot roller hemming
- MIG, PED, SPR welding solutions
- Press tool design and manufacture

BSI accreditation. Supported by our Faro, CMM measurement and teardown weld destruction.

Fields of competence

Products	Markets	Capabilities
Aluminium Pressings	Automotive (Pass car & Light Commercial)	Component Manufacturing
Steel Pressings	Off Road and Construction	Equipment and Tooling suppliers
Painted Assemblies	Commercial vehicles (>3500kg)	Design & Development
	Bus & Coach	



Meritor Electric Powertrain Systems (UK) Ltd
Grange Road
Cwmbran
NP44 3XU

No. of employees: 26 (2022)

Email: claudio.anzola@meritor.com

Email: kieran.orourke@meritor.com

Website:
www.accelerazero.com

E-Machines



Accelerate the shift to net zero by providing state of the art e-Powetrain solutions

Accelera by Cummins e-powertrain team is a customer centric organisation, focussed on solutions for the heavy and medium duty truck applications.

Cwmbran facility is the European Center of Excellence (CoE) for the development of e-powertrain: our engineers work hand in hand with customers to maximise the system value proposition.

Innovators by nature, and supported by testing, quality, finance, purchasing and supply chain, we are developing the next generation of electrified solution for commercial vehicles.

Currently in series and pre-series production for various European Customers.

Fields of competence

Products	Markets	Capabilities
17Xe Heavy Duty electric axle	Commercial vehicles (>3500kg)	Design & Development
14Xe Medium-Heavy Duty electric axle	Bus & Coach	System Integration / Assembly
12Xe Light-Medium electric axle	Off Road and Construction	Testing / Homologation
		Component Manufacturing



Microchip Technology
Caldicot Limited
Phase 2
Castlegate Business Park
Unit 4
Caldicot
NP26 5YW

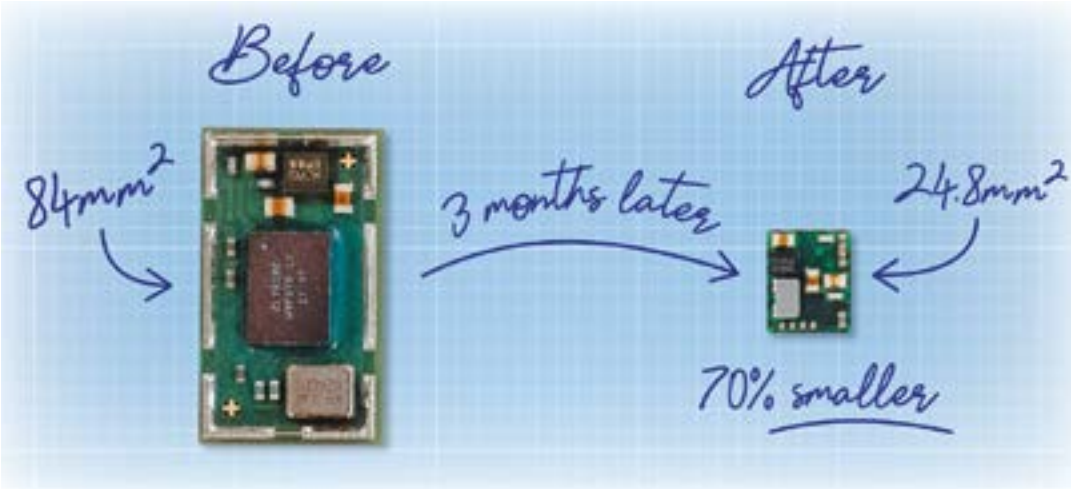
No. of employees: 19,500
(140+)

Contact: Mr.Pagu
Chidambaram
Email: pagu.chidambaram@microchip.com

Email:
info-Caldicot@microchip.com

Website:
www.microchip.com/aps

E-Machines



Let us help design, develop, assemble, and test your advanced electronic assembly and packaging solutions

Our world-class products meet your specific Size, Weight, Power, Cost, and Cooling (SWaP-C2) requirements, taking your design from prototypes to volume production quickly. At our facility located in Caldicot, Wales (UK), we deliver a competitive advantage for customers through miniaturising electronic circuits, enabling wireless connectivity and custom/complex power modules with a track record of successful designing, developing next generation miniaturised electronic modules

and pioneering power modules. This includes custom ASICs, FPGAs, RF modules and ICs, power and photonic modules and multi-chip packages.

Microchip Technology Inc., HQ is a leading provider of smart, connected and secure embedded control solutions. The company serves more than 120,000 customers across industrial, automotive, consumer, aerospace and defence, communications and computing markets.

Fields of competence

Products	Markets	Capabilities
Microelectronics assembly and packaging Services	Aerospace	System Integration / Assembly
Custom power module design and manufacturing Services	Automotive (Pass car & Light Commercial)	Design & Development
Miniaturisation services using Embedded SiP Technology	Commercial vehicles (>3500kg)	Testing / Homologation
	Off Road and Construction	Component Manufacturing



Spectrum Technologies Ltd
Bridgend Industrial Estate
Western Avenue
Bridgend
CF31 3RT
Wales
UK

No. of employees: 70

Contact: Jon Mowat
Email: jmowat@spectrumtech.com

General Enquires:
sales@spectrumtech.com

Website:
www.spectrumtech.com

E-Machines



Industrial laser systems and advanced manufacturing solutions for electric drives

For over 30 years Spectrum Technologies has been the leading supplier to the global aerospace industry for specialised industrial laser systems utilised in the production of complex electrical wiring systems. The company has also established a strong capability in high speed, high quality, precision laser stripping of magnet wire used in the production of stators for e-drive systems and more generally for electric motors, alternators etc.

Spectrum is now bringing to market a new generation of low cost, modular laser magnet

wire stripping systems, offering increased flexibility for integration into electric motor production lines.

Our Applications Laboratory can undertake process development and sample preparation for customers to establish the precise process parameters for a given application. Using this our Sales and Engineering teams will work with customers to develop the optimum solution and most cost effective design and configuration of magnet wire stripping system for integration into the customer's production line.

Fields of competence

Products	Markets	Capabilities
Industrial laser systems	Automotive (Pass car & Light Commercial)	Equipment and Tooling suppliers
Laser Magnet wire stripping systems	Aerospace	Design & Development
Industrial laser marking systems	Rail	System Integration / Assembly
Laser wire processing systems for harness manufacture		



T S Henderson & Co Ltd

Forest Road
Hay-on-Wye
Hereford
HR3 5DS

No. of employees: 16

Email:
rob@tshenderson.com

Website:
www.tshenderson.com

E-Machines



Working with customers to produce their components to a high standard

We relocated to our current headquarters in Hay-on-Wye in 1998 and have continued to grow our customer base by developing a strong reputation in the market for quality, reliability, and flexibility.

We specialise in the machining and manufacture of components for the automotive and other sectors. We have the capability to undertake a wide range of engineering projects. We machine materials from mid steel though to high tensile and stainless steels, brass, bronze, alloys, specialist metals and plastics.

Our company is able to respond quickly to customers' requirements due to stock holding and control. We pride ourselves in a quick turnaround of orders.

We work with partner organisations to provide a total order fulfilment service, including heat treatment and plating. We provide a customer focused service. Our company is accredited with ISO9001 for: CNC turning, Milling, Thread rolling, Conventional machining, General engineering services.

Fields of competence

Products	Markets	Capabilities
Turned and milled Sub contract components manufactured	Off Road and Construction	Component Manufacturing
	Automotive (Pass car & Light Commercial)	



Tata Steel

Llanwern House
Llanwern Works
Newport
NP19 4QZ
UK

No. of employees: 8000

Email: automotiveuk@
tatasteelurope.com

Website:
www.tatasteelurope.com

E-Machines



Tata Steel offers sustainable steel solutions for electric vehicles. Your partner for electrification

Tata Steel is one of the few steel suppliers that offers advanced steel solutions for electric motors, energy storage and conversion systems, crash-management components and outer panels. This

integrated product offering, supported with in-depth application knowledge and engineering services, makes Tata Steel the preferred partner in your electrification journey.

Fields of competence

Products	Markets	Capabilities
Advanced steel solutions for electric motors - thin gauge non grain oriented steels for stators and rotors.	Automotive (Pass car & Light Commercial)	Raw material supply chain
Advanced high strength steels for mounting and battery pack protection	Commercial vehicles (>3500kg)	Testing / Homologation
	Off Road and Construction	Design & Development
	Bus & Coach	End of life Management



Vale Europe Ltd
Clydach
Swansea
SA6 5QR

No. of employees: 200
(2023)

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Darren Poland
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Darren.Poland@vale.com

Website: www.vale.com/
united-kingdom

E-Machines



We are a sustainable global mining company with a refinery producing class 1 nickel in Clydach, Swansea, Wales

Vale has mining operations in more than 20 countries and employs over 100,000 people worldwide. Our Clydach Refinery, where we produce 99.9% pure class 1 nickel, is one of the largest in the world. The purity of our products is ideal for high-nickel alloys, plating, stainless steel applications and, increasingly important, the electric vehicle (EV) market.

As the world races to course-correct climate change, we are stepping in with our premium nickel. On the “Critical mineral” watchlist for the U.K. government, it is used in the manufacturing of batteries for the EV market.

Our commitment to sustainability can also be seen in our remediation work and good water quality – both recognised by Natural Resources

Wales, and our ISO14001 certification (for environmental performance).

Our refinery has the proud mantle of being the birthplace of nickel carbonyl production, where the process was developed more than 120 years ago. Our heritage has placed us at the heart of the communities around us and we proudly give back to the communities in which we operate, monetarily and through volunteer work.

Above all, our Obsession with Safety is the foundation of our business. Our Clydach Refinery is ISO45001 certified (for health and safety) and an Upper Tier COMAH site with a well-established safety culture supporting excellent safety performance.

Fields of competence

Products	Markets	Capabilities
Premium class 1 nickel pellets	Automotive (Pass car & Light Commercial)	Component Manufacturing
Premium class 1 nickel powder	Aerospace	Raw material supply chain
	Other Mobility Solutions / enablers	



YASA
Oxford Industrial Park
-14 Mead Road,
Yarnton
Kidlington
Oxfordshire
OX5 1QU

No. of employees: 375

Marketing:
marketing@yasa.com

Sales: sales@yasa.com

Website: www.yasa.com

E-Machines



Engineering Revolution – Accelerating Electrification

YASA is at the forefront of eMotor innovation and development. Our Axial-Flux technology motors are upto 4x more powerful than those used in nearly all Electric Vehicles on the road today, whilst being around 50% smaller and lighter. With an axial-flux design there’s a larger radius than in a conventional radial motor, this means for the same permanent magnet and copper winding provision, you get more torque.

mass by up to 80%, giving the significant power density advantage and a 5-10% range benefit over the radial electric motors.

The YASA motor topology also removes the stator yoke, which reduces the stator iron

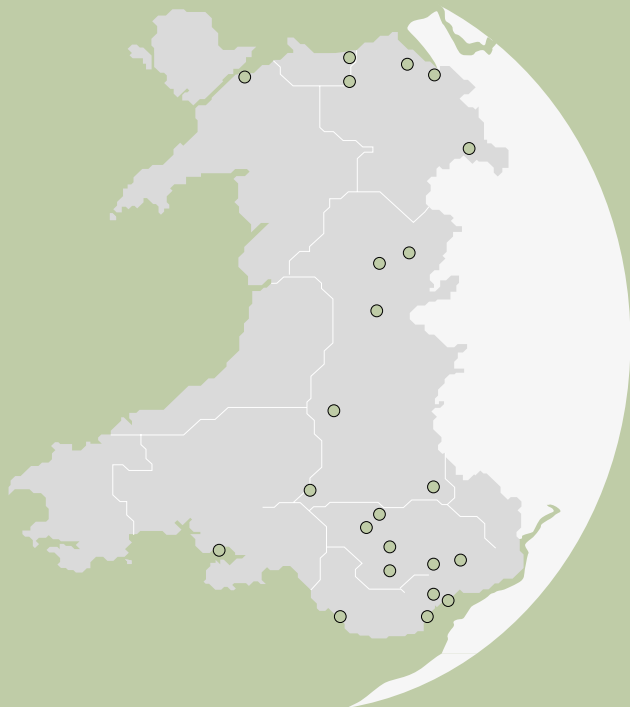
As YASA, we already feature in some of the best eMotor applications across multiple sectors, and now as part of Mercedes-Benz, with sites in Oxfordshire and Welshpool we are accelerating development of Axial-Flux eMotors and Control Systems for of the next generation of Electric Vehicles.

Fields of competence

Products	Markets	Capabilities
Electric Motors for Hybrid and Battery Electric Vehicles	Automotive (Pass car & Light Commercial)	Design & Development
Electric Drive Systems	Marine	Component Manufacturing
	Motorcycles	System Integration / Assembly
		Testing / Homologation



Power Electronics & Electrical Systems



Actia UK Ltd
Unit 81
Mochdre Industrial Estate
Newtown
Powys
SY16 4LE

No. of employees: Group – 446 (Wrexham – 150)

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Website: www.actia.co.uk

Power Electronics & Electrical Systems



We design, manufacture and operate electronics to manage systems with uncompromising quality standards

Actia’s core business is to design, manufacture and operate electronics for system management.

Our expertise is in:

- Vehicle electronic architecture
- Power electronics
- Vehicle telematics & Connected services
- Diagnostic Systems
- EMS – Electronic Manufacturing services
- Equipment and services for workshops & inspection centres
- Telecommunications & SatCom
- MicroMobility – Electric solutions for Cycles/E Bike

Fields of competence

Products	Markets	Capabilities
Power Electronics Multiplex Electrical systems	Bus & Coach	Design & Development
Diagnostic services	Motorcycles	Software Engineering / Development
Telematics	Commercial vehicles (>3500kg)	System Integration / Assembly
	Off Road and Construction	



Power Electronics & Electrical Systems



Largest global remanufacturer of powertrain and drivetrain products

ATC Drivetrain provides environmentally friendly remanufacturing solutions for powertrain and drivetrain products regardless of the technology powering the vehicle, including batteries, electric drive units, engines, transmissions, and other driveline products. ATC Drivetrain also offers engineering services that include warranty root cause analysis and testing, quality audits, production rework and recycling. ATC Drivetrain serves the global automotive industry from its facilities in the USA, United Kingdom and China and supports automotive OEMs for in-warranty and out-

of-warranty products, IAM distributors and individual consumers.

ATC Drivetrain locations within Llanelli, Wales, Treharne Automotive Engineering, EV Marine and EV Recycling, specialise in the areas of mechatronic/electronic systems with the ability to design and develop systems and equipment for automotive and marine manufacturers. ATC Drivetrain engages in complete HV battery lifecycle and can support customers as they transition to an EV portfolio.

Fields of competence

Products	Markets	Capabilities
HV Battery – Testing, equipment	Automotive (Pass car & Light Commercial)	Design & Development
	Commercial vehicles (>3500kg)	Software Engineering / Development
	Off Road and Construction	Equipment and Tooling suppliers
	Bus & Coach	Testing / Homologation



Power Electronics & Electrical Systems



Bespoke instrumentation solutions for niche vehicle manufacturers

Caerbont Automotive Instruments designs, manufactures and supplies a wide range of traditional gauges under the SMITHS brand and provides key players in the emerging niche EV net zero mobility market with bespoke solutions.

We have a multi-talented design team with capabilities in mechanical, electronic and software design, backed up with a vertically integrated manufacturing capability

which allows us to design, develop and manufacture prototypes in the shortest possible lead times.

With investments in state-of-the-art laser cutting systems, CNC machining, digital print and paint spray facilities, Caerbont Automotive Instruments are suppliers to the heritage divisions of several large OEMs in automotive and specialist in other sectors including motorcycle and marine. Certified to ISO 9001.

Fields of competence

Products	Markets	Capabilities
Discrete Gauges	Automotive (Pass car & Light Commercial)	Design & Development
Instrument Clusters	Motorcycles	Software Engineering / Development
Electronic Control Modules	Marine	Component Manufacturing
	Aerospace	System Integration / Assembly



Power Electronics & Electrical Systems



Camtronics Ltd
The Gateway Building
Tredegar Business Park
Tredegar
NP22 3EL

No. of employees: 40
(2023)

Contact: Paul Macleur
Email:
pm@camtronicsvale.com

General Enquiries:
sales@camtronicsvale.com

Website:
www.camtronicsvale.co.uk

Truly flexible electronics manufacturing services

Camtronics provides electronics manufacturing services to companies who are unable, or do not wish, to manufacture their electronic products in-house.

