

R&B

RESEARCH & BUSINESS

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A Teesside University Magazine

TECHNOLOGY TURNS MULTINATIONAL

Digital data specialists from Dubai
team up with University

BUILDING BRIDGES

Closing the gap between
Universities and business

MIKE MATTHEWS MBE

Discover his nifty plan
to plug the skills gap



Welcome from the Vice-Chancellor

I was very proud and honoured when Teesside University was recognised with the award of a prestigious Queen's Anniversary Prize for excellence at world-class level but on receiving the award I said that it was vital that the University did not rest on its laurels and continued to search for new and innovative ways to work with business.

It is in that vein that we have reconfigured our flagship Darlington campus as a major point of entry to the University and a hub for businesses across the North East, Yorkshire and beyond. It shows that we are always working to develop new ways to support the local and national economy.

The Darlington business hub will be a front door for business, offering organisations from SMEs to multinational blue-chip companies a single point of access to all the University's R&D, innovation and knowledge exchange services and education, training and professional development.

The creation of the University's business hub is consistent with the recommendations put forward in the recent Government-commissioned review by Sir Andrew Witty, the Chief Executive of GlaxoSmithKline, and will provide the environment to allow us to triage a company's needs and direct them to the appropriate department or expertise within the University, as part of our well-established, responsive and business solutions focussed approach to business engagement.

As one of Sir Andrew's expert advisors, I am firmly behind the notion of universities being a principal driver for local and regional economic growth and I am pleased to say that Teesside University has always prided itself on its contribution to the economies of the North East and North Yorkshire regions.

We are delighted that we have been recognised for our work with business, and our new business hub underlines our commitment to continuing to play a key role in the growth of

the North East and North Yorkshire economies. And of course our Queen's Anniversary Prize for Business Engagement serves to reinforce the view expressed by Vince Cable, the Secretary of State for Business, Innovation and Skills, when, after visiting, he described Teesside University as 'Britain's best for working with businesses' – a big claim that we will work hard to live up to.



Professor Graham Henderson CBE DL
Vice-Chancellor and Chief Executive

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Teesside academic brings his expertise to South America

By David Roberts

A Teesside University academic is working with the Brazilian government to help implement cutting-edge technology in the South American country's construction industry.



Dr Mohamad Kassem from the University's Technology Futures Institute was invited to Brazil to showcase how Building Information Modelling (BIM) is being implemented in different European countries.

The invitation followed Dr Kassem's appointment as the EU BIM consultant to the Brazilian Ministry of Development, Industry and Foreign Trade (MDIC) and the Ministry of Planning, Budget and Management (MPOG).

It is hoped Dr Kassem's advice will form the basis of policy which will help the Brazilian government revolutionise its approach to major building projects.

Brazil has one of the fastest growing economies in the world and its building projects account for 2% of the entire global construction industry. BIM is a concept that uses a combination of collaborative processes and technologies to develop a digital representation of physical and functional characteristics of a building project from its design to operation.

BIM approaches, if implemented properly, can improve the predictability of building projects and contribute to saving time, money and safety records.

Dr Kassem, who is a Senior Lecturer in the School of Science & Engineering, says, 'Brazil is a massive economy and the country is undergoing a huge amount of construction work. Changes which result in efficiency savings, even small ones, have the potential to save the Brazilian economy billions of pounds.'

Dr Kassem travelled to Brazil as the guest of MDIC and MPOG. During his visit he met with senior figures in both the Brazilian government and army. He also presented his interim findings on BIM implementation in three EU countries that are currently active in developing BIM policies – the United Kingdom, Netherlands, and France.

Dr Kassem's research was carried out alongside a Brazilian consultant, Professor Sergio Leusin, who looked at how BIM was currently being implemented in Brazil. The two academics are now working on a joint report to present to Brazilian policy makers with conclusions and recommendations for BIM implementation in Brazil.

Dr Kassem adds, 'This is a very exciting project and there are massive opportunities in Brazil. BIM can bring real benefits to the construction industry and there is a real momentum towards innovation in

the industry and I hope my work can help improve BIM diffusion in Brazil.'

Teesside University's Technology Futures Institute has an international reputation for its excellence in BIM technologies. Academics, including Professor Nashwan Dawood and Dr Kassem, are also carrying out research on BIM implementation in Qatar.

Professor Cliff Hardcastle, Deputy Vice-Chancellor (Research and Business Engagement) says, 'This is an excellent example of how Teesside University's research can be closely aligned with the needs of business and industry. BIM can have a major impact on efficiency in the construction industry and I'm sure that Dr Kassem's work will bring real benefits in Brazil.'



This is a very exciting project and there are massive opportunities in Brazil

BUSINESS FOCUS

with Professor Cliff Hardcastle



Professor Cliff Hardcastle is Deputy Vice-Chancellor for Research & Business Engagement at Teesside University. He directs the use of University skills and expertise in support of business and industry, heads the institution's work on the DigitalCity regeneration project and grows and develops the University's research strategy.

Teesside University is heading into an exciting new phase of its work with business in 2015. We have a long history of being an innovative and flexible institution that works with companies to find solutions and we want to build on this continually.

Our aim is to grow business, create new enterprises, support companies and contribute to the North East economy and beyond to ensure this region flourishes and the economy expands.

As part of this, as the Vice-Chancellor mentions in his introduction, our Darlington campus will be our central hub for business – a single point of initial contact for all enquiries about support.

We intend to ensure that everything we can offer to business can be clearly and easily identified and brought together under one brand that is instantly recognisable – so watch out for this in the coming weeks.

The launch of our new business brand will send a message that demonstrates how nimble we are as an organisation in mobilising the help and support that businesses need. Our expertise in innovation, management and many areas of research provides the tools businesses need to move to the next level. This is particularly important as new knowledge and skills generated by universities are at the very heart of the UK's economic growth agenda.

Of course it is ideal that our Darlington campus on Central Park, a major strategic development site for the Tees Valley, is the central physical hub for business as it is so easily accessible from the main road and rail routes.

Alongside the campus, the University is privileged to be leading an exciting new business development on the Central Park site, in partnership with the Centre for Process Innovation, C-STATE and Darlington College, with the support of Darlington Council and Tees Valley Unlimited. Due to open in 2018, the National Horizons Centre will provide a unique setting for delivery of skills, leadership and innovation in the enabling and industrial technologies that are the key to a successful UK economy. It means that here in the Tees Valley we will harness the potential of biologics, industrial biotechnology, subsea engineering and digital manufacture and design, delivering leading-edge programmes for the current and future workforce of the super sectors.

This development, along with others already under way, including the National Biologics Manufacturing Centre led by the Centre for Process Innovation, and Business Central, a new 50-unit build by Darlington Council, is at the core of an ambitious ten-year vision for Central Park, which will see its growth as an attractor and creator of innovative, knowledge-based companies,

jobs and talent for Darlington and the Tees Valley.

