

**Name of Capital Programme:**

**e-Learning**

**Name of Lead Institution:**

**University of Warwick**

**Name of Proposed Project:**

**Supporting online personalised lifelong and work-based learning across the institution / practice divide**

**Name of Project Partners:**

**University of Leeds  
NHS Institute  
CHAIN  
Connecting for Health**

**Full Contact Details for Primary Contact:**

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**Length of Project:**

**24 months**

**Project Start and End Dates:**

**01.10.06 – 30.09.08**

**Total Funding Requested from JISC:**

**£200,000**

**Funding Broken Down over Project Years:**

**Year 1      £100,000  
Year 2      £100,000**

**Total Institutional Contributions:**

**University of Warwick will provide Administrative support to the project and will also provide £60,285 funding support**

### **Outline Project Description**

A two year research and development project designed to identify how social software can be used to support personalised lifelong and work based learning across the institution/practice divide. An existing professional network will be expanded to include a student cohort so that students can become active members of a community of practice, thereby bridging the gap between the institution and the workplace.

The focus of activity for the professionals and the students will be to support innovation and change in the workplace using a model of process enhancement (“lean thinking”) in the healthcare sector, where such concepts are beginning to arouse interest.

This project will:

- Evaluate the impact of new methods of e-learning, notably the use of social software, to support personalised lifelong and work based learning across the institution/practice divide
- Enable HE post-graduate students to gain transferable understanding of “real life” issues and problems of the workplace
- Develop an evolving Community of Practice amongst NHS managers and cohorts of post-graduate students focused on e-learning of “lean” principles
- Enable rapid knowledge transfer of Warwick’s research into practice in the NHS

Careful evaluation of the growth in perceptions, processes and products of this activity is a significant element of the research. The benefits of the project lie in the way that it enables capacity growth in the use of social software amongst student and professional users, enabling them to make the transition from a passive, reactive engagement with ICT towards a pro-active, reflective, collaborative approach.

**I have read the Circular and associated Terms and Conditions of Grant at Appendix B (Tick Box)**

**YES**

## **JISC Bid Proposal**

### **Supporting online personalised lifelong and work based learning across the institution/practice divide**

#### **Introduction**

This proposal describes a two year research and development project designed to identify how social software can be used to support personalised lifelong and work based learning across the institution/practice divide. An existing network, currently made up of NHS professionals, will be expanded, to include a student cohort so that the students can become active members of a community of practice, thereby bridging the gap between the institution and the workplace.

The focus of the activity for the professionals and the students will be to support innovation and change in the workplace using a model of process enhancement ("lean thinking"<sup>1</sup>) in the healthcare sector, where such concepts are beginning to arouse interest. This will enable:

- rapid transfer of ideas and outcomes from a significant programme of work on Lean Thinking in Healthcare, currently funded by EPSRC and located at Warwick International Manufacturing Research Centre (part of Warwick Manufacturing Group) University of Warwick, to be transferred to NHS managers
- students in HE to experience authentic learning that is grounded in real life problems and practice

Careful evaluation of the growth in perceptions, processes and products of this activity is a significant element of the research. The benefits of the project lie in the way that it enables capacity growth in the use of social software amongst student and professional users, enabling them to make the transition from a passive, reactive engagement with ICT towards a pro-active, reflective, collaborative approach. The outcomes of the project will enable JISC to gain evidence that will inform HEI's and others on the use of social software approaches to support cross-institutional delivery of lifelong personalised learning that is directly related to working life and the workplace itself.

This JISC funded project will:

- Evaluate the impact of new methods of e-learning, notably the use of social software, to support personalised lifelong and work based learning across the institution/practice divide
- Develop an evolving Community of Practice amongst NHS managers and cohorts of post-graduate students focused on e-learning of "lean" principles
- Enable HE post-graduate students to gain transferable understanding of "real life" issues and problems of the workplace
- Enable rapid knowledge transfer of Warwick's research into practice in the NHS

The innovative nature of this approach lies in its use of emerging technologies to enable collaborative engagement, by professionals and students, with the implementation of "lean" projects, so that everyone involved, (researchers, practitioners, NHS professionals and managers, and students) can learn collaboratively. The project will seek to employ two main types of emergent social technologies. First, to develop a virtual "community" through blogs and RSS feeds. Second, to develop collective knowledge creation and storage through the use of social bookmarking approaches in which content is shared and tagged/classified. The

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<sup>1</sup> In manufacturing environments "lean" has been defined as "Half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to develop a new product in half the time. Also, it requires keeping far less than half the needed inventory on site, results in many fewer defects, and produces a greater and ever growing variety of products" (*Radnor 2000*)

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system structure and content will continually evolve and adapt to the needs of the community through these relatively simple technological processes.

