

Saleem Akram *BEng(Civil) MSc(CM)*

PE MASCE MAPM FIE FCIQB

Director, Construction Innovation & Development
Director, European Affairs

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Overview

- Brief info about the CIOB
- UK & European Construction Industry
- Management of Time in Complex Projects
- Construction Manager of the Year Awards
- Innovation & Research Awards
- Construction Simulation Centre
- European Projects

- Headquarters at Ascot, UK
- 12 Branches in UK
- Regional Offices in China, South Africa, Malaysia, Singapore, Hong Kong and Australia

- Established in 1834 – 176 Years
- Royal Charter - granted in 1980
- 46,000+ individual members in 115 Countries
- 450 Chartered Building Companies
- 160 Chartered Building Consultancies
- Maintains standards, practice and discipline, in the UK building and construction industry
- Itself an Awarding body

Royal Charter.....

- **Promote the science and practice of building.....**
- **Benefit of members and for the public good.....**
- **Raise standards in management of construction**

STRATEGIC PARTNERSHIPS

- **USA:** AMERICAN INSTITUTE OF CONSTRUCTORS (AIC),
- **USA:** CONSTRUCTION MANAGEMENT ASSOCIATION OF AMERICA (CMAA)
- **HONG KONG:** HONG KONG INSTITUTE OF ENGINEERS
- **POLISH** CHAMBERS OF CIVIL ENGINEERS
- **AUSTRALIAN** INSTITUTE OF PROJECT MANAGEMENT
- **CHINA:** MINISTRY OF CONSTRUCTION, CSCEC(CHINA STATE CONSTRUCTION AND ENGINEERING CORPORATION), NATIONAL BOARD OF CONSTRUCTION MANAGEMENT ASSOCIATION
- **GLOBAL:** International Construction Project Management Union (ICPMU)

UK

- **£100 billion turnover**
9% of GDP
- **Employs: 2.1 million**
- **Employs: 3.5 million**
(Directly & indirectly)

EU

- **€938 billion turnover**
10% of GDP
- **Employs: 11.5 million**
- **Employs: 26 million**
(Directly & indirectly)

STRENGTHS

- The UK has a large and varied construction industry.
- Many leading UK building contractors have the expertise and flexibility to undertake complex and varied projects.
- Many large UK contracting companies have the expertise to carry out work overseas.
- Large UK building contractors generally also have capabilities to provide facilities management services.
- From an ownership angle, most contractors operating in the UK are UK owned.

UK Construction Industry - SWOT

WEAKNESSES

- The construction industry comprises numerous small companies, many of which struggle to compete in a marketplace that is subject to increasing legislation and technical standards.
- The construction industry suffers from a shortage of skilled labour.
- There is still room for improvement in terms of the efficiency, e.g. in relation to customer satisfaction, completion cost and compliance with agreed completion dates.
- There are still weaknesses in project management, regarding the way in which main contractors and subcontractors work together.

UK Construction Industry - SWOT

OPPORTUNITIES

- There are opportunities for UK contractors to expand their overseas work.
- New building materials and construction techniques are being developed that could provide more cost-efficient methods of building.
- Climate change, greenhouse-gas emissions and other environmental issues are now of great importance to the whole construction industry. The provision of solutions to these problems represents opportunities for building contractors.
- For building contractors wishing to expand their UK business by acquisition, there is a broad range of smaller potential candidates to purchase.
- Urban regeneration is a high-profile government policy and provides an opportunity for contractors to work on mixed-use schemes, often with long-term facilities management requirements.
- There are promising long-term opportunities in the education, health and utility sectors.

UK Construction Industry - SWOT

THREATS

- To a considerable extent, the services provided by building contractors are dependent upon growth in house building.
- Many of the major projects carried out by building contractors depend on contributions from government funding. Delays in government programmes can have significant negative consequences on the financial results of contractors.
- Where land acquisition and planning consent are required for projects, some building contractors' business can be held up or even cancelled by adverse decisions by planning authorities.
- The outsourcing of building services, such as security and maintenance, is well established. However, there have been reports of instances where this work was taken on at unrealistic prices, resulting in deteriorating standards of work that led to dissatisfied customers.