Elsewhere in the Tees Valley, we are closely involved with a brand new Innovation Centre at Muse Developments' £100m Northshore regeneration scheme, close to the River Tees and Stockton-on-Tees town centre. The three-storey, 36,000ft² building opening in June 2015 is a partnership project between Muse, Stockton Council, Teesside University and the Homes and Communities Agency (HCA).

The building went ahead following a £2.87m investment from the North East European Regional Development Fund with HCA providing the match funding. Managed by the University, it will provide flexible space for new and growing SMEs in the digital, scientific and creative sectors.

At the Innovation Centre we will offer tenants the full range of business innovation and development services, available from both our Darlington and Middlesbrough campuses. Companies will have ready access to research, academic expertise, graduate resource, training and networks to support their development and growth.

These major developments point to an exciting future for the area, one which I am confident will see Teesside University working right at the heart of successful business.

Engineering students supported by ElringKlinger

By David Roberts

The hard work of four students at Teesside University is to be recognised thanks to a new prize fund set up by a leading engineering firm.

ElringKlinger (GB), a major employer in the region, is sponsoring the prize fund for students graduating from BEng (Hons) Mechanical Engineering courses in the University's School of Science & Engineering.

The prizes, which total £550, will be awarded to the four students by ElringKlinger (GB) Managing Director Ian Malcolm at this year's graduation ceremony in November. The winners will each receive a cheque, plaque, certificate and a citation during their graduation ceremonies.

The prizes will be awarded to the top students in thermodynamics and heat transfer, manufacturing processes, mechanics of materials and the interdisciplinary project.

ElringKlinger (GB), the UK division of German multinational ElringKlinger, manufactures and supplies car parts for a range of vehicles from its Redcar factory, including Jaguar Land Rover, BMW MINI and Ford.

The company enjoys a strong relationship with Teesside University and has previously taken on Teesside undergraduates as part of its Year in Industry offering.



It is always encouraging to see young people taking an interest and actively pursuing a career in the sector

Ian Malcolm says, 'Education and skills continue to be high up on our agenda here at ElringKlinger (GB) and we continue to support and recognise the need for promoting engineering as a career, to bridge the skills gap we are currently facing. It is always encouraging to see young people taking an interest and actively pursuing a career in the sector and equipping students with the skills they need to establish themselves for a successful engineering future is

something we hope to build on through our relationship with Teesside University.'

Jessica Turner, Corporate and Alumni Relations Officer, adds, 'We are extremely grateful to ElringKlinger (GB) for this generous prize fund. The prizes will have a transformative effect on the winners and will open up new opportunities to them.

'We are delighted that ElringKlinger (GB) is continuing to support our students in this vital sector and we look forward to continuing our partnership with them.'

Flagship Darlington campus now the front door for business

Plans to create a nationally renowned business hub in Darlington are taking shape with the University's flagship £13 million Darlington campus becoming the front door for business activity.

Every organisation, from SMEs to multinational blue-chip companies, can now use the Darlington campus as a single point of contact to access all R&D, training and professional education support.

The University has located its business services team, as well as key academic staff from its Schools, at the Central Park site which provides unrivalled connectivity with the East Coast railway line at Darlington station just a short walk away, and easy access by road to the A1M to continue to attract businesses from across the country.

The vision to create a new hub for all the University's business-facing services mirrors the recommendations put forward in the Government-commissioned review by Sir Andrew Witty, the Chief Executive of GlaxoSmithKline, which recommended that universities should be drivers of economic growth and would triage a company's needs and direct them to the appropriate department.

The campus at Darlington is also home to the highly-prestigious National Biologics Manufacturing Centre (NBMC), which has a temporary base in the University's building as work continues on its new building at Central Park. Further developments include

Darlington Business Central, a business incubation centre for start-up companies as well as proposals for a National Horizon Centre to be utilised by the University, NBMC, the Centre for Process & Innovation (CPI) and a range of private sector partners as a learning, conference and residential training resource. Central Park is already home to Darlington College, one of the five further education college partners of Teesside University in the Tees Valley.

Each year, Teesside University helps hundreds of businesses with a range of services including graduate placement, knowledge exchange, start-up incubation and mentoring, consultancy and joint research.

In 2013, 330 businesses held in-depth meetings to discuss their business needs and identify a solution to their problems, and over the past decade the University has helped to create 430 new businesses and more than 550 jobs.

Vice-Chancellor Professor Graham Henderson CBE DL says, 'Teesside prides itself on being a business-facing University and we are very proud of our record of supporting the region's economy.

'We see Darlington as being a front door for our business services where we can work with companies and ensure that they are given the support they need.'



We see Darlington as being a front door for our business services where we can work with companies and ensure that they are given the support they need



Partnership paves the way for new Innovation Centre

Work is well underway on a new state-of-the-art Innovation Centre at Muse Developments' £100m Northshore regeneration scheme, adjacent to the River Tees and Stockton-on-Tees town centre.

The three-storey, 36,000 ft² building, constructed to a BREEAM Very Good specification, is a partnership project between Muse, Stockton Council, Teesside University and the Homes and Communities Agency (HCA).

The project is a result of a £2.87m investment from the North East European Regional Development Fund (ERDF) with HCA providing the match funding.

Located centrally within the Northshore development, the building will provide

flexible space for new and growing SMEs in the digital, scientific and creative sectors.

As well as flexible office space provided in two rectangular office wings either side of a glazed central atrium, the building will feature a training suite, meeting rooms and a seminar facility designed to maximise interaction and networking between occupiers.

The Innovation Centre will be managed by Teesside University, which will offer tenants the full range of business

innovation and development services, available from its Darlington and Middlesbrough campuses. Companies will have ready access to research, academic expertise, graduate resource, training and networks to support their development and growth.

It is due for completion in Spring 2015.



Cllr Bob Cook, Leader of Stockton Council; Marie Kiddell, Area Manager, HCA; Simon Dew, Senior Development Surveyor, Muse Developments; Laura Woods, Director of Academic Enterprise, Teesside University

Spin-out companies are proof that research has real business benefit

A forensic breakthrough which received praise in parliament has been the catalyst for another successful spin-out company formed from Teesside University academic research.



Chemicam was set-up by Dr Meez Islam in a bid to take a unique blood stain examination device to the commercial market.

Along with colleagues Dr Liam O'Hare, Peter Beveridge, Dr Andrew Campbell and Dr Bo Li, Dr Islam has used a technique called visible wavelength hyperspectral imaging, which can positively and quickly identify blood stains at crime scenes. It also enables investigators to pinpoint the age of a one month old blood stain to within one day – something that has so far eluded forensic scientists.

The pioneering forensic research has been praised in parliament with ministers urged to roll out the new technology to police forces across Britain.

Teesside University spin-out company Chemicam has been set up as a result of the research in a bid to gain commercial funding and convert the prototype lab device into a portable, robust instrument that can be taken to crime scenes.

Universities are encouraged to identify opportunities to translate research into business benefit. At Teesside, the commercialisation of intellectual property developed from research is actively supported through new University spin-outs.

Professor Zulf Ali, Dean of the Graduate Research School at Teesside University, says, 'If we can improve the process of getting technologies into the market then we are better placed to address the challenges we face in some of the key sectors which drive innovation and economic growth.'