The research will be conducted by a consortium of organisations led by

- the University of Warwick International Manufacturing Research Centre (IMRC) (currently running a large research programme on “lean” principles)
- the University of Leeds, Medical Education Unit (MEU) (actively involved in technology-led networks)
- the NHS Institute (national remit for innovation and improvement in the NHS)
- CHAIN (existing virtual network of 4,500 NHS professionals)
- Connecting for Health (charged with developing e-infrastructure for the NHS),

The consortium has its roots in the NHSU, a Department of Health (DoH) initiative that was reconfigured in 2005 into the NHS Institute. CHAIN was an initiative of NHSU, and both University of Warwick and University of Leeds were NHSU’s major partners for educational development. NHSI and CHAIN reside on the campus at Warwick and collaborate with IMRC and Warwick Business School.

The MEU at the University of Leeds is the lead partner in the ALPS CETL (Assessment of Learning in Practice Settings) and this has close working relationships with the NHS partners, NHS Institute and Connecting for Health. In addition, the MEU is providing development and evaluation support to CHAIN.

The project will run for a period of two years, beginning October 2006 and completing in October 2008. It will contribute to the aim of the JISC programme by supporting workplace e-learning that is widespread, relevant and fit-for-purpose in line with JISC’s vision to provide “ubiquitous and reliable access to an information and communication environment, so that users are able to enjoy world class technologies in support of their work and study”.

Warwick IMRC has agreed to provide administrative support and to contribute £57, 554 towards funding of the project.

Connecting for Health (CfH) have agreed to guarantee sustainability of the network by funding continuation once the project has concluded.

**To ensure the success of the project the sum of £200,000 is requested from JISC.**

## **Context**

Collaborative, expansive and lifelong learning can be used to widen participation and enable knowledge transfer in the “real life” workplace where there is an increasing need for innovation and change (*Billett*<sup>2</sup>; *Unwin and Fuller 2005*<sup>3</sup>). This kind of learning can be structured formally, but it can equally be personalised, experiential, informal and – increasingly – virtual. Informal learning, it can be argued, develops a greater capacity for self-determination and self-evolution partly because it is not so bounded as formal learning (*Eraut 2000*),<sup>4</sup> having no prescribed curriculum. In the main such an approach takes a socially situated, constructivist approach to learning (*Vygotsky 1978*<sup>5</sup>; *Engestrom 1996*<sup>6</sup>).

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<sup>2</sup> Billett S (2002) Critiquing workplace learning discourses: participation and continuity at work *Studies in the Education of Adults* vol 34:1

<sup>3</sup> Unwin L and Fuller A (2005) *Learning as Work: teaching and learning processes in the contemporary work organisation* Leicester University Press

<sup>4</sup> Eraut M (2000) Non-formal learning, implicit learning and tacit knowledge in F Coffield (ed) *The Necessity of Informal Learning* Policy Press in association with the ESRC Learning Society Programme Bristol

<sup>5</sup> Vygotsky L S (1978) *Mind in Society: The development of higher psychological processes* Harvard University Press Cambridge Mass.

<sup>6</sup> Engestrom Y and Middleton D (1996) *Cognition and Communication at Work*. Cambridge, Cambridge University Press

Collaboration amongst those with shared interests is likely to achieve rapid advances in pursuit of change. *Bititci et al (2004)*<sup>7</sup> argue that collaborative networks have a number of benefits for participants but also that there are inherent difficulties (*Bititci et al 2004*). Collaboration requires a substantial time and administration commitment from the partners (*Farrukh et al. 2003*)<sup>8</sup>, may have uncertain benefits for participants (*Parker 1994*)<sup>9</sup> and can result in low and extremely slow-moving output from the group (*Huxham and Vangen, 2004*)<sup>10</sup>. These problems can be exacerbated by the resource limitations of reduced funding such as those predicted for future health environments. Building on an existing network could alleviate some of the reported problems, by minimising obstacles and resulting in rapid diffusion.

Such an existing network exists in CHAIN (Contact, Help, Advice and Information Networks) - online networks for people working in health and social care. They are based around specific areas of interest (Research; Work-related Learning; and Innovation and Improvement) and they give members a simple and informal way of contacting each other to exchange ideas and share knowledge. CHAINs are multi-professional and cross organisational, and have been active for nine years with growing success and a current membership of c 4500 (<http://chain.ulcc.ac.uk/chain/index.html>). However, the networks are based on low technology e-mail contact, within a carefully managed environment, It is timely to consider the reconfiguration of the networks to embrace new technologies and more effective ways of collaboration. Both Warwick and Leeds Universities are offering a "blogging" approach to technology use to students and staff, and this experience will be built upon to develop "corporate blogs" as a service to NHS managers charged with service improvement.

