

enterprise
creativity
innovation
community
excellence
knowledge
collaboration
culture



Issue 2 2009

Environmental enterprise
MyOcean, our future
International focus

Taking enterprise east
Investing in Cornwall
Entrepreneurship training



University of Plymouth
the enterprise university



enterprise





enterprise in action

Professor Wendy Purcell



Sustainability in enterprise

Welcome to this second edition of *Enterprise*. In September we hosted our inaugural enterprise awards evening. I was delighted at the breadth and depth of the entries we received. Our staff, students, graduates and partners demonstrate what we can achieve through being bold, innovative and creative and embracing an enterprise-led approach to all our activities. Through these pages, I am proud to share with you a selection of our many success stories.

Our enterprise vision builds on the heritage of the University and is one that supports and reflects the breadth and depth of talent here. An important part of our enterprise journey is distinguished by the significance of sustainability and ensuring we develop in line with our economic, environmental and social goals. With that in mind, we have chosen sustainability – in all its various guises – as our theme for this issue.

What is most striking, and an opportunity for real growth, is the inter-play between the University's strengths in the sustainability agenda and that of enterprise. This exciting space is one of ethical, environmentally-aware,

community-engaged, and responsible enterprise. It is an opportunity to build upon an already excellent reputation for working with business and community groups, and develop leadership and skills in social enterprise.

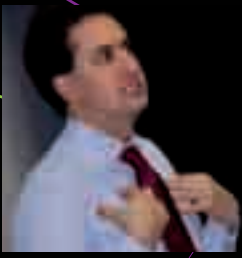
As you look through this magazine, you will find evidence of environmental sustainability and best practice; our long-term approach to supporting our region; our community and international outreach work and our partnership activities. These are the very powerful illustrations of our enterprise approach.

A particular example of this recognition is our recently awarded silver status in the 'Universities that Count Index' of corporate and social responsibility. This places us ahead of many businesses who have been involved in these assessments for much longer.

I know you will find something in these pages to interest and inspire you. If you would like to find out more or join us on our journey, please email enterprise@plymouth.ac.uk.

Professor Wendy Purcell
Vice-Chancellor and Chief Executive





4-5

Keeping sustainability
centre stage
SERIO report makes splash



6-7

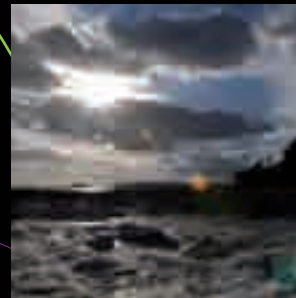
Putting environmental
science in the picture
Enterprise and sustainability
are in our nature



8-9

Environmental enterprise
Honouring environmental pioneers

10-11



Sea View
MyOcean,
our future

12-13

Showcasing marine excellence
Protecting our coastline
Pioneering oceanographic excellence



14-15

International focus
The Brazilian connection
Making Romanian classics more accessible



16-17

Canadian collaboration
Taking enterprise east

18-19

Investing in Cornwall
Funding feeds Dental School growth
The power behind renewable energy

20-21

Sharing talent, knowledge and ideas
Entrepreneurship training for teachers
Community collaboration



22-23

Designed with sustainability in mind
Under the microscope
Creating enterprise opportunities



24-25

Entrepreneurship
Breathing life into new enterprise

26-27

A risk that's reaping its rewards
A toast to entrepreneurial spirit

ENTREPRENEUR

enterprise in action



Keeping sustainability centre stage

At Plymouth, sustainability is a fundamental part of our enterprise culture. Our green credentials are undisputed – but we never stand still. Our commitment to continual improvement means we strive to keep sustainability at the heart of all our activities.

> With the support of our Centre for Sustainable Futures – a government-awarded Centre for Excellence in Teaching and Learning – a comprehensive Environmental Management System was created, ensuring that the development and implementation of sustainable practices will always remain a priority for the University as a whole, and in all areas of the curriculum.

> Earlier this year we became one of just three UK universities to receive ISO 14001 accreditation, the international standard for an organisation's environmental performance. As part of our assessment, every aspect of the University's operations was audited, from facilities and food preparation to waste management and provision of environmental education in our courses.

> As *the* enterprise university, we recognise our wider obligations to society and our aim is to become an exemplar in sustainability, social responsibility and responsible

business practice – engaging with our wider community and continually monitoring, improving and sharing our achievements.

> We are proud to be ranked the UK's best-performing university for environmental credentials. In the annual Green League produced by People & Planet, the nation's largest student group campaigning on the environment, we have outperformed 126 other universities since the league table was launched in 2007.

> This year, we were shortlisted for three Green Gown Awards in recognition of some of our particular achievements: a model for institutional change and transformation, a sustainable community enterprise, and PlymDESK5, a full life-cycle desktop service.

> The University recently hosted Secretary of State for Energy and Climate Change, Ed Miliband MP, and showcased its expertise in areas such as marine research, human health and sustainability.

Ed Miliband MP, at the University of Plymouth



Students' Union members during Green Week





enterprise in action

SERIO report makes splash

A report prepared by the Socio-economic Research and Intelligence Observatory (SERIO) has recently made a significant impact on the current public debate about regional differences in water and sewerage service costs. SERIO, a collaboration between the University and Plymouth 2020, one of our local strategic partnerships, undertook the study in response to the Walker Review – an independent assessment of the charging for water and sewerage services.

The debate focuses on whether the cost of the environmental improvements these services bring, such as cleaner beaches and bathing water, should be paid for by people who live in the areas affected, or amongst all those who enjoy the benefits – including, for example, holidaymakers and tourists visiting the seaside.

SERIO's review was undertaken in support of Linda Gilroy MP, and prepared with input from Professor David Wheeler, Pro Vice-Chancellor and Dean (Designate) of the Plymouth Business School, and Professor Simon Payne, Head of Plymouth Law School and Associate Dean

of the Plymouth Business School. The report evaluates the evidence underpinning the debate and includes an overview of the regional differences in water and sewerage service costs, a review of policy documentation and academic literature, and an analysis of visitors and trips to the South West.

Parts of the report were extensively quoted in Parliament on 14 October 2009 by MPs from around the South West, who praised the content and rationale of the work, and its value in furthering the debate.

