The Aerospace industry in Wales is thriving, and Wales provides world-class training, innovation and expertise, from university research to government and private sector projects.

It’s a passion for progress. A driving force that has attracted some of the world’s leading companies to Wales, including BAE Systems, British Airways, GE Aviation, General Dynamics, Raytheon, Zodiac Seats and Qioptiq. Airbus Group in North Wales employs 6,500 people in its civilian aircraft wing plant.

Wales can offer some of the highest levels of financial incentives in the UK. The sector has its own Enterprise Zone (EZ). Since 1938, St Athan EZ in South Wales has been a major centre for aerospace and defence. Today, the area is dedicated to shaping the sector’s future, as part of Welsh Government’s £60 million Cardiff Airport and St Athan EZ. With a 1,800 metre runway resurfaced in 2009 and full airfield support, the Enterprise Zone is Wales’ new hub for Aerospace and Defence. It has been a major base for the Ministry of Defence (MOD) since its opening. Deeside EZ includes a number of global companies and the Snowdonia EZ includes Llanbedr, a site being developed for further RPAS and potentially for a Space Port. Civilian and military projects work here side by side, in areas including maintenance, repair and overhaul and non-destructive testing, as well as pilot and engineering training and ‘end of life’ aircraft recycling services.
DEFENCE OPERATIONS

Wales is a cornerstone of UK defence operations, through provision of workforce skills, as well as the availability of secure sites and airspace. More recently, we’ve added new strengths to our infrastructure. These include training, systems and defence technologies. Around 100 companies in Wales are involved in creating defence applications such as software, biometrics, optical design and imaging.

One example is Airbus Defence and Space. From its base in Newport, the company is developing defence communication and information systems using local expertise and ingenuity. Working in South East Wales, with General Dynamics, Axiom and TT Electronics nearby, these companies have been able to access a highly skilled workforce – as well as the MOD’s procurement base, just a short drive away in Bristol.

Such an active Aerospace and Defence sector provides a ready market for businesses such as Qioptiq, which designs and manufactures night vision systems for the MOD. Another is Babcock, which maintains the RAF fast-jet training fleet at RAF Valley on Anglesey, and QinetiQ, experts in defence, aerospace and security.

Segregated airspace for RPAS off the coast of West Wales was the first of its kind in the world to be established, spanning over 1,500km² of land, and a further 7,100km² over sea – enabling full-scale testing, training, flight trials and demonstrations.

The centre of excellence for test and evaluation of RPAS includes hangars and laboratories at Parc Aberporth – the first purpose-built RPAS technology park in Europe and home to Watchkeeper – Europe’s largest RPAS programme operated by the UK MOD.

Llanbedr Airfield – an ex-military site with three runways, is a controlled environment enabling safe operations of medium and high-altitude long duration RPAS.
GE Aviation is the world MRO base for the GE90 engine, used in the twin-engine wide-body Boeing 777, one of the most powerful engines certified for civil aircraft. In addition, GE handles the GP7000, which was developed by The Engine Alliance, a joint venture between GE and Pratt & Whitney. This powers the new Airbus A380 and the CFM56 family of engines – developed by CFM, which is the world’s most popular aircraft engine. The business occupies a workshop space of 1 million square feet and its customer base covers 90+ operators, stretching from China through Europe to the West Coast of USA and to Chile in Latin America. British Airways is also committed to Welsh expertise, with three dedicated MRO facilities across a 50km radius.

At St Athan Aerospace Business Park, part of the Cardiff Airport and St Athan Enterprise Zone, there are a number of smaller companies emerging. Among them is eCube Solutions LLP, specialising in end-of-life aircraft projects. St Athan is also home to Cardiff Aviation, a fully approved and certified aviation maintenance, engineering, and technical service group.

The Non-Destructive Testing Validation Centre in Port Talbot, managed by TWI, works to improve the accuracy of inspection techniques and flaw detection.

