

# Technology Strategy Board

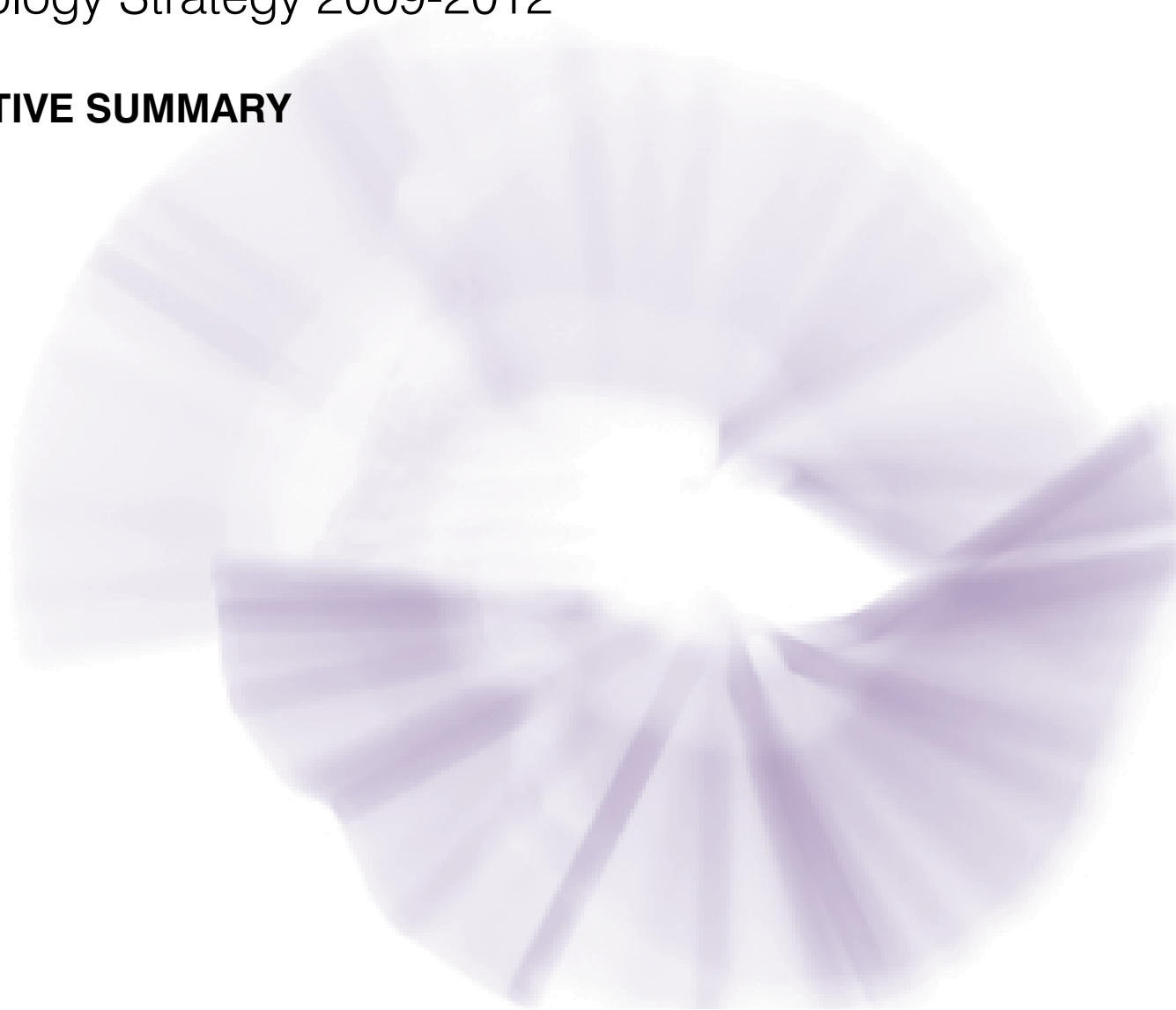
Driving Innovation



# Creative Industries

Technology Strategy 2009-2012

## **EXECUTIVE SUMMARY**



# Executive Summary

This is a summary of the Technology Strategy Board's Creative Industries Key Technology Strategy. For the full document, see [www.innovateuk.org](http://www.innovateuk.org).

The UK is a world leader in culture and media, consistently in the top three achieving countries. Within the UK, the Creative Industries sector contributes over 6.4% of UK Gross Value Added and is growing at a faster rate than the economy as a whole. In 2007, total Creative Industries revenues amounted to some £67.5bn. The Publishing sub-sector is the largest, with Radio & TV and Advertising among the top performers.

