

# Best of the Best 2014



Knowledge Transfer  
Partnerships

# Inspiration, collaboration and British innovation

The Best of the Best annual awards recognise the people and partnerships that are behind the most inspirational and successful KTP projects in the UK. Improving the competitiveness of businesses by linking them to the expertise in universities and colleges produces exceptional results, not only in profit but in capability, reputation and future promise.

Highlighting these outstanding partnerships is the tip of the iceberg. There are currently more than 800 inspiring collaborations across the country, shaping the future of British innovation.



## About KTP

Knowledge Transfer Partnerships (KTPs) enable businesses to collaborate with universities, colleges and recently qualified graduates on new opportunities and innovations.

Innovation needs knowledge, skills, technology and adaptability, so KTPs bring those elements together. Businesses improve competitiveness and performance by using the expertise in universities while academic bodies improve their industry links and kick start the careers of high calibre graduates.

The KTP programme is run and managed by Innovate UK on behalf of 12 government funding organisations. More than 10,000 KTPs have been set up, each one runs for one to three years.

In 2013-14, for every **£1m** of government money invested in KTP projects:

**44** new jobs were created

**366** staff were trained

**£1.6m** was invested in plant and machinery

**£1.8m** was invested in R&D

Profit before tax, during KTP projects, rose from **£480,000** last year to **£780,000**

## About the Awards

The award winners come from the public and private sectors and work in fields ranging from healthcare and strawberry agriculture to insurance and micro-finishing engineering.

**Best UK Partnership:** recognising the collaboration that has excelled in the benefits achieved by all three participants – business partner, academic partner and associate.

**Business Leader of Tomorrow:** for the associates who, through KTP projects, have demonstrated the potential to become business leaders.

**Business Impact Award:** for the company partner that has continued to demonstrate outstanding impact in the years following their KTP project.

**Engineering Excellence:** recognising partnerships that have demonstrated excellence in the application of engineering skills (in an evolving field).

**Academic Excellence:** for the member of academic staff who has most influenced the uptake of KTP in their institution.

**RCUK Knowledge Base Impact:** for the Research Council-funded partnership that has delivered outstanding benefits for the academic partner.

**RCUK Societal Benefit:** for the Research Council-funded partnership that has delivered outstanding societal benefit.

# Best UK Partnership Winner

Floreon Transforming Packaging Ltd  
& The University of Sheffield

**Associate:** Dr Andrew Gill

**[www.floreon.com](http://www.floreon.com)**

Partnership sponsored by Innovate UK



Shaun Chatterton



## The aim:

To develop and commercially produce bio-derived compostable biopolymer, utilising PLA blends that will replace plastics.

## The story:

Working with The University of Sheffield, Floreon is a newly-formed SME created to commercialise the patent pending material 'Florian', which was developed through two 'outstanding' rated KTPs. Highly disposable and environmentally friendly, the opportunities include applications for new bio-polymers affecting plastic packaging for the food industry, office supplies, microwaveable cutlery, and plastic components.

With many publications and a new IP generated, plus the potential for massive commercial growth, the KTP academic team has been recognised internationally as one of the strongest teams in the field of industrially applied research.

## Key achievements

Anticipated annual turnover of **£14m** within four years

Four prestigious conferences and journal papers published

**£40,000** grant from the low carbon investment fund C02Sense

# Best Partnership Award – Finalists

## YASA Motors Ltd

Oxford Brookes University

**Associate:** Jonathan Biddulph

**www.yasamotors.com**

Partnership sponsored by Innovate UK

### The aim:

To develop joining technologies for the mass manufacture of high reliability, high torque, low mass electric motors.

### The story:

Before the KTP, YASA Motors electric motors were hand built and expensive to produce. With a high fail rate, this led to inefficiencies. Working in partnership with Oxford Brookes University, the project saw a highly successful move towards low-cost, mass-produced units that could be sold into different application areas.

A young start-up company that produces electric motors for premium electric vehicles, YASA Motors is now in negotiation with major potential customers and is significantly ramping up production. There are also key non-commercial project benefits including use of the engine technology within engineering courses at Oxford Brookes University and the establishment of a new electric race series with world-leading motorsport company, Dallara.



