

Science &
Technology

Lancaster
University



Partnerships for Success

Science and Technology Business Partnerships with Lancaster University



What are you looking for?

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SOLUTIONS

What is your
business challenge?

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**GAIN
COMPETITIVE
ADVANTAGE
THROUGH
NEW SKILLS
AND EXPERTISE**

See how our experts
helped to develop software
with annual revenue
potential of £3 million.

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**EXPLORE YOUR
POTENTIAL FOR
NEW MARKETS**

See how a partnership
with Lancaster University
resulted in a tenfold
increase in turnover.

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**DEVELOP NEW
PRODUCTS
AND SERVICES**

Discover how we helped
deliver a market-changing
product, while saving time
and money.

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**USE EMERGING
SCIENCE AND
TECHNOLOGIES
TO IMPROVE
YOUR BUSINESS**

Discover how we
helped one business
increase annual sales
by over £500,000.

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**FIND A
SUPPORTIVE
ENVIRONMENT
TO DEVELOP
AND GROW
YOUR BUSINESS**

See how our facilities were
used to help establish a new
industry standard and tap
into a revenue stream
worth €300,000 per year.

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EXPERTISE

See the breadth
of our knowledge.

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CREDENTIALS

Find out about our
track record.

What is your business challenge?

Whether you want to develop a new product, compete in a new market, enhance your organisation's performance, tap into a diverse skill-set, or access world-leading facilities, Lancaster University has the expertise and resources you need. As over 3,000 businesses have already discovered, partnering with us is a cost-effective, time-efficient way of achieving success.

GAIN COMPETITIVE ADVANTAGE THROUGH NEW SKILLS AND EXPERTISE

Our award-winning business partnerships team can connect you quickly to the skills and knowledge you need to achieve your business goals.

EXPLORE YOUR POTENTIAL FOR NEW MARKETS

Our resources and support will help you to future-proof your organisation by exploring new commercial opportunities together across global market places.

DEVELOP NEW PRODUCTS AND SERVICES

We provide access to expertise, facilities, funding and bespoke design services to support the development of a wide range of innovative products.

USE EMERGING SCIENCE AND TECHNOLOGIES TO IMPROVE YOUR BUSINESS

We can help identify and explore the opportunities presented by emerging scientific technologies and knowledge with our staff and students.

FIND A SUPPORTIVE ENVIRONMENT TO DEVELOP AND GROW YOUR BUSINESS

We offer access to a diverse range of research and development facilities and the space to work alongside us.



SPEAK TO OUR TEAM

Becky Gordon

01524 510188

b.gordon@lancaster.ac.uk



GAIN COMPETITIVE
ADVANTAGE THROUGH
NEW SKILLS AND EXPERTISE

Developing world-leading software to generate £3 million annually

Leading environmental engineering consultancy JBA Consulting operates at the forefront of hydrological science and river catchment management, working to enhance the built and natural environment on behalf of clients in the public and private sectors.

Experts from the University's Lancaster Environment Centre (LEC) helped JBA to develop world-leading flood risk modelling software, as well as design robust strategies for catchment management.

Working in tandem, LEC and JBA Consulting created multi-tier solutions to a range of key needs, drawing on the University's expertise in software development, graphics processing unit, accelerated computing, statistics, computer modelling, and hydrology.



FINALIST
IN THE 2012 ROYAL ACADEMY
OF ENGINEERS MACROBERT
AWARD FOR INNOVATION

£3 MILLION
ANNUAL REVENUE
GENERATED BY JFLOW

**FILLING
THE
SKILLS
GAP**

THROUGH
INNOVATIVE
POSTGRADUATE
STUDY
DEVELOPMENT



WORLD-CLASS SOLUTIONS

The resulting development of the unique JFlow software has enabled JBA to offer more accurate and reliable modelling of phenomena such as water quality and flooding.