We aim to provide this in the most flexible and collaborative way, so that you see us as an integrated part of your organisation. Many of our customer partners have been working with us for over ten years.

Our core speciality is high complexity surface mount PCBAs. Send us your gerber files and

BOMs and let our ISO9001 certified processes do the rest.

Camtronics has been manufacturing electronics assemblies since 1993 and operates in a broad range of industries. All operations are conducted under one roof in a 1250m2 facility in Tredegar, South Wales, to ensure full control and the highest quality.

Fields of competence

Products	Markets	Capabilities
Electronics manufacturing services	Other Mobility Solutions / enablers	System Integration / Assembly
	Off Road and Construction	Infrastructure installation
	Specialist Vehicles	Equipment and Tooling suppliers
	Marine	



Power Electronics & Electrical Systems



CAPSE Limited
Dynevor Arms
Llwydcoed
Aberdare
CF44 0ND

No. of employees: 17

Contact: Rhian Evans,
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Email: rhian.evans@
southwales.ac.uk

CAPSE@southwales.ac.uk

Website: www.southwales.
ac.uk/research/research-
groups/capse

CAPSE is a nationally recognised independent research, development, test and certification house

CAPSE's mission is to support business and organisations to develop the next generation of low carbon technologies, supporting the creation of new jobs and economic opportunities.

Based at a private and secure site in Aberdare, CAPSE prides itself on specialised facilities and equipment, as well as a commitment to ongoing research and development, which empowers professional engineers and support staff to deliver innovative products and services.

We are committed to working closely with industry leaders to meet the challenges

in the transport and energy sectors, and prioritise our customers' needs by providing a flexible and bespoke range of services to deliver a greener and more sustainable future.

CAPSE can deliver a significant range of testing and advisory services focused around automotive, energy storage, power electronics, control systems design and advanced communications.

Our work evidences our key role in supporting the ever-increasing demand for producing low carbon technologies and energy storage solutions.

Fields of competence

Products	Markets	Capabilities
Powertrain	Automotive (Pass car & Light Commercial)	Testing / Homologation
Energy Systems	Off Road and Construction	End of life Management
Energy Storage	Commercial vehicles (>3500kg)	Software Engineering / Development
	Specialist Vehicles	Design & Development



Charcroft Electronics Ltd
Dol-y-Coed,
Llanwrtyd Wells
Powys
LD5 4TH

No. of employees: 85

Email:
ben.weaver@charcroft.com

Email:
sales@charcroft.com

Website:
www.charcroft.com
www.icwltd.com

Power Electronics & Electrical Systems



Manufacturer of bespoke DC-LINK Film Capacitors – enabling high-performance inverter design

Since being established in 1974, Charcroft has a long heritage of supplying electronic components to military and aerospace customers in the UK and beyond. Remaining 100% UK based and privately owned positions the company quite uniquely. Over recent years, Charcroft has made acquisitions to add manufacturing capability – including wound plastic film capacitors, mica capacitors and precision FOIL resistors.

The existing business for the film capacitors (ICW) includes customers in Aerospace, Audio, Automotive, Industrial and Rail markets.

We are seeking opportunities to work with customers on bespoke DC-LINK capacitor designs, providing the flexibility to allow optimisation of performance and mechanical design.

We remain a distributor of electronic components including passives, electro-mechanical, sensors and high-temperature semiconductors – so have a wide product portfolio with which to support our customers.

Fields of competence

Products	Markets	Capabilities
DC-LINK Capacitors	Automotive (Pass car & Light Commercial)	Design & Development
DC-LINK Capacitor modules	Aerospace	Component Manufacturing
	Specialist Vehicles	Testing / Homologation
	Bus & Coach	



Clayton Power
Unit K2
Southpoint Industrial Estate
Foreshore Road
Cardiff
CF10 4LQ

No. of employees: 6 in the UK (50+ in Europe)

Contact: Karl Jones (Head of Sales)
Email: kj@claytonpower.com

Email:
ukinfo@claytonpower.com

Phone: 07738386098

Website:
www.claytonpower.com

Power Electronics & Electrical Systems



Eliminate emissions, reduce noise with our all-in-one lithium power solutions

Our all-in-one battery and inverter systems provide a clean and efficient energy solution that helps eliminate roadside emissions, reduce noise pollution, and increase your fleet's sustainability. Our systems are designed to replace traditional petrol generators, providing a more reliable, emission free and long-lasting source of power for your fleet's operations.

By switching to zero emission technology your fleet will benefit from cleaner, greener energy that is designed to meet the demands

of a tough working environment. The easy installation and integration process ensures that your fleet will be up and running with minimal disruption whether installed from new or retrofitted. Our expert technical support will provide peace of mind when you need it. Our auxiliary power systems have been trusted by the largest fleets in the country for years and have received numerous awards for innovation and sustainability, making us a leader in the industry.

Fields of competence

Products	Markets	Capabilities
Lithium Power Supply (LPS) 1500W – 100Ah	Automotive (Pass car & Light Commercial)	Design & Development
Lithium Power Supply (LPS) 2500W – 100Ah	Specialist Vehicles	Software Engineering / Development
Lithium Power Supply (LPS) 3000W – 160Ah	Commercial vehicles (>3500kg)	System Integration / Assembly
G4 280Ah lithium Battery	Other Mobility Solutions / enablers	



Power Electronics & Electrical Systems



Dawson Shanahan Manufacturer of Electrical Connectors – Custom engineered for use throughout Emobility

We have been working with major global connector companies since 2014 on high power connectors for EV passenger and commercial vehicles, energy, and data storage. In this time, we have worked with our customers in the design, development, and production of connectors, having produced over 10 million parts to date.

Our in-house design, process simulation and tooling manufacturing capability, combined with our extensive range of Cold Forming and CNC machines, provides our customers with a one-stop shop in the design, development, prototype, and series production phases of a project.

Cold forming of High Conductivity Oxygen Free copper alloys has unique benefits in the manufacture of connectors. Connector

designers can utilise the process benefits to incorporate complex features without increasing a connectors cost, which can be associated with using only CNC machining processes.

In addition, our technical capabilities enable us to offer our customers advice on assembly including brazing, bonding and heat treatment processes, cleaning and special packing requirements.

We supply global customers and export over 80% of our sales, offering them consignment stock and delivered-to-the-door terms. Recent investment in rotary transfer CNC machine technology has enabled us in 2023 to win a new 5-year contract to supply a key EV connector to an OEM in the EV supply chain.

ISO 9001, IATF 16949, ISO 14001 Accreditation.

Fields of competence

Products	Markets	Capabilities
Power Connectors EV	Automotive (Pass car & Light Commercial)	Design & Development
Terminal connectors	Bus & Coach	Component Manufacturing
Charging Connectors	Commercial vehicles (>3500kg)	Equipment and Tooling suppliers
Connectors for EV systems	Off Road and Construction	

Dawson Shanahan
(Wales) Ltd
Henfaes Lane
Welshpool
Powys
SY21 7BE

No. of employees: 98

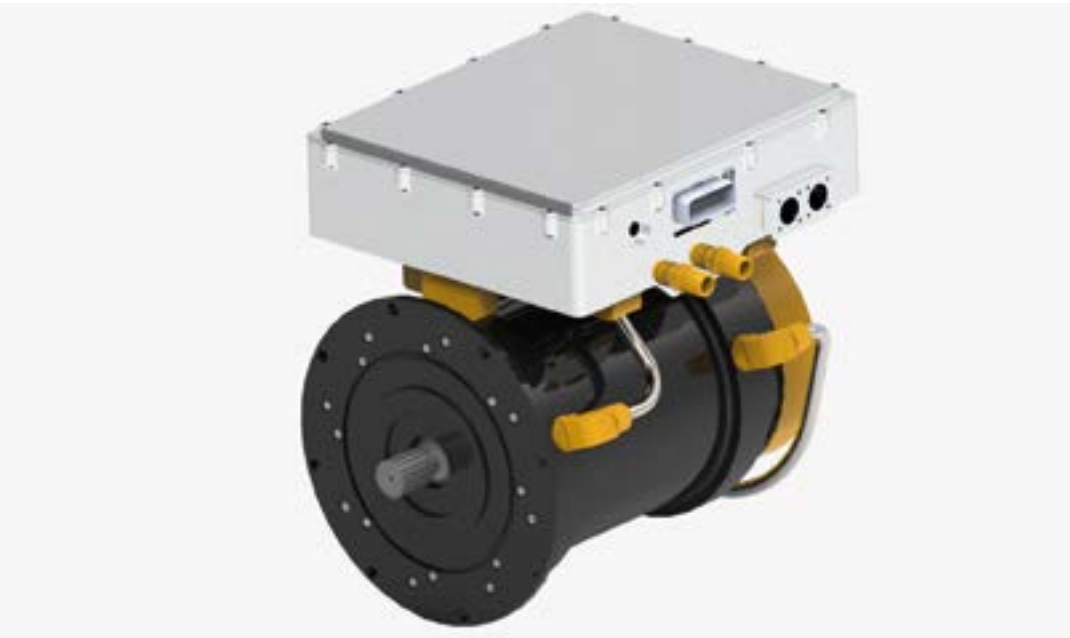
Contact: Jeff Kiernan –
Commercial Director
Email: jeff.kiernan@dawson-shanahan.co.uk

info@dawson-shanahan.co.uk

Website: www.dawson-shanahan.co.uk



Power Electronics & Electrical Systems



High power density electric motor and generator systems for aircraft and vehicles

The drive for aircraft and vehicle electrification has resulted in higher power electric motors becoming a key electric powertrain component. Increasing power and decreasing mass and space requirements see conventional power density limits being pushed with efficient thermal management critical to ensuring reliability and robustness. Advanced liquid cooling systems are needed to meet these requirements.

DFG designs and manufactures customer-specific high power density permanent magnet electric motors with novel liquid cooling

systems for aircraft and vehicle applications. This patent pending slot, end winding and rotor liquid cooling architecture drives up current density and, in turn, torque density. When combined with high rotational speeds (dependent on system level trades) this results in high power density (kW/kg) and optimum power volume density (kW/L).

We are using this technology to meet the high-performance requirements of electric road and track cars and long distance heavy duty electric trucks emphasising efficiency, safety and reliability.

Fields of competence

Products	Markets	Capabilities
High power density permanent magnet traction motors	Aerospace	Design & Development
High voltage DC generators	Automotive (Pass car & Light Commercial)	Component Manufacturing
Rare earth free Induction traction motors	Commercial vehicles (>3500kg)	Testing / Homologation
Electric machine control systems (controllers, invertors)	Marine	Software Engineering / Development

Denis Ferranti Group
Caernarfon Road
Bangor
Gwynedd
North Wales
LL57 4SP

No. of employees: 30-40

Contact: Bob Austin Senior
Business Manager
Email: bob.austin@dfm-ltd.co.uk

General sales office:
sales@dfm-ltd.com

Website:
www.dferrantigroup.com/



Power Electronics & Electrical Systems



DG Innovate
Unit 2 De Clare Court,
Pontywindy Industrial
Estate
Caerphilly,
CF83 3HU

No. of employees: 18 (2023)

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Martin Boughtwood
Chief Technical Officer
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dgipcl.com

Website: www.dgipcl.com

Sustainable and environmentally friendly advances in electric drives and energy storage

DG Innovate’s current activities are broadly split into two areas: Enhanced Drive Technology (EDT) and Enhanced Battery Technology (EBT).

EDT paves the way for electric vehicles that have greater range, lower manufacturing costs and increased reliability. The Pareta® system comprises a novel motor with integrated high-power inverter and control electronics. The system’s unique architecture divides the motor and inverter functionality between multiple segments, each of which can be powered and controlled individually. This ground-breaking design brings:

- Exceptional power density – up to 12 kW/kg
- High efficiency – up to 98.5%

- Lower energy input for higher torque output
- Built-in redundancy and reliability
- Reduced EMI
- High- or low-voltage operation

EBT is focused on the development of a family of hard carbon anode materials produced from sustainable bio-waste. The materials are primarily intended for use in sodium-ion batteries but can also be used in lithium-ion batteries.

Fields of competence

Products	Markets	Capabilities
Control electronics	Commercial vehicles (>3500kg)	Design & Development
	Bus & Coach	Testing / Homologation
	Specialist Vehicles	Component Manufacturing
	Automotive (Pass car & Light Commercial)	System Integration / Assembly



Power Electronics & Electrical Systems



Electric Classic Cars Limited
Unit 37 Mochdre Industrial
Estate,
Newtown, Powys,
SY16 4LE

No. of employees: 13
(January 2023)

Contact: Sophia Pert (Office
Manager)
Email:
sophia@electricclassiccars.
co.uk

Jon Peck (Sales)
Email: sales@
electricclassiccars.co.uk

Website:
www.electricclassiccars.
co.uk/

World’s largest converter of classic cars to electric

At Electric Classic Cars we’re the pioneers of classic car electrification; steering the industry as the world’s market leader. Established in 2015 by our founder Richard Morgan, whose desire to be able to drive his classic cars as a daily driver without the worries of reliability and high maintenance

was the inception of ECC. Our customers’ response has meant that we’ve rapidly evolved into the largest converter of classic cars in the world having now converted over 70 vehicles. We also develop and supply numerous bolt-in conversion kits to companies around the world.

Fields of competence

Products	Markets	Capabilities
Plug and play bolt-in kits for classic cars conversions	Automotive (Pass car & Light Commercial)	System Integration / Assembly
Classic car conversions to electric	Off Road and Construction	Design & Development
Components supply	Specialist Vehicles	Component Manufacturing
Retro charge stations	Bus & Coach	Raw material supply chain



Power Electronics & Electrical Systems



Fibrax Limited
Queensway
Wrexham
LL13 8YR

No. of employees: Group – 446 (Wrexham – 150)

Email: info@fibrax.co.uk

Phone: 01978 356744

Website: www.fibrax.com

The Fibrax Group is a high-end precision injection moulding partner for the automotive industry

Fibrax specialises in the design, development and manufacture of high-quality rubber, plastic and TPE components for the automotive industry. OEMs and Tier 1 manufacturers benefit from our polymer engineering expertise, collaborative approach, and sustainable localised production capabilities. As a full-service manufacturer, we are skilled at identifying solutions that provide excellent value and meet our customers’ exact needs. Fibrax is accredited with IATF 16949:2016 Automotive Quality Management, ISO9001:2015 and ISO14001:2015.

Fields of competence

Products	Markets	Capabilities
Rubber injection moulded parts	Automotive (Pass car & Light Commercial)	Component Manufacturing
Plastic injection moulded parts	Commercial vehicles (>3500kg)	Design & Development
Steering column sealing systems	Off Road and Construction	Equipment and Tooling suppliers
Suspension components (Polymer)	Rail	Testing / Homologation



Power Electronics & Electrical Systems



GTS Flexible Materials Ltd
Unit 41 Rassau Industrial
Estate
Ebbw Vale
Gwent
NP23 5SD
UK

No. of employees: 130

Contact: Simon Titman
Email: simontitman@gtsflexible.com

General Enquiries:
sales@gtsflexible.com

Website:
www.gtsflexible.com

Technical foil solutions for battery cell connections in BEV

GTS Flexible Materials is a leading supplier of flexible copper laminates and insulation materials to the automotive and power distribution markets.

With over 50 years’ experience we have a range of products ideally suited to the increasing growth in general automotive electronics, EV battery power and sensing applications. As a market leader in insulations for laminated bus-bars, our materials are also widely used in the renewable energy sector. Our in-house team of researchers are on hand to design customised solutions where required.

Our recently expanded and refurbished design and manufacturing facility is approved to ISO9001, IATF16949, ISO14001 and ISO45001.

Fields of competence

Products	Markets	Capabilities
Flexible Laminates and Coverlays	Automotive (Pass car & Light Commercial)	Design & Development
Flexible Insulations	Bus & Coach	Component Manufacturing
	Commercial vehicles (>3500kg)	
	Rail	



HYPERMOTIVE

Power Electronics & Electrical Systems



Intelligent hydrogen & electric integration technologies for zero emission power

Hypermotive Ltd. design, manufacture and integrate hydrogen and electrical systems and e-mobility solutions for the automotive, off-highway, rail, marine, powergen, motorsport and aerospace sectors.

