

## NIHR INVENTION FOR INNOVATION (i4i) PROGRAMME Current collaborations

### 1. MATCH

Multidisciplinary Assessment of Technology Centre for Healthcare (MATCH) is a research collaboration between five UK universities in healthcare technology assessment, and a cohort of industrial partners. It has been funded for several years by the Engineering and Physical Sciences Research Council (EPSRC) as a centre of excellence in its field, having been awarded the status of an Innovative Manufacturing Research Centre (IMRC). The aims of MATCH include:

- Supporting the UK medical devices sector through fundamental and applied research working closely with industrial partners, specifically:
  - To develop methods and models to assess the value of products from multiple perspectives, from identification of need to evolution as mature offerings on the market.
  - To propose processes to turn improved information into better decision-making, more effective development and production processes, clinical integration, and improved provision for users.
  - To undertake specific confidential applied research with each of its research partners to validate the research and to support companies as they embed new methods in their internal practices.
- Supporting industry with a knowledge network and a forum to engage with regulatory and other bodies, specifically:
  - To provide a network service to inform the wider industry and support a community of network partners alongside the research partners.
  - To support engagement between industry and regulatory bodies in the UK and abroad.

Following a successful review, EPSRC agreed to renew the funding for MATCH for a further five years from 2008-2013. Alongside this renewal, the **NIHR i4i Programme** has agreed to provide funding towards 'MATCH-PLUS' in order to develop two specific areas of activity:

**Economic evaluation:** development of new methods for such assessment and the creation of tools (based on existing and new methods) to provide technology vendors and procurers with the means to make value-based judgements as needed; and

**Users' needs:** Development of methods related to acquiring an appropriate view of user needs and also embodying such insights into tools, again for the use of vendors, assessment agencies and procurement bodies.

In addition, this collaboration will enable the provision of specific support to others, where appropriate, preparing research proposals for funding from the **i4i programme** and for pragmatic contributions around uptake, supply chain, industrially oriented research, and implementation.

## 2. Knowledge Transfer Partnerships (KTP)

Knowledge Transfer Partnerships (KTP) is Europe's leading programme helping businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK knowledge base. There are three principal players within a partnership:

**Company partner** - this is usually a company (including not-for-profit) but in some cases it can be a health or education organisation or local authority. KTP supports a broad cross-section of UK firms, regardless of size.

**Knowledge-base partner** - this is a higher education institution (e.g. university), college or research organisation (public or privately funded).

**KTP Associates** – Each partnership employs one or more high calibre Associates (recently qualified people), transferring the knowledge the company is seeking into the business via a strategic project.

KTP is funded primarily by the Technology Strategy Board (TSB) but with a number of other funding organisations also providing sponsorship (more details on KTPs can be found at the following web site: <http://www.ktponline.org.uk> ).

**The NIHR, through the i4i Programme**, is currently providing funding for a number of health related KTPs. Further funding is available for appropriate high quality health partnerships.

## 3. Assisted Living Innovation Platform (ALIP)

The World Health Organisation has identified that, because of the demographic and lifestyle changes that are taking place, chronic conditions will be the leading cause of disability by 2020. Consequently, an enormous challenge facing developed countries is that of delivering care to the elderly and those with chronic conditions and in supporting the more vulnerable members of society. Another consequence of the demographic change is that the number of care professionals will decrease so there will be increasing demand for care, yet less resources to deliver it.

To accommodate these changes any 21st century health and social care service will have to make greater use of technology, deliver care closer to and sometimes in, the home and make increasing use of a person's capacity to self care by supporting them appropriately.

These changes in the nature of care delivery will take place against the backdrop of improvements in medicine, which will lead to treatments for neurological conditions, more targeted personalised medicine, increased integration between diagnosis and treatment (theranostics) and a better understanding of disease processes. This may of course reveal further unmet need and create increased demand.

The focus for the future will thus move more towards prevention rather than cure, and towards assisting people to live as independently as possible. This will involve reinforcing lifestyles that promote wellbeing, intervening earlier to avoid conditions worsening, empowering people to work with their care professionals to manage their own conditions and involving a greater number of stakeholders in the care delivery process.

A key infrastructure technology in both the new care delivery methods and the personalisation of medicine is Information and Communication Technology (ICT) which will need to have a high bandwidth and be ubiquitous to cater for the volumes of data transmitted and the mobile nature of care delivery.

The applications that run on this infrastructure will create new care delivery models and networks of users. To create these applications ICT will have to interface with other technologies such as sensor technology and display technology. It will thus be crucial for technological development to be firmly embedded in an environment where the implications for models of service delivery are recognised and understood.

During 2007, the Department of Health and the **NIHR (via the Invention for Innovation (i4i) Programme)**, the Technology Strategy Board (TSB), the Engineering and Physical Sciences Research Council (EPSRC) and the Economic and Social Research Council (ESRC) agreed to jointly fund a number of activities in the area of Assisted Living under the umbrella of the TSB-led Assisted Living Innovation Platform (ALIP). This platform was launched in November 2007 with the aim of significantly advancing the technology to meet the demand for independent living from people suffering from chronic long term conditions.

The Innovation Platform's work programme will range from conventional collaborative R&D and single company support for small companies R&D, to work in standards, research fellowships in business models, specific projects in user centred design and a potentially ground breaking future care technology "test suite", and will be closely linked to the DH agenda being pursued through various activities including the 'whole system long term conditions (LTC) demonstrator programme'. For more information see the following web sites:

[http://www.dh.gov.uk/en/Healthcare/Longtermconditions/DH\\_4140328](http://www.dh.gov.uk/en/Healthcare/Longtermconditions/DH_4140328) and

<http://nds.coi.gov.uk/environment/fullDetail.asp?ReleaseID=367176&NewsAreaID=2&NavigatedFromDepartment=True>

More details on ALIP can be found on the TSB web site at:

<http://www.innovateuk.org/ourstrategy/innovationplatforms/assistedliving.ashx>

#### **4. Medical Futures**

The Medical Futures Innovation Awards programme is run on a not-for-profit basis. Formed in 2001 it provides a model to engage and stimulate innovation from the clinical and academic communities through a range of activities including: (i) peer-to-peer communication channels to identify unmet need and stimulate bottom-up solutions to be developed; (ii) built-in clinician focused educational programmes, to help guide and focus; (iii) clinical peer review panels to validate & endorse innovation; and (iv), the mentoring of Award winners to help road map innovation.

This process compliments other activities and organisations in the innovation space and allows the best innovations to be assessed by peer review thereby enabling projects, businesses and individual ideas to receive feedback and insights they might otherwise find difficult to obtain.

The **NIHR i4i Programme** is working with Medical Futures to pilot a way of working where the Award programme will identify up to three proposals that are considered potentially eligible for i4i funding. A small amount of support will then be given to provide consultancy services to these projects in order to turn their idea into a commercially focused application for R&D funding, with the intent of achieving greater success based on the recommendations from the clinical and commercial judging panels. Depending on the outcome of this pilot activity, this scheme may be expanded and opened up to projects emerging through similar schemes or from validated mechanisms run by other 'ideas generators'.

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[www.nihr-ccf.org.uk](http://www.nihr-ccf.org.uk)