Together we have developed and deliver a new postgraduate course in Sustainable Water Management. This combines LEC's world-class teaching and JBA's leading industrial excellence to train the next generation of water professionals meeting an increasing industry demand for specialists.

As well as jointly funding an industry-based PhD in environmental sciences JBA are working with experts in mathematics and statistics to integrate environmental knowledge with statistical analysis to improve their services to clients.

"I have come back to working with Lancaster more and more... they are one of our core partners"

Rob Lamb, Chief Scientist at JBA, Professor in Practice at Lancaster University

A GLOBAL SUCCESS

JBA has become a world leader, modelling more rivers in more locations than any other company, for private clients and government agencies across the globe. Local authorities are already benefiting from more accurate data and guidance, while more work is being carried out to improve the quality and quantity of JBA's data.



SPEAK TO OUR TEAM

Dr Ruth Alcock

01524 510285

r.alcock@lancaster.ac.uk



Award-winning collaboration boosts turnover potential tenfold



▲ Guangzhou, China

DemoPad relocated its research and development activity to Lancaster University three years ago to facilitate further development of its leading software tools, which effectively turn a tablet or mobile phone into a smart building controller.

“Our relationship with Lancaster University has been nothing short of transformational. It has given us the opportunity to have a virtually unlimited extension of our research and development resource. The publicity around our partnership with HDL has led to a serious enquiry from a North American company seeking a similar relationship.”

Mike Cain, Managing Director, DemoPad

Having partnered with the University on a number of projects, DemoPad’s ongoing collaboration resulted in the development of a relationship with key China-based supplier HDL. The company then worked with a cross-disciplinary university team to design, manufacture and distribute a range of home automation products.

AN INTERNATIONAL IMPACT

By harnessing the University’s expertise in software technology, project management and production engineering, DemoPad was able to develop the Centro 8, which acts as a connecting hub for a vast array of sophisticated high-end home entertainment systems, as well as a controller for heating and lighting.

The benefits of the innovation have been extensive, with the products not only providing a potentially significant boost to UK exports, but also accelerating DemoPad’s output dramatically, resulting in the potential for a tenfold increase in turnover.

STUDENT ENGAGEMENT

DemoPad continue to benefit from engagement with Lancaster’s student base through hosting placements, setting projects and jointly funding a PhD. They have used the resource for research and development and testing a new role, later employing one graduate full-time. Due to their collaborative relationship with Lancaster they were finalists in an award recognising best business partners with universities across the UK.

FINALIST
BEST BUSINESS PARTNER,
PROSPECT AWARDS

FOUR
FULL-TIME
JOBS CREATED

£100,000
FUNDING SECURED FOR
FUTURE PROJECTS




SPEAK TO OUR TEAM
Nick King
01524 510447
n.king@lancaster.ac.uk



Delivering a market-changing USP to the climbing world

Keswick-based business King Kong Climbing is a specialist in designing and manufacturing bespoke climbing walls, delivering its unique solutions at sites across the UK, and constantly seeking to add value by developing innovative new products.

King Kong Climbing approached Lancaster University's Engineering Department to help them develop the latest concept in climbing walls – illuminated routes. Traditional climbing walls use moulded holds that can be costly to replace and become discoloured over time. The new system introduces coloured LED lights embedded within the holds to create routes for climbers to follow, which can be programmed and controlled from a computer on the ground.



PRODUCT ANALYSIS
AND DESIGN DEVELOPMENT

MARKET-CHANGING
NEW PRODUCT

FULLY FUNDED
SUPPORT

ADDING BUSINESS VALUE

Our engineers have experience in actively engaging with companies of all sizes, helping to inspire technological innovation and functional product development so companies can realise the benefits that can come from understanding and implementing advanced manufacturing techniques.

They were able to use their specialist facilities and expertise in product development, structures, design and manufacturing to offer the exact mix of product analysis and design skills required to develop the new system in a way that saved both time and money.

This innovative system enables climbing wall owners to programme several routes of different grades up the same wall, and gives climbers the option to select routes at a difficulty suitable for their skills.

