

Harnessing Large and Diverse Sources of Data

COMPETITION FOR COLLABORATIVE R&D FUNDING

Summary

The Technology Strategy Board will invest up to £7m to fund collaborative research and development projects that will lead to new technologies and strategies to help businesses extract greater value from large and diverse sources of data (or information), and which drive a robust data economy.

This competition is open to all UK-based companies and research organisations in business-led consortia. Ideas are sought from all economic sectors.

Background and challenges

Businesses in all economic sectors depend on data, but the degree to which this data is exploited varies. The speed at which the data can be understood has an impact on the extent to which available data is used for decision making.

Indications are that while data volumes are growing at an annual compound rate of 60%, the number of disparate data sources from which data is originating is growing even faster (*The Diverse and Exploding Digital Universe*. IDC, March 2008). These sources include businesses, consumers, public sector organisations, data-intensive research activities, and the proliferation of sensors. This data deluge is outstripping the ability to store and process it, making it more important than ever for businesses to be able to identify and make sense of the data of most use to them in a competitive data economy.

Many businesses are highly data-driven using internal data generated by their own activities, such as customer details and feedback, purchase history and browsing behaviour to improve their offerings or to increase efficiency. However, external data sources present huge opportunities for

businesses, especially new and small enterprises that have yet to build up significant internal data assets. Opening up access to this would make business intelligence market-wide rather than enterprise-wide. It is estimated that the indirect value of public data alone could be £10-100bn - 0.8-8% of UK economic activity (*The Power of Information*. Power of Information Task Force, 2007). Estimates of the potential value of other external sources of data are elusive, but they may have a similar level of untapped value.

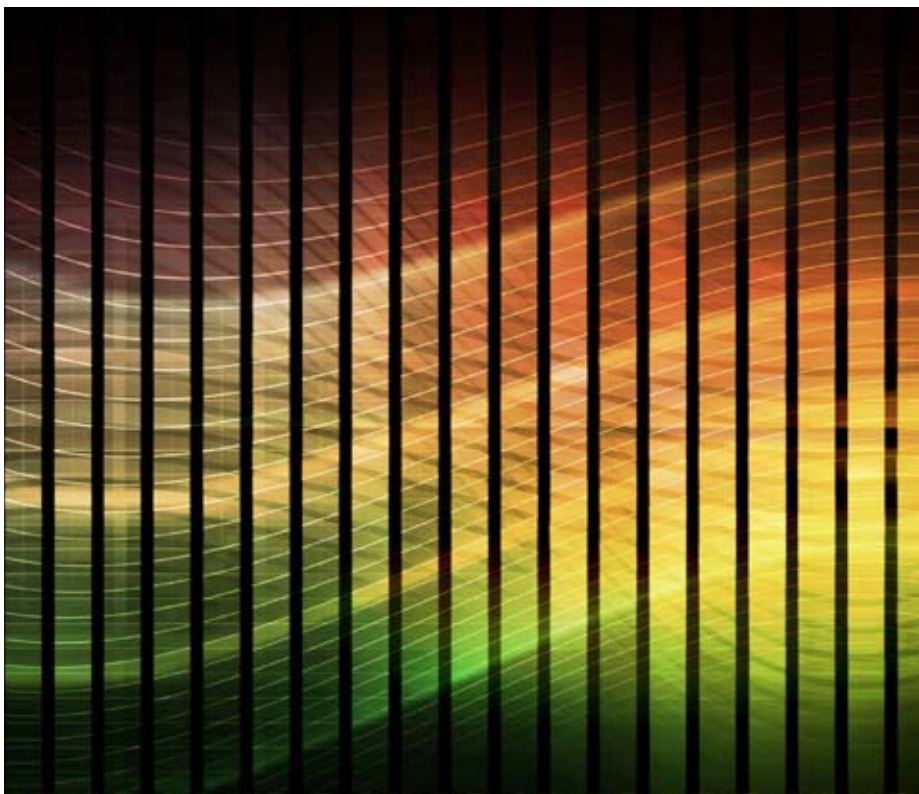
The UK has world-class strengths in many areas relevant to data exploitation including:

- modelling
- e-research
- human factors
- visualisation
- creative arts and design
- decision support
- industrial mathematics
- scalable computing
- pattern recognition
- algorithm development.