Our Fuel Cell Systems team have engineering capability in stack and system design, fuel cell controls and health monitoring, air, fuel and thermal management, and the electrical and mechanical integration of fuel cells into applications. We create bespoke solutions and offer products to customers for control and operation of fuel cell power and propulsion systems. Using expert knowledge

of hydrogen systems to integrate and control hardware to ensure high performance, life, durability and cost, we support customers from initial concept and demonstrators through to SoP.

Product lines of intelligent integration technologies for zero emission power systems are under development, including industrial hydrogen power integration projects.

Delivery is supported with broader engineering capability in electrical/electronic hardware design, software/controls, LV/HV harnessing and low volume tier 1 manufacturing.

Fields of competence

Products	Markets	Capabilities
Wiring harnessing	Marine	Design & Development
HV wiring	Commercial vehicles (>3500kg)	Software Engineering / Development
LV and HV Electronic equipment	Off Road and Construction	System Integration / Assembly
Intelligent Control modules	Specialist Vehicles	Component Manufacturing

Hypermotive Ltd
Ty Gwent Lake View,
Llantarnam Industrial Park,
Cwmbran,
Gwent,
NP44 3HR

No. of employees: 30
(2022)

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General Enquires:
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Website:
www.hyper-motive.com



Power Electronics & Electrical Systems



KnitMesh Technologies – flexible and compressible porous media for high efficiency electrochemical applications

KnitMesh Technologies has a proud history of innovation in specialised engineering. For over 60 years, we have been developing innovative and bespoke products to help our customers achieve their goals.

The transport industry is changing, and KnitMesh Technologies has developed a new range of products to support our customers in the drive to zero emissions. Our new products include:

- Electrolyser components for the generation of green hydrogen including current carriers, gas diffusion layers, electrodes and stack tolerance compensators.
- Porous conductive media battery components for EV applications
- Improved transportation components for vibration control, sealing, and filtration

Many EV components are produced in nickel, titanium and special grades of stainless steel.

- Flame and spark filters to protect battery technologies from uncontrolled fire

Fields of competence

Products	Markets	Capabilities
Flame filters for pyrotechnic actuators including circuit breakers	Automotive (Pass car & Light Commercial)	Component Manufacturing
	Aerospace	Design & Development
	Specialist Vehicles	
	Rail	

KnitMesh Technologies Ltd.
Coast Road,
Greenfield,
Flintshire
CH8 9DP

No. of employees: 92 (2022)

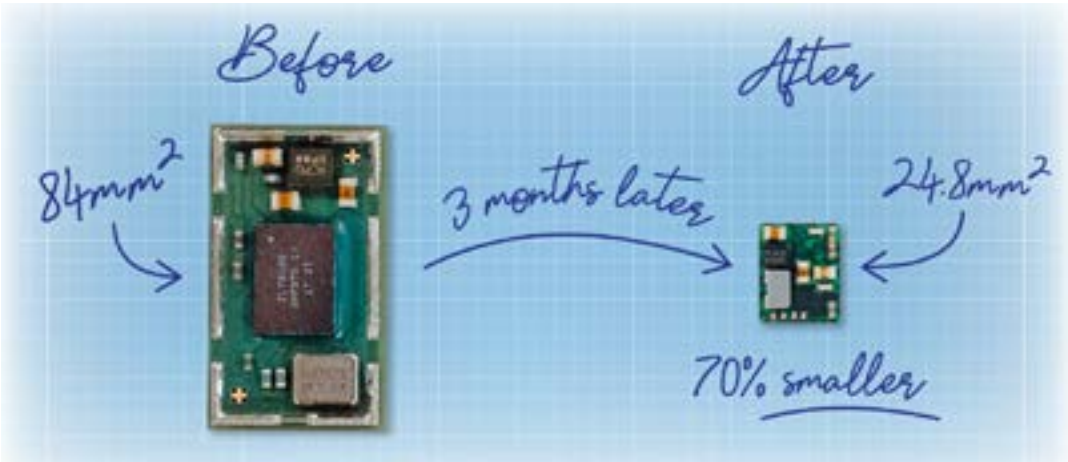
Sales:
enquiries@knitmesh.com

Lucy Heald
Email:
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Website:
knitmeshtechnologies.com



Power Electronics & Electrical Systems



Microchip Technology
Caldicot Limited
Phase 2
Castlegate Business Park
Unit 4
Caldicot
NP26 5YW

No. of employees: 19,500
(140+)

Contact: Mr.Pagu
Chidambaram
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Email:
info-Caldicot@microchip.com

Website:
www.microchip.com/aps

Let us help design, develop, assemble, and test your advanced electronic assembly and packaging solutions

Our world-class products meet your specific Size, Weight, Power, Cost, and Cooling (SWaP-C2) requirements, taking your design from prototypes to volume production quickly. At our facility located in Caldicot, Wales (UK), we deliver a competitive advantage for customers through miniaturising electronic circuits, enabling wireless connectivity and custom/complex power modules with a track record of successful designing, developing next generation miniaturised electronic modules

and pioneering power modules. This includes custom ASICs, FPGAs, RF modules and ICs, power and photonic modules and multi-chip packages.

Microchip Technology Inc., HQ is a leading provider of smart, connected and secure embedded control solutions. The company serves more than 120,000 customers across industrial, automotive, consumer, aerospace and defence, communications, and computing markets.

Fields of competence

Products	Markets	Capabilities
Microelectronics assembly and packaging Services	Automotive (Pass car & Light Commercial)	System Integration / Assembly
Custom power module design and manufacturing Services	Aerospace	Design & Development
Miniaturisation services using Embedded SiP Technology	Commercial vehicles (>3500kg)	Testing / Homologation
	Off Road and Construction	Component Manufacturing



Power Electronics & Electrical Systems



RAM Innovations
Unit 1F
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Chester Road
Pentre
CH5 2DQ

No. of employees: 10

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Email: p.green@ram-innovations.com

Nick Russel
Email: n.russel@ram-innovations.com

Website:
www.ram-innovations.com

Embedded Die Packaging – for power dense, efficient, fast switching electrical power converters

RAM Innovations provides advanced semiconductor packaging services to the global semiconductor and electronics industry, with a particular focus on embedding bare semiconductor dies (and other components) directly into printed circuit boards (PCBs).

RAM has the capability to design and manufacture power electronics modules using a range of Silicon, Silicon Carbide and Gallium Nitride devices alongside a range of drivers, controllers and other components.

RAM offers fast turnaround services and the capability to manufacture hundreds of thousands of modules per year.

RAM's clients range from global OEMs to technology start-ups, and all have a common need – to improve the efficiency and reduce the size and weight of power electronics modules.

Fields of competence

Products	Markets	Capabilities
Power Modules (Si, SiC, GaN)	Aerospace	Component Manufacturing
	Specialist Vehicles	Design & Development
	Off Road and Construction	System Integration / Assembly
	Rail	



Reflexallen UK Ltd
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Kinmel Industrial Estate
Bodelwyddan
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LL18 5TQ

No. of employees: 1500
Group, 420 Wales

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General Enquiries:
cs@reflexallen.com
cs.uk@reflexallen.com

Website:
Under Construction

Power Electronics & Electrical Systems



Offering solutions where less is more in term of mass, weight, CO2 and energy reduction. Because the future is sustainable energy

Our vision “Driven by Sustainable Energy” is the perfect translation of what we have created in the last 30 years, and one that will continue to drive us forward into the future. We deeply evolved, from a local company to a global player with limitless capabilities. Today, with our international experience, design, development, testing, manufacturing and distribution skills, we present ourselves as a Solution Provider for almost any kind of product which needs to transfer and manage energy inside vehicles, systems or sub-systems.

Reflexallen’s UK facility with IATF16949, ISO14001 and Military accreditation, is located on the North Wales coastline, is the largest within the group and is the epicentre of material and application development.

We serve both the on and off-highway OEMs with competitive, yet innovative products, where both our conceptual and manufactured products are developed and produced starting from the raw material.

Fields of competence

Products	Markets	Capabilities
Electrical transfer lines	Commercial vehicles (>3500kg)	Component Manufacturing
	Automotive (Pass car & Light Commercial)	System Integration / Assembly
	Bus & Coach	Design & Development
	Rail	Raw material supply chain



Senior Flexonics
1B Oakwood Close
Pen-Y-Fan Industrial Estate
Crumlin
UK
NP11 3HY

Global Employees: 6361
(2022)

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Website:
www.seniorflexonics.co.uk

Power Electronics & Electrical Systems



An international engineering solutions provider of innovative thermal management and fluid conveyance products

We are an international, market-leading, engineering solutions provider with 26 operating businesses in 12 countries.

We help engineer the transition to a sustainable world for the benefit of all our stakeholders.

We do this by:

- Using our technology expertise in fluid conveyance and thermal management to provide safe and innovative products for demanding applications in some of the most hostile environments
- Enabling our customers, who operate in some of the hardest-to-decarbonise sectors, to transition to low carbon and clean energy solutions

Staying at the forefront of climate disclosure and action by ensuring our own operations achieve our Net Zero commitments

Our Flexonics portfolio spans a wide range of fluid conveyance and thermal management components and sub-systems, as well as complex precision machined parts, for conventional and advanced land vehicle propulsion systems, petrochemical, renewable energy, and a variety of other industrial applications.

Fields of competence

Products	Markets	Capabilities
Battery Thermal Management	Automotive (Pass car & Light Commercial)	Design & Development
Power Electronics Thermal Management	Commercial vehicles (>3500kg)	Component Manufacturing
Hydrogen Thermal Management	Off Road and Construction	Testing / Homologation
Fluid Conveyance	Bus & Coach	System Integration / Assembly



Spectrum Technologies Ltd
Bridgend Industrial Estate
Western Avenue
Bridgend
CF31 3RT
Wales
UK

No. of employees: 70

Contact: Jon Mowat
Email: jmowat@spectrumtech.com

General Enquires:
sales@spectrumtech.com

Website:
www.spectrumtech.com

Power Electronics & Electrical Systems



Industrial laser systems and advanced manufacturing solutions for electric drives

For over 30 years Spectrum Technologies has been the leading supplier to the global aerospace industry for specialised industrial laser systems utilised in the production of complex electrical wiring systems. The company has also established a strong capability in high speed, high quality, precision laser stripping of magnet wire used in the production of stators for e-drive systems and more generally for electric motors, alternators etc.

Spectrum is now bringing to market a new generation of low cost, modular laser

magnet wire stripping systems, offering increased flexibility for integration into electric motor production lines.

Our Applications Laboratory can undertake process development and sample preparation for customers to establish the precise process parameters for a given application. Using this our Sales and Engineering teams will work with customers to develop the optimum solution and most cost effective design and configuration of magnet wire stripping system for integration into the customer's production line.

Fields of competence

Products	Markets	Capabilities
Industrial laser systems	Automotive (Pass car & Light Commercial)	Equipment and Tooling suppliers
Laser Magnet wire stripping systems	Aerospace	Design & Development
Industrial laser marking systems	Rail	System Integration / Assembly
Laser wire processing systems for harness manufacture		



TRB Ltd
St Asaph Business Park,
Denbighshire, North Wales,
UK, LL17 0JB

No. of employees: 120
(2023)

Email: hello@trb-ltd.co.uk

Website: www.trb-ltd.com

Power Electronics & Electrical Systems



TRB Mission Statement – To continually supply the highest quality products and services at competitive prices, to the delight of our customers

TRB Ltd, a subsidiary of the Japanese multi-national Tokai Rika Company. Occupying a 15,500ft² site in St Asaph, North Wales. Established in 1999 as the group's first assembly plant in Europe, it is dedicated to supplying the highest quality automotive switch products to Europe's front line vehicle manufacturers.

Located just off the A55 North Wales Expressway, with easy access to Holyhead, Liverpool and Manchester.

Our plant in St Asaph North Wales offers a clean environment, utilising the latest technologies in manual and semi-automated assembly processes. Our commitment to quality is backed by a highly motivated team, ensuring the highest level of quality is built into each process, in a company which values continuous improvement in its people as well as the process.

Our experience includes managing products with complex supply chains, reaching as far as Asia, ensuring a high level of delivery assurance.

Our professional warehousing team utilises state-of-the-art IT technologies, including barcodes, and labels. Providing seamless logistic processes for receiving, repacking, and supply of products in support of UK and Europe localisation.

Our highly skilled team of Production and Quality Engineers with experience in designing assembly processes, utilise latest technologies in robotics and camera sensors to ensure high levels of quality and productivity.

We are a team, who are proud of our abilities and quality performance. And who are confident enough to aspire to new commodities and areas of business.

Fields of competence

Products	Markets	Capabilities
Automotive Switches	Automotive (Pass car & Light Commercial)	Component Manufacturing
	Motorcycles	System Integration / Assembly
	Bus & Coach	
	Commercial vehicles (>3500kg)	



Power Electronics & Electrical Systems



Wiltan Limited
Ambassador Buildings
Pontnewynydd Industrial Estate
Pontypool
Torfaen
NP4 6YW

No. of employees: 18 (2023)

Email: zou@wiltan.co.uk

Email: info@wiltan.co.uk

Website: www.wiltan.co.uk

Manufacturers of cores for transformers

Wiltan Magnetic Components is the UK's leading manufacturer and supplier of strip wound cores in electrical steels, both cut and uncut; and cut laminations for use in the transformer and associated industries.

We can produce custom designs to meet almost any requirements that the customer may need. We understand the evolving needs of the customer and strive to deliver a product that will provide an answer to any mechanical or electrical constraint.

The Engineering Department at Wiltan have the necessary skills and expertise to ensure that cores of any shape and size can be produced; and as a result, we are happy to discuss the options available for any enquiry. We have worked with Cardiff University on Welsh Government Projects to develop advanced motors for automotives and regional aircraft.

Products	Markets	Capabilities
Cores for Transformers		Component Manufacturing
		Testing / Homologation
		Design & Development



Power Electronics & Electrical Systems



Winslow Adaptics Ltd
Unit 11
Brecon Enterprise Park
Brecon
Powys
LD3 8BT

No. of employees: 14 – 2023

Contact: Teri-Ann Winslow
Email: Teri-ann@winslowadaptics.com

John Dyson
Email: johnd@winslowadaptics.com

Website: www.winslowadaptics.com

Developing and manufacturing innovative solutions for the electronic system lifecycle

From our base in the beautiful Brecon Beacons in Wales, Winslow Adaptics has close to 50 years' experience of offering innovative interconnect and adapter solutions for Electronics Design, Manufacture, and Obsolescence professionals.

In that time, Winslow has helped hundreds of top-tier OEM and SME customers modify their hardware and software to changing technologies, hence prolonging the lifecycles of countless items of electronic equipment and promoting sustainability.

Specialising in solutions for high reliability markets, our AS 9100 D approved facility offers both mechanical and electronic design expertise. Our team is highly experienced and instils confidence with fast responses. They understand the need for form, fit and function when specifying a solution and consider cost without sacrificing quality at all times.

Winslow is committed to the growth of its services and manufacturing processes for the future. Head over to our website and see how we can support your next design or supply chain challenge.

