EPSRC
Pioneering research and skills

Engineering and Physical Sciences Research Council

DIGITAL ECONOMY PROGRAMME

programme remit

Digital Economy (DE) is the novel design or use of information and communication technologies to help transform the lives of individuals, society or business. Delivering this will require multi disciplinary input across a broad spectrum of subjects including researchers from the arts and humanities, economic and social scientists, medical sciences, in addition to engineering and physical sciences.

programme strategy

- Establish new research capability with a strong research capability in ICT research but with an understanding of business and the other research areas needed to deliver the benefits of ICT
- Deliver step-change in the level of engagement with industry, government and society to pursue key research challenges and deliver transformational use of ICT leading to increases in economic impact
- Create a critical mass of researchers working at the interface between the physical and social sciences providing the base on which to deliver research needed to underpin the knowledge economy and contribute to public policy goals
- Build links with key sectors where DE has the potential to have a major impact, but where the Research Councils currently have a limited engagement in order to increase the economic impact
- Ensure the fundamental research in engineering and the physical sciences is aligned to future needs of DE.

Research, societal and economic impact

Research supported by the DE programme will focus on delivering societal and economic impact, as well as academic excellence, by collaboration with users and stakeholders, e.g. through partnership funding in hubs, or through user focussed workshops. User engagement and impact is a key criterion in DE funding decisions and one which is assessed in conjunction with those users.

International links

8.6% of the portfolio has an element of international collaboration across 3 countries, with a total grant value of £482k. Note this does not include recent activity in India outlined below.

EPSRC-DST Digital Economy Funding. £9M over 5 years: £2.5M each from RC Digital Economy programme and DST; £4M from companies and academic partners. Gerard Parr from the University of Ulster is the lead UK academic on the project and BT is the lead UK Company. Project aims to bring online education, healthcare and early warning weather/natural disaster systems to remote areas in both countries.

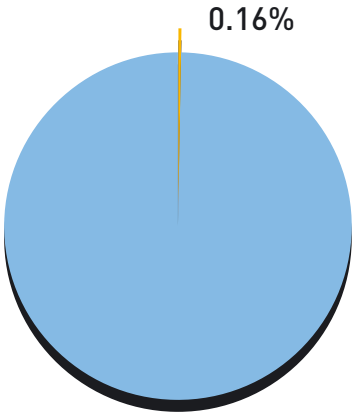
Science Bridges supported a £940k award between Heriot Watt and China in wireless communications. 6 INTERACT awards fall within the programme remit, totalling £702k encouraging international networking with India.

Data is based on EPSRC's current portfolio in January 2009

Public engagement

It is our perception that the profile of public engagement needs to be increased with the digital economy community, as the research conducted in this area should have an impact on users and society. There seems to be a split in the research community regarding societal and ethical thinking, and the DE programme will be working with the DE community to develop an ethical framework to help bridge this divide. We have seen a couple of PPE applications related to DE with a focus on social relevance at the start/during research projects e.g. biometrics and security. This area benefits from having Professor Tom Rodden as an ambassador for broader engagement.

Programme % of total EPSRC budget



Inter-relation with other EPSRC programmes

Programmes	Level of interaction
Maths	✓
Physical Sciences	
ICT	✓✓✓
M3E	✓
PES	✓
Cross-Disciplinary Interfaces	✓
Energy	✓
Healthcare	✓✓
Nanoscience	✓
Cross Council	✓✓✓

Data is based on EPSRC's current portfolio in January 2009

Greatest user collaboration*
Metacause Solutions Ltd
Rolls-Royce plc
Informing Healthcare
IBM Watson Research Centre
The 451 Group

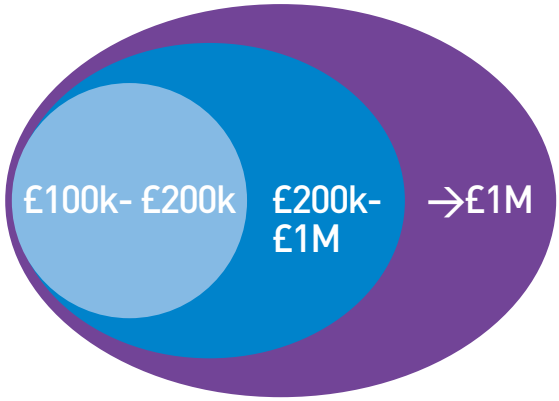
* The above data reflects the engagement of users with the initial Digital Economy activities: Information Driven Health, Research Clusters, and the Feasibilities Studies. The DE Programme Advisory Board (PAB) has a strong user membership, reflecting the potential sectors of impact. Virtually all DE activities will have strong user collaboration. For example each DE Hub has £2M earmarked as their Partnership fund, for engagement specifically with users. Selection of the Partnership activities will be done in conjunction with those users of interest.

