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# INNOVATION



RESEARCH & ENTERPRISE  
volume 2 issue 3

Innovation in the  
Faculty of the  
Built Environment

DIT News

Research opportunities, technical expertise, state of the art laboratories, industry training, accreditation of training courses, new product development, technology, customised training, flexible delivery, professionalism, market research, consultancy, expertise in design, engineering, planning, building, tourism, food, pharmaceuticals, management, logistics, enterprise development.

## YOUR PARTNERS

## IN INNOVATION

## A DATE FOR YOUR DIARY

### DUBLIN INSTITUTE OF TECHNOLOGY MISSION STATEMENT

The Institute is a comprehensive higher education institution, fulfilling a national and international role in providing full-time and part-time programmes across the whole spectrum of higher education, supported by research and scholarship in areas reflective of the Institute's mission. It aims to achieve this in an innovative, responsive, caring and flexible learning environment with state-of-the-art facilities and the most advanced technology available. It is committed to providing access to higher education for students of different ages and backgrounds, and to achieving quality and excellence in all aspects of its work.

This commitment extends to the provision of teaching, research, development and consultancy services for industry and society, with due regard to the technological, commercial, social and cultural needs of the community it serves.

#### Editor

Jean Cahill

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### WHAT ENGINEERS NEED TO KNOW ABOUT BUSINESS

A lecture by Paul O'Sullivan, Dean and Director of the Faculty of Business, will take place in DIT Aungier Street, February 24th. The lecture is one of a series organised by the Institution of Electrical Engineers. Dr David Kennedy, Head of Department of Mechanical Engineering, DIT Bolton Street is currently Chairman of the Irish Branch.

### SURFACE ENGINEERING & NANOTECHNOLOGY CONFERENCE

The conference which takes place in the RDS, Dublin, on the 4th and 5th April will be suited to engineers, managers and industrialists interested in surface engineering, materials, design and nanotechnology. It is based on the belief that competitiveness depends largely upon advances in these fields of technology.

Topics include: surface engineering, multi-functional materials and biomaterials, nanostructured materials and nanopowders, nanorobots, micro and nano systems/sensors, smart packaging, applications and research on nanotechnology, optical measuring techniques, R&D and nanotechnology education, technologies for the safety and security of people and intelligent manufacturing systems.

### A NIGHT AT THE OPERA

Once again, the soloists, chorus and symphony orchestra of the DIT Conservatory of Music and Drama are proud to present 'A Night at the Opera' in the National Concert Hall on Tuesday 22 February. This has become a favourite event in the calendar for all music lovers, and for those who want to hear the singers and musicians of the future perform. This year's programme includes excerpts and scenes from some of the world's favourite operas, including 'Don Carlos' by Verdi; Rossini's 'The Barber of Seville' and 'Die Fledermaus' by Strauss. The evening will open with the overture from Verdi's 'La Forza del Destino', which is a splendid orchestral show piece.

The conductors of the orchestra for the evening will be William Halpin and Roy Holmes, both of whom are members of the Conservatory's impressive academic staff. The director of this year's production is once again the renowned Vivian Coates, and the guest of honour for the evening will be the Minister for Education and Science, Ms. Mary Hanafin TD. In previous years 'A Night at the Opera' has attracted a full house at the NCH, so early booking is advisable. Tickets are €15 (€8 concession) and can be booked through the National Concert Hall Booking Office at +353 1 417 0000 or online at [www.nch.ie](http://www.nch.ie)



### Company Profile

Based in Dublin city centre, the Food Product Development Centre is a leading provider of specialised training and consultancy to the food and drinks industry.

Our multidisciplinary team of full time technical staff and DIT experts in Food Safety Management, Environmental Health, Culinary Arts, Food Science, Business, Marketing and Design can help your company in key business areas.

### Services we provide

- Product development
- Market research — gap analysis
- Consumer halls tests
- Expert taste panels
- Customised training programmes
- Nutritional analysis
- Labelling advice
- Shelf-life monitoring



### Contact

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### MARKETING CONFERENCE

The 2005 Academy of Marketing Conference—AM2005 is being hosted by the School of Marketing, Dublin Institute of Technology from 5th to 8th July at DIT Aungier St. The Conference Theme is 'Marketing: Building Business, Shaping Society' and embraces an upbeat view of the role of marketing. For much of the past decade, a gloom has enveloped the marketing world, with doubt about the validity of disciplinary thinking, the role of marketing in the organisation, and the broader impact of marketing on society.

# innovation

Welcome to the latest edition of DIT's Innovation newsletter, published by it's Directorate of Research and Enterprise to highlight DIT's extensive industry programme. In this edition the research and scholarly activities of the Faculty of the Built Environment are high-lighted, starting on page 8. Also in this issue are details of recent events, funding opportunities for industry and news of collaborative projects taking place within DIT's 6 faculties and range of industry centres. If you would like to find out more contact any of the Industry team – their details are on page 3.

Jean Cahill, Editor

<b>contents</b>	<b>3</b>	meet the team
	<b>4</b>	creating 21st century engineers
	<b>6</b>	events
	<b>8</b>	smart development for the built environment
	<b>9</b>	school of construction
	<b>10</b>	futures academy
	<b>12</b>	sustainability research development group
	<b>13</b>	construction innovation centre
	<b>15</b>	the timber sector training initiative
	<b>16</b>	school of environmental planning and management
	<b>18</b>	dublin school of architecture
	<b>22</b>	school of real estate and construction economics
	<b>24</b>	funding news
	<b>26</b>	dit supports the launch of the institute of refrigeration ireland
	<b>28</b>	news



For innovative companies operating in today's competitive environment, third-level colleges are now commonly seen as a source of new knowledge and innovation in addition to being a source of highly-skilled workers. However, accessing these resources can sometimes be challenging, as the difference in cultures and customs between academia and industry can often lead to gaps in trying to build much-needed links.

To help address some of these gaps and to provide easier access to DIT's expertise, the Institute has established an organisation-wide Industry Programme. The programme has been designed to promote the range of education, training, research and consultancy services available to established businesses, both public and private. In addition it aims to help in the commercialisation process by promoting and supporting innovation development, technology transfer and new venture start-ups. A core team of professionals is in place to facilitate this programme and act as the conduit for industry to the knowledge base within the Institute. Senior personnel can help identify company needs and harness the expertise of the academic community to develop and deliver the full range of services and supports available. In addition, they can provide guidance to the relevant research or development centre within DIT with which a firm might want to engage.

DIT has a strong commitment to the development and support of the knowledge economy and a proactive approach to building successful links with industry.

Whether you are interested in participating in state-of-the-art research, acquiring relevant skills development for your staff, undertaking critical commercial studies, accessing cutting edge technology or just linking with State and European bodies, DIT can provide you with unparalleled expertise and resources to do so. We look forward to being your partner in innovation.

## Meet the team



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## Creating 21st Century Engineers

National Conference calls for major shake-up in engineering education to grow our knowledge economy.

The Minister for Enterprise, Trade and Employment, Micheál Martin, TD, opened the national conference hosted by the Dublin Institute of Technology with a call for a shake-up in education to ensure that the Irish economy stays one step ahead of the competition.

'The Engineering Sector in Ireland now comprises 1,200 companies including over 170 multi-nationals. It is a critical component of Ireland's economic infrastructure' he told the conference of industry leaders, engineering academics, and government policy makers.

'There is a need for greater interaction between third-level and enterprise; this is necessary in order to drive innovation in the enterprise sector and to ensure that third-level curricula are aligned with the contemporary needs of industry.' He went on to say that 'There is evidence that the third-level sector is not teaching the skills that industry requires in disciplines as diverse as Sales and Chemistry.'

'Our graduates need to be recognised as world-class if they are to capture for Ireland the complex, high-level investment activities that we want to attract to this country'.

He also pointed out that 'Eighty per cent of the workforce of 2020 is already in work and with an expected steady decline in the number of young workers entering the labour market we need to concentrate increasingly on upskilling those already in employment'.

The second speaker at the conference Eoin O'Driscoll, Chair, Forfás and lead on the recent Enterprise Strategy Report, also highlighted the importance of

developing new sales engineering programmes and raising standards in engineering education.

"There is high status and high reward for 'business and technical professionals that sell'. We do not yet have this focus in Ireland. We need to produce Sales Engineers and strong researchers to augment our strength in manufacturing and operations if we are to continue to compete successfully in the global knowledge economy. This conference was a very important step in raising the bar for ourselves in what we need from an engineering education."

Martin Murphy MD HP, John Mc Sweeney MD ESB Telecom, Tom Costello MD SISK, Dr Conor O'Brien Chair Pharmaceutical Ireland and Joe Hegarty Dir. Intel, all raised the bar for engineering education. They told the conference that their businesses will demand engineers who are strong technically but are also creative and entrepreneurial, great people and great project managers, and who really understand business.

The opportunities in global markets also call for multi-lingual skills. John Mc Sweeney projected that more than half the ESB business will come from outside Ireland in the next 10 years and language proficiency in Chinese and Spanish will be critical to capture and deliver that business.

Sean Dorgan CEO IDA painted an exciting future ahead for engineers. He referenced the HEA statistics showing the staggering growth of jobs in the ICT and materials sectors and highlighted that in the Pharmaceutical sector 'Ireland now manufactures 12 of the top 25 selling drugs in the world.' Ireland is also attracting a broad range of medical device

companies. He told the conference that most of the Managing Directors (engineers) that have been successful in building world-class manufacturing/operations are now developing strengths in research and in sales and marketing to solidify and enhance Ireland's position as a leader in the knowledge economy.

Leading academics responded to the opportunities and challenges presented by highlighting some of the new initiatives that they have underway.

Prof Dennis Depew from Purdue University, Indiana, presented the 'the three C's' of best practice: content, Creativity and Collaboration. He emphasised the focus his faculty has on rich state-of-the-art content, innovation and creativity in learning and the importance of collaborating in projects that are cross-disciplinary.

First year students at the University of Colorado are encouraged to design new products. Prof. Larry Carlson runs the Invention and Innovation Programme where students study patents and think through how to circumvent them to further inspire their creativity and improve their patenting skills. He also highlighted their initiatives to increase interest in engineering including summer camps that are run for secondary level teachers and the voluntary community engineering projects that are undertaken by staff and students.

Dr Mike Murphy Dean of Engineering DIT discussed the collaboration between Engineering, Business and Applied Arts Faculties to create the new B.Sc. in Product Design. 'The course is in great demand and is a good example of the need for cross-faculty

offerings.' He also presented the work done in improving student retention. He told the conference 'You need to relate lectures to real life, ask students for their input, encourage teamwork and rely more on continuous assessments.'

Prof. Jane Grimson Vice Provost TCD emphasised that it is an economic imperative that we attract more women into engineering to increase diversity and improve creativity and she strongly recommended that diversity ratios be measured and reported regularly as part of the Competitive Index.

On this issue, Dr Paula Trench, author and conference panelist, highlighted that gender imbalance within the engineering sector is an issue that cannot be easily resolved.

She argued that women are more empathetic than men and less systematic and are therefore less likely to be interested in pure engineering. However she encouraged more women to choose an engineering career as their empathy will be a significant asset in innovation, in people management and in sales engineering.

Finally Kevin Kernan Director General of the Institution of Engineers of Ireland presented the potential for Ireland to build on its Educational capabilities to be a centre of excellence for Europe. He also highlighted the work underway to promote and accredit experiential learning and emphasised that there is a growing need for 21st Century Engineers with great project management skills, who are multi-disciplinary, who understand business and most important who are CPD active.

The conference certainly raised the bar for what a 21st Century Engineer must become and what is needed in an Engineering Education. Thankfully it also highlighted the great potential we have here in Ireland to grow our knowledge economy through engineering excellence and it was very encouraging to see the enthusiasm and drive that our leaders in government, in industry and in academia have for shaping a very bright future for Engineering in Ireland.



PICTURED ABOVE AT THE CONFERENCE CREATING 21ST CENTURY ENGINEERS, HELD IN DIT BOLTON STREET IN OCTOBER 2004 ARE FROM LEFT TO RIGHT; DR MIKE MURPHY, DEAN OF ENGINEERING, DIT; TOM FLANAGAN, HEAD OF INNOVATION AND INDUSTRY SERVICES, FACULTY OF ENGINEERING, DIT; PROFESSOR BRIAN NORTON, PRESIDENT, DIT; MICHEÁL MARTIN TD, MINISTER FOR ENTERPRISE, TRADE AND EMPLOYMENT; EOIN O'DRISCOLL, CHAIRMAN OF THE ENTERPRISE STRATEGY GROUP; MARTIN MURPHY, MD, HEWLETT PACKARD; SEAN DORGAN, CEO, IDA; JOHN MCSWEENEY, MD, ESB TELECOM.