“ I have a copy of that report – it is an excellent contribution, ”

commented Teignbridge MP,
Richard Younger-Ross.

Putting environmental science in the picture

The University's research and development attracts interest at home and abroad, leading to relationships with businesses as far afield as China and the USA. Dr Alex Nimmo Smith, Lecturer in Marine Physics and Marine Sciences, has recently signed a contract with a Seattle-based company, as he explains:

“ The study of microscopic marine particles provides scientists like me with a very sensitive indication of wider environmental trends and conditions, improving understanding of what's happening in our oceans and how subtle changes are influencing factors such as fish stocks. The problem is that these particles are difficult to accurately observe, undisturbed in their own natural environment. ”



Marine Physics and Marine Science researchers

“ This predicament led me to develop a special holographic camera for my research into marine particles. Recognising the unique benefits of my design, I worked with University of Plymouth Enterprises Ltd, and in January signed a ten-year licence agreement with Sequoia Scientific. Based in Seattle, it is the world-leader in producing instruments for the measurement of suspended particles in the natural environment. ”

“ I visited Sequoia Scientific in May to ensure the smooth transfer of product know-how, and to discuss commercial development of the camera. The whole process has gone incredibly well and the new system should be commercially available from Sequoia before Christmas, marketed under the name LISST-HOLO. ”



Alex and his camera

Enterprise and sustainability are in our nature

The University's Centre for Sustainable Futures (CSF) works to encourage excellence in education for sustainable development across the University, and throughout the regional, national and international communities with whom we engage.

As part of its recent work, the CSF has initiated and co-ordinated plans for a major collaborative programme that will transform one side of Portland Villas on the University campus into a vibrant, multi-functional garden.

Together with staff and students from Health, Arts and Science, the centre has spent the past six months developing a scheme that will

feature medicinal plants in a physic garden, student vegetable plots and peaceful meeting places with garden furniture designed and built by students.

It's intended that the garden will become a unique and valuable resource for landscape architect student training, as well as a focus for innovative teaching and learning across a wide range of other disciplines.

Alan Dyer, Director of the Centre for Sustainable Futures



Environmental enterprise

Such is Dr Mike Foulkes's dedication to enterprise that he was named a winner of the Vice-Chancellor's Enterprise Awards held in September.

Mike manages the University's Analytical Research Facility (ARF), an important resource for environmental, clinical, medical, nutritional, food, drugs and water analysis. The ARF has a strong international reputation for elemental, speciation analysis and radio-isotope geochronology. The facility underpins research, teaching and contract activities and also supports inter-disciplinary research projects, as well as those conducted jointly with external partners.

Generating external income is a competitive business, particularly when bidding for commercial contracts, and having accredited status is essential. After integrating the newly-developed Consolidated Radio-isotope Facility into his plans, a considerable amount of writing, and an extensive laboratory re-organisation, Mike and his colleagues in the Accreditation Group succeeded in gaining ISO 9001:2000 accreditation in September 2007.

Our advanced industry-standard laboratory skills mean students have more chance of successful employment, and with our accredited status – acknowledged in peer-reviewed research articles and research grant applications – the quality of our research data is guaranteed and will contribute significantly to our Research Excellence Framework submissions,

commented Mike.

Recognising the commercial value of accreditation, Mike is working to accredit other areas, including fluid modelling, particle sizing, electron microscopy and palaeo-magnetism.

Scott Wilson, an international design and engineering consultancy, required the measurement of total arsenic and individual arsenic species in soil samples from potentially contaminated land. The ARF is one of the few laboratories in the UK to be able to undertake this type of analysis. Catherine Pritchard, Engineering Geologist at Scott Wilson, said:

Scott Wilson used the laboratory service at Plymouth for specialist contamination testing and we would certainly use it again. The lab kept us informed on a regular basis with the progress of the testing and the scientific interpretations and information we received in the final report were useful.

ARF services are now in increasing demand, locally, nationally and internationally, with clients including the Barden Corporation, Imerys Minerals, BP and Viridor Ltd. Contracts with universities in Spain, Ireland and Canada have also been secured, and ARF is now involved in certification programmes with the New York Health Department and the International Atomic Energy Agency.



Dr Mike Foulkes at the ARF



Rebecca Hosking



Pen Hadow

enterprise in action

Honouring environmental pioneers

Along with the hundreds of graduates and families celebrating at September's graduation ceremonies – which were once again held against the magnificent backdrop of Plymouth Hoe – were 17 honoraries with strong connections to the South West.

These honorary graduates are chosen by the University in recognition of their outstanding contributions to their chosen field. Among this year's were several distinguished environmental pioneers, including explorer Pen Hadow, campaigner Rebecca Hosking, Juliet Davenport, who set up the Good Energy Company, and Guy Watson, founder of Riverford Organic Farm.

