

A UNIVERSITY ALLIANCE *briefing*

*Keeping knowledge
at the centre of growth*

March 2011



UNIVERSITY ALLIANCE

About University Alliance

University Alliance represents 23 major, business-focussed universities at the heart of the sector delivering world-leading research with impact.

Alliance universities educate over 25% of all UK students and achieve some of the highest graduate-level employment rates. Alliance universities offer a research-informed, academic learning environment and a culture of innovation and enterprise, equipping graduates who will help deliver growth to the UK economy.

Our universities maintain a revolving door with business to help ensure graduate employers get innovative and thoughtful, professionally accredited graduates with the right skills to help grow their businesses.

Alliance universities:

- Aberystwyth University
- Bournemouth University
- University of Bradford
- De Montfort University
- University of Glamorgan
- Glasgow Caledonian University
- University of Hertfordshire
- University of Huddersfield
- University of Lincoln
- Liverpool John Moores University
- Manchester Metropolitan University
- Northumbria University
- Nottingham Trent University
- Open University
- Oxford Brookes University
- University of Plymouth
- University of Portsmouth
- University of Salford
- Sheffield Hallam University
- Teesside University
- University of Wales Institute, Cardiff
- University of Wales, Newport
- University of the West of England

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Keeping knowledge at the centre of Growth

“A business facing university has a revolving door with business and the professions – not an interface or a portal but true interaction”

Professor Tim Wilson

Universities are driving growth through innovation and enterprise

Universities are not just part of a growth strategy, they are central to it. Joining together our university research with business innovation is key to generating business growth and jobs, as well as strengthening the UK's global competitive advantage.

Alliance universities have real expertise in driving economic growth through this approach. These are universities undertaking world-leading research, often in highly rated STEM departments, working closely with industry to generate near-market solutions and starting new businesses.

Harnessing the links and processes that allow knowledge to be shared between universities and business is of critical importance. Technology Innovation Centres will go some way in strengthening these links but they are part of a much bigger picture of joining university research and business innovation.

We urge Government to recognise the value of existing initiatives and infrastructure, in particular Knowledge Transfer Partnerships. Far from being outmoded, KTPs are a proven vehicle for creating innovation and development in businesses, small and large, across the UK economy through a process of knowledge exchange with universities.

Our recommendations for Government

- Clarity of funding – The removal of RDA funding, changes to the Higher Education Innovation Fund and cuts to the Research Councils could lead to a ‘perfect storm’ of cuts to funding for innovation and collaboration. KTP funding should not be reduced in order to support activity elsewhere, for example Technology and Innovation Centres.
- Recognise that the system is working – KTPs have an excellent track-record and are proven to be particularly effective at supporting SMEs. Changing the structure unnecessarily will damage the good reputation it has with business and universities.

What is a Knowledge Transfer Partnership?

A Knowledge Transfer Partnership (KTP) is a three-way project between a graduate, an organisation (business, third sector or public sector body) and a university or research organisation (known as the 'knowledge base').

The partnership is centred on a recent graduate, as an 'Associate', who manages a project implementing tactical or strategic development in the organisation based on active input and partnership with the university and access to academic expertise. Each KTP project (normally lasting 1-3 years) is part-funded by the government, with the remainder of project costs met by the business.

Through this unique approach KTPs are central to a number of government priorities:

- Driving economic growth and rebalancing the economy
- Supporting the growth of SMEs
- Embedding research-led innovation in the economy and society
- Positioning the UK's brightest graduates to have a immediate and direct impact
- Supporting the efficiency and impact of UK social enterprises and the third sector

KTP projects result in an average increase of over £220,000 in annual profits before tax for a participating business

For every £1m of government investment the average benefit to business is:

- £3.5m annual increase in profit before tax
- £1.42m investment in plant and machinery
- 34 new jobs
- 374 members of staff trained as a direct result of the project.

Alliance universities have contributed over one-third of all KTPs historically, worth over £6.5m per institution.

Driving economic growth

KTPs have a proven track-record in delivering economic growth on the back of government investment. As a result of the £42m of government funding committed to KTPs during 2009/10, it is estimated that UK businesses stand to benefit from:

- over 15,800 staff trained
- over 1400 new jobs created (aside from the recruitment of KTP Associates) and
- an overall increase in annual profit before tax of over £150m; an increase of 19% on the previous year.