### Key areas for future growth in Ireland were identified as;

- Manufacturing
- Semiconductor design and fabrication
- Software development, especially Security Software and Enterprise Applications
- Systems Design, Development and Support
- Digital Media, Storage and Distribution Systems
- Business process, e-procurement, Supply Chain Management, Research and Development
- Software and Systems for mobile and wireless applications

## Science and Society Forum 2005

Registration is now open for the Science and Society Forum 2005, the major Commission conference in the field of science and society interaction, which will be held in Brussels, Belgium from 9 to 11 March 2005.

The event will review efforts to stimulate a deep-seated dialogue between the scientific community and society at large, and plot a new course forward in the form of a Charter on the future of science in society.

The conference is expected to attract between 500 and 600 delegates, and will explore four main themes:

- science and society and the Lisbon strategy;
- science, technology and democracy;
- towards a common culture of communication of science in society;
- fostering diversity and inclusiveness in research.

For further information, please consult the following web address:

[europa.eu.int/comm/research/conferences/2005/forum2005/index\\_en.htm](http://europa.eu.int/comm/research/conferences/2005/forum2005/index_en.htm)

## DIT 2nd Annual Industry Think Tank

In November of this year over 50 senior executives and DIT senior management staff met to discuss DIT's move to a new campus in Grangegorman. DIT's President, Professor Brian Norton, opened the event with a presentation outlining DIT's plans to move all of its operations to a new 65 acre site on the northside of the city, in Grangegorman. DIT has always worked closely with industry at undergraduate and postgraduate level but in Grangegorman it will forge even stronger links with industry by incorporating it directly into the new campus setting and providing staff and students with unique opportunities to interact with enterprise on a daily basis.

Delegates to the Think Tank were asked to discuss this aspect of the move in workshops facilitated by members of DIT's Board of Directors. The points raised within each group were collated and a number of actions have already been identified and prioritised. DIT's industry team will be happy to discuss plans for the new campus with any companies that would like to contribute ideas or who would like to meet members of the Grangeorman planning team to ensure there is a strong industry presence on the new site.

## DIT Staff get an update on IP Policy



PICTURED ABOVE LEFT TO RIGHT ARE MICHAEL SHARPE, ENTERPRISE IRELAND; MARGARET WHELAN, DIT; PROFESSOR BRIAN NORTON, DIT; ADRIAN RYDER, AZARO; DR PETER KAVANAGH, DIT.

An Intellectual Property (IP) workshop for DIT staff was held recently in its newest research institute – FOCAS (located behind DIT Kevin St). Presentations were made by DIT staff and companies who have worked together to commercialise research findings. They explained to their colleagues how to patent products and processes and warned them about the pitfalls associated with the process. DIT's Director of Research and Enterprise, Dr Declan Glynn, outlined DIT's IP policy which applies to DIT staff undertaking research with a commercial application. After reviewing 16 other IP policies in 3rd level institutes DIT has decided to reward researchers who can commercialise their research on a sliding scale:

70% of net income (from licenses/royalties) up to the first €65,000  
50% of net income from €65,000 to €130,000  
30% of net income when cumulative income is over €130,000.

Experts from the European Patent Office will be coming to DIT in the New Year to conduct an exclusive training workshop for DIT staff to ensure they are fully aware of all aspects of research commercialisation.

DIT's Prospect programme, run by its Project Development Centre (see [www.pdc.ie](http://www.pdc.ie)) was also highlighted at the workshop. This programme is for academics who would like to investigate the avenues open to them if they choose to commercialise their work.



PICTURED ARE MEMBERS OF THE AUDIENCE AT THE WORKSHOP.

## Gastronomes welcomed to DIT Cathal Brugha Street

In November, colleagues and students in the School of Culinary Arts and Food Technology welcomed to DIT Cathal Brugha St, the master chef and maitre d' from La Mas Candille Restaurant in southern France. The gastronomes spent three days in the School, conducting seminars and workshops with students who participate on the Leonardo internship programme. This programme (administered through Leargas) provides funding for DIT's Culinary Arts degree students to complete an overseas placement in one of a range of top quality restaurants and hotels linked with DIT.

Over the three days students and lecturers delivered presentations on different aspects of food and food culture, and working with the visiting gastronomes, prepared and served a gastronomic experience to their colleagues and guests. La Mas Candille is one of the exceptional restaurants and hotels which welcomes DIT students as part of their internship programme.

## DIT hosts to the Department of Education and Science National Skills Competition 2005

The annual Department of Education and Science National Skills Competition took place in December 2004. DIT proudly hosted the competition, which is a major highlight in the Institute's calendar. The competition aims to encourage excellence in industrial and service skills, to provide the opportunity for participants to display their competence in a competitive arena and to increase awareness of the calibre of apprentices in Ireland today.



PICTURED ABOVE LEFT TO RIGHT ARE DAN PATERSON, EDINA; YVONNE O'CONNOR, EDINA; DEREK CAHILL, WINNER OF ENGINE WORKSTATION 2004; THOMAS MURPHY, LECTURER DIT; MIKE MURPHY, DEAN OF ENGINEERING; TOM CORRIGAN, HEAD OF THE DEPARTMENT OF TRANSPORT ENGINEERING.

The competition not only encourages young people to excel in their work, but also provides an opportunity for us to recognise their effort, and to reward those who achieve outstanding results in their own skill areas. Students will participate in the areas of Brickwork, Construction, Plant Fitting, Graphic Design, Welding, Painting and Decorating, Plumbing, Polymechanics, Refrigeration, Sheet Metalwork, Joinery and Automobile Technology.

The winners in each section qualify for the prestigious Silver Medal Award, presented by the Department of Education and Science, and sponsored by the Dublin Airport Authority plc. Several students are then chosen from these winners to represent Ireland at the international World Skills Competition.

"The National Skills Competition is a fantastic opportunity to showcase the excellence in education and technical skill of Irish apprentices and it helps to motivate apprentices to strive for higher and higher levels of achievement," according to Eddie O'Donohoe, Chairman of the National Skills Organising Committee — the voluntary group that co-ordinates the competitions each year within DIT.



PROFESSOR JOHN RATCLIFFE, DIRECTOR AND DEAN OF THE FACULTY OF THE BUILT ENVIRONMENT OPENS OUR SPECIAL FEATURE ON HIS FACULTY.

## Smart Development for the Built Environment

Central to the future of the built environment is 'sustainability'. Almost everyone now pays homage to the concept of sustainability in general, and subscribes to the ideal of sustainable urban development in particular. Indeed, it can be said that human destiny is closely linked to the success or failure of the places where we live — cities, towns and villages. The challenge, of course, is to turn high-minded theory into practical reality. And this is the policy strand that weaves its way throughout the academic fabric of the Faculty of the Built Environment at DIT in terms of teaching programmes, research projects and enterprise initiatives.

Looking forward to the future of urban planning, design, development and construction, much imagination must be exercised in devising fresh forms of settlement which unify the need to satisfy inexorable growth with the emerging awareness of the sustainability imperative. The result of this new kind of urbanism is called 'Smart Development'. It is the goal of the Faculty, across and between its constituent disciplines, to produce graduates at all levels who can foster and implement the spirit and purpose of smart development.

What is smart development? Smart development itself derives from the notion of smart growth which, at its core, is defined as being about ensuring that neighbourhoods, towns and regions accommodate growth in ways that are economically sound, environmentally responsible and socially supportive of community livability. In other words, growth that enhances the quality of life. To achieve this, certain common features in shaping future policy and implementing proposed projects can be identified and summarised as follows:

- **Collaborating on Solutions;** establishing a shared approach between developers, environmentalists, civic organisations, public officials and local citizens as to how future growth can best be accommodated.
- **Mixing Land Uses;** so as to achieve several smart growth objectives simultaneously by attracting homeowners of various income levels, providing a range of local employment opportunities and reducing travel needs.
- **Encouraging Infill Development and Redevelopment;** which fulfills a prime aim of smart growth by revitalising the neglected part of towns, cities and older neighbourhoods.
- **Building Master-Planned Communities;** most usually on Greenfield areas adjacent to the urban fringe, and taking the form of long-term, multi-phased

projects that combine a comprehensive mix of land uses and are held together by unifying design and service elements.

- **Conserving Open Space;** the value of which is fast being recognised by developers who find that the incorporation of natural features, cycling paths, play areas and additional footpaths makes their schemes more marketable.
- **Providing Transportation Options;** for though the car retains its allure to most occupiers, there is rapidly becoming a growing interest in other choices such as light and heavy rail systems, expanded bus services and bike and pedestrian paths, which all enhance mobility and improve the quality of life.
- **Offering Housing Opportunities;** because the lack of affordable accommodation contributes significantly to the jobs/housing imbalance facing many major towns and cities. This may be due to several factors such as opposition to higher-density development, restricted residential land designation or a desire to attract jobs over homes. Properly planned and designed, however, there is a realisation that mixed-income housing schemes can be both attractive and profitable.
- **Lowering Barriers and Providing Incentives;** is a key principle of smart growth and development and distinguishes it from traditional growth management policies in that it combines incentives, disincentives and conventional planning techniques to promote a pattern of development that achieves economic, environmental and quality of life objectives.
- **Using High-Quality Design Techniques;** is also a central component of smart development as it can help alleviate public opposition to new proposals. By employing design techniques such as integrated land uses, mixed housing types, open space protection, and a pedestrian-orientated environment, developers can create new places that are actively supported, rather than opposed, by neighbourhood groups and local authorities.

Smart development, therefore, is the essential keystone of the Faculty of the Built Environment, and imagination the driver towards it, remembering the while the words of George Bernard Shaw. **"Imagination is the beginning of creation. You imagine what you desire, you will what you imagine, and at last you create what you will".**

Professor John S. Ratcliffe

## SCHOOL OF CONSTRUCTION

The School of Construction delivers educational programmes from apprenticeship level to Masters Degree. A key objective is the continued renewal of existing programmes and the development of new ones which are directly relevant to the needs of our students and of industry. Many of the programmes are part time, aimed at people already in the industry.

Continuous professional development courses are also available in a variety of formats. The programmes delivered are highly rated by industry as evidenced by the over-subscription to the programmes each year. Quality of content and delivery is a prime consideration.

### Recent Successes

A student team from the Construction Management and Technology course recently won the prestigious international CIOB Student Challenge competition. The apprentices from the School have repeatedly won Gold Medal and other awards at the World Skills Competitions.

### EU Research on Performance Based Building

The School of Construction is engaged in a "Thematic Network PeBBu" as part of the EU Competitive and Sustainable Growth Programme. The objective of the network is to stimulate and facilitate the international dissemination and implementation of Performance Based Building. It includes 33 Member organisations from EU Countries and observers from USA and Australia. PeBBu includes several defined Domains that focus on the international inventory, programming and coordination of R&D in defined areas of expertise.

The Network aims at combining fragmented knowledge and experience in the respective area, in order to build a systematic approach towards organisational and technological innovation in the building and construction industry and related regulatory communities and towards applying user requirements as the actual basis for communication throughout the building and construction process.

The Network builds upon various R&D projects and programmes initiated over the past years by CIB — the International Council for Research and Innovation in Building and Construction — over the past years. The application of Performance Based Building in building and construction related regulatory system, codes and



standards and in the organisation of and communication within building and construction projects, will enhance both the explicit focus throughout all phases of such projects upon performance requirements of building owners and users, will supply new opportunities for organisational and technological innovation within and of the building and construction process and will enable a more successful international trade in construction materials and products.

The staff involved are Phil Murray (National Coordinator), Louis Gunnigan and Shay Murran with previous contribution from James O'Connor and Ken Beattie.

## Futures Academy

Futures thinking is becoming an increasingly important way of planning for the future in a range of areas from business, to economics, society, town planning, transport, and enterprise. Those involved in decision-making for the long term are frequently discovering that there is more than one future out there, and being prepared for more than one eventuality is key component of the truly successful.