Professor Ali and Dr Islam have teamed up to launch another spin-out – Anasyst – a company specialising in novel analytical systems. The company is participating in an EC project with the University on a highly sensitive optical technique for the early diagnoses of sepsis. As well as saving countless lives, the research also has the potential to save health services across the world billions of pounds and Anasyst is leading the commercialisation for this work.

Dr Tim Thompson, a Reader in Biological & Forensic Anthropology at Teesside, launched his spin-out company, Anthronomics, three years ago on the back of research which has used digital technology to provide new ways of teaching skeletal anatomy.

The company's first app – Dactyl – is now on the market and it provides digitised models of bones and skeletons, allowing users to zoom in and out, access notes and add their own information on specific features of interest.

Dr Thompson says: 'There is a lack of access to skeletal material, and by bringing together this need with digital expertise, we have created something which will change teaching because it is the closest thing to studying actual bones and it is easily accessible.'



Nothing is going to waste at SITA

By David Roberts

Teesside University has teamed up with a leading recycling and resource management firm to help its workforce learn the best ways of producing energy from waste.

In partnership with SITA UK, the University has developed a Higher National Certificate in Energy from Waste to meet the growing demand for more sustainable means of energy production.

The HNC will be studied by SITA UK employees who staff the company's Energy from Waste facilities around the country, including the plant at Billingham, where it employs over 100 people.

Energy from Waste is the process of recovering energy in the form of electricity and/or heat from waste. An Energy from Waste facility is a power station which burns fuel, in this case residual waste, to generate electricity. Residual waste is the waste that remains once all practical recycling has taken place.

As well as minimising the amount of waste which is sent to landfill, Energy from Waste plants also reduce the need for power generated by burning fossil fuels. Although Energy from Waste plants have been used for several decades on the continent, they are still relatively new in this country.

However, with the increased demand for more renewable forms of energy production they are becoming more prevalent, leading SITA UK to develop the HNC with Teesside University.

SITA UK Technical Training Manager Robin Walsh says, 'We turned to Teesside University as we wanted to develop a fully-assessed course for our employees. We wanted something that was unique to our business and has the flexibility to cope with the changes in the industry.



'As well as training people who currently staff our existing Energy from Waste plants it will also enable employees in other areas of our business to be able to develop careers in energy.'

The HNC will be studied over two years with the majority of the course being delivered by flexible open learning, which will enable participants to study irrespective of their location. The course combines theory and practical work with the focus being on industrial applications. The first cohort of the HNC Energy from Waste programme started during the summer.

Fiona Smith, Business Development Manager for Teesside University's School

of Science & Engineering, says, 'SITA UK is one of the world's leading recycling and resource management companies and we are delighted that it has chosen Teesside University to help train its staff. As a society it is very important that we try and do more with waste and find alternatives to burning fossil fuels for our power needs.

'SITA UK's Energy from Waste plants represent a fantastic example of an alternative method of producing energy which, not only reduces our reliance on burning fossil fuels, but also reduces the amount of waste which is sent to landfill.

'We are very pleased to assist them with this important work.'

Teesside is top for the cops

By Gary Martin

Teesside University's renowned expertise in policing and criminology is helping to carve out new opportunities for current professionals, as well as those seeking a career in law enforcement.

The University is leading the way with a range of new initiatives, courses and conferences to meet the demands of the industry. Teesside now offers a new BSc (Hons) Policing degree, a new programme taught by staff with professional policing experience and expertise, which provides the knowledge and understanding required to apply to join the police service.



Teesside University was also the first North East university to be nationally approved by The College of Policing to offer the Certificate in Knowledge of Policing (CKP). An increasing number of police forces across the country now request the CKP qualification be completed before someone applies to join the service.

The first cohort of 24 students recently successfully completed the first CKP at Teesside. It is now offered as a stand-alone award as a part-time evening class, or as a module studied within the BSc (Hons) Crime and Investigation degree or the BSc (Hons) Policing degree.

Dr Mark Simpson, Dean of the School of Social Sciences, Business & Law, says, 'We are a university that not only meets the needs of our students, but meets the needs of employers by providing the types of qualifications they want for their employees. The CKP and the new BSc (Hons) Policing degree are just two

examples of how the University is tailoring its offer to fit with the demands of the professional industry.

'We are extremely proud of our policing courses and our reputation as a first-class provider.'

Teesside University has also welcomed around 100 police professionals for a unique conference to examine ways to foster excellence in policing.

POLCON 5 was held in the North East for the first in the autumn and saw police professionals from around the country come together to discuss what works in terms of spending and policy decisions, particularly in terms of reducing crime. The two day conference also examined how universities and the police service can collaborate more effectively.

Dr Simpson adds, 'The POLCON 5 conference was further confirmation of our standing in the policing profession and it was a great opportunity to welcome current



police professionals to Teesside to discuss ways of working together to improve both the standards of policing and the standards of higher education.'

Teesside University also hosted the prestigious National Deviancy Conference. The historic deviancy conferences began in the 1960s and developed new approaches to the understanding of crime and disorder. The 2014 conference was hosted, for the first time, by Teesside University's Centre for Realist Criminology.

The Centre is developing a distinct form of criminology, which examines harm rather than those things judged criminal. The Centre is currently investigating hidden forms of violence, ecological harm, and recent changes to criminal markets in deindustrialised areas. It also has a commitment to charting changes in politics and consumer culture.



**We are extremely proud of our policing courses
and our reputation as a first class provider**



Unique internship scheme to find the tech entrepreneurs of tomorrow

By David Roberts

A new partnership between Teesside University and a multinational technology firm has resulted in a unique internship scheme which has given students the chance to launch their own start-up companies.

The University partnered with Clicksco, the Dubai-based digital data specialists, on the 12-week Enterprise Internship programme which saw 11 students form three new companies.

Following completion of the 12-week Clickscelerate programme, one of the teams is about to launch a mobile app on Apple's App Store and another group has successfully applied to develop their business with the help of a DigitalCity Fellowship.

The students, who have just completed their final year at the University, will retain any Intellectual Property (IP) which was developed over the course of the paid internship. Throughout the programme, the students used lean start-up business practices which use customer focused methodology to develop a business product or idea in minimal time.



I've learned so much over the past 12 weeks, I really want to take the business further

They also benefited from guidance and mentoring by Clicksco UK and University staff, as well as invited guests from major international technology firms including Google.

The three companies formed are:

- > **GigAbout** – a web platform for bands and venues.
- > **The Happiest Hour** – an app which matches customers to eating establishments which are offering discounts.
- > **Randomizer** – an app which suggests random places for people to visit on a night out.

The programme was run by Paul Callaghan, Director of TwentyThreeMiles, Clicksco's investment fund for start-ups. Paul says, 'In 12 weeks, the teams have come from nothing to develop three minimum viable products which are ready to be put in the hands of customers. It's even more pleasing to see that one of those is about to be launched on the App Store and another are looking to take their business further.'