In response to this increased investment £97m was invested in KTPs by participating businesses.

A common focus for KTPs is the development of a growth strategy to enable a business to expand into new markets. As has been well documented, in the current economic climate it is particularly important that the opportunities for export and inward investment caused by the weak pound are seized upon by UK business.

Case Study - New markets, suppliers and inward investment ***GB Electronics | University of the West of England***

GB Electronics worked with the University of the West of England's Faculty of Computing, Engineering and Mathematical Sciences on two KTPs to first develop and then market a new CCTV system. Both KTPs focused on broadening the company's business strategies to include an international dimension.

The manufacture of its existing product range was outsourced to China, with both Associates establishing productive relationships with suppliers and working to ensure quality. As a result the company won a major contract to supply wound products as a result of better operating procedures with Far East partners and a new security division was launched, operating profitably with turnover of £1.5 million a year.

Rebalancing the economy

The geographical spread of KTP projects awarded in 2009-10 shows that 77% of projects took place outside of London and the South East. KTPs play a prominent role in driving regional economic development and supporting private sector growth. Given the effectiveness of the programme in delivering these economic benefits, KTPs are crucial to the government's plans to rebalance the economy and encourage private sector employment in new areas.

The Government's paper, *'The path to strong, sustainable and balanced growth'* identifies six key sectors that are likely to be crucial for the growth and success of our regional economies:

- advanced manufacturing
- digital and creative industries
- business and professional services
- retail
- construction
- healthcare and life sciences

These areas are consistent with NESTA's conclusion that the UK should focus on rebalancing towards high-tech and innovation industries, exactly the industries that are a major focus for KTPs.

Case Study - Supporting regional industry *UUNW | Liverpool John Moores*

Liverpool John Moores University worked with major industry player United Utilities Northwest Water (UUNW). The project with LJM is currently in the final stages of lab testing and, if successful, could have a significant impact on the water industry as a whole.

Steve Whipp, Standards and Innovation Manager at UUNW said, "KTPs are ideal arrangements to further develop technologies in key strategic areas to ensure that there are solutions to problems we face. The KTP is one of a cluster that we have carried out and provides access to world-class research, knowledge and facilities that we alone just couldn't access. It's a real win-win-win for the business, for the University and for the graduate Associate who all get huge value from working together."

Enabling SMEs to flourish

The UK's 4.8m SMEs are 'vital to the economy. They provide 60 per cent of private sector jobs and account for half of all private sector turnover. The Government is committed to: ensuring that the UK has an environment where it is easier for new companies and innovations to flourish; providing targeted help to SMEs; and to protect incentives for innovation' (*The path to strong, sustainable and balanced growth, a BIS / HMT paper, November 2010*).

73% of KTP projects in 2009-10 involved an SME as a business partner

As "incentives for innovation" that are specifically targeted at SMEs, KTPs should be a central part of the Government's approach in creating the right framework for growth and shaping the new economy.

The programme has a particular emphasis on helping SMEs access university expertise; supporting their growth and development through innovation. These organisations now only have to contribute 25% of the total project cost for a KTP, meaning government investment to support economic growth is being targeted effectively at companies with high-growth potential.

Case Study - Computers that see: a revolution in motion capture

OMG | Oxford Brookes University

Oxford Brookes University worked with OMG, an Oxford-based SME that supplies Oscar winning technology for Hollywood blockbusters such as Star Wars, Gladiator and Van Helsing, to develop a ground-breaking new motion capture technology.

The project used expertise from Oxford Brookes' world-leading Computer Vision Group to advance the technology of "markerless motion capture" - digitising motion without the use of special markers on the subject - with the aim of creating a system to achieve this in real time. Winner of the 2009 award for Best KTP, the project has supported the company's expansion into other markets and applications, such as virtual environment engineering (BMW, Peugeot, and Renault) to hospitals, universities and research institutes.

Embedding research-led innovation in the economy and society

The KTP programme is established within most universities as a core mechanism for engagement with business and other external organisations. With over 1,000 live projects currently being funded by the Technology Strategy Board (TSB) and 17 other funding bodies, KTPs have become an essential part of the innovation framework for the UK.

