

KNOWLEDGE EXCHANGE

Investing in collaboration to deliver real world benefit

The University of Manchester has a strong tradition of using its research to make a positive impact on real world challenges. From building mutually beneficial industry partnerships, informing policy and decision-making to the commercialisation of intellectual property, the University promotes innovation through its knowledge, technology and skills.

Knowledge Exchange forms an integral part of the University's research strategy and the exchange of knowledge, expertise and skilled people also benefits academic teaching and future research agendas.

In recent years, the University has been awarded more than £15 million to support Knowledge Exchange activities, helping us to drive improvements and growth in a wide range of external partners across all sectors, from multinational blue-chips and public sector organisations through to local SMEs. Businesses engaging in Knowledge Exchange activities with the University have seen benefits including improved competitiveness, productivity and performance.

From early stage relationship nurturing to the application and exploitation of research, Knowledge Exchange between The University of Manchester and your organisation delivers impact through innovation.

OUR KNOWLEDGE EXCHANGE SERVICES INCLUDE:

- * Internal funds to support collaborative projects
- * Knowledge Transfer Partnerships (KTPs)
- * Dedicated Knowledge Exchange support staff
- * UMI³, providing incubation premises and IP commercialisation services.

WHAT IS KNOWLEDGE EXCHANGE?

Knowledge Exchange (KE) is a two-way process which transfers ideas, knowledge and expertise between academic staff, users of research and wider groups and communities with the overall aim of bringing economic, social, cultural and environmental benefits to society.

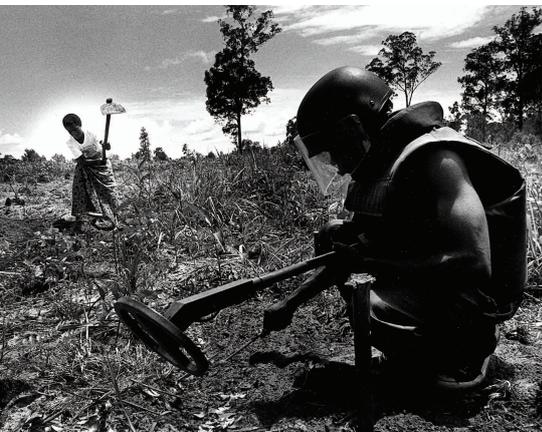
BENEFITS TO EXTERNAL ORGANISATIONS

- * Access to world-leading academics whose quality, breadth and volume of research activity is unparalleled in the UK
- * New skills and capabilities embedded into your organisation
- * Commercial and social benefits including job creation, cost-savings, opening up of new markets, and process and productivity improvements.

BENEFITS TO ACADEMIA

- * Application of research in challenging real-world issues
- * Improved understanding of organisational requirements and operations
- * Career opportunities through projects and secondments
- * The opportunity to demonstrate research impact and publish high quality journal and conference papers.

KNOWLEDGE EXCHANGE CASE STUDIES



TACKLING THE LEGACY OF LANDMINES

ACTIVITY TYPE	Concept and Feasibility Study
LEAD RESEARCHERS	Professor William Lionheart, Applied Mathematics; Professor Anthony Peyton, Electromagnetic Tomography Engineering
EXTERNAL PARTNERS	A consortium led by Sir Bobby Charlton and including UoM, Lancaster University, the Mines Advisory Group (MAG) and security screening experts Rapiscan.
OBJECTIVE	To assess the feasibility of applying mathematical and electrical technology used in airport scanners to improve humanitarian landmine detection, save lives and prevent injury.
BACKGROUND	There are at least 110 million active landmines in place across the world. It is estimated it would take £19 billion and over 1,000 years to clear them using current technologies. A consortium was established to draw on academic and industry expertise to tackle the legacy of land mines through the application of new technology.
PROJECT	The Manchester team applied existing research into metal detection and ground penetrating radar technology, originally developed for a project on airport scanners, into new technologies to improve mine clearance. The project provided the consortium with increased confidence that innovative solutions could be developed and used in-field.
RESULTS	The concept and feasibility studies have attracted funding for more substantial projects that will deliver this technology for humanitarian landmine detection. The project has led to the creation of a new UK charity, Find A Better Way, which aims to improve the lives of individuals and communities affected by landmines through funding research, and providing education programmes and medical care.

SALON AT HOME

ACTIVITY TYPE	Knowledge Transfer Partnership (KTP)
LEAD RESEARCHERS	Professor Franz Wortmann, School of Materials, Fibre and Textile Technology
EXTERNAL PARTNER	PZ Cussons
OBJECTIVE	To bring the first in-home solution for easy to manage, frizz-free hair to market.
BACKGROUND	Constant innovation is essential in the highly competitive hair care market. PZ Cussons wanted to be market leaders in developing a new technology that would provide semi-permanent hair straightening in a safe and easy to use in-home treatment. As it didn't have the necessary expertise or resources in-house, PZ Cussons approached the University for help.
PROJECT	<p>An 18-month Knowledge Transfer Partnership gave PZ Cussons access to the University's expertise in Materials Science and, specifically, Professor Wortmann's internationally-renowned fibre and textile research.</p> <p>Under the guidance of Professor Wortmann, KTP Associate and recent graduate, Katie Hardy, was able to transfer knowledge from existing University research into the chemical and structural properties of hair keratins into PZ Cussons to develop new technologies for chemical straightening at home.</p>
RESULTS	The rapid transfer of technology enabled PZ Cussons to be 'first to market' with an innovative new product, boosting the credibility of its haircare brand. The Knowledge Transfer Partnership was awarded the highest grade of 'outstanding' for achieving the KTP's objectives and it has initiated a completely new line of research at the University.



See Knowledge Exchange video case studies online at www.manchester.ac.uk/business/ke/casestudies/