There are constantly changing circumstances and drivers of change which can, in one stroke, negate all the plans and ideas which had been the cornerstone of the policy, project or proposal to date. Adaptability and flexibility are crucial issues in future planning which will allow for a company or policy (or whatever else is at stake) to be prepared for different situations which in other circumstances they would not even have considered. Futures thinking is not about prediction – that is impossible – but it is about preparation, and demonstrating ways of preparing for the different futures which lie ahead.

Over the last 10 years, Ireland has and continues to experience a period of rapid change. Both the nature of this change and, vitally, the pace of this change have led to the development of feelings of uncertainty and insecurity about the future. This uncertainty permeates through many layers: government, society, economy, technology, and the environment. Crucially though, this uncertainty has also begun to permeate abroad, so it is no longer simply within Ireland, but is now applying to those companies, countries and individuals outside Ireland looking in. At all levels, from top to bottom, decision-makers need assurances and confidence that their decisions are the correct ones.

Since January 2003, The Futures Academy at DIT has been promoting the message of being prepared for different futures in a variety of spheres: enterprise, town planning, corporate social responsibility, real estate, sustainable development and climate change. Increasingly, we are finding that decision-makers in industry, local and central government and Europe are taking this on board in a proactive manner, and discovering that what they

had perceived as long-range planning was actually nothing of the sort. Long-range planning is regarded as an important management function within many organisations, but it is lacking in several areas:

Long-range planning exercises are often done on an ad-hoc basis;

- They are frequently prepared as a one-off, not to be repeated for many years;
- They are usually project-specific and localised;
- They use a limited number of variables or possibilities; and
- They use a limited number of people in their consultation and construction;

Through a variety of methods and techniques, The Futures Academy has been demonstrating to industry, government and individuals how to make decisions based on genuine long-range planning, and to test these decisions against likely future events. We have been involved in a wide range of projects and workshops, both in Ireland and abroad, in which we have used our knowledge and experience to help decision-makers take the choice best suited to their needs based on a series of possible futures. Last Summer, we were in Lisbon and Bratislava showing the Municipalities of both cities how best they can future-proof the decisions they are taking today, against the uncertainties of the future. The future is bright, but you have to be prepared for it to be a colour other than orange!

Details of some of our other past and current work are detailed below.

### LUDA

The Futures Academy is a partner in an EU 5th Framework project entitled: Improving the Quality of Life in Large Urban Distressed Areas. This is a multi-million euro project, of which The Futures Academy has €140,000 assigned over three years. The City of Dublin has now been selected as a 'Reference City', which means that it is held as an example of best practice urban regeneration across Europe.

Through our work in this project, futures methods and techniques have now been accepted as valuable tools in rehabilitating urban areas, particularly in relation to its social inclusivity and breadth of vision. The Futures Academy have been asked to produce a 'futures handbook' which will demonstrate a hands-on approach to urban regeneration. This handbook will also be available on CD-Rom and in a range of European languages. The Futures Academy will be discussing the Handbook with the Municipalities (Lord Mayors and City Councils) in the six main cities in the project to discuss and respond to the considerable interest in these techniques.

### Greater Dublin Prospectives Society

Several times a year, The Futures Academy organises a morning workshop for decision-makers in Dublin regarding the future of the city. Each workshop is themed around a topic of relevance to the participants, such as security, cleanliness and greening the city. A renowned international speaker is invited to speak, along with two or three local speakers, and a discussion ensues. Attendees include the Lord Mayor, Deputy Garda Commissioner and leading business people.

### Enterprise

Late in 2003, The Futures Academy was asked to run a workshop for a Government-appointed body to examine the future of enterprise in Ireland. A series of pre-workshop meetings were held in which the nature of the workshop was discussed and preparatory work disseminated, following which The Futures Academy ran a workshop for the Group members. The successful workshop provided much food for thought for the Group members about the variety of different possible futures facing Ireland and Irish enterprise.

### Lincoln 2020 'Towards a Preferred Future'

On November 24th, 2004, The Futures Academy, DIT, in collaboration with the University of Lincoln, held a futures workshop to inspire imaginative and creative thinking about the future direction of the city of Lincoln. Workshop participants represented a wide variety of backgrounds including academia, planning, architecture, design, enterprise, tourism, and media, and therefore work, on the day, incorporated a diverse range of interests, ideas and opinions.

The one-day workshop followed a futures methodology known as 'Prospective Through Scenarios' — a futures approach advocated by The Futures Academy. Although the main purpose of the workshop was to demonstrate the process to the participants and provoke interest in 'futures thinking', it surpassed expectations and proved an immense success, following which The Academy have been asked to undertake a follow-up study.

Activities on the day challenged all involved to think divergently and 'outside the box' about the future of Lincoln, potential threats and possibilities, global driving forces, alternative scenarios, and essentially explore what might lie ahead. Participants shared their 'best dream' and 'worst nightmare' for Lincoln in the year 2020 and the workshop culminated with the creation of a 'preferred future vision' for the city as well as policy fields and specific 'action agendas' that could be taken to realise this vision.

Following the workshop and much heated debate, the participants took part in presenting their work and the outcomes of the workshop to an audience within the University attended by interested students, academics and other professionals. It is intended that The Futures Academy will continue to work in close co-operation with the University in the new year and hopefully build a lasting relationship to help Lincoln develop a comprehensive vision for its future and act accordingly to shape it.

### Dublin Vision 2020

In April 2004, Dublin Chamber of Commerce launched their Dublin Vision 2020 at the Dublin City Council. The Futures Academy was instrumental in the facilitation and production of this document, developing scenarios and characterisations for the Chamber of Commerce, and has received very positive feedback on our contribution.



### Conferences

The mention of futures frequently attracts a lot of attention, and as a result The Futures Academy has presented at many international conferences in the last 12 months, some of which include:

- The Fourth International Conference of Postgraduate Research in the Built and Human Environment, April 2004, University of Salford
- Fourth LUDA Workshop, Valenciennes, April 2004, France
- Sustainable Futures Conference, Tampere, June 2004, Finland
- Brownfield Development Conference, Wessex Institute of Technology, June 2004, Siena, Italy
- Urban Land Institute: Leadership Retreat, April 2004, Seville
- IPD Annual Conference, April 2004, Vienna.

## Sustainability Research Development Group (SRDG)

The SRDG is a newly formed applied research grouping working in the areas of sustainable development related to buildings. The groups creation was a reaction to current national objectives (i.e. the establishment of a knowledge based society and European and worldwide competitive advantage), the lack of any coherent research programme to tackle contemporary sustainable development issues in the built environment in Ireland, breadth and depth of research potential in DIT, evolution of the demands on buildings driven by initiatives such as Energy Performance Building

Directive (EPBD) and ongoing amendments to Building Regulations, ongoing pressures related to energy security, climate change, and the ever increasing depth of understanding of the various impacts of buildings.

"The groups objective is to build capacity in Ireland for basic and applied built environment research. Integration of SRDG in DIT is being aimed at establishing a structure that maintains two-way dialogue with the various disciplines to both learn from and to feedback research output and perspectives to education and professional training programme," says Kirk Shanks, Group Leader. "Ideally we hope to establish an interdisciplinary research programme to work at the various scales of sustainability of buildings, i.e. building stock, urban, individual building, services systems, technologies and materials. We have secured the technical role in a major energy performance survey of Irish housing commissioned by SEI (Sustainable Energy Ireland).

Currently, particular strengths include building energy performance (assessment and prediction), low-energy architecture (design process, strategies and techniques), detailed design analysis, low-energy technologies and techniques and building stock studies. The groups' development strategy is to harness these strengths to conduct applied research projects to build basic research capacity and credentials through post-graduate and post-doctoral studies and crucially, retaining the resultant expertise."

Whilst, in these early stages research directions are fluid to respond to interests and perspectives of DIT staff the emphasis is on areas of cross-over between disciplines. For example, research of a low energy ventilation system would not only focus on the science of performance but also on implications related to architectural realisation – i.e. what does the architect need to know to determine if it is a suitable solution, what are the impacts on other architectural issues, what design and construction issues affect the systems robustness or performance – i.e. is it suitable as a 'bolt-on' solution or does it require complex integration?

The interdisciplinary concept is being pursued in a growing number of Institutions world-wide and is in itself a valid research area – for interdisciplinary think bio-technology, hydro-informatics. However, to get to the point where interdisciplinary areas and activities intrinsic to sustainability, can be identified and pursued, it is fundamentally important to build capacity in the range of disciplines related to sustainable building, to keep abreast of developments and research directions. The main thing that has changed in the modern world to support a re-evaluation of building design is the ever-increasing depth of understanding/knowledge in all areas related to building. In addition to this, the performance of the end product, the building, is becoming increasingly transparent demanding greater accountability, for example through the introduction of the EPBD which directly links energy performance with property and users financial interests.

The construction industry can respond to this changing climate/landscape through objective consideration of approaches to design process, construction and operation. Whilst there is a large body of knowledge on the artefact, high performance; low-energy; environmental and ecological technologies, strategies and design solutions, there is comparatively little on design and construction process.

Realising a sustainable solution requires knowledge of the inter-dependencies of design and construction decisions. Ultimately sustainable design process comes down to communication between disciplines which is the responsibility of all. For further details on the Sustainability Research Development Group, please contact:

**Kirk Shanks, BEng, MSc Arch, PhD**  
Sustainability Research Development Group  
Faculty of the Built Environment  
Dublin Institute of Technology  
Dominick Court,  
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Dublin 1, Ireland

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M: +353 86 3700 764  
E: kirk.shanks@dit.ie

## CONSTRUCTION INNOVATION CENTRE

Innovation, in the context of the Irish construction industry, is often thought of in purely technological or product development terms. In reality, innovation embraces much more and transcends all of the many disciplines and functions that contribute to the effective functioning of the industry. By focussing on these specific components e.g. sustainable development, off site construction, energy issues, design, IT, materials, new product development, business process etc, it becomes easier to identify where innovation can have a meaningful impact on the growth and development of the sector as a whole.

To support industry in understanding and adopting innovation in its many forms, the Dublin Institute of Technology has recently established a Construction Innovation Centre. In the first instance, the Centre will focus on knowledge transfer, facilitating organisations in discussing and debating the key issues currently impacting upon their business through masterclasses and conferences.

### Masterclass Series 2004 – 2005

The DIT Construction Innovation Centre and the Construction Industry Federation have organised a series of Masterclasses for 2004/2005 focussing on critical issues impacting on the construction industry and its associated professions.

The Masterclasses are presented by recognised experts in the chosen topics with additional contributions from other leaders in their fields. Presentations are followed by a full discussion/workshop.

The first in the series took place on October 1st in DIT and addressed the issue of Research and Innovation in the Construction Industry. The Masterclass attracted a broad range of attendees from academia, research and development, and professionals within the industry itself, to share their experiences and listen to the experiences of the two keynote speakers, Dr Tim Broyd, CEO Construction Industry Research and Information Association and Mr Tom McGuniness, Technical Director, Kingspan.

The second Masterclass dealt with off site construction and took place at the RDS on November 5th. The 2005 schedule of Masterclasses is currently being developed and will address key topics such including energy performance of buildings and waste management. For further details on the Masterclasses please contact:

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E: david.kirk@dit.ie

**Kevin Gilna**  
Construction Industry Federation  
T: +353 1 406 6000  
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PICTURED ABOVE LEFT TO RIGHT ARE PHIL MURRAY, DIT; PROFESSOR JOHN RATCLIFFE, DIT; LIAM KELLEHER, CIF AND LOUIS GUNNIGAN DIT AT THE MASTERCLASS IN OCTOBER.

### Innovation Services for the Built Environment

Innovation Services for the Built Environment provide tailored programmes to industry. The key to the success of our programmes is our flexibility in approach to training and our ability to adapt to the needs of the customer. We are aware of the demands on companies and are anxious that companies get the maximum benefit from training attended by staff. Our approach to providing training ensures that this is the case. In consultation with the client we deliver courses at times that suit particular needs. We have run courses for half days, day long courses once every two weeks, Saturdays and evenings. The courses outlined below are those which ran in 2003 – 2004.

### Advanced FURNCERT Programme

The Advanced FURNCERT programme, an initiative of Enterprise Ireland, aims to provide management skills to key technically/operationally focussed employees, in the furniture and timber sector. The course is aimed at employees who have been identified by their respective companies as having potential to take on managerial roles.