### Key achievements:

- Saved almost **£100K** in avoidance of motor durability failures
- Defect rate reduced by a factor of **100**
- Manufacturing process time reduced from **7 days** to **2 days**
- Saved **£380** per motor, **£1.14m** for **3000** motors



## Lindhurst Engineering Ltd

The University of Nottingham

**Associate:** Dr Laura Porcu

**www.lindhurstinnovation.co.uk**

Partnership sponsored by Innovate UK

### The aim:

To commercialise a microbial fuel cell for transferring dairy waste water into sustainable energy gas and an organic fertiliser.

### The story:

Established in 1985 to manufacture and design bespoke fabrications, Lindhurst Engineering Ltd is focused on environmentally friendly, sustainable products, including solutions to deal with waste water, particularly in the farming industry. Moving from a traditional heavy industry business, they have transformed into a company that harnesses scientific principles to develop innovative solutions.

The KTP has led to a strategic partnership with The University of Nottingham, the Engineering Faculty, Business School and School of Bioscience. A new plant has been commissioned on the university's farm. Innovative research and new technology are being used to improve the sustainability of farming while developing the commercial viability.

### Key achievements

- Commercial company benefits
- Big cultural shift to a more innovative approach
- Two grants have been written for an agricultural project
- Two masters students are to work on the pilot plant outputs
- Second plant built at university farm
- Several presentations made by the associate and the company partner to the university
- Two papers will be jointly submitted to academic journals
- Two papers submitted to sustainable fuel research conferences

# InterContinental Hotels Group

Oxford Brookes University

**Associate:** Dr Yang Chu

**www.ihgplc.com**

Partnership sponsored by the Economic & Social Research Council (ESRC) and Innovate UK

## The aim:

To develop InterContinental Hotels Group's ERM (enterprise risk management) methodology to minimise its exposure to loss by assessing, monitoring and controlling risks.

## The story:

UK-based global organisation InterContinental Hotels Group (IHG) worked with Oxford Brookes University on this ground-breaking project that has changed strategic thinking at board level, whilst creating international interest from the hospitality sector.

Seen as the first of a number of future joint projects, both the KTP Associate and company executives have delivered lectures to Masters Students and provided advice on course content. IHG has now employed the KTP Associate who is seen as a future industry leader, while Oxford Brookes University is now internationally known as the leading research centre for risk management in the hospitality sector.



Danny Wong, Yang Chu, Alexandros Paraskevas

## Key achievements:

- An enterprise-wide risk monitoring and reporting system for a company of almost **4,700 hotels** in nearly **100 countries** and over **350,000 staff**, surpassing anything previously available within the industry
- Overall benefit to the group over a five-year period that could be as much as a **£35 million**
- 1 postgraduate module re-designed on the basis of the knowledge developed
- 3 conference papers, 2 journal articles and 1 book chapter
- A major industry award



The Scottish Water Group

# Scottish Water

The University of Edinburgh and the University of Strathclyde

**Associates:** Travis Poole and Graeme Blair

**www.scottishwater.co.uk**

Partnership sponsored by the Scottish Funding Council and Innovate UK

## The aim:

To develop statistical models for each of Scottish Water's four key asset groups and develop an optimisation tool for planning expenditure.

## The story:

A strong partnership between Scottish Water, Edinburgh University, Strathclyde University and the KTP Associates conquered new territory. The KTP's commercial impact was huge and significant milestones were surpassed in the areas of business practice, the academic arena and for the KTP Associates themselves.

The industry mould was broken in such a way that the regulator OFWAT changed regulations to ensure other water companies followed similar capabilities. The KTP has contributed to a huge cultural change ensuring large cost savings for the government and, ultimately, the taxpayer.

