

The ECSITE-UK Science Centre Network

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The Government's new Strategic Framework for Science aims to make the UK "the most attractive location in the world for science and innovation".¹ Achieving this goal will involve the combined efforts of the country's scientists, innovators and policy-makers; but it will also require the strong support of the country's science educators and communicators.

Fortunately, it is not just our scientific community that already punches above its weight internationally; so, too, does our science communication community in the broadest sense. Across Europe and far beyond, the UK is widely – and rightly – seen as a highly active and innovative centre of informal science communication. Science broadcasting, lecturing and writing all thrive here, as do a host of other initiatives – from science fairs and festivals through science & art initiatives of all kinds to science on the buses and science on the underground.

A key asset for science communication today is the country's national network of science centres and museums. Thirty years ago there was a mere handful of specialist science museums, most dating from the 19th century. In the 1980s several new hands-on

science centres were founded; and in the 1990s, the National Lottery fuelled the construction of 14 major new regional science centres, radically enlarging the UK's science centre resource. Today the UK has the largest and strongest science centre network in Europe. Four-fifths of the population lives within one hour's drive of at least one science centre. The 80 members of ECSITE-UK, our national network organisation, together welcome more than 11 million visitors annually through their doors.²

Why does all this matter? Well, for one thing the science centres are important economic contributors in their own right – for example, through urban and rural regeneration; and of course through leisure and tourism. But even more importantly, the science centres have a vitally important part to play in helping to strengthen the UK science base. ECSITE-UK members are ideally placed to help deliver two key objectives within the Strategic Framework for Science: creating a more responsive supply of science, technology, engineering and mathematics skills to the economy; and building public confidence in and engagement with science and technology.



So far as skills supply is concerned, the most important thing to say is that the UK's science centres represent a £500 million capital investment in interactive, enquiry-based learning environments that are demonstrably motivating for young people of all abilities and backgrounds. The fact that these environments are *not* like school is undoubtedly an important factor in their success. Science centres don't compete with schools; rather, they offer complementary experiences and opportunities in support of better overall learning outcomes.

Individual science centres' programmes meet the needs of local and regional schools and communities – typically, a quarter to a third of science centres' visitors are pre-booked educational groups. Additionally, programmes devised and managed by ECSITE-UK have national reach. For example, ECSITE-UK's *sciZmic* programme links school-based science clubs to 20 local science centres/museums, providing special events, a website and resource pack, and direct links to the materials and support available from, eg, Young Engineers, Salters' Chemistry Clubs and RSPB Wildlife Explorers. ECSITE-UK's *Meet the Scientist* programme marries research scientists to science-communication mentors, to develop *Meet the Scientist* events for families and school groups in six science centres distributed nationally.

The new National Network of Science Learning Centres (NNSLC) is creating further opportunities for partnership. NNSLC is a national initiative co-funded by the Department of Education & Skills and the Wellcome Trust. It is designed to support science teaching through a regional programme of innovative continuing professional development courses. Science centres are involved in several of the new Regional Science Learning Centres;



indeed, Science Learning Centre South West is being led by At-Bristol in partnership with the University of Bristol and the University of Plymouth. Starting in January 2005, we shall be offering CPD courses across the South West that exploit to the full the strengths of hands-on and experiential learning in helping school teachers, learning assistants and lab technicians to achieve better results in the classroom.

If the UK is indeed to become the most attractive location in the world for science and innovation, then we shall have to strengthen the relationship between science and society at many different levels. All agree that more and better dialogue between scientists and the wider public is a vital ingredient in building public confidence in science. What is not yet so widely recognised, however, is that science centres are ready-made hubs in the community for such dialogue. They are well-dispersed, highly visible and readily accessible; they are centres of excellence in popular science communication; and their independent charitable status gives them a high degree of credibility with the public.

Our sector is already involved in public engagement activities of many different kinds.

For example, as long ago as 1994 the Science Museum London organised the UK's first national consensus conference on plant biotechnology; and today, the Science Museum's recently opened Dana Centre organises a wide variety of deliberative programmes on science and society issues. Similarly, At-Bristol has hosted deliberative debates on topical scientific issues in collaboration with the Food Standards Agency and the Human Genetics Commission; and we have recently been contracted to deliver a multi-site public engagement programme as part of a European "Network of Excellence" on biodiversity in Europe.

The experience of the innovative *GM Nation?* consultation in 2003 has led to calls for more "upstream" public engagement on key science and society issues in the future.³ To be effective, it is suggested, public engagement should start much earlier at a point in the

innovation cycle where options are not firmly fixed and innovators can genuinely learn from and respond to emerging public priorities and concerns. We should be using our science centres as regional forums for upstream engagement of this kind. An upstream *Nano Nation?* initiative, for example, might usefully feature co-ordinated dialogue events in science centres throughout the country, with opportunities for local exchange, exchange between regions and regular feedback to policy-makers. We urgently need to get better at proactive engagement activities of this sort if we are not to have important areas of science-based innovation mired in decades-long confrontation and dispute.

I make no apology for the fact that my vision of the role of science centres nationally is very upbeat. But at the same time it would be foolish of me to



pretend that there are not real challenges ahead. Our sector is not yet reaching all parts of the community: geography is still a barrier to access in many parts of the country (the solution here, in my view, is not the creation of many more centres but rather more and more effective outreach from existing centres); and a great deal of work needs to be done to remove other (eg economic) barriers to access. Science centres are independent institutions that depend upon admission income; but we need to find economically viable ways of making it possible for people on lower incomes to visit us regularly.

This leads me to the biggest of all the

challenges we face, which is the quest for long-term financial sustainability. The closure of The Big Idea in Irvine, Scotland earlier this year and the recent announcement of the (hopefully temporary) closure of The Earth Centre in Doncaster are proof enough, if proof is needed, that many science centres around the country are struggling financially. At root, this is because there never was a coherent national plan for long term support of science centres from the public sector. Around the world, science centres thrive best on a mix of earned income, fundraising and public sector support. UK science centres are highly entrepreneurial – on average, we earn a significantly higher proportion of our operating costs than do our continental European partners – but our educational and public engagement activities cannot realistically meet all of their costs at the "point of sale".

Technique in Cardiff enjoys the support of the Welsh Assembly. Earlier this year two Departments of Government in Westminster offered a limited amount of financial support to five of the English Millennium science centres only through to March 2006; and over the summer, the Scottish Executive announced a (distinctly more generous) package of revenue support for the four surviving Scottish science centres over a two year period. As I write, parallel discussions are under way between W5, the Millennium science centre in Belfast, and the Northern

Ireland Office. It is vital that revenue support of this kind is now extended – across the entire sector, and beyond 2006. Also, it is important that we do not stumble into a "two-tier" system, with one (higher) level of funding for science centres working under the devolved administrations in Scotland, Wales and Northern Ireland and another (much lower) level of funding for those working in England.

If the right sort of partnership can be secured over the coming months, I have absolutely no doubt that the UK's science centres will play a full and important part in delivering the national strategy for science and innovation.

¹ "Science & innovation investment framework, 2004-2014, HM Treasury, July, p. 1.

² For further details, see: www.ecsite-uk.net

³ See for example, James Wilsdon & Rebecca Willis, "See-through Science. Why public engagement needs to move upstream", Demos, London, 2004.