

Technology Strategy Board

Driving Innovation



Digital Testbed: Network Services Demonstrators

MAY 2010 COMPETITION FOR FUNDING



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Summary

As part of our Digital Testbed Programme we have allocated up to £2m to invest in a small number of projects that will establish network services demonstrators.

We expect these demonstrators to become national 'hotspots' for trials and innovation in business models, applications and services that centre on advanced network infrastructure and service enablers.

There is high unmet demand for open, live experimentation with advanced networks. Although such networks are already available and small-scale trials are under way, this initiative will add value by stimulating the opening up of advanced capabilities, lowering barriers to experimentation, and increasing visibility and critical mass.

The competition is open to business-led consortia, and we encourage collaboration among the various communities in the digital ecosystem. We will fund up to 50% of eligible costs.

Funded projects will comprise two phases:

Phase 1: over four to six months consortium partners will develop a demonstrator, together with a proof of principle business model, application or service that is enabled by the demonstrator's features.

Phase 2: the demonstrator will go live and be made available for third parties to experiment with novel business models, applications and services based on the demonstrator's features. The consortium will be required to maintain the demonstrator for at least one year.

This competition has a two-stage application process and will open on **10 May 2010**.

Background and challenge

Modern businesses, public services and consumer applications increasingly rely on the internet, and broadband access is now essential for our knowledge-based economy.

As the demand for bandwidth grows exponentially due to the ever-increasing amount of content and the shift in consumption patterns, the infrastructure is struggling to cope and businesses are questioning the current models for content, distribution, networks and internet service providers.

Many initiatives – national, regional and local, private and public – are under way to upgrade the network infrastructure and enable the services that will be required in the near future. Most of these efforts are focused on the fundamentals of network provisioning.

However, the UK faces the challenges of legacy business and operating models, and little open experimentation is being carried out across communities and sectors, notably the content industry, ISPs and network providers.

Such experiments could lead to more innovative, compelling and tailored offerings, which could shift or generate revenue and build confidence to invest. Experiments could also address fundamental tensions that still dominate the landscape, such as the control of peak traffic volumes affecting service quality, and poor rewards for improved network service.

We are setting up testbeds to facilitate such experimentation (see our digital strategy at www.innovateuk.org under Publications), and have consulted extensively with the ICT, network and content industries.

One of the main issues highlighted by the consultations is the need to demonstrate the additional business models, applications and services that can be

supported by advanced, open and flexible networks and network services.

Scope

Through this competition we will invest in the development of a small number of network services demonstrators that are intended to become national hotspots for trials and innovation in business models, applications and services centred on advanced network infrastructure capabilities and service enablers.

Each demonstrator will comprise a **site**; a **proof of principle** business model, application or service; and **availability** of the site for experimentation and trials.

The site

Sites must have the following:

- a live network, ideally pre-existing and possibly with a well-defined footprint, such as next-generation access, a community broadband network, a publicly funded network or a wireless town – we will consider any type of access technology
- a number of end users or businesses connected to the network, for instance as part of an existing community
- advanced baseline and peak network performance and characteristics in its class
- at least one advanced enabling network characteristic or service openly exposed through interfaces, including for instance one or more of the following:
 - real-time or near-real-time control of available bandwidth
 - quality of service control
 - content awareness
 - content caching services
 - multicasting
 - latency control
 - identity management.



Proof of principle business model, application or service

This will need to use the advanced network services and features of the site. We are particularly interested in those that bring together the various communities in the digital ecosystem (eg content owners and ISPs).

Availability

The site will need to be made available for pre-commercial experimentation with business models, applications and services for a period of at least one year (ideally longer), with external interfaces to the site features, terms and conditions of use, and dissemination criteria for the experimental results. We aim to ensure that these aspects have a level of consistency across the demonstrators that we fund.