Additionally, to meet the need of HE students who have authentic learning needs that are grounded in real life problems and practice, the network membership will be expanded to incorporate cohorts of post-graduate students studying on the Warwick Masters in Public Administration. Discussions are underway about the possibility of including other student groups including medical students at Warwick and at Leeds; and Masters level clinical professionals at Coventry University and at Anglia Ruskin University. Learners' needs are varied and require personalised approaches in terms of time and pace of learning, which becomes increasingly difficult in virtual/online professional learning environments.

The proposed solution is to allow students to become active members of an online/virtual community that is

- Longitudinal over a period of time, allowing participants to develop their role over time from that of observer to become active members of the community of practice (*Wenger 1998*)<sup>11</sup>
- Allows active sharing of knowledge between students and professionals, who are **also** learning
- Builds a common (student and professional) knowledge base that is ongoing for the professional Community of Practice (CoP)

The network will enable student learning that is fit for purpose when subsequently moved into work situations by expanding their knowledge, skills and attitudes, and will also:

- Ease the transition into the life of work

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<sup>7</sup> Bititci, U.S., Martinez, V., Albores, P. and Parung, J. (2004) Creating and managing value in collaborative networks. *International Journal of Physical Distribution & Logistics Management*

<sup>8</sup> Farrukh, C., Fraser, P. and Gregory, M. (2003) Development of a structured approach to assessing practice in product development collaborations. *Proceedings of the Institution of Mechanical Engineers. Part B: Journal of Engineering Manufacture*

<sup>9</sup> Parker, H. (2000) Inter-firm collaboration and the new product development process. *Industrial Management & Data Systems* **100**, 255-260.

<sup>10</sup> Huxham, C. and Vangen, S. (2004) Doing things collaboratively: realizing the advantage or succumbing to inertia? *Organizational Dynamics* **33**, 190-201.

<sup>11</sup> Wenger E (1998) *Communities of Practice: Learning, Meaning and Identity* Cambridge University Press

- Enable the acquisition of **knowledge** about problems that are currently being faced by professionals but also the **processes** that professionals are currently using to learn and share knowledge
- Take an “apprenticeship” approach enabling students to become initiated into the professional’s CoP as early as possible to ensure easier transition (*Lave and Wenger 1991*)<sup>12</sup>

Funding will enable the development of a common technology environment for both the cohort of student learners and a group of professional managers in the workplace, by:

- Setting up and maintaining individual blogs for student learners and healthcare professionals and managers
- Joining blogs into a virtual community network, including the use of RSS feeds and aggregator software
- Incorporating social bookmarking software into blogs (e.g del.icio.us – a tool that enables users to share their links with others and to archive this content by the use of shared metadata). This resource gradually builds up over time to provide a collective knowledge store that is available to both students and professionals.

Such an approach will enhance learning across the institution(s) and workplace divide allowing personalised and reflective engagement with the challenges of innovation and change via “lean” approaches to process enhancement.

Hosting will be undertaken by Leeds where open standard use is the norm.

The network will consist of both students from HEI and professionals. The students will be post-graduate students registered on Masters programmes at the University of Warwick, including, but not confined to, the Warwick MPA, where they are studying “lean” processes. They will take part in the network as full participants and contributors. This participation will be an integral part of the learning on the course.

The professionals will include existing members of CHAIN, who will be selected on the basis of their interest and /or active involvement in “lean” projects in their NHS workplaces. They will be mentored by Warwick academic researchers who are involved in the development of “lean” processes and this group will also join the CHAIN network

## **Project Description**

### **Aims and objectives**

The aim of this research is to support online personalised lifelong and work based learning across the institution / practice divide, using as an exemplar the transfer of knowledge about concepts concerned with process enhancement into a service environment.

The objectives are to:

- Develop and evaluate an evolving Community of Practice amongst NHS professionals and managers, academic mentors, and cohorts of post-graduate students using emerging social software during the life of the project
- Evaluate how the approach and form of technology use in support of learning, and the degree of pro-activity in use by participants, affects learning outcomes over the life of the project
- Enable transfer of knowledge about lean principles from manufacturing to service environments, by linking IMRC Warwick research outcomes to the network within the first 12 months of the project
- Support the development of a number (c. 6) of case studies of process enhancement projects via a corporate blog approach during the first 18 months of the project

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<sup>12</sup> Lave J and Wenger E (1991) *Situated Learning: Legitimate Peripheral Participation* Cambridge University Press Cambridge

- Use the network as a means of support and spread of case study project methodologies during year 2 of the project
- Evaluate the impact in NHS workplaces of Lean Process Projects that emerge from network activity, particularly during year 2 of the project

Student learners will benefit from exposure to real life issues and problems faced by managers, fostering easier transition into the world of work. The professional experience will be enhanced in a number of ways including benefiting from opportunities to witness and reflect on process techniques in use in other sectors; exposure to research and development amongst HE institutions on a just-in-time basis (both process enhancement and e-learning technology development); and a reduction in isolation commonly experienced by managers working on innovative projects.

