

# FORFÁS ANNUAL REPORT 2009



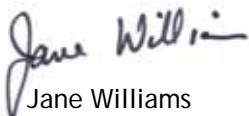
## To the Minister for Enterprise, Trade and Innovation

Pursuant to the Industrial Development Act, 1993, Forfás herewith presents its report and accounts for the year ended 31 December 2009.



Eoin O'Driscoll

Chairman



Jane Williams

Chief Executive



# Table of Contents

About Forfás	5
Forfás Board Members	10
Statement of the Chairman	14
Statement of the Chief Executive	16
Policy Activities	19
Discover Science & Engineering	91
Corporate Shared Services	97
The Irish National Accreditation Board (INAB)	101
Corporate Governance	107
Report of the Comptroller and Auditor General	112
Financial Statements	115
Appendix Advisory Councils	141



# About Forfás





## About Us

Forfás was established in 1994 as an agency of the Department of Enterprise, Trade and Employment, in the context of an economic environment which was substantially different to how Ireland’s enterprises now operate. Forfás’ role remains as relevant in today’s competitive and constantly changing global marketplace as it was when it was established.

Forfás has a range of functions which fall broadly into:

- Policy analysis and advice; and
- Other activities including awareness, accreditation and shared corporate services

which contribute towards the development of the environment in which enterprises in Ireland operate.



### Policy Analysis and Advice

Forfás’ policy functions include:

- Providing independent and rigorous research, advice and support. This work informs the Department of Enterprise, Trade and Innovation and wider Government in its responses to the fast changing needs of the global business environment. Forfás policy advice in 2009 addressed five overarching policy areas of critical importance to the success of enterprise in Ireland:

Enterprise	Supporting the development of sustainable enterprise
Knowledge & Innovation	Making research and technology work for business and Ireland
Competitiveness	Ensuring Ireland is a good place to live and to do business
People	Building world leading education and training to sustain and build Ireland's prosperity
Sustainability	Contributing to environmental sustainability and identifying enterprise opportunities

- Ensuring the coherence of policies across the development agencies supporting enterprise.
- Evaluating enterprise policy interventions.
- Promoting and influencing the outcomes of our advice.
- Forfás also provides research and analytical support to independent advisory groups which, during 2009, included:
  - Advisory Council for Science, Technology and Innovation
  - Expert Group on Future Skills Needs
  - Management Development Council
  - National Competitiveness Council

## Awareness, Accreditation and Shared Services

### Awareness

Forfás manages the national awareness programme, Discover Science and Engineering (DSE). This programme delivers a focused, strategic and quantifiable awareness campaign which aims to:

- Increase the number of students studying the physical sciences and mathematics - essential skills and knowledge for the development of Ireland as a Smart Economy;
- Promoting a positive attitude to careers in science, technology, engineering and mathematics; and
- Fostering a greater public understanding of the physical sciences, engineering and mathematics and their value to Irish society.

### Accreditation















The Irish National Accreditation Board (INAB) is the national body with responsibility for the accreditation of laboratories, certification bodies and inspection bodies and is a division of Forfás. It is Ireland's only signatory to the multilateral agreements (MLAs) for Europe through the European cooperation for Accreditation (EA) and worldwide through the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF).

It provides accreditation in accordance with the relevant International Organisation for Standardisation ISO 17000 series of standards and guides and the harmonised EN 45000 series of European standards.

### Shared Services

Forfás provides certain shared corporate services to IDA Ireland, Enterprise Ireland, Science Foundation Ireland, and the Office of the Chief Scientific Adviser to the Government. These shared services are provided in areas where Forfás can improve the efficiency and effectiveness of these services or where Forfás has obligations as the legal employer of staff in the agencies. These include aspects of financial and accounting services, human resources, pensions, facilities and property management and management of a Freedom of Information network for the enterprise agencies and some other public bodies.