Along with initiatives such as data.gov.uk, the UK is well placed to take a lead in exploiting large and diverse data sources.

Scope

This competition is aimed at stimulating innovation to help businesses extract greater value from large and/or diverse sources of data. The resulting projects will be necessarily collaborative as they will involve data creators, owners or custodians, and technology providers from multiple disciplines, as well as end users. Ideas are invited from all economic sectors including (but not limited to) applications such as bioinformatics, mobile services for transport users, and crisis or risk management.





Projects are invited from one or both of the following two broad areas:

Harnessing diverse data sources

For example (but not limited to) ways to model and assess the value of data to a business and for supporting the case for discarding or maintaining data for future use; novel approaches to integrating internal and external data sources; and new business models for sharing data across organisations.

Making sense of 'big data'

For example (but not limited to) ways to maximise knowledge extraction from 'big data', new or enhanced algorithms that can significantly speed up data analysis with little or no loss of accuracy; and novel visualisation technologies that put complex and 'big data' into the right form so that it can easily be understood or explored by one or more decision-makers.

Proposals should move well beyond simply combining data from several sources into a single view or application, and should clearly state the specific business and technological challenges faced and the benefits of overcoming them for the market concerned.

Proposals should illustrate the potential for significant direct benefits to a number of the partners involved in at least one commercial setting. In all cases:

- obtaining data should take up no more than 10% of the project costs or time. Ideally, the data should already be available to the consortium
- standards development should require no more than 10% of project costs or time. The focus should be on providing a business case for setting standards outside of the project
- projects should result in a demonstration of the end result embedded within one or more businesses in the consortium.

'Big data'

The term 'big data' refers to a data set so large that it poses significant challenges to those wanting to store, manage, analyse or share it using existing tools and techniques. By its very nature, 'big' is subjective. 'Big data' for one organisation might not be considered so by another. The increasing production and availability of data means that 'big data' is now an issue for companies of all sizes.

Funding allocation and application process

The Technology Strategy Board has allocated up to £7m to fund collaborative research and development projects that align with the scope we have described. Projects are expected to last no more than 18 months and we expect to invest £100-500k in each project, although we will consider projects outside this range.

Additional funding may be available for the competition from the Joint Information Systems Committee (JISC) for projects involving one or more academic partners that would add value to its Research Data Management and Business Community Engagement programmes. For instance,

projects which lead to increased sharing of research data or data management practices between academia and industry or between economic sectors. See www.jisc.ac.uk under Managing Research Data, and Business & Community Engagement Programme.

Further funding may also be available from the Biotechnology and Biological Sciences Research Council and Medical Research Council for projects involving one or more academic partners, aimed at extracting maximum knowledge and value from biological or medical research data.

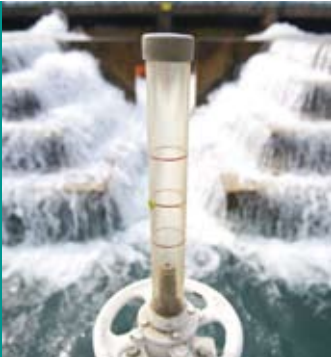
The competition will have two stages:

- Applicants must submit an Expression of Interest (EOIs). Feedback on this will be provided to each applicant consortia
- Full proposals will be invited for assessment from the highest scoring EOI consortia.

Innovators with ideas for technologies and strategies focused on metadata should consider submitting a proposal to the 'Metadata: Increasing the value of digital content' competition. For further details and to apply see www.innovateuk.org under Competitions.

Key dates

Competition opens	13 September 2010
Deadline for compulsory Expressions of Interest	21 October 2010
Full proposal stage opens	8 November 2010
Full proposal stage deadline	16 December 2010
Full proposal stage assessment	Early January 2011
Decision and feedback to applicants	By end of January 2011



Further information

For more information about this and other competitions and details of how to register and apply, visit www.innovateuk.org under Competitions.

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.

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