Fields of competence

Products	Markets	Capabilities
Adapters/Interposers	Rail	Design & Development
Legacy Design Services	Aerospace	Component Manufacturing
Custom Test Modules	Marine	End of life Management
	Specialist Vehicles	



Power Electronics & Electrical Systems



YASA
Oxford Industrial Park
-14 Mead Road,
Yarnton
Kidlington
Oxfordshire
OX5 1QU

No. of employees: 375

Marketing:
marketing@yasa.com

Sales: sales@yasa.com

Website: www.yasa.com

Engineering Revolution – Accelerating Electrification

YASA is at the forefront of eMotor innovation and development. Our Axial-Flux technology motors are up to 4x more powerful than those used in nearly all Electric Vehicles on the road today, whilst being around 50% smaller and lighter. To complement YASA’s eMotor success, YASA’s Engineering team are continuing their journey to develop sophisticated Inverters and controllers. This has been accelerated over the past 12 months

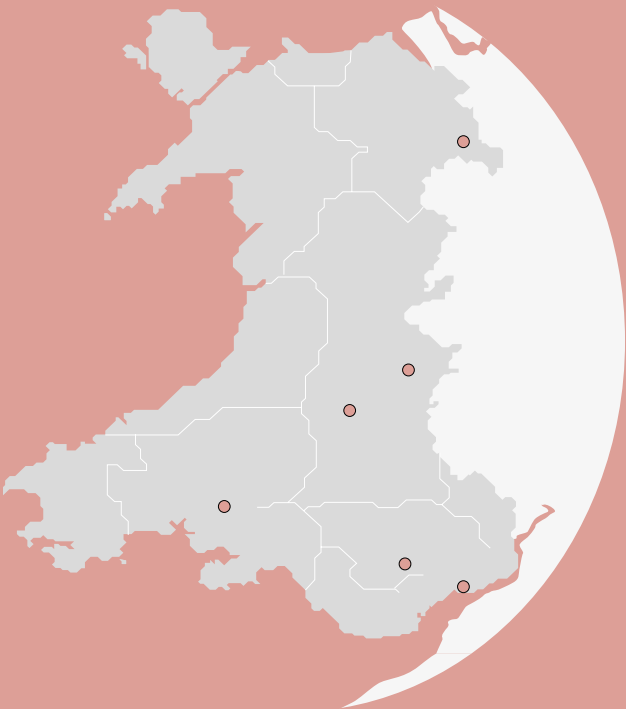
with the construction of a new state-of-the-art flagship research and development centre in Welshpool, supported by the Welsh Government. With the high degree of talent, cutting-edge test facilities and agility to innovate, YASA’s research and development facility will develop advanced, efficient products for the hybrid and electric mobility sector, and at the same time create jobs and opportunities locally.

Fields of competence

Products	Markets	Capabilities
Power Electronics	Automotive (Pass car & Light Commercial)	Design & Development
Electric Drive Systems	Marine	Component Manufacturing
	Motorcycles	System Integration / Assembly
		Testing / Homologation



Light-Weighting





Light-Weighting



CastAlum
Unit 5 Buttington Cross
Enterprise Park
Welshpool, Powys,
SY21 8SL

No. of employees: 150

Contact: Nathan Field,
Innovation Lead
Email:
nathan.field@castalum.com

General Enquiries:
info@castalum.com

Website:
www.castalum.com

We manufacture die cast and machined components that no one else can

Our investment and understanding of Additive Material Technology to aid with conformal cooling has allowed us to change what is viewed as achievable within our industry. Consequently, we now have a wealth of experience and data to support the development of lightweight casting technology, without sacrificing properties or durability.

Over the years, we have been entrusted with the manufacture of a wide variety of castings for prestigious automotive marques. These include customers such as VAG, BMW,

Ford, General Motors, Fiat, Renault, Porsche, Mercedes, Jaguar Land Rover, as well as other non-automotive customers, with 90% of our production being for export.

Through our innovative approach, we have been able to realise light-weighting opportunities for our customers that had been considered impossible. These advancements have included advancements in light-weighting through the integration of cooling methods and reduction of components in assemblies.

Fields of competence

Products	Markets	Capabilities
Powertrain products	Automotive (Pass car & Light Commercial)	Component Manufacturing
E-motor housings	Motorcycles	Design & Development
Transmission housings	Rail	System Integration / Assembly
Tooling inserts	Other Mobility Solutions / enablers	Testing / Homologation



Light-Weighting



Fibrax Limited
Queensway
Wrexham
LL13 8YR

No. of employees: Group – 446 (Wrexham – 150)

Email: info@fibrax.co.uk

Phone: 01978 356744

Website: www.fibrax.com

The Fibrax Group is a high-end precision injection moulding partner for the automotive industry

Fibrax specialises in the design, development and manufacture of high-quality rubber, plastic and TPE components for the automotive industry. OEMs and Tier 1 manufacturers benefit from our polymer engineering expertise, collaborative approach, and sustainable localised

production capabilities. As a full-service manufacturer, we are skilled at identifying solutions that provide excellent value and meet our customers’ exact needs. Fibrax is accredited with IATF 16949:2016 Automotive Quality Management, ISO9001:2015 and ISO14001:2015.

Fields of competence

Products	Markets	Capabilities
Rubber injection moulded parts	Automotive (Pass car & Light Commercial)	Component Manufacturing
Plastic injection moulded parts	Commercial vehicles (>3500kg)	Design & Development
Steering column sealing systems	Off Road and Construction	Equipment and Tooling suppliers
Suspension components (Polymer)	Rail	Testing / Homologation



Light-Weighting



Haydale
Clos Fferws
Parc Hendre
Capel Hendre
Ammanford
SA18 3BL

No. of employees: 75 (2023)

Contact: David Davies
UK Managing Director
Email: david.davies@haydale.com

John-Mark Seymour
UK Site Director
Email: info@haydale.com

Website: www.haydale.com

Using revolutionary plasma functionalisation to provide technological solutions to improve people’s lives

Graphene and other 2D materials have revolutionised the world of materials science with their exceptional properties, such as high strength, flexibility, conductivity, and transparency.

Haydale is a global technology solutions company passionate about creating the next generation of advanced materials to improve mechanical, thermal and electrical properties for our customers. We specialise in the design, development, and commercialisation of advanced materials using graphene and other nanomaterials.

Our patented plasma functionalisation technology unlocks the potential of nanomaterials, enabling us to provide a wide range of graphene-based materials designed to enhance and improve various products from our facility in Ammanford, Wales.

Whether you are looking for high-performance batteries, composites, conductive inks, thermal management solutions, our functionalised materials are produced to stringent quality control procedures including ISO 9001:2015 and ISO 14001:2015 and managed by an experienced team offering a dedicated end-to-end service.

Fields of competence

Products	Markets	Capabilities
Composites	Automotive (Pass car & Light Commercial)	Raw material supply chain
Automotive Body Panels	Commercial vehicles (>3500kg)	Design & Development
Foam Core	Aerospace	Testing / Homologation
	Marine	System Integration / Assembly



Light-Weighting



Hydro Aluminium UK Ltd
Pantglas Industrial Estate,
Bedwas
Caerphilly
CF83 8DR
United Kingdom

General Enquiries
Email: Marketing.extrusion.uk@hydro.com

Barnaby Struthers
Email: Barnaby.struthers@hydro.com

Website: www.hydro.com

Aluminium fabrication and surface treatment with low carbon and recycled content offerings

Extensive list of in-house offerings for aluminium components including design support, bending and forming, CNC machining, welding, anodising and more. Over 50 years’ experience in developing aluminium extrusion profiles into fabricated applications for a variety of industries including automotive products and electric vehicle components.

At Bedwas, a large majority of our work is for the automotive sector. Our formed and machined aluminium extrusions can be found in many of today’s models to produce products such as; bumper armatures, bumper beams, chassis, chassis components, sunroofs, window assemblies, A, B, C & D posts, division channels, roof racks, sports carriers, door frames, window frames, sun surrounds, crush cans, floor pans, and steering column supports.

We provide component part and sub-assemblies made from aluminium extrusion, and help our customers to benefit from sustainable solutions with our low carbon aluminium and recycled content aluminium.

Fields of competence

Products	Markets	Capabilities
Battery boxes	Automotive (Pass car & Light Commercial)	Design & Development
Automotive Chassis	Bus & Coach	Component Manufacturing
Bumper beams	Off Road and Construction	Raw material supply chain
Roof racks	Rail	Equipment and Tooling suppliers



Reflexallen UK Ltd
Royal Welch Avenue
Kinmel Industrial Estate
Bodelwyddan
Denbighshire
LL18 5TQ

No. of employees: 1500
Group, 420 Wales

Contact: James Reece –
Sales Director
Email: james.reece@
reflexallen.com

General Enquiries:
cs@reflexallen.com
cs.uk@reflexallen.com

Website:
Under Construction

Light-Weighting



Offering solutions where less is more in term of mass, weight, CO2 and energy reduction. Because the future is sustainable energy

Our vision “Driven by Sustainable Energy” is the perfect translation of what we have created in the last 30 years, and one that will continue to drive us forward into the future. We deeply evolved, from a local company to a global player with limitless capabilities. Today, with our international experience, design, development, testing, manufacturing and distribution skills, we present ourselves as a Solution Provider for almost any kind of product which needs to transfer and manage energy inside vehicles, systems or sub-systems.

Reflexallen’s UK facility with IATF16949, ISO14001 and Military accreditation, is located on the North Wales coastline, is the largest within the group and is the epicentre of material and application development.

We serve both the on and off-highway OEMs with competitive, yet innovative products, where both our conceptual and manufactured products are developed and produced starting from the raw material.

Fields of competence

Products	Markets	Capabilities
Braking system	Commercial vehicles (>3500kg)	Component Manufacturing
Fluid transfer lines / sub-systems	Automotive (Pass car & Light Commercial)	System Integration / Assembly
	Bus & Coach	Design & Development
	Rail	Raw material supply chain



Riversimple Movement Ltd
Unit 32, Ddole Enterprise
Park
Llandrindod Wells
Powys
LD1 6DF

No. of employees: 20

Contact: Bill Whyman
Email: bill@riversimple.com

Email: info@riversimple.com

Website:
www.riversimple.com

Light-Weighting



A car manufacturer and service provider developing affordable, fun-to-drive hydrogen electric vehicles

Riversimple is pioneering the next generation of zero emission vehicles. They use hydrogen, not batteries, and emit nothing but water. Able to refill in three minutes, our vehicles will offer a solution for those who value flexibility and freedom, and want to live lightly on the planet.

Lightness is key to efficiency and range. We have used a combination of technologies to keep the weight to a minimum and deliver the greatest fuel efficiency and superb environmental performance. Like a Formula

One car, it is built with strong and lightweight composite materials rather than steel. Our production vehicles will be designed to deliver a range of 300 miles, which would last most people a week of local travelling before needing to refill.

Riversimple is developing a subscription service for vehicles which offers a move away from vehicle ownership towards an all-inclusive, simplified and clean mobility experience.

Fields of competence

Products	Markets	Capabilities
Hydrogen system integration	Automotive (Pass car & Light Commercial)	Design & Development
Composite materials		Software Engineering / Development
Circular Economy Principles		System Integration / Assembly



Tata Steel
Llanwern House
Llanwern Works
Newport
NP19 4QZ
UK

No. of employees: 8000

Email: automotiveuk@tatasteeleurope.com

Website:
www.tatasteeleurope.com

Light-Weighting



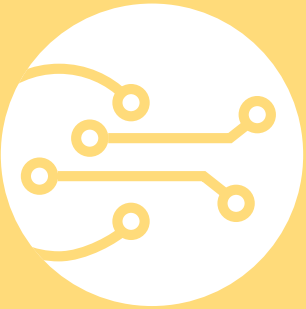
**Tata Steel offers sustainable steel solutions for electric vehicles.
Your partner for electrification**

Tata Steel is one of the few steel suppliers that offers advanced steel solutions for electric motors, energy storage and conversion systems, crash-management components and outer panels. This

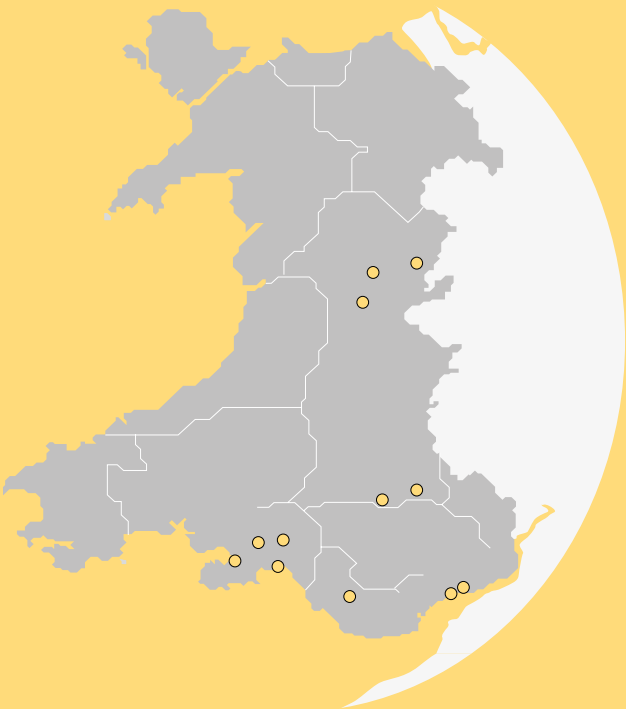
integrated product offering, supported with in-depth application knowledge and engineering services, makes Tata Steel the preferred partner in your electrification journey.

Fields of competence

Products	Markets	Capabilities
Affordable lightweighting with steel	Automotive (Pass car & Light Commercial)	Raw material supply chain
	Commercial vehicles (>3500kg)	Testing / Homologation
	Off Road and Construction	Design & Development
	Bus & Coach	End of life Management



Infrastructure





Infrastructure



Actia UK Ltd
Unit 81
Mochdre Industrial Estate
Newtown
Powys
SY16 4LE

No. of employees: Group – 446 (Wrexham – 150)

Contact: Richard Haynes
Email: rhaynes@actia.co.uk

Robert Myatt
Email: rmyatt@actia.co.uk

Website: www.actia.co.uk

We design, manufacture and operate electronics to manage systems with uncompromising quality standards

Actia’s core business is to design, manufacture and operate electronics for system management.

Our expertise is in:

- Vehicle electronic architecture
- Power electronics
- Vehicle telematics & Connected services
- Diagnostic Systems
- EMS – Electronic Manufacturing services
- Equipment and services for workshops and inspection centres
- Telecommunications & SatCom
- MicroMobility – Electric solutions for Cycles (E Bike)

Fields of competence

Products	Markets	Capabilities
Power Electronics Multiplex Electrical systems	Bus & Coach	Design & Development
Diagnostic services	Motorcycles	Software Engineering / Development
Telematics	Commercial vehicles (>3500kg)	System Integration / Assembly
	Off Road and Construction	



Infrastructure



Truly flexible electronics manufacturing services

Camtronics provides electronics manufacturing services to companies who are unable, or do not wish, to manufacture their electronic products in-house.

Camtronics has been manufacturing electronics assemblies since 1993 and operates in a broad range of industries. All operations are conducted under one roof in a 1250m² facility in Tredegar, South Wales, to ensure full control and the highest quality.

We aim to provide this in the most flexible and collaborative way, so that you see us as an integrated part of your organisation. Many of our customer partners have been working with us for over ten years.

Our core speciality is high complexity surface mount PCBAs. Send us your gerber files and BOMs and let our ISO9001 certified processes do the rest.

Fields of competence

Products	Markets	Capabilities
Electronics manufacturing services	Other Mobility Solutions / enablers	System Integration / Assembly
	Off Road and Construction	Infrastructure installation
	Specialist Vehicles	Equipment and Tooling suppliers
	Marine	

Camtronics Ltd
The Gateway Building
Tredegar Business Park
Tredegar
NP22 3EL

No. of employees: 40 (2023)

Contact: Paul Macleaur
Email: pm@camtronicsvale.com

General Enquiries: sales@camtronicsvale.com

Website: www.camtronicsvale.co.uk



Infrastructure



Clenergy EV
Pencoed Technology Centre
Pencoed
Bridgend
CF35 5HZ

No. of employees: 25
(February 2023)

Contact: Michael Nixon
Email: michael.nixon@clenergy-ev.com

Sales team:
sales@clenergy-ev.com

Website:
www.clenergy-ev.com

Charge point software to power up your electric vehicle infrastructure strategy

We provide organisations the means to monetise, manage and maintain effective electric vehicle charging stations.

Our charge point management system gives charge point owners complete control of their charging infrastructure, all from one platform. We work closely with large corporations, public sector authorities and SMEs, from all sectors, to power up their EV charging and decarbonisation strategies.

Fleet owners can also benefit from integrated vehicle tracking, vehicle to grid (V2X) and smart scheduling systems, unlocking the benefits of low carbon transport for forward thinking organisations.

Our aim at Clenergy EV is to provide simple, fair, and accessible electric vehicle charging - all from one platform, for one cleaner planet.

Fields of competence

Products	Markets	Capabilities
Charge Point Management System	Other Mobility Solutions / enablers	Software Engineering / Development
Fleet electrification software/ telematics	Automotive (Pass car & Light Commercial)	
	Bus & Coach	
	Commercial vehicles (>3500kg)	



Infrastructure



Dawson Shanahan Manufacturer of Electrical Connectors – Custom engineered for use throughout Emobility

We have been working with major global connector companies since 2014 on high power connectors for EV passenger and commercial vehicles, energy, and data storage. In this time, we have worked with our customers in the design, development, and production of connectors, having produced over 10 million parts to date.

