

invention . . . proof of technology . . . proof of market . . . breakeven . . . exploitation

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## Commercialising innovation: *TrusTECH*



***T***rusTECH® is one of the nine NHS Innovation Hubs set up to help NHS Trusts manage their intellectual property more effectively, so as to maximise benefits in terms of new products and processes for industry as well as improved healthcare.

*TrusTECH* is based in the Innovation Hub at Manchester Royal Infirmary, with offices in Liverpool and Preston, and works with NHS Trusts in Cheshire, Cumbria, Greater Manchester, Lancashire and Merseyside.

### Background

The first of the Innovation Hubs, including *TrusTECH*, were set up in 2001, with all nine in operation by 2005. They are funded primarily by DIUS (the Department for Innovation Universities and Skills, ex DTI), and the Department of Health.

The Hubs have a regional focus similar to that of the Regional Development Agencies (RDAs), a number of which are funding partners. The other two Hubs in the North of England are Medipex Ltd covering Yorkshire and Humber (YCF reported Medipex spin-out Aperio Diagnostic in July), and NHS Innovations North in the North East.

### Innovation in the NHS

According to Dr Richard Deed, *TrusTECH*'s Innovation Unit Manager, the innovative ideas originating in the NHS can be divided into two broad categories; those which are solutions

for immediate local problems, and those which offer a technology platform, both of which may have considerable commercial potential.

In either category the innovations might involve diagnostic technologies, medical or surgical procedures, medical devices and equipment, software, training materials, or service delivery.

The majority fall into the first category – solutions for immediate problems – and, especially in the case of products such as medical devices, are most suited to licensing to third parties which already have the manufacturing capability, the sales outlets, and all the commercial infrastructure required to take products to market. Successful examples of out-licensed products include a pain relief manikin, used to train clinicians in needle placement for pain relief during surgery, and a rhinoplasty model for

simulation of nasal surgery (see Fig 1), both licensed to anatomical model supplier Adam Rouilly Ltd.

Where services such as drug screening programmes or diagnostic tests are involved, an alternative business model is for a new unit to be set up either within the NHS Trust or as an independent spin out company to deliver the service both to the NHS and to third parties; the originating Trust is in these cases likely to have a sizeable stakeholding in the business. Deed quotes the expansion of glycaemic index testing services at the Hammersmith Hospital as a successful example.

Innovations in the second category, platform technologies with high commercial potential, can also lend themselves more readily to commercialisation by a spin-out company, so that the IP can be further developed and exploited for the greatest benefit to its originators. Two recent examples where the NHS has contributed technology or knowledge to recently established spin outs are **Femeda**, which is developing new products for women's health, and **Steritrox** (see YCFN issue 8)

Peter Townley, Steritrox's managing director, commented "We have built a strong working alliance with *TrusTECH* that has allowed us highly professional access to the NHS."

"We have developed a range of ecological sanitising equipment which is now widely used in the food industry to effectively destroy harmful bacteria without the use of dangerous and aggressive chemicals. As a result of our alliance with *TrusTECH*, extensive trials will start very shortly at



Fig 1. Rhinoplasty model for simulation of nasal surgery

Manchester Royal Infirmary to demonstrate that our equipment offers a highly effective means of destroying such pathogens as *Clostridium difficile* and MRSA within hospital and medical environments. We are confident that the results will prove very encouraging."

TrusTECH is currently considering the establishment of separate spin outs in the areas of cardiac devices and genetics testing technologies.

**Spinning out**

It is often thought that sorting out the ownership of ventures originating within the NHS must be a major barrier to commercialisation, as it is with universities, but according to Dr Deed this is not the case; the principal barrier is time. Whereas a university professor might be able to devote some time and resource to advancing the development of a promising technology arising within his or her department, this is rarely the case with staff in the NHS, and one of the most important services which TrusTECH's Innovation Management team can provide is to take as many aspects of the commercialisation process forward as possible, freeing up the NHS partner to concentrate on his or her job with input to the project kept to its technical aspects.

