



THE INSTITUTION OF ENGINEERS OF IRELAND

SUBMISSION TO GOVERNMENT

ON

Achieving Competitiveness

**Outcome of 2004 Annual Conference
Galway October 2004**

DECEMBER 2004

INTRODUCTION

The Institution of Engineers of Ireland (IEI) is the country's largest professional body, with more than 21,000 members working in all sectors of the Irish economy. As a small open economy, Ireland's international competitiveness is critical to our economic performance. With this in mind, the Institution held its Annual Conference in October 2004 in Galway with the theme "Achieving Competitiveness through Engineering Excellence".

With high profile Irish and international speakers, and delegates from all sectors of the economy, the Conference provided a valuable forum for debating key issues relating to competitiveness. The two-day conference was highly significant in promoting interaction between industry, academia and the public sector.

This submission to Government summarises the key learning from our conference, and outlines important recommendations for both Government and the Institution itself.

1. BENCHMARKING & PRODUCTIVITY:

The Competition Authority¹ confirmed that there is little or no competition in the non-traded sector in Ireland, particularly in the services area. Inflation is high in sectors where regulated monopolists operate. The professions, insurance and banking sectors are also areas of concern for the Authority.

It is essential in both the public and private sectors to measure and publish productivity levels against relevant international standards and to set targets for improvement. Acknowledging the vital role that our education system will continue to play in the future development of the state, it is critical that it, too, be performance and benchmark-driven.

Where Irish organisations have been active in competitive markets, they have been forced to focus on their own productivity. The continuing decline in value of the dollar is now forcing an even greater focus here. The arrival of international competition into many Irish sectors has similarly forced domestic participants to focus on their competitiveness, with the construction industry being a prime example. A detailed analysis of the operations of one Irish organisation now operating internationally has revealed that up to 35% of activity is non value-adding, forcing a radical overhaul of working procedures to address this.

The final report of the Competition Authority into the engineering profession has shown the profession to be competitive, delivering significant benefits to the Irish economy and society in general. The pro-competition factors highlighted by the Authority's report include:

- An open regulatory regime where individuals or companies, including foreign-based firms, may provide almost any engineering service
- A range of educational institutions offering a large number of courses for individuals wishing to study engineering
- The process of achieving the Chartered Engineer title is exemplary of an open, pro-consumer, flexible system of regulating a professional title.

Recommendations for Government:

- Develop a culture of publishing performance & productivity data against relevant international benchmarking standards. This is to apply to all sectors of the economy, but with particular focus on the public sector and the education sector.
- Evaluate the approach of the engineering profession to promoting competition, and use as a benchmark for other professions

¹ Presentation by John Fingleton, Chairman of the Competition Authority

IEI's Commitment:

- Through its training courses and lectures, actively encourage and support employers of engineers to benchmark their productivity against best international practice.

2. INVESTMENT APPRAISAL:

The National Development Plan 2000 – 2006 (NDP) is a visionary document aimed at laying the foundations for Ireland's future economic and social success. The mission statement of the Department of Transport is a good example of the importance of transport infrastructure projects financed under the NDP:

“To underpin Ireland’s economic growth and contribute to social development through the efficient and effective delivery of a sustainable, appropriately regulated, safe and integrated transport system”

The scale of investment under the NDP is unprecedented for the State. Investment in infrastructure and in particular access, is key to promoting development of the regions in line with the objectives of the National Spatial Strategy. It is vital that the best possible return is achieved on this investment both for the remainder of the NDP, and for its successor. In particular, lessons learned in relation to investment appraisal and cost-benefit analysis must now be acted upon.

The decision of the Minister for the Environment, Heritage & Local Government to withdraw the Strategic Infrastructure Bill is very disappointing. The current planning regime imposes many problems in the delivery of major infrastructure projects:

- It takes too long for major projects to get to construction stage.
- The timescale and outcome of the planning process are unpredictable.
- The process costs too much.
- Insufficient emphasis is placed on Article 43.2 of the Constitution which makes reference to the “exigencies of the common good”.

A common appraisal framework for major capital projects does not appear to be used across different Government Departments. Apart from having an inconsistent approach to decision-making across Departments, the lack of a common framework means that selection of projects for investment is problematic when funds are low. Accurate, timely and independent cost / benefit analysis is a vital component in the appraisal process, along with the development of a value engineering approach to implementation

The Public Private Partnership (PPP) process has not achieved its potential contribution to infrastructure development. While reasonable progress has been made in the roads area, progress in other sectors has been minimal.