## Forfás Board Members

			
<b>Eoin O'Driscoll</b> Chairman, Managing Director, Aderra	<b>Jane Williams</b> Chief Executive, Forfás	<b>Simon Barry</b> Chief Economist ROI, Ulster Bank Capital Markets	<b>Bob Brannock</b> President, European Operations, Genworth Financial
			
<b>Timothy Dullea</b> Former Chief Executive Officer, Tipperary Co-op	<b>Prof. Frank Gannon</b> Director General, Science Foundation Ireland	<b>Sean Gorman</b> Secretary General, Department of Enterprise, Trade and Innovation	<b>Miriam Magner Flynn</b> Managing Director, Career Decisions
			
<b>William O'Brien</b> Chief Executive, Wm O'Brien Plant Hire Ltd	<b>Barry O'Leary</b> Chief Executive Officer, IDA Ireland	<b>Paul O'Toole</b> Director General, FÁS	<b>Frank Ryan</b> Chief Executive Officer, Enterprise Ireland
			
<b>Dr Don Thornhill</b> Business Adviser Companies Director	<b>Michael O'Leary</b> Secretary to the Board		

Anne Heraty resigned from the Board in February 2009.

Martin Cronin, former Chief Executive of Forfás, retired from the Board in August 2009.

Jane Williams joined the Board on her appointment as Chief Executive in September 2009.

Pat Barry retired from the Board on a rota basis in December 2009.

William O'Brien retired from the Board on a rota basis in December 2009 and was reappointed in March 2010.

Simon Barry, Bob Brannock, Miriam Magner Flynn and Timothy Dullea were appointed to the Board in March 2010.

### Forfás Audit Committee

William O'Brien

Eoin O'Driscoll

Sean Gorman

One appointment is pending

### Forfás Management Development Committee

Eoin O'Driscoll

Dr Don Thornhill

One appointment is pending

# Forfás Management

## Chief Executive



Jane Williams<sup>1</sup>

## Competitiveness Division



Declan Hughes  
Division Manager

## Secretary's Office & Human Resources



Michael O'Leary  
Secretary & Human Resources



Martin Craig  
Finance



Adrian Devitt  
National Competitiveness,  
Sustainability &  
Infrastructure



Eoin Gahan  
Regulation, Trade & Policy  
Foresight



Eamonn Kearney  
Systems & Facilities

<sup>1</sup> Martin Cronin retired as Chief Executive, Forfás in August 2009

**Enterprise and Regional  
Policy Division**



Helena Acheson  
Division Manager



Peter Brabazon  
Discover Science &  
Engineering



Maria Ginnity  
Enterprise Policy &  
Communications



Andrew Stockman  
Tax/Finance Policy &  
Enterprise Surveys

**Science, Technology,  
Innovation and Human  
Capital Policy Division**



Martin Shanahan  
Division Manager



Marie Bourke  
Human Capital & Labour  
Market Policy



John Dooley  
Science & Technology Policy



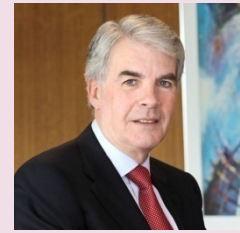
Karen Hynes  
Innovation Policy

**Irish National  
Accreditation Board**



Adrienne Duff  
Manager

## Statement of the Chairman



Eoin O'Driscoll,  
Chairman

2009 was a very challenging year for the Irish economy and a difficult one for companies operating here. First estimates indicate that the collapse in consumer confidence coupled with a sustained contraction in activity in the construction sector led to a reduced GDP of 7.1 per cent for Ireland, the biggest decline in output ever recorded in a single year, and employment decreased nationally by 8.1 per cent.

During 2009 we began to see improvement in Irish cost competitiveness, with the costs of energy, property and labour falling in parallel with a growing recognition that costs must be reduced to align with the levels of our main trading partners for sustainable, long term growth. A relative weakness in the euro has also contributed to improved cost competitiveness. Ireland's unit labour costs fell by 2.4 per cent during 2009 relative to the euro area average and while improvements to unit labour costs are welcome, a significant gap in cost competitiveness still remains and further work is required particularly in the areas of utilities and professional services. A range of utility costs in Ireland remain expensive including broadband services, waste disposal and mobile phones while the costs of professional services have taken longer to respond to the recession and some sectors have experienced only marginal price falls. There are also increasing concerns over the costs of insurance. Consumer price levels in Ireland, despite subdued growth since September 2008, continue to be among the highest in the euro area. A return to substantive economic growth will depend on our creating the right conditions nationally to support a vibrant export sector and we must continue to build on improvements in competitiveness to achieve this.

