

Maintaining our distinctive research edge: the role we all have to play

DID YOU KNOW?

- Cranfield is one of the top five research-intensive UK universities
- We earn more of our research income from UK industry than any other university does
- Our academics bring in over ten times more business-related income per head than the average academic in the higher education (HE) sector.

The facts speak for themselves: research and innovation is not only an important aspect of our work – it is core to our mission.

And what is more, each one of us has a role in driving our research and innovation forward – from identifying and securing future opportunities to ensuring our research is widely cited. Whether we engage directly in research or whether we ensure contracts are in place and people are paid, we all have our part to play.

THE CRANFIELD APPROACH

The Cranfield approach has always centred on user-focused research; that is research carried out to solve an existing problem, where the outcome will make an impact in the real world. We don't just advance new knowledge for knowledge's sake; rather, we apply our knowledge in innovative ways to address key challenges faced both by industry and society.

While Cranfield continues along its well-established path of user-focused research, however, the broader political landscape is shifting. The Government is increasingly promoting 'the Cranfield approach' as a driver for UK competitiveness. Partly as a result of this drive, UK universities in general are tending to increase their interaction with industry, adopting a more user-focused approach to research.

Every year the Higher Education Funding Council (HEFCE), Cranfield's largest single funder, publishes the results of its Higher Education Business and Community Interaction (HEBCI) Survey.

This year's results show collaborative research income in UK universities to be nearly £670 million, 12% up on the previous year. This has led Ian Pearson, Science and Innovation Minister, to point out that collaborative research between universities and industry in the UK is growing at a faster rate even than the Chinese economy...

Performance as demonstrated in the HEBCI survey helps to inform HEFCE's knowledge transfer funding or Higher Education Innovation Fund (HEIF). In 2006, due to our level of industrial research income, Cranfield was one of fewer than ten institutions which saw their allocation under HEIF capped at the maximum level. In the latest round of HEIF funding, we are one of 36.

SO WHAT DOES THIS MEAN?

As well as attracting more income directly from industry, the HE sector is seeing the added benefit of public funding through HEFCE's growing commitment to 'knowledge transfer'. But more significant still is the shift in the Government's approach to the assessment of research quality, and HEFCE's future allocation of quality-related (QR) funding.

This has traditionally been allocated according to performance in the Research Assessment Exercise (RAE) and, because of this, there has been a bias towards the purely academic or 'blue-sky' end of the research spectrum. Recently, however, there have been major changes in QR funding.

Firstly, HEFCE introduced a small but significant business-related element to its QR research funding, which now means some funding allocations are made according to an institution's performance in generating income from UK industry, commerce and public corporations. Unsurprisingly, and given all that has been said about our levels of industry-related research, we receive the third highest allocation after Imperial College London and Cambridge University.

Secondly, in 2006 Gordon Brown, then Chancellor, called for the allocation of research funding to be 'radically simplified', through a metric-driven approach instead of the peer-review RAE system. For the first time it appeared that user-focused and blue-skies research might be assessed on an equal footing.

In reality this new assessment approach, known as 'Research Excellence Framework' (REF), has proved controversial. In the main, this is due to its focus on bibliometrics – statistics on published research – as an indicator of quality. Indeed, although assessment will take factors such as income generated from industry into consideration, citation data looks likely to be the principal quality indicator in most of Cranfield's research areas. Put simply, under REF the more a publication is quoted, the higher its perceived quality and the greater the funding allocation it could potentially generate.

TO SUM UP

The research funding system is currently undergoing significant change, and has the potential to benefit universities such as Cranfield which focus on collaborative research. As universities across the sector appear to be moving towards the Cranfield research model, however, and the Government seeks to redefine the exact nature of research quality, we will need to be smart about the way we manage and present the research undertaken throughout the University.

HOW CAN WE PRESENT OUR RESEARCH BETTER?

During our preparations for the Research Assessment Exercise 2008 (RAE 2008), two key issues were identified:

- confusion over where to find all the different pieces of information required to make our submissions
- frustration at having to supply the same information for several different purposes.

The solution: a 'single system' that integrates all the information required to manage and present our research to the outside world.

A SINGLE SYSTEM: CRANFIELD RESEARCH MANAGEMENT INFORMATION SERVICES (RMIS)

To support our academic community effectively in the run-up to REF, we are developing a fully integrated system which will be accessible to all staff through the intranet. The starting point for this system is RDHub and CERES; details of these are opposite.

The single system will use MS Sharepoint technology to provide:

- a single point of access for publication submissions to CERES and other externally facing applications
- acquisition of evidence of esteem data
- a reporting suite to aid research management analysis and decision-making
- a tool kit to promote best practice
- access to other external resources such as ResearchResearch (database of funding opportunities), citation databases (Web of Science, Scopus) and the Journal Citation Report for the evaluation of journal quality
- a CV generator.

The system will be developed further through a series of pilot projects involving a number of test communities on both campuses being steered by the Research Excellence Strategy Group. Work is underway to develop a prototype for trialling.

RDHub

RDHub is an internally facing application which holds mainly publications plus evidence of esteem.

In the build-up to and throughout the submission of RAE 2008, RDHub was used extensively by schools and departments to input and maintain their research data. By mapping this to other central databases such as research income, students and studentships data, the University is able to build a picture of the research work across all of its schools.

CERES (formerly Cranfield QUEprints)

An externally facing collection of research publications designed to ensure that our research has maximum visibility and impact, specifically configured to be easily found by internet search engines. It provides links to the published versions of journal papers and, for those researchers who are unable to access these, CERES also contains an accepted version which can be downloaded in full text.

Because our papers are more visible, they are more frequently viewed and downloaded, leading to increased citations by others in their work. This is significant given HEFCE's plans to use citation counts as the primary indication of research quality in REF.



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Image: the 'research machine' - illustrating what is needed for effective research to take place. Take away one cog and the whole process stops.