A Guide to Good Practice in the Management of Time in Complex Projects

Overview of the CIOB Reforms

CIOB's Time Management Research initiated & Led by:

Keith Pickavance

Senior Vice President , Hill International

Past President, Chartered Institute of Building

Carried out in late 2007, concerning:

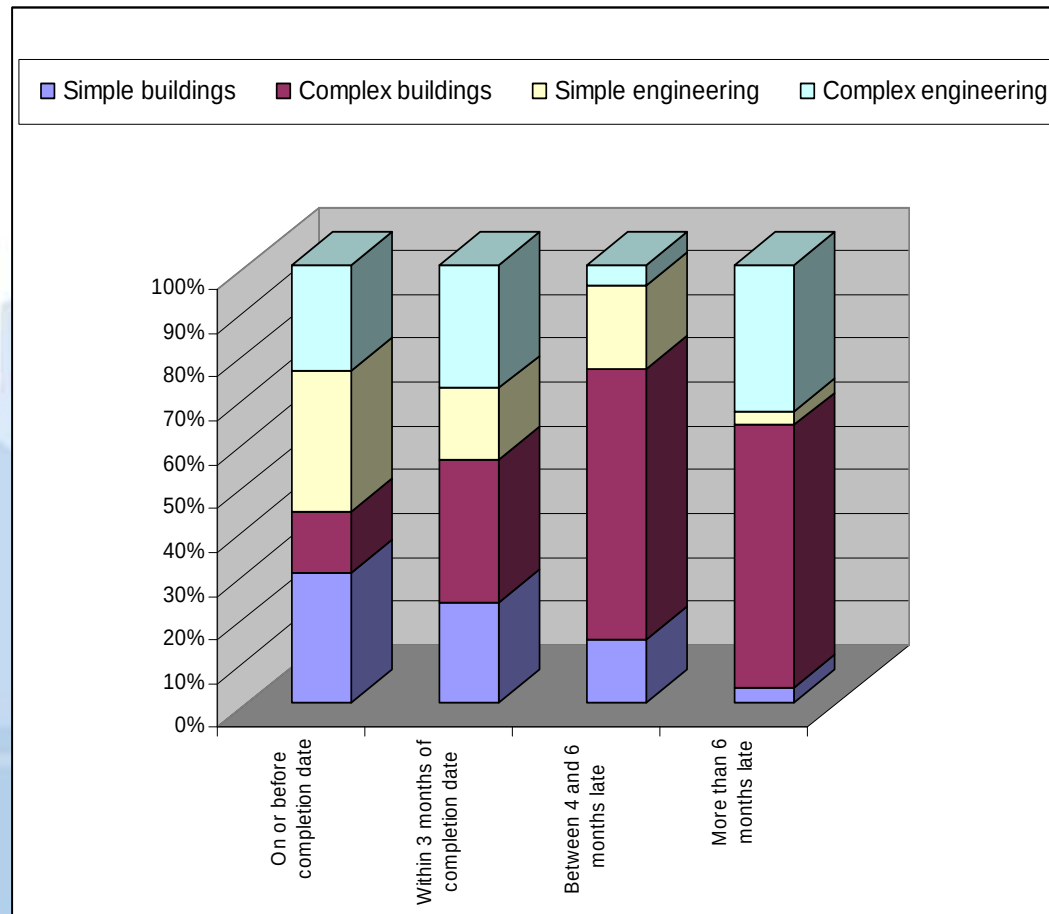
- The incidence of delayed completion in differing project types and contracts
- The way time is managed in design and on site
- The understanding of the industry of the role of the planning engineer and project scheduler

Carried out in late 2007, concerning (cont):

- 73 respondents covering 2000 projects over a three year period
- Report titled: “Managing the risk of delayed completion in the 21st century” published on 20th June 2008

