

# innovation:

LEARNING FROM ESRC RESEARCH

THE ESRC IS A  
SIGNIFICANT  
RESOURCE FOR  
THOSE WORKING  
TO IMPROVE  
PERFORMANCE  
THROUGH  
INNOVATION



*Jan Diamo*

# INNOVATION: LEARNING FROM ESRC RESEARCH

Innovation matters. In today's turbulent and complex business environment, smart firms are aware that if they fail to innovate both in terms of processes, and products and services, they will lose out to competitors. That's why they must invest time and effort in creating systems, structures and processes to ensure a sustained flow of innovation.

The UK's research community has a key role to play in helping organisations – both large and small – to succeed through innovation. More than a decade ago the Economic and Social Research Council (ESRC) made a significant investment in UK innovation research through three research centres: the Centre for Organisation and Innovation, the Centre for Research on Innovation and Competition and the Complex Product Systems Innovation Centre. Since then the ESRC has invested continuously in innovation research through a range of initiatives including, in 2002, the launch of the Advanced Institute of Management Research (AIM).

As a result, the ESRC is now a significant resource for those working to improve performance through innovation. Currently our researchers are looking at innovation from a number of different perspectives and at different levels of activity. They undertake research projects in organisations ranging from small firms to major global corporations. On a national level, these research activities change the way we think about innovation and offer insight into how the UK economy can compete through innovation. But at a local level, researchers help individual organisations to innovate through concrete activities such as partnership schemes.

So, whether it's a written research briefing or face to face contact with a researcher, we are confident that ESRC investment in innovation research can make a difference both to your organisation and the performance of our economy as a whole.

## **Professor Ian Diamond AcSS**

Chief Executive

Economic and Social Research Council

# WHAT IS INNOVATION?

Innovation is the successful exploitation of new ideas. That means the successful commercial exploitation of ideas that are new to your business. These ideas do not have to be new to the world. Rather, to innovate a business one simply has to introduce an idea which improves performance and makes a commercial impact.

Traditionally people think of innovation in terms of **product innovation** – the development of a new and different product or service such as the Dyson vacuum cleaner. But product innovation is only one dimension of innovation. There is also process, organisational, and market innovation.

Hence the new idea that makes a commercial impact could be for a product but it could equally be a **process innovation**. In other words, a new way of making a product such as Pilkington's float glass production methods.

Yet more important in today's commercial climate is **organisational innovation**. A good example is Toyota who, by introducing employee based problem solving in the 1970s, transformed its approach to car manufacturing.

Finally, there is **market innovation**. EasyJet is a good example of a market innovator in a very large industry. But market innovation works in smaller organisations too. For example, Threadless.com, a T-shirt manufacturing firm is changing the way its market works. It has set up its own website where people design their own T-shirts. Other customers vote on these designs and the winning

designs are produced. In this new business model, customers themselves do the design and research for the manufacturer.

There is one further key dimension to innovation – the **degree of novelty** involved. This can range from incremental innovation – improving an existing product, for instance; to radical – inventing an entirely new one.

Both ends of this spectrum constitute innovation. Quite simply, if a firm introduces a new idea which ultimately feeds through to better bottom line results, then that is innovation.

## Why innovate?

Innovation is essential to business health and wealth – both for individual firms and the UK economy. In particular, innovation is linked to superior competitiveness and productivity.

Innovation is the life blood of organisations. Firms that do not search for new and better ways of doing business will be overtaken by their competitors.

As a country the UK needs to innovate more – and more effectively. A number of recent reports have focused on the competitive position of the UK. Their central argument is that the UK is less productive than some of its major competitors, especially the United States.

Competing on low costs is not a viable option for the UK in a global economy. What is required, therefore, is a shift in competitive focus. As Professor Michael Porter of Harvard

University put it, “the UK needs to change from a location competing on low costs to a location competing on value and innovation.” And it is not just about making the shift, it is about how quickly and effectively we make this shift. Key to this new competitive drive whether for individual firms or the UK national economy is innovation.

## How innovative is your business?

Professor Andy Neely, Deputy Director of the Advanced Institute for Management Research (AIM) suggests three simple questions to help assess a firm’s performance on innovation:

1. **Rate of change.** How many new ideas or new ways of working have been introduced in this firm over the past 12 months? Are we still doing everything the way it was done 12 months ago?
2. **Scope of change.** How many people in the organisation have been affected by the changes made in the last 12 months. Have these changes affected people across the organisation or just in specific areas?
3. **Depth of change.** How many people in the organisation are making suggestions about how to do things differently?