Our in-house design, process simulation and tooling manufacturing capability, combined with our extensive range of Cold Forming and CNC machines provides our customers with a one-stop shop in the design, development, prototype, and series production phases of a project.

Cold forming of High Conductivity Oxygen Free copper alloys has unique benefits in the manufacture of connectors. Connector

designers can utilize the process benefits to incorporate complex features without increasing a connector's cost, which can be associated with using only CNC machining processes.

In addition, our technical capabilities enable us to offer our customers advice on assembly including brazing, bonding and heat treatment processes, cleaning and special packing requirements.

We supply global customers and export over 80% of our sales, offering them consignment stock and delivered-to-the-door terms.

Recent investment in rotary transfer CNC machine technology has enabled us in 2023 to win a new 5-year contract to supply a key EV connector to an OEM in the EV supply chain. ISO 9001, IATF 16949, ISO 14001 Accreditation.

Fields of competence

Products	Markets	Capabilities
Power Connectors EV	Automotive (Pass car & Light Commercial)	Design & Development
Terminal connectors	Bus & Coach	Component Manufacturing
Charging Connectors	Commercial vehicles (>3500kg)	Equipment and Tooling suppliers
Connectors for EV systems	Off Road and Construction	

Dawson Shanahan (Wales) Ltd
Henfaes Lane
Welshpool
Powys
SY21 7BE

No. of employees: 98

Contact: Jeff Kiernan – Commercial Director
Email: jeff.kiernan@dawson-shanahan.co.uk

info@dawson-shanahan.co.uk

Website: www.dawson-shanahan.co.uk



Infrastructure



World's largest converter of classic cars to electric

At Electric Classic Cars we're the pioneers of classic car electrification; steering the industry as the world's market leader. Established in 2015 by our founder Richard Morgan, whose desire to be able to drive his classic cars as a daily driver without the worries of reliability and high maintenance was the inception of ECC. Our customers' response has meant that we've rapidly evolved into the largest converter of classic cars in the world having now converted over 70 vehicles. We also develop and supply numerous bolt-in conversion kits to companies around the world.

Fields of competence

Products	Markets	Capabilities
Plug and play bolt-in kits for classic cars conversions	Automotive (Pass car & Light Commercial)	System Integration / Assembly
Classic car conversions to electric	Off Road and Construction	Design & Development
Components supply	Specialist Vehicles	Component Manufacturing
Retro charge stations	Bus & Coach	Raw material supply chain

Electric Classic Cars Limited
Unit 37 Mochdre Industrial Estate,
Newtown, Powys,
SY16 4LE

No. of employees: 13
(January 2023)

Contact: Sophia Pert (Office Manager)
Email: sophia@electricclassiccars.co.uk

Jon Peck (Sales)
Email: sales@electricclassiccars.co.uk

Website:
www.electricclassiccars.co.uk/



Infrastructure



GCRE: The Global Centre of Rail Excellence

The Global Centre for Rail Excellence (GCRE) is set to become Europe's leading rail innovation centre, providing world-class research, testing and certification of rolling stock, infrastructure and innovative new rail technologies that will become the backbone of tomorrow's greener, stronger and more reliable railway.

The site will include an electrified high-speed outer rail testing track (6.9km) with testing speeds of potentially up to 125mph and an electrified, low-speed infrastructure testing track (4km) allowing speeds of up to 40mph. As well as rail infrastructure, the site will include a new business premises, maintenance facilities and a hotel.

The facility will fill a strategic gap not just in UK rail, but across Europe, helping lower the costs of major rail projects; supporting the path to net zero and helping bring products to market faster. Supported by the Welsh and UK Governments, the facility will be open in 2025.

Fields of competence

Products	Markets	Capabilities
Rolling Stock Testing	Rail	Testing / Homologation
Infrastructure Testing		System Integration / Assembly
Storage and Maintenance		
Rail Innovation		

Global Centre of Rail Excellence
Onllwyn
Neath
Port Talbot
SA10 9HN

No. of employees: 18 – 2023

Enquiries:
enquiries@gcre.wales

Website: www.gcre.wales



GS Yuasa Battery Manufacturing UK Ltd.
Unit 22, Rassau Industrial Estate,
Ebbw Vale
Gwent
NP23 5SD

No. of employees: 13,600
(400 Wales)

Contact: Shaun Gardner
Email: shaun.gardner@gs-yuasa.uk

General Enquiries:
info@gs-yuasa.uk

Website: www.gs-yuasa.eu

Infrastructure



Powering everyday lives and a sustainable future through advanced battery technologies

GS Yuasa are a world-leading battery manufacturer based in Japan with factories worldwide, including a state-of-the-art facility in Ebbw Vale, Wales. They produce Valve Regulated Lead-Acid (VRLA), lithium-ion (Li-ion) and lithium-ion starter batteries for a wide range of vehicle and industrial applications.

With sales companies across Europe and over 40 years of experience, GS Yuasa is a market leader in the industrial and motorcycle sectors. Their comprehensive industrial range provides reliable backup power and energy storage

solutions in a wide range of applications including uninterruptible power supply (UPS), renewable energy, security alarms, and telecommunications. Many of these battery types are produced at their Ebbw Vale facility, which opened in 1981.

GS Yuasa are also an Original Equipment supplier to top vehicle marques, including BMW, Honda, Jaguar, Mercedes Benz, Ducati, and Yamaha. Their Yuasa and GS ranges are specially designed for cars, vans, caravans, and boats.

Fields of competence

Products	Markets	Capabilities
Lead-acid batteries	Automotive (Pass car & Light Commercial)	Component Manufacturing
Lithium-ion batteries	Motorcycles	Design & Development
ESS and UPS systems	Commercial vehicles (>3500kg)	Infrastructure installation
Off-vehicle charging systems		



Microchip Technology Caldicot Limited
Phase 2
Castlegate Business Park
Unit 4
Caldicot
NP26 5YW

No. of employees: 19,500
(140+)

Contact: Mr.Pagu Chidambaram
Email: pagu.chidambaram@microchip.com

Email:
info-Caldicot@microchip.com

Website:
www.microchip.com/aps

Infrastructure



Let us help design, develop, assemble, and test your advanced electronic assembly and packaging solutions

Our world-class products meet your specific Size, Weight, Power, Cost, and Cooling (SWaP-C2) requirements, taking your design from prototypes to volume production quickly. At our facility located in Caldicot, Wales (UK), we deliver a competitive advantage for customers through miniaturising electronic circuits, enabling wireless connectivity and custom/complex power modules with a track record of successful designing, developing next generation miniaturised electronic modules

and pioneering power modules. This includes custom ASICs, FPGAs, RF modules and ICs, power and photonic modules and multi-chip packages.

Microchip Technology Inc., HQ is a leading provider of smart, connected and secure embedded control solutions. The company serves more than 120,000 customers across industrial, automotive, consumer, aerospace and defence, communications and computing markets.

Fields of competence

Products	Markets	Capabilities
Microelectronics assembly and packaging Services	Aerospace	System Integration / Assembly
Custom power module design and manufacturing Services	Automotive (Pass car & Light Commercial)	Design & Development
Miniaturisation services using Embedded SiP Technology	Commercial vehicles (>3500kg)	Testing / Homologation
	Off Road and Construction	Component Manufacturing



Protium

Brunel House 15th Floor
Fitzalan Road
Cardiff
CF24 OEB

No. of employees: 50+

Contact: Ian Collier
Business Development
Manager

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ian.collier@protium.co.uk

Kimberley McCracken
Head Of Grants

Email:
kimberley@protium.co.uk

Website:
www.protium.green

Infrastructure



Pioneering green hydrogen energy solutions to provide net zero emission services

Protium, the UK's largest green hydrogen

energy company, displaces fossil-based energy with green hydrogen, focusing specifically on hard-to-abate sectors, such as heat, power and transport. It provides services, and builds infrastructure, to support the deployment of hydrogen and fuel cell technologies.

Road transportation currently accounts for 19% of domestic transport emission across UK, therefore, hydrogen mobility is essential for net zero transport. From 2030 all new petrol and diesel passenger, light duty and taxi vehicle sales will be banned, with HGVs also facing a fossil fuel ban from 2040. Protium has agreements with leading FCEV OEMs and current operators of HGV refuelling systems (hydrogen & CNG) to lead deployment in the UK.

Protium is committed to supporting green investment and mobility in Wales:

- Protium has partnered with Budweiser Brewing Group UK&I to explore the deployment of green hydrogen at Magor brewery in South Wales - one of the largest breweries in the UK. The hydrogen will fuel the brewery's production, as well as its key logistics assets including Heavy Goods Vehicles (HGVs) and forklift trucks. This project will eliminate 15,500 tonnes of CO₂e per year, the equivalent of removing 3,300 cars from UK roads.

Fields of competence

Products	Markets	Capabilities
Infrastructure	Commercial vehicles (>3500kg)	Design & Development
Alternatively fuelled vehicles	Aerospace	Infrastructure installation
	Marine	Software Engineering / Development
	Bus & Coach	

- Protium is working with Kier to conduct a feasibility study examining if its highways depots can be powered using green hydrogen. The study will explore how hydrogen and fuel cell technologies can complement other renewable energy sources, to fuel existing fleet, depots and equipment in the Highways business.
- Protium and Siemens PSE have partnered, to use digital technology to advance hydrogen refuelling infrastructure development for transport, by enabling rapid refuelling technology that will make domestic hydrogen aviation a technically viable alternative.
- Protium has deployed its first c.100kW electrolyser in the UK, which is being installed at the University of South Wales' (USW) hydrogen centre at Baglan - the largest integrated Enapter electrolyser in the field in the UK.
- As part of a 14-company consortium that includes Blue Bear Systems and ZeroAvia, Protium is working at the forefront of the transition to a sustainable aviation industry in Project HEART. Having secured a portion of the £125 million funding from Innovate UK as part of the Future Flight Challenge, Protium will utilise the grant to determine the optimal methods for safely and commercially producing, storing, and distributing green hydrogen for aviation activities. Hydrogen produced for Project HEART will be used to power some of the longest zero-emission flights to date.



Qualitek Engineering Ltd

Llanelli
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SA14 9TD
UK

No. of employees: 25

Email: Leyton.thomas@qualitekeng.co.uk

Email: info@qualitekeng.co.uk

Website: www.qualitekeng.co.uk

Infrastructure



Developing solutions for industry via integrated supply chain design and manufacturing partnerships

Qualitek Engineering are an engineering solution provider with over 50 years' experience within multiple industry sectors. Our organisation values align with our passion to be involved with striving for net zero mobility objectives. We are an exceptionally customer focussed, extremely experienced team here at Qualitek who continually endeavour to support our clients' business goals . Our collaboration mindset ensures that clients' expectations are at the forefront of all we do.

Present sectors serviced include: Automotive, Defence, Flood Prevention, Security, Construction and multiple sector Original Equipment Manufacturers (OEMs).

Many of our clients use our skills and experience to enhance their designs and develop their products to optimised manufacturing.

We are based within South Wales, UK, within a 2,500 sq m manufacturing facility. Qualitek Engineering and are accredited to the following standards:

ISO 9001:2015
EN 1090 Ex Class 2 (Construction welding standard)
BS 8555 (Environmental Standard)

Fields of competence

Products	Markets	Capabilities
Fabricated & precision machined structures	Automotive (Pass car & Light Commercial)	Equipment and Tooling suppliers
Manufacturing Facilities – production floor infrastructure	Marine	Component Manufacturing
	Bus & Coach	Design & Development



Infrastructure



Tata Steel
Llanwern House
Llanwern Works
Newport
NP19 4QZ
UK

No. of employees: 8000

Email: automotiveuk@tatasteeleurope.com

Website:
www.tatasteeleurope.com

Tata Steel offers sustainable steel solutions for electric vehicles. Your partner for electrification

Tata Steel is one of the few steel suppliers that offers advanced steel solutions for electric motors, energy storage and conversion systems, crash-management components and outer panels. This integrated product offering, supported with in-depth application knowledge and engineering services, makes Tata Steel the preferred partner in your electrification journey.

Fields of competence

Products	Markets	Capabilities
Electricity Supply	Automotive (Pass car & Light Commercial)	Raw material supply chain
2nd life batteries for construction applications	Commercial vehicles (>3500kg)	Testing / Homologation
Charging Applications	Off Road and Construction	Design & Development
	Bus & Coach	End of life Management



Infrastructure



Vale Europe Ltd
Clydach
Swansea
SA6 5QR

No. of employees: 200 (2023)

Contact:
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Email: Sherryl.Sobie.Cooke@Vale.com

Darren Poland
Email:
Darren.Poland@vale.com

Website: www.vale.com/united-kingdom

We are a sustainable global mining company with a refinery producing class 1 nickel in Clydach, Swansea, Wales

Vale has mining operations in more than 20 countries and employs over 100,000 people worldwide. Our Clydach Refinery, where we produce 99.9% pure class 1 nickel, is one of the largest in the world. The purity of our products is ideal for high-nickel alloys, plating, stainless steel applications and, increasingly important, the electric vehicle (EV) market.

As the world races to course-correct climate change, we are stepping in with our premium nickel. On the “Critical mineral” watchlist for the U.K. government, it is used in the manufacturing of batteries for the EV market.

Our commitment to sustainability can also be seen in our remediation work and good water quality – both recognised by Natural Resources Wales, and our ISO14001 certification (for environmental performance).

Our refinery has the proud mantle of being the birthplace of nickel carbonyl production, where the process was developed more than 120 years ago. Our heritage has placed us at the heart of the communities around us and we proudly give back to the communities in which we operate, monetarily and through volunteer work.

Above all, our Obsession with Safety is the foundation of our business. Our Clydach Refinery is ISO45001 certified (for health and safety) and an Upper Tier COMAH site with a well-established safety culture supporting excellent safety performance.

Fields of competence

Products	Markets	Capabilities
Premium class 1 nickel pellets	Automotive (Pass car & Light Commercial)	Component Manufacturing
Premium class 1 nickel powder	Aerospace	Raw material supply chain
	Other Mobility Solutions / enablers	



Recycling



ATC Drivetrain
Llanelli Gate
Dafen
Llanelli
SA14 8LQ

No. of employees: 24

Email:
info@taengineering.co.uk

Phone: +44(0)1554 775 938

Website:
www.atcdrivetrain.com

Recycling



Largest global remanufacturer of powertrain and drivetrain products

ATC Drivetrain provides environmentally friendly remanufacturing solutions for powertrain and drivetrain products regardless of the technology powering the vehicle, including batteries, electric drive units, engines, transmissions, and other driveline products. ATC Drivetrain also offers engineering services that include warranty root cause analysis and testing, quality audits, production rework and recycling. ATC Drivetrain serves the global automotive industry from its facilities in the USA, United Kingdom and China, and supports automotive OEMs for in-warranty and out-

of-warranty products, IAM distributors and individual consumers.

ATC Drivetrain locations within Llanelli, Wales, Treharne Automotive Engineering, EV Marine and EV Recycling, specialise in the areas of mechatronic/electronic systems with the ability to design and develop systems and equipment for automotive and marine manufacturers. ATC Drivetrain engages in complete HV battery lifecycle and can support customers as they transition to an EV portfolio.

Fields of competence

Products	Markets	Capabilities
HV Battery – Testing, equipment	Automotive (Pass car & Light Commercial)	Design & Development
	Commercial vehicles (>3500kg)	Software Engineering / Development
	Off Road and Construction	Equipment and Tooling suppliers
	Bus & Coach	Testing / Homologation



Electric Classic Cars
Limited

Unit 37 Mochdre Industrial
Estate,
Newtown, Powys,
SY16 4LE

No. of employees: 13
(January 2023)

Contact: Sophia Pert (Office
Manager)
Email: sophia@
electricclassiccars.co.uk

Jon Peck (Sales)
Email: sales@
electricclassiccars.co.uk

Website:
www.electricclassiccars.
co.uk

Recycling



World’s largest converter of classic cars to electric

At Electric Classic Cars we’re the pioneers of classic car electrification; steering the industry as the world’s market leader. Established in 2015 by our founder Richard Morgan, whose desire to be able to drive his classic cars as a daily driver without the worries of reliability and high maintenance

was the inception of ECC. Our customers’ response has meant that we’ve rapidly evolved into the largest converter of classic cars in the world having now converted over 70 vehicles. We also develop and supply numerous bolt-in conversion kits to companies around the world.