The programme is a collaborative venture between DIT, University of Limerick and the Furniture Technology Centre, Letterfrack, and it follows on from the FURNCERT Foundation Level programme which was run very successfully (by the above) over the past two years.

For SME's the release of key staff is always a major issue. The Advanced FURNCERT programme recognises this potential difficulty for companies and as a result has developed a very flexible programme that suits both employers and employees.

The programme runs between March and September, with a two month break for the months of June and July, to allow for holidays and holiday cover. Lectures are delivered at intervals of at least two weeks to enable companies to have as much flexibility as possible in relation to release of key staff and to allow for the practical application of course content. Advanced FURNCERT comprises six modules and includes an overseas trip, where participants will visit factories and workshops. Each module ranges from 14 to 16 hrs in duration depending upon the module and the entire programme is approximately 100 hours. Modules are outlined below:

- Organisational Behaviour and Development
- Human Resource Management
- Introduction to Strategic Planning and Operations Strategy
- Project Management
- Practical Cost and Accounting
- Market Development and Sales Strategies

The programme is accredited by the DIT. The class of 2004 graduated on the 18th June 2004 at a ceremony attended by representatives from Industry, DIT, University of Limerick, Letterfrack Furniture Technology Centre and Enterprise Ireland.

#### Building Technology and Construction Management Course

This programme has been developed to improve participants knowledge of building technology and construction management practice and as an independent preparatory programme for those intending to sit the Direct Final Examinations of the Chartered Institute of Building. The course consists of 15 modules in 3 subject areas, with 5 modules per subject area as detailed below:

##### Building Technology and Practice

- Industrial Practice
- Performance
- Site Organisation
- Construction Method
- Maintenance and Repair

##### Contract Administration and Practice

- Contract Principles, Procedures and Practice
- Delays, Disruptions and Reimbursements
- Arbitration
- Alternative Contractual Arrangements

##### Construction Management

- Production Management
- Human Resource Management
- Material Management
- Plant Management
- Corporate Management

The programme runs on alternate Saturdays from September to June each year and is accredited by the Dublin Institute of Technology. For further details, please contact:

**Mr David Kirk**

**Office of Innovation and Industry Services**

**Faculty of the Built Environment**

**41 Lower Dominick Street, Dublin 1**

**T: +353 1 872 9020**

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**E: david.kirk@dit.ie**

#### Minister urges greater use of Timber Construction for Sustainable Development



PICTURED ARE JEFF COLLEY, CONSTRUCT IRELAND; MR GERARD MCCAUGHEY, CEO CENTURY HOMES LTD.; MR BRYAN WOODLEY, CEO UK TIMBER FRAME ASSOCIATION; PROFESSOR BRIAN NORTON, PRESIDENT DIT; DR KIRK SHANKS DIT AND MR DAVID KIRK DIT.

On Thursday 9th December the DIT Construction Innovation Centre hosted a successful breakfast seminar at the Shelbourne Hotel in Dublin, entitled 'The Challenge of Sustainable Construction – The Role of Timber'. Organised under the Timber Sector Training Initiative, which is funded by the Department of Agriculture and Food (Forest Service) under the National Development Plan 2002-2006, the seminar was well attended by a cross section of building professionals



PICTURED ABOVE ARE PROFESSOR BRIAN NORTON, PRESIDENT DIT AND MR JOHN BROWNE, TD, MINISTER OF STATE AT THE DEPARTMENT OF AGRICULTURE AND FOOD, AT THE OPENING OF THE TSTI SEMINAR.

including architects, engineers, developers and administrators. Opening the event, the Minister of State at the Department of Agriculture and Food, Mr John Browne TD said 'It is important to get across the message that the use of timber in building can make a significant contribution to sustainable development. Timber is a natural and renewable resource and has a significant role to play in supporting the drive towards sustainable construction practices'.

Professor Brian Norton, President of the DIT, thanked the Minister for his comments and highlighted the research and training activity being undertaken in the area of sustainability within the Dublin Institute of Technology. Mr Bryan Woodley, CEO of the UK Timber frame Association, provided an excellent overview of the timber frame industry in the UK and described how timber was an important component of the overall building sustainability debate. Mr Gerard McCaughey, CEO Century Homes Ltd, gave a lively presentation on how timber can provide an excellent solution to Ireland's European and International environmental and energy commitments. Dr Kirk Shanks of the DIT Sustainability Research and Development Group, presented a very informative insight into the benefits of timber as a material from an energy perspective. The seminar was chaired by Mr Jeff Colley of Construct Ireland.

#### The Timber Sector Training Initiative

The Timber Sector Training Initiative (TSTI) was established in 2002 by the DIT Office of Innovation and Industry Services (Faculty of the Built Environment) with the generous financial support of the Forest Service of the Department of Agriculture and Food under the National Development Plan 2000-2006.

The aim of the Initiative is to address the skills needs of the Irish timber sector in a flexible and innovative manner. In order to achieve this, a training needs analysis of the sector was conducted in 2002. This analysis highlighted the diverse needs of specific groups within the sector, not only relating to course content but also to course delivery. In answer to these articulated requirements, the suite of courses/programmes were delivered to the timber sector in Autumn 2003. These included:

- **Timber in building: Good practice and specification for professionals**
- **Winning Business: Marketing and Sales for the Timber Industry**
- **Talking the Talk: Negotiating and Presentation Skills for the Timber Industry**

The current programmes are:

- **Timber in building: Good practice and specification for professionals**  
An accredited programme of three two day modules and a site visit aimed at designers and specifiers to ensure proper specification and use of timber and timber products.
- **Timber as a Material**  
Introductory Programme for Timber Traders. The aim of this course is to introduce those working on the shop floor to the general properties of wood and to familiarise them with wood types, structures, functionality and engineered wood products. As part of the course, participants will be taken on a site visit to a relevant factory or site where they will see the wood products being used or manufactured. The course will run for two and a half days spread over a three week period.

For further details, please contact:

**Ms Jude McCarthy, Programme Manager**

**Office of Innovation and Industry Services**

**41 Lower Dominick Street, Dublin 1**

**T: + 353 1 872 9020**



## SCHOOL OF ENVIRONMENTAL PLANNING AND MANAGEMENT

### Professional Streams

The School currently delivers education in three professional areas: Geomatics, Spatial Planning and Environmental Management. These fields can be described as outlined below.

**Geomatics** is a term, which collectively describes the many specialised activities related to surveying the earth's physical and man-made features. Geomatics is both science-based and engineering-based. It involves all aspects of the collection, management, analysis and visualisation of geo-spatial data for surveying and mapping. It has many specialised fields of activity including land surveying, cartography, engineering and mine surveying, the use of satellites for positioning, and the production of computerised maps.

**Spatial planning** refers to the methods used largely by the public sector to influence the future distribution of activities in space. It is undertaken with the aims of creating a more rational territorial organisation of land uses and the linkages between them, to balance demands for development with the need to protect the environment, and to achieve social and economic objectives. Spatial planning embraces measures to co-ordinate the spatial impacts of other sectoral policies, to achieve a more even distribution of economic development between regions than would otherwise be created by market forces, and to regulate the conversion of land and property uses.

**Environmental management** refers to the methods used in society to influence human activity in the light of its effect on the society's physical resource base. It is undertaken with the aims of attaining sustainable use of the earth's resources, protecting and enhancing the quality of the environment and realising social and economic objectives. It embraces the management of enterprises and activities with full consideration of ecological principles and the sustainable use of natural resources and is carried out in both the public and private sectors.

### New Programmes

A new integrated BSc programme combining the professional streams of Geomatics, Spatial Planning and Environmental Management, is under active consideration. The programme may retain separate CAO intake routes.

Two new MSc programmes are planned: MSc in Spatial Information Sciences and MSc in Spatial Planning. A working group has been formed to develop the MSc in Spatial Sciences programme. The MSc in Spatial Planning will be developed from the existing part-time MSc in Spatial Planning programme.

### Competitive Position

All three undergraduate programmes are well positioned in the marketplace because the awards are professional and lead to clear career paths. Also, two of the awards have professional accreditation which ensures recognition by employers. The programmes are generally unique in their field so that the School forms the sole provider in the relevant areas.

The four MSc programmes attract large numbers of applicants and feedback from employers is good. An industrial liaison group is being set up to improve links with the alumni of the School.

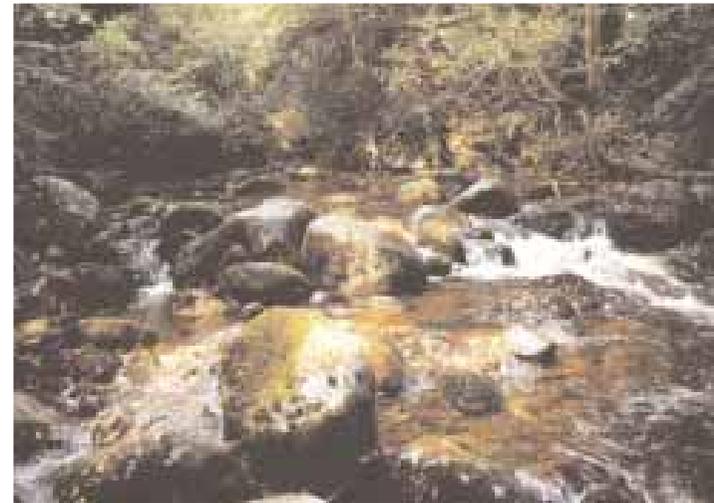
The international profile of the School has been raised in recent years in a number of ways. Student fieldtrips are carried out on a regular basis and as part of these trips, collaboration has been developed with other schools in Europe. Other international collaboration has been facilitated by student exchanges and research projects. An Erasmus exchange programme was signed for the year 2003/04 between Hamburg-Harburg university and the School for two student place exchanges each way. The scope for staff exchange will be explored. A student from Dresden University is

studying in the School as part of a research project. A new thematic Network for Geomatics has recently formed under the EU Socrates programme. EEGECS (European Education in Geodetic Engineering, Cartography and Surveying) is tasked with meeting the objectives of the Bologna and Prague Declarations. Frank Prendergast is the Irish representative on EEGECS and is also a member of Working Group 2 (research).

### Research and Enterprise

#### E-Learning project in 'Coordinate Reference Systems'

In April 2004 the research phase of the e-Learning project in 'Coordinate Reference Systems' that was instigated by Kevin Mooney and Audrey Martin in the Department of Geomatics was completed. In the words of the Head of Department, Frank Prendergast, "The satisfaction ratings received from the pilot industrial 'distance guinea pig' students at the Ordnance Survey Ireland office and the Cypriot National Mapping Agency speak for themselves," while "the extremely positive feedback received from the participants and management auger very well for the future development of this innovative form of teaching and learning."



### Euro SDR

Since the academic year 2003/2004 the Secretariat of Euro SDR (European Spatial Data research) is based in the School. The School has a memorandum of agreement with Euro SDR to run the administration of the organisation. Senior Lecturer Kevin Mooney received the unanimous vote of the 18 member countries to become the new Secretary-General of Euro SDR for a term of 4 years. The centre is based in the School premises in DIT Bolton Street and following initial visits by the EuroSDR management team and putting in place office accommodation for the management of the centre, a number of collaborative events have already occurred.  
**Secretariat Euro SDR**  
**+ 353 1 402 3734**  
**W: [www.eurosdri.org](http://www.eurosdri.org)**

### Knocksink Wood NEEC

Since the late 1990s the School has been taking responsibility for the National Environmental Education Centre in Knocksink. The centre is located in Knocksink Wood close to Enniskerry, 25 km from the centre of Dublin. The centre is not owned by DIT but DIT is committed to look after the day to day running of the centre on behalf of the National Parks and Wildlife Service in the Department of Environment, Heritage and Local Government. Primarily, the centre provides one-day educational courses and field trips in nature studies and the environment for primary and secondary schools. Disadvantaged schools in particular have benefited through non-paying courses of this type. The School of Environmental Planning and Management has been using the facility as a 'laboratory' for its environmental courses, as a

fieldtrip base and as a field centre for dissertation research. The centre is run by a dedicated team of committed people and received the 2000 Regional Community Initiative Award.