Firms that are innovative keep a constant lookout for new ideas that can impact the whole organisation and make it easy for their employees to make suggestions. “In this atmosphere there is an innovative buzz about the organisation but not a feeling of overload,” Professor Neely points out.

“If there is too much change going on then it can feel out of control. This is not about changing everything all at once. It’s very important to control the amount of innovation taking place at any one time.”

## How to become more innovative

**Steal ideas with pride.** Research shows that the most effective route to becoming more innovative is to grasp every available opportunity to gather ideas for possible product, process, organisational or market innovation.

**Innovative ideas do not have to be new.** It can be an innovation that’s already working for someone else. It means constantly scanning the environment – at trade shows, asking customers, talking to suppliers – searching in a host of different places for new ideas to make your business better.

**Why not tap into the UK’s academic research community for ideas on innovation?** At present a broad community of researchers – many funded by the Economic and Social Research Council – are focusing on ways to make UK business more innovative.

This booklet highlights some of their latest research findings on innovation, shows how innovation has helped UK businesses improve performance and explains what you can do to ensure your business can benefit from ESRC investment in innovation research.

# SUCCESSFUL INNOVATION: WHAT THE LATEST RESEARCH TELLS US

Since 2002, researchers at the Advanced Institute of Management Research (AIM) have been working on a variety of research projects that explore how UK firms can succeed through innovation. Some of their recent research findings include:

## Innovation needs good leaders

Innovation rarely happens spontaneously within a firm. In most cases it has to be made to happen. Research suggests that companies that adopt a structured approach to innovation tend to fare better. This means being good at all the elements required in successful innovation from creativity through to implementation of the new idea.

But recent research shows that it is leadership that plays a crucial role in creating an environment in which the appropriate innovative behaviour can flourish. It must be a climate where intelligent risk taking is encouraged and failure tolerated. As IBM's Thomas Watson Sr. said, the fastest way to succeed 'is to double your failure rate'.

Creating such a climate for innovation within a firm requires leaders who are capable of leading in two distinct ways. First, leaders who can act as organisational architects to create the organisational context or environment within which innovation takes place. Second, leaders who are motivators, who can engage, empathise with and inspire employees, and foster cultures of creative change and growth.

Innovation can be sub-divided into a number of activities which fall within two broad phases of innovation. The creative or exploration phase is the stage people most commonly associate with innovation. Activities during this phase of the innovation process include product definition, design, and pre-testing. The other phase of innovation is the commercialisation or exploitation of the product or service.

The different sub-processes that make up the innovation process as a whole require different organisational environments or contexts – and therefore different leader styles.

In the creative phase, for example, the organisation must encourage creative input from diverse sources. For the commercialisation phase to deliver on time and efficiently, the organisation must enable cooperation and coordination across different units such as manufacturing and marketing.

During the creative phase, transformational leadership skills are most useful. These skills include motivating and inspiring others, acting as a role model in terms of consistent behaviours and ethical conduct, encouraging creativity through questioning assumptions and reframing problems, and attending to people's needs for achievement and growth through coaching and mentoring, valuing diversity and creating new learning opportunities.

During the commercialisation phase, transactional leadership skills are essential. At this stage, an organisational environment

that favours accountability and a more formal structure is appropriate. Here, the relationship between leader and employees can be termed 'transactional'. In other words, it's based on, and limited, to an exchange of value that is of mutual benefit. For example, a salesperson receives a bonus. The leader also takes immediate action when activities fail to go to plan. This kind of leadership emphasises the factors that favour the commercialisation aspects of innovation such as structure, systems and process.

The selection, support, evaluation, motivation and development of leaders therefore depends on the innovation stage they are responsible for. To add one final layer of complexity in terms of a leader's skills, successful organisations must balance a steady stream of incremental innovations against the occasional radical innovation – an organisational balancing act often referred to as ambidexterity. Hence, leaders for innovation must also foster an environment which accommodates both radical innovation and incremental innovation and obtain the right balance between the two.

