

£8m EU-backed boost to roll out initiative to drive groundbreaking research to support the manufacturing industry

Backed by £4m of EU funding, Swansea University's ASTUTE 2020 scheme will help to establish more research collaborations between participating Welsh universities and companies to address future manufacturing challenges and opportunities. The aim is to drive productivity and growth within the industry by developing new sustainable technologies and higher-value, competitive goods and services for the global market.

The project is already delivering in north and west Wales and the south Wales valleys. The additional EU funding will enable ASTUTE 2020 to be rolled out to support businesses across the rest of Wales, including Cardiff, Newport, the Vale of Glamorgan, Monmouthshire, Powys, Flintshire and Wrexham. The remainder of the funding will come from participating Welsh universities.

Professor Drakeford said:

“Investing in our manufacturing sector to drive innovation and develop pioneering technologies and products will lead to increased competitiveness within the industry and new employment opportunities.”

Professor Johann Sienz, ASTUTE 2020's operation director, said:

“We are delighted to be expanding the ASTUTE 2020 applied research which will enable transformational and sustainable growth across Wales in manufacturing industries. Focussed upon developing and adopting future manufacturing technologies, we are looking forward to collaborating with more companies aiming to stimulate and drive business growth in the region.”

To date, more than 30 companies have been involved with research collaborations through ASTUTE 2020, covering manufacturing component areas such as medical equipment, automotive and aerospace.

One such collaboration has been with the Aluminium Lighting Company (ALC), which has led to the development of a state-of-the-art electronic device, which can collect performance and maintenance data on lighting columns, such as those along roads, more efficiently and safely.

Currently, the performance and structural condition of lighting columns is

assessed by visual and physical inspection, which can be time consuming and can cause service disruptions on roads, train lines, and to pedestrians. The new device will enable the remote monitoring of lighting columns and condition and maintenance assessment, without the need for regular physical inspections. Such a device could become an integral part of ALC's future products and could be retro-fitted to existing lighting columns.

Craig Williams, ALC's managing director, said:

"The ASTUTE 2020 programme means we can access specialist knowledge that we do not have. Working with Swansea University we are looking to apply concepts of artificial intelligence, machine learning and neural networking in developing and refining our exciting new product and service."

ASTUTE 2020 is a £22.6m all-Wales scheme delivered in partnership between the Swansea, Aberystwyth, Cardiff and South Wales universities and the University of Wales Trinity Saint David.

North Wales boost for Air Covers

Air Covers relocated to Wrexham in 2014 and exports over 80 per cent of its products. It is the main supplier for the Royal Swedish Air Force, the Omani and UAE Air Forces, the German Bundeswehr, the Royal Navy and the Royal Air Force amongst others.

Based on the Bryn Business Centre on Wrexham Industrial Estate, Air Covers employs nine full time designers and machinists and has taken part in various trade shows organised by the Welsh Government. It will be one of many Welsh companies taking part in the Welsh Government's Export Market visit to China and Hong Kong in March this year.

Helicopters are vulnerable to environmental damage from sand, ice, humidity and heat. Air Covers have developed products to protect against these hazards which would otherwise reduce operational time in the air. The covers also reduce the need for maintenance, which over the lifetime of an aircraft can easily be three times the purchase price of the original helicopter.

The company has developed specialised breathable fabrics that allow heat to escape but are impermeable. They need to be quick and easy to fit, because of the harsh conditions in most of the markets Air Covers operate. For example in Saudi Arabia cockpit temperatures can reach 81C after just 120 minutes without protection, while with the cover the cockpit temperature is just 43C.

Advanced computer aided design facilities are used for every order enabling millimetre precise measurements to be taken.

Commenting on the decision to move the company to North Wales CEO John Pattinson said:

“The move to Wales was a key moment in the growth of Air Covers. Since 2006 we have become a global leader in our chosen niche – environmental protection for high value equipment. Our productivity, product range, quality and skills grew exponentially with investments in skills training and capital equipment.

“Our laser scanning and 3D modelling department had the space to grow and we partnered with local businesses for product testing. Within 18 months we had been approved by Airbus Helicopters and Bell Helicopters USA and diversified into marine and land equipment protection.

“It isn’t just the great support we’ve had from the Welsh Government, its agencies and Wrexham Council. We have also had support from many local businesses through the networking group, Wrexham Business Professionals. I feel we are part of regional growth story and we’re proud to be here.”

The company hope to start a close co-operation with nearby Wrexham Berwyn Prison where inmates will be given NVQ training in the manufacture of an Air Cover subsidiary, Klobbabags.

