

Technology Management

Quarterly newsletter of the Centre for Technology Management



UNIVERSITY OF
CAMBRIDGE

Institute for Manufacturing

November 2003

Symposium explores the challenges of innovation

*Accelerating innovation through
technology and design*

9th annual Cambridge Technology
Management Symposium, October 03

Innovation as the key source of wealth creation was the main theme of this year's Technology Management Symposium, held in Downing College at the beginning of October.

The challenge this presents to the technology management community was set right at the start of the Symposium in a stimulating address by Sir Peter Williams, Chairman of the Engineering Technology Board.

Industry and academia collaboration

Speaking before the dinner in Kings College, he drew on his experience of running one of the UK's most successful university spin-outs, Oxford Instruments, to illustrate the contribution that industry and academia can make by working in partnership.

UK Innovation Review

The importance of innovation to the UK in the context of the world economy was demonstrated by David Hughes of the DTI in his



keynote address. He reported on the progress of the UK Innovation Review, highlighting the critical contribution that Government technology strategy could make. This included identification of business technology priorities, for example in transport and healthcare.

Issues and challenges

Specific examples of issues, challenges and contributions to wealth creation were given by the three other plenary speakers, drawing on a mix of industry and academic perspectives.



David Clarke of Rolls-Royce emphasized the critical aspects of product design and testing; Cornelius Herstatt from the Technical University Hamburg-Harburg reviewed the contribution lead-users can make to innovation; and Simon Minderhoud of Philips discussed the challenge posed to successful product innovation and wealth creation by shortening life cycles.

Delegates' feedback on the Symposium was extremely positive.



They particularly valued the case study and workshop sessions, at which the contributions made by technology, design and product development to innovation were discussed.

Technology licensing and regenerating the innovation process itself were also explored in the workshops, which together generated the highest interest and attendance of recent years.

The full Symposium proceedings will be sent to delegates shortly. They are available to CTM members on request – contact details back page.

Next year's Symposium is planned for 29-30 September 2004.



Providing a space to be creative

Many CTM research projects result in practical tools to support group thinking, decision-making, communication and planning. Most of these tools, such as Roadmapping, are designed for use in workshops with multi-functional groups.

We have recently been exploring the concept of an 'Industrial Laboratory' to support the development of such tools, and enable improved interaction with industry. Ideas for the laboratory have been inspired by an investigation of several private and public sector facilities, which aim to support a range of managerial and strategic activities.

For example, 'Future Focus' at the DTI provides a dedicated facility for policy makers to creatively explore the

impact of alternative future scenarios, whilst the Royal Mail's 'Innovation Lab' supports group brainstorming around new technologies.

A prototype laboratory is currently being developed at the IfM. This facility seeks to provide an atmosphere conducive to creative exploration, coupled with an appropriate technological infrastructure. The project aims to support rapid access to data as well as group working and data collection.

Write-on surfaces

The laboratory will also offer a pilot facility to explore new technologies for distributed group working. Key features are multiple 'write-on' surfaces, including



A typical innovation lab facility

tabletops, a wireless network to support group brainstorming and a full wall projection facility to support simulation and visualisation.

To find out more and discuss use of the pilot facilities, get in touch with James Moultrie (jm329@eng.cam.ac.uk)

New book focuses on technology and innovation

CTM research staff have contributed to a new book, *Bringing technology and innovation into the boardroom*, due to be published at the end of the year.

The book is the result of CTM's collaboration with the EITIM, the European Institute for Technology and Innovation Management. It draws on best practice and research from leading European technology and engineering based universities, and shows how the top management of a company can deal with the challenge of technology and innovation. In addition to CTM, the partners in EITIM are Ecole Central, Paris, University of Chalmers, Gothenberg, Technical University Eindhoven, Swiss Federal Institute of Technology, Zurich, National Institute for Technology Management, University College, Dublin, and Technical University Hamburg-Harburg.

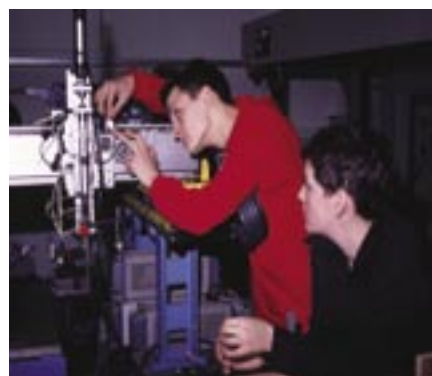
Full details of how to order copies of the book are given in the flyer included with this newsletter.

Could your company host a student project?

Every year in early summer, IfM's final year Manufacturing Engineering students carry out a 7-week research project. This is a great chance for CTM staff, students and member companies to work together on something of real interest and value.