## SME INNOVATION VOUCHER SCHEME

The £240k pilot of the INDEX project offered 40 companies, in the West Midlands, with less than 250 employees the opportunity to receive an innovation voucher, worth £3,000 which they were able to spend with any of participating Higher Education establishments. Funded by the Regional Development Agency, Advantage West Midlands (AWM), the Economic & Social Research Council (ESRC) and the Engineering and Physical Sciences Research Council (EPSRC), the voucher allows businesses to gain access to academic resources who will work with them to generate real innovation for a particular project or situation.

Professor Julia King, Vice Chancellor of Aston University commented, "It will enable innovation across the SME community through this method of knowledge exchange and it will aim to sustain these relationships and benefit both the regional and national economy."

# CASE STUDY 1

## WELCOME TO THE MADHOUSE: LEADING INNOVATION AT AXA INSURANCE

In 1999, John O'Neil became CEO of AXA Insurance, Ireland, the leading motor and household insurer in Ireland. He set about making innovation a central part of the company's strategy. To do so he used his influence both as motivational leader and as organisational architect.

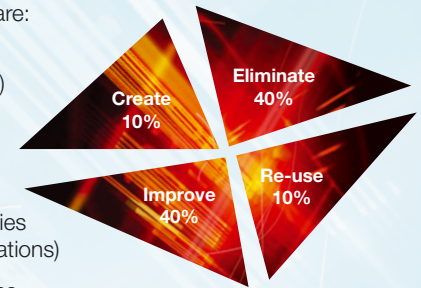
On a structural level he created an innovation department, and appointed an innovation manager. He charged the department with the responsibility 'to raise the innovative capability of the organisation through staff involvement and shared knowledge'.

O'Neil also developed and implemented a number of innovation initiatives. With the help of the innovation department, he introduced the 'MadHouse' initiative – a team-based innovation programme that brings seven employees together from across different grades and functions to work together, brainstorm, select and develop customer-focused innovation proposals.

On a motivational level, he addressed the issues of what innovation meant at AXA. The company developed the Innovation Quadrant. This formed part of the communication strategy helping to promote the understanding and meaning of innovation among staff.

The four elements of the quadrant are:

- create new customer-focused opportunities (radical innovations)
- improve existing products, services and processes (incremental innovations)
- eliminate non-value added activities (process or cost-reduction innovations)
- re-use AXA Global success stories (me-too innovations)



The success of the innovation programme shows how O'Neil's motivational and structuralist leadership behaviours interact to deliver innovation. He created a common goal for innovation, inspired his followers to buy into this goal and designed a process for delivering different types of innovation in the organisation.

For the full report, see AIM Research Briefing: Leading for Innovation: The Impact of Leadership on Innovation  
[http://www.aimresearch.org/portnews/articles/port\\_leading.html](http://www.aimresearch.org/portnews/articles/port_leading.html)

## Be ready for discontinuous innovation

One of the biggest challenges facing organisations is dealing with discontinuous innovation. Most organisations understand that innovation is an organisational imperative. They learn to listen to customers and constantly evolve their existing products and services, continuously improve their processes, so that they are not left behind by competitors.

The ability to deal with this steady state of innovation – the constant storms of change within an industry – is essential. Every so often, however, a whirlwind blows through an industry – whether caused by regulatory or political change, a technology or a product, so radically different that it changes the shape of an industry completely and in doing so puts many existing, successful companies out of business.

For an organisation to succeed in the long term it needs to be good at both steady state, conventional innovation, and to be able to sense a radical new discontinuous innovation on the horizon and, preferably, come up with one itself.

Being ready for discontinuous innovation requires a specific set of organisational capabilities: searching in unlikely places, building links to strange partners, allocating resources to high risk ventures, exploring new ways of looking at the business. But how does an organisation start building discontinuous innovation capability?

One way of getting to grips with this challenge is for firms to learn about managing discontinuous innovation together – sharing experiences, trying new things out, reflecting on what has and hasn't worked and looking at new ideas and models.

The AIM DILab, which started in spring 2006, allows networks of firms in the UK, Germany and Denmark, to link up with each other, and to work with academic researchers, providing a chance to compare, contrast, share and develop understanding of discontinuous innovation ([www.innovation-lab.org](http://www.innovation-lab.org)).

The first results from this initiative offer 12 strategies for addressing one aspect of this issue – how to search for triggers for discontinuous innovation. These 12 strategies are also useful for more conventional innovation, and while not every strategy is applicable to smaller firms, all organisations should employ some at least, if they aim to remain competitive and durable.