An improved cost base is a platform from which we can compete and generate revenue in international markets. Enhanced productivity and promoting sustainable growth through innovation will enable us to build on that platform and compete more effectively. Innovative products and services that provide superior value in the marketplace and harness the results of our investment in science, technology and innovation will give us that competitive edge. Ireland's move towards a Smart Economy and the Innovation Ireland concept are being fostered nationally to provide a framework for long term export growth. Forfás is working closely with Enterprise Ireland and IDA Ireland to support the development and expansion of innovative exporting companies. Data shows that 45 per cent of Irish firms are innovation active. An estimated €2.6bn, representing 1.68 per cent of GNP, was spent on R&D in Ireland in 2008 with €1.68m performed by industry, a demonstration of how the world class research being conducted in Ireland is linking into industry to create strong and competitive niche business areas.



Decisive action by government in tackling the public finances and recapitalising Ireland's banks is restoring confidence in the Irish economy. As world trade recovers and strong markets are established we must ensure that our enterprise base has the confidence, the people and the funding to grow. We must continue to invest in education and up-skilling and we must provide sound financial solutions for companies with strong potential.

Now more than ever before, we must work together to develop clear measures and timely strategies. To ensure we are well positioned to take advantage of the anticipated economic upturn, a careful balancing act between successfully addressing short term issues and taking action that will deliver outcomes in the medium to long term is required.

On behalf of the Board, I am pleased to report on the activities and outcomes of the work of Forfás during the last year. The organisation delivered policy advice and analysis to support Government and enterprise in tackling urgent areas of concern that required immediate solutions, whilst also keeping a firm eye on the long term to prepare for enterprise needs further down the line. I would particularly like to acknowledge the contribution of Jane Williams, who joined us in September following the retirement of Martin Cronin as Chief Executive. Moving from her role as Managing Director of The Sia Group, Jane made a very strong and valuable contribution to the work of the organisation and led Forfás staff through a most difficult time during the last nine months. I thank her for her commitment and dedication and wish her well in her return to the private sector.

Although a challenging year, Forfás staff rose to this challenge and produced a significant body of work which has had a meaningful impact on informing and enabling Ireland to move forwards and upwards through this unprecedented time.

## Statement of the Chief Executive



Jane Williams,  
Chief Executive

This has been a successful year for Forfás, despite the challenges. It has delivered significant policy outputs in a very changed environment. Evidence based policy advice is in strong demand as policy makers and business people seek to chart a route through the current fog of economic and financial uncertainty. Forfás activities in accreditation services, awareness programmes and shared services have also experienced strong demand - enabling accreditation, enhancing students' engagement with science, mathematics and engineering, and providing governance.

As a businessperson, who moved into the public sector for a short period of 9 months, I have been struck by the complexity of our public administration system and I marvel at the skill and patience of those who operate within it. A dedicated, talented group of civil servants, politicians and public servants operate within this system. I hope the current efforts at public sector reform facilitate the release of efficiencies and effectiveness in the culture, structures and working environment of the public sector, so that all of its talents may be harnessed to underpin recovery and to contribute to economic and social success for Ireland over the next decade.

Forfás has offered analysis and advice on issues for enterprise, both to tackle immediate issues and to overcome the challenges in recovery. Among the key areas where Forfás advised on immediate actions to assist Government and the enterprise sector in coping with the crisis were:

- improving access to finance and credit for firms;
- putting in place fiscal measures to sustain jobs and productive sector investment, in the supplementary Budget 2009 and Budget 2010;
- reprioritising infrastructure investment to meet the needs of enterprise in the context of tighter public finances;
- reducing the costs of doing business in Ireland, in particular energy, waste management and business services costs;
- improving the efficiency and effectiveness of labour market activation programmes; and
- improving our productivity and innovation performance.

