The KTA aims to generate outcomes and impact from the University’s research outputs

(Non-academic) Output:
The products and services which result from research (e.g. commissioned reports, course material, patents, data-sets). The key to distinguishing outputs from other types of results is that the University controls its outputs.

Outcomes:
The likely or achieved short-term and medium-term development of research outputs (e.g. prototypes, quotes in policy documents, external committee memberships). The University influences outcomes and does this through collaborating with external organisations.

Impact:
Long-term, sustainable benefits that, for example, increase profitability, improve human well-being and protect and conserve natural resources. The University contributes partially and indirectly to these enduring results in society or the economy.

THE KTA@BATH TEAM

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THANK YOU

Eloise Spark has been supporting the KTA team but will be concentrating on two projects from 1 September 2011 - the Limes.net and Turbo Centre Projects. We are grateful for all the support she has provided and hope Eloise enjoys these new challenges.

The KTA Showcase Conference this year, highlights the successful collaborative relationships between our academic staff and external organisations and in particular, the steps we are taking to deliver real benefits. It also showcases the other activities the KTA has taken to embed a knowledge exchange and impact-driven culture at the University. The KT Champions appointed in October 2010 have been actively supporting their colleagues to engage with knowledge exchange and have encouraged applications for £120K of KT Champion funding. This has supported academics from all disciplines across the University to showcase their research to potential collaborators. The fund has also supported secondments and mentoring.

We have awarded an additional £1.3m to KTA projects, taking the number of projects to thirty-two and the total awarded to £2.7m. Projects, once complete will be developed as case studies and videos, to help Bath and our collaborating partners promote the benefits of working together.

Maximising the application and impact of our research

Prof. Jane Miliar
Pro-Vice-Chancellor (Research)

Welcome to the second edition of “KTA@Bath”, the newsletter outlining the latest developments of our EPSRC funded Knowledge Transfer Account.

We value our relationships with external organisations and pride ourselves on our University mission to “benefit the wider population through our research, enterprise and influence.”

With pressure growing on us to demonstrate and evidence the benefits our research makes to society and the economy, our interactions and relationships with external organisations are more important than ever. The KTA provides us with a valuable opportunity for building new relationships, strengthening existing ones and evidencing how we embed our research for the benefit of society and the economy.

The KTA has launched a programme of events, which highlights activities across the University aimed at helping academics and research staff find out more about knowledge transfer and impact. It also includes the newly launched “Pizza with KT” events on the first Friday of every month (e.g. Pizza with IP) and a range of workshops.

“our interactions and relationships with external organisations are more important than ever. The KTA provides us with a valuable opportunity for building new relationships”

We would like to know more, please contact in the first instance, Dr. Denise Cooke, KTA Project Manager (d.cooke@bath.ac.uk) or Dr Jon Hunt, KTA Project Director (j.hunt@bath.ac.uk).
Why EPSRC is still your friend, and always will be

While Bath’s KTA has already passed its halfway point, EPSRC’s support to help exploit the research we fund in the university will not end any time soon. As active applicants, you can still secure the resources necessary to ensure that your research is taken up by its most appropriate users.

For instance, all new EPSRC grant applications should include a fully-resourced and well-planned “Pathways to Impact” section. There are no particular limits or restrictions on the scale or nature of “Pathways to Impact” funding, other than those imposed by common sense and proportionality! EPSRC’s Follow-on Fund is continuing to support work in the tricky gap between basic research and proof-of-principle. Of course we always welcome research projects and studentships which have user involvement, and hence a path to exploitation, built in from the start. Impact is here to stay. My engagement with Bath’s KTA has clearly shown that this is a welcome message for you, and one which falls on exceptionally fertile ground. After all, given the choice of achieving more or achieving less, who would go for less?

The Impact Assessment Group

The Impact Assessment Group is responsible for awarding KTA funding to encourage the adoption of research outputs by external organisations, to generate benefits and impact. The Group is composed of members of Bath Ventures, the Knowledge Transfer Partnerships Office, the Research Development & Collaborations team, CPD Development & Support Office and the School of Management and is chaired by Professor Jane Millar.

The KTA in its second year has continued to grow in success with a further 9 projects going live, including a concentration of Partnership Development Awards (PDAs), and Knowledge Transfer Fellowships. In total the IAG has awarded funding of £2.7m to 32 knowledge transfer projects.