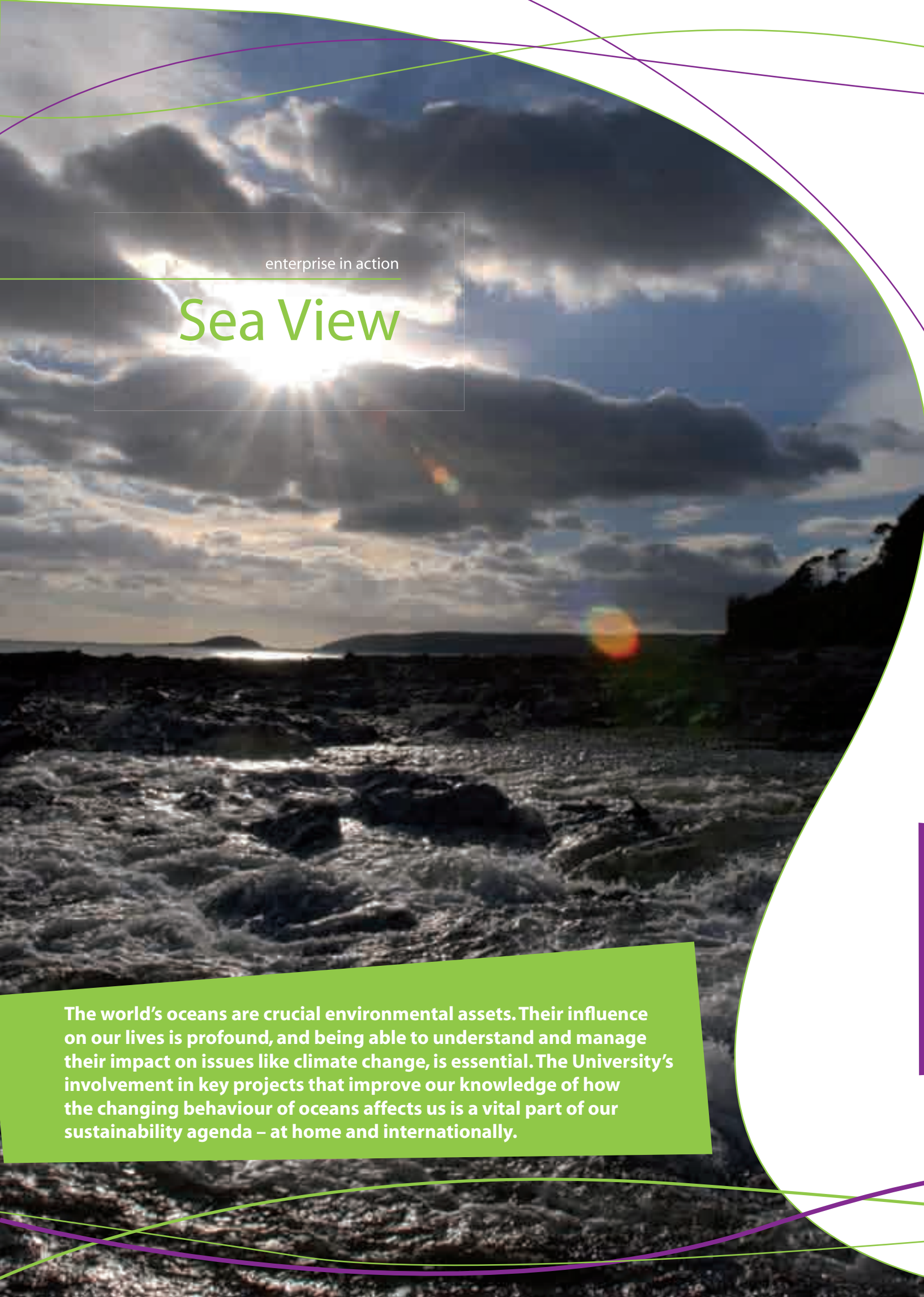
Guy was born and raised at Riverford Farm in Devon, as one of five children, all of whom are now running food businesses from the farm. Guy started Riverford Organic Vegetables in 1986 with little more than three acres and a wheelbarrow, but has seen his business grow to one that employs 400 people and with sales of £35million. Their vegetable box scheme delivers to 45,000 households a week and has joint ventures with regional farms to ensure customers receive locally grown produce. Guy, who received an Honorary Doctorate of Law, said:

|| Social enterprise and sustainability are fundamental to Riverford Organic Vegetables. The success of the business, and the wonderful accolades we have received from the likes of the Royal Agricultural Society and BBC Radio Four, demonstrate that you can run an enterprise on these principles and be successful. ||

Rebecca Hosking, who was awarded an Honorary Doctorate of Science, ran a successful campaign to have all of the plastic shopping bags removed from stores in the Devon town of Modbury. This she did after her documentary *Message in the Waves* recorded the devastating impact that plastic waste was having on marine wildlife in Hawaii.

|| I hope the film-makers of tomorrow, some of whom will be graduating this year, will find the opportunities to focus on the really important issues for our society and our planet, ||

said Rebecca, who has returned to documentary-making after running the landmark campaign.



enterprise in action

Sea View

The world's oceans are crucial environmental assets. Their influence on our lives is profound, and being able to understand and manage their impact on issues like climate change, is essential. The University's involvement in key projects that improve our knowledge of how the changing behaviour of oceans affects us is a vital part of our sustainability agenda – at home and internationally.

MyOcean, our future

We are one of only two UK universities selected to work on the €55m landmark project, MyOcean. Funded by the European Commission, this ambitious programme brings together 60 leading marine organisations, including Mercator Ocean and IFREMER (France), the Met Office and Plymouth Marine Laboratory, to create a unique pan-European resource for ocean monitoring and forecasting.

With 28 countries involved, MyOcean is the first step towards establishing the new European Marine Core Service – an important building block of GMES (Global Monitoring for Environment and Security). The aim is to provide vital information on issues like maritime security, oil spillage prevention, climate change and marine resource management.

Our specific involvement is in the numerical modelling of ocean dynamics, and the calibration and validation of prognostic services in the Black Sea – an area where we have already achieved international repute. When the European Marine Core Service is set up, it will offer the best ocean information available, assimilating space and in-situ observation into 3D models of ocean circulation and covering aspects such as temperature, salinity, currents, ice extent and sea levels. The high-quality products will be produced through a strong cross-fertilisation between the operational and research communities.

|| Plymouth's involvement is testament to its research quality in this field and will further contribute to the growing prestige of marine science excellence that exists both within the University and the region, ||

said Professor Georgy Shapiro.

|| It's hugely exciting to be working alongside Europe's leading marine authorities on a project that's going to have such significant outcomes for the future. ||

Professor Georgy Shapiro, Lead Researcher for the University.

Professor Georgy Shapiro



Showcasing marine excellence

In October, Plymouth's international reputation for marine excellence was highlighted once again, when the University hosted a high-profile visit from Professor Alan Thorpe, Chief Executive of the Natural Environment Research Council (NERC), the organisation that funds world-class science in universities and research institutions to the tune of over £400m each year.

The University is one of the largest centres of marine and maritime excellence in Europe. In recent years we have succeeded in attracting around 80 NERC grants totalling almost £8m in recognition of our world-leading research on oceans, aquaculture, biological indicators, green energy and climate change.

Professor Thorpe met our foremost marine and environmental scientists and learned about the exciting research happening in areas including biogeochemistry, marine biology, environmental toxicology, nanoscience, coastal engineering and renewable energy.