The key ethos of the centre is 'training through environmental awareness'. Different skills are developed through the activities undertaken by participants. These include education and interaction with children and young adults, management of an interpretative centre, basic administrative and office skills and outdoor skills. Contact:

**Knocksink Wood NEEC,**  
**Billy Flynn**  
**T: +353 1 286 6609**  
**W: [www.knocksinkwood.org](http://www.knocksinkwood.org)**

### Waste Management Initiative

The National Construction and Demolition Waste Council approached the School to develop continuing professional education initiatives for the Council. This is as part of the activities of the sub-committee 'Information, Awareness and Funding' of the Council. This Sub-Committee will develop a National Awareness Programme targeted at the key stakeholders within the demolition/construction industry, a Formalised Training Programme through a State Training Body in order to educate industry personnel in relation to Best Practice in C&D Waste management and develop an Annual Awards Scheme to recognise best practice in C&D Waste.

The involvement of the school in this initiative reflects the strong reputation of DIT links with the professions and industry. Opportunities to develop short courses, CPD modules or other tailored education courses are being considered at the moment. These initiatives build on work carried out by the School exploring the suitability of existing modules in Environmental Management within the Department of Planning and Development for CPD purposes.

## DUBLIN SCHOOL OF ARCHITECTURE

### Staff member undertakes research on the Irish Passage Tombs

For many years, Frank Prendergast, Head of the Department of Geomatics, has undertaken research on Ireland's prehistoric monuments from the archaeoastronomical perspective and has several publications, and delivered many lectures on the subject, in Ireland and internationally. He has also recently contributed to a new Channel 4 programme on prehistoric cultures, which is scheduled for transmission next autumn. His Masters degree involved research in the Boyne Valley and led to significant new data on the world famous Newgrange passage tomb.

Significantly, Frank has recently been accepted as a PhD student at the Department of Archaeology, UCD to continue his research interest in this field, specifically on the wider passage tomb building tradition in Ireland and Britain. Passage tombs constitute the third type in the tomb building sequence in Ireland, being preceded by the court Cairns and portal dolmens, and followed by the wedge tomb tradition. Construction of the passage tombs began sometime after c.3500 BC and continued as a distinct tomb building tradition during the Irish Neolithic. Archaeoastronomy is the scientific investigation of the roles that cyclical and seasonal movements of the heavenly bodies may have played in the lives and culture of indigenous peoples worldwide. This scientific discipline uses a combination of astronomical surveys, statistics, GIS and other investigative tools.

Frank's research goals are to help link archaeoastronomy with archaeology in theory and practice, assist those interested in the intellectual achievements of pre-literate societies, and increase our knowledge and understanding of the role of astronomy in those societies. This new research project which is funded by the DIT and the DIT Research Support Unit, may help unravel many of the many fundamental questions pertaining to life in Ireland during pre-historic times and how societies experienced and understood their surroundings.

### Socrates/Exchange Programmes

The School of Architecture has a long tradition of being involved in exchange programmes at both staff and student levels. The oldest exchanges occurred in excess of twenty six years ago with the School of Architecture Lincoln, Nebraska, USA, the University of Los Andes, Columbia, South America and l'Ecole Speciale d'Architecture Montparnasse, Paris. The Nebraska exchange has continued in an unbroken fashion up to today. Professor Tim Potter has recently visited from Nebraska for the first half of Semester One. Currently, two students from Nebraska are studying in fourth year.

The School has been actively involved in exchange programmes with European schools since the early nineties under the Erasmus, now Socrates, and the Tempus programmes. Currently two fourth year students are studying in Europe under the Socrates Programme. Laurence Lord is attending the Royal Danish Academy of Fine Arts in Copenhagen; Lucey Jones is studying in Ecole d'Architecture de Montpellier, France. Both are studying in these schools for the full academic year. They have selected their own programmes of study within the respective schools with an ECTS valuation of 60 credits. If they are successful they will be exempt from completing the fourth year of the five-year wholtime programme. There are 7 Socrates students in the School this year: two from the Royal Danish Academy of Fine Arts, Copenhagen; one from the School of Architecture Aachen, Germany; two from Universita' Degli Studi Di Genova, Italy; one from Ecole d'Architecture de Paris La-Villette, France; and one from the School of Architecture, Lund University, Lund, Sweden.

### Henry J. Lyons Masterclass for the New School of Architecture

A week long masterclass/workshop sponsored by the Henry J. Lyons Masterclass fund took place in October, involving all the staff and students of the Dublin School of Architecture and exploring a range of issues surrounding the design and provision for a new school of architecture at the Grangegorman campus. The extensive documentation that was designed and assembled during this week will become a baseline document and a platform for further thinking and development to ultimately brief the designers of a new school.



### Ormonde Brick Medal

Maureen Considine, graduate from the class of 2003, was recently presented with the Ormonde Brick Silver Medal for Excellence. Maureen is pictured above with her medal.

### EAAE & ACE Co-operation

An agreement was recently reached between EAAE (European Association for Architectural Education), representing more than 100 schools of architecture across Europe (of which James Horan the Head of School is currently the President) and the ACE (Architects Council of Europe) to form a joint working party to explore areas of mutual interest and to develop a working link between the two associations. This is the first time that the educators and the professionals across Europe have formed such an association.

### Professional Doctorate

Work is steadily progressing with the development of a Professional Doctorate programme within the School of Architecture and within the Faculty of the Built Environment. A relationship has developed between the Dublin School of Architecture and School of Architecture at North Carolina State University (NCSU) to progress the establishment of a Professional Doctorate programme which would be jointly awarded by both the DIT and NCSU.

### Renaming of the School of Architecture

In January 2004, the School of Architecture was renamed the "Dublin School of Architecture" identifying the school with the city in which it is located.

### The Grangegorman Project

As part of the development of a new campus for the Dublin Institute of Technology at Grangegorman the Dublin School of Architecture has decided to dedicate the projects for the academic year 2005/2006 to issues surrounding this development. All of the student projects for the coming academic year will be set in the context of the Grangegorman site and numerous aspects of a future type of third level education will be explored.

### Opus Awards 2004

Students from the Dublin School of Architecture won all four prizes in the annual Opus Awards for Architecture & Construction and at least six members of staff had their work acknowledged in the form awards or commendations.

## Architecture News

### Architectural Technology Conference, June 2004

The DIT Department of Architectural Technology and Conservation hosted a one-day conference of Architectural Technology educators in the Dublin School of Architecture, Bolton Street, last June. The conference was attended by over 50 delegates, including staff, from Dublin, Waterford, Cork, Carlow and Limerick Institutes of Technology, all of which have provided or currently provide third level education programmes in Architectural Technology. Also in attendance were guests from Vitsubering University in Denmark and the University of Ulster Jordanstown, together with representatives of the Architectural Technology profession, including the British Institute of Architectural Technologists (UK and ROI branch), technician members the Royal Institute of Architects of Ireland together with the chairman of the RIAI Board of Architectural Education, and a representative of the National Qualifications Authority of Ireland.

Delegates were welcomed by Professor John Ratcliffe, Dean of the Faculty of the Built Environment, and the conference was launched by Cormac Allen, Head of Department of Architectural Technology and Conservation. Cormac Allen expressed the view that the singular challenge facing the community of architectural technologists in Ireland is that of self-organisation and self-representation, be that through the mobilisation of the RIAI technician membership generally and the dormant RIAI Technician Committee in particular, through the expansion in membership of the BIAT Republic of Ireland branch, or through the formation of a new Irish professional body. He outlined his Department's aspiration to provide a series of architectural technology programmes leading to a 3-year ordinary degree (Technician), a 1-year 'add-on' honours degree (Technologist), and a suite of 1-year master's degrees in architectural technology in areas such as conservation and sustainable technology. Thus the architectural technologist would have access to a 5-year educational programme matching that of the architect in duration, with a new professional status arising for those who hold all three qualifications, leading perhaps to a new form of RIAI membership.

Visual presentations were made by the course directors of the various 3-year diploma programmes on the nature and content of their respective programmes, while the discussion was broadened to consider the role of technical architects in the European context, the function of the Bureaux d'Etudes operating in France which provide technical design consultancy services to architects, contractors and design sub contractors, and the Spanish Aparejador, or technical architect, who has traditionally worked as an equal partner with the Architect in the design of buildings.

### Graduates Conference in Bolton Street

Arising from the Architectural Technology Education Conference, the DIT Department of Architectural Technology and Conservation will host a major conference of all graduates of the Diploma in Architectural Technology programme (1967-2004) in the Dublin School of Architecture, Bolton Street on 12 March 2005. The department is already in contact with the RIAI technician membership and with a large section of its overall graduate body. To facilitate contact with all DIT architectural technology graduates the department proposes to develop an email contact data base, and invites all graduates to email their contact details and year of graduation to [cormac.allen@dit.ie](mailto:cormac.allen@dit.ie).

### Annual Architectural Technology Prize Day

The Department of Architectural Technology and Conservation's annual Prize Day provides an opportunity to formally celebrate achievement in excellence by architectural technology students in all years and to acknowledge industry input to the programme through sponsorship of class trips, equipment purchases and student bursaries and prizes. Among the prizes awarded is the long standing JD Hackett prize for best first and second year students, the Forbo Ireland, Bank of Ireland and Deantus Projects prizes for the most improved first, second and third year students, and the Hayes Montrose prize for the best graduate which was awarded to Kirk McCormick for 2003-2004. Special book prizes are awarded by the British Institute of Architectural Technologists for first year students and by St Michael's House for the learning toy design, a joint project involving students of both architecture and architectural technology.

### Century Homes Award

A special prize was awarded to Peter Lawlor (architectural technology) and Laurence Lord (architecture) for their designs in the Century Homes sponsored joint project. Century Homes financial input in this project was focussed on funding a three day joint second year architectural technology and third year architecture class trip to buildings and manufacturing facilities related to timber technology and sustainable design across Ireland, including Tullamore County Offices, Letterfrack Furniture College, GMT library in Galway and the Century Homes factory in Monaghan. This joint endeavour has progressed considerably the school policy of enhanced integration of architecture and architectural technology, building on the unique position of the Dublin School of Architecture in providing programmes in both disciplines side by side.

### Tegral Sponsored Project

Industry sponsorship is being expanded this year to include a vertical group conservation project involving all three years of architectural technology. With third year students leading, six individual groups researched, sketched, measured and photographed six Dublin based churches by the nineteenth century Church of Ireland architect John Semple. The project will continue with a Tegral sponsored two day joint trip to Wexford where the groups will study and record six further churches by the same architect with the dual aim of academic study and community building among the students of the three years of the programme.

### Murray O'Loaire Sponsor Sketch Book Prize

Industry input to the programme is centred on architectural practices that facilitate access to sites for students of all three years, provide design team staff for specialist project related technology seminars, allow part time input to the programme by their employees, and who assist in providing external examiners to the programme on an annual basis. Extending this supportive input Murray O'Loaire Architects have offered a €1000 bursary for three dimensional freehand sketching in building technology problem solving which will be awarded annually to second year students based on their sketchbooks and sketch esquisse project submissions.

### St Michael's House Toy Project

In a unique collaborative project the Dublin School of Architecture has engaged with St Michael's House in designing and making timber learning toys for children with special needs. The project provides an opportunity for students of architectural technology to engage with students of architecture, with second year architecture students designing prototype toys, and the winning design being made by the first year technology students using the carpentry workshop under the supervision of Jimmy Stewart of the Department of Construction Skills. The completed designs are explained by the students and assessed by special needs teachers from St Michael's House who visit the School of Architecture. The teachers select the most appropriate toys and a prize is awarded at the annual Architectural Technology Prize Day for the best design and the best made toy, with the completed toys being given to St Michael's House for distribution among its clients on conclusion of the end of year examinations.



### Opening of Green Street

Pictured above, the new studios for final year architecture in Green Street were officially opened during the academic year by the then Minister for Education & Science, Mr. Noel Dempsey, TD.

### Weekly Industry Lectures

As part of an initiative to increase active engagement with industry, the Department of Architectural Technology and Conservation has introduced a weekly industry lecture series into the student timetable. The lecture series allows various manufacturers, suppliers, designers and speculative thinkers to present their work and thoughts to the combined three year student population, who eagerly seek information on latest practice and emerging technologies.

## SCHOOL OF REAL ESTATE AND CONSTRUCTION ECONOMICS

The Mission of the School of Real Estate and Construction Economics is to promote and develop the use of economic, financial and management concepts and techniques in the built environment generally and more particularly in the fields of construction and real estate. It does this by providing professionally orientated undergraduate and postgraduate courses and undertaking research, consultancy and other scholarly activity.