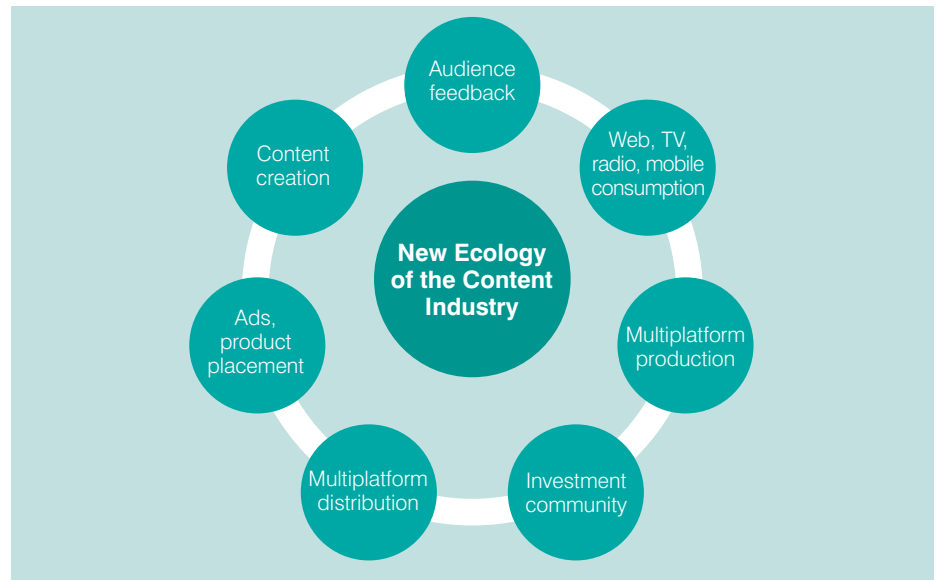
Key features of the sector are:

- It has many medium-sized, small and micro companies.
- The few large media businesses frequently provide the route to market for many smaller entities.
- There is a significant, publicly funded community including the BBC, Channel 4, theatre companies, museums and galleries.
- Its players, many of whom are freelancers, are often able to react with agility to new opportunities.
- The smaller companies do not frequently expand internationally.
- Many businesses find it hard to keep up to date with changing technologies and economic conditions.

New technology presents significant threats as well as very exciting opportunities for UK creative industry businesses. As digital technologies have developed, businesses using traditional business models and linear value chains from the analogue age are increasingly finding themselves ill equipped to succeed.

The internet is creating new, dynamic relationships between content creators, service providers and their audiences (Figure 1). It provides new routes to market and facilitates immediate feedback from consumer to producer.

**Figure 1 – New dynamic relationships**



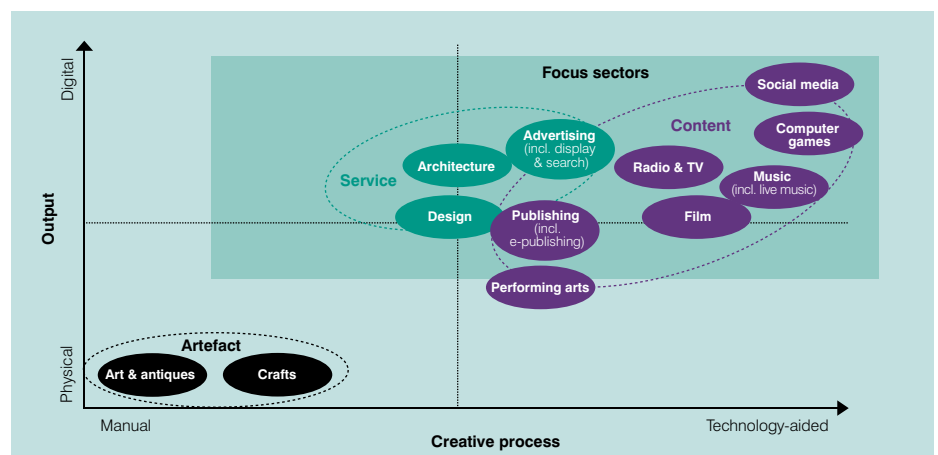
## Segmentation

In this Strategy, we set out the Technology Strategy Board's analysis of the sector and identify those areas where we believe public interventions will bring the greatest economic benefit to the UK (Figure 2).

The Department of Culture Media and Sport identifies the following sub-sectors: Advertising, Architecture, Art & antiques, Crafts, Computer games and software development, Design, Fashion, Film, Music, the Performing arts, Publishing and Radio & TV. We analysed each sub-sector

by the extent to which the output is digital and to which its creative processes are aided by technology. Then we aggregated the sector into three broad markets: Content, Services and Artefacts. We introduced a new sub-sector called Social media to reflect the growth and importance of user-generated content and the platforms that enable it. We decoupled Software development from the Computer games subsector because the Technology Strategy Board's ICT Strategy covers it.

**Figure 2 – Segmentation strategy**



## Key Priorities

We have found that 70% of the value and most of the growth potential in the entire Creative Industries sector lies in the Content and Advertising space. It is a space where technology is challenging well established business models and providing the spur to innovation and growth, and offers a significant prize upon which to focus.

The Technology Strategy Board has four key criteria for investment: size of the global market opportunity, UK capability and capacity to succeed, timeliness and the added value created by such interventions. It is clear that Content scores uniquely highly across all four criteria and therefore merits substantial focus. It is also, however, not without challenges.

It is now widely recognised that measures to prevent consumer copying of digital content are limited in both acceptance amongst consumers and capability to protect rights holders interests. As broadband and peer-to-peer technologies have grown, so has the problem of file sharing and this is only set to continue. This poses a significant threat to traditional physical sales models and standard digital distribution models.