## Key achievements

- Four international conference papers and three national conference papers presented
- Article published in IEEE Transactions on Reliability
- Educational case study, MSc projects and mentoring of postgraduate students
- KTP products were used to evidence **£1.2bn** of capital investment in the six-year company business plan and to develop the Asset Health Index

# Best Partnership Award – Finalists

## Ford Motor Company Ltd

Cardiff School of Engineering, Cardiff University

**Associate:** Alex Sutton

**www.corporate.ford.com**

Partnership sponsored by the Engineering and Physical Sciences Research Council and the Welsh Government

### The aim:

To develop Ford's capacity in resource efficiency and environmental performance through improvement in waste management and effluent treatment at the Bridgend Engine Plant.

### The story:

A tried and tested partnership, this KTP was one of a series of successful KTPs between Ford Motor Company Ltd and the Cardiff School of Engineering/Cardiff University. The end result of the work has seen a cultural shift, with a new plant-wide awareness of the issues, including at management level – and even in the relationship between Ford and its lubricant supplier, Castrol.

The main output from the project, however, has seen significant cost savings and work is being done to reapply the process to deliver additional factory output and profit – and ultimately protect jobs at the plant.



The Ford Motor Company Group

### Key achievements:

- **£260K** funding secured
- Potential savings in access of **£2m** per year
- Two undergraduate and one postgraduate projects
- One lecture delivered by Ford staff
- Two papers in preparation



Gareth Jones, Dr Orla Kelly, Panos Kapetanopoulos

## Photek Ltd

University of Bristol

**Associate:** Dr Orla Kelly

**www.photek.com**

Partnership sponsored by the Engineering and Physical Sciences Research Council (EPSRC) and Innovate UK

### The aim:

To design novel ion optics for velocity map imaging spectrometers, suitable for both the imaging and the characterisation of attosecond laser systems.

### Key achievements

- Year two of the project provided a **4%** increase in revenues
- Photek received **£1.5m** in quotations for full systems alone within six months of the end of the project
- More than **£100k** increase in sales of standard Photek products associated with the product over six months
- The new product now has its own marketing strategy, branding and website [www.velocitas-vmi.com](http://www.velocitas-vmi.com)

### The story:

Photek Ltd, an SME, is a specialist manufacturer of vacuum detectors and camera systems for photon and particle detection. Photek is working in partnership with KTP Associate Orla Kelly (KTP Business Leader of Tomorrow 2013) and the University of Bristol.

The KTP has led to the design of the ion optics that will ultimately enable Photek to manufacture and sell complete velocity map imaging spectrometers. Whilst contributing to the academic understanding of ion optics, during the last two years of the project Photek has received two orders for full VMI spectrometers, an unprecedented achievement within the timescale of the KTP.



# Higgs & Sons Solicitors

Aston University

**Associate:** Krishna Balthu

**www.higgsandsons.co.uk**

Partnership sponsored by Innovate UK and the European Regional Development Fund

## The aim:

To implement a cultural change programme to better understand client needs, re-examine pricing and challenge operational processes.

## The story:

This KTP truly demonstrated the power of linking academia and business, leaving a project legacy with the KTP Associate working for Higgs in the newly-created role of Organisational Change and Project Manager.

Out-dated and inefficient processes were done away with and new practices were introduced to the full service law firm, including 'Lean Thinking', producing some amazing measurable results. Aston University has demonstrated the power of KTP partnership, contributing significantly to the world of academia with the knowledge gained.



Ben Clegg, Glyn Morris

## Key achievements:

- More than half the firm participated in the project through focus groups, workshops and action teams leading to a significant cultural shift
- The firm was recognised internationally as an innovator in the legal services sector – InnovAction Award 2014, EFMD Excellence in Practice Finalist, 3rd Place at The Lawyer Management Awards 2013 for Innovation in Law Firm Finance
- The Associate has been recruited into a newly created position in the firm
- Besides 5 case studies, 5 conference papers, 30 press articles, 15 invited presentations covering over 1600 people from 27 countries, the firm has embarked on another KTP project as a follow on



Kieran Gilmurray, David Sandford, Jim McCann

# Hughes Insurance

Queen's University Belfast

**Associate:** David Sandford

**www.hughesinsurance.co.uk**

Partnership sponsored by Invest NI and Innovate UK

## The aim:

To develop behavioural modelling capability to deliver optimal pricing and customer-contact strategies for acquisition, retention and cross sales to grow profits.