### **Research Methodology**

This research will be action-based and participatory, encompassing technology, network and content development; on-line collaboration to promote learning; and case study elaboration to promote spread of ideas about process enhancement in healthcare environments. A significant element of the research will be the iterative and formative evaluation of all activities, concentrating particularly on the use of social software, the student experience, the extent and form of learning that takes place, and on the impact of collaboration and advancement of “lean” processes.

The approach employed will be multimethod incorporating qualitative and quantitative data collection and analysis to arrive at an understanding of

- The **perceptions** of network members - student learners, researchers, professionals – both before and after involvement in the network; of the technology used (blogs, social bookmarking etc) and their learning (for example the transition from learner to professional of student members)
- The **processes** employed – use of blogs/social bookmarking software by network members – eg. Users statistics – number of posts/ number responded to / network – who talks to whom and frequency / messages read / number and richness of common book-marks, references
- The **products** developed by student learners and professionals - recall of times when new insights into both “lean” thinking and how professionals communicate online.

The conceptual approach to evaluation of i) learning and ii) impact will be collaborative, employing qualitative and quantitative techniques, and will elaborate on a model developed by *Pawson and Tilley(1997)*<sup>13</sup> which they describe as “realistic evaluation”. Pawson and Tilley argue that most evaluations are of limited value because they focus on reporting outcomes (“an intervention worked or it didn’t work”) whereas a realistic evaluation focuses on process in order to arrive at an understanding of *why, how and to what extent* interventions achieve their aim. In this case, it is likely that there will be varying levels of activity and focus amongst stakeholders and it will be interesting to pursue the evolutionary path that is being followed. In the convention of realistic evaluation, a number of broad hypotheses of what might be occurring will be developed, and the evaluation will set about proving or disproving the legitimacy of these.

It is anticipated that the research programme will require two years of dedicated activity involving:

- Acquisition of ethical (COREC) approval for work in healthcare environments (if necessary)
- A literature review of the concepts underpinning this research
- Development of the technology infrastructure to support community building and knowledge sharing
- Membership of the network established – student learners and NHS professionals
- A face-to-face learning intervention at Warwick to enable understanding of “lean” principles

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<sup>13</sup> Pawson R and Tilley N (1997) *Realistic Evaluation* London Sage Publications

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- A selection process to identify appropriate case studies
- Supporting the instigation of c. 6 case studies to pilot the implementation of “lean” techniques
- Occasional face-to-face meetings of participants to enable collaboration
- Evaluation of the extent and direction of learning amongst network members
- Evaluation of the impact of knowledge transfer of “lean” principles into healthcare environments

**Impact**

It is envisaged that progress on case study work by NHS managers will be of great interest to others working in the service and to those in other sectors. The network, building on the existing c. 4500 CHAIN members, will provide a focus for interaction, debate, support, and advice amongst people who have wide and deep experience of attempting change in the NHS. This will support rapid dissemination and implementation of new ideas. Student learners will be enabled to grasp the socio-cultural issues of the world of work, as well as the specifics of “lean thinking”.

Although the focus of this activity will be on implementing “lean” principles, there is a significant learning aspect to the research, which exposes participants to a form of collaboration with which they may be unfamiliar. Collaborative engagement via blogs is becoming more common as a social device but is less often found in corporate environments. This research will test the efficacy of such an approach.

**Sustainability**

The CHAIN network is funded by a small number of sponsors (NHSI; DoH R&D Unit; Cochrane; Northern Ireland Professional Education Council) and it is anticipated that the network will be similarly supported, enabling it to grow and establish itself in health and social care once the JISC project is completed. Connecting for Health has undertaken, as their contribution to the project, to guarantee the sustainability of the network, once this research is completed.

The model is generalisable across public sector bodies, and it is likely that social care, local government, education and other sectors will take an interest in this research.

**IPR**

IPR for any content will reside with the University of Warwick, the lead partner for the “lean” aspects of this research. Project outcomes will be made available, free at the point of use, to the UK HE and FE community in perpetuity, and may be widely disseminated in partnership with the JISC

**Timescales**

<b>Project activities</b>	<b>Purpose</b>	<b>Dates</b>
Convene Steering Group – First meeting	Agree Terms of Ref	<b>1.10.06</b>
COREC ethical approval	Requirement for work on NHS sites with patients and staff	<b>1.10.06 – 31.01.07</b>
Literature review	“lean”; learning; technology approaches	<b>1.10.06 – ongoing</b>
Data collection instigated And collected	User stats fields agreed to ensure baseline information - collection ongoing	<b>1.10.06 - ongoing</b>