The focus of future-oriented policy advice in 2009 was on the actions needed for a sustainable reversion to productivity and export-led growth, including:

- accelerating investment in next generation broadband networks to drive growth in the enterprises of today and in future growth sectors;
- evaluation of labour market programmes;
- assessment of the priorities and returns from investment in science and technology;
- sustaining and growing our attractiveness as a place to do business for key growth sectors, such as life sciences and the green economy, and addressing skills needs and management development requirements for the future;
- ensuring an appropriate return on the investment in research and higher education by sustaining commercialisation efforts and by encouraging the flow of graduates to enterprise;
- improving the competitiveness of our regions and cities to ensure all areas contribute to their full potential and to the recovery;
- addressing the challenges of climate change in national and international negotiations in a way that improves the sustainability and competitiveness of enterprises in Ireland while capturing the economic opportunities as they emerge; and
- responding to the compelling calls by industry for more students in science and engineering, with the quality of those students being underpinned by improving performances in maths at second level, through the work of the Discover Science and Engineering awareness programme.

Looking forward to 2010, the work of Forfás will address:

- Identifying areas for job growth;
- Ensuring the unemployed are close to the labour market to take advantage of future job growth as it arises;
- Supporting enterprise to enable them to stabilise and return to sustainable growth;
- Ensuring adequate credit is available for business;
- Developing both indigenous enterprise and maintaining foreign direct investment;
- Continuing to improve on cost competitiveness;
- Improving productivity and driving innovation including investment in infrastructure, and specifically next generation networks; and
- Ensuring a return from our investment in R&D.

To deliver on its role Forfás has addressed a number of strategic challenges over the last year:

- The world has changed and the new landscape is not yet clear. Enterprises have been facing a radically changed environment over the last two years. Providing policy advice in a fast moving and uncertain environment while the economists are rethinking their models and assumptions is not for the faint-hearted. Sound advice is more important than ever to ensure that decisions on interventions are based on reality and that they work.

- Balancing short term needs and a mid term response. Crisis correctly focuses attention on the immediate. Success requires short, medium and long term strategies. Forfás has a deep well of expertise and analysis. During the emergencies of this year, this has been drawn upon to provide rapid, well-founded answers and advice. To continue to deliver in and for the longer term requires that the well of analysis and insight be topped up. Maintaining the right balance between responsiveness and the generation of new work is crucial.
- Like enterprises, Forfás has delivered more, with less, over the last year to 18 months. In common with Irish businesses, Forfás has managed with less while increasing its productivity and output. This is at a time when demand for policy analysis, accreditation services and governance standards are all increasing significantly.

Forfás enters 2010 in a very strong position, reaffirmed by the appointment of five new business people to fill vacancies on the Board and the approval by the Minister for Finance to appoint a permanent Chief Executive. These appointments will ensure that Forfás can continue to provide expert analysis and advice informed by both an enterprise and public policy perspective.

The work programme summarised in this Annual Report was developed and delivered by the talented team of managers and staff in Forfás under the direction of a dedicated Board of people expert in enterprise and enterprise development, with the support of colleagues in the Department of Enterprise, Trade and Innovation and other government departments; and sister agencies, IDA Ireland, Enterprise Ireland and Science Foundation Ireland. I would also like to acknowledge the important contributions of the members of the Advisory Councils, particularly:

- Dr Tom McCarthy, Chairman of the Advisory Science Council
- Una Halligan, Chairperson of the Expert Group on Future Skills Needs
- Prof. Frank Roche, Chairman of the Management Development Council
- Dr Don Thornhill, Chairman of the National Competitiveness Council.

I have received the support of all of the above since I accepted the role of Chief Executive, on an interim basis, on 7 September 2009. I would like to acknowledge the contribution of my predecessor, Martin Cronin, who led the work of Forfás for the previous seven years. I am particularly grateful to the Chairman of Forfás, Eoin O Driscoll; to the Secretary General of the Department of Enterprise, Trade and Innovation, Sean Gorman; and to the team of people who manage the Divisions and Departments in Forfás. I have been privileged to lead such an organisation in these challenging times. Studies show that experiencing the loss of success is a strong factor in underpinning the drive for, and achievement of, future success. Ireland has experienced success before, with the knowledge of the last two years behind us, we can work towards achieving success again.