'This is a unique form of internship and Teesside was the obvious place to run it – the University has been massively supportive.'

Steve Shutts, Chief People Officer from Clicksco adds, 'This is a brilliant example of young enterprise in action. As experts in digital marketing we know just how responsive businesses need to be to the constantly changing demands placed by the online medium; these outputs are each huge testimony to how a small group, properly motivated and supported, can innovate compelling propositions from a standing start.'

Billy Floyd, a BA (Hons) Broadcast Media student, worked on the Randomizer app which is about to launch on the App Store.

He says, 'It's been an amazing experience and really intense. We're delighted that we've been able to get something which is ready to go out to the App Store in only a few weeks.'

Josh Allan, who worked on the GigAbout app, applied for a DigitalCity Fellowship which will offer him and the other members of the team up to £4,000 each to cover living costs while they develop the app further. They plan to use the fellowship to develop the app so that it is ready for market.

Josh, a BSc (Hons) Computing student, says, 'I'd never really contemplated starting my own business but I've learned so much over the past 12 weeks I really want to take the business further.'

Sasha James, a BA (Hons) Multimedia Journalism student, who also worked on the GigAbout app, adds, 'I found the programme incredibly rewarding. It's really taught me a lot of different skills, particularly marketing skills and I've made some very valuable contacts as well.'

Professor Cliff Hardcastle, Deputy Vice-Chancellor (Research and Enterprise), says, 'This was a very exciting project for the young people. It not only gave them the chance to consider establishing their own business, but also the opportunity to work with senior mentors from a very successful international business to develop those ideas. From our perspective, this contains in a microcosm everything about the University's approach to encouraging a spirit of enterprise within our students.'

MIKE HAS A NIFTY PLAN TO PLUG THE SKILLS GAP

FROM a North East council estate to running a multi-million pound business, Mike Matthews MBE is on a journey – and it's one he likes to share with his colleagues and networks. The head of Nifco in the UK and Europe tells Alison Ferst why he believes the successful business of the future will be built on skills and education.

Mike Matthews is a passionate believer in education and training even though he admits he has no background in academia himself. He has a clear mission to see automotive parts manufacturing company Nifco on a major growth trajectory. He sees education as the method to achieve these ambitions.

He grew up on the Branksome estate in Darlington surrounded by a number of challenges. It wasn't an environment that emphasised the value of education but Mike was determined to achieve a different lifestyle for his future.

'I know what it feels like to be seriously short of cash and I didn't want that,' he admits. Even so his career didn't start smoothly. His early twenties as a toolmaker showed him clearly that he didn't want to be doing the same thing aged 50. So he left Nifco, which was then Elta Plastics.

This year Mike has hit his milestone half century and he certainly has moved on with an impressive trajectory of his own – from shop floor to boss. After just six months he returned to Elta, not as a toolmaker but in sales – talking his way into a graduate level job, although he didn't have a degree.

'Within two years turnover had grown from £300,000 to £3m and in 1990 the owner sold the business to Nifco. I think my hard work helped him get a lot more money for the company,' he grins.

By 28, Mike was sales manager, a director by 38 and in charge of European operations by 48. Nifco UK Ltd has been a wholly owned subsidiary of the Nifco Group of Japan since 1990. The company specialises in the design, manufacture and supply of functional plastic components from fasteners to handles used in the automotive industries.

But it wasn't all plain sailing. In 2004 he was director of a significant loss-making operation. In his plain-talking manner he explains, 'Those were difficult times but it is difficult times you learn from and I learned a lot about making business decisions that really gave me experience for the future.'

Mike is now in charge of two plants in Poland, one in Barcelona, Munich and Dusseldorf as well as two in UK with the headquarters on Teesside at a new and expanding factory site at Eaglescliffe, which amounts to around €250m sales plus over 2,000 staff.

Yet he takes nothing for granted. When

Mike took the Japanese owner of the company on a tour, he insisted he visited the site after dark. 'I wanted him to see the site lit up, the sign lit. As we drove through the gates and saw it, this head of a multi-billion worldwide company smiled and it was worth it.'

Mike's pride in what he has built up is evident, but he retains his straight-talking and – cliché though it might sound – his down-to-earth attitude is appreciated by his team and he is keen to invest in them with education and training which led him to start working with Teesside University.

'We need to invest in skills, education and training. There is a huge number of engineers nearing retirement in the North East and we have a skills gap that has to be addressed. Young people today have a different idea of work than we did. They want to be able to see where their career will develop. They don't just think if they work hard they will get on, they want to see that progression pathway.'

Mike doesn't mind admitting he loves to see potential. 'I used to think we were the A-Z but I realised we were missing research and development and marketing. The business was driven by customer



enquiries but we needed to change that and strategically align ourselves with the markets we wanted to produce for and work with.

'The way we need to move forward is through education, sponsoring young people and older people who come in as apprentices to develop and then move on to take a degree and offer training to existing more mature staff too. Everyone in this business is given a chance for further training and education.'

Sometimes that takes encouragement, a little pushing, mopping up of tears and reassurance of capability. 'I enjoy it. It's fantastic to see the difference you can make by nurturing talent and helping people fulfil potential they sometimes don't even know they have. I think I have achieved a lot in my career but I believe I could have achieved even more if I had been fortunate enough to have a better education.'

At the moment that is not on the cards with a role that entails a lot of travelling across Europe, the US and Japan and a full family life with wife of 18 years, Alison, and daughters Amy, 18, at Queen Elizabeth sixth form and Lucy, 16, at Hummersknott Academy.

'I don't have much spare time,' he laughs. Plus he has roles with the CBI and North East Chamber of Commerce. In 2013 he was named North East Business Executive of the Year to add to his titles and this year Mike was awarded an MBE for his services to business in the North East.

'I think it is important to be involved in the wider business affairs of the region. I am passionate about this region, Darlington, Teesside, the North East. The automotive industry will be worth £15bn in the next few years. That equates to another 150,000 jobs. I want to see this area recognised as the industrial automotive heartland. I truly

believe we do it better than the Midlands, which has held this title for a long time.

'But to make this happen we do have to address the skills gap and I want Nifco to lead from the front on this. When I was first invited to Teesside University, I had no idea what it offered, I was amazed when I found out and since then we have built up a relationship, put people on courses - not just engineering but business-related courses too. We see the University as a strategic partner now.'

To this end Nifco have signed a Memorandum of Understanding with Teesside University: 'I can honestly say the more we have been involved with training, development and education, the more successful the business has become. It's not just technical skills; it develops people in the round, their personalities, their confidence, and their leadership skills. We have people with an incredible amount of experience but they can be quite shy. They start a course and they learn how to share their views, they become much better communicators. It's skills like this that are not immediately obvious, they're almost intangible benefits of an academic education but they are invaluable and the bottom line is that our customers get a better experience which is the bedrock of success.'



I think it is important to be involved in the wider business affairs of the region. I am passionate about this region, Darlington, Teesside, the North East

MY BUSINESS:

Investigating new business

Since setting up their own business a little over two years ago, two Teesside University graduates have travelled to the Middle East, met senior politicians and diplomats and flown the flag for Teesside business at the Commonwealth Games. David Roberts speaks to the founders of CSI Training and Events.