Leading centres based on EPSRC funding

- Southampton, Web Science Research Initiative
- Nottingham, Mixed Reality Laboratory
- Imperial, London e-Science Centre, Centre for Transport Studies
- Oxford, Oxford eScience Institute, Institute of Biomedical Engineering
- QMU, Centre for Digital Music

Universities within sub theme by EPSRC funding

£100k- £200k	£200k- £1M	→£1M
York	Dundee	Imperial
Swansea	Cardiff	Oxford
Manchester	Nottingham	
Newcastle		
QMUL		
Bedfordshire		
Sheffield		
Edinburgh		
Southampton		
King's		
Hull		



Swot analysis

Strengths

- Evidence of enthusiasm from research base in this area
- Broad range of potential users and applicable disciplines
- Building a community
- Changing culture in HEIs through programme activities
- Attracting co-funding from other councils (above cross-programme budget)
- Building on world-leading research base.

Weaknesses

- Starting from scratch
- Small portfolio at this stage...
- ...made of small 'preparation' projects.

Opportunities

- High level of demand
- Potential to engage broad range of stakeholders
- High potential for transformative outputs
- Potential for engagement with India
- Investment in critical mass will accelerate a culture change.

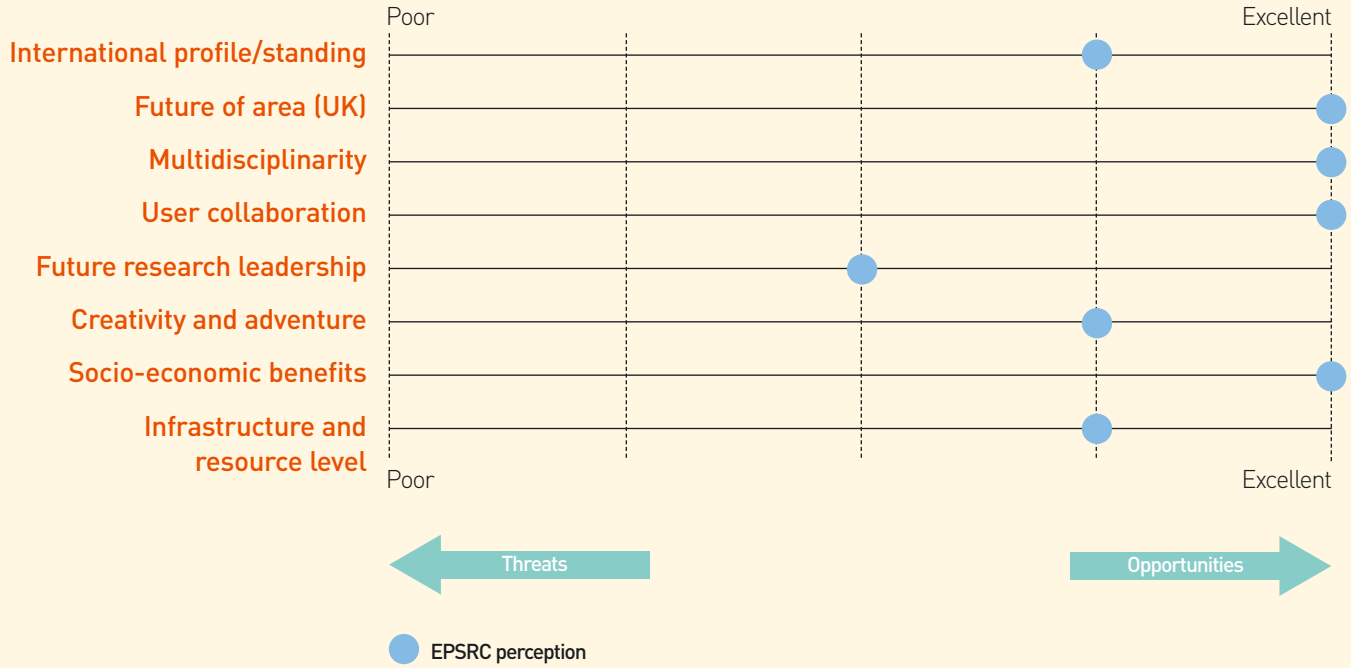
Threats

- Need to continue to attract cross council funding
- Continuity through next SR
- Making sure we fund the right people in all disciplines
- Definition of remit for DE
- Peer review not 'getting' DE and supporting excellent research
- Keeping a 'healthy' evolution of the community – not static.

Data is based on EPSRC's current portfolio in January 2009

Perceptions

Our perception of the current position of UK digital economy research



Summary

- Data contained in this review only reflects the initial Digital Economy activities. It does not include the large investment in CDT (although those funded under DE are named here) and the DE Hubs due later in Financial year 08/09
- The investment in the CDTs and Hubs will catalyse the relevant communities, providing a critical mass around which an identity for DE can be created. The programme is looking to develop the key challenges for the future in this space, building on this underpinning support being put into place
- The programme has had strong user engagement to date, which will strengthen over the CSR period
- The programme is seeking to drive a culture change in the research base, where the transformational potential of the novel design or use of information and communication technologies will be an integral aspect of any research projects in this area.

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