This cost-effective, approach to innovation was vital to a business that is keen to maintain its position at the forefront of the sector by providing new USPs to market.

“Illuminated holds are a very exciting new idea in climbing walls, and an area we have been looking at in order to grow our business, so we started looking for alternatives and approached the University.”

Paul Cornforth, Managing Director, King Kong Climbing

HARNESSING EXPERTISE

The team was able to analyse product requirements before delivering three solutions, carrying out further design development, and producing a fully-functioning prototype. Funding was provided by the European Regional Development Fund and by Lancaster University, with the product now available on the climbing accessories market.



SPEAK TO OUR TEAM

Chris Lambert

01524 594383

c.g.lambert@lancaster.ac.uk



Partnering in communications technology to generate over £500,000 in annual sales

Ultra Electronics Communication & Integrated Systems (UECIS) is a market leader in the provision of secure communications, information assurance and intelligence, surveillance, target acquisition, and reconnaissance systems to customers worldwide.

UECIS worked with the School of Computing and Communications at Lancaster University to develop a real-time integrated security monitoring and management system for the communication of situational awareness from remote locations, such as unmanned aerial vehicles, over satellite and local broadband links.

BOOSTING SALES

Benefiting from the University's expertise in communications technology, aviation security and project management, UECIS was able to meet its key objectives, raise its profile significantly, and enhance its product range to such an extent that its sales are predicted to increase by more than £500,000 per year.

University expertise in information systems engineering ensured that the right skill-set was deployed to drive the project towards its goals.

£500,000
INCREASE IN REVENUE

POTENTIAL
FOR FURTHER PRODUCT DEVELOPMENT

IDENTIFIED AREA FOR
FUTURE GROWTH



STRATEGIC PARTNERSHIP

Following on from the successful product development, a strategic partnership agreement was reached, which it is anticipated will lead to future business growth in many areas of high technology, including aviation security, wireless communications and artificial intelligence.

In the meantime, UECIS continues to reap the benefits of its enhanced capabilities in product design, and newly developed expertise in computer networking and data-link technology.

"The collaboration has added a valuable dimension to our data-link products and raised Ultra's profile at conferences, standards committees, and with published journals."

**Andrew Cambridge, Chief Scientist,
Ultra Electronics Communication & Integrated Systems**



SPEAK TO OUR TEAM

Dr Steve Fish
01524 510784
s.fish@lancaster.ac.uk



FIND A SUPPORTIVE ENVIRONMENT TO DEVELOP AND GROW YOUR BUSINESS

Expertise and facilities to establish a new industry standard and tap into potential revenue of €300,000 per year

Formed in 1991, T.E. Laboratories (TelLab) is a multi-divisional analytical and manufacturing company operating in the chemical and environmental sectors, working alongside national and local government, as well as with customers in environmental consultancy, pharmaceutical manufacturing, and fuel distribution.

Collaborating with experts using specialist facilities at the University TelLab has developed a new sampling technique for the monitoring of pollutants in surface waters. Designed to assist with meeting the requirements of the EU's Water Framework Directive, the new system allows in-situ sampling, and offers a more robust, reliable and cost-effective alternative to traditional methods.



“We found an efficient and cost-effective way to complete a short-term technical research project with significant support and input from highly skilled university principle investigators. The company has planned a longer term relationship with the University, with funding secured to develop further applications.”

Mark Bowkett, Managing Director, TelLab

€300,000

POTENTIAL REVENUE

DEVELOPED A

NEW INDUSTRY STANDARD

ACCESSED

SIGNIFICANT R&D FUNDING

A LONG-STANDING PARTNERSHIP

TelLab initially developed a relationship with Lancaster University in order to access a European network of more than 500 members to increase their competitiveness through the sharing of expertise.

Subsequently, TelLab worked together with university staff with expertise in environmental sciences and engineering to achieve the breakthrough sampling technique, which is set to become a new industry standard for the assessment of surface water quality. This has been achieved through collaborative access to the University's knowledge, facilities and research funding.