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Develop technology infrastructure	Leeds to lead on this to migrate CHAIN to new configuration	<b>1.10.06 – 1.02.07</b>
Launch network	Invite existing CHAIN members to use new blogging approach	<b>1.02.07</b>
Launch network	Invite student learners to join network	<b>1.02.07</b>
Steering Group meeting	Progress report	<b>1.03.07</b>
Course at Warwick	introduction to each other and lean principles, Warwick research + company visits	<b>1.03.07 – 08.03.07</b>
Workshop to launch case studies	Selection process followed by start of case studies – mentored by Warwick researchers	<b>1.06.07</b>
Interim Progress report Interim Evaluation report	For Steering Group and JISC information	<b>1.08.07</b>
Steering Group meeting	Progress report	<b>1.09.07</b>
Questionnaire development – learning evaluation	Formative evaluation of e-learning	<b>1.09.07</b>
First Questionnaire dissemination	To all those active on the network– establish learning strategies employed	<b>1.12.07</b>
Steering Group meeting	Progress report	<b>1.03.08</b>
Focus groups and individual interviews	Gather data on impact in workplaces	<b>1.04.08 – 1.07.08</b>
Case studies completed – evaluation ongoing	Data for dissemination	<b>30.01.08 – 26.02.08</b>
Journal articles and conference presentations	Wide dissemination	<b>Ongoing during Q3 and Q4 2008</b>
Final report	For JISC and publication	<b>1.10.08</b>

**The Consortium**

This research will be carried out by an existing consortium made up of:

- University of Warwick
- University of Leeds
- NHSI
- CHAIN
- Connecting for Health

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The consortium has its roots in the NHSU, a DoH initiative that was reconfigured in 2005 into the NHSI. CHAIN was an initiative of NHSU, and both University of Warwick and University of Leeds were NHSU's major partners for educational development. NHSI and CHAIN reside on the campus at Warwick and collaborate with IMRC and WBS. Connecting for Health is DoH funded, and charged with developing the technology infrastructure required by the NHS.

University of Warwick will lead the consortium and host the network activities, via CHAIN and the NHSI. Activities in support of transfer of "lean" principles will be lead by Warwick. Financial arrangements will be handled by Warwick.

The University of Leeds will lead on activities concerned with technology infrastructure development. The MEU at the University of Leeds is the lead partner in the ALPS CETL (Assessment of Learning in Practice Settings) and this has close working relationships with the NHS partners, NHS Institute and Connecting for Health. In addition, the MEU is providing development and evaluation support to CHAIN.

#### **Steering Group**

A Steering Group will be convened to provide advice and guidance during the progress of this research. Possible members are:

- Dr Jim Mc Goldrick – Chair, Fife Health Board
- Prof Phil Candy – Connecting for Health
- Womack or Jones – or comparable specialist on "Lean"
- Dr Nick Mallinson – IMRC
- Andy Pellow - IT Manager School of Medicine, Leeds
- Steve Carpenter – E-Lab, University of Warwick
- David Evans – CHAIN
- Representative of JISC
- Representative of DoH
- ANO

#### **Outcomes**

The outcomes of this research will be:

- An established network of NHS managers and student learners with experience of technology-led collaboration
- Infrastructure to support corporate blogging
- Two-three journal articles – academic and practitioner led
- Two conference papers
- Interim reports (One describing general progress and one focusing on interim evaluation)
- Final reports (Progress and Evaluation).

#### **Budget**

See attached. Note:

- Warwick IMRC have agreed to contribute £57,554 towards the cost of this project

#### **Risk assessment**

<b>Risk</b>	<b>Mitigation</b>
Too many participants wish to take active part in the network	Participants will be selected by being asked to describe their interest and involvement with "lean" to ensure their active involvement
Current high level of interest in "lean" in NHS will wane over the two years	Process re-design will continue in some form to ensure productivity increases - the project will monitor these trends and adapt accordingly

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Participants who are active on e-mail network may not accept transition to blogs	Process will be closely monitored and supported – including face-to-face meetings – to support users
Current research at Warwick on “lean” principles will not be transferable to NHS contexts	Widespread pilot work in NHS workplaces will be used to supplement Warwick outcomes

**Key personnel**

***Prof Rajat Roy - Principal Investigator***

Prof. Rajat Roy is a member of the Warwick Manufacturing Group (WMG – of which IMRC is a unit), University of Warwick. He joined WMG in 1981 and set up the Simulation Unit within the Group, which built up its reputation and practical experience through working with many different sectors of industry (in the UK and abroad), including automotive, aerospace, construction and healthcare. His research/ professional interests are in the design, analysis and re-engineering of manufacturing, product development and business systems, and in decision support tools. He has been the Principal Investigator on grants and contracts worth ~£12m from public & private organisations. He was involved in the DTI sponsored Time Compression programme. He has led a large EPSRC-funded programme with a house builder, which studied the strategic, technological, cultural and supply chain changes necessary to implement best practices learned in the manufacturing sector. Recently he set up, in WMG’s International Automotive Research Centre, a multi-disciplinary team engaged in the study of engineering simulation, complexity management and team work for a ‘robust product development process’. He was the first Director of the Warwick Innovative Manufacturing Research Centre, and is on the Steering Committee of WMG’s Premium Automotive R&D Programme funded by Advantage West Midlands (AWM - the Regional Development Agency) and automotive companies He has served on EPSRC’s College of Peers and its prioritisation panels, and as an assessor, panel member and monitoring officer on DTI’s Technology Programme.

