



# New methodologies in multi-disciplinary software development

**TARGETED CALL FOR KNOWLEDGE TRANSFER PARTNERSHIPS  
MAY 2013**



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## TARGETED CALL FOR KNOWLEDGE TRANSFER PARTNERSHIPS

### Summary

The Technology Strategy Board is to invest up to £500,000 to establish new Knowledge Transfer Partnerships (KTPs) in multi-disciplinary software design (MDS), to enable UK businesses to draw on the latest research in this area. In addition, the Arts and Humanities Research Council (AHRC) will consider co-funding projects if they involve arts and humanities academic disciplines.

The aim of this initiative is to enable industry to access the MDS expertise that is available within the UK research base,

and to translate it into innovative business practice. The AHRC is particularly keen to encourage businesses to access academic expertise from across the full spectrum of the arts and humanities.

Although there have been many initiatives to involve external expertise (ie expertise from outside computer science) in the software production process after the code has been developed, this initiative focuses on helping businesses access that expertise at the initial stage of software engineering.

We are seeking proposals that will lead to the development of new multi-disciplinary approaches to critical parts of the software development process, such as the capture of user requirements and understanding of user culture, and the translation of these into effective business methodologies that are suitable for small projects and budgets.

Our aim is to reduce the amount of software that is produced that is unfit-for-purpose, because it is developed without a real understanding of the contexts that users are working in, or their cultures and behaviours, and so does not meet user requirements.

This targeted call for KTPs is part of a £1.5m programme to develop innovative ideas and facilitate new cross-sector, industry-led collaborations, bringing software developers together with professionals from non-computer-science disciplines, in small-scale software development. It runs in parallel with a competition for feasibility studies funding, supported by the Technology Strategy Board and the Arts and Humanities Research Council, which encourages software companies to experiment with MDS and to try out new formats and methodologies in this area.

Through this investment we aim to:

- help UK software businesses to access academic learning and embed it into business practice

- encourage small software companies to experiment with MDS and create a pool of companies that understand its benefits
- give those companies an edge over other software companies that do not employ these methods.

Our ultimate aim is to ensure that the value of significant annual investment in software development in the UK can be maximised.

We will part-fund KTPs. The competition opens for applications on **28 May 2013** and the final deadline for proposals is noon on **2 October 2013**. A briefing and brokering event for potential applicants will be held on **28 May 2013**.

### Background

Software underpins every economic sector in the UK and enables innovation in all areas of high-growth technology. Software systems are becoming ever more complex, while our reliance on them is increasing. Capturing real user requirements and understanding user cultures and aspirations is vital for effective software design.

Low-quality software can have a major economic impact. It has been estimated that own-account software (software developed and used by a business for its

This targeted call is being run in parallel with a £1m competition funding feasibility studies in the field of MDS. The competition will open in May 2013 – please see the Competitions page on the Technology Strategy Board website for more details: [www.innovateuk.org/competitions](http://www.innovateuk.org/competitions). Organisations applying to both competitions must make sure that their proposals can stand alone and are not dependent on both applications being successful.

### What is KTP?

KTP helps businesses to improve their competitiveness, productivity and performance through better use of the knowledge, technology and skills that are available within the UK knowledge base. The programme is UK-wide, headed by the Technology Strategy Board, and supported by 12 other public sector funding organisations.

A KTP involves the formation of a partnership between a business, an academic institution (or knowledge base partner) and a recently qualified graduate, who is known as the Associate. The aim of the partnership is to facilitate the transfer of knowledge, and embed new capability within the business.

Through collaboration, these partnerships can:

- involve highly qualified people in spearheading new projects
- engage experts to help take organisations forward
- develop innovative solutions to help organisations grow
- develop the capacity and capability to innovate more effectively.



own day-to-day use) will contribute £18bn to the UK economy in 2014. Realising the value from the huge investment made in this area relies on high-quality software engineering processes.

Software can be unfit-for-purpose because it does not fulfil the practical needs of users. This is often the result of inaccurate specification of requirements, where the context of use is not fully understood or appreciated.

Many software development teams lack the right skills to fully appreciate user context, cultures and behaviours, or they lack the ability to translate this understanding into workable requirements. In some large organisations, software developers work cross-functionally with anthropologists, literature and narrative specialists, sociologists, psychologists, artists, performers and creative designers, but this is certainly not the norm.

The UK is home to world-leading research in many aspects of software development, and it also has great strengths in human-orientated subjects (the arts, humanities and social sciences). However, these communities are not well connected, and the potential for building a base for high-quality software development is not being realised.

Looking for partners to work on your project? Go to **\_connect** ([www.innovateuk.org/connect](http://www.innovateuk.org/connect)) to find collaborators and networks. We have set up a dedicated group for this competition to enable partners to communicate and share information: <https://connect.innovateuk.org/web/mdsd/> The Design Special Interest Group may also help you find partners, and has a subgroup on software engineering: <https://connect.innovateuk.org/web/design-sig>

We see KTPs as an ideal mechanism to support businesses in working with the UK research base, enabling them to access academic learning and use this expertise to develop innovative business practices which become established as standard.