12 search strategies that could save your organisation:

1. **Sending out scouts.** This involves sending out idea hunters (full or part-time) whose role is to search actively for new ideas to trigger the innovation process. They could be searching for technological triggers, emerging markets or trends, competitor behaviour, etc., but what they have in common is a remit to seek things out, often in unexpected places.

## EXPLOITING IDEAS

WRc provides research and consultancy services to water utilities and public bodies, manufacturers and consultants. The company was looking for commercial and marketing input for its developing Innovation Unit in order to exploit ideas and innovation within WRc.

Working in partnership with University of Bath and with support from the ESRC, the aim was to introduce formal processes into the innovation unit so that it was quicker and easier to identify new business and marketing opportunities. In addition, WRc wanted to change the company's conservative approach to marketing and innovation.

The result? WRc achieved a £580,000 increase in royalties and licence income over a three-year period and £130,000 in increased export earnings.

2. **Exploring multiple futures.** One source of ideas about possible innovation triggers is to imagine alternative futures, especially those which do not necessarily follow the current trajectory. An effective way of creating and exploring such futures is through scenario-based approaches.
3. **Using the web.** Harness the power of the web, through online communities and virtual worlds, for example, to detect new trends.
4. **Work with active users.** Team up with knowledgeable product and service users to see ways in which they change and develop existing offerings. Their ideas and insights can provide the starting point for new directions and help create new markets, products and services.
5. **Deep diving.** In consumer research, study what people actually do, rather than what they say they do. This leads to a deeper understanding of how products and services are actually used, and also insights of new needs or wants that a company may be able to address.
6. **Probe and learn.** Get the hands dirty early on, by prototyping quickly and often rather than spending ages planning.

7. **Mobilise the mainstream.** Activate users within the workforce – bring them into the product and service development process.
8. **Corporate venturing.** Create special units with the remit and budget to explore new diversification options.
9. **Corporate entrepreneuring and intrapreneuring.** Discover and nurture the entrepreneurial talent inside the organisation.
10. **Use brokers and bridges.** Cast the ideas net far and wide: plunder other industries. The scope for transferring ideas from one sector to another is huge, and a powerful source of discontinuous innovation.
11. **Deliberate diversity.** Create diverse teams and a diverse workforce to help challenge your assumptions. A variation on this theme is to collaborate with strange partners to learn new perspectives. One of the interesting observations about close working relationships between firms is that, in terms of innovation, sometimes ‘the ties that bind become the ties that blind’.

12. **Idea generators.** Use creativity tools and techniques, and in a way that encourages, rather than squashes, creativity.

Smart firms are developing their innovation capabilities, so that they can pick up discontinuous shifts early enough to do something about them. Human beings evolved an elaborate capacity for peripheral vision to help them get out of trouble quickly by spotting it early. Now firms need to develop their version of such a capacity as part of the solution to the discontinuous innovation challenge.

For the full report, see AIM Research Briefing: 12 Search Strategies That Could Save Your Organisation  
<http://www.aimresearch.org/publications/searchstrat.pdf>

## INNOVATION AT WORK: LESSONS FROM RESEARCHERS

More than a decade ago, the ESRC launched three research centres with a common theme of innovation: the Centre for Organisation and Innovation (COI), the Centre for Research on Innovation and Competition (CRIC) and the Complex Product Systems Innovation Centre (CoPS). That funding has resulted not only in crucial findings across a broad swathe of innovation issues, but has broadened the scope of what we understand today by innovation. Here are a few of their findings:

### Better ways to boost creativity

The emphasis on fostering innovation within the workplace has prompted a rise in the use of courses to boost employee creativity. Researchers from the Centre for Organisation and Innovation (COI) set out to evaluate the benefits for a group of civil servants of three different types of creativity workshops: Beyond the Box (to teach the importance of setting radical goals), Lateral Thinking (to improve the variety and evaluation of ideas) and Six Thinking Hats (to encourage participants to think in six different ways from cautious to intuitive).

Findings show that the courses did help the 70 civil servants generate ideas. Those who attended all three courses showed the greatest improvement. However, external factors such as managerial support and the general climate for innovation greatly influenced the extent to which ideas were put into practice.

