

10 BCS Thought Leadership Role

BCS has a pivotal role to play in the IT profession's response to globalization. We need to develop a good understanding of our strengths compared with the best in the world so that we can use the new opportunities that global sourcing offers to nurture and grow the UK's IT profession. Anna Duckworth, BCS Head of Corporate Marketing, writes about BCS's thought leadership role:

As the leading learned and professional society for IT, BCS aims to ensure that it is always at the forefront in thought leadership and promoting growth in, and awareness of, the underlying science, techniques and applications of IT. It does this by providing opportunities for experts from research and practice to exchange views. In a rapidly changing scientific and technologically driven world, essential to this process is the bringing together of key players from a wide range of disciplines and industrial sectors.

By performing these traditional learned society roles BCS also provides vehicles for disseminating the outcome of these interactions to both the public and private sectors. The ways in which BCS achieves this include:

- thought leadership debates;
 - These debates tackle specific hot-topics, with invited audiences of both BCS members and key decision makers across the IT spectrum. Topics have included intelligent infrastructure, electronic patient records and network surveillance. A full list of thought leadership debates is given in Appendix D (see also pages 68–70). Further information can be found at www.bcs.org/thoughtleadership.
- forums;

The forums have been set up for areas in which BCS has a major focus interest, such as education and training, engineering and technology, management, security and health informatics, and all are led by major players in their respective fields.
- specialist groups;

The BCS specialist groups address specific sectors of interest, supporting a wealth of opportunities for working with professional colleagues (see also page 40).
- learned society awards programme;

The Learned Society Awards Committee is responsible for a number of nationally significant academic awards and prizes.
- prestige public lectures;

Annual lectures organized by BCS include: the Turing Lecture (in association with the IEE); the Lovelace Lecture; the Roger Needham Lecture; the RSI lecture (in association with the Royal Signals Institute).
- publishing.

BCS is committed to serving the professional and academic needs of its members through publishing. For over 40 years BCS has published academic journals, newsletters, magazines and computing books (see also page 42).

THOUGHT LEADERSHIP DEBATE: THE KNOWLEDGE-BASED ECONOMY – WHAT CAN THE UK DO TO AVOID LOSING OUT TO THE FAR EAST?

This debate took place in January 2006 and was introduced by two speakers: Richard Sykes, Chair of Intellect's Outsourcing Group and formerly ICI Group Vice-President IT, and Mari Sako, Said Business School, Oxford. The discussion was very positive, highlighting that the UK is currently in a strong position. Some of the key points to emerge are described below.

Given that wage levels in countries such as India and China are relatively low, it is hardly surprising that the trend to offshore IT services is gathering pace. Most of the services provided by India and China are, however, still fairly low level. As time goes by we can anticipate that offshore services will move up the value chain. This has happened elsewhere: the Japanese car and Taiwanese electronics industries began by manufacturing entry-level products but have now moved on to developing their own-brand products. The timescale for moving up the value chain in service industries is expected to be much shorter than for manufacturing thanks to the global use of up-to-date ICT technologies.

The UK is, however, currently in a strong position. It has the seventh largest economy in the world and the fourth in terms of services. The UK has a trade surplus in computing and information services, lying fifth in the world behind India, Ireland, the USA and Germany in 2003 according to the World Trade Organization. Britain's trade surplus in business services is bigger in absolute terms than that of the USA, even though our economy is 10 times smaller. What is more, the UK's surplus is growing over time.

Not only does the UK have a flexible workforce, some communities have shown that they can reinvent themselves as world trade patterns change. One example is Leeds, a former textile area that has reinvented itself to become a financial services centre.

A widely shared view was that the UK must appreciate that offshoring is happening and embrace the trend. It should not try to put up barriers but take a confident, outward looking stance. The UK derives great benefit from its trading networks and UK companies should be encouraged to exploit globalization. The focus needs to be on more than just technology because competitive advantage does not come from technology alone but from people: their experience, skills and competencies. Education, training and qualifications all have a role to play. Equally, the UK needs to be an attractive place for companies to be based. The government can help to create an environment that is not excessively constrained so that companies find it easy to do business in the UK.