Recommendations for Government:

- A common appraisal framework should be used by all Government Departments for capital projects. Such a framework should use sophisticated cost-benefit techniques, where the benefits are assessed by an independent party. The framework should also use a contingent scale, where the level of forecasting relates to the scale of the investment.
- The current approach to PPPs should be reviewed to ensure risk is appropriately allocated between the parties to a contract and the cost of bidding is significantly reduced.
- Implement the Strategic Infrastructure Bill as a matter of urgency
- Ensure that medium and long term capacity and service standard requirements are taken into account in the initial planning and design of infrastructure projects.

IEI's Commitment:

- Make a comprehensive submission to Government on Infrastructure Development and the National Development Plan by early 2005.

3. RESEARCH & DEVELOPMENT:

The current investment in R&D is sizeable, by Irish standards, but relatively small in global terms. A clear opportunity exists for Ireland to become a world-leader on the return-on-investment aspect and management of R&D, where scale of investment is not a constraint. Private sector commercial engagement in R&D is vital to keep it focused and committed to delivering results. In particular, the development of an appropriate collaborative model for SME engagement in R&D would help indigenous enterprises move up the value chain.

Recommendations for Government:

- Commit to making management of R&D an area of national expertise.
- Government policy must ensure that private sector commercial engagement in R&D is encouraged through appropriate incentives.
- Together with relevant stakeholders, develop a collaborative model to encourage SME engagement in R&D. Such a model should detail the benefit to all participants in the process. It should facilitate clear understanding of risk management issues and the return-on-investment possibilities of engaging in collaborative R&D.

IEI's Commitment:

- Undertake Project Management collaboration with The Irish Management Institute to improve the management of R&D.

4. MARKET INTELLIGENCE / INTELLECTUAL PROPERTY COMMERCIALISATION:

In order for indigenous organisations to develop expertise in international markets and to build technological and applied R&D capability (Enterprise Strategy Group Report 2004), it is vital that up-to-date market intelligence is made easily available to the enterprise sector. Enterprise Ireland already provides some support in this area for its portfolio of organisations. Much greater resources need to be deployed here to develop a national resource for market intelligence, similar to the approach adopted in France.

Recommendations for Government:

- Develop a national capability in intelligence gathering, coordinated via Enterprise Ireland. Focus initially on niche areas appropriate to Irish enterprise

IEI's Commitment:

- Liaise directly with Enterprise Ireland to discuss intelligence gathering capability.

5. SKILLS DEVELOPMENT & TEAM WORKING

Ireland's recent economic success has been built on an excellent education system and a highly qualified and skilled workforce. IEI's annual conference highlighted the need to develop a wide range of skills for future engineers and business leaders, including marketing, project management, entrepreneurial, management, process development and interpersonal skills. Team working, both in-company and inter-company, is recognised as being vital as a more complex, network economy develops.

Good examples of strategic investment in upskilling were evident in many of the case studies presented at the conference, e.g. ESB's investment in project management, Enterprise Ireland's focus on management skills for its supported companies, the National Microelectronics Research Centre's attitude to collaborative working, HP Galway's ongoing upskilling as a survival strategy through several corporate changes (DEC, Compaq, HP). The process of competing for research funds has also improved entrepreneurial skills. However, this culture of upskilling and lifelong learning is not prevalent throughout all sectors of the Irish economy, and much work remains to be done.

IEI recognises the important role it must play in encouraging engineers to be proactive about developing their own skills. In particular, Irish engineers must be trained in the softer skills, become more customer-oriented and improve their project delivery capability particularly in relation to delivering a solution for all stakeholders.

It is vital to develop well-rounded professionals who excel in their customer interactions – IEI's professional titles (Chartered Engineer, Associate Engineer and Engineering Technician) are designed to stimulate and recognise such development.

Recommendations for Government:

- Accelerate upskilling in the public sector.
- Ensure National Training Fund resources are fully deployed, with a particular focus on lifelong learning.
- Support employers' investment in training & development via the tax system.
- Allow Professional Body membership to be tax deductible for all taxpayers.

IEI's Commitment:

- Roll-out a comprehensive training programme for engineers, particularly focusing on “soft” skills.
- Utilise the “*Engineers Journal*” publication to encourage engineers to upskill in appropriate areas (e.g. benchmarking productivity, intelligence gathering, collaborative working etc.)
- Continue its investment in Continuing Professional Development (CPD), to ensure best industry practice in training & development for engineers, in conjunction with the Department of Enterprise, Trade & Employment.