## Key achievements

- Profit increase by **37%** in the period 2009-2013
- Revenue increase by **53%** in the period 2009-2013
- Company growth of **121 staff**
- Company employed six additional data scientists
- Two research papers published
- Two invited lectures from Hughes Insurance staff
- Two summer placements/internships at university
- Undergraduate prize (**£100**) sponsored by Hughes
- Prizes (**three £50**) awarded by Hughes to top three students in Stochastic Processes exam

## The story:

Knowing that behavioural modelling would help insurance broker Hughes Insurance to maximise its business opportunities, the company wanted to bring it in-house. Having used external consultants to analyse customer behaviour to optimise its sales strategies, Hughes Insurance wanted to address the issues of it being expensive, inflexible, an inefficient use of staff time, and that outsourcing analysis means outsourcing customer insight and knowledge. Through the KTP, Hughes predicted it could maximise its profits by almost £700,000. The KTP exceeded all expectations.

With the KTP Associate's help, the project moved from the development stage to the commercialisation of a new software product for customer renewal within 12 months. Other new introductions, such as price optimisation, enable Hughes' business managers to operate far more efficiently.

As a result of fast movement, the project has had a spectacular commercial impact for Hughes Insurance and is anticipated to boost net profit by £5.1m by three years post-project.

# Business Impact Award Winner

## Quadralene Ltd

[www.quadralene.co.uk](http://www.quadralene.co.uk)

Partnership sponsored by Innovate UK



### The aim:

To accelerate Quadralene's planned migration from traditional automotive markets, where commoditisation meant the business was making large losses in 2005, towards healthcare.

### The story:

Through its KTP, detergent and disinfectant manufacturer Quadralene has transformed from a manufacturer of car shampoo into a major force in the infection control industry, exporting to 48 countries. It has grown its Dentisan brand to become the second-largest brand of infection control products in the UK. The KTP focused on the development of Biocleanse Ultra, a surface cleaning product for dental medical devices.

On top of this, Dentisan has also established itself as the leading provider of education to infection control professionals, opening an on-site Dental Infection Control Academy earlier this year. It has also recently signed a four-year contract with the world's biggest manufacturer of dental chairs, based in Canada, for its dental unit water line cleaner, Bioclear.

Quadralene cites the strength of the Dentisan brand and Biocleanse Ultra, developed through its KTP, for its recent growth and success.

“A KTP is an excellent programme bringing together academic expertise, commercial aspiration and innovative ideas. A terrific scheme for any company interested in keeping ahead of the game.”

Andrew Corley, Managing Director,  
Quadralene Ltd

### Key achievements

Export of **48 countries** through OEM partnership and development of market leading dentistry product portfolio

#### Awards won:

HSBC Business Thinking competition (Midlands) 2010,  
Lord Stafford award 2011,  
Medilink's National Outstanding Achievement award 2011,  
Export Achievement Award 2013

Capital investment circa **£250k** in the business

Company has **doubled** in size over the last five years

# Engineering Excellence Award Winner

## YASA Motors Ltd

Oxford Brookes University

**Associate:** Jonathan Biddulph

**www.yasamotors.com**

Partnership sponsored by Innovate UK



### The aim:

To develop sustainable joining technologies for the mass manufacture of high reliability, high torque, low mass electric motors.

### The story:

The Joining Technology Research Centre at Oxford Brookes has been the source of invaluable expertise for YASA Motors. Through their KTP, the company, which designs and manufactures electric motors for premium electric vehicles, has achieved a vastly reduced defect rate, a big reduction in assembly time, the introduction of injection moulded parts and a huge growth in knowledge of materials and bonding technology.

YASA, which now employs KTP Associate Jonathan as a materials engineer, is currently in negotiation with major potential customers and is ramping-up production significantly. Key non-commercial project benefits include the use of the engine technology within engineering courses at Brookes and the establishment of a new electric race series with world-leading motorsport company, Dallara.

