



Medipex Annual Report

April 2004 to March 2005

Chairman's Statement

In their foreword to the recent '*Science and Innovation Investment Framework 2004-2014*', the Chancellor and DfES and DTI Secretaries say that '*The nations, which can thrive in a highly competitive global economy, are those that can compete on high technology and intellectual strength..*'. The development of an environment and culture that promotes improved investment in science and innovation so as to maximise benefits from scientific advances is key to achieving a healthy and prosperous United Kingdom.

The longer-term benefits to be derived from innovative communities are recognised. The NHS, the largest provider of healthcare in the world, has a key role to play by encouraging the development and growth of innovative and dynamic organisations within the regions. The enactment, in 2001 of the Health and Social Care Act to allow NHS Trusts and primary care Trusts to have a shareholding in companies along with publication, in 2002 by the Department of Health of the framework document '*The NHS as an Innovative Organisation: A Framework and Guidance on the Management of Intellectual Property in the NHS*', has resulted in the establishment of nine regional NHS Innovations Hubs and were a clear signal from Government to mobilise the creative potential that lies within the NHS.

Medipex Ltd was the first NHS intellectual property management hub to be incorporated as a 'not for profit' company. It is governed by a Board representing a cross section of the regions NHS and business communities with extensive experience in managing the innovation process.

It was a privilege in January 2004 to be offered the opportunity to lead Medipex and my first twenty months as Chairman have been both enjoyable and challenging. Since my appointment I have had the opportunity to see at first hand the potential for innovation that exists within the regions NHS communities. The early signs of achieving a return on the public investment in Medipex are very encouraging. In the last 15 months, Medipex has handled 220 new ideas. Over 50 selected for further development and negotiations on exploitation agreements are progressing on many of these. Medipex cannot achieve and exceed its targets without engagement with and investment by the private sector in particular Venture Capital organisations and industry. It is particular pleasing to see the emergence of effective partnerships with organisations from within both sectors of the business community.

I have also had the opportunity to get to know the management team at Medipex. I am impressed by the work they are doing, outlined in detail in the Executive Report and by the enormous enthusiasm and energy for promoting innovation across the regions NHS communities. This has built throughout the NHS, among clinicians, scientific and technical staff and managers alike a strong level of Trust in the team and the belief that engagement with the Hub can provide enormous benefits for the NHS, for the inventors, and importantly the regional economy.

The medical industry faces an exciting future and I have been encouraged by the growing commitment to health related issues emerging within the region that will underpin Medipex's work. Never before has the region and the UK been better networked to develop and commercialise new innovations in healthcare.

We are committed to working closely with the Regional Development Agency; Yorkshire Forward on initiatives that ensure maximum benefit is derived for the healthcare community in Yorkshire and Humber.

In the rapidly changing environment Medipex currently operates in we have been fortunate to have a Board that plays a key role in monitoring developments and ensuring the appropriateness of strategy to our key customers. Over the coming year I look forward, with help and guidance from my Board of Directors and continued support from the *National Innovation Centre*, now incorporated within the recently formed NHS Institute for Innovation and Improvement, to helping Medipex enhance its contribution to the NHS and regional economic development through greater engagement with its community and active participation in innovative regional and national initiatives.

Gareth Lloyd-Jones
Chairman

Executive Summary

Following guidance from DH, a consortia of six Yorkshire NHS Trusts successfully bid for funding towards the establishment of Medipex, the NHS Innovation Hub for Yorkshire & Humber. Medipex Ltd was formally established during 2003 and an initial Board of directors appointed from the core partners. Membership of the Board was broadened from the core NHS partners to include private sector expertise and by June '04 the key staff positions were filled.

A service level agreement and terms of membership were agreed with the Board and during 2004 all of the Trusts in the region were invited to join Medipex and make use of the expertise and specialist intellectual property (IP) management services which at that time were free. From April 2005 it has been necessary to introduce an annual membership fee because costs are only partially met by DH/DTI funding. In future years membership fees will be adjusted to more closely match the fee to the anticipated level of activity. For those Trusts who do not wish to join Medipex our services are still available on a cost reimbursement basis. To date 75% of the Trusts in the region have made use of our services and currently around half have a service level agreement in place.

Throughout this last year our staff have been engaged in numerous activities to promote Medipex to NHS personnel, identify and assess IP on behalf of our members.