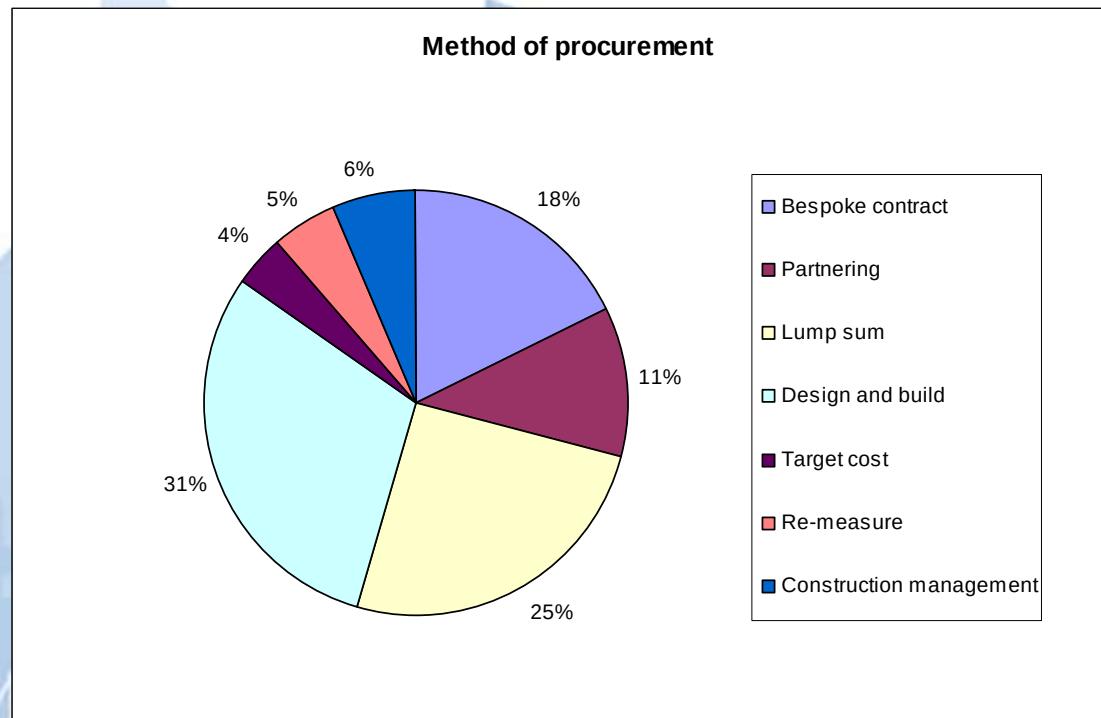
Results

The more complex the project, the less likely it is to be completed on time.



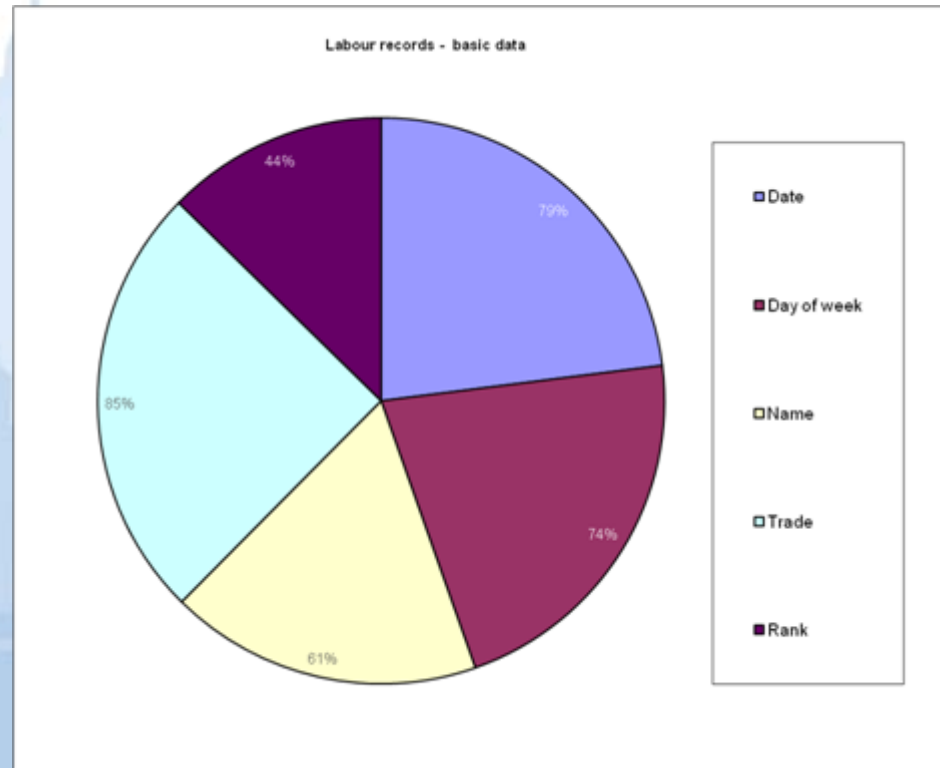
Results

The type of contract and procurement method has no discernable effect on the incidence of delayed completion.