“The combination of expertise and equipment had attracted us to the KTP – but everyone here has been blown away by the results.”

Dr Tim Woolmer, Founder and CTO,  
YASA Motors Ltd

#### Key achievements

Saved almost **£100K** in avoidance of motor durability failures

Defect rate reduced by a factor of **100**

Manufacturing process time reduced from **7 days** to **2 days**

Saved **£380** per motor, **£1.14m** for **3000** motors

# RCUK Societal Benefit Award Winner

## Nottinghamshire Fire & Rescue Service and Nottingham Trent University

**Associate:** Tom Simpson

[www.notts-fire.gov.uk](http://www.notts-fire.gov.uk)

Partnership sponsored by The Economic and Social Research Council (ESRC) and Innovate UK



### The aim:

To establish which prevention activities most successfully improve community safety, making Nottinghamshire Fire & Rescue Service (NFRS) fit for purpose.

### The story:

Having been tasked with evaluating its services and facing changing demographics that challenges its ability to meet future community needs, NFRS needed to change the way it works. The fire service looked to its KTP to measure the effectiveness of its prevention initiatives and assess future service delivery.

The KTP has fed into a radical organisation restructure for the fire and rescue service. The simplified restructure, which was not originally part of the KTP's aims, means fewer line managers and clearer lines of accountability – as well as savings in staff costs. There is also a new Knowledge and Information Hub within the corporate services department, which is the brain of the organisation, gathering data from partners as well as from NFRS itself, to inform business decisions.

Nottingham Trent University's Emergency Services Research Unit's relationship with NFRS provides the university with future research opportunities, yielding benefits for both teaching and research activities.

In the three years following the completion of the project, NFRS will make savings on activities such as staff training, retained firefighter budgets and commissioned contracts by £56k.

“By engaging with the KTP, Nottinghamshire Fire and Rescue were able to develop an evidence led and evaluated approach to Community Safety.”

Chris Hooper, Nottinghamshire Fire & Rescue Service

### Key achievements

**Seven** conference presentations

**Five** journal articles and policy documents to date

Developed and applied evaluation and research methods to assist in targeting and measuring the impact of community safety work, leading to a more evidence led process

# Academic Ambassador Award Winner

## Professor Susan Taylor

Queen's University Belfast  
[www.qub.ac.uk](http://www.qub.ac.uk)



### The story:

Professor Susan Taylor has made it her mission to bridge the gap between academia and the commercial world. She has played a leading role in 11 KTPs to date, four as an academic supervisor and seven as a committed lead academic. Each one has generated strong links for Queen's University Belfast with the companies involved, and each has provided personal benefits for the KTP Associates – two of whom have won Business Leader of Tomorrow awards, with a third nominated this year.

Su has recently been appointed Professor in the School of Planning, Architecture and Civil Engineering in recognition of her outstanding research and industrial impact through KTPs. Thanks to her personal enthusiasm and her inspiring, internationally acclaimed research; she has picked up several KTP awards to date.

“Su is an ambassador for KTP in her school, personally demonstrating the benefits of KTP to academics and encouraging many other members of staff to become supervisors.”

Mary Flynn, KTP Office Manager  
for Queens University Belfast

# RCUK Knowledge Base Impact Award Winner

The Phoenix Partnership (Leeds) Ltd  
& the University of Leeds

**Associate:** Samantha Crossfield  
[www.tpp-uk.com](http://www.tpp-uk.com)

Partnership sponsored by the Engineering and Physical Sciences Research Council (EPSRC) and Innovate UK

## The aim:

To evaluate and implement opportunities for research-led innovation in patient care based on the interrogation of a large patient information database.

## The story:

The Phoenix Partnership (TPP) connects healthcare organisations through IT solutions. It is behind the SystemOne clinical records software and it embarked on its KTP with the University of Leeds to add novel, clinically meaningful data analytic capabilities to SystemOne – and introduce data mining experts to its team. By improving its data analytics, TPP will be able to expand sales to hospitals by demonstrating the value in having comprehensive and detailed patient records across both primary and secondary care.