The project made a number of concrete recommendations to managers thinking of going down this path:

- creativity training should cover finding opportunities and problems, implementing solutions and generating ideas;
- firms should devote resources to evaluating the outcomes of such exercises, including questionnaires, work diaries, text exercises and supervisor assessment;
- managers should be sent on the course before their subordinates while employees should receive briefings before and after on the objectives; and
- the organisation must develop a culture where innovation is publicly valued, encouraged and resourced

As author Kamal Birdi points out: “Returning creativity trainees to a working environment that is averse to change would be like taking a carefully cultivated palm tree and planting it in the middle of the Arctic.”

COI-sponsored researchers found staff who attended purpose-built ‘creativity centres’ produced more, and better quality ideas, than colleagues using traditional methods in the workplace. Researchers looked at a Government Centre, [futuresfocus@dti](mailto:futuresfocus@dti), set up by the DTI and Fujitsu. They found that those people using brainstorming software at the Centre produced more and better ideas than those using flipcharts.

In one experiment, the Centre-based group generated 218 ideas in 40 minutes while the workplace group generated 138 in four hours, or 23 per 40 minutes. Moreover, the Centre produced not just quantity but quality with more than two-thirds of the suggestions from the creativity Centre being implemented into the final project compared with just one in eight from the traditional workplace.

### Widening the net for innovative ideas

Never underestimate any potential source of innovation. That's one message emerging from research at the Complex Product Systems Innovation Centre (CoPS) into computer hackers. Hackers can pose a direct threat to suppliers through hacking into systems and making modifications to existing products and enabling illegal sharing of digital content. On the other hand, the illegal activities of hackers can produce valuable innovations that some firms have appropriated to their advantage.

Computer gaming, for example, is one area where some firms have moved from a tolerance of user hacking activities to their encouragement and the eventual absorption of these activities within their business model.

In terms of illegal filesharing, Napster was instrumental in redefining music consumption, enabling users to obtain songs in digital format without having to purchase the single or album. Napster's activities led to the launch of many more legal and

## REDUCING COSTS

Much of the work assembling shower and bath enclosures and shower trays at Manhattan Showers in Lancashire was undertaken manually by unskilled labour. Absenteeism, high staff turnover and poor skills levels had a detrimental impact on quality and production.

ESRC-funded researchers from Manchester University worked with Manhattan Showers to improve quality awareness among shop floor employees, increase the quality and level of manufacturing and management information, and reduce product throughput.

The result? Cost savings of £30,000 per annum were achieved due to reductions in scrap levels. The company's reputation for dependability improved due to better product availability and quality, and reliable delivery times. Restructuring of manufacturing into self-managed cells and the provision of better manufacturing data resulted in significant productivity improvements.

## CHANGING CULTURE

Arriva is one of the largest transport services organisations in Europe, employing 33,000 people and delivering more than one billion passenger journeys across nine European countries every year. The company was looking to reduce accident rates by delivering new training and recruitment practices that would help further embed Arriva's culture of safety.

In partnership with Cranfield University, Arriva has developed a bus-driving simulator for training purposes plus a bus driver behaviour index (BRDI) to identify drivers with specific training needs.

The result? Costs savings of more than £1million were achieved due to reduced accident insurance claims. Fault accidents were reduced by 6.5 per cent and non-fault accidents by 3.5 per cent. Additional benefits from the development of a more positive safety culture included reductions in absenteeism and staff turnover.

illegal file sharing services and, ultimately, a series of innovations in file-sharing such as Apple Computer's iTunes.

Innovations produced by outlaw users therefore provide an important source of R&D as well as a challenge to existing products, business models and regulatory regimes. The five approaches firms can take to hackers are:

1. Monitor hackers' activities to see what is worth appropriating and to assess the weakness of their own systems.
2. Adapt or copy the technologies, methods or other innovations that have been developed by outlaw users.
3. Encourage hackers' activities either through tacit approval or by making available toolkits to enable users to engage in development.
4. Absorb both outlaw innovations and the outlaw users that understand or created them. This tends to occur when an innovation is highly attractive to a mainstream firm, the skills possessed by outlaw users are rare, or the boundaries between mainstream firms and outlaw users are unclear.
5. Go on the attack – although this can take place alongside the more passive strategies described above. Attacks usually take the form of litigation.

Firms need to distinguish between harmful and potentially useful hacking activity and ensure they have the structures in place to maximise the value hackers can deliver.

## New ways to manage major projects

Britain has a mixed record on delivering major projects. So, with the 2010 London Olympics on the horizon, what lessons can we learn in terms of big project innovation?