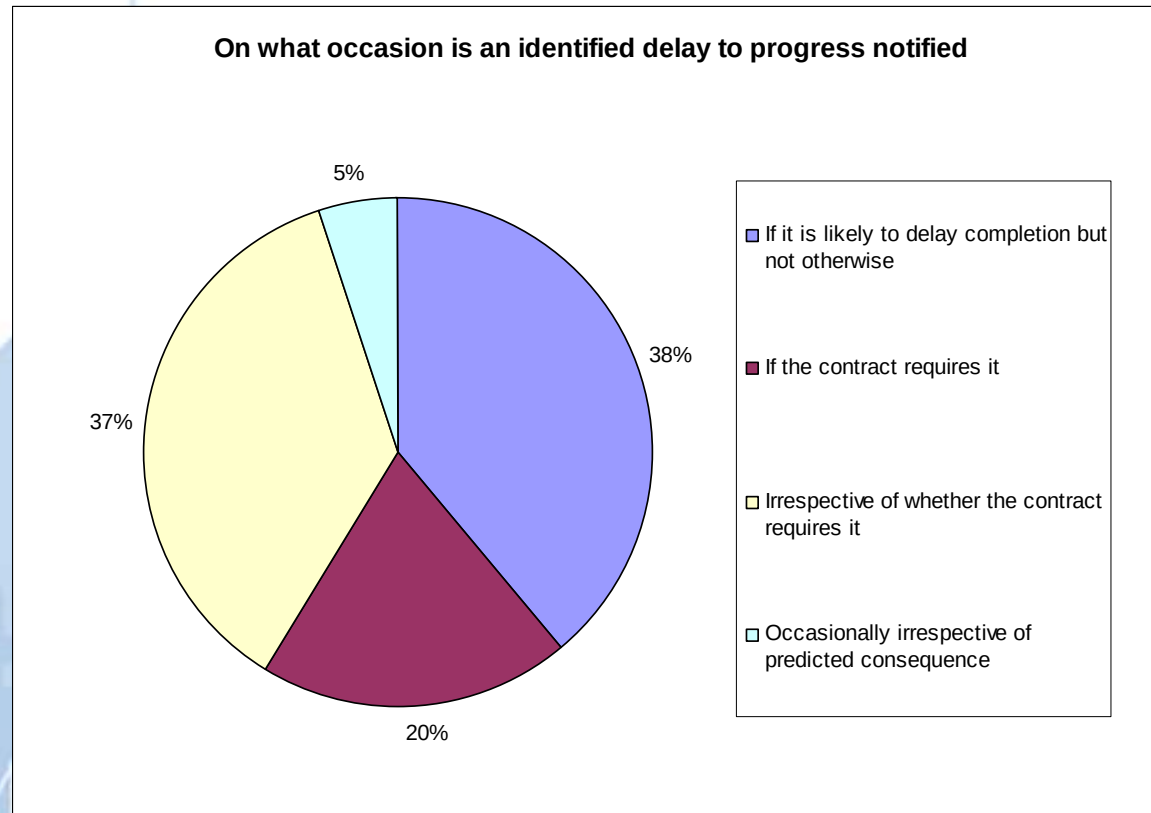


Results

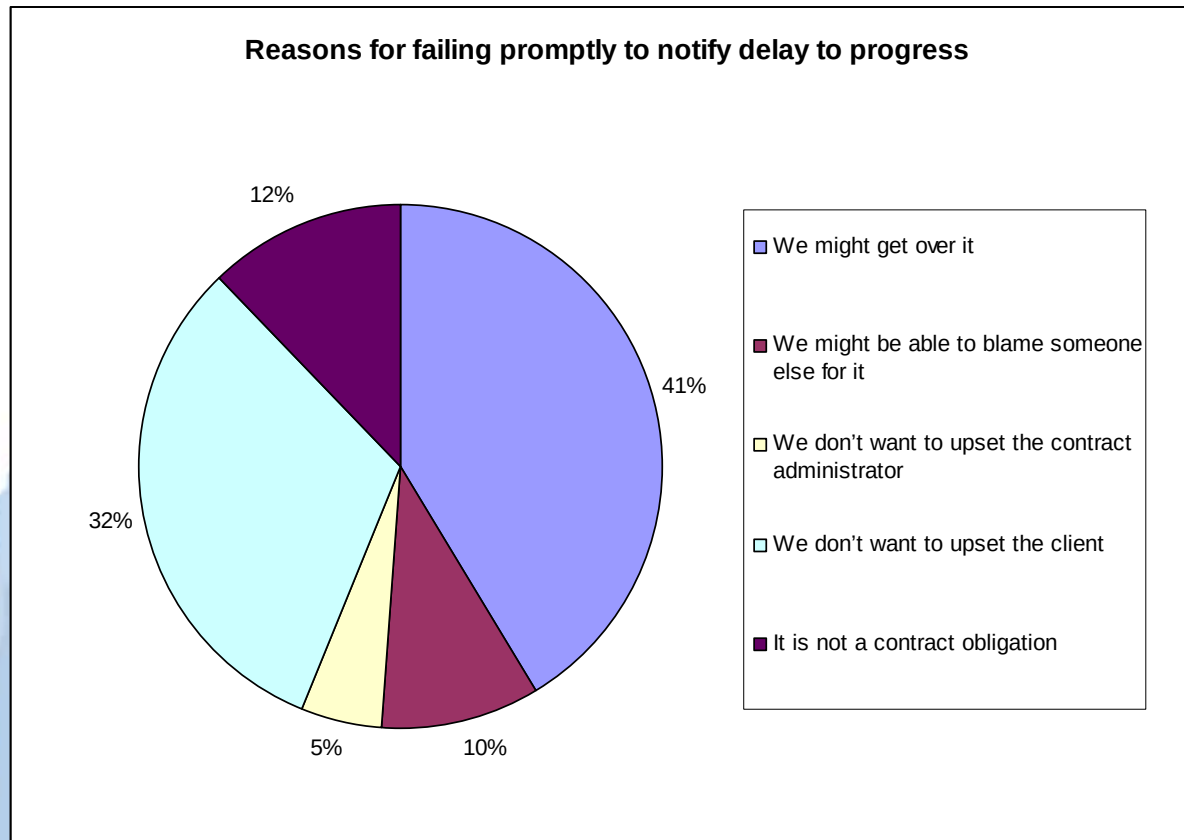
Records of resources used and work performed are usually inadequate for effective time control.