KTP Associate Samantha Crossfield also identified that allowing care organisations to opt in their data for research purposes would engage the wider research community. This resulted in the original aim of the KTP being expanded to develop an anonymised database, branded ResearchOne.

As a result, TPP has developed skills in information governance and ethics, data extraction, denormalisation, anonymisation and data linkage. The KTP also established research access to one of the largest clinical databases in the world, as well as a product that can be sold abroad.

The partnership has contributed to the development of the University of Leeds' eHealth strategy and research programme in Health Informatics.



“The KTP united our strengths so we could build a truly world-leading process for health research. As the Associate, I was exposed to the cutting edge and supported in forging a way forward.”

Samantha Crossfield, KTP Associate

### Key achievements

**20-25%** benefit to TPP  
marketing and sales

**Two** conference papers and  
conference presentation at Healthcare2011  
and the World Congress on Medical  
and Health Informatics in 2012

Journal paper published

# Business Leaders of Tomorrow Award Winner

## Shervin Younessi

Royston Ltd & Newcastle University  
[www.royston.co.uk](http://www.royston.co.uk)  
Partnership sponsored by Innovate UK



### The aim:

To develop and deliver commercially viable new concepts linked to engine, fuel and emissions management.

### The story:

Royston sells generators and engines to the marine, offshore, defence and utilities markets and looked to its KTP to create a team to innovate new product development capabilities following the company's development of a fuel management system called Enginei.

Shervin Younessi, KTP Associate, has worked on developing Enginei and has created a 'plug and play' monitoring/recording/telemetry product to connect to different sensors, improve data storage capacity, reduce the processing and telemetry time, provide data analysis and cut down the product's dependency on external knowledge – resulting in a reduced finished product cost. Prior to the KTP, Royston's technical team struggled with connectivity with ships, but Shervin's involvement has seen these issues resolved.

The KTP has enabled Royston to develop in-house expertise in the hardware and software elements of Enginei, strengthening its position in the market and significantly cutting the company's reliance on outside expertise, resulting in a £30k saving to date. Shervin's work has also resulted in more efficient operations for Royston, saving £5k to date.

Shervin's prototype product, the Enginei Mark 2, can recover data if it is disrupted during transfer and it has a lower finished product cost. It is being developed alongside a major database enhancement, which Servin is also playing an integral role in.

Royston believes that, without Shervin's input, the company would have missed out on the major opportunity to develop its Enginei product for the fuel security market, where fuel theft is a problem.

“KTP is a great way to transition from academic life to the world of work. I have applied classroom skills to the commercial environment; it really helps cement your learning as well as acquiring new skills.”

Shervin Younessi, KTP Associate

#### Key achievements

£30k saving to date

Providing a system which has generated **£500k** to date

Developed an operational mode logging feature to evaluate fuel consumption, resulting in a **£250k** sale and potential sales of **£500k**

Leadership position within **six** months

# Business Leaders of Tomorrow Award Winner

## Diana Nyamugure

Neuteq Europe Ltd & Staffordshire University  
[www.neuteq-europe.co.uk](http://www.neuteq-europe.co.uk)  
Partnership sponsored by Innovate UK

### The aim:

To put science behind the art of the microfinishing process by mathematically quantifying the input factors and their effect on the measured performance output.

### The story:

With long-serving and highly skilled team members soon to retire, Neuteq was facing a loss of vital skills and experience. It wanted to inject some science into its ability to produce world-class bearing surfaces, which are used in engineering applications including Formula 1 engines, by identifying all 30-odd parameters applicable to the micro-finishing process.

KTP Associate, Diana Nyamugure was responsible for identifying those parameters and then designing tests to quantify the effects of variations in each of them.

On top of this – beyond the task of the KTP – Diana has worked with Neuteq’s sales team, using her technical knowledge to help secure new machine orders. During her KTP, order values rose 230% year-on-year for the company, to almost £6.5m. Diana was also called upon to write and deliver technical presentations to the design team at Ford America and GM Chrysler worldwide. That resulted in GM placing its first order with Neuteq in 10 years.