At first glance, the offices of CSI Training and Events look like those of any other small business. But peer beyond the desktop computers and files of paperwork and lining the shelves of the company office in Teesside University's Victoria Building, are magnifying glasses, fake blood, crime scene tape and other assorted paraphernalia that identify this as not an average SME.

In 2008, after completing BSc (Hons) Crime Scene Science degrees, Angela Davies and Dionne Wightman went to work as crime scene investigators – however, due to cutbacks, the pair had to re-evaluate their career path after they were made redundant in 2012.

Angela and Dionne realised that the analytical and investigative skills they had deployed as Crime Scene Investigators (CSIs) could be vital to help develop businesses and organisations in the private and public sector.

'We'd talked for a while about doing something like this, but being made redundant gave us a bit of a kick,' says Dionne. 'We spoke with Teesside University's enterprise team who discussed our business idea and helped us take it forward. I don't think we would have got this far without them. We have hit stumbling blocks but they have always been there to help us.'

The pair deliver crime scene and forensic investigation training and events

including a consultancy service to provide professional training to both private and public sector organisations in order to proactively tackle crime, educational sessions for schools, colleges and universities as well as corporate team building and fun-filled themed events.

Angela says, 'Although CSI Training and Events does quite a lot of different things, everything that we do is based on the same principles. The only thing that we change is how we deliver it and the level of ability we deliver it to.'

From the outset, the business has proved a success with Angela and Dionne working with a range of companies, organisations and education institutions to deliver their unique brand of training.

The company has attracted overseas attention and were approached by a prominent Libyan business leader about the possibility of introducing their educational services to the Libyan market.

With the support of UK Trade and Investment (UKTI) the pair carried out several market visits to the country and, in May this year, they delivered their first exported team event to a training company in Tripoli.

UKTI put their name forward to attend the prestigious Commonwealth Games Business Conference and they were sent a personal invitation from Lord Livingston of Parkhead, the Minister of State for Trade and Investment, and John Swinney, the Cabinet Secretary for Finance,

Employment and Sustainable Growth.

At the conference, Angela and Dionne met with several key business figures and also spoke with Prince Edward, the Chief Secretary to the Treasury Danny Alexander MP and the High Commissioner to Sri Lanka.

Dionne says, 'It was an absolutely amazing experience. We were possibly the smallest business to be invited, so it was a real honour. The conference has given us some great contacts with some possible business opportunities to explore.'

'Just being in the room with all those people and getting to hear from leading business figures was incredibly useful to a young business like ours.'

Determined not to rest on their laurels, the pair are looking at further opportunities to develop their business and to help with this have appointed the Head of Teesside University's Centre for Forensic Investigation, Brian Rankin, as a non-executive director. Before joining the University, Brian had an illustrious career as a forensic scientist with the Forensic Science Service and is the Immediate Past President of the Forensic Science Society, recently granted a Royal Charter and renamed the Chartered Society of Forensic Sciences.

He says, 'I was delighted to be asked and only too willing to help such a company with great potential. Angela and Dionne are really developing as young entrepreneurs.'



Study to find number one frozen shoulder treatment

By Gary Martin

A major national research project is set to find the most effective treatment for one of the most common forms of debilitating pain.

Frozen shoulder affects 10% of the UK adult population, causing severe pain and stiffness and impairing function and quality of life. However, there is limited high-quality evidence comparing the effectiveness of different treatments for the condition.

The UK Frozen Shoulder Trial (UK-FroST), funded by the National Institute for Health Research (NIHR) Health Technology Assessment (HTA) Programme, will compare the three most frequently used active treatments in the NHS.

The trial will be led by Professor Amar Rangan, clinical professor in trauma and orthopaedic surgery at James Cook University Hospital, who also holds an honorary professorship in Teesside University's Health and Social Care Research Institute. Managed by York Clinical Trials Unit, the £1.7m trial will involve 500 frozen shoulder sufferers across 25 clinical centres in the UK.

Treatments being compared are physiotherapy and two operating theatre procedures – keyhole surgery and controlled manipulation of the shoulder. A typical course of physiotherapy costs around £500, with keyhole surgery costing in the region of £2,200 and controlled manipulation £1,500, so the outcome could potentially save the NHS millions of pounds.



Nigel Hanchard (pictured), Senior Research Fellow at Teesside University and the physiotherapy lead for UK-FroST, says that the project is hugely important, both clinically and financially.

'We will be able to properly compare the three most-used treatment approaches to frozen shoulder in the NHS – not only in terms of their clinical outcomes, but also their cost-effectiveness. The importance of this study really can't be overstated.'

Nigel, who has himself been affected by frozen shoulder, adds, 'It is an extremely

nasty condition – very painful and it disturbs sleep and makes your day-to-day activities a misery. The pain makes you feel ill. But you still try to go about your daily business, so the suffering is hidden. You don't tend to get much empathy. That feeling of hidden suffering has been echoed by patients with frozen shoulder who we've interviewed as part of a separate research project.'

UK-FroST got underway in October 2014 and will run for five years.

Building bridges between research and business markets

Universities can and should do more to bridge the gap between research and business. Professor Zulfiqur Ali, Dean of Teesside University's Graduate Research School argues, in the latest edition of *International Innovation* magazine that universities can and should do more to bridge the gap between technology readiness levels to help new innovations enter the market.

In his 2013 report *Encouraging a British Invention Revolution*, Sir Andrew Witty challenged universities to go beyond knowledge transfer and to facilitate economic growth, recognising the need to maximise their engagement in the third mission alongside research and teaching. Similarly Horizon 2020, the EU Research and Innovation programme, is strongly focused on economic growth, jobs and social inclusion.



Technology's magnetism

Universities play a major role in supporting and stimulating economic activity within their regions, but there is still more that they can do to support the development and growth of regional economies. A significant issue is that universities can be large, complex organisations that are difficult to access; a particular problem for small businesses.

A further criticism levelled at university research is that it can be too focused on technology-push, so that problems are sought in the marketplace for a technology that has already been developed. This is in contrast to a technology-pull approach, where a technology is sought to address an existing problem.

Universities ideally wish to produce world-leading research that also leads to demonstrable impact, but it is also important to recognise that significant value can be created by incremental improvements since, by their very nature, breakthrough technologies are not generated very often.

When we work with business, we should focus on creating value based on our research expertise, rather than displacing activities that are already being carried out by the private sector. We also need to make it easier for businesses to access the different competencies within a university, preferably through a single gateway as recommended in the Witty report.



Sector support

Measure of maturity

In addition to carrying out research and demonstrating proof of concept, universities should and could do more to bridge the gap between technology readiness levels (TRLs) – measures used to assess the maturity of evolving technologies – particularly TRL four, where laboratory testing has been carried out, and TRL eight, where the system has been fashioned into its final form and is ready for introduction into the market.