During our first full year we have:-

- identified over 220 ideas
- actively pursued 50 ideas, and negotiated exploitation agreements on many of them
- filed 12 patents, 1 trademark and dealt with 18 cases of copyright
- promoted NHS IP at 15 events, 6 exhibitions, via the website
- contacted all 60 NHS Trusts in the region, looked at ideas from 45 Trusts and so far negotiated contracts with 25 Trusts to deliver a managed IP service
- provided information for annual R&D returns to DH
- secured £592,000 of funding for one of our Trust members (HTD)
- spoken to 100 healthcare companies regarding NHS IP and are actively exploring opportunities for spin outs to promote new technologies
- Successfully organised a regional innovation competition

Background

The purpose of Medipex is to provide a managed intellectual property service to the NHS in Yorkshire and Humber. Specific activities of Medipex include the provision of the following activities to all Trusts in the region wishing to participate: -

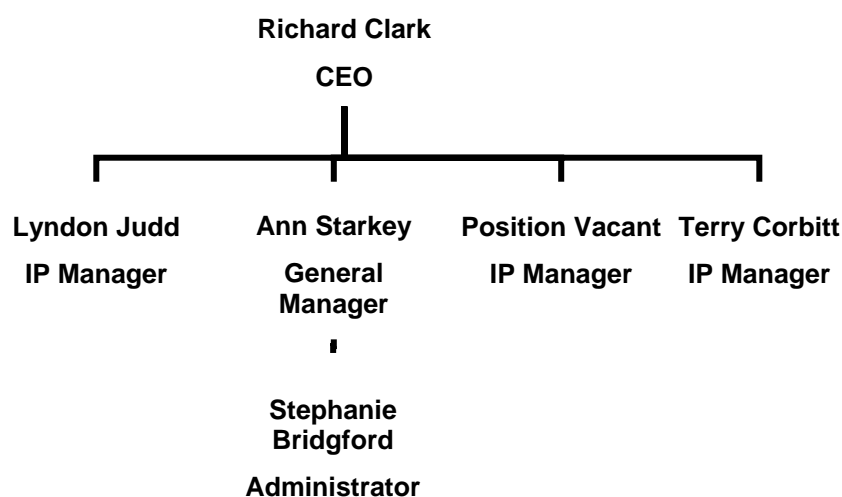
- | | |
|------------------------------------|-------------------------------------------------------------------------------|
| (i) education and training | (v) management of IP asset base on behalf of the NHS |
| (ii) identification of IP | (vi) identification of non-commercial innovations which could benefit the NHS |
| (iii) protection of IP | (vii) commercialisation of knowledge base in NHS. |
| (iv) commercial exploitation of IP | |

There is also a regional economic development role stimulating innovation in to medical technology companies (SME's) within the region and in some instances creating new companies and employment to take forward novel ideas and technologies.

Organisational Structure:

During the first quarter of FY 2004/05 legal agreements with the 6 founding Trusts were put in place and a Board of directors confirmed representing the NHS, private industry and the University sector. The external non-executive directors appointed come from a cross section of the business community; they bring a range of business skills and expertise to the company ranging from setting up spinout companies to financial management. Additional responsibilities of the Board include overseeing financial matters, project appraisal and PR/marketing functions.

Figure 1. Medipex family tree



Weekly management meetings involve all staff and project reviews take place twice per month. A formal project appraisal group chaired by a non-executive Board member meets quarterly to approve Proof of Concept Fund expenditure and recommend which projects are taken forward.

External relations

Membership from NHS Trusts outside of the founding Trusts commenced in July 2004. An SLA was developed that identified the services on offer from Medipex and a scale of membership charges was based on 3 bands dependant upon size and anticipated level of IP activity. Membership fees are to be levied from April 2005 onwards. PCT's were judged to be outside the banding and a nominal fee of £200 will be charged on their membership until a more accurate measure of the level of IP emanating from PCT's is obtained.

Marketing of the opportunities to companies in order to secure commercial exploitation agreements is done via our website (www.medipex.co.uk), by mail shots but mainly via direct communication with contacts in the healthcare industry. During November 2004, Medipex attended Medica 2004 (world's largest medical technology trade fair).

A PR strategy has been developed using external PR expertise from Medilink. A PR and marketing sub-group is chaired by a member of the Board and including representation from Atlas Media Group (publishers of NHS Magazine) in order to drive the strategy forward. Additional PR material is being produced as and when necessary.

Progress to March 2005

Two hundred and twenty ideas have been identified since we commenced activities just over twelve months ago. Approximately ninety ideas relate to technology devices and associated software whilst the balance is service improvement related ideas that were mainly thrown up by the competition. Currently 50 ideas are being actively assessed by Medipex (medical devices & equipment 50%, software 20%, diagnostics 8%, training materials 22%).

The remainder of the ninety ideas have been assessed and are not being progressed apart from 6 in the pipeline awaiting initial screening. Medipex are in active discussions with medical companies on 21 projects and one licensing deal (Panoramic Test Object) is awaiting signature by a local company. A list of the active projects currently being assessed is presented in Table 1 at the end of this report.