The IAG are monitoring the projects funded to ensure the delivery of outcomes which will lead to impact. We are considering how best to share the good practices around KT and celebrate the successes of these projects. Although the funding for projects has been allocated, there is still some KTA funding available via KT Champions. The funding is available to help develop new collaborative relationships with external organisations, so start talking to your KT Champion about possibilities.

Gaining insight through secondments

Working within an organisation offers a unique opportunity to gain insight into the real needs and pressures, and to build close working relationships.

Ashwoods Automotive Ltd has seconded three of their employees to work with Dr Chris Brace, Dr Sam Akehurst and Prof Andrew Plummer within the Department of Mechanical Engineering, to establish a jointly staffed, integrated project team at Bath. They are working together to redesign the second generation of Ashwoods Automotive’s existing hybrid systems for diesel vans. Reducing the cost of the hybrid product will make it suitable for the mass market and increase customer acceptance of low carbon technologies.

Commercialising research

The KTA has also been supporting technology development to make it ready for investment by external companies. Engineering research in the Departments of Chemical Engineering and Mechanical Engineering has resulted in new and exciting opportunities.

Professor Stan Kolaczkowski and Dr Gareth Lamb (Department of Chemical Engineering) with Professor Jonathan Williams (Department of Chemistry) are developing a prototype reactor for continuous flow solutions for pharmaceutical manufacture. This offers advantages over the current industry by providing a faster development of drugs to market and a new lease of life for drugs coming to the end of their patent protection.

Dr Michele Meo (Department of Mechanical Engineering) is developing a manufacturing procedure for composite materials, which has the potential to improve the performance of the materials under impact loading generated by, for example, bird strike, hailstones or runway debris, in the aerospace industry. The new generation of composite materials, reinforced with nanoparticles, could also lead to lighter, more fuel efficient components, resulting in reduced carbon emissions of aircraft.

The KTA and Bath Ventures are working closely with these projects to realise their commercial potential. This would have benefit to the university by seeing the real world application of its research, raising its international reputation, and the further development of collaborative industrial relationships.

Combined expertise for sustainable wastewater treatment

A KTA Partnership Development award, lasting 18 months, will combine research expertise from the Departments of Biology & Biochemistry (Prof Rod Scott), Chemistry (Prof Matt Davidson) and Chemical Engineering (Dr Tom Arnot) with Aragreen Ltd. Together they will develop a commercial wastewater treatment system using algae, grown in large photobioreactors, which will also produce high value saleable bio-products such as high-value food proteins and bio-diesel. This system will be green in more ways than one – the algae consume large amounts of carbon dioxide and can thus help reduce carbon emissions.

Aragreen was recently voted the top prize of £500 as well as the Veale Wasteborough Vizors Elevator Pitch trophy at the recent annual SETsquared Garden Party and Innovation Showcase in Bristol on 6 July 2011. Voting came from Venture capitalists, SWAIN investors, representatives of grant-funding and venture capital communities in London and the South West, senior executives from major corporations and mentors of the SETsquared activity.

Jerome Vaughan, Managing Director of Aragreen, said: “The University of Bath have demonstrated a very proactive approach to this project, which is going to be one of the key drivers in ensuring its success. Both parties are working to make this an example of the academic and corporate world, combining in an early stage business, to develop a series of innovative products and processes, which will give us a leading position in our chosen industry sectors.”

This project could have real economic impact by utilising a combination of cutting-edge production technology and what would otherwise be waste nutrients (mainly chlorophylls and nitrates) from waste water. Aragreen aims to redefine the value proposition of algae, as a sustainable and cost-competitive source of protein, for commodity markets.
Funding available to all

The Knowledge Transfer Forum continues to meet every quarter to discuss KT related issues, bringing together representatives from Departments and KT Champions. This activity continues to support the KTA aim of embedding KT beyond the life of the three year project.

Over the last two years, the KT Forum has undertaken the following:

- Provided the Academic Staffing Committee with a list of KT activities currently undertaken at the University, which will form the basis of an annex for promotion information.
- Recommended that KT is a standing item on departmental research committees.
- Asked Heads of Department to consider how KT would feature in their departmental workload models.
- Discussed building capacity for KT and the skills development needs.
- Discussed how to involve research staff and PhD students in KT activities.
- KT Champions have agreed to support the Units of Assessment Leads with their REF case study development. They will also help identify opportunities where KT activities, supported by KT Champion funding, could increase the impact of case studies.
- The KT Forum will continue to work towards gaining a cultural change across the university to recognise Knowledge Transfer as integral to the research being undertaken. In support of this Professor Jane Millar will be attending the next KT Forum in September to review progress and receive feedback on the KT Champion roles.