At Teesside University we support some of our researchers in bridging this gap by supporting the commercialisation of the intellectual property generated from our research, licensing technologies to existing companies and new university spin-outs. As an example, Anasyst Ltd is a start-up formed to commercialise some novel optical technology from the University and which we are now supporting to make a novel market-ready instrument. Funding activity that bridges the gap between TRLs four to eight is vital, as is work that might either produce breakthrough technologies or incremental improvements.

If we can improve the process of getting technologies into the market then we are better placed to address the challenges we face in some of the key sectors which drive innovation and economic growth, such as process, advanced manufacturing, digital and health.

One example of a sector with an exciting future is biologics, otherwise known as biotherapeutics. This sector involves the production of therapeutic drug products via biological means. In 2012, biologics represented 15% of the global pharmaceutical market, with seven of the top ten products, and this is predicted to rise.

Development requires complex cellular processing where biological cells are transfected with a vector to express a particular protein – drug product – and then selection of those cells with the most desirable characteristics. This is a time-consuming, iterative and expensive procedure where innovations within the process could deliver significant benefits.

The Tees Valley region has received a boost through the construction of the National Biologics Manufacturing Centre and builds on the longstanding presence of Fujifilm Diosynth Biotechnologies, a leading biologics company. Teesside University is also playing a role in supporting the sector.

For enquires about research at Teesside University, please contact the Graduate Research School on 01642 342532 or visit tees.ac.uk/research. Article courtesy of International Innovation www.internationalinnovation.com – a leading scientific dissemination service.

Bottom line benefits of healthy staff

Working to promote the health and well-being of your staff can pay dividends for both the employee and employer, says Teesside University's Assistant Chief Executive and Director of Human Resources Juliet Amos.

Investing in a healthy workforce is vitally important for any successful organisation. As a University, we feel our staff are our main asset and we do everything we can to assist their health and well-being.

Clearly this has a beneficial effect for our employees. Apart from the obvious health implications, the work that we do has a positive effect in terms of staff morale and helps to promote greater engagement amongst colleagues.

This helps employees improve their performance and their ability to do the job and consequently the University benefits. Since 2011, we have seen the amount of days lost to sickness reduce by 20%.

As one of the Tees Valley's largest employers – we have more than 2,000 staff – it is vital that we take a structured approach to staff health. However, it is important that all organisations, large and small, take a holistic attitude to how they manage their workforce health and well-being.

At Teesside University, along with South Tees Hospital NHS Foundation Trust and Middlesbrough College, we are taking part in the Healthy Settings initiative. This is a public health-led initiative which has been developed by the World Health Organisation and maps the health needs

of University staff and students with the support and interventions available through Public Health in Middlesbrough.

It takes a holistic and multi-disciplinary approach to well-being that assesses behaviour and environmental factors, and uses early interventions to support positive well-being.

As part of the Healthy Settings Initiative, we have just completed a series of staff focus groups to find out the health needs of our employees and where any gaps might be in our existing provision and we hope that this Initiative will assist us in bridging those gaps.

The University provides a range of services for the health and well-being of its staff and students.

The University's health and fitness centre in the Brittan building is extremely popular. For a small charge, staff and students enjoy unlimited access to the gym and fitness classes as well as the climbing wall and squash and badminton courts.

We also encourage opportunities for social sport amongst staff such as University walking groups and even ultimate frisbee games.

The Brittan building also houses the Well-being Centre where staff obtain advice, attend short courses and

workshops and access complementary therapy treatments.

Obviously, not all companies or organisations are able to offer the facilities or services that Teesside University can. However, even the smallest SME can take steps to encourage better health and well-being.

The key thing is to identify the main areas of staff health which may need improving. This can be a relatively straightforward task, done at a team leader level, by analysing sickness data and talking to their staff. Once the problems are identified, health champions can be appointed from amongst staff to look after well-being in the workplace.

A lot of support is available from public health authorities and it may be that companies and organisations can work collectively to improve their employees' health. For example, different companies on a business park might have a lot of different skills or facilities they can pool to help their staff.

Once an organisation takes steps to improve the health and well-being of its staff, it will soon see its efforts richly rewarded.



DigitalCity welcomes new entrepreneurs onto Fellowship scheme



A mobile web platform for bands, an interactive arts company and an audio production company are some of the latest digital businesses to be accepted onto the successful Fellowship scheme.

Five new businesses, comprising 13 entrepreneurs, have joined the DigitalCity Fellowship scheme at Teesside University.

The Fellows will spend the next few months receiving mentoring and advice from leading figures in their respective industries as they develop their products and ideas, as well as having access to the cutting-edge facilities at Teesside University. They will also receive up to £4,000 to cover living costs.

The DigitalCity Fellowship programme has already proved incredibly successful at launching new start-ups and is responsible for more than 260 new companies in the Tees Valley.

It has helped to create a tech economy worth more than £174 million and the only digital hotspot north of Birmingham, as ranked by the National Institute of Economic and Social Research.

Mark Hill, Technical Director of DigitalCity, says, 'These are some very

interesting new businesses and we are delighted to welcome them onto our Fellowship programme.

'Our aim is to reduce a lot of the risk associated with early-stage start-ups to enable these entrepreneurs to make their businesses a success.

'At the same time we hope that, like many of our previous Fellows, they will be able to contribute to a collaborative digital economy here in the Tees Valley.'

This project is part-financed by the European Regional Development Fund (ERDF), managed by the Department for Communities and Local Government.

The ERDF Competitiveness Programme 2007-2013 is bringing over £300m into the North East to support innovation, enterprise and business support across the region.

The deadline for the next round of Fellowships is 1 December. For more information call 01642 384334 or visit digitalcityinnovation.com/fellowships.

THE NEW FELLOWS ARE:

- > **Oceloid**, formed by Teesside University graduates Thomas Philips, Melissa Fionda, Jorden Hildrew and Conor Doyle.
- > **Gigabout**, formed by Teesside University graduates Fraser Oxlee, Billy Floyd and Joshua Allan.
- > **Sound Particle Labs**, formed by Christopher Winter, Damon Jenkin and Luke Whinfield who studied Teesside University degrees at Middlesbrough College.
- > A web design and app development company formed by Newcastle College graduate Stewart Platt and University of Central Lancashire graduate John-Michael Hedley.
- > **Animated Finance**, formed by University of Wolverhampton graduate Nick Lewis.



EXAMINING THE PAST WITH A KEEN EYE ON THE FUTURE



Forensic anthropologist Dr Tim Thompson's revolutionary teaching techniques have been rewarded with a National Teaching Fellowship. His company recently released its first app, providing digitised models of bones and skeletons and his third book is due for publication. Dr Thompson can also add time travel to his list of achievements. He spoke to Gary Martin about his research and future ambitions.

As somebody who thrives on trying out new ideas, the National Teaching Fellowship gives Dr Thompson the perfect platform to build on his already impressive portfolio of work.

The £10,000 Fellowship recognises excellence in higher education teaching and learning. He plans to use the money to develop digital teaching tools and hopes to take on a research assistant to provide an opportunity for an ambitious graduate.

