

Technology Strategy Board

Driving Innovation



Metadata production tools

**COMPETITION FOR FAST-TRACK AND
MAINSTREAM COLLABORATIVE R&D FUNDING
MARCH 2011**

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Summary

The Technology Strategy Board is investing up to £5m in collaborative R&D projects looking to create tools that make the production of content such as film, music and computer games, more cost-effective, less risky and yield greater value through new advanced uses of metadata.

We want to see projects that increase return on investment and the value of media assets by building new metadata tools or making workflows already in place yield richer, more persistent and therefore more valuable metadata.

Projects will deliver a prototype, demonstrator or similar solution built around a specific content-based service or application, which has the potential to enter the market within two years of project completion.

We are funding two rounds of fast-track competition for collaborative R&D projects with a total value of less than £100k, each targeting small and medium-sized enterprises (SMEs). There will also be one mainstream collaborative R&D competition for projects with a total value more than £100k.

The challenge

In our first metadata competition, we invested in projects that demonstrated how businesses may increase revenues from the metadata relating to their digital content.

Despite new software development tools and other production technologies, the production costs of complex large-scale products such as films, recorded music, console-based computer games or even new magazine launches remain high. Exploration of new genres and new user experiences attracts limited investment because of the inherently high risks which stifle the appetite for innovation. In the ruthlessly competitive, hit-driven markets of the creative industries, where traditional advertising spend continues to decline, strategies to reduce investor risk are more important than ever.

In this competition the emphasis is on developing metadata tools which will not only increase production efficiency, but also ensure that the necessary information has been captured and transferred throughout the production process to enable commercialisation at a component/object level as well as at the level of whole completed works.

Background

Digital editing and production processes across the creative industries have adapted over the last 10 years to non-linear methods of working, taking advantage of many of the online/offline capabilities of digital technology to speed up and make production more efficient. Throughout this revolution, however, the role of metadata has not been developed as effectively as a means to add value. Unlike the analogue world, nothing needs be left on the cutting room floor – including metadata.

Today metadata is frequently generated in almost every aspect of production, from conception to finished product. It is then often discarded, and frequently needs to be manually reintroduced in later stages of the process. In addition, further metadata on aspects of production could be captured that might have the potential to add value later. Part of the scope of this competition is to explore potential value creation from the development of tools in this field that retain, manage and organise that metadata.

The re-purposing of digital content assets is rapidly becoming a business sector in its own right. Increasing the fineness of granularity in tagging content could allow for combined elements to retain individual component status. This kind of approach might allow for the radical re-use of material created for one production to be re-purposed for another or be made available for sale or licence. Ultimately, this approach could, for example, allow end-users to pay additional fees to personalise their experience by substituting characters or branded elements with their own images or avatars that place them within the movie or game.

Scope

The Technology Strategy Board is to invest up to £5m in collaborative R&D projects which develop proof of concept, prototypes, tools or solutions that capture and preserve, or organise and enable access to metadata to address this challenge and enhance the digital content production process. The table opposite gives examples of some of the types of project we envisage and how each addresses the competition scope.

Funding allocation and project details

We have provisionally allocated £5m for business-led proposals for collaborative R&D projects. Application is open to all UK-based companies and research organisations. There will be two application streams:

- 1. Fast-track projects below £100k in total project value** – these should aim to complete within 12 months (of the project start date) and must be led by a creative industry SME. There will be two rounds of competition funding over the next six months (see timetable below) with the Technology Strategy Board investing up to £1m in total. The second of these two fast-track rounds will accept projects that fall in scope for this competition or its predecessor 'Metadata: increasing the value of digital content' (see www.innovateuk.org under Competitions for further details about that competition scope).
- 2. Collaborative R&D projects greater than £100k in value** – these typically take between 12 and 18 months and must be led by a creative business. Up to £4m will be available in this stream and there will be one competition round.

For both types of project the deliverable should be a prototype, demonstrator or similar solution built around a specific content-based service or application, which has the potential to enter the market within two years of project completion. The deliverables should be precursors to new, commercial services or products, or offer



These examples include, but are not limited to:

Tools or solutions that capture and preserve:	Potential benefits, such as:
ideas and related metadata in the early stages of projects (eg, treatments, storyboards, location plans)	to allow planning and pre-production activity to be coordinated, empowering different contributors to arrive at a shared creative vision and enabling production components to be previewed in context
author, composer or performer metadata (eg, names, aliases, instruments played)	to enable rights information management from the point of creation onwards, facilitating the monetisation of content at the component level as well as at the level of whole completed work
mechanical, contextual, logistical or operational metadata associated with the production of a component (eg, geolocation, camera angles, equipment specification and set-ups)	to maintain not only the metadata but its significance to the production activity that generated it, aiding continuity, transferability and repeatability
artistic, creative or directorial metadata (eg, preferred performances, blocking or staging data, directorial comments)	to streamline later production steps, generate new material (eg, making-of footage, commentary tracks)
Tools or solutions that organise and enable access to:	Potential benefits, such as:
aid real-time organisation of metadata (eg, organisation of the data in the course of production)	to enable collected metadata to be organised, stored, maintained and made searchable throughout the process from idea generation to archive. By broadening access to the production metadata, producers might enable, solicit and manage contributions from partner companies, outsourced labour and user generated content
create better metadata interfaces (eg, using visualisations or better search methods)	to manage larger volumes of information, particularly access and version control, concurrent development, redundant storage and archive
leverage machine intelligence and artificial intelligence technologies to semantically analyse content and automate unskilled tasks (eg, error checking of log information or even auto-generation)	to relate captured media to the real world and drive new uses of that content to reduce costs and human error associated with manual input of metadata during or after the production process
improve interoperability between different existing software tools and workflows (eg, being able to use files from one system in another)	to improve competition and reduce barriers to adoption
facilitate the more efficient and effective repurposing of content (eg, making game assets available for use in movie production or vice versa)	to facilitate distribution and consumption across different technology platforms, thereby opening up new markets