# Policy Activities

<b>Enterprise</b>	<b>23</b>
Access to Finance	24
Forfás Budget Submissions	24
Reducing Administrative Burden on Business	25
Economic Appraisal of State Support to Enterprise Projects	26
Productivity	26
SSTI Enterprise Feedback Group	26
Health Life Sciences in Ireland - An Enterprise Outlook	28
Report of the High Level Group on Green Enterprise	30
Energy Related Goods and Services	31
Analysis of Agency Intervention	31
Enhanced Agency Collaboration	32
Enterprise Surveys	33

<b>Knowledge &amp; Innovation</b>	<b>39</b>
Research Strengths in Ireland: A Bibliometric Study of the Public Research Base	40
Ireland's International Linkages in Science, Technology and Innovation	41
Irish Representation on CREST	41
Strategic Forum on International S&T Cooperation (SFIC)	42
Programming of Research in Europe	42
European Strategy Forum on Research Infrastructures	43
Evaluation of Ireland's Participation in EU Framework Programme 6 (FP6)	43
Optimisation of Irish Engagement in EU Framework Programme 7 (FP7)	44
Review of Supports for Exploitation of Intellectual Property from Higher Education Research	45
Commercialisation Strategy for Nanotechnology in Ireland	46
Innovation Taskforce	47
R&D and Innovation Surveys	48

Advisory Council for Science, Technology and Innovation	52
Sustaining Investment in Research and Development	52
The Role of PhDs in the Smart Economy	53
Research to Revenue Workshop	54
Maximising the Environment for Company R&D	55

<b>Competitiveness</b>	<b>57</b>
Sharing Our Future: Ireland 2025	58
Restoring Ireland's Competitiveness	59
Regional Competitiveness Agendas	59
Next Generation Networks: Performance and Policy Actions	60
Infrastructure Priorities, Coordination and Delivery	62
Energy Cost Competitiveness	62
Ireland's Trade and Investment Policy	63
Trade Negotiation Support	63
Trade Facilitation	63
The Impact of Sterling Depreciation for Ireland	64
Trade Data and Analysis	64
A New Strategy for Trade, Investment and Tourism	64
Europe 2020	65
National Competitiveness Council	66
Annual Competitiveness Report 2009; Benchmarking Ireland's Performance	66
Annual Competitiveness Report 2009; Ireland's Competitiveness Challenge	
Getting Fit Again: The Short Term Priorities to Restore Competitiveness	68
Driving Export Growth: Statement on Sectoral Competitiveness	68
Cost of Doing Business in Ireland	69
Our Cities: Drivers of National Competitiveness	69
Statement on Energy	70
Statement on Education and Training	71

<b>People</b>	<b>73</b>
Review of Labour Market Programmes	74
Profile of Employment and Unemployment	75
Economic Migration Policy	75
National Strategy for Higher Education	76
Expert Group on Future Skills Needs	77
Future Skills Requirements of the Food and Beverages Sector	77
Future Skills Requirements of the Wholesale and Retail Sector	78
Skills in Creativity, Design & Innovation	79
Submission to Higher Education Labour Market Activation Response Group	80
Submission on Skills to the High Level Group on Green Enterprise	80
Statement on Funding for In-Company Training From The National Training Fund	80
Collaboration with FÁS Skills and Labour Market Research Unit	81
Management Development Council	82

<b>Sustainability</b>	<b>85</b>
Long Term Energy Framework	86
Outcome of EU Council Negotiations on a Post-Kyoto Climate Change Agreement	86
Towards Copenhagen: Issues for Enterprise	87
Waste Management Benchmarking	88
Ongoing Research and Policy Advice to the Department of Enterprise, Trade and Innovation's Environment Unit	89



# Enterprise

2009 was a particularly challenging year for enterprises in Ireland. The collapse in demand on domestic and international markets, the fall off in construction activity coupled with constraints on credit availability, and the consolidation required in the public finances resulted in a sharp focus on policy actions to help viable enterprises survive and prepare for the upturn.

Throughout the year, Forfás undertook research and analysis on a range of issues to help respond to the immediate crisis facing businesses with the goal of ensuring that supports for enterprises are meeting business needs for the future. This work ranged from assessing the options for improving access to finance for firms, the tax and expenditure priorities for the two budgets in 2009, economic appraisal of supports from the enterprise development and reduce red tape. In addition Forfás led on major reviews of the opportunities for future growth in the life sciences and green economy areas.