Both government and professional organizations have a role to play in sustaining the UK's competitive advantage in the IT service industry. BCS can contribute by promoting professionalism. Innovation, learning, professional standards and a business-friendly environment, supported and encouraged by government measures, will all help the UK to maintain its current strong position in the global IT services trade market.

Nigel Shadbolt, BCS Deputy President, chaired the debate:

Our debate highlighted the strengths that lie in the UK and the opportunities that globalization opens up for IT professionals. BCS is committed to building a strong profession for the future and we have many initiatives that will help us meet the new global competition with confidence. We cannot, however, be complacent – we need to be alive to the fact that we need to raise our professional standards to match the best in the world.

A full report of this debate can be found at www.bcs.org/thoughtleadership.

BOX 10.1 WORLD LEADERS (1): THE UK'S FINANCIAL SERVICES SECTOR

The UK has a strong and vibrant financial services industry. The sector is one of the most significant users of offshore resources in the UK for data centres, non-customer facing processing centres and call centres. According to a recent PricewaterhouseCoopers survey, the scale of offshoring in the global financial services sector is set to virtually double by 2008. Those companies that offshore jobs solely to cut costs, however, or do not approach projects with caution, will not reap full benefits, such as improved efficiency and increased shareholder value (PricewaterhouseCoopers, 2005).

Roger Baker, Peter Golden and Geoff Webster of the FINSIG specialist group write about new and emerging job opportunities for IT professionals in this sector:

The sector's regulator, the Financial Services Authority (FSA), strictly reviews all proposals for significant offshoring before permitting them. The FSA supervision and inspection leads to banks' subsidiary operations being managed directly 'hands-on' from the UK, rather than left to independent offshore organizations.

This impacts the labour market:

- basic developer jobs are reducing;
- IT operations, software support and applications support continue to be outsourced onshore and then, after a period of a year or two, transferred offshore;
- IT product developers also move standard development offshore, although specification and final testing tends to remain in the UK;
- Indian banking solutions are gaining traction in the global market, which may lead to a loss in core product revenues and job opportunities in UK-based technology product suppliers and to compete these companies may also have to move work offshore or specialize in the more niche market products or solutions.

A new breed of hybrid financial services business/IT professionals are, however, thriving. They ensure requirements are specified and met, use agile methods and work within new global delivery models. These UK IT professionals manage the sourcing selection process, specifying business, process and IT requirements and project managing the supply. Value chain analysis and core value propositions are used to analyse and propose which processes should be offshored or retained in-house, identifying the types of services and processes that can be most successfully developed and run offshore. As business service and federated computing models mature, this trend will accelerate.

Taking a holistic approach is often a valuable tool for these hybrid professionals; processes cannot simply be outsourced as they currently exist; they may be problematic, inefficient, damaged and held together by informal arrangements and key onshore staff. Simplification and systems redesign are needed first, generating significant UK onshore business systems analysis and design activity (and then process and IT design) before an optimized offshore solution can be created.

Alongside these hybrid professionals, and related as mentioned to the FSA supervision, a number of UK staff are being retained in-house to manage all aspects of the offshoring relationship: day-to-day operational control, supervision, audit, review and performance management. These staff also interpret changing business needs, which may mean that systems and processes are resited onshore or moved to a different offshore location.

BOX 10.2 WORLD LEADERS (2): THE UK'S MOBILE INDUSTRY

The UK is at the very vanguard of the fast growing entrepreneurial mobile industry. With close to 65 million in use, there are now more mobile phones in the UK than people. Britain is a world leader in the development of novel mobile applications, from employee communications via texts to meter readings, from remote monitoring of sick patients to people and parcel tracking. From 1985 the UK had two network operators, Vodafone and Cellnet, rather than a single monopoly and this helped spawn a vibrant and innovative support industry. Britain has also taken a leading role in the development of GSM and has become a global media hub, leading to the creation of new mobile services such as news alerts, ring-tones, games and mobile email. In 2004, UK mobile voice and data revenues overtook fixed-line voice revenues for the first time (Leyland and Eastwood, 2005).