Fields of competence

Products	Markets	Capabilities
Plug and play bolt-in kits for classic cars conversions	Automotive (Pass car & Light Commercial)	System Integration / Assembly
Classic car conversions to electric	Off Road and Construction	Design & Development
Components supply	Specialist Vehicles	Component Manufacturing
Retro charge stations	Bus & Coach	Raw material supply chain



Hydro Aluminium UK Ltd
Pantglas Industrial Estate,
Bedwas
Caerphilly
CF83 8DR
United Kingdom

General Enquiries:
Email: Marketing.extrusion.
uk@hydro.com

Barnaby Struthers
Email: Barnaby.struthers@
hydro.com

Website: www.hydro.com

Recycling



Aluminium fabrication and surface treatment with low carbon and recycled content offerings

Extensive list of in-house offerings for aluminium components including design support, bending and forming, CNC machining, welding, anodising and more. Over 50 years’ experience in developing aluminium extrusion profiles into fabricated applications for a variety of industries including automotive products and electric vehicle components.

in many of today’s models to produce products such as; bumper armatures, bumper beams, chassis, chassis components, sunroofs, window assemblies, A, B, C & D posts, division channels, roof racks, sports carriers, door frames, window frames, sun surrounds, crush cans, floor pans, and steering column supports.

We provide component part and sub-assemblies made from aluminium extrusion, and help our customers to benefit from sustainable solutions with our low carbon aluminium and recycled content aluminium.

At Bedwas, a large majority of our work is for the automotive sector. Our formed and machined aluminium extrusions can be found

Fields of competence

Products	Markets	Capabilities
Battery boxes	Automotive (Pass car & Light Commercial)	Design & Development
Automotive Chassis	Bus & Coach	Component Manufacturing
Bumper beams	Off Road and Construction	Raw material supply chain
Roof racks	Rail	Equipment and Tooling suppliers



Recycling



Riversimple Movement Ltd
Unit 32, Ddole Enterprise Park
Llandrindod Wells
Powys
LD1 6DF

No. of employees: 20

Contact: Bill Whyman
Email: bill@riversimple.com

Email: info@riversimple.com

Website:
www.riversimple.com

A car manufacturer and service provider developing affordable, fun-to-drive hydrogen electric vehicles

Riversimple is pioneering the next generation of zero emission vehicles. They use hydrogen, not batteries, and emit nothing but water. Able to refill in three minutes, our vehicles will offer a solution for those who value flexibility and freedom, and want to live lightly on the planet.

Lightness is key to efficiency and range. We have used a combination of technologies to keep the weight to a minimum and deliver the greatest fuel efficiency and superb environmental performance. Like a Formula

One car, it is built with strong and lightweight composite materials rather than steel. Our production vehicles will be designed to deliver a range of 300 miles, which would last most people a week of local travelling before needing to refuel.

Riversimple is developing a subscription service for vehicles which offers a move away from vehicle ownership towards an all-inclusive, simplified and clean mobility experience.

Fields of competence

Products	Markets	Capabilities
Hydrogen system integration	Automotive (Pass car & Light Commercial)	Design & Development
Composite materials		Software Engineering / Development
Circular Economy Principles		System Integration / Assembly



Recycling



Tata Steel
Llanwern House
Llanwern Works
Newport
NP19 4QZ
UK

No. of employees: 8000

Email: automotiveuk@tatasteeleurope.com

Website:
www.tatasteeleurope.com

Tata Steel offers sustainable steel solutions for electric vehicles. Your partner for electrification

Tata Steel is one of the few steel suppliers that offers advanced steel solutions for electric motors, energy storage and conversion systems, crash-management components and outer panels. This integrated product offering, supported with in-depth application knowledge and engineering services, makes Tata Steel the preferred partner in your electrification journey.

Fields of competence

Products	Markets	Capabilities
2nd life batteries for construction applications	Automotive (Pass car & Light Commercial)	Raw material supply chain
	Commercial vehicles (>3500kg)	Testing / Homologation
	Off Road and Construction	Design & Development
	Bus & Coach	End of life Management



Winslow Adaptics Ltd
Unit 11
Brecon Enterprise Park
Brecon
Powys
LD3 8BT

No. of employees: 14 – 2023

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John Dyson
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Website: www.winslowadaptics.com

Recycling



Developing and manufacturing innovative solutions for the electronic system lifecycle

From our base in the beautiful Brecon Beacons in Wales, Winslow Adaptics has close to 50 years’ experience of offering innovative interconnect and adapter solutions for Electronics Design, Manufacture, and Obsolescence professionals.

In that time, Winslow has helped hundreds of top-tier OEM and SME customers modify their hardware and software to changing technologies, hence prolonging the lifecycles of countless items of electronic equipment and promoting sustainability.

Specialising in solutions for high reliability markets, our AS 9100 D approved facility offers both mechanical and electronic design expertise. Our team is highly experienced and instils confidence with fast responses. They understand the need for form, fit and function when specifying a solution and consider cost without sacrificing quality at all times.

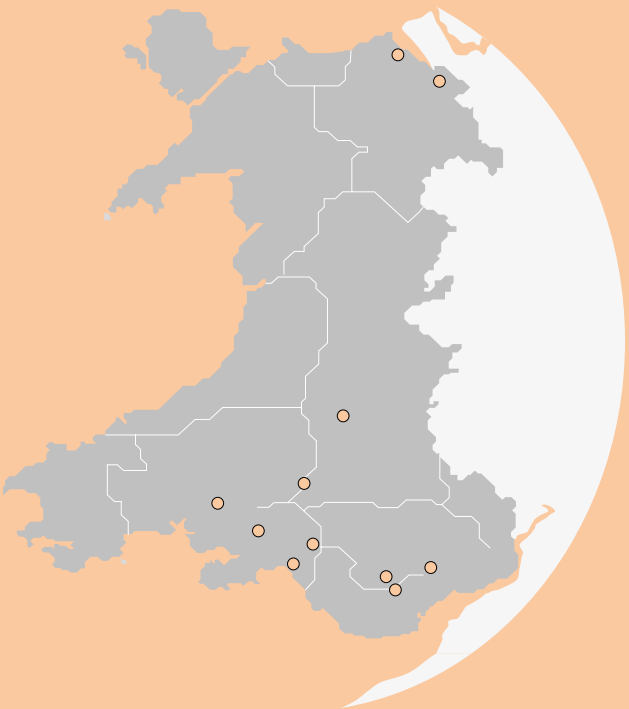
Winslow is committed to the growth of its services and manufacturing processes for the future. Head over to our website and see how we can support your next design or supply chain challenge.

Fields of competence

Products	Markets	Capabilities
Adapters/Interposers	Rail	Design & Development
Legacy Design Services	Aerospace	Component Manufacturing
Custom Test Modules	Marine	End of life Management
	Specialist Vehicles	



Alternatively Fuelled Vehicles





Alternatively Fuelled Vehicles



Bergstrom (Europe) Ltd
41, Sycamore Close
Dyffryn Business Park
Ystrad Mynach
CF82 7RJ

No. of employees: 182 (2023)

Contact: Chris Holland
Email: cholland@bergstrom europe.com

General enquiries:
Email: enquiries@bergstrom europe.com

Phone: +44(0)1554 775 938

Website:
www.bergstrom europe.com

Design and Manufacture of Battery Energy Storage Thermal Management and AirCon Systems

Battery Energy Storage System (BESS) plays a vital role in going carbon neutral as it can bank lots of renewable energy for later use. Proper thermal management is necessary for BESS as it improves the overall performance of the system and provides a long cycle life.

With state-of-the-art capabilities in engineering and manufacturing – not only end products, but also core components – honed over the past 70+ years in the climate control industry, Bergstrom has developed a series of energy storage air cooled systems and liquid cooled systems to meet the needs of different BESS

applications with precise temperature control, high efficiency and reliability.

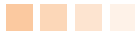
BESTic – Bergstrom Energy Storage Thermal AC System comes in three versions: air-cooled (BESTic), liquid-cooled (BESTic+) and direct-cooled (BESTic++).

We are ISO9001, ISO14001 and ISO45001 certified, and we pride ourselves on our world class manufacturing processes which deliver the right fit product.

We are supporting projects with OEMs.

Fields of competence

Products	Markets	Capabilities
HVAC – for hybrid and e machines	Off Road and Construction	Design & Development
Thermal Management Modules	Automotive (Pass car & Light Commercial)	Component Manufacturing
	Commercial vehicles (>3500kg)	Testing / Homologation
	Bus & Coach	System Integration / Assembly



Alternatively Fuelled Vehicles



Caerbont Automotive Instruments Ltd
Abercrave
Swansea
SA9 1SH

No. of employees: 54

Contact: Gavin Roberts
Email: Gavin.roberts@caigauge.com

Website:
www.caigauge.com

Bespoke instrumentation solutions for niche vehicle manufacturers

Caerbont Automotive Instruments designs, manufactures and supplies a wide range of traditional gauges under the SMITHS brand and provides key players in the emerging niche EV net zero mobility market with bespoke solutions.

We have a multi-talented design team with capabilities in mechanical, electronic and software design, backed up with a vertically integrated manufacturing capability which allows us to design, develop and

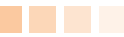
manufacture prototypes in the shortest possible lead times.

With investments in state-of-the-art laser cutting systems, CNC machining, digital print and paint spray facilities, Caerbont Automotive Instruments are suppliers to the heritage divisions of several large OEMs in automotive and specialist in other sectors including motorcycle and marine.

Certified to ISO 9001.

Fields of competence

Products	Markets	Capabilities
Discrete Gauges	Automotive (Pass car & Light Commercial)	Design & Development
Instrument Clusters	Motorcycles	Software Engineering / Development
Electronic Control Modules	Marine	Component Manufacturing
	Aerospace	System Integration / Assembly



Alternatively Fuelled Vehicles



Haydale
Clos Fferws
Parc Hendre
Capel Hendre
Ammanford
SA18 3BL

No. of employees: 75 (2023)

Contact: David Davies
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John-Mark Seymour
UK Site Director
Email: info@haydale.com

Website: www.haydale.com

Using revolutionary plasma functionalisation to provide technological solutions to improve people’s lives

Graphene and other 2D materials have revolutionised the world of materials science with their exceptional properties, such as high strength, flexibility, conductivity, and transparency.

Haydale is a global technology solutions company passionate about creating the next generation of advanced materials to improve mechanical, thermal and electrical properties for our customers. We specialise in the design, development, and commercialisation of advanced materials using graphene and other nanomaterials.

Our patented plasma functionalisation technology unlocks the potential of nanomaterials, enabling us to provide a wide range of graphene-based materials designed to enhance and improve various products from our facility in Ammanford, Wales.

Whether you are looking for high-performance batteries, composites, conductive inks, thermal management solutions, our functionalised materials are produced to stringent quality control procedures including ISO 9001:2015 and ISO 14001:2015 and managed by an experienced team offering a dedicated end-to-end service.

Fields of competence

Products	Markets	Capabilities
Hydrogen Pressure Vessels, Type V	Automotive (Pass car & Light Commercial)	Raw material supply chain
	Commercial vehicles (>3500kg)	Design & Development
	Aerospace	Testing / Homologation
	Marine	System Integration / Assembly



Alternatively Fuelled Vehicles



Hypermotive Ltd
Ty Gwent Lake View,
Llantarnam Industrial Park,
Cwmbran,
Gwent,
NP44 3HR

No. of employees: 30 (2022)

Contact: Brad O’Nians
Commercial Director
Email: brad.onians@hyper-motive.com

General Enquires:
contact@hyper-motive.com

Website:
www.hyper-motive.com

Intelligent hydrogen & electric integration technologies for zero emission power

Hypermotive Ltd. design, manufacture and integrate hydrogen and electrical systems and e-mobility solutions for the automotive, off-highway, rail, marine, powergen, motorsport and aerospace sectors.

Our Fuel Cell Systems team have engineering capability in stack and system design, fuel cell controls and health monitoring, air, fuel and thermal management, and the electrical and mechanical integration of fuel cells into applications. We create bespoke solutions and offer products to customers for control and operation of fuel cell power and propulsion systems. Using expert knowledge

of hydrogen systems to integrate and control hardware to ensure high performance, life, durability and cost, we support customers from initial concept and demonstrators through to SoP.

Product lines of intelligent integration technologies for zero emission power systems are under development, including industrial hydrogen power integration projects.

Delivery is supported with broader engineering capability in electrical/electronic hardware design, software/controls, LV/HV harnessing and low volume tier 1 manufacturing.

Fields of competence

Products	Markets	Capabilities
Wiring harnessing	Marine	Design & Development
HV wiring	Commercial vehicles (>3500kg)	Software Engineering / Development
LV and HV Electronic equipment	Off Road and Construction	System Integration / Assembly
Intelligent Control modules	Specialist Vehicles	Component Manufacturing



Alternatively Fuelled Vehicles



KnitMesh Technologies Ltd.
Coast Road,
Greenfield,
Flintshire
CH8 9DP

No. of employees: 92 (2022)

Sales:
enquiries@knitmesh.com

Lucy Heald
Email:
lucy.heald@knitmesh.com

Website:
knitmeshtechnologies.com

KnitMesh Technologies – flexible and compressible porous media for high efficiency electrochemical applications

KnitMesh Technologies has a proud history of innovation in specialised engineering. For over 60 years, we have been developing innovative and bespoke products to help our customers achieve their goals.

The transport industry is changing, and KnitMesh Technologies has developed a new range of products to support our customers in the drive to zero emissions. Our new products include:

- Electrolyser components for the generation of green hydrogen including current carriers, gas diffusion layers, electrodes and stack tolerance compensators
- Porous conductive media battery components for EV applications
- Improved transportation components for vibration control, sealing, and filtration

Many EV components are produced in nickel, titanium and special grades of stainless steel.

- Flame and spark filters to protect battery technologies from uncontrolled fire

Fields of competence

Products	Markets	Capabilities
Conductive porous media for electrochemical applications	Automotive (Pass car & Light Commercial)	Component Manufacturing
	Aerospace	Design & Development
	Specialist Vehicles	
	Rail	



Protium
Brunel House 15th Floor
Fitzalan Road
Cardiff
CF24 OEB

No. of employees: 50+

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Manager
Email:
ian.collier@protium.co.uk

Kimberley McCracken
Head Of Grants
Email:
kimberley@protium.co.uk

Website:
www.protium.green

Alternatively Fuelled Vehicles



Pioneering green hydrogen energy solutions to provide net zero emission services

Protium, the UK's largest green hydrogen energy company, displaces fossil-based energy with green hydrogen, focusing specifically on hard-to-abate sectors, such as heat, power and transport. It provides services, and builds infrastructure, to support the deployment of hydrogen and fuel cell technologies.

Road transportation currently accounts for 19% of domestic transport emission across UK, therefore, hydrogen mobility is essential for net zero transport. From 2030 all new petrol and diesel passenger, light duty and taxi vehicle sales will be banned, with HGVs also facing a fossil fuel ban from 2040. Protium has agreements with leading FCEV OEMs and current operators of HGV refuelling systems (hydrogen & CNG) to lead deployment in the UK.

Protium is committed to supporting green investment and mobility in Wales:

- Protium is working with Kier to conduct a feasibility study examining if its highways depots can be powered using green hydrogen. The study will explore how hydrogen and fuel cell technologies can complement other renewable energy sources, to fuel existing fleet, depots and equipment in the Highways business.
- Protium and Siemens PSE have partnered, to use digital technology to advance hydrogen refuelling infrastructure development for transport, by enabling rapid refuelling technology that will make domestic hydrogen aviation a technically viable alternative.
- Protium has deployed its first c.100kW electrolyser in the UK, which is being installed at the University of South Wales' (USW) hydrogen centre at Baglan - the largest integrated Enapter electrolyser in the field in the UK.
- As part of a 14-company consortium that includes Blue Bear Systems and ZeroAvia, Protium is working at the forefront of the transition to a sustainable aviation industry in Project HEART. Having secured a portion of the £125 million funding from Innovate UK as part of the Future Flight Challenge, Protium will utilise the grant to determine the optimal methods for safely and commercially producing, storing, and distributing green hydrogen for aviation activities. Hydrogen produced for Project HEART will be used to power some of the longest zero-emission flights to date.