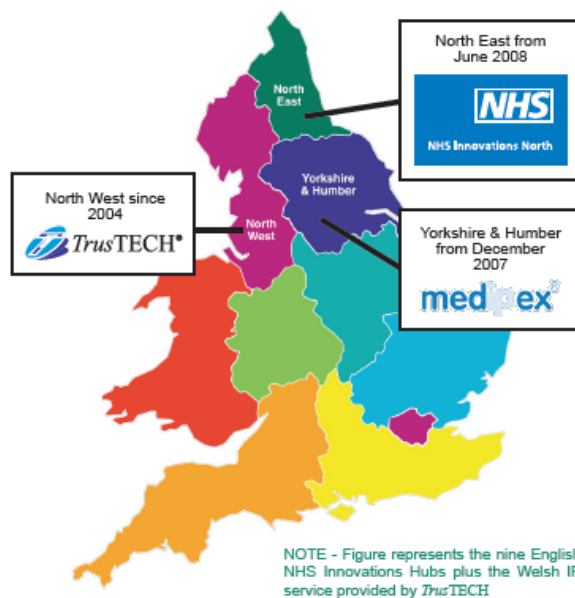
TrusTECH has a small proof of concept fund, from which it can make grants of up to £25k; the grants must be made to NHS organisations, but can be used to fund work undertaken by third parties if required.

**Working with the NHS**

TrusTECH sees one of its roles as facilitating commercial relationships between the NHS and industry over a wide range of collaborations, through its **Commercial Services** programme. One way in which it can do this is to help businesses develop their products in collaboration with the NHS so that they are better able to sell appropriate products and services into the NHS. This is notoriously difficult, especially for small companies. Larger companies

are better able to handle the NHS's tendering and procurement procedures, and can aspire to be included on approved supplier lists, with the prospect of large volume orders.

Small companies are better advised to start from the bottom up, first finding clinical champions for their products or services, then expanding from this base. TrusTECH operates the **Medilink** service in the North West to advise companies on selling into the NHS, and Deed cites examples of medical instruments and disposable surgical packs which have succeeded in this way.



**Fig 2. Coverage of ACTNoW**

TrusTECH is the originator of **ACTNoW**® (see Fig 2) an online, searchable database of NHS investigators and clinical research expertise across the North of England. It is a resource aimed at pharmaceutical and medical device industries, academia and the NHS to facilitate the placement of clinical trials in the NHS. TrusTECH in collaboration with the two other Northern NHS Hubs and the University of Manchester Business School is currently developing the scale and functionality of ACTNoW to provide an intelligent interface to 2,000 clinical staff and is also refining the business model for its continued expansion, probably via the spin out route.

Companies which are able to contribute towards the further development of products or services originating in the NHS can benefit from TrusTECH's help in a number of ways, including advice on the protection of the IP for mutual benefit, confidentiality agreements, business structures for shared ownership, the facilitation of trials, and advice on the best way of making the product acceptable within the NHS.

**Improving product acceptability**

This is a major issue for the NHS. There have been many proven and promising projects which remain unadopted by NHS practitioners, which according to Dr Deed include software systems for patient management, monitors for blood oxygenation, and new treatments for kidney stones. He says that the problem is not always a lack of money to implement the new product or service, but rather a failure to consider the 'fit' with the NHS system; in some cases the project cuts across budget boundaries, or across different disciplines, or it might be seen as removing some part of a doctor's responsibility or clinical judgment.

To combat this difficulty in getting projects accepted by the NHS system, a new venture called the **NHS National Technology Adoption Hub** has been set up. It will be staffed by a team of specialists based in TrusTECH with a nationwide remit. Its role will be to take a number of projects and run adoption trials for six to nine months, exploring the barriers to technology take-up. The outcome of these adoption trials is expected not only to identify the main barriers to uptake, but also to set out how they might be overcome, either by tailoring the project or by making changes in NHS arrangements which ultimately will improve patient healthcare.

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