Researchers from the Complex Product Systems Innovation Centre (CoPS) have used BAA's Heathrow Terminal 5 to explore how learning gained from previous projects, individuals and organisations can contribute to an innovative approach.

The long public enquiry into T5 made BAA realise it needed a new approach to project management and project delivery to deliver the terminal on time and within budget. As a result, BAA built on lessons learned within the group, and externally from other worldwide airport projects, projects in other sectors, and leading edge practices in supply chain management and project management.

One crucial lesson was that a major source of failure in the past arose from trying to shift risk onto suppliers. Hence, for T5, BAA adopted the innovative approach of assuming responsibility for risk itself.

In addition to project-led innovation, BAA also made strategic changes in organisational structures, capabilities and business processes including deliberate strategic efforts to create a standardised and predictable approach to the delivery of all types of projects.

BAA took a structured approach to capturing the four different types of knowledge and learning in the organisation:

- tacit knowledge held by individuals or shared by teams of people;
- codified knowledge converted into project guides, tools, processes, supply chain management, technological innovations and standardised components;
- individual learning gained from experience and knowledge working on a project; and
- organisational learning gained when groups of individuals working in a team use collective knowledge and experience to perform project activities

This new structure for business-led learning was also informed by the bottom-up learning BAA gained on key projects – in particular its success in delivering the Heathrow Express project, which was running 24 months late after a tunnel collapse, only six months overdue.

Researchers suggest this structured approach to organisational learning could help avert potential problems in future major projects. That's good news for the 2012 organisers.

*The Business of Projects: Managing Innovation in Complex Products and Systems*, by Andrew Davies and Michael Hobday (Cambridge UK: Cambridge University Press 2006) offers case study examples of how project competence can lay the foundations for competitive advantage.

## Innovation through improved management practices

Passenger numbers at Heathrow have quadrupled since 1970. Managerial innovations, rather than a growth in runways, have played a significant part in helping the airport increase its capacity to handle more flights. Research undertaken at the Centre for Research on Innovation and Competition (CRIC) points to the joint value of new ways of working and cooperation as well as new technology in boosting this capacity. Improvements to technologies such as the power of engines on departure and the power of brakes and reverse thrust on landing have contributed to increased aircraft movements. But better co-operation between the airports, airlines and air traffic control played a significant role too. For example, Heathrow monitors the runway performance of different airlines and aircraft type and notes where there is scope for improvement. As a result, pilots' performance improved leading to increased flight capacity.

## Teamworking that works

For teamworking to succeed a few simple rules must be followed. Researchers from the Centre for Organisation and Innovation (COI) lay down some basic requirements for team working which include:

- collective responsibility for achieving aims
- interaction and independent work

- well defined and differentiated roles within the team; and
- acknowledgement by the organisation of the existence of the team

At the same time, leaders must watch out for two potential pitfalls. The first is that some people will get a 'free ride' because their lack of contribution is not noticed. The second is the potential for dominant personalities to exert excessive influence.

When the rules are followed, the benefits of teamworking are clear. Studies show that stress among NHS staff working in teams was much lower than for the organisation as a whole. But those working in teams that failed to follow the 'rules' had higher stress levels than those working in bona fide teams.

Researchers at COI have built up information on company performance over 22 years which allows them to study the practices which have had the most positive impact on performance. They examined four operational management practices – total quality management, just-in-time, integrated computer-based technology, supply-chain partnering – and three human resource practices – team-based working, empowerment and extensive training and development.

Findings show that the performance of both management and human resource practices is significantly enhanced by teamwork.

## Hidden innovation

The UK is more innovative than many policymakers may think, according to a study from the Complex Product Systems Innovation Centre (CoPS). Researchers suggest that traditional measurements of innovation, such as R&D spend fail to capture the true extent of UK innovation practices. Many non-traditional innovations occur in areas such as process, business models and relationships – not necessarily in the manufacturing sector.

The battle between governments and accountancy firms over tax is an example of a hidden innovation. Accountants innovate by first developing a product to lower a tax liability for a client, and secondly by producing mass-marketed products for multiple clients. Governments then innovate through legislation to counter current and future schemes. Firms need to grasp the opportunities to innovate in surprising and often hidden ways.

## ANTICIPATING CUSTOMER NEEDS

Based in Northern Ireland, Texthelp Systems is a small company that designs and markets software for students of all ages with learning difficulties. The company needed to find better ways of demonstrating the benefits of a product designed to help children with dyslexia.