POTENTIAL FOR GROWTH

The research has brought TelLab closer to the possibility of a commercial service that will enable the company to tap into a potential revenue worth an estimated €300,000 annually, in addition to similar opportunities across Europe. In order to further the project's development, TelLab has set up a satellite office at the University, which has already created one full-time job.



SPEAK TO OUR TEAM

Martin Gilmore

01524 510229

m.gilmore@lancaster.ac.uk

Expertise

ADVANCED MANUFACTURING

- High power microwave engineering
- Micro and nano systems
- Nuclear and renewable energy
- Radiometrics and special instruments
- Rapid prototyping and rapid manufacturing
- Structures, design and manufacturing

CHEMISTRY

- Analytical chemistry and spectroscopy
- Chemical theory and computation
- Synthetic chemistry

ENERGY

- Energy conversion (engineering, chemistry, physics)
- Energy living laboratory
- Energy storage technologies
- Health and environmental impacts
- Human factor in energy systems
- Sustainable resources (technologies & strategies)
- System architecture (energy distribution and storage)

ENVIRONMENT

- Atmospheric sciences
- Earth sciences
- Eco-innovation
- Ecology and conservation
- Environmental chemistry
- Plant and crop science
- Society and environment
- Water and soil sciences

HEALTH AND HUMAN DEVELOPMENT

- Analytical skills
- Behavioural, computational and neuropsychological techniques
- Environment and health
- Human development and aging
- Medical and pharmaceutical statistics
- Medical technology

INFORMATION AND COMMUNICATION TECHNOLOGIES

- Communications and networking
- Computer systems
- Data science
- Digital health
- Human-computer interaction
- Intelligent systems
- Software engineering

QUANTUM TECHNOLOGY

- Accelerator science
- Biophotonics
- Low temperature physics
- Nanoscale dynamics and mathematical physics
- Nanoscale engineering
- Nanostructures and nanoelectronic devices
- Semiconductor physics
- Superconductors

SECURITY

- Cyber security
- Investigative expertise
- Security futures
- Violence and society
- Transport and infrastructure



Credentials

Our partnerships include Alstom, AstraZeneca, Bank of England, BBC, BT Labs, British Geological Survey, BAE Systems, BSI, Carillion, Cisco, Crown, EDF, Environment Agency, Centre for Ecology and Hydrology, Fujitsu, GCHQ, Google, HP Labs, IBM, Lloyds Bank, Microsoft, Orange, Raytheon, RBS, Shell Research, Thales, The Co-operative Insurance, QinetiQ, Waitrose, Williams F1 Team, and Unilever.

We pride ourselves on developing sustainable relationships with industry. In particular, we have been recognised by government and received national awards for our engagement with small and medium enterprises.

Our partnerships extend beyond business and include a diverse range of public and private sector organisations at regional, national and international level. These range from NHS Trusts and Police Forces to Local Authorities, UK and International Governments.

OVER
£18m
WORTH OF ACTIVITY
WITH BUSINESSES

RESEARCH RATED AS
**WORLD
LEADING**

OVER
3,000
SUCCESSFUL PARTNERSHIPS

RANKED
TOP 10
FOR INTERACTION WITH SMEs
BY GOVERNMENT

OVER
500
STUDENT AND INDUSTRY
PARTNERSHIPS EACH YEAR

OVER
700
STAFF
600
RESEARCH STUDENTS

To find out how partnering with Lancaster University could add real value to your business, contact us at:

Becky Gordon
Operations Manager
Business Partnership and Enterprise
Faculty of Science and Technology
Lancaster University
Lancaster
LA1 4YQ
United Kingdom

T: +44(0)1524 510188

E: b.gordon@lancaster.ac.uk

 @LUSciTechBiz

 Science and Technology at Lancaster

www.lancaster.ac.uk/sci-tech/enterprise