The University's research leaders, led by Vice-Chancellor and Chief Executive Professor Wendy Purcell, also discussed how Plymouth can play a pivotal role in NERC's new international science strategy, 'Next Generation Science for Planet Earth', which aims to deliver the science needed to provide solutions to present and future global environmental challenges.

"One of NERC's underpinning goals is 'enterprising people delivering world-class science', which is exactly what we are doing here," said Professor Purcell. "This visit showcased how our enterprise-led approach is helping to unlock our potential as we work with our partners to ensure the best opportunities for our researchers and the wider community."

"The words Plymouth and marine are becoming increasingly synonymous within the national and international marine and maritime research communities," said Professor Thorpe. "NERC supports world-leading research at the University and in the Plymouth marine institutes."

Professor Alan Thorpe (second from right) on his tour of the University



Protecting our coastline

Climate change is one of the biggest threats to our coastline. Rising sea levels and increasingly extreme weather are major contributors to coastal erosion and flash flooding, so finding ecologically friendly ways to protect coastlines and communities is essential.

Pioneering oceanography

Plymouth has a rich naval heritage, and the University is delighted to be working alongside the Royal Navy in a unique initiative that will drive the collaborative development of research activities. Having recently signed an agreement with the Flag Officer Sea Training – Hydrography, Meteorology and Oceanography (FOST HM), to establish a Centre of Excellence in Naval Oceanographic Research and Education (CENORE), Royal Naval personnel will soon be able to study for postgraduate qualifications at the University.

In the UK, experts from the University are leading the way in tackling these difficult issues as a key part of the £8m THESEUS project – an initiative that addresses the defence of coastlines across the EU. Focussing on the stretch of coast between Plymouth and Exmouth in Devon, our work aims to integrate engineering and ecological principles to develop coastal defences and flood management strategies that are sustainable and environmentally sympathetic.

The research involves modelling wave conditions using future climate scenarios, and studies the vulnerability and strength of coastal defences.

“We are thrilled to be part of the THESEUS consortium as it allows us to extend the work on coastal flooding we have completed as part of the EU’s recent FLOODsite project,” said Professor Dominic Reeve, who led the team of University of Plymouth coastal engineers that was shortlisted as Best Engineering Team in the prestigious 2009 Times Higher Education Awards. **“Reducing flood risk not only means understanding the nature of extreme storms, but also being better prepared to respond to warnings and make changes to how we live so that we are more resilient against flooding episodes.”**

Equally important, from an ecological perspective, is the

design of engineering structures that will provide habitats for marine life, as well as strategies to manage the natural flood defences provided by salt marshes and sand dunes. **“Some of our recent work has shown that small modifications to coastal defences can create increased biodiversity and boost stocks of commercially important molluscs,”** commented the University’s Dr Richard Thompson. **“This funding provides exciting opportunities to test these approaches on a much broader geographical scale.”**

enterprise in action

ceanographic excellence

Led by a steering committee of representatives from the University of Plymouth, the University at Britannia Royal Naval College, FOST HM and other sections of the Royal Navy, CENORE will be linked with the School of Marine Science and Technology, the largest of its kind in Europe, and will be part of the Marine Institute.

“This is an exciting venture that allows a synergy of experience and development of ideas,” commented Professor Georgy Shapiro. **“It furthers the University’s reputation as a leader in both enterprise and marine expertise and we very much look forward to working with our new colleagues in this pioneering partnership.”**

Dr Duncan Priestley, of the University of Plymouth at BRNC, said **“CENORE offers the Royal Navy the opportunity to develop their personnel at postgraduate level, as part of an integrated approach to research and education. We expect officers to become participating partners in research programmes focussed on specific defence requirements.”**



Caption

enterprise in action

International focus

As a world-class university, we're totally committed to maintaining and cultivating a truly global outlook and helping our students to become global citizens. Our international links, partnerships and collaborations enrich lives and expand knowledge, and we continually seek to broaden the scope and scale of our overseas network.

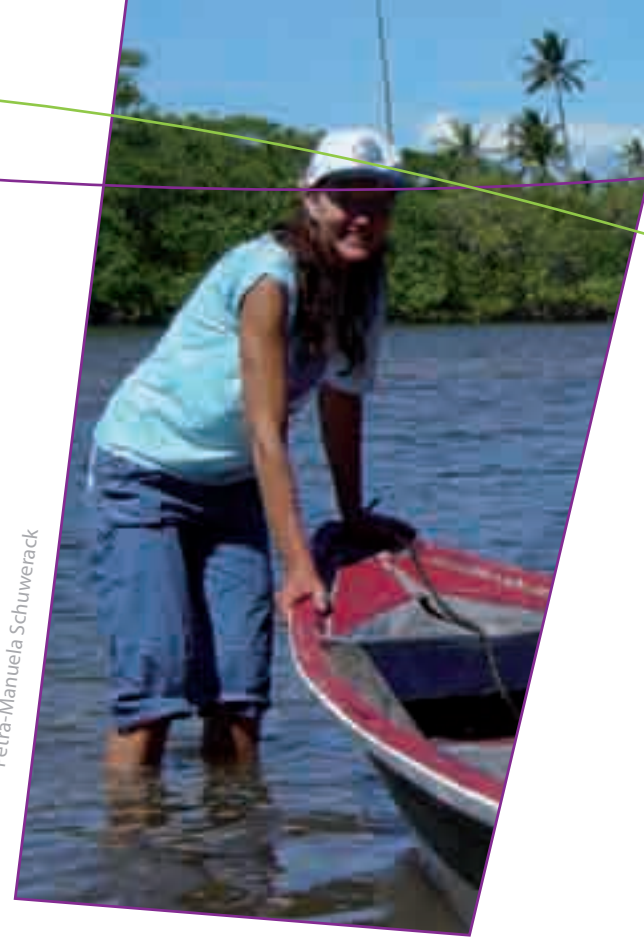
enterprise in action

The Brazilian connection

One of our most recent international associations has resulted in the launch of an exciting student and staff exchange programme with two leading Brazilian universities – the Federal Universities of Santa Catarina in south-east Brazil, and Paraiba in the North East.