The School is the premier provider of undergraduate education in real estate and construction economics in the Republic of Ireland and is a significant centre for the advancement of learning and knowledge in these fields.

The School is organised into 2 Departments:

- Department of Construction Economics, which is responsible for the whole time and part-time Degrees in Construction Economics and Management.
- Department of Real Estate which is responsible for the Degree in Property Economics and the Certificate/Diploma in Auctioneering Valuation and Estate Agency.

The School of Real Estate and Construction Economics provides advice in resolving problems in the fields of real estate and construction economics and maintains close links with professionals working in real estate and construction economics.

## Recent Activities

The Construction Information Technology Alliance (CITA) was established in 2001 to encourage Irish Construction Industry firms to take full advantage of current and emerging Information and Communications Technologies. Membership consists of many high-profile firms and organisations

from across the construction sector. Alan Hore of the School is a Director. See [www.cita.ie](http://www.cita.ie) for details.

**The objectives of CITA are:**

- To inform the Irish construction sector of relevant IT developments.
- To establish and disseminate best practice in the use of IT in the construction sector.
- To encourage IT related research and training collaboration between the Irish academic sector and the leading firms in the Irish construction sector.
- To establish and maintain links with relevant national and international organisations.
- To encourage the strategic use of IT by all firms in the Irish construction sector.

The School participates in the European Challenge in Real Estate This is part of a programme funded by the EU, the RICS, the Estates Gazette, The Reaume Foundation, and CBRE Amsterdam. The programme brings together third level institutions from Holland, Poland, Denmark, Germany, UK, Slovakia and Ireland and allows students to participate in international teams investigating real estate markets in Europe.

The School has recently provided a professional development programme especially tailored for the staff of GMAC (General Motors Acceptance Corporation) Mullingar. This comprised modules in Accounting and Finance and Property Financing and Property/Real Estate valuation and appraisal methods.

Terry Prendergast a lecturer in the School advised the Dublin Docklands Development Authority on Strategic Environmental Assessment and the Dublin Docklands Master Plan. An EU Directive on SEA comes into operation in July. The Docklands Plan is the first plan to be subject to SEA under the terms of the Directive. The report on the SEA on the

Dublin Docklands Master Plan, which Terry co-ordinated and wrote, is available at [www.dublindocklands.ie](http://www.dublindocklands.ie). The All Party Oireachtas Committee on the Constitution (APOCC) recently published their Ninth Progress Report on Private Property. Two lecturers from the School of Real Estate and Construction Economics, Tom Dunne and Terry Prendergast, provided a consultative resource to this committee in pursuing its analysis and arriving at its recommendations.

The Head of the School, Mr Tom Dunne chaired the government commission on the Private Rented Residential Sector which reported to government in 2000 and now chairs the ad hoc Private Residential Tenancies Board PRTB.

## Henrietta Street Conservation Plan

Tracy Pickerill Lecturer with the School is part of a team commissioned by Dublin City Council in partnership with the Heritage Council to develop an agreed long term strategy for the conservation, rehabilitation and regeneration of Henrietta Street in the context of the fabric of Dublin city.

The team includes:  
Grainne Shaffrey; Shaffrey Associates (architect/urban design/planning)

Peter Cox; Carrig Conservation International (building fabric consultants)

John Montague; (architectural/urban history interpretation)

Tracy Pickerill; (heritage funding policies & mechanisms)

## Sectoral scoreboard

For the competitiveness of certain business sectors, such as pharmaceuticals and aerospace, it is well known that innovation plays an important role, yet there are also those where innovativeness appears less vital, for example in textiles or transport and storage.

In order to identify Europe's most innovative firms within each business sector and determine what factors promote that innovativeness, a special report entitled the Sectoral Innovation Scoreboard has been produced as part of the 2004 European Innovation Scoreboard exercise.

In order to carry out its analysis, the report had to identify 15 indicators in areas of innovative performance that would not breach national confidentiality rules. For many of Europe's business sectors, however, this was not possible, and the final Scoreboard covers ten manufacturing and four service sectors in 12 of the EU15 countries, as well as Norway.

The indicators used include: share of firms innovating in house; share of SMEs (small and medium sized enterprises) cooperating with each other; innovation expenditure as a percentage of total turnover; share of firms that patent; R&D (research and development) expenditures; and EPO and USPTO patents granted. All indicators were weighted equally except for the EPO and USPTO patent indicators, which had half the weighting of the rest.

Using data from the Community Innovation Survey (CIS), as well as from Eurostat and the OECD, the report identifies that the most innovative manufacturing sectors in Europe are electrical and optical equipment and chemicals and chemical products, and that the least innovative is textiles. The most innovative service sectors prove to be computer and related services, and business services.

Based on a country-by-country analysis of sector innovation leaders in Europe, the report finds that Belgium, Germany and Finland are all leading in at least five manufacturing sectors, and Belgium and Finland each lead the way in three service sectors. It adds that while the 2004 summary innovation index found Greece and Italy to be among the less innovative countries in Europe, a sectoral analysis shows that both are leaders in at least one sector — Italy in non-metallic mineral products and Greece in computer-related activities.

Finally, the figures reveal that either chemicals and chemical products or electrical and optical equipment appear in the top two most innovative manufacturing sectors for every country in the Scoreboard except Luxembourg.

The Sectoral Innovation Scoreboard is the first step in the establishment of a Sectoral Innovation Watch, a new Sixth Framework Programme project that will analyse the innovation performance at sectoral level in order to identify barriers and opportunities for innovation within the EU.

## Scoreboard reveals decline in EU industrial R &amp; D spending

The top 500 EU companies investing in research and development (R&D) spent a combined 101 billion euro on research in 2003 — down on the total for 2002, and in contrast to the increased investments made by leading non-EU companies.

The finding was revealed in the first EU Industrial Research Investment Scoreboard, published on 10 December as part of the Union's research investment action plan to raise R&D spending to three per cent of GDP. The figures are based on annual audited company reports and accounts, and focus on the EU's major R&D-investing businesses, regardless of where the research is carried out.

Whereas EU500 investments in R&D fell by two per cent between 2002 and 2003, research spending by the top 500 non-EU companies rose by 3.9 per cent during the same period. One obvious reason for the decline in European research spending is the fact that 12 of the EU's top 25 companies reduced their R&D budgets last year, four of them by double figure percentages.

However, the five biggest R&D spenders in Europe — Daimler Chrysler, Siemens, Volkswagen, Nokia and Glaxo Smith Kline — continue to hold their own globally. All five appear in the list of top 12 global companies in terms of research investments, with each having spent over four billion euro on R&D in 2003. But after these larger companies, the EU500 list shows a steep fall-off in research spending in comparison with the non-EU list.

Indeed, at 101 billion euro, the total R&D investment by the EU500 companies in 2003 was around half that of their non-EU counterparts, at 196 billion euro. Closer analysis of the scoreboard figures shows that the four largest EU sectors in terms of research spending are automobiles and parts, pharmaceuticals and biotechnology, IT hardware, and electronics and electrical equipment, which together represent 64 per cent of the total spent on R&D. The largest of these is automobiles, which accounted for 24 per cent of R&D investments, whereas in non-EU companies the biggest proportion goes to the IT hardware sector.

Within the EU, there is an obvious concentration of research-intensive companies in the block's largest economies, with enterprises based in Germany, France and the UK together accounting for 74 per cent of the EU500 R&D investment.

### Research commercialisation

To encourage and facilitate high quality applied research that has the potential for commercialisation, Enterprise Ireland offers a range of supports to researchers in 3rd level institutes. Proof of Concept funding (up to €90k) is aimed at individuals or small groups whose aim is to develop a product concept with a clear route to commercialisation. Applications may be submitted at any time and are assessed three times a year.

It also offers 100% funding to research projects aimed at major technology development around platform technologies or groups of products built around a new technology. The underlying technologies must be sound and there should be an identifiable market. The maximum amount of funding available is €350,000.

Finally, the aim of the Commercialisation Of Research and Development (CORD) grant is to bring a new product idea/business venture from third-level educational institutions to market. This grant is available to knowledge-based Campus Companies, academic entrepreneurs, and non-academics interested in forming a Campus Company. Research findings from Advanced Technology and Technology Centre programmes can be funded. The grant is for 50% of expenditure up to €38,000. For more information on these and other grants from Enterprise Ireland see: [www.enterprise-ireland.com](http://www.enterprise-ireland.com)

### UREKA Supplements

The purpose of the UREKA Supplement is to fund outstanding undergraduate students (from Ireland and abroad) to carry out challenging and meaningful research within an SFI funded research group for a duration of 10–12 weeks during the summer months. The research project should give the students an opportunity to extend themselves intellectually, unstrained by the limits of their degree courses and to work closely with researchers, post-docs and PhD students.

### UREKA Sites

The aim of a UREKA Site is to provide outstanding undergraduate students (from Ireland and abroad) with the opportunity to conduct a challenging and meaningful research project in an excellent research environment, while at the same time providing them with a range of seminars and events aimed at stimulating their interest in science or engineering and equipping them with the skills and knowledge needed to pursue a career in these areas. It is expected that UREKA Sites will become a powerful tool for attracting very highly motivated undergraduates who would provide a pool of high calibre potential PhD students. Non-SFI funded researchers are eligible to apply for a UREKA Site award. The closing date for these awards is February 11th 2005, more information is available at [www.sfi.ie](http://www.sfi.ie).

### Attracting undergraduates into research

The Science Foundation Ireland UREKA (Undergraduate Research Experience & Knowledge Award) programme supports active research participation by undergraduate students in any of the areas of research funded by Science Foundation Ireland (SFI). The UREKA programme endeavours to expand student participation in all kinds of research – whether disciplinary or interdisciplinary – encompassing efforts by individual investigators, groups, centres and others. UREKA projects feature high quality interaction of students with faculty and/or other research mentors and access to appropriate facilities and professional development opportunities.

Active research experience is considered one of the most effective ways to attract talented undergraduates and retain them in careers in science and engineering. SFI is particularly interested in increasing the participation of women in research and consequently the involvement of female students in UREKA projects is encouraged. The UREKA initiative features two types of support systems for undergraduate student research — UREKA Supplements and UREKA Sites.

### EU funding for SMEs

The European Commission has published a call for proposals for small and medium sized enterprises (SMEs) wishing to pursue horizontal research activities. The call is divided into two annexes:

#### Cooperative Research Projects (CRAFT):

This instrument provides support to SMEs with a capacity to innovate but without their own research facilities. It allows a number of SMEs from different countries with particular R&D problems or needs to assign a significant part of the research activities to R&D 'performers', such as universities and research centres.

#### Collective Research Projects:

Collective research is a type of research carried out by R&D performers (for example, research centres and universities) on behalf of industrial associations or groupings in order to expand the knowledge base and improve the overall competitiveness of large communities of SMEs.

### Funding for food research

The Department of Agriculture and Food recently awarded over €17m to a total 36 food research projects in the FIRM (Food Institutional research Measure) competitive open call for proposals held in April 2004. As 136 proposals were received, the success rate was 27% overall. The call was for proposals in the areas of Food Safety, Functional Foods, Food Ingredients, Advanced Food Technologies, New or Innovative Products or Processes, Consumer Foods, Beverages, and Dissemination. Proposals were received from Universities, Institutes of Technology and Teagasc in all theme areas. Advanced food technology proposals received the highest amount of funding (€4.2 million with a success rate of 45%). Food safety, with the lowest success rate (13%), received one of the highest total amount of funding (€1.9million). The Department plans to issue a specific targeted call for proposals in the New Year with the emphasis likely to be on food safety and microbiology.

### IST funding

The European Commission has issued a call for proposals under the Sixth Framework Programme's 'information society technologies' (IST) programme. The areas covered by this call include: nanoelectronics, technologies and devices for micro/nano-scale integration; a global dependability and security framework; and mobile and wireless systems and platforms beyond 3G.