Proposal

Proposals should include the following:

- Outline plan to develop the demonstrator site, including:
 - network infrastructure characteristics and performance
 - the user base, available or planned, and its expected predisposition to be part of trials
 - network characteristics and services enablers exposed for business experimentation – their potential impact, quality and reach.
- Outline plan of the proof of principle business model, application or service – including its expected impact and how the market might react to it, ideally supported by market data or the results of similar experiments.
- Strategic rationale and outline plan for allowing the demonstrator to be used for experimentation by other parties for at least one year. The outline plan should include:

- the external interface for using the proposed enablers
- terms and conditions for using the demonstrator
- criteria for disseminating the learning resulting from experimentation
- the added value of the proposed demonstrator in terms of what type, scale and impact of new business model, application and services experimentation it would enable over and above what is available elsewhere.
- The names and roles of two people from the consortium available to participate in a 'bidders workshop' (see 'Application process', p4).

Due to the likely size and timescale of projects, this competition might not be suitable for consortia seeking support for the deployment of infrastructure and/or the development of new technology.

Consortia

This competition is open to business-led consortia. We are encouraging collaboration between diverse communities in the digital ecosystem because they embody the type of challenges that the Digital Testbed Programme aims to address.

The competition is likely to be of interest to organisations including but not limited to:

- those that own or manage advanced infrastructure, such as local and regional public-sector organisations, co-ops and private operators
- small to medium-sized infrastructure players and ISPs looking to lead the way with experimentation with new business models, applications and services
- parties, especially content and service providers, interested in business model experimentation and innovation in the digital value chain.

It may particularly suit infrastructure owners or innovative ISPs that have or are exploring a 'network as a platform' strategy and would like to become hotspots of innovation in business models, applications and services centred on their own advanced network capabilities and services.

Funding allocation and project details

We have allocated up to £2m to fund a small number of business-led collaborative projects at up to 50% of eligible costs to establish and run network services demonstrators.

Projects will comprise two phases:

Phase 1: over four to six months consortium partners will develop the demonstrator site together with a proof of principle business model, application or service that is enabled by the features of the site.

Phase 2: the demonstrator will go live and be made available for the consortium and third parties to experiment with new business models. The consortium will need to maintain the demonstrator for at least one year, ideally longer.

Eligible costs include making limited enhancements to current infrastructure to deliver the proposed network service enablers, developing APIs and interfaces, integrating with other testbeds and/or network services demonstrators, setting up the demonstrator, keeping the demonstrator up and running, and in-kind contributions (eg network capacity usage).

Note: Any income raised from the demonstrator must be deducted from the total eligible project costs.

We encourage applicants to contact their regional development agency, devolved administration or local government to explore opportunities for additional funding.

Application process

This is a two-stage competition that will open on **10 May 2010**. The Guidance for Applicants provides full details of the application process and selection criteria; it will be available online when the competition opens (see the Competitions section of our website at www.innovateuk.org).

A briefing event will be held on **20 May 2010** to explain the application process and competition requirements. We strongly advise that all applicants attend.

Stage 1 applications must be submitted by **24 June 2010 (noon)**. Proposals will be independently assessed to establish a short list of bidders who we will invite to a bidders workshop. Each short-listed consortium will receive feedback and suggestions of ways to improve their proposal.

A mandatory two-day **bidders workshop** will take place on **28-29 July 2010**.

Two representatives from each short-listed consortium must attend. The consortia and Technology Strategy Board representatives will discuss and agree a common ground for the demonstrators, while recognising the diversity of the proposals and the regulatory boundaries of public funding.

All bidders must prepare a **stage 2 submission** by **9 September 2010 (noon)**.

Key dates

Competition opens	10 May 2010
Briefing day	20 May 2010
Deadline for receipt of stage 1 applications	24 June 2010 (noon)
Short-listed bidders informed	19 July 2010
Two-day bidders workshop (mandatory)	28-29 July 2010
Stage 2 opens	5 August 2010
Deadline for receipt of stage 2 submissions	9 September 2010 (noon)
Decision to applicants	7 October 2010

We anticipate that we will fund the majority of stage 2 submissions; however, they will be subject to a further assessment. Part of this assessment will be to evaluate whether recommendations from the bidders workshop and stage 1 feedback have been responded to within the final stage 2 submission.

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. Email 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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