In North Wales, DECA, Raytheon, Marshall Aviation Services and Babcock are also engaged in maintaining and overhauling aircraft, drawing on the region’s extensive talent pool.

With so much activity and opportunity, Wales’ MRO sector continues to grow in volume, as well as workforce expertise.

A local supply chain

Alongside opportunities to tap into local markets, businesses in Wales have suppliers on their doorstep. A mature supply chain serves both aerospace and defence markets with leading edge electronics and communication systems.

That chain includes companies with varying aerospace expertise such as Magellan, CAV, Gardner, Triumph Actuation, Metal Improvement Company, Curtiss Wright and Tritech.

Companies like Solvay and Timet are also working to develop advanced materials including composites and adhesive materials for extreme-demand environments.
Cardiff University
The Innovation Campus retains their position as a renowned research centre of excellence. The aerospace and defence expertise includes aerodynamics research, stress evaluation, lightning protection at the Morgan Botti Research Centre, and Propulsion performance research at the Gas Turbine Research Centre (GTRC). Also at Cardiff University is the National Software Academy, located at Innovation Point, increasing Wales’ digital capability.

University of South Wales
The Aerospace Centre in the School of Engineering specialises in Aircraft Maintenance Engineering. The facility has two aircraft hangars housing Jetstream and Provost aircrafts and Rolls Royce Spey engines.

University Wales Trinity Saint David
Demonstrate considerable expertise in the area of Non Destructive Testing, and work closely with TWI.

Cardiff Metropolitan University
This university has expertise in design, through PDR (International Centre for Product Design & Research) as well as a modern School of Art & Design, housing a Perceptual Experience Laboratory (PEL) to emulate human perceptual experience.

Aberystwyth University
Active within the Wales Academic Space Partnership, they have supported Beagle 2 through its Intelligent Robotics Group. The University also offers an Earth Observation Research Centre, providing expertise in both upstream and downstream Space research.

Bangor University
Home to CLARET, Centre for Lifetime and Reliability Testing, which provides support to companies involved in aerospace technologies and Space electronics through design, manufacture or integration of opto-electronic and material technologies with reliability testing facilities.

There are also a number of colleges providing specialist vocational skills that the aerospace industry is demanding.

The International Centre for Aerospace Training
Part of Cardiff and Vale College and located at Cardiff Airport and St Athan Enterprise Zone, this is an iconic centre delivering training for CAA licence requirements for Parts 147 and 66 for aircraft maintenance.

Coleg Cymoedd
This institute has aerospace facilities at both its Nantgarw and Ystrad Mynach locations, providing apprentice programmes in aeronautical engineering.

Coleg Cambria
This is also a centre of excellence in aerospace engineering, providing apprenticeship training for Airbus and other aerospace companies in North Wales, for both manufacturing and maintenance. Its campus at Deeside in particular has a strong focus on aerospace activity.

Wales produces over 6,000 science and engineering graduates a year. Within our eight universities there is a wealth of academic expertise applying itself to the aerospace industry.

Welsh Universities and Colleges in Wales are developing their capabilities and linking together to offer world class expertise and training.

8 Welsh Universities Supporting Aerospace
The 2015 state of the art Swansea University Bay Campus provides world class R&D in areas such as Computational Engineering which includes aerodynamic design for Airbus Wings and the Bloodhound supersonic car. The Finite Element method and Computational Fluid Dynamics, allow engineers to model structures with increasing complexity. The Institute of Structural Materials and Centre for Printing & Coating further complement expertise in this area.
NETWORKING & SUPPORT

The Aerospace Wales forum (aerospacewales.com) is the trade association for all companies and partner organisations operating in the Aerospace and Defence sector in Wales, through access to events, networking opportunities and industry expertise.

WHAT NEXT?

The opportunities for your sector in Wales are many and varied – so let’s talk. Call one of our team to find out more about what Wales can do for your business.

Find out what Wales can do for your business:

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