Throughout the year we have filed 8 outline patents and several projects have patents already granted. We would only file an outline patent application where it is in the best interests of all of those involved in the project or because of an imminent risk of disclosure that could jeopardise the IP integrity. In addition we have filed one trademark application and advised on 18 cases of copyright.

During January 2005 Medipex launched its first regional innovation competition. In total 136 entries were received by the March 4th closing date and the awards

evening held in April at the Thackray Medical Museum in Leeds was attended by 90 people. The major benefit of running a regional competition has been initially, to advertise the existence of Medipex to large numbers of NHS front line staff. The event was widely considered to be successful and a decision has been made to repeat the competition next year but starting earlier. A national final has been planned in October 2005 and the 2 winners from our regional event will be entered and the winner presented with an award at a dinner hosted by a Government Minister. The competition was sponsored by 4 companies and discussions are ongoing to secure sponsorship in future years.

The bulk of the Medipex regional competition entries (80%) related to service improvements but 22 Innovative Technology/Device ideas were entered and we are examining these in more detail (7 were already registered with Medipex and 6 are not considered commercial). In future years, tighter competition criteria will be adopted to try and redress the imbalance between technology and service improvements.

A number of Trusts joined Medipex as a direct consequence of our regional innovation competition which proved very successful and demonstrated an increasing awareness amongst NHS staff of Medipex and innovation. Medipex has had direct contact from staff in 45 NHS Trusts across the region on IP matters and a significant number have formally taken out membership so that we can provide an ongoing service to their staff, Table 2.

During 2004/05 Medipex has focussed on building external relations (within the wider NHS community and medical company sectors) and promoted the Hub activity at 15 events, 6 exhibitions at local, regional, national and international venues. The website receives an average of 90 to 100 unique visitors/week and during the innovation competition there were over 90 visitors/day. Throughout the year we have been talking to many medical companies (nearly 100 to date) and exploring opportunities to collaborate with the NHS as well as IP exploitation on behalf of the NHS.

Working with one of its member Trusts, Barnsley, Medipex successfully obtained £592,000 of R&D funding from the HTD programme to develop a speech therapy trainer and environmental control device for people with severe speech impediments (dysarthria). The feedback from Quotec, HTD program manager, was very positive about the involvement of an NHS innovation Hub company on programme grants since it implies a strong focus on technology transfer and commercial exploitation. Several other HTD grant applications are in preparation.

Future Challenges

- To convert the potential value of NHS IP in to commercial deals.
Significant IP potential has already been identified amongst NHS staff, the challenge now faced is to convert as many of these as feasible in to commercial reality whilst they are still relevant.
- To maintain a consistent deal flow.
Other hubs have reported variability in the identification of new IP after 18 to 24 months of operation i.e. when all the low lying fruit has been picked. It remains a continuous challenge in order to inspire staff to look at how to improve the delivery of patient care and to stimulate an interest in working with us to achieve this.
- To build on the current membership base.
During 2005/06 we are introducing membership fees which may have a negative impact upon membership. There is also a need to balance the expectation of member Trusts against our ability to effectively service the demand.
- To better promote our successes.
Positive PR will not only boost awareness of and interest in innovation but it also is a major morale boost amongst Trust staff. The challenge is to view PR as part of the innovation process and not something to be done as and when.
- To secure ongoing funding beyond 2007.
Technology transfer is a long term process and in a recent comparison against a US technology transfer office based in a major research focussed hospital it took them 10 years to become cash positive. It is vital that ongoing funding is made available to support hubs whilst they embed processes and secure IP on behalf of the NHS.
- To establish more cohesive ways of all the hubs working together.
Each of the hubs are creating unique expertise and resources relevant to their successful operation much of which will have common currency amongst all the other hubs. Furthermore, opportunities for bundling of IP and commercial opportunities exist that can be made much more of if a more cohesive way of working can be developed. The establishment of the new National Innovation Centre will help resolve some of this but there is also a resource issue that needs to be addressed in each hub so that they can more effectively communicate between themselves.