Whilst the programme was initially aimed at helping apply science and engineering knowledge and technology from universities to businesses, the success of the scheme has meant it has now expanded to include all academic disciplines and business sectors. 107 HEIs participated in the programme in 2009-10, with projects in STEM areas particularly strong: engineering, management and computing departments accounted for some two thirds of partnerships.

Projects also promote and facilitate greater social and economic impact in research. They encourage genuine knowledge exchange between academics and business creating a culture of engagement and innovation.

Case Study - Internationally-leading software innovation ***The Foundry | University of Salford***

The Foundry Ltd is a UK Top-20 design consultancy with a client list including Manchester United, Heineken, Scholl, Nike, Mölnlycke Health Care and Kumho Tyres. It has won numerous international industry awards including the New York Festivals Innovative Advertising Award and World Design Medals.

Working with the University of Salford, The Foundry developed a software application that allowed major multinationals to design their own marketing materials and make them available via the internet to their customers. The project created new business opportunities for The Foundry in areas and with companies that they wouldn't normally approach.

“Working alongside the guys from the KTP has been an absolute joy. They have understood our business needs and have helped [the associate] and ourselves every step of the way, for us it has been the perfect partnership”.

Positioning the UK's brightest graduates to have an immediate and direct impact

Covering a huge range of projects, the KTP is one of the largest graduate recruitment programmes in the UK. The associate working in placement at the company is normally a recently qualified person and benefits enormously from an extensive and highly competitive programme of career development support. They have regular meetings with academics from within the partner university, as well as the opportunity to take ownership of a project that is core to the development of an organisation's strategy. Associates spend around 10% of their time on training and personal development and leave their KTP with a professional qualification.

Following the completion of their project

- 60% of Associates are offered and then accept a post in their host company
- 41% register for a higher degree
- 67% of these were awarded a higher degree

KTP placements enable graduates to make a real difference to the success of a company. This ethos is at the heart of the approach taken by Alliance universities. Ensuring that students go on to have a successful graduate future is about equipping students with the entrepreneurial skills they need for the future. A KTP embeds skills development across the curriculum informed by a strong relationship with business. It is another way universities are supporting students beyond graduation – giving them access to career support services provided by their university even after they have left it.

Case Study - Inspiring the business leaders of tomorrow

Sara Zarei | Teesside University

Sara Zarei graduated with distinction from Teesside's MSc Computer Aided Engineering and is doing her PhD while working as a KTP Associate (manufacturing systems engineer) with local SME, Stanley Vickers.

On winning 'Business Leader of Tomorrow' award for outstanding achievement as a KTP associate she said: 'the KTP project has provided me with a brilliant opportunity to gain vital industrial and hands on experience alongside the chance to study for a PhD relating to the work and research undertaken. The project has also provided me with the responsibility to make a difference to the company through ideas of my own and implement new technologies for improvement.'

Supporting the impact of UK social enterprises and the third sector

The scope of the KTP programme has recently been expanded to incorporate charities, social enterprises, community groups and local public sector organisations. Using the structure and principles of a KTP project to address the problems of society has inspired a new cohort of academics in new disciplines to work with organisations to innovate and improve service provision.

Case Study - Co-operatives: an alternative business model *Co-operativesUK | University of Salford*

Co-operativesUK is the national representative body for cooperative enterprises, federal bodies representing sectoral cooperative interests and co-operative development bodies. The purpose of Co-operativesUK is to unite, promote, develop and extend co-operative enterprise across the UK and in all sectors of the economy.

The aim of this 2 year KTP with the University of Salford was to facilitate growth in co-operative enterprise. This was achieved by re-engineering business processes using innovative technology based on social networking concepts to enhance collaborative networking. The KTP enabled the company to change their understanding of, and the way in which they used information and communication technologies, moving from dissemination to dialogue in promoting and supporting the development of cooperatives as an alternative business model for the UK.

Case Study - Zero-carbon: a community hall for the future *Hill Holt Wood | University of Lincoln*

The University of Lincoln worked with Hill Holt Wood, a charity and environmental social enterprise, to establish a new environmental, social enterprise construction company. The new company then constructed the Eco Community Hall. They used specialist knowledge in zero-carbon design to construct a hall built entirely of earth walls with a shingled roof. By utilising solar energy, it will be completely off the grid. Such was the high profile of this project, that the Prince of Wales visited the site in January 2009.