Delayed progress is not often notified promptly, or widely.



Reasons given for not reporting delay



Summary of Results

- The more complex the project, the less likely it is to be completed on time
- A high proportion of complex projects are likely to be completed more than six months late

Summary of Results

- The design team are rarely consulted by the contractor about time management strategy
- The contractor is usually held to be predominantly at fault for delayed completion

Summary of Results

- Very few projects are currently managed by reference to modern methods of time control
- The type of contract and procurement method has no discernable effect on the incidence of delayed completion
- Records of resources used and work performed are usually inadequate for effective time control

Research Conclusions

In construction, time is largely managed:

- By the contractor
- Intuitively, without reliance on the programme
- Largely by way of diary dates
- Rarely by way of a dynamic time model
- Rarely an reliable QA process
- Without excessive intra-disciplinary discussion

Research Conclusions

- Too many projects suffer from delayed completion
- Projects that suffer from disputed about delay also suffer from poor time control



Research Conclusions

- Time efficiency is rarely considered at the design stage
- Current forms of contract do not encourage effective time control
- Time control is generally left to the contractor

Research Conclusions

In regard to project planners and schedulers:

- It is difficult to distinguish the good from the bad before it is too late
- Few industry professionals understand the contribution that they make to time control
- There is a dire shortage of them in the industry
- Improvements must be made in standards, education and training

Why are we where we are?

1865 – Birth of quantity surveying

1870 – Birth of the Joint Contracts Tribunal

1915 – Invention of the bar chart

1922 – SMM1 published

1960 – Invention of the Critical path network

1970 – Birth of the project manager

1982 – PC commercially available

1993 – NEC contract published

1998 – Pentium chip and graphics accelerators

2002 – SCL Protocol

Why are we where we are?

In time management, there is currently:

- **no effective standard**
- **no formal education**
- **no formal training**
- **no accreditation**



It is against this background, that in September 2008, the CIOB set up a working group of varied professional interests from as far apart as Australia, America and the UK to develop a practical standard to which the industry could work, entitled:

A Guide to Good Practice in the Management of Time in Complex Projects

New Concepts in Time Management

- 
- A faint, blue-toned architectural illustration serves as the background. It features a mix of classical and modern structures, including domes, spires, and a large, complex truss bridge structure on the right side.
- **Strategy**
 - **Planning and scheduling**
 - **The time model**
 - **Project control**

The Time Model

The schedule is to be prepared and distributed electronically, not on paper.

Only the quality assured and independently audited schedule is to be used for identifying, from time to time, the intended:

1. durations, sequence, and the interface with any other contracts incidental to the work
2. dates and logic by which information is to be supplied;

The Time Model

Only the quality assured and independently audited schedule is to be used for indentifying, from time to time, the intended (cont):

3. dates and logic by which plant, materials, or goods are to be supplied, or work to be carried out by others;
4. free float and total float;

The Time Model

Only the quality assured and independently audited schedule is to be used for indentifying, from time to time, the intended (cont):

5. time contingency required by any designer, utility, contractor, or any sub-contractor and /or supplier

- *for whom the contractor is responsible*
- *for whom the employer is responsible*

The Time Model

There is no concept of a “Master Programme” or a “Contract Programme” that is required to remain unaltered.

The schedule is to be regularly reviewed and revised against improved information and updated and impacted with:

- 1. The progress actually achieved on all activities from time to time;**

The Time Model

The schedule is to be regularly reviewed and revised against improved information, and updated and impacted with (cont):

- 2.** the likely and actual effect of any delay to progress on completion of any sequence; and
- 3.** the likely effect of any proposed accelerative or recovery measures.