“Winning & Leadership are inevitable with KTP – it’s a foundation that enhances your academic and professional skills at a faster rate than any other postgraduate programme.”

Kudakwashe Diana Nyamugure,  
KTP Associate

### Key achievements

GM placed an order worth over **£1m**

Increase in capacity of **50%** in key bottleneck processes

Academic paper published

**£1m+** machine orders

**Three** international orders valued at **£1.3m** each

Increase in the profit margins from **50%** to **84%**



# Business Leaders of Tomorrow Award Winner

## Daniel Smith

S&A Produce (UK) Ltd & the James Hutton Institute  
[www.sagroup.co.uk](http://www.sagroup.co.uk)  
Partnership sponsored by Innovate UK Project aim



### The aim:

The development of novel strawberry growing techniques to maximise fruit yield and quality.

### The story:

Wanting to maximise their annual strawberry yield in the face of ever-changing climactic conditions, S&A Produce called on a KTP to develop a lab to assess the mineral nutrition required for optimum growth, flavour and shelf life.

Daniel Smith, KTP Associate, set to work by looking at the properties of the inert substrate, recognising it could have significant impact on growth and quality. He sourced alternative materials and also recognised that substrates could be re-used, providing both environmental and economic benefits. To date, his work has increased the strawberry yield by 32%, exceeding expectations.

Daniel also spotted the opportunity to use glasshouse space over winter, with LED lighting technology, allowing S&A Produce to now produce fruit year-round.

Beyond his initial task, Daniel now manages an R&D team for S&A Produce, which looks at all aspects of growing operations, not just mineral nutrition. He has a chemistry background, but through his work at S&A Produce Daniel has made himself competent in all aspects of breeding and has introduced novel practices that will cut down the breeding schedule from seven to five years for new releases.

“The project is a prime example of how closer relationships between industry and academia can result in huge, measurable benefits.”

Daniel Smith, KTP Associate

#### Key achievements

Yield increase of **32%**

**£300k** savings from the re-use of substrate

Net saving of **£24k** per annum.  
Expected net benefit of up to **£2.5m** per annum

# Business Leaders of Tomorrow Award Winner

## Paul Callender

McFarland Associates Ltd & the Queen's University Belfast

[www.mcfarlandassociate.com](http://www.mcfarlandassociate.com)

Partnership sponsored by Invest Northern Ireland



### The aim:

To deliver an asset management strategy using advanced monitoring condition and performance techniques to assess and maintain ageing infrastructure in a commercial environment.

### The story:

From the outset, Paul took the initiative to transform his research into a live database, which has now been incorporated into McFarland Associates' International Structural Health Monitoring for Intelligent Infrastructure database, turning his research phase into a viable commodity from day one.

Paul managed three pilot projects (the restoration of a bridge, extending the life of two power station chimney stacks and upgrading a Hammerhead crane) in the first four months of the KTP. From this, he recommended further structural health monitoring projects, including monitoring structural cracking at a car park and monitoring the silencer steelwork and composite beam at a power station.

He has also developed an innovative and original integrated monitoring system for geotechnical infrastructure. On top of this, he has submitted two journal papers to the Institute of Electrical and Electronics Engineers, and two papers to the Institution of Civil Engineers, and is in the process of drafting a fourth.

McFarland Associates also credits Paul with being extraordinarily proactive in developing links with new clients and consultants, proving vital in helping the company secure new contracts and employ four new graduates.

“McFarland Associates now offer a wider range of innovative services to the construction industry and asset owners, saving considerable investment – enabled by the KTP.”