Fields of competence

Products	Markets	Capabilities
Infrastructure	Commercial vehicles (>3500kg)	Design & Development
Alternatively fuelled vehicles	Aerospace	Infrastructure installation
	Marine	Software Engineering / Development
	Bus & Coach	



Alternatively Fuelled Vehicles



Riversimple Movement Ltd
Unit 32, Ddole Enterprise Park
Llandrindod Wells
Powys
LD1 6DF

No. of employees: 20

Contact: Bill Whyman
Email: bill@riversimple.com

Email: info@riversimple.com

Website:
www.riversimple.com

A car manufacturer and service provider developing affordable, fun-to-drive hydrogen electric vehicles

Riversimple is pioneering the next generation of zero emission vehicles. They use hydrogen, not batteries, and emit nothing but water. Able to refill in three minutes, our vehicles will offer a solution for those who value flexibility and freedom, and want to live lightly on the planet.

Lightness is key to efficiency and range. We have used a combination of technologies to keep the weight to a minimum and deliver the greatest fuel efficiency and superb environmental performance. Like a Formula

One car, it is built with strong and lightweight composite materials rather than steel. Our production vehicles will be designed to deliver a range of 300 miles, which would last most people a week of local travelling before needing to refuel.

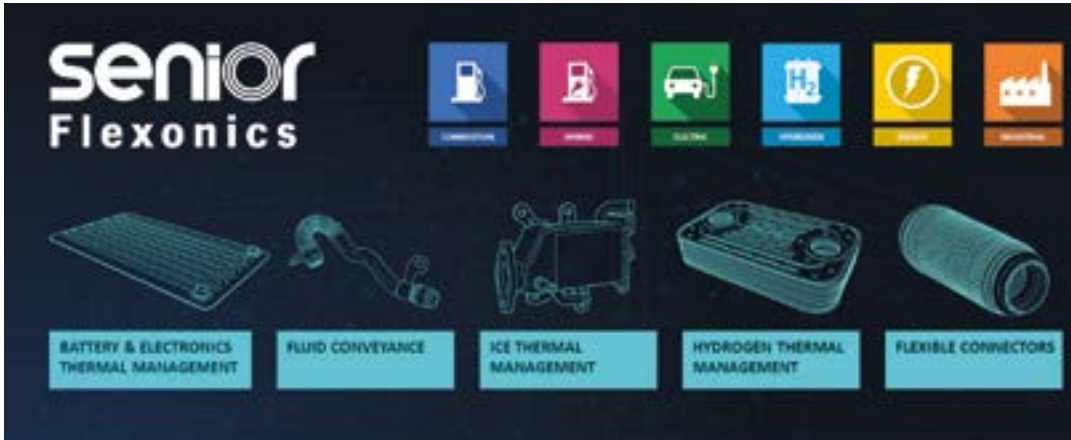
Riversimple is developing a subscription service for vehicles which offers a move away from vehicle ownership towards an all-inclusive, simplified and clean mobility experience.

Fields of competence

Products	Markets	Capabilities
Hydrogen Zero Emission Vehicles	Automotive (Pass car & Light Commercial)	Design & Development
Hydrogen system integration		Software Engineering / Development
Composite materials		System Integration / Assembly
Circular Economy Principles		



Alternatively Fuelled Vehicles



Senior Flexonics
1B Oakwood Close
Pen-Y-Fan Industrial Estate
Crumlin
UK
NP11 3HY

Global Employees: 6361 (2022)

Contact: Eric Gillam
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Lewis Evans
Email: LEvans@seniorflexonics.co.uk

Website:
www.seniorflexonics.co.uk

An international engineering solutions provider of innovative thermal management and fluid conveyance products

We are an international, market-leading, engineering solutions provider with 26 operating businesses in 12 countries.

We help engineer the transition to a sustainable world for the benefit of all our stakeholders.

We do this by:

- Using our technology expertise in fluid conveyance and thermal management to provide safe and innovative products for demanding applications in some of the most hostile environments
- Enabling our customers, who operate in some of the hardest-to-decarbonise sectors, to transition to low carbon and clean energy solutions

Staying at the forefront of climate disclosure and action by ensuring our own operations achieve our Net Zero commitments

Our Flexonics portfolio spans a wide range of fluid conveyance and thermal management components and sub-systems, as well as complex precision machined parts, for conventional and advanced land vehicle propulsion systems, petrochemical, renewable energy, and a variety of other industrial applications.

Fields of competence

Products	Markets	Capabilities
Battery Thermal Management	Automotive (Pass car & Light Commercial)	Design & Development
Power Electronics Thermal Management	Commercial vehicles (>3500kg)	Component Manufacturing
Hydrogen Thermal Management	Off Road and Construction	Testing / Homologation
Fluid Conveyance	Bus & Coach	System Integration / Assembly



Alternatively Fuelled Vehicles



Toyota Motor
Manufacturing UK Ltd
Deeside Industrial Park
Deeside
Flintshire
CH5 2TW

No. of employees: 600
(CY2023)

Email: Simon.foster@toyotauk.com

Email: external.affairs@toyotauk.com

Website: www.toyota.com

Manufacturing world-leading hybrid engines and future technologies for tomorrow’s mobility market

Toyota’s trail blazing technology has already resulted in sales over 20 million hybrid electric vehicles, saving 160 million tonnes of CO2 emissions globally (compared to equivalent ICE vehicle).

Production System (TPS) fundamentals we are ready and able to apply these techniques in support of our vision to produce zero emissions components and products, both for Toyota and other customers.

TMUK Deeside was the first hybrid engine plant outside Japan. We build over 250k electric hybrid engines a year – and have supplied engines to other OEMs.

We are currently working on alternative technologies including supporting the development of a fuel cell powered Toyota Hilux vehicle.

We have the capability to produce aluminium castings, machine components as well as full assembly and performance test.

Since 2015, with the support of Welsh Government, we have reduced our own plant carbon emissions by over 80%, and we are on target to be the first Carbon Neutral Toyota plant globally by 2025.

Using our 30 plus years of expertise and Toyota

Fields of competence

Products	Markets	Capabilities
Hybrid engines	Automotive (Pass car & Light Commercial)	Component Manufacturing
Aluminium casting & precision component machining		Testing / Homologation
High volume assembly and testing		
EV Components		



Wall Colmonoy Ltd
Alloy Industrial Estate
Pontardawe
Swansea
SA8 4HL

No. of employees: 197 (2023)

Contact:
Dr. Lewis Berry
Business Development
Manager
Email: lewisberry@wallcolmonoy.co.uk

General enquiries:
alloyproductsales@wallcolmonoy.co.uk

Website:
www.wallcolmonoy.com

Alternatively Fuelled Vehicles



**Making Metals Work Harder Since 1938.
The World Leader in Nickel Brazing Miller Metals since 1950**

Wall Colmonoy (WCL) is a materials engineering company engaged in the manufacture of nickel, cobalt and iron-based superalloy products with a turnover of £40mil exporting >85% of its products.

WCL has full supply chain coverage with the ability to carry out development, scale up and volume manufacturing of components.

WCL provides OEM products & services:

Alloy Products:

- Microbraz® Brazing Alloys - Nickel filler metals for brazing of thermal management systems (heat exchangers, cold plates, heat sinks)
- Surfacing Alloys – Lifetime extension of wear components via Colmonoy® and Wallex® superalloys

Aerobraz®:

- Aluminium, Stainless Steel, Inconel Heat Exchangers
- Dissimilar Metal and Material Brazing
- Total manufacture of hard-wearing coatings via flame, HVOF and laser

Precision Components:

- Manufacture of Wallex® and Colmonoy® components via investment, sand and centrifugal casting and fully machined to print

Additive:

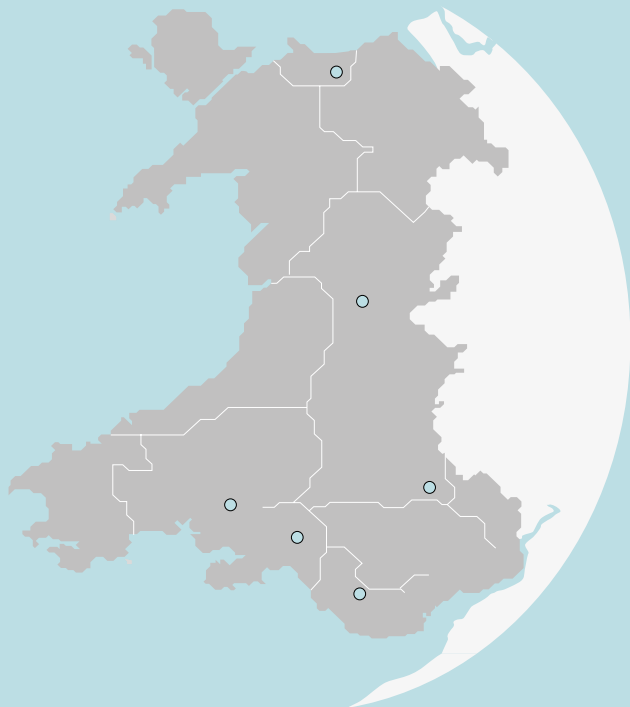
- Additive Layer component manufacturing via Binder Jet and Laser Powder Bed Fusion

Fields of competence

Products	Markets	Capabilities
Nicrobraz® Brazing Alloys	Aerospace	Raw material supply chain
Surfacing Alloys	Automotive (Pass car & Light Commercial)	Component Manufacturing
Engineered Technologies	Bus & Coach	Design & Development
	Commercial vehicles (>3500kg)	



Connected & Automated Enablers



Actia UK Ltd
Unit 81
Mochdre Industrial Estate
Newtown
Powys
SY16 4LE

No. of employees: Group – 446 (Wrexham – 150)

Contact: Richard Haynes
Email: rhaynes@actia.co.uk

Robert Myatt
Email: rmyatt@actia.co.uk

Website: www.actia.co.uk

Connected & Automated Enablers



We design, manufacture and operate electronics to manage systems with uncompromising quality standards

Actia's core business is to design, manufacture and operate electronics for system management. Our expertise is in:-

- Vehicle electronic architecture
- Power electronics
- Vehicle telematics & Connected services
- Diagnostic Systems
- EMS – Electronic Manufacturing services
- Equipment and services for workshops and inspection centres
- Telecommunications & SatCom
- MicroMobility – Electric solutions for Cycles (E Bike)

Fields of competence

Products	Markets	Capabilities
Power Electronics Multiplex Electrical systems	Bus & Coach	Design & Development
Diagnostic services	Motorcycles	Software Engineering / Development
Telematics	Commercial vehicles (>3500kg)	System Integration / Assembly
	Off Road and Construction	



Connected & Automated Enablers



Camtronics Ltd
The Gateway Building
Tredegar Business Park
Tredegar
NP22 3EL

No. of employees: 40
(2023)

Contact: Paul Macleaur
Email:
pm@camtronicsvale.com

General Enquiries:
sales@camtronicsvale.com

Website:
www.camtronicsvale.co.uk

Truly flexible electronics manufacturing services

Camtronics provides electronics manufacturing services to companies who are unable, or do not wish, to manufacture their electronic products in-house.

We aim to provide this in the most flexible and collaborative way, so that you see us as an integrated part of your organisation. Many of our customer partners have been working with us for over ten years.

Our core speciality is high complexity surface mount PCBAs. Send us your gerber files

and BOMs and let our ISO9001 certified processes do the rest.

Camtronics has been manufacturing electronics assemblies since 1993 and operates in a broad range of industries. All operations are conducted under one roof in a 1250m2 facility in Tredegar, South Wales, to ensure full control and the highest quality.

Fields of competence

Products	Markets	Capabilities
Electronics manufacturing services	Other Mobility Solutions / enablers	System Integration / Assembly
	Off Road and Construction	Infrastructure installation
	Specialist Vehicles	Equipment and Tooling suppliers
	Marine	



Connected & Automated Enablers



Clenergy EV
Pencoed Technology Centre
Pencoed
Bridgend
CF35 5HZ

No. of employees: 25
(February 2023)

Contact: Michael Nixon
Email: michael.nixon@clenergy-ev.com

Sales team:
sales@clenergy-ev.com

Website:
www.clenergy-ev.com

Charge point software to power up your electric vehicle infrastructure strategy

We provide organisations the means to monetise, manage and maintain effective electric vehicle charging stations.

Our charge point management system gives charge point owners complete control of their charging infrastructure, all from one platform. We work closely with large corporations, public sector authorities and SMEs, from all sectors, to power up their EV charging and decarbonisation strategies.

Fleet owners can also benefit from integrated vehicle tracking, vehicle to grid (V2X) and smart scheduling systems, unlocking the benefits of low carbon transport for forward thinking organisations.

Our aim at Clenergy EV is to provide simple, fair, and accessible electric vehicle charging – all from one platform, for one cleaner planet.

Fields of competence

Products	Markets	Capabilities
Charge Point Management System	Other Mobility Solutions / enablers	Software Engineering / Development
Fleet electrification software/ telematics	Automotive (Pass car & Light Commercial)	
	Bus & Coach	
	Commercial vehicles (>3500kg)	



Connected & Automated Enablers



Global Centre of Rail Excellence
Onllwyn
Neath
Port Talbot
SA10 9HN

No. of employees: 18 – 2023

Enquiries:
enquiries@gcre.wales

Website: www.gcre.wales

GCRE: The Global Centre of Rail Excellence

The Global Centre for Rail Excellence (GCRE) is set to become Europe’s leading rail innovation centre, providing world-class research, testing and certification of rolling stock, infrastructure and innovative new rail technologies that will become the backbone of tomorrow’s greener, stronger and more reliable railway.

The site will include an electrified high-speed outer rail testing track (6.9km) with testing speeds of potentially up to 125mph and an electrified, low-speed infrastructure testing

track (4km) allowing speeds of up to 40mph. As well as rail infrastructure, the site will include a new business premises, maintenance facilities and a hotel.

The facility will fill a strategic gap not just in UK rail, but across Europe, helping lower the costs of major rail projects; supporting the path to net zero and helping bring products to market faster. Supported by the Welsh and UK Governments, the facility will be open in 2025.

Fields of competence

Products	Markets	Capabilities
Rolling Stock Testing	Rail	Testing / Homologation
Infrastructure Testing		System Integration / Assembly
Storage and Maintenance		
Rail Innovation		



Connected & Automated Enablers



Haydale
Clos Fferws
Parc Hendre
Capel Hendre
Ammanford
SA18 3BL

No. of employees: 75 (2023)

Contact: David Davies
UK Managing Director
Email:
david.davies@haydale.com

John-Mark Seymour
UK Site Director
Email: info@haydale.com

Website: www.haydale.com

Using revolutionary plasma functionalisation to provide technological solutions to improve people’s lives

Graphene and other 2D materials have revolutionised the world of materials science with their exceptional properties, such as high strength, flexibility, conductivity, and transparency.

Our patented plasma functionalisation technology unlocks the potential of nanomaterials, enabling us to provide a wide range of graphene-based materials designed to enhance and improve various products from our facility in Ammanford, Wales.

Whether you are looking for high-performance batteries, composites, conductive inks, thermal management solutions, our functionalised materials are produced to stringent quality control procedures including ISO 9001:2015 and ISO 14001:2015 and managed by an experienced team offering a dedicated end-to-end service.

Fields of competence

Products	Markets	Capabilities
Diagnostic Equipment	Automotive (Pass car & Light Commercial)	Raw material supply chain
Pressure Sensors	Commercial vehicles (>3500kg)	Design & Development
Heating systems	Aerospace	Testing / Homologation
	Marine	System Integration / Assembly



TRB Ltd
St Asaph Business Park,
Denbighshire, North Wales,
UK, LL17 0JB

No. of employees: 120
(2023)

Email: hello@trb-ltd.co.uk

Website: www.trb-ltd.com

Connected & Automated Enablers



TRB Mission Statement – To continually supply the highest quality products and services at competitive prices, to the delight of our customers

TRB Ltd, a subsidiary of the Japanese multi-national Tokai Rika Company. Occupying a 15,500ft² site in St Asaph, North Wales. Established in 1999 as the group's first assembly plant in Europe, it is dedicated to supplying the highest quality automotive switch products to Europe's front line vehicle manufacturers.

Located just off the A55 North Wales Expressway, with easy access to Holyhead, Liverpool and Manchester.