***Dr Lynne Caley MA MA(Ed) D Phil – Senior Researcher***

Dr Lynne Caley had a first career as a Radiographer in the NHS before reading Economics at Cambridge. She then worked for 13 years at the University of Cambridge in the field of Adult Education and Professional Development. During this time Lynne gained a Masters in Educational Development and a Doctorate in work-related learning. Lynne spent two years working for NHSU, first as Head of Learning Communities and Cultures, and then as Associate Director of the NHSU Institute, which was the research capacity building arm of the organisation. She is currently working with Warwick Manufacturing Group as part of a research group focusing on skills development in the Automotive sector, funded by Advantage West Midlands.

Lynne is an experienced researcher, specialising in learning in both formal and non-formal contexts, for the benefit of individuals and organisations. Her early background, and subsequent consultancy work has given her specific knowledge of the NHS, but also significant experience of working with a range of organisations in the public and private sectors, to develop and implement strategies delivering high level business outcomes. Her strong research background has resulted in the development of innovative methodologies concerned with learning. Lynne has gained experience of developing, implementing and evaluating e-learning programmes since 1997. This has culminated in various publications including a recent book *“Learning for Health Improvement: a practical guide for the workplace”*.

***Dr John Sandars MB ChB (Hons) MSc FRCGP MRCP Certificate in Education  
 Diploma in Counselling Diploma in Palliative Medicine***

Senior Lecturer in Community Based Education, Medical Education Unit, University of Leeds

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John qualified from the University of Sheffield in 1975 and, after training in hospital medicine, entered General Practice in 1980. He became a part time lecturer at the University of Manchester in 1994 and in 2002 was appointed Director of E-learning in Health in the Evidence for Population Health Unit. He moved to Leeds in 2004 to develop his major research interest in e-learning.

John was a core member of the team that developed the first UK online Masters in Population Health and has subsequently produced several e-learning programmes. He has a major research and development interest in online learning networks and is an editorial advisor to Saferhealthcare and the facilitator for CHAIN Interactive (work place learning). In these networks he has been involved in developing blogs. He writes a regular e-learning column in Education for Primary Care and is the editor of the book *E-learning for GP Educators*. He has published numerous articles on e-learning networks in Education for Primary Care and Work Based Learning for Primary Care.

John is the academic lead for e-learning in the School of Medicine at the University of Leeds, where he has been involved in developing blogs, and also to the IT subgroup of the ALPS (Assessment of Learning in Practice Settings) CETL.

In 2005, John was a WUN Visiting Scholar at the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign and he is a holder of a Hansard Society E-Moderating Certificate.

**David Evans** BA Politics/Economic History; MSc Evidence based health care.

David Evans started work in the NHS in 1985, moving into the new NHS Research & Development Programme in 1993. He was involved in two innovative initiatives: The "Front Line" Evidence Based Health Care Project, and the "Purchaser-Led Implementation Projects." This work was summarised as *Implementing Evidence Based Changes in Health Care*, (Eds. Evans D and Haines A, 2000) and informed *Surviving Research Implementation* (Evans, D and Wye, L, 2002). Since 1997 David has been working to establish and develop Effective Health Care C.H.A.I.N. (Contacts, Help, Advice, and Information Network). It uses online directories, facilitated targeting and peer-to-peer communication. CHAIN now has 3 components with around 5,000 members. An independent evaluation of C.H.A.I.N. showed that the network is highly valued and effective. (*Soft Networks for bridging the gap between research and practice: illuminative evaluation of CHAIN*, Russell J. et al, BMJ 2004;328:1174-7). David's own recent writing on the network includes: *CHAIN: Nurturing relationships to encourage the sharing of experience, knowledge and aspiration in research, evidence-based practice and workplace-based learning* in Work Based Learning in Primary Care 2006;4:79-86 and (With Macaulay L, Santesso N, McGowan J and Grimshaw J) *CHAIN: Breaking down barriers between professions, organizations, researchers and practitioners in the UK and Canada* (in *Innovations in Health Care - A Reality Check*, Casebeer A, Harrison A, and Mark A (eds), Palgrave Macmillan, 2006).