Conversely, the growth of a variety of media platforms and the increasing digitisation of their networks opens up significant new opportunities for new products and services. Convergence of content across platforms and the increasing potential for interoperability between digital networks are broad trends that will progressively yield new value.

Technology convergence is blurring the boundaries between sub-sectors and creating both challenges and opportunities. The Technology Strategy Board has most to add by focusing on crosscutting areas.

The Technology Strategy Board will invest in applications and solutions that seek to open up new business models for creators and the creative industries to exploit these opportunities.

This strategy is aligned with several Government policy and funding initiatives: the Creative Britain programme, the Digital Britain report, the Research Councils' Digital Economy programme and the Intellectual Property Office's consultation on Copyright in the 21st Century. The Technology Strategy Board is well placed to play a key role as an enabler and implementer of technology elements in several of these programmes.

Based on our analysis and the broader policy context, our key areas of focus for the Creative Industries technology strategy are as follows.

### 1. Enable content data and meta-data<sup>1</sup> infrastructure development

The goal is to move towards the creation of content-aware networks that do not presume any single business model but anticipate new models beyond simple transaction-based or advertising-based methods of deriving revenue. In order to achieve this, we need a meta-data infrastructure in which intelligence about the movement, sharing, and consumption of content in a network can be tracked and analysed without compromising privacy and security.

<sup>1</sup> Here, meta-data includes authorship, provenance, rights positions, pricing, ownership, distributor, aggregator and licensee data, production information and identification of how, where, when and the context of content exploitation.

### Technology Strategy Board will support or create programmes to:

- aid the development of shared standards for meta-data that address both the form in which the metadata is provided (syntax) and the vocabulary used to provide the metadata (semantics) in association with all forms of content or media;
- develop durability, persistence and robustness of meta-data linked accurately to files;
- develop means by which content and its meta-data are automatically logged as present on networks;
- enable the elimination of lengthy manual input;
- increase the degree of content awareness built into networks to create accountability and transparency;
- develop the analytical capability to extract knowledge and value from the data;
- enact policy across all interventions to ensure the preservation of individual's rights, personal privacy and security; and
- develop, through the Knowledge Transfer Network, mechanisms to promote awareness and adoption of meta-data programmes.

### 2. Improve interoperability and increasing convergence cross-platform

The goal here is to achieve increased technical and service interoperability between content, products and services, platforms, networks and devices. We anticipate significant benefit beyond the Creative Industries, in particular delivering broader societal value to public service sectors.

### The Technology Strategy Board will:

- encourage innovation to aid the expansion of existing products and services to exploit multiplatform capability;
- stimulate the development of new skills and cross-media collaboration to aid the development of brand new product or experience concepts that exploit integrated, pervasive environments;
- ensure business models and transaction (including micro-transaction) systems are available to support commerce;
- encourage the development of interface technologies and standards, where required, to increase interoperability between networks, applications platforms and devices; and
- foster solutions to support the trading of digital assets between content creators and distribution platforms.

### 3. Promote knowledge sharing and multidisciplinary collaboration

With technology convergence blurring the boundaries between sub-sectors, there are benefits to be gained from transferring know-how between different Creative Industry sub-sectors. There are also opportunities to learn from industries outside of the sector. Existing investments, such as the Creative Industries Technology & Innovation Knowledge Transfer Network ([www.citin.org](http://www.citin.org)) funded by the Technology Strategy Board, will have a significant role in encouraging knowledge exchange.

### The Technology Strategy Board will:

- provide a trusted source of knowledge on technology and market developments and provide the mechanisms for creative businesses to explore potential impacts and opportunities;
- promote partnerships between business and academia through collaborative projects and Knowledge Transfer Partnerships;
- signpost creative businesses to other support-agencies within the broader innovation landscape and, where needed, develop the mutual understanding necessary to facilitate successful relationships;
- promote multidisciplinary cross-fertilisation between the Creative Industries sector and other technology and market application areas supported by the Technology Strategy Board;
- transfer creative industry know-how to other sectors, in particular to apply design thinking and creative industry solutions to societal and industry challenges; and
- engage UK creative industries with the European Framework Programme.

### 4. Working with others

The importance of the creative economy and the diversity of the sector is reflected by a range of public sector funded initiatives, from the Arts Council through to regional support programmes. We will maximise the impact of public sector investment on business growth.

### The Technology Strategy Board will:

- work closely with business and with public sector stakeholder organisations such as the Research Councils, Regional Development Agencies, Devolved Administrations and other Non Departmental Public Bodies (eg the Film Council and Design Council) to identify complementary opportunities and, where appropriate, develop and implement multi-agency collaborative programmes.

### 5. Exploit emergent opportunities

The pace of technological change affecting the creative industries is rapid and we have seen emerging capability being successfully exploited to develop significant new businesses within short time periods.

### The Technology Strategy Board will:

- identify and evaluate these opportunities;
- encourage business to invest within appropriate timeframes to maximise exploitation potential; and
- consider the development of targeted interventions, outside of the key focus areas outlined above, to stimulate investment in any emerging areas where the UK has a strong platform to succeed.

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