Our plant in St Asaph North Wales offers a clean environment, utilising the latest technologies in manual and semi-automated assembly processes. Our commitment to quality is backed by a highly motivated team, ensuring the highest level of quality is built into each process, in a company which values continuous improvement in its people as well as the process.

Our experience includes managing products with complex supply chains, reaching as far as Asia, ensuring a high level of delivery assurance.

Our professional warehousing team utilises state-of-the-art IT technologies, including barcodes, & labels. Providing seamless logistic processes for receiving, repacking, and supply of products in support of UK and Europe localisation.

Our highly skilled team of Production and Quality Engineers with experience in designing assembly processes, utilise latest technologies in robotics and camera sensors to ensure high level of quality and productivity.

We are a team, who are proud of our abilities and quality performance. And who are confident enough to aspire to new commodities and areas of business.

Fields of competence

Products	Markets	Capabilities
Automotive Switches	Automotive (Pass car & Light Commercial)	Component Manufacturing
	Motorcycles	System Integration / Assembly
	Bus & Coach	
	Commercial vehicles (>3500kg)	



THIS IS WALES

Wales is an innovative, ambitious and highly responsive country. We have our own devolved government with direct control over economic development, transport and education spending. This gives us the flexibility and agility to respond quickly to the demands of modern businesses.

Wales has an enviable track record in delivering for business and we have been attracting investment for over forty years, supporting growth and ensuring businesses succeed. This personalised approach is why some of the world's biggest and most innovative companies have thriving operations in the country, and why it is home to over 150 Mobility companies including global brands Airbus, GE, Aston Martin, and Toyota.

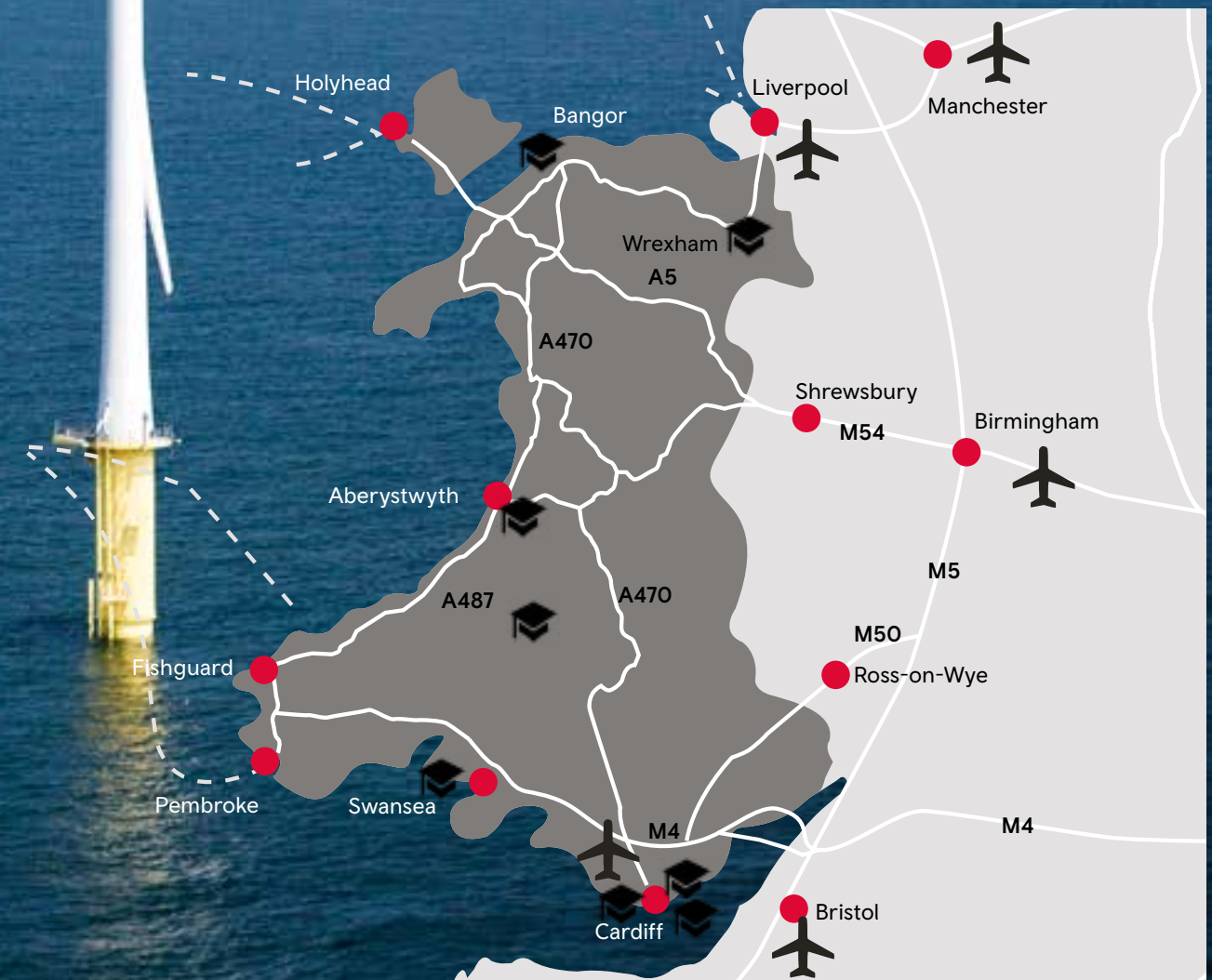
Sustainability is at the heart of all this innovation, and it's even enshrined in law. Wales was the first certified Fair Trade Nation, and also the first in the world to pass legislation that acknowledged the UN's Sustainable Development Goals.

It marks Wales out as a nation ready to meet the challenges of the 21st century – and to work with every business to create a fair, inclusive and sustainable economic future.

Companies that come to Wales will benefit from operating in a country that has a stable political environment and is business orientated. The Welsh Government has a dedicated team that looks after investors into the country, helping companies to access:

- Talent: 8 Universities and further Research & Technology organisations here to support your commercial evolution.

- Supportive ecosystem: Support for Skills and Innovation developments plus access to commercial investments from the Development Bank of Wales – one of the UK's largest regional investment companies who can make commercial investments in small and medium-sized businesses (SMEs) based in Wales or willing to relocate.
 - Experienced Supply Chain: Supply Chain opportunities to develop green, local, resilient and innovative value chains. A benefit that has influenced the decisions of Airbus, Toyota, Aston Martin, Hitachi, Thales and CAF Rail to develop long-term projects here.
 - Cross technology collaboration: Access into enabling technology clusters also sited in Wales such as CyberWales, SWIC and Europe's first eco-system dedicated to compound semiconductor applications.
 - Competitive bottom line costs: commercial rents and property prices are great value in Wales. Help is at hand to help you identify the right property for your needs whilst remaining well connected to the rest of the UK by road and rail.
- On top of that Wales is a great place to live, with abundant outdoor activities, beautiful landscapes, blue flag beaches and a rich heritage and culture.
- If you are interested in hearing more about how Wales can support your Net Zero Mobility company we'd be happy to discuss it further.
- Contact us at: tradeandinvest.wales



In 1839, Swansea born judge and inventor, Sir Robert William Grove, known as the father of the fuel cell, developed a platinum-zinc voltaic cell, the 'Grove' cell. He went on to create the voltaic battery in 1842, which was to become the forerunner of the modern fuel cell.

Businesses in Wales continue to be supported by the proactive collaboration between innovation and academic expertise, including:

Aberystwyth University

The National Spectrum Centre

A centre for innovation, engineering, and experimentation in radio spectrum technologies. A wide range of research opportunities include Intelligent transport systems (road, rail, air), IoT, LoRaWAN, Autonomous Vehicles, Space Instrumentation and Sensors, Sensor Development and Networks, Improving communications and connectivity to local communities, smart/future cities in rural areas, Agri-tech, Precision Farming, and 5G.

Cardiff University

Centre for Automotive Industry Research

Focuses on the broader business, strategic, social, environmental and economic impacts of global automobility and of the sector that provides it. With increasing pressure to make the automotive industry and its products more sustainable, growing uncertainty in the industry and questioning of existing business models, CAIR's research expertise is increasingly valued. Prof. Peter Wells was Co-I of the ReLiB: Recycling and Reuse of EV Lithium-ion Batteries project funded by the Faraday Institution to study the economic and business aspects of recycling battery packs from battery electric vehicles. Consortium led by Birmingham University.

ACADEMIC EXPERTISE

Exploration and discovery:
Swansea University is a research-led university offering a balance of excellent teaching and research, matched by an enviable quality of life.

Magnetics and Materials Group

The magnetics laboratories have a wide range of advanced facilities for the development, characterisation, imaging and modelling of soft magnetic materials subject to operational conditions of waveform, frequency, temperature and stress. The researchers have many years of experience working with several of the leading manufacturers of electrical steels and electromagnetic drives.

Network for Decarbonising Transport through Electrification (DTE)

The DTE network addresses low carbon transport modes (road, rail and airborne) alongside associated electricity infrastructures to support existing and deliver future mobility needs, treating these as an integrated system embedded within the electricity energy vector with the goal of decarbonising the transport sector. It is exploring drivers for change within the transport system including technology innovation, individual mobility needs and economic requirements for change alongside environmental and social concerns for sustainability and consider the role, social acceptance and impact of policies and regulations to result in emissions reduction. The network's key "Work Streams" (i) vehicular technologies, (ii) charging infrastructure, (iii) energy systems and (iv) Smart Mobility are underpinned by cross-cutting themes around large scale data analysis and human factors.

Sustainable Transport Research Network

Focuses on new and emerging transport technologies and modes, including electric vehicles (EVs), alternative fuels, autonomous vehicles (AVs), infrastructure and mobility as a service (MAAS, eg car sharing). Aims to understand the nature and impacts of new and emerging transport technologies and

modes (eg electric and autonomous vehicles; alternative fuels, infrastructure, mobility as a service) by generating robust evidence and high-quality scientific insights.

Gas Turbine Research Centre

GTRC undertakes research in the field of novel combustion systems, components, and fuels, including hydrogen and ammonia. Research at the Centre is informing application of alternative fuels and new combustion systems in order to develop decarbonised, clean, and efficient energy systems for the future.

The Electrical Vehicle Centre of Excellence

The Electric Vehicle Centre of Excellence (EVCE) at Cardiff University is a multi-disciplinary centre that is unique in academic electric vehicle (EV) research teams.

Working on key transformative issues such as vehicle autonomous control, wireless charging of electric vehicles (dynamic charging on the road), user and traveller behaviours, and the modelling of transport systems, smart grids, energy demand scenarios for EVs, regulatory options, and consumer barriers and incentives.

Swansea University

CAPTURE

CAPTURE is a new Centre of Excellence within Swansea University for building knowledge and skills in the emerging UK Energy Storage sector; encompassing materials, manufacturing processes and energy management.

- Improved sustainability of materials, with lower environmental impact and reliance on rare earth materials
- Optimum use of resources
- Re-use and recyclability of components towards a zero-carbon approach

University of South Wales

The Hydrogen Centre

The Centre provides a platform for the experimental development of renewable hydrogen production and novel hydrogen energy storage. The centre enables further research and development of hydrogen vehicles, fuel cell applications and overall hydrogen energy systems. The Centre is the focal point for a series of collaborative projects between the University of South Wales and other academic and industrial partners.

Useful Links

[AMRC Cymru](#)

[The National Spectrum Centre](#)

[Network for Decarbonising Transport through Electrification \(DTE\)](#)

[Gas Turbine Research Centre](#)

[The Hydrogen Centre](#)

Welsh Industry Ecosystem

Industry Wales

Industry Wales is the umbrella organisation, for several industry bodies in Wales. The organisation with its specialist aerospace, automotive, net zero industry and technology forums, aim to provide support and promote growth in the manufacturing industry.

The forums, with a combined membership of approaching 400 leading Welsh companies, provide a range of services. These include offering advice and guidance, funding opportunities, networking events, training and education, and research and development collaborations, supporting companies already established within Wales and working to attract and support companies that are seeking a world-class location for their business.

For further information, please contact via forum websites:

Industry Wales
Aerospace Wales Forum | Aerospace, Defence and Space
Net Zero Industry Wales
Technology Connected
Welsh Automotive Forum
WAF Directory

Welsh Government Toyota Lean Clusters Programme

The Welsh Government has partnered with the Toyota Lean Management Centre at Toyota's Deeside engine facility. Toyota is widely recognised as a leading world-class manufacturer with a long history of consistently achieving high performance and productivity levels, thanks to their approach known as The Toyota Way. Through the partnership, program participants gain direct access to Toyota Motor Manufacturing Ltd.'s production facility in Deeside, where they can observe and learn from Toyota's concepts and systems.

Advanced Manufacturing Research Centre (AMRC Cymru Wales)

AMRC Cymru is part of the University of Sheffield Advanced Manufacturing Research Centre and a member of the High Value Manufacturing (HVM) Catapult, a consortium of leading manufacturing and process research centres backed by Innovate UK. The state-of-the-art centre, which was fully funded with £20m from the Welsh Government and is managed by the University of Sheffield, focuses on advanced manufacturing sectors including aerospace, automotive, in the key research areas of future propulsion, sustainability and digital manufacturing.

The Hydrogen Electric Propulsion Systems (HEPS) testbed at AMRC Cymru is bringing together the AMRC's key research areas to lead the race to decarbonise our industries and build a green economy by accelerating the adoption of hydrogen electric technologies.

Compound Semiconductors

The importance of semiconductors in the transition away from ICE engines cannot be overstated. They are critical components in a range of sustainable transportation technologies, as well as in renewable energy generation and storage systems. As such, the continued development and advancement of semiconductor technology will be essential in realising a sustainable, low-carbon future.

While the UK is a centre for expertise in semiconductor technology, Wales has been a hub of semiconductor technology for over 50 years, with many of the leading global companies in the field choosing to locate their operations in the country.

Companies based in Wales are able to draw on wider UK Government programmes and support which includes the £80m **Driving the Electric Revolution** fund.

Welsh capabilities in research and development of compound semiconductors are supported by several organisations.

Compound Semiconductor Applications Catapult

The Compound Semiconductor Applications (CSA) Catapult's purpose is to deliver long-term benefit to the UK economy and accelerate UK economic growth in industries where applying compound semiconductors creates a competitive advantage and enables new products or end markets. Based in Newport, South Wales, its vision is for the UK to become a global leader in developing and commercialising new applications for compound semiconductors.

- Power Electronics Lab - Design and characterisation of high performance devices and modules
- RF and Microwave Lab - Supports development of leading-edge products in multiple sectors
- Photonics Lab - Supporting customer breakthroughs in optical sensitivity and beam control
- Advanced Packaging Line - Leading-edge package design and development including thermal optimisation

CSconnected

CSconnected is the collective brand for a growing number of advanced semiconductor related activities in Wales, home to a unique community of academic institutions, prototyping facilities and global, high-volume manufacturing capabilities that collaborate across a range of research and innovation programmes.

Power semiconductor R&D
Power semiconductor design and test
Equipment and processes for manufacture of power semiconductor devices

Cardiff University

The Translation Research Hub (TRH). Researchers in the Institute for Compound Semiconductors (ICS) and Cardiff Catalysis Institute (CCI) use state-of-the-art TRH to bring together industry and scientists to solve complex global challenges. Collaborating with commercial partners and working across sectors including energy, advanced materials, transport, communication, and healthcare, creating new technologies and charting innovative research directions.

Swansea University

The Centre for Integrative Semiconductor Materials (CISM) is a £50m new facility at Swansea University's Bay Campus, bringing together semiconductor and advanced materials platforms and processes to deliver new technologies and products. The Centre includes a unique facility for wafer-level processing of Silicon Carbide Power Electronic Components.

- Advanced electron microscopy (TEM, SEM, FIB)
- Surface chemical analysis and multi-functional scanning probe
- Multi-wafer batch wet etch stations
- Advanced atomic layer, chemical vapour and molecular vapour deposition
- Component modelling and design suite
- Component stress and failure testing
- Thin film analysis (ellipsometry, spectrophotometry)

Partnering with these organisations will provide you with access to state-of-the-art facilities, cutting-edge expertise, and the opportunity to collaborate with industry and academic partners. These collaborations can help accelerate the commercialisation of compound semiconductor technologies, while reducing costs and risks.

Whether you're looking to develop new materials, processes, or applications for compound semiconductors, Wales has the resources and expertise to support your goals.