A Reader in Biological and Forensic Anthropology, Dr Thompson's research helps to shed light on people and populations using unique methods of bone identification and his work has revolutionised the way that bone identification is taught.

'To receive the Fellowship was a very proud moment. I spend a lot of time thinking of new and interesting ways of teaching and it was very nice to see that acknowledged,' he says.

Three years ago, Dr Thompson set up Anthonomics and the company has recently released its first app – Dactyl – which provides digitised models of bones and skeletons, allowing users to zoom in and out and access notes on specific features of interest.

'It is a way of accessing bone material when not in a laboratory,' explains Dr Thompson. 'I use it when teaching a lot of people and it is very useful in places where they do not have access to skeletal material.'

Dr Thompson's third book, due for release in the New Year, has been a real labour of love. *The Archeology of*

Cremation re-examines a subject which he specialised in for his PhD thesis over ten years ago.

'It is a really difficult subject to study and I have waited a long time to write this book.'

As well as his research and teaching commitments, Dr Thompson has starred in a Teesside University marketing campaign where he was depicted as a superhero with the ability to time travel.

'I enjoy getting involved in that kind of thing – it is good fun and people always seem to find my subject quite interesting. It is another way of supporting the University and giving something back.'

Alongside developing his own research group at Teesside University, Dr Thompson currently chairs the University Research Ethics and Integrity Committee. He says, 'In the future I hope to develop my research group and become more involved in the University in terms of policy and decision making.'

'Teesside University is a really positive and supportive environment to work in and I know that I would not have had the same opportunities if I had worked elsewhere.'



It is a really difficult subject to study and I have waited a long time to write this book

Enterprise Clinic



WITH STEVE DOUGAN

Steve Dougan is Teesside University's senior business advisor. He coaches and supports graduate entrepreneurs as part of an award-winning business incubation project funded by the European Regional Development Fund.

If you have any questions for Steve email s.dougan@tees.ac.uk. Please include your contact details.

Q: I am thinking of starting a business. Where do I start?

I want to use this issue's clinic to point you in the direction of the resources that you need to make a great start and do all the right things first. This isn't so much an article, it's more a 'Where to start chart'.

Start-ups are not businesses

For most people starting a business is a step into the unknown, a leap of faith from the certain and structured world of education or employment to the uncertainty and freedom of self-employment. The basic answer to 'Where do I start?' is remove as much of the uncertainty as possible before you take a single step further down your chosen path.

'A startup is a human institution designed to deliver a new product or service under conditions of extreme uncertainty.'

Eric Ries – Silicon Valley entrepreneur and pioneer of the lean start-up movement

Extreme uncertainty – that is the condition that we want to try and mitigate. When Eric delivers his lectures around the world his first slide says 98% of start-ups fail. All start-ups are a gamble, all entrepreneurs are gamblers, risk-takers, but we need to take educated risks, we need to know the form of the horse, the condition or going of the ground before we place our bet.

Uncertainty

If you are Volkswagen and you are launching a new Golf, the Mk7, you already know (it is your seventh iteration after all) that you have customers for your product. More than that, you understand their needs, their buying

behaviours, their expectations, how much they will pay and how often they will buy your product. VW just have to build a superb product based on their deep understanding of Golf buyers and then deliver on it, on budget, on schedule, to the quality levels their customers expect – and it will sell. When we start a new business to deliver a new product or service we are entering into the unknown where assumptions and untested hypotheses are the key ingredients for failure.

In these conditions of extreme uncertainty, writing a business plan, projecting three year forecasts, deciding when to open your second branch etc., is probably not the best course of action. Equally, spending time and money building complex websites, acquiring stock or purchasing equipment is probably a little presumptuous.

We need to engage with our target customers early on, expose them to our value proposition or offer and measure their response. Before we build a single car we need to know that we have customers.

Five steps to starting up

Don't start by building a website, designing a logo or buying stock. Your first business investment needs to be an investment of time, an investment in developing you. Take some time out to learn about start-ups, not business plans or accounting, just start-ups.

Follow these five steps:

1. Go to the library (or Amazon) and get a copy of the following book: *The Lean Startup* by Eric Ries
2. While you wait for the book to arrive, or download, watch this video of Eric Ries

delivering a keynote about the Lean StartUp method – <http://youtu.be/fEvKo90qBns>. It will give you a headstart when his book arrives.

3. When it arrives set aside some time and read Eric's superb book (or at least make a good start).

OK, so now you have a good introduction. If you want to learn more, Teesside University's enterprise team have developed a free two-day course to help you develop more understanding. You can book it at www.startupteesside.eventbrite.com or if you would like to have a free one-to-one review with an enterprise consultant, contact sue.clark@tees.ac.uk.

4. Now it's time to run some experiments to test your hypothesis and validate or invalidate your assumptions.
5. If you have read through Eric's book or watched the video you will understand the importance of validation. Start by downloading and printing (as big as you can afford) this wall chart: www.javelin.com/experiment-board.htm, this video will help you to use the experiment board to test your assumptions and validate your business ideas. <http://youtu.be/F-5lyj9A1MU>

By following these five steps you have started the process of learning before you start building a business. Validated learning is the key to reducing the uncertainty and risk inherent in starting your own business.

If you have any questions regarding business start-up support, incubation services or training, please contact the Enterprise Team on 01642 384068 or email Sue.Clark@tees.ac.uk

Explosive report reveals true extent of anti-Islamic abuse

By Gary Martin

Muslims are being attacked on a daily basis and children as young as ten have been the perpetrators of some abuse – according to a report by Teesside University’s Centre for Fascist, Anti-Fascist and Post-Fascist Studies.

The report, compiled by Dr Matthew Feldman, a Reader in Teesside University’s School of Arts & Media, and Mark Littler, a Research Associate, is based on data from the Tell MAMA (Measuring Anti-Muslim Attacks) project set up by Faith Matters. It covers a ten month period from the beginning of May 2013 to February 2014.

During that time, there were a total of 734 self-reported cases of anti-Islamic abuse. This ranged from online abuse and threats, to street-based assaults and extreme violence.

Significantly, there was a huge spike in reported incidents in the wake of Drummer Lee Rigby’s murder in Woolwich in May last year. The week following the Woolwich

murder accounted for almost a fifth (17%) of all incidents reported to Tell MAMA in the ten month reporting period – with 127 incidents reported during that week alone. Almost half, 354, of the 734 incidents reported during the ten month period took place in May and June of 2013.

Dr Feldman, who is Co-Director of the Centre for Fascist, Anti-Fascist and Post-Fascist Studies, says there has been a troubling backlash against Muslim communities in the aftermath of Lee Rigby’s murder.

‘Muslims remain amongst the most likely minority group in Britain to be targeted for a hate crime. Trigger events like the murder of Lee Rigby clearly magnify the possibility of far-right groups and others victimising Muslims simply for who they are and what they believe.’

Teesside University’s Centre for Fascist, Anti-Fascist and Post-Fascist Studies is the first research unit in Britain dedicated to the study of the far right and its violent opposition, and this is the second report it has compiled based on data from the Tell MAMA project set up by Faith Matters. Faith Matters was founded in 2005 with the aim of reducing extremism and inter-faith tensions.