Where we are at?

- **Time Management member review of comments and amendments to the draft will take place between January 2010 and May 2010**
- **The next step once the Guide is complete is to provide an educational framework for schedulers**

The background of the slide is a light blue illustration of various architectural structures, including a bridge, a tower, and a large stadium-like building with a complex, lattice-like roof.

The Construction Manager of the Year Awards have celebrated excellence in construction since 1979 and the roll of past medal winners represents the cream of the industry.



No other awards in the UK construction industry are subject to the level of judging and scrutiny that the CIOB applies to these Awards.

This is why the Construction Manager of the Year Awards are so highly prized.



This is why year after year the industry's top managers are nominated for consideration. And it's why over **1100** of the movers and shakers of the construction industry make a point of attending the Awards evening at the Grosvenor House, Park Lane, London



Grosvenor House
Hotel, London

There are 12 categories covering managers on all construction projects from the SME up to the very largest retail and commercial developments. Each category has a Gold and Silver medal winner with all the Gold winners going forward for the final selection of 'Construction Manager of the Year'.

Construction Manager of the Year **12** categories:

1. New Build / Refurbishment Projects Over £45M
2. New Build / Refurbishment Projects Over £20M to £45M
3. New Build / Refurbishment Projects Over £15M to £20M
4. New Build / Refurbishment Projects Over £10M to £15M
5. New Build / Refurbishment Projects Over £7M to £10M
6. New Build / Refurbishment Projects Over £5M to £7M
7. New Build / Refurbishment Projects Over £2M to £5M
8. New Build / Refurbishment Projects £2M and below
9. PFI Projects
10. Restoration Projects
11. Residential Projects Under £14M
12. Residential Projects Over £14M



Construction Manager of the
Year 2008 - **Anthony Joubert**,
Camerons Ltd
Liberation Place & Liberation
Station, Jersey



Construction Manager of the
Year 2009 - **David Wilson**,
Morgan Ashurst plc
De Grey Court York St John
University



International Innovation & Research Awards (I&R)

- Brings together practitioners, education and training providers and policy makers.
- Enables entrants to be on the forefront of excellence and innovative working.
- Brings together and celebrates the best examples of work in the innovation and research fields.
- Increasingly high quality entries are submitted to the Awards from worldwide institutions.
- Six categories for the I&R Awards

The 6 Award Categories

1. Undergraduate Dissertation Award
2. Masters Dissertation Award
3. Innovation Research Paper Award
4. Innovation Achievers Award
5. Architecture and Surveying Innovation Award
6. Innovation Technology and Development Award

The CIOB welcomes submissions that:

- are from CIOB members or non-CIOB members, or from joint submissions.
- cover any construction related area and clearly demonstrate the benefits of innovation or new ways of working.
- are in clear and concise English and presented in such a way as to make its findings understandable to the widest possible construction audience

Undergraduate Dissertation Award

- For outstanding dissertation research from students.
- Dissertations must have been assessed as first class honours with a mark of at least 70%
- A premier award of £500 and commemorative medal awarded to the winner
- A runner-up award of £300 and commemorative medal.

Undergraduate Dissertation Award Winner 2008/09

Andrew Hart

‘Corporate Governance Practices of Australian Listed Construction Companies’

Andrew's thesis investigated the impact that global warming has upon the built environment and ways of controlling the temperature of the internal environment without resorting to air-conditioning.

Areas examined were thermal comfort legislation, thermal mass design and the use of cementitious material, derived in part from re-usable waste materials.



Masters Dissertation Award

- Recognition of the importance of research undertaken at masters degree level.
- A premier award of £750 and commemorative medal awarded to the winner
- A runner-up award of £500 and commemorative medal.

Innovation Research Paper Award

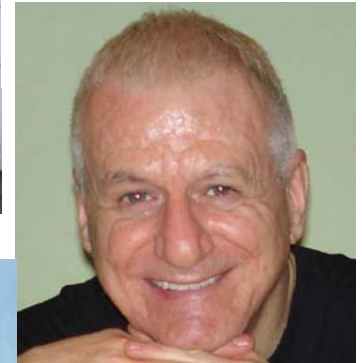
- Recognition of the importance of research undertaken undertaken at any stage throughout higher education either within the industry or in academia
- A premier award of £750 and commemorative trophy awarded to the winner
- A runner-up award of £500 and commemorative trophy.