The University of Plymouth Brazilian Connections programme has been awarded the International Networking for Young Scientists grant by the British Council, enabling staff and postgraduate students to collaborate on specific research projects. Initially, the focus will be on marine science with an emphasis on marine biology, ecotoxicology, botany, and coastal and environmental protection. But there are already plans to extend the programme to other disciplines.

Petra-Manuela Schuwerack



Dr Petra-Manuela Schuwerack, Marine Sciences Senior Lecturer at the University of Plymouth at Britannia Royal Naval College, founded and co-ordinated the exchange programme. She said:

It's a fantastic opportunity to take part in leading-edge international research, gaining a truly global scientific experience while working in a different climatic and cultural region. There's also the possibility of creating a jointly held MSc, and Brazil – like China and India – offers an emerging model of financial stability that could lead to potential employment opportunities for our graduates.



Making Romanian classics more accessible

Peninsula Arts, the public arts programme of the University, and University of Plymouth Press have recently won the rights to translate into English and then publish some of the greatest literary works ever created in Romania. It's a first for the UK and comes after the partnership beat stiff competition from 30 other organisations for the opportunity to print four works every year for the next five years.

The project represents a significant milestone in Romania's post-Ceausescu cultural heritage with the 20 works, including novels, poems and plays, as well as selected art from some of the country's finest painters, all chosen in a vote overseen by the Romanian Cultural Institute.



'The Couple' by Romanian artist Anca Boeriu

“ This is one of the most exciting projects we have ever been involved with, said Peninsula Arts Director Simon Ible. ”

“ We're used to being at the cutting edge of art and cultural performance, but this is something quite different. These works will open up a fascinating door into Romania's past and provide the chance for them to tell their story to the world. ”

Canadian collaboration

Our enterprise outlook stretches beyond geographical boundaries and manifests itself in commercial collaborations around the globe. This international perspective has resulted in many innovative projects in a variety of sectors and has helped establish our reputation for enterprise on the world stage. Our ongoing relationship with leading Canadian biotech company, Labopharm, for example, is creating economic advantage on both sides of the Atlantic. Professor Rob Sneyd, Vice Dean of the Peninsula College of Medicine and Dentistry and Consultant Anaesthetist, explained:

Our work with Labopharm started after they read a critique I wrote in a review article about the development of drug delivery for intravenous anaesthetic agents. The problem is, they don't dissolve well in water, and Labopharm recognised from the article that I may be able to assist them with new drug delivery technology they were developing.

Over the past few years, I've helped them review their technology, advised on pre-clinical proof-of-concept experiments, identified areas of future work, and created a development plan for them to use in licensing discussions with major players in the pharmaceutical industry.

As well as financial benefits for the University and the publication of two peer reviewed papers, Rob's consultancy work has also secured contracts for his colleague, Dr Ann Rigby Jones, whose expertise in computer modelling of drug disposition has helped compare new and existing formulations of anaesthetic agent.

The next stage for Labopharm's new drug formulation is clinical testing, and Rob has been able to introduce the Canadians to Plymouth company, Veeda Clinical Research, who hope to host the first clinical administrations.

We have collaborated with Rob on a range of clinical projects over a number of years. The introduction gives us an opportunity to develop new business in an area where we have world-class expertise,

said Veeda Group Medical Director, Dr Maurice Cross.

Professor Rob Sneyd and Dr Ann Rigby-Jones working on Labopharm's new drug formulation





enterprise in action

Dulekha and Rebecca

Taking enterprise east

Plymouth Business School lecturer Dr Dulekha Kasturiratne developed the application that enabled the University to be appointed by the British Council as an international knowledge partner to Sri Lanka. As a result, Dulekha was invited to take part in the Sri Lankan National Enterprise Week, organised by British Council Sri Lanka, in November 2008.

The event, part funded by the Prime Minister's Initiative 2, was designed to encourage graduate entrepreneurship and develop mutually beneficial, long-term partnerships between Sri Lankan and UK universities.

Dulekha, the only Sri Lankan conference delegate representing the UK, was accompanied by final year student, Rebecca Garner, who was a winner of the Placement Student Award at the Business School's Enterprise Awards in 2008.

During the conference, Dulekha promoted the University's enterprise culture and its benefits for Plymouth and the region, as well as a commitment to building international networks and collaborations. She also gave a series of presentations which emphasised the importance of incorporating entrepreneurial and enterprising activities across disciplines throughout university life. Her words generated considerable interest from the 350-plus conference participants, resulting in invitations to speak at various Sri Lankan universities and enquiries about possible partnerships. There has also been interest from the Board of Investment (BOI) in Sri Lanka for more long-lasting and substantial involvement between Plymouth and Sri Lanka.

More recently, in July this year, Dulekha and some of her colleagues met with the British Council's Country Director for Sri Lanka to discuss future involvement in the Entrepreneurial University Project and to explain more about what makes us *the* enterprise university.



enterprise in action

Investing in Cornwall

The University is driving forward its transformational agenda right across the region – and Cornwall is a vital part of that strategy. Our commitment to this unique county is evidenced through our long-standing presence and activity there, and we are working with our partners to achieve sustainable prosperity and opportunity for all. From our knowledge transfer activities through our active role in the Combined Universities in Cornwall, to our delivery of education and training for health professionals, we are working to unlock the potential of *Kernow*.

enterprise in action

Funding feeds Dental School growth

The Peninsula Dental School in Devonport, Plymouth, is the first purpose-built dental education facility in the UK for 30 years. Now, with additional sites in Exeter and Cornwall, the Dental School's Truro location is being extended and developed into a substantial new dental clinic with new office and research space, thanks to significant European funding for Cornwall. The facility will welcome its first patients in January 2010.

The funding was secured with help from the South West Regional Development Agency (SWRDA) which assisted the Universities of Plymouth and Exeter in preparing the complex bid against very tight deadlines.

Work will shortly be completed at the school's Knowledge Spa on the Royal Cornwall Hospital's NHS Trust site and at the nearby Tremough campus, providing first-class facilities for students and the local community. A fourth dental education facility will open at Derriford in early summer of 2011.

□ □ The Peninsula School of Medicine and Dentistry is a key strategic project for the South West. The Dental School development programme became our first completed application for convergence funding – a major new source directed into Cornwall. □ □

Sue Brownlow of the CUC.