Richard Clark
Chief Executive

Table 1. Summary of Active Projects

TITLE	DESCRIPTION
Panoramic Test	Image quality test device for Dental Radiology
HMDS Solution	Procedure/kit which fixes cell and enables improved cell permeability. Application as a cancer diagnostic
IRPS	IRPS is a radiotherapy training aid for radiotherapy staff, students and trainee doctors.
Drip stand	Motorised drip stand for elevation of 3 l fluid bags
Radiotherapy book	Proposed update to textbook
Cancer diagnostic	Diagnostic for colo-rectal cancer
SPNET	Integrated purchasing, stores catalogue software with procurement tracking database
Leeds Solution	Organ preservation and flush solution
Cervical probe	battery powered mini inductance probe possible replacement to smear test
Bladder Tissue	Bio mimetic bladder tissue model
DFOR	Software procedure to assess image manipulation
Hip spica	Operating table accessory for plaster casting allows radiographs to be taken
APMed	A computerised system for controlling the assessment and provision of medical and social equipment to clients in the community
Iceberg Amie	Software for renal management
EPAQ	A touch screen electronic patient questionnaire for pre-consultation evaluation of patient symptoms
LOGIN	QA procedure for viewing quality of filmless X-rays & digital media
Fire Simulator	Fire Safety Training device
Training Device	Device for training surgeons on colorectal surgery
WOW Project	Educational package for school children
Electronic Pen	Electronic pen to assess level of patient stability and sway for patients suffering ear problems.
Exudate physical model	Modelling of wound bed exudate as a basis to understand wound healing
Dressing support	An adaptive inflatable wound packing & support device
EMCALE	Modular interactive training package for A&E
Health Needs Assessment	Health Needs Assessment Model for School Nurses. The innovative aspect of the model is the data collection process and the transferability of this process to other disciplines.
Sterile Dressing Pack	Sterile dressing pack created specifically for use in Primary Health Care environment to provide community nurses with all the basic equipment they need to perform sterile and non-sterile dressings effectively and safely in patients homes.
Snoring Recorder	A patient-calibrated snoring data capture device for home use
Urological Digital Diary	An electronic device to measure void and times between and volumes of urine. Used by patients with incontinence problems instead of paper diary.
Endoscope QA	Measurement device to provide assessment of rigid & flexible endoscopes during routine use & immediately after cleaning
Pathlore	Medical Terminology CD Rom
GAS	A non-invasive technique for the measurement of gastric acid secretion
CoGPA	Computer game play audiometry - combines pc games with an audio test for children.
Nutritional Supplement	Nutritional supplement that provides 100% of the Reference Nutrient Intakes for a healthy person for carbohydrates, protein, fat, vitamins and minerals on clinical outcome and quality of life of older patients.

Keyboard	Keyboard specifically for teaching braille and moon students
Spine Board	Improved spine Board
Diet Sheets	Diet sheets with photographs of portion size and level of inorganic constituent present in the portion.
Patient Restraint	A restraint to prevent patient harm by prevention of treatment interference.
Paediatric Genetic Screening	Undertake genetic testing under public/private partnership
Personnel Management database	System developed by Med `Phys to assist with new work force regs on accreditation of staff and for tracking staff CPD & other HR issues.
Dispensing Unit	Dispensing unit for plasters / dressings
Planning & Performance management System	Software application enabling Trust CMT's to collect business plans around their defined criteria to achieve corporate goals. Example business plans can be developed by the organisation and used if required by planning units. Software also collects self
Blood Train	PC based interactive training for haematologists using a virtual microscope and blood samples
Pill Teach Campaign	Campaign to raise awareness of the contraceptive pill
Phantom	Novel phantom for quality assurance applications on x-ray based bone densitometers
SPRAT	Sheffield Peer Review Assessment Tool: questionnaire designed to screen for poorly performing doctors
Paediatric Healthy Eating	Project to develop informative fun learning video for under 5s and a computer game for age 5-14 year olds
PC Cart	Mobile cart for tablet pc and portable keyboard in recovery room
SPECS	Intelligent software to enable disabled users control their surroundings - HTD project
High Res Dosimeter	HTD project to develop a high res dosimeter for small field dosimetry - IMRP X-rays

Table 2 Medipex Membership

Airedale NHS Trust
Airedale PCT
Barnsley District General Hospital NHS Trust
Bradford District Care NHS Trust
Bradford South & West PCT
Bradford Teaching Hospitals NHS Trust
Doncaster and South Humber Healthcare NHS Trust
Eastern Hull PCT
East Leeds PCT
Eastern Wakefield PCT
Hull & East Yorkshire Hospitals
Hull & East Riding Community Health NHS Trust
Leeds Mental Health Teaching NHS Trust
Leeds Teaching Hospitals NHS Trust
Leeds North West PCT
Rotherham PCT
Scarborough & North East Yorkshire Healthcare NHS Trust
Sheffield Children's NHS Trust
Sheffield South West PCT
Sheffield Teaching Hospitals NHS Trust
South West Yorkshire Mental Health NHS Trust
Tees, East and North Yorkshire Ambulance Service NHS Trust
West Hull PCT
York Hospitals NHS Trust
N&EY&NL SHA