Research projects are funded by two means; the "Integrated project" (IP) and the "Specific targeted research project" (STREP). An IP is intended to be broader in scope and ambition than a STREP. The Commission also provides funds for co-ordinating existing research projects — either just IST projects or including other projects also — in order to increase their benefits or impact etc. This is done by means of "Co-ordination action" (CA) contracts. Other work in support of the Priority can be funded by "Specific support action" (SSA) contracts. There is also an instrument designed to support the structuring and shaping of Europe's research capacity: the "Network of Excellence" (NoE). Closing date is the 22nd of March 2005.

### DIT awarded sustainable tourism funding

The Environmental Protection Agency has awarded over €300k worth of funding to DIT to carry out a 2-year cross-disciplinary research project that will examine the concept of tourism carrying capacity and develop processes to mitigate the negative impacts of tourism on the environment.

The concept of carrying capacity will be used to underpin tourism development and management through the adaptation of frameworks including: Limits of Acceptable Change (LAC) and Visitor Impact Management (VIM). Linking these two elements in the process of mitigating negative impacts of tourism will be a final output of this integrated research. Researchers from the Faculties of Tourism and Food (including DIT's Tourism Research Centre) and the Built Environment will collaborate on the project bringing to it a range of expertise in qualitative and quantitative research methods. The Tipperary Lakeside portion of Lough Derg on the river Shannon is the location chosen for the study area. According to the Tourism Development Strategy for North Tipperary, (CHL, 2004) Tipperary Lakeside is:

"An established, but not highly developed, tourism zone which has its own tourism promotion organisation, Tipperary Lakeside Tourism Cooperative Society. Lough Derg is the principal attraction and platform for tourism development in this zone. Numerous water-based activities are available for tourists, and there are several very picturesque villages located along, and close to, the lake shore. There is a good selection of restaurants, country pubs and tourist accommodation available. The main gateways are Nenagh, Birr and Portumna, and these are significant locations for visitor services and attractions".

To further support this study area, Tipperary Lakeside was selected as one of the 'Pilot Tourism and the Environment Project' areas. This pilot scheme was administered by the Department of Arts, Sport and Tourism.

Two postgraduate students will be recruited to the project which has three strands of research. An advisory committee of external experts and senior DIT staff will direct the team which comprises a total of six researchers including the two postgraduate students. When the project is completed there will be a number of practical outcomes including an executive training programme, a National training workshop for key players and an International conference on sustainable tourism development. For more information on this substantial project contact [elizabeth.kennedy@diti.ie](mailto:elizabeth.kennedy@diti.ie).

## DIT supports the launch of the Institute of Refrigeration Ireland

For the last five years, staff at DIT's National Maintenance Centre have been managing a sector-wide training programme on behalf of the refrigeration and air-conditioning sector in Ireland. DIT promoted and supported the establishment of an industry-led training network — Refrigeration Technology Skillnet — back in November 1999 and has worked in partnership with the network ever since. The principal aim of the network is to develop and deliver practical industry-led training solutions to meet common training needs across the sector. This has been achieved with some considerable success over the last five years and the work of the network continues.

However, the network board of management set themselves a secondary goal at the time the network was established. They committed themselves to working towards the formation of a new learning institute for the refrigeration and air-conditioning profession in Ireland. This goal required a great deal of debate, consultation and planning but now, five years on, the work has paid off. On Friday 26th November 2004, over 160 refrigeration and air conditioning professionals met in the Lucan Spa Hotel in Dublin to celebrate the launch of the Institute of Refrigeration Ireland.

The overall aims of the Institute are outlined below.

### Aims

- To promote the general advancement of refrigeration and air conditioning applications.
- To pursue excellence in the provision of refrigeration products and services for the community.
- To provide members with continuing learning opportunities and a means of exchanging ideas.
- To provide members with networking opportunities.
- To establish and maintain standards of education, training and conduct.



HELPING TO ORGANISE THE LAUNCH WERE EIDIN FINLAY, ENDA HOGAN AND LISA PADDEN FROM THE NATIONAL MAINTENANCE CENTRE AT DUBLIN INSTITUTE OF TECHNOLOGY

- To ensure that the titles for members of the Institute of Refrigeration of Ireland are given to suitably qualified candidates.
- To speak as the authoritative voice of the refrigeration and air conditioning profession in Ireland.

Enda Hogan opened the event by calling on five people within the profession to give their views on the need for an Institute. Gerry McDonagh (RSL Ireland), John O'Leary (Brian A Flynn), Joe Grealy

(Thermo King Europe), Jim Ffrench (Dublin Institute of Technology) and Paul Tingle (Tingle and Associates) each gave a different perspective on the need for an Institute, representing wholesalers, contractors, manufacturers, educationalists and consultants respectively.

A common theme throughout their presentations was the need for professionals within the industry to work together to make their voice heard. Decisions are being taken at national and European level with no direct representation from the

profession in Ireland. Government departments and state agencies have had no organisation to go to in order to seek input from the profession. As a result, policies, directives, regulations and standards have been imposed on members of the profession with insufficient forethought as to the practical and economic implications therein. Several speakers made reference to the Pressure Equipment Directive as a classic example.

Seamus Kerr, Chairman of Refrigeration Technology Skillnet, outlined the aims of the Institute and encouraged everyone within the profession to give it their full support. He stressed the fact that it is a learning organisation, a professional body made up of individual members, rather than a trade organisation or interest group. As such, it will draw its membership from across the profession, whether they are working for contractors, wholesalers, OEMs, consultants, end-users, state agencies or education providers. Membership will also come from every level of the profession, from apprentice up to managing director.

Six grades of membership will be available, student, affiliate, associate, member, fellow and honorary, though only the first three will be available in the early stages of the development of the Institute. Detailed information on the criteria for membership and the application process will be distributed widely and is available from the Institute's new website at [www.instituteofrefrigerationireland.ie](http://www.instituteofrefrigerationireland.ie). The website also gives general information on the aims of the Institute.

The voluntary board of Refrigeration Technology Skillnet are to be congratulated for getting things to this stage, in particular Seamus Kerr, Allen Davies, John Ryan, Vincent Weldon, John Sampson and Garrett Keenehan each of whom put in a huge amount of planning and groundwork over the past six months.

Congratulations also to the staff of the National Maintenance Centre at Dublin Institute of Technology, Enda Hogan, Eidin Finlay and Lisa Padden, who are



PICTURED ABOVE REPRESENTING BOTH THE FACULTY OF ENGINEERING AND THE FACULTY OF BUILT ENVIRONMENT AT DUBLIN INSTITUTE OF TECHNOLOGY WERE DON BYRNE, ENDA HOGAN, JOHN MURPHY, SEAMUS MURRAN, TOBY BYRNE, GARRETT KEENAGHAN AND JIM FFRENCH.

responsible for the day to day management of both Refrigeration Technology Skillnet and the Institute of Refrigeration Ireland. Together, they managed to organise a highly successful launch which bodes well for the future of the Institute. Now it's over to the people who make up the profession to lend their support and make this an ongoing success story. The Institute of Refrigeration Ireland is open for membership!

## DIT Lecturers write Pub Manual



PICTURED ABOVE FROM LEFT TO RIGHT ARE ANDREW O'GORMAN, SCHOOL OF CULINARY ARTS AND FOOD TECHNOLOGY AND PAUDIE O'DONNELL, SCHOOL OF RETAIL AND SERVICES MANAGEMENT

Two DIT lecturers – Andrew O'Gorman, School of Culinary Arts and Food Technology, and Paudie O'Donnell, School of Retail and Services Management – are the co-authors of a book just published by the Vintners' Federation of Ireland for their members throughout the country. The publication covers a wide range of topics relevant to the Licensed Trade, from Cellar Management to Marketing, and from Waste Management to Financial Control.

Both authors have a long association in educating bartenders from apprenticeship to management level and this is the second publication they have written for the Vintners' Federation. Paudie has carried out in-depth research in the area of licensing law for which he obtained an MLitt from Trinity College Dublin. Andrew has published five books, co-authored two and edited one on the licensed trade since 1983. He is a regular contributor to licensed trade magazines and in particular to Licensing World since 1972.

The VFI Pub Manual was launched at the Vintners' Federation of Ireland National Executive Council Dinner in Jury's Doyle Hotel, Ballsbridge on the 23rd November 2004.

## Ireland slowing down

The 2004 European Innovation Scoreboard (EIS) confirms Sweden and Finland as the EU's innovative leaders, with Estonia and Slovenia leading the ten new Member States.

This is the fourth edition of the EIS, which was established by the European Commission as part of the Lisbon Strategy to compare the innovation performance of the EU Member States. The scoreboard also contains information on Bulgaria, Romania, Turkey, Iceland, Norway, Switzerland, the US and Japan. The scoreboard is drawn up using 20 indicators, measuring human resources, the creation of new knowledge, the transmission and application of knowledge, and innovation finance. A composite indicator provides an overview of national performances.

This year's EIS indicates that the gap between the EU and the US and Japan remains constant. The gap between the EU and the US can largely be explained by three indicators, according to the EIS: patents; percentage of the working population with tertiary education; and research expenditure.

While Sweden and Finland maintain their leadership positions, they have lost momentum somewhat. Germany and Denmark are performing well above the EU average, with Denmark in particular moving ahead quickly. Other leading countries, such as the Netherlands, Ireland and France, are slowing down. Most of the new EU Member States are catching up, although from relatively low levels.

The 2004 EIS examines for the first time the differences between various sectors in terms of innovation. The most innovative sector in the EU is found to be electrical and optical equipment, while textiles and textile products bring up the rear.

Also included for the first time in this year's EIS is an evaluation of non-technical innovation. Studies have suggested that the advance of the US over Europe in productivity growth is not based solely on technological innovation. 'Non-technical innovation may well be the 'missing link' that prevents Europe from taking full advantage of new technological opportunities,' states the EIS.

The scoreboard looks at four aspects of non-technical innovation: non-technical change; implementation of changed organisational structures; implementation of advanced management techniques; and implementation of significant changes to aesthetic appearance. Luxembourg performs best in three out of four categories, while Germany comes second in all four.

Several countries labelled as average or poor performers on the overall scoreboard, such as Luxembourg, Italy, Greece, Portugal, Estonia and Slovenia, perform much better according to the indicators for non-technical change. This is considered encouraging, as 'substantial changes to organisation and management, as part of a modernisation process, may provide the necessary foundation for both an increase in per capita GDP and the capacity to innovate.'

The EIS working paper will be used to identify the main innovation policy changes that need to be made in order to reach the Lisbon targets. As a follow up, the Commission will update statistical data and methodology. The Commission also pledges to enter into a policy dialogue with the Member States, based on the open method of coordination, with a view to establishing a common framework of innovation policy objectives.

Ireland ranked No 1 for number of science and engineering graduates as well as value-added hi-tech manufacturing. However, in the categories "public R&D spend" and "Business R&D spend" Ireland fell into the "falling further behind" section of the Innovation Scoreboard chart. All of the information is available at: [trendchart.cordis.lu](http://trendchart.cordis.lu).

## Emersion

The EU has stated that it "must become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion" (European Council, Lisbon, March 2000).

To achieve this ministers of education agreed on three major goals to be achieved by 2010: to improve the quality and effectiveness of EU education and training systems; to ensure that they are accessible to all; to open up education and training to the wider world. All of these objectives are closely tied to the ethos and institutional strategy of the Dublin Institute of Technology.

DIT, working with Harbin Institute of Technology, China and University of Wolverhampton is lead partner of the Emersion project (Education to Meet the Requirements of Software Industry and Beyond) funded by the EU Asia-Link programme. The aim of the project is to establish, implement and evaluate an industry-oriented education model and system in China, particularly for the information technology sector.

The findings will be used to enhance the skills of academic staff and to improve the delivery of IT education programmes in all partner institutions. The project aims to benefit undergraduate and postgraduate students as well as faculty staff.

The Emersion project is now in its second year and the model that was developed to meet the identified requirements is being refined and prepared for implementation. The Emersion education model is a well researched, fully documented, industry-oriented educational model specifically tuned to meet the requirements of the evolving software industry in China. The model will facilitate business and collaboration between the EU and China and will be widely applicable and easy to adopt. For more information contact: [deirdre.lawless@dit.ie](mailto:deirdre.lawless@dit.ie).

## Lecturer wins gold

Tony Kiely, lecturer in DIT's School of Hospitality Management and Tourism was conferred with an MSc in Strategic Management at DIT's Faculty of Business graduation awards recently. Tony received both a gold medal for his dissertation work and the overall student excellence award. The external examiner from Boston University was so impressed with Tony's work that he asked for a copy of his thesis to be sent to Boston University library.