ESRC-funded researchers from Queen's University Belfast developed an evaluation of the software product that provided independent validation that Texthelp could employ in its national and international marketing. With independently conducted empirical research indicating the product's benefits, Texthelp became a leader in the field with this form of product validation.

The result? Research led to \$550,000 of business from a US customer and an anticipated increase in exports of nearly \$3million.

# INNOVATION: WHAT IS THE FUTURE?

Traditionally, the UK has been regarded as good at innovation – with many inventions and scientific breakthroughs emanating from within these shores. But the fact is that for many years the UK economy has underperformed in terms of innovation. Researchers from the Advanced Institute for Management Research have taken a long look at the most recent findings on innovation and suggest several ways in which firms could move forward in terms of improving their innovation performance in an increasingly globalised world.

## How the UK can get ahead on innovation

### Opening up innovation

In an increasingly competitive world, no single organisation has all the answers. In future, innovation involving collaboration across organisations and national borders will play a critical role in competitive positioning. A growing number of firms, including BT in the UK, Lego in Denmark and Procter & Gamble in the US, have begun to emphasise this approach.

The UK has one of the most open innovation systems in the world in terms of cross-border flows, but more needs to be done to encourage collaboration between businesses and universities, for example. The UK's strong science base offers enormous opportunities. UK firms, research centres and universities are also well placed to collaborate with upcoming countries such as India and China. It is vital that these opportunities are grasped.

### Mastering higher-order innovations

There is an important distinction between the run-of-the-mill innovations in products and processes that all firms engage in, and the higher order forms of innovation – such as business model innovation, discontinuous innovation and management innovation – that very few have mastered.

UK firms need to find ways of understanding and managing these different forms of innovation. Many organisations around the world are currently experimenting with new innovation practices. There is a great opportunity for UK firms to learn from and adopt new practice in this area to develop more sustainable sources of advantage.

### Developing innovation networks

The UK's science base could be better harnessed by developing innovation networks around the top research centres and universities. Importantly, such networks are not only about stimulating high tech start-ups but also about providing the space within which a variety of knowledge exchange activities can occur to support existing businesses.

Clearly much effort has already gone into this, but as innovation opens up the importance of networks will grow. Global innovation networks can also support knowledge transfer – but they depend critically on brokers and gatekeepers to enable the flow. UK firms already use their R&D investment in other countries, especially the US, as an important way to access new technology and import know-how into the UK.

International links will be increasingly important to create networks that span the globe, including the rapidly developing economies of Brazil, Russia, India and China.

#### **Making the most of international firms in the UK**

Large parts of the UK economy are owned by foreign multinationals, and the trend towards foreign ownership is continuing. This has prompted concerns about the 'hollowing out' of the UK economy and the ability of foreign-controlled businesses to be innovative and entrepreneurial.

AIM research suggests this concern is not well-founded: there is evidence that foreign-owned companies are at least as innovative as locally-owned companies, and there are a number of clear strategies open to managers of foreign-owned business who want to chart their own destiny. Even for smaller firms, the main message of these findings are clear. Now is the time to become better attuned to developing and exploiting new ideas. The rise of India and China and other lower cost economies means that competing on cost is no longer a viable strategy for firms in the UK. Competition has shifted firmly to knowledge. And even the smallest of firms need to become more effective at identifying and capturing useful know-how, and turning it to their advantage.

For the full report, see AIM Research Briefing: *Competing on Knowledge: The UK's Global Innovation Challenge*  
<http://www.aimresearch.org/publications/ukinnovationchallenge.pdf>

## BETTER MARKETING

Leeds City Credit Union offers a range of financial services including Credit Union Current Accounts, Child Trust Funds and ISAs to anyone living or working in the Leeds Metropolitan District. The company knew it needed a fresh pair of eyes to look critically at the business and the way it marketed itself.

Working in partnership with researchers from the University of Leeds, Leeds City Credit Union set about transforming its marketing strategy in order to bring significant growth in its capacity to offer affordable financial services.

The result? As a result of this initiative, the company recorded a 35 per cent increase in savings revenue, doubled its staff numbers, increased the number of its branches from two to seven, and doubled the number of savings and lending products on offer.

## HOW CAN THE ESRC HELP?

**How can we help your business or organisation increase productivity and expand into new markets? How can we help your business be more innovative?** Whether it's written information or face to face contact, the UK's research community can help your business become more innovative.