The power behind renewable energy



Thanks to PRIMaRE, the Peninsula Research Institute for Marine Renewable Energy, the South West is fast becoming one of the world's most important centres for the development of renewable energy sources.

PRIMaRE was set up two years ago with funding from the South West Regional Development Agency (SWRDA), and is a joint venture between the Universities of Plymouth and Exeter. Its groundbreaking work with the Wave Hub project is helping to establish the world's largest wave energy farm ten miles off the north Cornish coast, which is due to be built next year.

During July, an additional £10.3m funding was secured for Wave Hub to assist with business collaboration and purchase new equipment, as well as helping support PRIMaRE's team of 75-strong world-class academics and researchers.

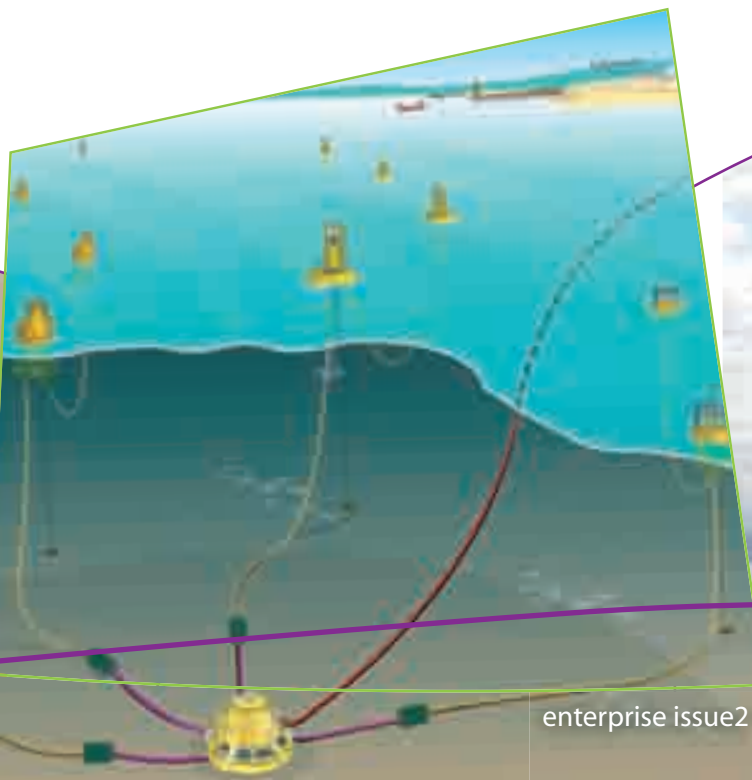
The funding will help establish a unique coastal engineering facility based in the Marine Institute on the University of Plymouth campus, and designed to attract wave energy developers to test their ideas.

New equipment like wave and tidal measuring devices, wave-making facilities, sub-sea electrical equipment, collision avoidance and monitoring technology, together with high definition underwater cameras and a state-of-the-art remote-operated vehicle, will make Plymouth the only institution in the UK able to offer such a combination of resources.

The additional funds will also support a dedicated technology transfer team working with businesses across the South West to ensure that research results directly benefit commercial competitiveness and create high quality job opportunities.

Martin Attrill, Director of the Marine Institute, commented:

|| This new funding recognises the very substantial expertise in marine energy research, development and innovation now present in the South West and provides additional support for engaging business with world-class research for the benefit of our region and the wider environment. We will generate important new marine knowledge to inform the emerging new energy sector, positioning the region at the forefront of marine science and technology expertise. **||**



Sharing talent, knowledge and ideas

We have long been strong supporters of Knowledge Transfer Partnerships (KTPs). They allow graduates to use their own, and the University's, knowledge and expertise in a real business environment on strategic projects for the benefit of all parties.

After a recently completed two-year KTP with the University of Plymouth, Bude-based furniture design and manufacturing company Zoefitg & Company Ltd are about to embark on their second KTP with us.

In the first project, KTP Associate Charlie Fowler, and Dr David Grieve and Dr John Summerscales from the School of Engineering, were involved in sourcing new expertise in advanced materials, such as polymers and composites, for component and structural design. The project resulted in an increase in sales of 25% and was independently assessed and recognised as being outstanding with the award of a grade A.

The KTP we embarked on with Charlie and the University of Plymouth has been highly effective. We have not only got an innovative market-leading product, but also a very detailed overall understanding of the market, which will be instrumental to the company's strategy in the development of other

products within this sector during the coming years,

said Ian Coates, Design and Engineering Director at Zoefitg.

Charlie, now permanently employed by Zoefitg as Design and Project Manager, added:

The project has not only had a massive impact on developing my skills and knowledge as a designer, but also my ability to run and manage a very long and challenging project. Without the overall support of the KTP system and structure, I believe I would have required a number of additional years working in industry before I could successfully complete, such a detailed and demanding project.

Charlie will also be company supervisor for the new KTP, overseeing the appointment of new associate Luke White. The project will focus on establishing a new product development methodology in the design of a highly configurable auditoria seating solution that will allow access to a new market sector.

Entrepreneurship tr

Developing teachers – and those they teach – through innovation, creativity and enterprise (ICE) is the aim of a new project in which the University's Faculty of Education is working with Cornwall College.

The project, ICE House, is a collaboration between the faculty's School of Secondary and Further Education Studies and the School of Education and Training at the college. One of five themed projects supported by the European Social Fund and the Combined Universities in Cornwall that will increase the level, effectiveness and profile of enterprise and entrepreneurship skills and culture in the county, it aims to research, rewrite and embed innovation, creativity and enterprise throughout the University's Initial Teacher Training partnership course, the Diploma in Teaching in the Lifelong Learning Sector.



Community collaboration

Collaboration plays a major part in work across the University. We believe that successful partnerships can drive innovative new approaches, producing more efficient, more effective and more inspiring outcomes.

The benefits of collaboration are clear in Sally Lewis' ongoing social enterprise work. Sally, lecturer and Development Officer in the Faculty of Health, is driving a pioneering initiative that brings together University placement students with Dartmoor Prison, Shekinah Mission, Age Concern and the Eden Project, to address the health, resettlement and employment needs of prisoners and ex-offenders over the age of 50.