Innovation Research Paper Award Winner 2008/09

Stuart Green, Simon Austin & Brian Dangerfield

‘The Big Ideas’

The ‘Big Ideas’ was a three-year research project funded by the Engineering and Physical Sciences Research Council (EPSRC). The research comprised a unique collaboration between the universities of Reading, Loughborough and Salford and involved extensive collaboration with industry. The project was predicated on the observation that the post-Egan industry improvement agenda was becoming increasingly disconnected from the day-to-day challenges faced by firms in the construction sector.



Innovation Achievers Award

- A brief report detailing a successful innovative practice.
- Encourages the sharing of innovative ideas and practices - can provide real benefits to members and other practitioners operating within the construction industry.
- A premier award of a trophy
- A runner-up award of a certificate

Innovation Achievers Award Winner 2008/09

Prof. Albert Chan

'Rapid Demountable Platform'

When you have to do maintenance work on a building in Hong Kong, you normally erect a temporary bamboo platform. This is simple and relatively cheap, but leaves a lot to be desired in terms of safety. It can be tricky to assemble on the outside of buildings, and even after it is ready, it's not easy to tell just how safe the structure is.

Here's an alternative. Prof Albert Chan and Prof Francis Wong and their research team in The Hong Kong Polytechnic University (PolyU) have been working on a safe, secure platform which can be installed simply from inside buildings. It is firm and steady. It can be assembled in just around 10 minutes.



Architecture and Surveying Innovation Award

- The FAS sponsors the Design Award for innovative practice in the areas of design, architecture or surveying.
- Should be focused on the advance of theory or practice of design, architecture or surveying.
- Applications that include aspects of integrated teams will be particularly welcome.

Architecture and Surveying Innovation Award Winner 2008/09

The Welsh School of Architecture

‘Ty Unnos – ‘House in One Night’

The sustainable Sitka spruce housing system (Ty Unnos - house in one night) is an ongoing collaborative research and development project, between the Design Research Unit Wales, at the Welsh School of Architecture, and Coed Cymru. The project is to employ the use of homegrown Sitka spruce in the design and construction of affordable, sustainable rural housing in Wales.



Innovation Technology and Development Award



The winner of the Technology Development Prize will see their innovative new concept proceed through the stages required for commercialisation.

The idea must drive an innovative development in technology, such as new advanced materials or process related concepts.

- A short report
- Must be based in the UK or elsewhere in Europe.
- Joint submissions welcome.
- *For more information about the innovation company, Pera see:*
www.pera.com

Innovation Technology and Development Award Winner 2008/09

Neville Hutchinson

'An Automatic Flood Defence Floating Barrier'

This project comprises two complementary parts; Shellcrete™, an ultra high performance structural concrete material that needs only one quarter of the weight and thickness of concrete for a comparative performance specification. This means that a slim lightweight structure can be designed that otherwise would make this flood defence project unlikely due to size and weight of the floatation barrier and chamber using normal concrete.



Innovation Technology and Development Award Highly Commended 2008/09

Mike McEvoy

‘Dwell-Vent Whole-House Ventilation System’

Dwell-Vent is an innovative Whole-House Ventilation System that uniquely employs natural forces to achieve both healthy indoor air quality, and lower household energy consumption, as explained at