## Over 70% response rate for survey

The 'First Destination Statistics' for DIT graduates of 2003 had a response rate of over 70%. This survey collects information on the whereabouts of graduates one year after they have completed their studies. Head of DIT's Careers Service, Dave Kilmartin said that the response rate to the survey of over 70% gives a very real picture of how DIT's graduates have fared in their career to date.

"The good news is that as of April 2004, less than 4% of DIT graduates across all faculties were still available for work. Roughly 47% were in employment, and another 45% were enrolled in further study. By a large majority (74%), graduates deemed their course of study to have been 'relevant' or 'very relevant', which is a big plus for DIT student recruitment".

## FSAI end of year report

The Food Safety Authority of Ireland (FSAI) served 60 Enforcement Orders on Irish food business in 2004 compared to 64 in 2003. Enforcement officers served 42 Closure Orders, 10 Improvement Orders and 8 Prohibition Orders. The FSAI has urged all food businesses to take the opportunity to prioritise their food safety and hygiene practices in 2005, as it, along with the official agencies, will continue its policy of rigorous inspection of compliance with food safety regulations.

In December 2004 environmental health officers (EHOs) in the Western Health Board served a Closure Order on Corrib Poultry Products, Athenry, Galway, while EHOs from the South Western Area Health Board served a Closure Order on Curragh Lodge Hotel, Kildare. A third Closure Order was served by veterinary inspectors in Offaly County Council on Bilire Trading Ltd, Meenwaun, Banagher, Co. Offaly. Finally, EHOs in the Northern Area Health Board served an Improvement Order on Green Cottage Chinese Takeaway, Unit 1 Townyard Building, Townyard Lane, Malahide, Co. Dublin. Dr John O'Brien, Chief Executive, FSAI commented that while the Orders represent a downward trend, it was not enough and indicated that there were still some food businesses failing to comply with food safety legislation.

## DIT lecturer honoured by the Irish Hotel and Catering Industry



Detta Melia, pictured above was recently made a Fellow of the Irish Hotel and Catering Institute (IHCI) at their annual gala dinner in November. This is in recognition of the work she has done for the IHCI over the years and for her contribution to the profession generally. Detta is based in DIT's School of Hospitality Management and Tourism where she is a lecturer in hospitality management.

She lectures on a diverse range of subjects including: strategic management; food and beverage management; managing training; communications; customer excellence; managing performance; and food and beverage marketing. She has also delivered an extensive range of continuing professional development programmes to the Irish tourism industry and has provided her expertise to the industry through her association with DIT's Tourism Research Centre. Detta has a wide range of industrial experience in hospitality and tourism predominately in senior management positions in

hotels, conference and tourism organisations. She has worked in the Boyne Valley Hotel and Country Club where she did her management training under the leadership of Pat Fox. Then she worked with Funtrek as part of their team running bases on the continent. Detta's main role was managing the Funtrek base in Ireland and training personnel for Europe.

She also worked for CERT (now Failte Ireland) in their residential training centre in Killarney as a tutor on a number of courses and before joining DIT she worked for the Royal Hospital Kilmalmainham as Deputy Manager in the banqueting and catering department.

Detta has worked on a number of consultancy and training projects in Ireland and abroad. The most recent of which was a two-month tour in Vietnam setting up a hospitality and tourism college for the Vietnamese tourism authority on behalf of

LuxDevelopment, an overseas initiative of the Luxembourg Government. She also has worked extensively on Corporation North projects in conjunction with Failte Ireland (CERT) and spent some time as a Bord Failte Inspector. She is a member of the IHCI, and has served on its council where she held the position of chairperson of education. She is also a full member of the Irish Guild of Sommeliers and has completed two officerships on its council.

Detta is registered for a PhD on a part-time basis with Loughborough University in the UK. Her research interest is 'Performance Management and Measurement' with particular focus on hospitality best practice. She has recently published an industry report on "A study of the use of quantitative and qualitative performance measures in Irish hotel operations" and has delivered a number of papers at business and academic conferences.

## No fees for part-time courses

IBEC recently called on the Government to abolish fees for third level part-time courses to help accelerate the move to a knowledge-based economy. IBEC's Director of Human Resources, Brendan McGinty, said initial priority should be given to people who have not had third level education and those on lower incomes.

He also urged education providers to be more flexible regarding delivery of courses in terms of timing, modules, e-learning and multimedia. He has called for foundation qualifications in workplace skills for employees, regardless of sector or occupation, along with more formal accreditation of skills.

He said priority should be given to employers in vulnerable sectors and employees with poor basic skills. IBEC also called on the Government to increase its spending on the workplace training scheme, Skillnets, from the current €5m a year to €20m.

He said a recent survey of 400 companies representing 145,000 people showed that employers continue to increase their commitment to training. The average employee receives three to five days training a year, while seven out of ten companies have a training budget. On average, each company spends 3.15% of its payroll budget on training. According to their survey nine out of ten companies provide financial sponsorship and support for various employee development and education courses.

## Inviting Cinderella to the Innovation Ball

As employers and as creators of wealth, the service industries now dominate most developed economies, including Europe's. But innovation policy thinking remains focused on manufacturing. A new report from the European Commission's Enterprise DG calls for better understanding – and more vigorous promotion – of innovation in services.

The European Union is consciously engaged in transforming itself into a knowledge economy. But the extent to which this transformation has already taken place sometimes seems to be overlooked. The authors of a new Innovation study, to be published by the European Commission early in 2005, point out that services now account for around two thirds of EU employment and GDP. Of the 76 million jobs created in the US between 1970 and 2000, 93% are in services. Eurostat believes that over the past two decades in Europe, additional jobs have only been created in the service sector.

Innovation in Services: Issues at Stake and Trends' is a one of a series of studies from the Innovation policy unit of the European Commission's Directorate-General for Enterprise. The full series is available at: [www.cordis.lu/innovation-policy/studies/](http://www.cordis.lu/innovation-policy/studies/)

## Simply the best

In a national competition to choose five images for the 2005 St. Patrick's Day cards from an An Post, all FIVE of the winning designs were by third-year students of Visual Communications in DIT's School of Art, Design and Printing! The designs were chosen from a total of 70 entries nationally, representing students of every design course in Ireland. The winners are John Paul Murray (who had three designs chosen); Marie Nolan and Áine Kierans, and they will receive €1000 for each design.

An Post will now choose three of the five for their final production. In 2004 over 350,000 St. Patrick's Day cards were sold and posted worldwide. A percentage of each card sold is contributed to charity and last year this raised €155,000. Congratulations to John Paul, Marie and Áine. The project was co-ordinated by John Short and Tom Kelly, 3rd year Visual Communications Coordinators.

## DIT lecturer elected ELIA treasurer

Kieran Corcoran, School of Art, Design and Printing, has been elected as Treasurer of ELIA - The European League of Institutes of the Arts. ELIA is an independent membership organisation representing over 320 higher arts education institutions in 45 countries. Member institutions cover all disciplines in the arts including art, design, music, dance, theatre, media arts and architecture. It provides an extensive network of artists, teachers, senior managers, administrators and more than 250,000 students and facilitates and promotes dialogue, mobility and activities between institutions and cultures. Its biennial conference was held in Dublin in October 2002 and it is a significant honour for Kieran to be elected to this position by his peers, and for DIT also. Kieran was centrally involved in the organisation of the successful ELIA conference which took place in Dublin in 2002, under the title 'Comhar'. In addition to his role as treasurer, he will have responsibility for publications and communications also.

## DIT Documentary Aired on TG4

A documentary detailing a year in the life of the children of the Ballymun Wind Band project was broadcast on TG4 in December. The 30 minute documentary, entitled "A Fanfare for Ballymun", was produced by the DIT Media Production Unit. It follows the lives of children from St Joseph's Primary and the Ballymun Comprehensive involved in the Ballymun Wind Band.

The Band, which grew out of the Department of Education's 'Breaking the Cycle' initiative, had an eventful year in 2004. Along with numerous performances in the Axis Theatre and at a state governmental dinner, they became the first-ever school band to perform with the National Symphony Orchestra in the National Concert Hall.

According to Dr Tomas Cooke, DIT Community Links Manager “This Documentary gives ample evidence of what can be achieved when music becomes central to the learning environment. The teachers involved are convinced that involvement in the Windband can have powerful effects in education and that these effects may reverberate far beyond the music-making. The Bands’ concerts and other public appearances are always hugely supported by the community and music is now firmly embedded in their lives”.

The Ballymun Wind Band Project is an initiative of the Dublin Institute of Technology, the Department of Education and Science and the schools involved — St Joseph’s Primary and the Ballymun Comprehensive. As part of the project all of St Joseph’s 600 students are exposed to instrumental music making, which begins with recorder lessons in 1st class. This continues all the way through to their final year. From these lessons students are then selected to form a band that comprises an extensive range of wind, brass and percussion instruments.

Musician Ron Cooney, an inspired teacher, is the core of the project and has developed the abilities and knowledge of the young musicians to an extremely high standard. The work undertaken to develop music in the schools has been both unique and groundbreaking. It exemplifies the positive and effective use of music as a tool for the successful engagement of pupils in the learning process. Participation in the Project benefits the students in a variety of ways and impacts on their development on a number of different levels.

Reading music teaches the students to recognise patterns both aurally and visually from an early age. The actual playing of the instrument requires co-ordination of the intellect, the ear and the body and develops the memory. Students also develop discipline, social skills and responsibility through their participation in the project.

According to Dr. Cooke, ‘This is a wonderful community project with huge parental support and input. These children practice from 7.45 to 8.45 every morning which is a major commitment from all involved; parents, school staff, the community and of course the children themselves.’

### Technology Platforms

Technology platforms bring together all interested parties in a particular sector, or areas. These vary from one sector to another, but include research institutions, national and regional public authorities, financial institutions, users groups, regulatory authorities, policy-makers and NGOs. In each case, industry is the driving force.

The areas are chosen for their strategic importance or their potential contribution to the European Union’s goals of knowledge-based growth, competitive. Currently, there are 22 platforms in sectors such as aeronautics, hydrogen, nano-electronics, innovative medicines and steel. The most recent is in the textiles sector.

Technology platforms were developed to foster effective public-private partnerships. Through this cooperation, technology platforms can define the necessary research and technological priorities for that sector in the medium to long-term and coordinate European and national, as well as public and private, R&D investments. In doing so, technology platforms can make a significant contribution to the development of a European Research Area.

At a conference in December, the industrial leaders of existing technology platforms agreed to work towards a voluntary code of good practice, covering for example, openness, rules of participation and communication. They also exchanged best practices on how to keep Member States and regional authorities involved in and committed to the success of technology platforms.

### And finally

Scientists in the US believe that they have found the most accurate method yet to tell whether someone is lying — by using a medical scan normally employed to look for brain tumours. The method is based on the fact that when a person lies, they use different parts of their brain to when they are telling the truth. Researchers at Temple University in the US detected these changes by using functional magnetic resonance imaging (fMRI).

Conventional polygraph lie detectors work by looking for physical changes associated with lying, such as sweating and changes in heart rate and breathing patterns. However, their accuracy is limited to around 70 per cent, as many of these physical symptoms could be observed in a subject who is anxious, but not necessarily lying. Conversely, skillful liars can learn to cheat such tests. To test the fMRI method, the team took 11 volunteers and asked six of them to fire a toy gun and lie about what they had done afterwards — the other five were asked to tell the truth. All 11 were then scanned using fMRI while the scientists questioned them, and afterwards each was given a polygraph test for the purposes of comparison.

In every case, both the fMRI and the polygraph were able to separate the liars from those telling the truth. According to the fMRI scans, different and more areas of the brain were active when a person was lying. The head of the team, Dr Scott Faro, believes that they have discovered a more accurate way of spotting lies. ‘We plan to investigate the potential of fMRI both as a stand alone test and as a supplement to the polygraph with the goal of creating the most accurate test for deception,’ he said.

So does this spell the end for Pinocchio everywhere? No more whoppers, porkie pies, or even the odd little white lie? Unfortunately (or fortunately, depending on your level of honesty) there is one practical problem that the researchers have yet to overcome — a typical fMRI scanner is around the size of a small family car! Which means that the incriminating evidence of your contrived excuses and gross exaggerations will remain safely locked away in your own head — for now...