### Research that makes an impact

It is vital to the ESRC that the world class research and researchers we fund has an economic and social impact on the business sector and the UK economy. The knowledge exchange schemes that follow are one of the positive methods of ensuring that a positive and lasting impact is made on UK business.

#### How to find out more:

Talk to the ESRC Knowledge Transfer Team using the contact details on page 20 or:

**Go online** – The ESRC has a regularly updated business zone on its website which offers access to news, research findings and opportunities for your business to work more closely with researchers on:

[http://www.esrc.ac.uk/ESRCInfoCentre/index\\_business.aspx](http://www.esrc.ac.uk/ESRCInfoCentre/index_business.aspx)

**Contact researchers** – Don't be put off going to researchers direct. Generally speaking researchers are extremely passionate about their subject and happy to share their ideas more widely. To find an expert in your particular area of interest, go to [www.esrcsocietytoday.ac.uk](http://www.esrcsocietytoday.ac.uk) and use the search engine to look for your particular field of interest.

### Knowledge Exchange Schemes:

The ESRC funds and manages a range of schemes. These include:

- **Knowledge Transfer Partnerships (KTPs)**  
Part funded by the Government and the ESRC, usually of two years duration, designed to strengthen the competitiveness and wealth creation of the UK by enabling research organisations to apply their research knowledge to important business problems...
- **Student SME Placements**  
The placement, managed through Step Enterprise Ltd, will focus on supporting research, strategy or business development requirements.

- **Business Engagement Opportunities Scheme**  
The scheme focuses on 'business engagement' and provides the opportunity for social science researchers to engage with specific sectors of business and professional groups or organisations to assist business sustainability.
- **Business Placement Fellowship**  
Your business can have experienced researchers join you for between one and twelve months to work on projects relevant to your operations. Alternatively, your employees can also undertake placements in research units on a similar basis.
- **SME Innovation Voucher Scheme**  
This pilot project invites SMEs to apply for an innovation voucher that can be used to purchase academic advice and support to general real innovation for a particular business project.
- **Collaborative Awards for Science and Engineering (CASE) Studentships**  
PhD research students can work in conjunction with your business on mutually agreed research projects as they undertake their doctorates.

## BOOSTING GROWTH

Eatec is a Bristol-based small business offering an engineering consultancy service for companies in a range of different sectors. The firm aimed to develop a marketing strategy what would identify the needs of both UK and overseas customers and enable business growth.

A collaboration between the University of Bath and Eatec worked to transform the company's marketing capabilities including a detailed database of potential target customers and marketing material which presents a more professional image for the company.

The result? The new marketing strategy increased business by £20,000 with a predicted further increase of £50,000 over the next three years.

- **Impact Grants Scheme**

This scheme gives high quality researchers a further opportunity to highlight the relevance of their research and undertake new and additional knowledge transfer activities that are likely to have an impact on policy or practice and generate impact.

## Knowledge Transfer Training and Development and other opportunities

- **Enterprisers – Entrepreneurial Training**

The training equips students with entrepreneurial skills that can easily be transferred and applied to their research and also to a wide range of businesses and organisations in any sector; public; private and third/voluntary.

- **Engaging with Business Workshops**

These events are aimed at ESRC-funded researchers undertaking research of potential relevance to business users and encourage such researchers to engage more effectively with the private sector.

- **Networking Opportunities**

The ESRC and the researchers we fund regularly engage with a broad spectrum of business organisations. The ESRC arranges briefings, consultations, events, meetings, presentations, seminars and access to speakers.

The ESRC Knowledge Transfer Team is always looking for members of the business community who are willing to give their time and expertise to sit on review boards and panels. If you feel you would like to become involved in facilitating knowledge exchange to business please contact us.

Full details of these and other schemes are available on the ESRC business zone at:

[http://www.esrc.ac.uk/ESRCInfoCentre/index\\_business.aspx](http://www.esrc.ac.uk/ESRCInfoCentre/index_business.aspx)

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The Economic and Social Research Council is the UK's leading research and training agency addressing economic and social concerns. It aims to provide high-quality research on issues of importance to business, the public sector and Government. The issues considered include economic competitiveness, the effectiveness of public services and policy, and our quality of life.

The ESRC is an independent organisation, established by Royal Charter in 1965, and funded mainly by the Government.

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