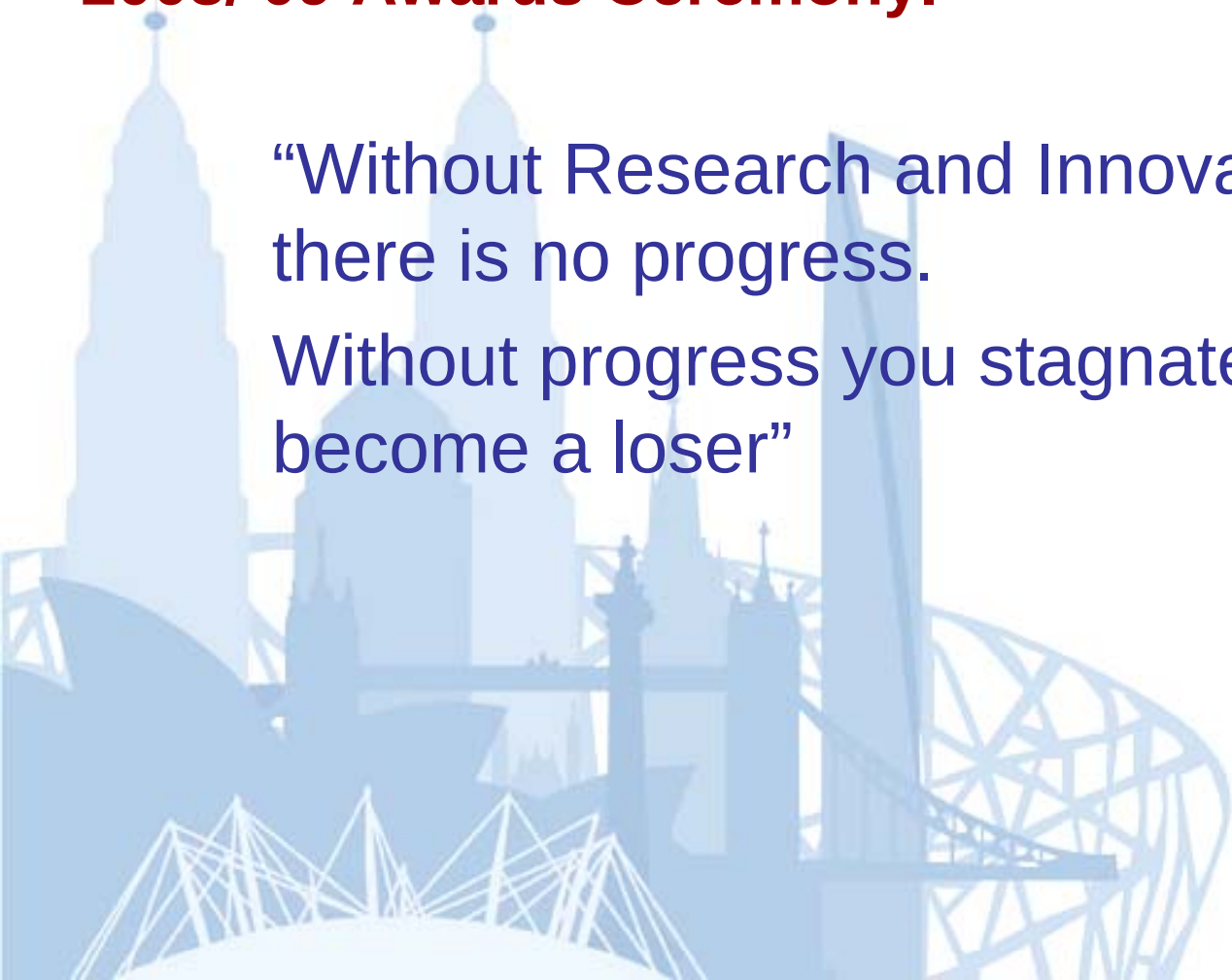
www.dwell-vent.com



**Sir Frank Lampl FCIOB,
Honorary Life President of Bovis Lend Lease
and Guest Speaker for the
2008/ 09 Awards Ceremony.**

“Without Research and Innovation
there is no progress.

Without progress you stagnate and
become a loser”



INTERNATIONAL INNOVATION AND RESEARCH AWARDS 2011

- **More awards**
- **Conference**
- **Exhibition**
- **300+ international delegates**

ACT-UK Simulation Centre

ACT-UK introduces a pioneering form of simulation training to the UK, using highly-skilled actors and an authentic environment.



ACT-UK
Simulation Centre

ACT-UK is based in Coventry and supported and funded by Advantage West Midlands.

Founder members of ACT-UK include:

- Coventry University Enterprises Ltd,
- LSC Learning and Skills Council Coventry and Warwickshire,
- The Chartered Institute of Building CIOB,
- K. B. Benfield Group Holdings Ltd and BMSC Leeuwarden, The Netherlands.

Virtual reality Simulation is the best training and development model available because it offers:

- Simulations which are all pre-planned with you,
- A unique and controlled measuring system to analyse and score your responses,
- A controlled environment that evaluates your progress,
- Constructive personal feedback in a supportive environment,
- Exposure of the underutilised wealth of your talents,
- Subjective and objective measurement of your performance,
- An environment where your talents can flourish.

Leonardo da Vinci Projects:

1. **“Improving Vocational Education In The Construction Industry Sector With The Aim Of Identification And Recognition Qualifications In European Union Countries”**
2. **“Trans European Promotion of Private Public Partnership” – “TEP – PPP”**
3. **“Common Learning Outcomes for European Managers in Construction II”**

Europe & beyond!

- ☐ develop robust, strategically focused Research & Development programmes which reflect productive and high quality research and the sharing of skills and expertise.
- ☐ more active participation in the EU Framework Programmes, as well as to search ways to establish a dialogue for partnerships
- ☐ work together with European and international partners in a collaborative working environment, thereby increasing credibility of creativity and boosting innovation and research in the built environment arena.

For more information, please contact:

Saleem Akram

Director, Construction Innovation and Development

Director, European Affairs

sbelbin@ciob.org.uk

Dr Sarah Peace

Research & Scholarships Manager

speace@ciob.org.uk

Piotr Nowak

Development Manager, European Projects

pnowak@ciob.org.uk