Paul Callender, KTP Associate

### Key achievements

Authored/co-authored three journal papers for IEEE and ICE

Increase in turnover of **22%**

Increase in employment of **35%**

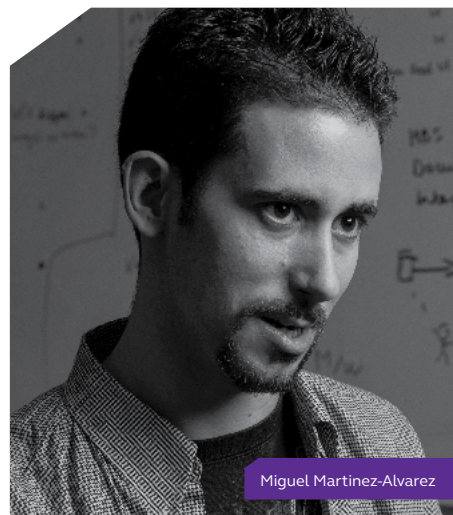
# Business Leaders of Tomorrow Award Winner

## Miguel Martinez-Alvarez

Signal & University of Essex

[www.signal.uk.com](http://www.signal.uk.com)

Partnership sponsored by Innovate UK



Miguel Martinez-Alvarez

### The aim:

To develop scalable technology architecture using natural language engineering and machine learning techniques.

### The story:

Miguel took charge of the KTP project from the start, assessing resources and costs and identifying additional resources via academic networks. Less than a year into the project, there have already been collaborations via student placements, with each link being explored and established by Miguel.

A separate team has been established using these additional resources, which is managed by Miguel. He is also now the Head of Research at Signal, supporting his own small team of researchers.

Miguel has been involved in every major commercial and strategic decision in the business. He has raised Signal's profile at conferences, integrated cutting edge research into its product, taken part in strategic commercial decisions, and worked with the CEO on financial planning. He is now an integral member of Signal's senior management team and has created and championed opportunities that have led to commercial benefit, including helping to pitch and deliver the company's product to a world-class think tank, resulting in a £500k contract over three years.

“There is a huge gap between the research done at university and real product development, especially in the IT world. The KTP has proven to be the best possible tool to achieve real innovation.”

Dr Miguel Martinez-Alvarez,  
KTP Associate and now Head of  
Research at Signal

### Key achievements

Company won an EPSRC Impact Acceleration Award with Glasgow University, equivalent to **£35,000**

**£500,000** contract over three years

**£50,000** contract this year

**£100,000** worth of executive search and selection business from usage out of the system

# Our Judges

## Awards selection panel

Each Year, those partnerships which have delivered over and above the original expectations of their project and have demonstrated benefits to all three partners are eligible for nomination.

All nominated partnerships and individuals are put through a rigorous assessment process, with final decisions made by our selection panels using specific criteria to score each shortlisted project. Each judge makes every effort to ensure that this process is fully transparent and impartial.

**We would like to extend our sincere thanks to all the members of our selection panel:**

**Robert Mackenzie**  
Business and Technology Editor  
BBC News Online

**Ryan Maughan**  
Managing Director  
AVID Technology Group Ltd

**Philip Greenish**  
Chief Executive  
Royal Academy of Engineering

**Zoe Cunningham**  
Managing Director  
Softwire

**John Hand**  
Head of Impact  
Engineering and Physical  
Sciences Research Council

**Bruce Jackson**  
Senior Knowledge Exchange  
Manager, Economic and Social  
Research Council

**Ian Shott CBE**  
Managing Partner  
Shott Trinova LLP

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# Our Partners

Innovate UK is the new name of the Technology Strategy Board – the UK’s innovation agency.

We know that taking a new idea to market is a challenge. We fund, support and connect innovative businesses through a unique mix of people and programmes to accelerate sustainable economic growth.

The Technology Strategy Board is an executive non-departmental public body sponsored by the Department for Business, Innovation and Skills, and is incorporated by Royal Charter in England and Wales with company number RC000818. Registered office: North Star House, North Star Avenue, Swindon SN2 1UE



# How to get involved

Knowledge Transfer Partnerships is the leading programme of its kind in Europe, with an outstanding track record for benefiting those who take part. To find out more, visit: [www.gov.uk](http://www.gov.uk) searching for Knowledge Transfer Partnership.

For interest in joining any of the Knowledge Transfer Partnerships:

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# Innovate UK

Technology Strategy Board

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