Changes in UK demographics and sentencing policy reforms mean that more prisoners and ex-offenders are suffering from age-related health and social problems that prison or resettlement centres are not always able to meet. Sally's work involves providing health students for placement at the prison or in resettlement centres to provide services, from podiatry to dietetics. The placements prepare students for dealing more effectively with elderly ex-offenders when they return to the community — and the ex-offenders benefit from improved healthcare.

This groundbreaking community initiative has presented major challenges, including resolving issues around clinical supervision in a non-clinical setting, ethics, health and safety, and availability of health professionals to undertake student supervision. The project continues to require careful co-ordination of partnership activities and management of multi-disciplinary teams from many areas of the University.

Students have provided supplementary health services at non-clinical settings using a variety of new media techniques. Distance learning packages are being developed to help prison officers understand the health needs of elderly prisoners, and e-learning materials are being created to provide offenders with the opportunity for re-training.

“It's a complex project that has so many different aspects,” said Sally. “But the results we are starting to achieve will help make a real difference in a variety of ways. Our work has already prompted a health needs audit in the South West cluster prisons of Dartmoor, Channings Wood and Exeter, and within the Shekinah Mission. And three of our students are now researching issues around older offenders which will inform future policies addressing the needs of elderly prisoners.”

training for teachers

Those involved in the project will work closely with employers, ensuring that existing and emergent industrial and educational requirements are met. Teacher educators will model innovative, creative and enterprising behaviour within their own teaching and learning – the trainee teachers involved will then challenge their own learners in innovative and enterprising ways.

“This approach will prepare teacher educators, trainee teachers and their learners to become more adaptable and responsive to a fast-changing employment culture and the associated skills required,

said Steve Harris, Project Manager at Cornwall College.

The ICE House 1 conference will take place at the University in 2010, giving delegates the opportunity to share their ideas and research interests within further and higher education and with associated employers.



convergence
for economic
transformation





enterprise in action

Designed with sustainability in mind

In early September this year, the Centre for Sustainable Futures hosted its second All Our Futures conference over a three-day period on the University campus. This pioneering forum brought together national and international representatives from the design, business and academic communities to explore and share knowledge, ideas and opinions on one of the most important sustainability issues of our time – how to design a world that we can continue to live in.

With an opening address from Plymouth's Vice-Chancellor, Professor Wendy Purcell, perspectives from a broad spectrum of contributors were shared by keynote speakers including Professor David Wheeler, Pro Vice-Chancellor and Dean (Designate) of the Plymouth Business School.

Professor Wendy Purcell said of All Our Futures:

“ Our enterprise journey is distinguished by the importance of sustainability and the importance of ‘triple bottom line’, ensuring we develop in line with our economic, environmental and social goals. ”



Arran Yeo (right)

Under the microscope

The Electron Microscopy Centre (EMC) at the University is one of the most comprehensively equipped in the region, with a full range of state-of-the-art instrumentation. Its imaging and analytical service is used not just by departments across the institution but also by external research establishments and industry.

The popularity and usefulness of the facility has been demonstrated by a series of Industrial Users' Days hosted by the EMC. The most recent, in May this year, attracted 45 representatives from sectors such as advanced engineering, electronics and marine, as well as organisations such as Business Link and the Cornwall Manufacturers Forum.

Richard Offer, from Barden Aerospace & Superprecision, and Janardhan Saithala, from Fine Tubes Ltd, were among the speakers at the event, which showcased the EMC's role and value as a resource supporting industry in areas such as materials properties, failure analysis and investigations of manufacturing processes.

“ The facility at the University is top class and has been instrumental in maintaining our position as a global centre of excellence in fibre technology, ”

said Dr Andrew Robertson, Director of Product Management at Gooch and Housego, manufacturer of precision optical components and sub-systems.



Creating enterprise opportunities

Smoothing the transition from the classroom to the workplace is a cornerstone of our enterprise agenda – not only for our own students, but also for young people across the region. We work closely with many schools and colleges in a variety of ways to embed the skills and experiences required to thrive in the workplace.

This vital role within our community is exemplified by providing young local students with internships at the University. Most recently, this has resulted in one student being chosen to represent the South West at the launch of a national campaign to transform work experience into work inspiration.

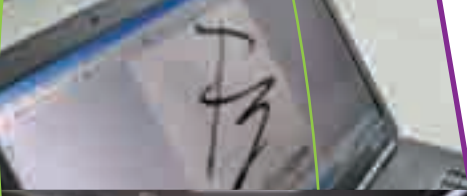
Seventeen-year-old Business and Finance student Arran Yeo, from John Kitto Community College, is one of four interns who spent six weeks on paid work placements in a number of key departments within the University.

“ We are very grateful to the University of Plymouth as they have played a key role in working with the college to support the students on the Personal, Business and Finance course. The four students all had a very positive experience during their internships and now have a better understanding of the opportunities and roles within the workplace. They have all gained inner confidence and have a better understanding about themselves and about the type of work they want to do in the future, ”

said Donna Shirley, Business and Enterprise Development Manager, John Kitto Community College.

Following his successful placement, Arran was selected to join 99 other young people as part of a delegation which met in London with 100 chief executives from some of the UK's top businesses at 'The Big Conversation'. The event forms part of the Backing Young Britain initiative which aims to better equip young people with the skills and work experience they need for employment.

Run by Business in the Community, 'The Big Conversation' was launched by Sir Stuart Rose, CEO of Marks & Spencer, and gave Arran and his young colleagues the chance to exchange opinions and perspectives on the world of work. Arran will continue to be engaged with the scheme as a Young Ambassador, spreading key messages amongst his peers and encouraging other organisations in the South West to follow the University's lead in championing the campaign.



enterprise in action

Entrepreneurship

As *the* enterprise university, Plymouth is focussed on nurturing and developing businesses and helping them to grow. Under our Enterprise Solutions banner, we've put together a compelling portfolio of support and made it even easier for the business community to work in partnership with us. One of the first initiatives we started in this arena was Formation Zone, nearly two years ago.

