

### 3 Supporting research and innovation

#### Challenge

Exploiting the opportunities of new technology

Removing systemic barriers to innovation

#### Response

The Technology Strategy Board will set up a £10 million collaborative R&D call for the creative industries

NESTA will launch a £3 million ‘creative innovators’ growth programme

DIUS will commission research into the value of innovation in the creative industries

The creative industries are among our most innovative. 78% of creative firms are active innovators. They are also comfortable changing strategies and even business structures in the light of market developments and technological advances. Creative firms attribute 52% of their turnover to new or improved products, compared with 40% for firms in other sectors.<sup>13</sup> So, while the creative industries translate ideas into new products and services effectively, this adaptability also puts innovation at a premium. The creative sector must stay innovative to stay competitive.

<sup>13</sup> *An Assessment of Productivity Indicators for the Creative Industries*, DCMS 2007.

- 3.1 The creative industries are by definition good at creativity – the production of new ideas – and at innovation – their successful exploitation. Nevertheless, there are challenges:
- How can we innovate quickly enough so that we exploit digital technology rather than feeling threatened by it?
  - How can we generate networks for shared intelligence and collaboration so that small and medium-sized creative businesses can benefit from research in universities and other businesses?
  - How can the creative industries stimulate innovation in the rest of the economy, including through design? The challenge confronted in the Cox Report<sup>14</sup>.

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#### **Design and creativity**

Design and creativity are fundamental to innovation. Following the *Cox Review of Creativity in Business* in 2005, greater use is being made of the nation's creative skills and more is being done to ensure the UK's long term economic success. New university courses are nurturing business innovation by bringing design, business, science and technology together to prepare future generations of creative specialists and business leaders; the Design Council's *Designing Demand* programme will support 6,500 firms across the UK by 2010/11 in the strategic use of design to drive innovation. More recently, Lord Sainsbury's Review of Science and Innovation Policy recommended that the Designing Demand Innovate service (a design-led innovation service for technology ventures) be extended to the university knowledge transfer sector, in order to strengthen the link between UK industry and the science base.

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#### **Exploiting the opportunities of new technology**

- 3.2 The creative industries must rise to the challenge offered by digital technology, with its many potential pitfalls and opportunities. The transition from the analogue to the digital world is transforming the distribution of content. It is also making it much harder to manage and value intellectual property. It is creating new business models and changing the value chains upon which they depend. It is demanding new skills, whilst cutting the costs of production and distribution. While all this is most evident in the content-based industries of software, games, music, television, radio and film it has equally profound, if less obvious, consequences for architecture, design, fashion and advertising. If they are to prosper from these changes, the creative industries must have the strategic ability to understand the impact of new technology and the practical ability to exploit it.

<sup>14</sup> Cox Review of *Creativity in Business*, HM Treasury 2005.

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#### **AHRC's Knowledge Catalyst: enabling micro-enterprises to benefit from university research**

The AHRC's Knowledge Catalyst supports small companies in the creative industries to access world-class quality research in the arts and humanities. The programme provides flexible funding for a graduate to work in the enterprise together with an academic supervisor based in a Higher Education Institution on projects of between three and 15 months. Recent success stories in innovation include a partnership between the University of the West of England and Licorice Film Ltd where research in interactive narrative was employed in the production of the new online Alternate Reality Game MeiGeist, voted best ARG of 2007.

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- 3.3 **Enabling access to technology:** While small businesses are often among the most innovative, they may also be the least able to afford access to new technology. The Creative Economy Programme Working Group on Technology noted that the 'cost of access to new delivery platforms such as games consoles and 3G networks is prohibitively high for many small-scale creative industries and there is a need for low cost access to test and development facilities.' We will work to bridge this gap, drawing on the lessons from programmes such as London College of Fashion's initiative to give designers access to advanced pattern cutting tools (see box).

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#### **Enabling small and medium-sized enterprises (SMEs) to access technology: case studies**

Animation: Southwest RDA funds two partnerships with Hewlett Packard and Alias that is creating SE3D, a facility giving filmmakers, games developers and animators access to remote computer power over the internet. SE3D offered 12 groups of UK animators access to a new rendering service for computer graphics, accompanied by workshops and mentoring. The resulting films have won international awards and HP has gained valuable insights into developing computer services for small businesses.

[www.southwestrda.org.uk](http://www.southwestrda.org.uk)

Pattern cutting: The London College of Fashion allows recent graduates to use modern pattern-cutting tools and a range of CAD/CAM technologies which the graduates could not otherwise afford. Such practical help to graduates making the transition from learning to work ensures that the tools and technologies they use keep pace with best industry practice. It also helps to raise the prestige of the College within the industry and among potential students.

[www.fashion.arts.ac.uk](http://www.fashion.arts.ac.uk)

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- 3.4 **Supporting innovation:** As in other sectors, public funding delivers spin-off benefits for research and development. We will therefore introduce two new initiatives: one to increase collaborative research in the creative industries and another to help small companies that want to build a business based on innovation.