Navigating a genuinely cross-cutting and innovative network through terrain of almost constant change has proved challenging, with upheavals in the NHS in 2005 having seriously threatened the continued existence of CHAIN. With the support of network members and his 2 colleagues, David has spent much of the past year working to secure the future for the network by establishing a stakeholder model of funding for CHAIN. Thankfully these endeavours now appear to be bearing fruit and the CHAIN network is continuing to thrive.

**Appendix A: Budget**

**Appendix B: Supporting letters**

## **Appendix A: Budget**

	Year 1	Year 2	Total Costs	Year 1	Year 2	Total Costs	Year 1	Year 2	Total Costs
<b>Directly Incurred</b>	<b>WARWICK COSTS</b>			<b>LEEDS COSTS</b>			<b>TOTAL PROJECT COSTS</b>		
Staffing - Research	44,185	44,185	88,370	0	0	0	44,185	44,185	88,370
Travel and subsistence	6,000	6,000	12,000	2,000	2,000	4,000	8,000	8,000	16,000
<i>Consumables and other costs</i>							0	0	0
Courses	10,000	10,000	20,000	0	0	0	10,000	10,000	20,000
Software	5,000	0	5,000	10,000	0	10,000	15,000	0	15,000
Meetings	3,000	3,000	6,000			0	3,000	3,000	6,000
Conferences	1,500	1,500	3,000	1,500	1,500	3,000	3,000	3,000	6,000
Recruitment	1,000	0	1,000	0	0	0	1,000	0	1,000
Equipment	0	0	0	0	0	0	0	0	0
	<b>70,685</b>	<b>64,685</b>	<b>135,370</b>	<b>13,500</b>	<b>3,500</b>	<b>17,000</b>	<b>84,185</b>	<b>68,185</b>	<b>152,370</b>
<b>Directly Allocated</b>									
Staffing PI	6,622	7,152	13,774	9,607	9,607	19,213	16,229	16,759	32,987
Estates	9,110	9,110	18,220	1,316	1,316	2,632	10,426	10,426	20,852
Indirect Costs	18,349	18,349	36,698	3,949	3,949	7,897	22,298	22,298	44,595
Consultancy Exceptions	3,375	3,375	6,750	0	0	0	3,375	3,375	6,750
	<b>37,456</b>	<b>37,986</b>	<b>75,442</b>	<b>14,871</b>	<b>14,871</b>	<b>29,742</b>	<b>52,327</b>	<b>52,857</b>	<b>105,184</b>
	<b>108,141</b>	<b>102,671</b>	<b>210,812</b>	<b>28,371</b>	<b>18,371</b>	<b>46,742</b>	<b>136,512</b>	<b>121,042</b>	<b>257,554</b>

**These costings have been constructed on the basis of FEC**

Warwick IMRC will contribute £57,554 to the project

Warwick IMRC will contribute administrative support to the project

The sum of £200,000 is requested from JISC

## **Appendix B: Letters of Support**

**University of Warwick**  
**University of Leeds**  
**NHSI**  
**Connecting for Health**

16<sup>th</sup> June 2006

To: JISC Capital Programme - To whom it may concern

**Re: Funding proposal – e-learning programme**

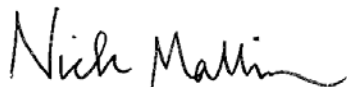
The vision for WIMRC is to be a centre of research excellence, demonstrating an ability to innovate, influence and perform in manufacturing and services research internationally at the highest academic level, to enhance the competitiveness and effectiveness of organisations within the specific sectors of intelligent and eco-friendly vehicles (IEV) and lean healthcare (LH).

We intend to achieve our vision by applying competencies in cross-disciplinary research including manufacturing technology and operations, materials, business processes and related management activities.

We recognise the important role that educational processes have in transferring knowledge into a target workforce and the difficulties in ensuring that such processes are convenient, effective and sustainable in a modern workplace. The internet and related e-learning tools are believed to offer us an effective transfer route to the health service for our research outcomes.

The proposed project will link closely with our planned work in knowledge management, new product introduction and user-friendly lean techniques for health processes. WIMRC is pleased to be associated with this proposal and fully endorses the bid.

Yours faithfully,



Dr Nick Mallinson  
Research Manager WIMRC

**Warwick Innovative Manufacturing  
Research Centre**

International Manufacturing Centre  
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16<sup>th</sup> June 2006

To whom it may concern

I am delighted to support the bid - Supporting online personalised lifelong and work based learning across the institution/practice divide.

The Medical Education Unit of the School of Medicine in Leeds has longstanding close working links with the National Health Service, including the previous NHS University and its successor, the NHS Institute. These links have been related to inter-professional education and work based learning, with several research and development projects. A major aspect of the continuing collaboration has been the development of the ALPS (Assessment and Learning in Practice Settings) CETL.

The Medical Education Unit has collaborative working with CHAIN, especially in the development of CHAIN Interactive with its use of blogs for online networking for healthcare clinical and management professionals.