'Aggregators such as WIN (Wireless Information Network) are building applications that save companies significant amounts of money. One example is a service for the AA that reduced the incidence of recalls to its breakdown call centre by 80 per cent', writes Mike Short, Chairman of the Mobile Data Association (Short, 2005). 'Companies such as Volantis are helping companies such as the FT, Egg, Norwich Union, Interflora, Ladbrokes and dozens of others to create fully functional mobile versions of their services' (Short, 2005).

The UK mobile industry has reached a critical mass, not only in terms of technology providers but also in the exploitation of the opportunities opened up by mobile. Vast global markets are emerging as GSM coverage extends to more than 200 countries and two billion users.

Mobile technology today is an indispensable business tool. The challenge is integrating its use with existing systems and processes to maximize business benefits. Mike Short believes the mobile industry in the UK has come a long way in helping organizations address these issues, 'There is no better place to be building mobile products and services and there is no better way to help organizations give themselves an edge, not just in local markets but internationally too' (Short, 2005).

In 2005, BCS introduced a new mobile computing award, reflecting the pace of evolution in this market. The first winner of this award was eCourier. The eCourier system brings clients and couriers directly together through the combination of mobile devices, GPS and an intuitive and easy to use online booking system. The system processes all delivery requests, minimizing the need for human intervention. Additionally a street-level tracking module allows clients to follow the GPS-informed movements of couriers assigned to their deliveries and another module automatically despatches proof of delivery emails containing the recipient's digital signature. Together, these systems provide unprecedented levels of efficiency, reliability, transparency and customer confidence.

THE IMPLICATIONS FOR THE UK OF COMPUTING DEVELOPMENTS IN THE NEXT 20 YEARS

The BCS Management Forum is commissioning a research study to look at the effect of computing developments on the UK economy and its society over the next 20 years. The output from the study will include an academic paper and a companion business report. The research will address three main challenges:

- (1) Do we want the UK to be G8 or G20 in 20 years' time?

- The UK needs to change and adapt in order to remain competitive in the world economy. How will ICT contribute to this? What must BCS do in order for this to happen successfully in the light of emerging economies, particularly China, India and Korea but also European accession countries, learning from our experiences and investing significantly in education and infrastructure?
- (2) Computing will dictate many more forms of work in future. How should BCS influence computing-related employment?
- We want to retain a stable society, with widespread prosperity. Many of the successful businesses of the future will export their value through ICT systems. What factors make these knowledge businesses successful? How can these new opportunities be encouraged so that positive impact will be felt in terms of employment? There is a risk that we will concentrate investment so that some sections of society will benefit more than others. The developing information infrastructure should bring widespread benefits, but might further widen the social and rural divide. What should BCS do to influence these developments?
- (3) How should BCS ensure that people can reach their full potential in a technical and information-rich society?
- As the UK economy becomes even more strongly focused on providing services we must ensure that people are prepared and motivated to deliver the customer value required to ensure UK business remains competitive. We need to develop all the elements of a knowledge economy and invest in them. Ultimately we want people that are happy but realistic about what is possible, and businesses that have world-class competitive advantages to deliver the global value to expand our economy. What role could BCS have in achieving this vision?

BOX 10.3 WORLD LEADERS (3): THE UK'S GAMES INDUSTRY

Reuben Edwards, University Dean at Lancaster University, and Paul Coulton, Forum Nokia Champion, who are both directors of m-ventions Ltd, write about the UK's games industry and the opportunities it offers for IT professionals:

One of the key advantages that UK developers offer is the ability to create innovative solutions as offshoring needs strictly specified requirements and software designs, based on well-known patterns, to be effective. Thus projects are often divided between countries, with the more sophisticated tasks kept in house and simpler tasks transferred overseas (although this is likely to change as skills, ability and experience improve in these countries).