## Commitment 8

**The Technology Strategy Board will provide £10 million to inspire new collaborative research and development ideas for the creative industries.**

- 3.5 The Technology Strategy Board<sup>15</sup> has a mission to promote and support research into technology and innovation, and its development and exploitation, for the benefit of UK business, in order to increase economic growth and improve the quality of life.
- 3.6 The Technology Strategy Board is providing £10 million to inspire new and collaborative research & development (R&D) through a package of measures specifically designed to engage small creative firms. Collaborative R&D is one of the Technology Strategy Board's primary delivery mechanisms. It helps the business and research communities to work together on R&D projects in strategically important areas of science, engineering and technology, from which successful new products, processes and services can emerge. While the focus for this programme, which is specific to the creative industries, will be on the underlying technology challenges and opportunities facing the sector, its theme will be shaped through consultation with industry and researchers.
- 3.7 As the recently published McMaster report on excellence in the arts recommended, we will seek to ensure that the full range of creative and cultural SMEs have access to this invaluable new network, in partnership with the Arts Council and other NDPBs.

## Commitment 9

**NESTA will launch a £3 million 'Creative Innovators Growth Programme'**

- 3.8 The National Endowment for Science, Technology and the Arts (NESTA), a lottery endowment whose aim is to support talent, innovation and creativity in the UK, aims to transform the UK's capacity for innovation by investing in early stage companies, informing innovation policy and encouraging a culture that helps innovation to flourish.

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### **Innovation in new business models**

Rapid progress in digital technologies is changing the way information is produced and exchanged in the economy. New and increasingly affordable software formats, innovations in hardware and faster broadband are challenging business practices. Convergence is muddying distinctions between publishing, broadcasting and telecommunications. Some consumers – increasingly able to access content through multiple platforms – are pushing hard at the boundaries between production and consumption of content. These developments have profound implications for the creative industries – most obviously in the advertising, film, television and radio, music, software and games sectors. The British Phonographic Industry estimates that digital downloads now account for more than 90% of all music single sales in the UK, up from 5% in 2004.

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<sup>15</sup> The Board is a business-led executive non-departmental public body, established by the Department for Innovation, Universities and Skills (DIUS).

- 3.9 NESTA will launch a £3 million Creative Innovators Growth Programme in 2008, to improve the capacity of growth-oriented small and medium-sized creative enterprises to innovate. Three sector-specific pilots will explore new business models that enable creative businesses to exploit new technologies or other sources of major structural change. The programme will generate evidence to help identify what specific support is required by creative businesses.
- 3.10 We expect the first pilot to be launched on 12 March in partnership with the UK Film Council. The pilot will pioneer new business models that enable film companies to make the most of digital technology.
- 3.11 In a similar vein, the Department for Innovation, Universities & Skills (DIUS) is developing a strategy to promote and support knowledge transfer within the wider further education reform agenda.
- 3.12 **Encouraging better networks:** Creative businesses are more likely to collaborate and form partnerships than other sectors.<sup>16</sup> They may do so through networked associations, interactions or collaborations, but much creative business development depends on this kind of process, where ideas and innovations emerge and are pursued iteratively. Such networks are often achieved by clustering, and their impact can be very significant where they are extended to include universities or large, well-resourced companies.

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#### South East Media Network (SEMN)

Set up in 2005 to 'grow the global market share of the digital content companies from the South East of England', SEMN has been driven by an industry board comprising Reed Business International, Microsoft, ITV, Kuju (a games developer), Ambulant (mobile), Sly Fox Films (film and TV production) and Jack Brand (online content).

SEMN has been funded by SEEDA, the regional development agency for the South East, in an innovative approach to arms length support for the digital content industry sector. The network sets priorities and activities with the board in collaboration with the 26 members of the SEMN Council who are drawn from national trade associations, local networks and the regional screen agency, Screen South.

[www.southeastmedianetwork.co.uk](http://www.southeastmedianetwork.co.uk)

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- 3.13 Infrastructure is often the most important issue for national, regional and local government. Their role can be to encourage networks between creative businesses, which can help to turn innovative ideas into new products, and to market them. These networks are particularly important at regional and sub-regional level in the fast moving world of new media: examples include the South East Media Network, 3CR in the South West, and Digital Central based in the West Midlands. In Salford, the new Media City will not only have space for over 1,000 creative businesses, it will provide infrastructure for them to develop networks within the 200 acre site. (See box in chapter six)

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**Archives strategy**

The wealth of material held in archives across the country can inspire, support and enhance the creative life of the nation. These archives constitute our collective memory. In October we demonstrated our commitment to preserving our screen heritage with the announcement of an additional £25 million for national and regional film archives led by the UK Film Council and the British Film Institute.

The National Archives, working with the Museums, Libraries and Archives Council and other key partners, is preparing a strategy for archives which the Government will publish in the course of 2008. The strategy will seek to preserve archives of all kinds; ensure the ongoing archiving of key events; and exploit their creative potential. This strategy will also address the historic, but now redundant, separation between digital and paper archives and set out a programme to maximise the benefit of archives for their creators and users, and for the creative and cultural sector as a whole. The strategy will help demonstrate the growing importance of archives in a digital society. The Department for Culture Media and Sport, Department for Communities & Local Government and the Ministry of Justice will pursue the strategy together with Ministers and key stakeholders meeting regularly to ensure progress.