The University of Leeds and the School of Medicine, including the Medical Education Unit, have been successful grant holders for interactive e portfolios and there is a current active research and development programme in the use of blogs and new technology.

Kind regards

Yours sincerely

A handwritten signature in black ink, appearing to read "Trudie Roberts".

Professor Trudie Roberts  
Head of the School of Medicine and  
Director of the Medical Education Unit





**Institute for Innovation  
and Improvement**

Coventry House  
University of Warwick  
Coventry  
CV4 7AL  
Ph: 02476 475 817

Our ref: HB/RF/gbf/L032\_gf

Your ref:

15 June 2006

To: JISC Capital Programme - To whom it may concern

**Re: Funding proposal – e-learning programme**

The mission of the NHS Institute for Innovation and Improvement is to improve health outcomes and raise the quality of delivery in the NHS by accelerating the uptake of proven innovation and improvements in healthcare delivery models and processes, medical products and devices and healthcare leadership.

We intend to achieve our mission by working in collaboration with partners in the private and public sectors, including relevant academics and professionals in the HE sector, to achieve innovative solutions to pressing problems for the NHS. This includes the need to keep staff abreast of change, and we acknowledge the necessity of engaging with emerging technology to enable this.

We value very highly our established partnerships with the Universities of Warwick and Leeds. In the former case we reside on campus at Warwick and work closely with the Medical School, the Business School and Warwick Manufacturing Group. In the case of the latter, our relationship pre-dates our present configuration, having been established during the life of NHSU, our predecessor organisation.

Funding from JISC will secure resources to allow for research in the educational implications of e-learning that will benefit both present and future members of the NHS workforce. NHSI has no hesitation in endorsing this bid.

Yours faithfully

A handwritten signature in black ink that reads "Helen Bevan". The signature is written in a cursive style with a large initial 'H'.

**Dr Helen Bevan**  
**Executive Director of Service Transformation**



## Connecting for Health

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[www.connectingforhealth.nhs.uk/etd](http://www.connectingforhealth.nhs.uk/etd)

22 June 2006

To whom it may concern

I am writing on behalf of the Education Training and Development (ETD) Directorate within NHS Connecting for Health in support of Warwick University's JISC Bid Proposal on 'Cross-institutional use of elearning to support lifelong learners.' This proposal is closely aligned with a number of strategic activities already under way or proposed within NHS Connecting for Health, and would add additional richness to our intended and existing work within the service by including linkages with higher education institutions and courses.

NHS Connecting for Health is responsible for the delivery of the National Programme for IT - the largest civilian IT project in the world – which aims to provide broadband connectivity and a high level of functionality to all public, and many private, health facilities in England. It is a foundation stone of the UK Government's policy direction as outline in *Connecting the UK: The Digital Strategy* (Prime Minister's Strategy Unit and Department of Trade and Industry, 2005) and will, when fully implemented, provide Integrated Care Records for over 50 million UK citizens, along with advanced applications such as Picture Archiving, Orders and Communications, Electronic Transmission of Prescriptions and the Capacity to Choose and Book specialist appointments.

The ETD Directorate is responsible not only for functional training in the various applications as they are rolled out, but has a much broader remit for creating a receptive context for learning across the Service and beyond. As part of a lifelong learning initiative articulated in the 2001 policy document *Working together, learning together: a framework for lifelong learning in the NHS*, it is actively using the ICT infrastructure to support various elearning and knowledge management interventions and, perhaps most importantly for this application, for supporting a number of online and virtual Communities of Practice. In addition, NHS CFH has a number of strategic links with the NHS Institute for Innovation and Improvement, and thus provides an essential bridge with another major partner in this proposed project.

The proposed project is closely related to the work of ETD - especially the Implementation Knowledge Management workstream - which aims to provide a sophisticated and responsive knowledge management environment employing social software and community functionality. The notion of spanning between the workplace and the Higher Education sector is also part of ETD's strategic direction; indeed we have a staff member appointed specifically to liaise with HEIs around Health Informatics and other related issues.

This project represents an exciting opportunity to link existing practitioners and those in training through Communities of Practice that span the boundaries between formal education and the world of practice. It is an ingenious initiative to use new and emerging technologies to transcend existing institutional and disciplinary interfaces.

In view of the foregoing we unreservedly endorse and support this proposed bid and, if it is successful, undertake to engage in its development, implementation and coordination with other initiatives within the Health Service, including the recently announced strategic roadmap: *Modernising healthcare training: Elearning in healthcare services* (April 2006), for which NHS Connecting for Health is a strategic partner with the National Workforce Group.

Please do not hesitate to contact me if further information is required. My contact details are given below.

Yours sincerely

**Professor Philip C Candy**  
Director of Education, Training and Development