The report shows that fewer than one in six people who reported incidents to Tell MAMA actually went to the police. It also reveals that 60% of perpetrators were aged between 10 and 30 – suggesting anti-Muslim prejudice among a younger generation raised in the shadow of 9/11 and 7/7.

Of the 734 reported incidents, 599 of them were online abuse and 135 were offline attacks. On average there were more than two cases reported every day between 1 May 2013 and 28 February 2014. Nearly half of all online incidents were linked to far right organisations. The majority of victims (54%) who reported abuse to Tell MAMA were female and were often wearing items of clothing associated with Islam.

Dr Feldman says, ‘This striking figure might indicate a greater willingness to report anti-Muslim attacks. Or, on the other hand, Muslim women could be seen as more visible targets because of the traditional clothing they wear such as the hijab or abaya.’

‘While Britain remains a place of inclusion, stubbornly high figures of anti-Muslim incidents also remain, and demand attention from policymakers and all people of goodwill in Britain alike.’

Fiyaz Mughal OBE, Director of Tell MAMA, says anti-Muslim attacks, especially against women, are under-reported. ‘We know we are only getting a snapshot of what’s happening, but it is clear that fear and apprehension is evident among Muslim women.’



Award-winning company praises 'go to' University

By David Roberts

An award-winning recycling company is going from strength to strength thanks to its partnership with Teesside University. WRL Glass Media, in Middlesbrough, takes unwanted glass and processes it into granulated form for applications such as water filtration and shot blasting.

Since it was taken over by parent firm Ward Recycling in 2012, the business has seen its sales steadily increase and its sales in foreign markets were recently recognised with the New Exporter prize at the North East Process Industry Cluster (NEPIC) annual dinner.

The company has recently announced the opening of a new office in Prague to service the Czech Republic and has successfully exported to France, Germany, Portugal, Spain, Belgium, The Netherlands, Greece, Cyprus, Israel, Italy, Iceland, Denmark and Ireland. WRL Glass Media has credited a lot of this success to its ongoing work with Teesside University.

Ward Recycling took over WRL Glass Media when its previous owners went into administration. The glass recycling market was new to Ward Recycling and the firm turned to Teesside University for help to get the PAS102 accreditation which reclassifies waste to a secondary product. Once that accreditation was achieved, WRL Glass Media was helped to obtain a Regulation 31 certificate which allows the granulated glass to be used for filtration for human consumption – one of only two companies in the UK to achieve that standard.



The University has also worked with WRL Glass Media on several other projects including:

- > a corporate video for the company website
- > measuring its carbon footprint through the University's Resource Efficient Pathways project
- > export development of a new product with the Enterprise Europe Network
- > help with obtaining research and development tax credits

Gareth Godwin, Manager, WRL Glass Media says, 'When our partner went into administration, we were left with a choice to either cut our losses or to take on the glass recycling plant and remain in the industry and learn about how we could reconfigure the business. That was when we contacted Teesside University who supplied us with all the information we needed to get the PAS102 accreditation.

'There's barely a week goes by that I don't contact the University – it has become my 'go to' company. Like a lot of people I wasn't aware of all the different things the University could do for companies like ours, but it has been a massive help.'

Gareth, who is enrolled on a part-time MBA course at the University's Darlington campus, added, 'What the University does needs shouting from the roof tops because it has really helped to point us in the right direction.'

Suhail Aslam, Head of the Teesside Manufacturing Centre says, 'The work we have done with WRL Glass Media shows the breadth of services which we can offer to business. What they are doing recycling unwanted material into a usable product is extremely useful as society looks to reduce the amount of waste it produces'.

'WRL Glass Media was a worthy winner of the New Exporter prize and we are delighted to have been able to play a part in the company's success.'

Partnership helps Landscape Architects unlock new technologies

Newcastle and London-based urban designers, landscape architects and master planners, Colour, are finding new ways of implementing the latest technology in their work thanks to a partnership with Teesside University.

Colour has taken on two members of staff at its Newcastle headquarters with the help of different schemes run by the University to help companies recruit talent and develop new skills in their business.

The company has used a Knowledge Transfer Partnership (KTP) and a Knowledge Exchange Internship (KEI) to investigate ways of implementing Building Information Modelling (BIM) within its business.

BIM is a concept that uses a combination of processes and technologies to develop a digital representation of physical and functional characteristics of a building.

Henry Fenby-Taylor was taken on by Colour in November 2013 on a KTP as a BIM system designer to apply BIM project management standards and to enhance software productivity and efficiency.

KTPs typically last for two years and are a collaboration between a University and a company. They are part-funded by Innovate UK to help businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills.

The project has already proved so successful that Henry has been appointed by the Landscape Institute, the Royal Chartered Institute for Landscape Architects, to write a major new book on BIM for landscape.

BIM for Landscape will be the first book of its kind, and is aimed at landscape practitioners, project leaders and decision-makers working with landscape on a BIM project.

Henry says, 'Having the chance to work with both professionals and academics in this area is unique and we are doing some cutting edge work.

'My role is more research focused and so I can afford to experiment and try new things. It means I can look at new models of doing things and it's not going to impact on the company.'

Adam Hay has just completed a 12 month KEI at Colour and is now employed permanently at the company, where he has helped to integrate BIM into its projects.

KEIs, unique to Teesside University, are part-funded by the European Regional Development Fund and employ talented graduates in companies which are looking to solve a particular problem or implement a specific project.

Over the course of the 12 months he has applied BIM to a live project, the new Newcastle College Gateway faculty, and collaborated with Ryder Architecture on their winning bid in the Build Sydney 2013 virtual design competition for a new convention centre in Sydney, Australia.

Adam says, 'I've been using the technology to help the landscape architect. It's meant I've been kept very busy with lots of new problems to solve and fix, and also learn new knowledge and skill sets.

'It's really helped to move me on in terms of furthering my skills.'

Stephen Blacklock, Technical Director at Colour, says, 'We're extremely pleased with the work that we've been doing with Teesside University.

'Adam's KEI has allowed the company to take on more complex BIM projects and is also helping the company drive efficiencies and work towards ISO accreditation which will help secure more work.

'The KTP is more of a problem-solving position with a lot more academic support but hopefully it will enable us to develop solutions which will allow us to stay at the forefront of our industry.

'It's fantastic that there are these different ways in which Teesside University has been able to support our business. We're now thinking of running another KEI project in our London office.'

The KTP and the KEI were supervised by Professor Nashwan Dawood and Dr Mohamad Kassem from Teesside University's School of Science & Engineering.

Professor Dawood says, 'The use of BIM technology in landscape architecture projects is quite rare so the work being carried out at Colour should have some extremely interesting outcomes for the industry.'

Dr Kassem adds, 'This is benefiting the University through an increased understanding of current and emerging technologies used in landscape architecture and potential and limitation of BIM technologies.

'It's also very pleasing that Adam and Henry have been able to collaborate and feed into each other's individual projects.'

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