In previous years we have tackled projects as diverse as knowledge management systems in R&D, new ways to value technology projects and implementing a new product introduction system on the intranet.

We shall be in touch soon with member companies, looking for ideas for next year's projects, so please think about something you might like investigated. If it catches the interest of our students we may have the perfect match. For more information contact David Probert (drp@eng.cam.ac.uk)



CTM educational activities

CTM is now involved in a wide range of educational programmes inside and outside the University. The examples below give a flavour of some of the new additions to CTM's portfolio of educational activities.

New modules for engineering students

Two new modules on the topics of '*Management of technology*' and '*Technological innovation: research and practice*' started this year. The aim of these modules is to prepare 4th-year engineering students with the background understanding, tools and techniques they will need manage technology in the business environment.

External and executive education programmes

Rolls-Royce MSc. – CTM will be providing a core module to the newly developed Masters programme run by Cranfield University for manufacturing engineers within Rolls-Royce.

Chevening Technology Enterprise Programme – CTM is working with London Business School and Imperial College Business School to provide 60 researchers working within UK universities with core skills in technology exploitation and management.

Workshop: regenerating innovation – Based upon recently completed CTM research, this workshop aims to support companies seeking to improve their ability to innovate.

For more information on CTM's educational activities, please contact David Probert (drp@eng.cam.ac.uk)

CTM people and projects



The beginning of the academic year is a time for starting new projects, often stimulated by the arrival of new graduate students. This year we welcome six new students (from left to right): David Beeton, Neil Gregory, Ayuth Jirachaipravitt, Mike Lynskey, Nicos Raftis and Rob Valli.

Research topics will become more focused as their work progresses, but they are tackling a fascinating range of issues including technology roadmapping in the packaging industry, intellectual property, technology and business development in the ICT sector, academic spin-outs, creativity, and corporate venturing for advanced technologies.

New research projects

CTM researchers are also involved in new research funded by the Engineering and Physical Sciences Research Council. This includes:

- the establishment of technology intelligence systems
- managing rapid, distributed innovation
- alliance based business models for early stage, technology-based business ventures

An EU Framework 6 project will investigate the development of ICT systems for government, business and citizen interaction within the Community. Collaboration with CTM member companies is welcome in any of these areas, so get in touch if you would like to know more.

Check out our new members' website...

Following positive encouragement from Centre members at the last annual meeting, the 'Members' Suite' on our web site has been undergoing development.

The site is designed for the exclusive use of member companies, and allows access to full academic papers, event proceedings, latest newsletters and much more. There are also Centre annual reports and minutes from the meetings.

Catalogue of management tools

If you haven't already done so, you might like to check out the tool catalogue 'T-Cat'. This lists over 850 popular management tools and frameworks. Please see the insert with this newsletter for the password and user id in order to access the Members' Suite. We would welcome your comments and suggestions relating to the structure and content of this site.



Technology management research at Cambridge

- Good design practice
- New product introduction collaboration
- Strategic technology management
- R&D project selection
- Software sourcing in manufacturing
- Product planning
- Technology change
- Technology management: a process approach
- Technology selection
- Technology evolution in hi-tech firms
- Innovation management in hi-tech firms
- Technology management in software production
- Strategic management competences
- Strategic make-or-buy
- Industrial make-or-buy decisions
- Sustainability and knowledge management
- Engineering re-use
- Technology foresight
- Technology entrepreneurship
- Technology transfer

Research news

Group to focus on new technology ventures

A new interest group has been formed within CTM that brings together researchers interested in issues relating to the growth of new technology ventures.

The Technology Enterprise Group (TEG) will act as a focal point for those investigating:

- The origins of new technology ventures – issues include university-industry technology transfer (especially university spin-outs), and corporate venturing.
- The start-up processes for new technology ventures – issues include the availability of venture capital, business incubation, use of consultancy activities, and corporate partnering.
- The growth of new technology ventures – issues include access to on-going investment, firm evolution, development of production capability, and mergers and acquisitions.

The group meets every three months to share information on current projects, and to identify potential new projects. Resources relating to the research and application of knowledge on the start-up and growth of new technology ventures are published on the Technology Enterprise Group's website: www-mmd.eng.cam.ac.uk/ctm/teg

For further information on the Technology Enterprise Group, see the TEG website or contact Dr Tim Minshall (thwm100@eng.cam.ac.uk)

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Diary

www.ifm.eng.cam.ac.uk/events

Nov

12th	<i>Tracking products around the globe</i>	Institute for Manufacturing Cambridge
14th	<i>Better product design</i>	Selwyn College Cambridge

Dec

9th	<i>Regenerating innovation</i>	Institute for Manufacturing Cambridge
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Jan

21st	<i>Surface engineering and measurement</i>	Institute for Manufacturing Cambridge
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