N.B. Projects may either focus on 'capture and preserve' or 'organise and enable access' or both.

significant enhancements to existing products or services. Solutions that have the potential for wider, global adoption across other businesses and market sectors will have an advantage over niche, geographically discrete applications.

All applicants will, through use of metadata, need to:

- demonstrate that they have a clear understanding of the opportunity or problem their solution is looking to address and an awareness of potential competing approaches
- explain what is innovative about their proposed solution and what benefits it will offer over existing approaches
- demonstrate an understanding of the current standards relating to metadata and compliance with relevant legislation
- provide an outline plan for the commercialisation of the project's deliverables describing the anticipated:
 - target market
 - business model (ie, how they intend to earn revenue)
 - route to market
 - time from project completion to product/service/capability launch
- explain how their proposal will enable digital content businesses to increase their commercial revenues or make significant cost savings during the production process
- attempt to quantify the annual global revenue potential for the solution for the first five years from launch.

Application process

Fast-track projects below £100k in total value

Applicants to the fast-track stream with projects worth less than £100k in total will need to complete a single fast-track projects application form. Applicants who are unsuccessful in the first round of the competition may revise and resubmit their proposal in the second round.

Collaborative R&D projects greater than £100k total value

All applicants for collaborative R&D projects valued at over £100k in total will need to submit an initial expression of interest. These will be assessed and a shortlist of proposals will be invited to submit a full application. Those applications that are not shortlisted will take no further part in the competition.

General criteria for all applicants

To qualify for either stream, projects must be truly collaborative, with at least one partner. All proposals will need to demonstrate that each partner is making a significant contribution to the project and expecting to derive value from the outcome. Partners can be drawn from businesses of all sizes, academia, research and technology organisations and not-for-profit organisations, but the projects must be led by revenue-earning business entities. Successful projects will receive funding to cover up to 50% of total project costs, with the partners providing the balance in matched funding. For example, applicants for fast-track project funding will be able to apply for a grant of up to £50k in value.

Any applicant for the larger collaborative R&D stream that intends to apply for funding of £1m or more should contact the Technology Strategy Board in advance of submission.

Guidance for applicants will be published (www.innovateuk.org under Competitions) when the competition opens and will describe the process in further detail for both streams.

Key dates

Collaborative R&D projects (greater than £100k) in total value	
Competition opens	14 March 2011
Optional briefing	24 March 2011
Expression of interest submission deadline	21 April 2011
Applicants informed	6 May 2011
Full stage application deadline	16 June 2011
Fast-track projects (less than £100k) in total value	
Competition opens	14 March 2011
Optional briefing	24 March 2011
Round 1 application deadline	21 April 2011
Round 2 open	13 June 2011
Round 2 application deadline	21 July 2011

Applicants are strongly recommended to attend the optional briefing event on **24 March 2011** before they apply.

Further information

Useful examples of metadata discussions in the creative industries

WiReD: Why Metadata Matters for the Future of E-Books

www.wired.com/epicenter/2010/08/why-metadata-matters-for-the-future-of-e-books/#ixzz0ve8w1rMR

Adobe White Paper on its XMP – Extensible Metadata Platform – a metadata platform for the newspaper and magazine publishing sector

www.adobe.com/products/xmp/pdfs/xmp_news-mags_wp.pdf

EPG Metadata Consultancy on metadata standards

www.epgmetadata.com/3-Metadata_Aggregation_%26_Data_Standards.html

Nick Ruffilo: Metadata, Not E-Books, Can Save Publishing

<http://toc.oreilly.com/2010/07/metadata-not-e-books-can-save.html>

Dave Stump, cinematographer, on metadata in movie production

<http://magazine.creativecow.net/article/metadata-the-future-of-filmmaking>

For more information about this and other competitions, details of how to register and apply, and the *Guidance for Applicants*, please see Competitions at www.innovateuk.org.

Competition helpline:
0300 321 4357

Email:
competitions@tsb.gov.uk

Publicity

The Technology Strategy Board frequently publicises the results of competitions and this includes engagement with the media. All applicants will be given a chance during the competition process to opt out of any publicity. Willing applicants will be asked to provide an agreed form of words for use in publicity material. E-mail pressoffice@tsb.gov.uk with any queries.

The Technology Strategy Board is a business-led executive non-departmental public body, established by the Government. Its role is to promote and support research into, and development and exploitation of, technology and innovation for the benefit of UK business, in order to increase economic growth and improve quality of life.

Collaborative research and development is part of the Government's Solutions for Business portfolio.

The Technology Strategy Board
North Star House
North Star Avenue
Swindon
SN2 1UE

Telephone: 01793 442700

www.innovateuk.org