### Scope

We are seeking proposals that will lead to the development of new multi-disciplinary approaches to critical parts of the software development process, such as the capture of user requirements and understanding of user cultures, and the translation of these into effective business methodologies that suit small projects and budgets.

Our aim is to encourage software developers to work with partners with complementary expertise from non-software disciplines (eg the arts, humanities, user-centred and creative design and the social sciences), to explore new and more effective ways of working. As part of this multi-disciplinary approach, we are encouraging businesses to access academic expertise from across the full spectrum of the arts and humanities.

In particular, we are encouraging applications from companies that have recently been commissioned to create software for a client, or developers in non-software companies that have been commissioned to write software for in-house use. In both cases, projects should aim to improve software quality and performance by developing and exploring new collaborative software development processes with experts from other disciplines.

### Funding allocation and project details

The Technology Strategy Board has allocated up to £500,000 to fund projects that address the technical challenges outlined in the scope above. In addition, the Arts and Humanities Research Council will consider co-funding projects if they involve arts and humanities academic disciplines. KTP projects generally last between six and 36 months. However, we expect the projects in this targeted call to be up to 51 weeks in duration – so-called 'shorter' KTPs. We expect to fund up to 25 KTPs across the UK.

We will fund part of the cost of running the KTP project. The level of grant that the KTP can receive depends upon the size of the company involved. The grant is paid through the academic partner and the level also depends on whether the academic partner uses a full economic cost model. KTP is open to all UK companies and the UK-wide knowledge base.

As an example, a small or medium-sized enterprise might contribute around a third of the project costs, with the remainder of the costs being paid as grant. Currently average annual project costs are around £60,000. Larger companies generally receive a lower level of funding.

Your local KTP adviser will be able to provide more details on funding levels (see back page).

Aside from the direct benefits of involvement in a KTP, we will support knowledge-sharing between KTPs by holding events that bring them together, providing information-sharing through our networking platform **\_connect**, and introducing KTP partners to partners in other types of funded innovation projects.

## Application process

To apply through this targeted call, businesses should contact one of our KTP advisers. The KTP advisers provide advice on eligibility and timescales, and work with all the potential KTP partners to develop the joint proposals. These proposals will be assessed by our Partnerships Approvals Group (PAG).

The application process involves:

**Stage 1:** All potential applications must be discussed with and approved in advance by a KTP adviser, before being submitted by the academic partner

**Stage 2:** Submission of online grant application and proposal form via the KTP portal. New KTP applicants need to register for a KTP portal account by following the 'register new user' link at <http://portal.ktonline.org.uk/login/register.aspx>

**Stage 3:** Our Partnership Approvals Group (PAG) makes a funding recommendation

**Stage 4:** The Technology Strategy Board Technologists assess applications and approve.

Proposals must be submitted by noon on **2 October 2013**.

NB proposals will be considered by the Partnership Approvals Group on an ongoing basis after the opening date of this targeted call, and proposals of an appropriate standard may be approved before the 2 October deadline. We therefore recommend that you submit your proposal as soon as possible, and do not wait until the final deadline.

To find your local KTP adviser, visit [www.ktonline.org.uk](http://www.ktonline.org.uk) and go to 'contact us'.

If your proposal is not within the scope of this call, you may still be eligible for a KTP grant. The scheme runs throughout the year and supports projects in many fields. Contact your local KTP adviser for more information.

## Key dates

Targeted call opens	<b>28 May 2013</b>
Optional briefing and brokering event, central London	<b>28 May 2013</b>
Deadline for applications	<b>2 October 2013 noon</b>
Partnership Approvals Group (PAG) meeting	<b>24 October 2013 noon</b>

## More information

For more information about KTP eligibility or suitability of projects for this call please contact your regional KTP adviser. Adviser contact details are available on the KTP website at [www.ktonline.org.uk](http://www.ktonline.org.uk) under 'contact us.'

**Competition helpline:**  
**0300 321 4357**

**Email:**  
[ktp\\_companies@tsb.gov.uk](mailto:ktp_companies@tsb.gov.uk)

## Publicity

As part of the application process all applicants are asked to submit a public description of the project. This should adequately describe the project but not disclose any information that may impact on intellectual property, is confidential or commercially sensitive. The titles of successful projects, names of organisations, amounts awarded and the public description will be published once the award is confirmed as final. Information about unsuccessful project applications will remain confidential and will not be made public. E-mail [pressoffice@tsb.gov.uk](mailto:pressoffice@tsb.gov.uk) with any queries.

*The Technology Strategy Board is the UK's innovation agency. Its goal is to accelerate economic growth by stimulating and supporting business-led innovation. Sponsored by the Department for Business, Innovation and Skills (BIS), the Technology Strategy Board brings together business, research and the public sector, supporting and accelerating the development of innovative products and services to meet market needs, tackle major societal challenges and help build the future economy. For more information please visit [www.innovateuk.org](http://www.innovateuk.org).*

*The Knowledge Transfer Partnerships Programme is part of the Government's Solutions for Business portfolio.*

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