Funded Activities

In 2010, the KTA introduced a new initiative to embed knowledge transfer within the University – Knowledge Transfer Champions. Appointed by the Vice-Chancellor Professor Glynnis Breakwell, the 17 departmental KT Champions have been proactive over the year in encouraging their colleagues to engage in KT and to access the KT Champion funding of £140K. This has been used to fund a wide range of activities.

The funding is open to all disciplines and to academic, research and related staff. It can be used for enabling impact to be delivered from research. This will enable new relationships with external organisations to be established by informing new audiences about your research and leveraging follow-on R&D funding. These are all activities that look to encourage and stimulate new collaborations with external organisations such as companies, third sector organisations and hospitals.

APPLY FOR KT CHAMPION FUNDING NOW by contacting your KT Champion at www.bath.ac.uk/kta/kta_champions

Public Vote for KTA Award-holders at Images of Research 2011

Two KTA Award-holders who entered the Images of Research 2011 competition, which aims to communicate our research with an image and short abstract, were well received by the public. They were joint winners of the public vote 2nd place.

Dr Mark Bonsman (Psychology) entered an image entitled ‘Emotion as Perceived by Children with Autism Spectrum Disorder (ASD)’, where children with ASD have been involved in the design of a computer maths tutor, identifying characters which would help them with maths and represent positive and negative emotion.

Dr Toby Jenkins (Chemistry) entered a montage of images entitled ‘Intelligent Nanotechnology: Enabled Dressings for Burnt Children’. This showed collaborative relationships in developing new dressings which detect and respond to pathogenic bacterial infection and the difference this emerging technology has made in the recovery of scald burns in young children.

These images, along with the other entries, were exhibited to an invited audience in 4 West Atrium on 10 May 2011 and to the public in Milsom Place over the following weekend.

Other entries from KTA Award Holders included:

- Dr Chris Bowen (Mechanical Engineering),
- Dr Sernali Perera (Chemical Engineering),
- Professor Chris Eccleston (Health),
- Dr Chris Brooke (Mechanical Engineering) and Ben Williamson (Electrical Engineering).

Support the KTA

The University annually surveys staff to assess attitudes to Knowledge Transfer as part of the KTA. Our survey in 2010 found that researchers think Knowledge Transfer is important to the University and to their research objectives. 72 percent of respondents felt that they had produced research outputs with potential for high impact, with the main benefits of transferring research outputs identified as establishing links with external organisations (62%) and seeing an impact of the research (60%). Other benefits identified included social benefits (48%), new products (47%) and new processes (45%).

The knowledge transfer activities that respondents were involved with included industry-funded research (38%), consultancy (35%) and knowledge transfer partnerships (26%), as well as Continuing Professional Development (16%) and the KTA (14%), amongst others. We are grateful to those who took part and will be running the survey again in November 2011 and look forward to your continued support.

Survey of Attitudes to Knowledge Transfer

FEEDBACK

LOOK OUT FOR THE NEXT SURVEY OF ATTITUDES TO KT AND REGISTER YOUR VIEWS AND OPINIONS ON THE KTA WEBSITE – WWW.BATH.AC.UK/KTA

SECONDMENTS

Secondments are a fantastic way to gain insight into an organisation and build up contacts. The KT champion funding supports both incoming and outgoing secondments.

Professor Nick Mitchell (Electronic & Electrical Engineering) has an incoming secondment from the Met Office to the department. The aim is to develop a new strategic collaboration centre encompassing a range of research areas across the University. This includes space weather, numerical weather forecasting, mesosphere boundary inputs and novel tropospheric measurements, which are of interest to the Met Office and its activities.
How to get impact

Practical Networking

The Practical Networking workshop run in the Spring, provided researchers with skills and strategies to network with potential stakeholders. This practical session gave attendees the opportunity to hone their skills in a supportive environment.

Following the event, attendees said:

- "At the next networking event I will be more aware and focused in my planning of how to network."
- "Very well presented and at the right pace"
- "Extremely useful and confidence building for what can be stressful social situations"

This event will run again on 26 June 2012

Helping to Diagnose Dementia - Imaging Technology Transfer

Department of Electronic and Electrical Engineering and the Royal United Bath NHS Trust

ABOUT THIS CASE STUDY

Martyn Evans, Head of Nuclear Medicine at the Royal United Hospital (RUH), Bath, has been keen to develop single photon emission computerised tomography (SPECT) scanning for brain blood flow imaging. Unfortunately there were technical hurdles to cross before embedding the technology.