Console and PC games represent significant pieces of software, easily broken into components that may be outsourced. Two of the largest games developers are currently offshoring work to countries such as Taiwan, China, Korea and India.

There is also a growing dependence on game engines such as Quake and Unreal, which means that increasingly large proportions of the development budget are being spent on cinematographers, composers, actors and artists from the film industry.

The development of games for mobile phones is an increasingly large market. Lower budgets and limited technical resources (memory, screen, graphics and power) require

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highly skilled programming coupled with the ability to develop innovative programming solutions. These games are also much smaller in scale and scope and so small companies tend to keep development in-house, although as the market has grown there has been a period of amalgamation, with smaller game development companies being swallowed up by the larger game developers (for example, the acquisition of Bluebeek by Mforma).

One of the major problems for mobile game developers is porting and testing (significantly more so than for console programmers), with a major game requiring testing on hundreds of different devices and for large position-complex games as many as 60 or 70 different versions. For companies such as EA this accounts for the largest part of their development budget. Here is where offshoring can support UK developers who are able to outsource device testing and porting to cheaper overseas partners.

The value placed on the skills and abilities of UK professionals is demonstrated by the significant level of development in the UK of software for Brew phones (common in the USA and South-East Asia), despite the fact that there are no Brew phones available in the UK and that these games are being sold purely overseas.

CASE STUDIES INITIATIVE

This new BCS initiative is a component of the Professionalism in IT Programme (see pages 18–20). Although several research projects have found that there is a wealth of best practice guidance available, professionals are often unaware of this advice or have difficulties applying best practice principles. The aim of the case studies programme is to promulgate lessons learnt in successful projects and to use the expertise demonstrated by BCS Professional IT Award winners and medallists.

The case study material will be written up in two formats:

- magazine-style material for award winners, highlighting achievements, the keys to success, barriers overcome and business impact;
- research papers, analysing roles, capabilities, results, relationships and competencies, all linked to professionalism in ICT work.

Case studies will be prepared for a selection of the 2005 award winners. The process will be embedded in the BCS Professional IT Awards programme from 2006 onwards.

BOX 10.4 INVESTING INTO THE UK

Global sourcing is one of the most significant forces shaping today's business environment. While countries with low wage levels can offer obvious cost advantages, this is not the only factor influencing offshoring decisions. Proximity, political and security risk, macroeconomic stability, regulatory environment, tax regime, labour regulation, labour skills and infrastructure all play a part. The Economic Intelligence Unit's 2005 ranking of global offshoring environments shows that Ireland and the UK are the highest ranked western European countries, in positions 27th and 29th respectively. Although wage levels are relatively high in both countries, this is offset at least in part by attractive labour markets, favourable business environments and English language skills (Economist Intelligence Unit, 2005).

Writing for *Computing* (Pedder, 2005), William Pedder, Chief Executive of the Inward Investment Group at UK Trade and Investment, notes that the UK's IT sector is attracting European investment in three key areas: inward investment projects; venture capital investments; and investment in IT capital goods and services. The

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UK led Europe in both the amount in IT and the number of venture-backed deals in 2004. By halfway through 2005, UK companies had captured nearly 38 per cent of all venture capital deals in Europe.

The UK is particularly well positioned to attract investments that capitalize on the convergence of the IT, telecoms and media sectors. Investment is also attracted to the many centres of excellence in digital media, communications, computing and 3G/wireless technologies.

In a real sense, the UK is the leading market in Europe for investment in convergence innovation. Investors who are already established in the UK have become part of a technology ecosystem that is bringing life to the vision of a truly adaptive enterprise and digital lifestyle with high mobility and ubiquity of access to high-fidelity content as core organizing principles.

PEDDER (2005)