Economy Secretary Ken Skates said:

“It’s great to see a company like Air Covers thriving since it moved to North Wales. It is a named supplier to most of the world’s military, to air sea rescue and charities, and it is set to continue to expand. It has taken advantage of export opportunities offered by Welsh Government trade missions, and has extensive international marketing experience. It is a real asset to have this company in the region and it’s good to see how it is actively contributing to the community it is based in.”

Former head of the UK Apache Attack Helicopter Programme in Afghanistan, Brigadier Nick Knudsen has praised the Air Covers product. He said:

“A fleet fit of Air Covers was the one of the best investment decisions that I made as we have had a return several orders of magnitude greater than the initial cost. Air Covers are now the protection of choice across the UK Defence Helicopter fleet and will remain so as there is no other that is comparable.”

Wales joins the 100,000 Genomes Project – placing rare disease patients at the heart of the genomic medicine revolution

The project, now a UK-wide initiative, seeks to transform patient care, encourage genomic discovery and drive a thriving genomics sector.

In an agreement between Cardiff and Vale University Health Board (CVUHB), Cardiff University and Genomics England (the company leading the Project across the UK), 420 whole genome sequences (WGS) have been commissioned for patients with rare diseases and their families, in Wales.

The 100,000 Genomes Project aims to sequence 100,000 genomes from 70,000 people with rare diseases and their families, as well as those with cancer. To date, more than 50,000 whole genomes have been sequenced, with the ultimate 100,000 WGS milestone due to be reached by the end of 2018.

In the UK as a whole, many people are affected by a rare disease: over 3 million people across 6,000 rare diseases, with around half of these children. The 100,000 Genomes Project is already changing the lives of patients with a rare disease, with genome sequencing leading to new or more precise diagnosis or a different course of treatment.

Welsh rare disease patients and their families, who choose to participate in the 100,000 Genomes Project, may be provided with a diagnosis and spared years of uncertainty and distress (often known as the diagnostic odyssey). With more precise and rapid diagnosis, there is also the potential to reduce pressure on Welsh health and social care budgets.

Today's announcement brings together the Welsh Government, AWMGS, CVUHB, Cardiff University, the Wales Gene Park, the Medical Research Council (MRC) and Genomics England to establish the first Genomic Medicine Centre (GMC) in Wales. This joins 13 other NHS GMCs in England, the Northern Ireland GMC and the Scottish Genomes Project. The Wales GMC, based at the University Hospital of Wales site in Cardiff, has been supported by the Welsh Government and the MRC, which contributed £2.4 million and £1 million in funding respectively. Participation in the 100,000 Genomes Project supports the Welsh Government's 'Genomics for Precision Medicine Strategy', which sets ambitious goals for genomic medicine, including the development of:

- internationally-recognised medical and public health genetics services
- internationally recognised research in genomics and excellent platforms for precision medicine
- new strategic partnerships in genomics and precision medicine

- the NHS and research workforce to underpin the delivery of genomic medicine.

Health Secretary, Vaughan Gething said:

“We are delighted that Wales has joined the 100,000 Genomes Project. The collaboration with Genomics England will enable patients with rare diseases in Wales to benefit from this exciting and transformational project, with the potential to bring quicker and more accurate diagnoses.”

The Director of the Division of Cancer and Genetics at Cardiff University School of Medicine and Honorary Consultant in Clinical Genetics with Cardiff and Vale University Health Board, Professor Julian Sampson, who leads the project in Wales, said:

“Patients in Wales with rare conditions in whom routine testing failed to make a diagnosis now have a chance to access the most comprehensive genetic test available; sequencing of their entire genome. This will increase the chances of achieving a specific diagnosis to inform their health care. Wales’ participation in this UK-wide project is helping to establish genomic medicine in the NHS.

“This will have far-reaching benefits for the understanding, diagnosis and treatment of many conditions.”

Chief Scientific Advisor for Health, Dr Rob Orford said:

“A key component of the Welsh Government’s Genomics for Precision Medicine Strategy is the creation of the collaborative Genomic Medicine Centre (GMC). The GMC will act as a springboard for the translation of cutting edge genomic research into better services and treatments for people of Wales.”

Dr Nathan Richardson, head of molecular and cellular medicine at the MRC, said:

“We welcome these very exciting developments that will help to establish a strong Wales-England partnership, which brings together patient genomes to enhance our ability to tackle the biggest challenges in understanding the role of human genetics in disease. We are excited by the prospects of people in Wales – and throughout the UK – who are affected by a rare condition and will benefit hugely from a new era of genomic medicine.”