The Knowledge Transfer project has developed a method to transfer and adapt images from one SPECT camera system to another. The process has the potential to increase the reliability of diagnosing dementia in patients and substantially reducing costs. The method has been coded within prototype software, and it has been used in a preliminary adaptation of a control database for a SPECT camera system at the Royal United Hospital, Bath.

"It has been a very positive experience to work with the RUH. Without the flexible EPSRC support we would not have been able to transfer our skills into the hospital. We hope to further this type of collaboration so that we can continue to be useful to the healthcare sector."

Professor Cathryn Mitchell, Principal Investigator, Department of Electronic and Electrical Engineering, University of Bath.

Combining Simulation Modelling With Empirical Data for Improved Mobility and Encounter Analyses

Department of Computer Science and Vodafone Group R&D

A major challenge in using data from mobility sensor networks is in improving its reliability and validity. The project met this challenge by systematically quantifying errors in data by combining sensed data with mobility simulations. Doing so can, for example, produce more accurate co-presence and proximity findings than the use of sensor data alone. The pictured team created a software tool that can test scenarios and assess data validity, so improving the design, and reducing the number of costly field trials.

"We left behind an analytical tool that Vodafone can use to model users’ mobility patterns in relation to sensor arrangements, and use in the simulation tool and to extend it as desired."

Eamonn O’Neill, Principal Investigator, Department of Computer Science, University of Bath.

"This robust and flexible tool provides a time-saving decision aid and will have an impact on Vodafone Group R&D’s processes, making the investigation of mobility- and encounter-sensing more efficient. Ultimately, this kind of work will help us to recommend new services and product ideas."

David Pollington, Head of Technical Research - Consumer & Internet, Vodafone Group R&D.

Case studies

‘How to get Impact from Research’ Staff Development Programme

In April this year, Professor Jane Milnar launched a series of seminars, workshops and events, which are being delivered collaboratively by RDSO, including Bath Ventures, and the Learning Teaching and Enhancement Office. This brings together the range of activities being offered by various departments across the University, under one easily recognised brand.

These events are helping academics and research staff to develop skills and capacity to create and respond to knowledge exchange opportunities. In addition, they are helping researchers address the new requirements to articulate potential impacts from the Research Councils and report and evidence actual impact from the Research Excellence Framework.

The events are suitable for academic and research staff who:

- Are interested in developing case studies for the REF submission
- Are writing Pathways to Impact in Research Council funding applications
- Would like to know more about Knowledge Transfer and what it means for their research
- Would like to engage with external organisations to potentially gain funding
- Would like to know what support is available at the University for Knowledge Transfer activities

The events held so far include engaging with policy, pathways to impact, applying for TSB funding, communicating your research to the public, practical networking, the ‘pizza with...’ series and media training.

To find out more about upcoming events, see www.bath.ac.uk/kta/events

How to Get Impact from Research Case Studies

Academics found themselves in the media spotlight over the summer after undergoing a new hands-on training course. The KTA commissioned a series of workshops related to working with the media, to ensure that the University communicates its research, so that it can be taken up by external organisations and have a real impact.

The sessions were mainly practical and provided the opportunity to learn how to handle television and radio interviews, both live and pre-recorded. The events were very well received and it was noted ‘It was most useful to see how I appeared and came across on TV, with each of the three interview settings being useful to understand and to review.’ It was run by former TV journalist, Myra Lee, who now works part-time in the University’s press office.

Lights, camera, action! KTA funds Media Training to give staff confidence in radio and television interviews

“Perhaps one of the best University courses I have been on.”

“It was an excellent day and I’d recommend it to others”.

“The hands-on practical experience was excellent and extremely helpful. It was a very enjoyable day”.

ABOUT THIS CASE STUDY

The mobile phone industry is maturing and mobile devices and networks are becoming more sophisticated in processing and sensing capability. Opportunities are arising to develop new services that harness data on a user’s location and their mobility patterns, contacts and social networks. For mobile network operators to develop sophisticated services that utilise such data, a key hurdle lies in understanding how user proximity data can be harmonised to characterise phone user’s movements and encounters, both in order to develop enabling technologies and to inform the design of new services.