[www.nationalarchives.gov.uk](http://www.nationalarchives.gov.uk)

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- 3.14 There is still plenty of room for improvement. A NESTA survey in 2006 reported that 60% of small creative businesses had never been involved in a business-related network.<sup>17</sup>

**Commitment 10****The Technology Strategy Board will launch a Knowledge Transfer Network for the creative industries**

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**AHRC Creative Economy Programme**

The AHRC will invest £4.5 million in a Creative Economy Programme to support and stimulate innovation in the creative industries. Launching in 2008, the programme will address barriers to innovation through providing access to hitherto untapped excellent research, networks and people in the arts and humanities. Working closely with the Technology Strategy Board's Knowledge Transfer Network for creative industries, the AHRC will bring together non-technological and technological innovation through novel collaborative R&D and knowledge exchange models that have been successfully piloted in partnership with BBC Future Media and Technology.

[www.ahrc.ac.uk](http://www.ahrc.ac.uk)

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- 3.15 The Technology Strategy Board will launch a Knowledge Transfer Network (KTN)<sup>18</sup> for the creative industries to help industry to access the knowledge and information that will improve innovation. The new network will help make the necessary connections between the key players by bringing together creative businesses, technical experts, suppliers, other related firms, customers, universities, research and technology organisations and other intermediaries. The results of a competitive process to identify the consortium to set up and manage the KTN will be announced in early 2008.

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**NESTA Arts & Innovation Research:** NESTA is leading a major programme of research on innovation in the creative industries. In one project, the Institute of Innovation Research at the University of Manchester is investigating the nature of innovation in the advertising, broadcasting, product design and video games sectors. Emerging results suggest that new metrics are needed to capture innovation in these sectors.

In other projects, the focus is on understanding spillovers. Experian and Oxford Brookes University are using quantitative techniques to explore whether knowledge transfer through business-to-business links with creative businesses stimulates innovation in other sectors. Central St Martin's College of Art and Design is leading a longitudinal study of how fine arts graduates contribute to innovation through their work practices and experiences.

[www.nesta.org.uk](http://www.nesta.org.uk)

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- 3.16 Following the recommendations of the Sainsbury Review, the Technology Strategy Board<sup>19</sup> will double the number of Knowledge Transfer Partnerships<sup>20</sup> it facilitates, while making them more flexible and responsive. Creative businesses, particularly small firms, should benefit substantially as a result.

#### Removing systemic barriers to innovation

- 3.17 The contribution made by the creative industries to the UK economy is substantial and growing but business support has not always been designed with these emerging business frameworks in mind. The pressures are particularly intense in the computer games industry where they are striving in the face of growing global competition and distorting tax subsidies. We need to better understand the benefits of the kind of innovation common in the creative industries: innovation that produces real value but not necessarily new technology or new products. This is particularly relevant to industries that protect their intellectual property primarily through copyright and other, typically unregistered, rights rather than patents.

<sup>18</sup> KTNs were developed in response to the DTI's Innovation Review ([www.berr.gov.uk/files/file12093.pdf](http://www.berr.gov.uk/files/file12093.pdf)), which identified access to networks and sources of new knowledge as two of the most important determinants of business innovation performance.

<sup>19</sup> The Technology Strategy Board is the lead sponsor for this programme, but it is also funded by a number of other bodies including the AHRC.

<sup>20</sup> Knowledge Transfer Partnerships facilitate one-to-one relationships between companies and higher and further education institutions, by sponsoring high-calibre, recently-qualified individuals to work in companies on challenging, business-related projects. See [ktonline.org.uk](http://ktonline.org.uk)

### Commitment 11

The Department for Innovation, Universities & Skills will commission research to better quantify the economic benefits of the creative industries, with special attention to the value added by innovation in those industries

- 3.18 DIUS, in the context of its forthcoming science and innovation strategy to be published in spring 2008, will commission research to better quantify the economic benefits of the creative industries with special attention to the value added by innovation in those industries. The goal will be to identify the best targeted financial and business support environment and for DIUS to inform future business innovation policy.
- 3.19 The Government will also increase awareness of the current R&D tax credit scheme and investigate how to make it more user-friendly for small businesses, with a particular focus on the video games industry.

### Conclusion

- 3.20 The challenge is to help the creative industries be even more innovative. The Technology Strategy Board, with co-funding from the AHRC, will launch a new £10 million call for ideas for collaborative R&D in the creative industries. It will also launch a Knowledge Transfer Network to enhance the vital connections between business, research, consumers and technical experts needed for innovation to flourish. NESTA will launch a £3 million programme to help build the innovation capacity of creative businesses with the potential to grow. And the Government will continue to examine its innovation and tax support policies to ensure that the creative industries – including the games sector – can benefit from them.