Professor Mark Caulfield, Genomics England Chief Scientist, said:

“Genomics is transforming healthcare and our ability to diagnose and treat rare disease and cancer. In joining the rare disease programme of the 100,000 Genomes Project, Wales has placed itself at the centre of genomic medicine revolution that will greatly improve patient outcomes, encourage exciting new discoveries and drive a world leading genomics industry.”

First Minister opens major Welsh export conference

Opened by First Minister Carwyn Jones, the full day event will focus on exporting and the implications of Brexit – such as tariffs and non-tariff barriers – and consider trading scenarios from March 2019.

Business experts from the South Wales Chamber of Commerce, Strong and Herd, the UK Export Joint Unit, Godi and UK Finance will be on hand to provide advice on how to navigate the rules and regulations of selling goods and services overseas.

Representatives from the Welsh Government's overseas offices will also hold market-focussed seminars throughout the day to discuss ways businesses can develop their export markets.

Opening the conference, the First Minister will say:

“Welsh exports are worth £14.6bn to our economy each year, with 61% of Welsh exports going to the EU. We must not let Brexit derail this success.

“Today, we are talking to people who run Welsh businesses about the support the Welsh Government can provide as the UK prepares to leave the EU. This is a time of huge uncertainty, but we are working hard to offer Welsh businesses the practical help they need to continue to export or start selling their good overseas in a post-Brexit economy.

“Our post-Brexit vision is of Wales as a globally trading nation, open to the wider world, while maintaining our strong trade with the EU. We need a Brexit deal that allows Welsh goods to keep flowing into the EU without new obstacles or costs, while embracing the new drive for trading opportunities around the world.”

Economy Secretary Ken Skates will also address the conference in Cardiff City Stadium. He will say:

“Key to successfully exporting goods and services across the globe is an understanding of the market in which you wish to do business.

“Today's conference is all about supporting Welsh businesses to feel confident enough to take their products and services worldwide, helping them to understand the strengths and limitations of different markets and advising on how businesses can grow their overseas operations.

“Our new Economic Action Plan is clear about our commitment to prioritising exports and trade and to helping businesses retain their existing trading partners, while supporting them to branch out into other global markets.

“The Welsh Government’s job is to ensure that our business owners are getting all the help they need to weather the challenges and embrace the opportunities ahead so we can drive forward our commitment to build a stronger and fairer economy for all.”

Sustainable drainage systems key to reducing flood risk – Hannah Blythyn

The Welsh Government’s [Water Strategy for Wales](#) sets out our aspiration for sewerage and drainage infrastructure for both waste water and surface water to be well managed and maintained in an integrated way.

To help achieve this, the Welsh Government wants all new developments to incorporate effective sustainable drainage systems (SuDS). The SuDS approach aims to deal with rainwater using techniques such as infiltration and retention that mimic runoff from a site in its natural state.

SuDS schemes slow down the flow of water and remove pollution, typically using combinations of installations such as permeable paving, soakaways, green roofs, swales and ponds.

The Welsh Government has recently [consulted](#) on how its aim of seeing the SuDS approach used to deliver multiple benefits for society in all new developments should be implemented.

Between 2010 and 2015, the Welsh Government supported Dŵr Cymru Welsh Water in developing a series of SuDS projects, known collectively as ‘Rainscape’.

One of the largest of these is at Stebonheath Primary School, Llanelli, which uses a range of SuDS methods to divert or reduce the flow of rainwater to the sewerage network. These include permeable paving, water butts, planters, increased numbers of trees, grass and plant, and a large swale.

Stebonheath Primary is the first school in Wales to have a surface water removal scheme retrofitted into its grounds. The scheme has been used as an educational opportunity to enable pupils to understand more about water resource management.

Speaking during a visit to Stebonheath Primary, Hannah Blythyn said:

“Surface water flooding is a serious problem and a major cause of

flooding. The Rainscape project, which I have seen today is an innovative and sustainable approach to dealing with rainwater, which reduces the risk of flooding and water pollution, while also providing a wide range of community benefits.

“It was great to hear how the pupils get involved in the design and ongoing maintenance of the Rainscape features. I was particularly interested to hear how they have been educating their parents on the benefits of the project. This, in turn, has led to a better understanding in the community about the subject of drainage, which, I think it’s fair to say, is not usually a conversation starter.”

“Sustainable drainage schemes help to reduce surface water flood risk, protect water quality and improve the local environment. We want to make them a requirement across Wales for all new developments and I am grateful to everybody that responded to our recent consultations.”