Members of the Enterprise Solutions team — Sally Sharpe, Steve Rice, Emma Hewitt, Denise Kellham and Emma Wright



Breathing life into new enterprise

Formation Zone was launched in December 2007 to provide high quality, one-to-one guidance and support for entrepreneurs from the very earliest stages of their new ventures. Over the past 18 months, Formation Zone clients have steadily increased and now all 21 pre-start desk spaces are in use.

Formation Zone Programme Manager, Eleanor Butland, says her clients are encouraged to use the facility for the first year or so of their business life. She said:

“ And when they're ready to move on, we support them in finding the right location. Because the University is a partner of the Tamar Science Park, we have a natural place for clients to move on to – but we also have close relationships with other managed workspaces across the city. It comes down to what's right for the client. ”

There is now a stream of positive stories emerging from Formation Zone, including Mutant Labs – a group of five graduates, from the Institute of Digital Art and Technology, developing a web, flash and gaming design business, and the programme's first 'straight-from-graduation' company.

Actuate Marketing, a strategic business and marketing development company, is the most recent entrant into Formation Zone – and within just a matter of weeks they've already secured a number of clients. And Actuate is symbolic of both the founders' long-held ambition to go into business together, and how Formation Zone can help stimulate the economy during times of recession. Dave Pearce, Director of Actuate, said:

“ It's a major decision to move from full-time employment to setting up a business, particularly during a recession, but the encouragement and support provided has meant this transition has been smooth and successful. ”

With the success of Formation Zone in incubating new creative enterprise, the University has recently launched Formation2.0 – a service dedicated to supporting budding entrepreneurs in STEM areas – science, technology, engineering and mathematics. Formation2.0 is located in our new LINK facility on campus and offers internet access, meeting rooms, telephones and library materials, as well as an opportunity to receive advice and mentoring from commercial specialists.

“ We're looking to provide help at the ideas or early business stage, or to an established business considering a new product or service, ”

said Project Manager Sally Sharpe.

“ Formation2.0 will then be able to help them test whether there is a market for the idea, provide links to specialist networks and expertise, help produce prototypes, form a business plan, or offer training to improve business skills. ”

Formation2.0 is supported by a £425,000 Economic Challenge Investment Fund grant from the Higher Education Funding Council for England. This was matched by the University of Plymouth and earmarked for projects designed to help businesses and individuals through the economic downturn.

Alex Ryley, Managing Director of Mutant Labs, said:

“ The comprehensive support and guidance Formation Zone offers has accelerated our development as a business. Having affordable office space, along with a great support network in the University has really helped our company take off. I would highly recommend Formation Zone to any business start-ups. ”

enterprise in action

TSP phase 4 building



A risk that's reaping its rewards

Established in 2007, Argans Ltd was born in the University and has made a successful transition from academia to the commercial marketplace. With a team of highly skilled, innovative scientists and engineers, the business is using state-of-the-art research to solve industrial, operational and scientific requirements.

Based at the Tamar Science Park, Argans is already breaking new ground in the UK, and its location allows it to maintain strong links with the University. The company's core business involves the analysis and translation of raw data from satellites into management and industrial knowledge – from the analysis of water from an environmental perspective, to crop surveillance to monitor global farming activity.

Argans also shares knowledge with ACRI-ST, an independent SME based in France involved in European Space Agency and other space agencies' earth observation programmes that use satellite-based sensors to monitor and detect changes in

the atmosphere and on the surface of the Earth. In another area, Argans is helping to revitalise the marine sector with their advanced technology through involvement in marine activities at the University and with others in the Plymouth Marine Sciences Partnership.

The business impact on the local economy has been extremely positive, creating 6.5 high value, knowledge-based jobs and generating a £500k turnover in the two years since its formation.

Managing Director Dr Samantha Lavender said

“ The move from being in an academic world to a commercial one was somewhat daunting – but the help and encouragement we have received from the University in getting the company off the ground has been invaluable and has allowed us to be clearly focussed on where we want to take the business and what we want it to achieve. ”



Sam Lavender

A toast to entrepreneurial spirit

University of Plymouth graduate Steve Burton typifies the entrepreneurial spirit we encourage in all our students. In 2006, Steve, now 25, was one of the first winners of our Business Ideas Challenge awards with his Logoworks concept – an idea he went on to successfully establish in Cornwall. Since then, he has been a year-on-year sponsor of the awards, contributing professional design services to the winner's prize package. With one successful business already under his belt, Steve's entrepreneurial drive has recently taken him to the launch of a new and totally unrelated project – Green Room Ales. While convalescing from a major operation in 2008, he was drinking an ale and decided that he could produce something better – something more than 'just another beer'. So he started his own brewing business. He said

Green Room IPA, our first beer, reflects the idea of wanting to produce a fresh, tasty and exciting brew that's innovative enough to compete with a very traditional industry. It's a difficult market to crack but we have some great people involved who know brewing inside out. You couldn't ask for a better team.

I'm keen to secure national distribution for the beer over the next two years but am currently concentrating on growing the Cornish market.



I love the excitement of starting something new and the sense of achievement you get when it takes off. I suppose I'm a bit of a serial entrepreneur – it's a way of thinking that was really encouraged at the University.

Work with us

As *the* enterprise university, we aim to give you the support you need, when you need it. That's why we've created Enterprise Solutions.

Enterprise Solutions is for individuals, businesses and the community – it's your gateway to accessing our entire range of expertise, services and facilities, and will help you find the right sources of information quickly and easily.

To find out more, call our Business Enquiry Team on 0800 052 5600, email enterprise@plymouth.ac.uk or visit www.plymouth.ac.uk/businessservices.



University of Plymouth
the enterprise university

University of Plymouth
Drake Circus
Plymouth
Devon PL4 8AA

Tel: 0800 052 5600

Email: enterprise@plymouth.ac.uk
www.plymouth.ac.uk/businessservices

The University is committed
to providing information
in accessible formats. If you require this
publication in an alternative format,
please contact the Marketing and
Communications Directorate
on +44 (0)1752 588000.



Mixed Sources

Product group from well-managed
forests, controlled sources and
recycled wood or fibre
www.fsc.org Cert no. SGS-COC-005998
© 1996 Forest Stewardship Council