## Access to Finance

Credit insurance plays an important role in providing protection to sellers against all or part of the risk of payment default by a buyer. During 2009, withdrawal and reduction of short term credit insurance covering a period of less than two years by private credit insurers presented a significant and complex problem. It affects both sellers who want to ensure that they receive payment and buyers in their ability to secure and fund their inputs from suppliers. These credit insurance problems are a recent development closely linked to uncertain global and domestic economic conditions, where private credit insurers are acting to reduce their risk exposure.

At the request of the Department of Enterprise, Trade and Employment (DETE) and following extensive consultation, Forfás and Enterprise Ireland identified and assessed a range of policy options to alleviate the problems being experienced in relation to credit insurance. The assessment showed that the impact of a state-supported export credit insurance scheme would be limited, given the likely high cost to the State of introducing an export credit insurance scheme, the forecasted significant increase in default rates and the increased premium cost to companies.

Access to finance is of critical importance to enterprise. Ensuring an adequate supply of funding to Irish enterprises, including small and medium sized enterprises, is a prerequisite for recovery. The current published official data limits the level of analysis that can take place on credit availability, particularly the measurement of “new” credit. Forfás proposed improvements in the data quantification and analysis of credit supply and demand:

- Forfás has been an active member of the Government’s Credit Supply Clearing Group comprising industry representative associations and the banks, since its formation in May 2009.
- Forfás submitted a proposal and engaged in discussions with Mazars on how official data on credit supply and demand could be improved for the Review of Lending to SMEs report, published in July 2009. This was reflected in the Mazars report recommendation to improve future credit supply and demand data gathering.
- At the request of the DETE, Forfás has engaged with interested parties to understand and monitor current and future lending to enterprise. Work in this area is ongoing and will be important in ascertaining the best way to ensure that enterprise has sufficient credit to facilitate investment, trade and employment.

## Forfás Budget Submissions

### 2009 Supplementary Budget

Forfás submitted its taxation and expenditure priorities in advance of the April 2009 Supplementary Budget to the DETE, following engagement with IDA Ireland, Enterprise Ireland and SFI. The submission focused on:

- Maintaining competitiveness and ensuring the overall cost of doing business in Ireland does not increase, including improvements to the tax treatment of intangible assets; and
- Continuing to invest for the future and to build the knowledge economy.

Forfás welcomed the supplementary budget announcement of the introduction of a new scheme of tax relief for the capital expenditure incurred by companies on intangible assets.

### 2010 Budget

The Forfás Pre-Budget Submission 2010 prioritised taxation and expenditure items, following consultation with the enterprise development agencies, IDA Ireland, Enterprise Ireland, SFI, Shannon Development and Udarás Na Gaeltachta, and external industry representative bodies. The submission advocated taxation measures under four headings:

- Opportunities for market development and enhancing the knowledge economy, including extending the unilateral credit relief for withholding taxes on royalty income from non-treaty countries to all trading companies.
- Barriers to market development.
- Labour market activation, including an initiative relating to employer PRSI exemption.
- Sustainable development, including principles regarding the introduction of a carbon tax to minimise the negative impact on enterprise.

The submission prioritised expenditure that would maintain a vibrant research ecosystem and enhance Ireland's competitiveness, in the infrastructural areas of telecommunications, transport, water and energy.

Forfás welcomes the extension of the unilateral credit relief for withholding taxes on royalty income from non-treaty countries to all trading companies announced in the Finance Bill 2010. Forfás also welcomes the announcement in the Minister for Finance's budget speech to introduce an Employer's Job Incentive Scheme giving PRSI exemption to employers to take on new employees from the Live Register. The adoption of many of the principles proposed in the Forfás' Pre-Budget Submission to minimise the impact of a carbon tax on enterprises is acknowledged.

## Reducing Administrative Burden on Business

The 2007 report of the Business Regulation Forum found that the administrative and regulatory burden on Irish business is perceived to be too high and affecting Ireland's competitiveness in the international economy. The Government agreed to take steps to reduce the administrative burden that domestic legislation places on business by 25 per cent by 2012.

At the request of the DETE, Forfás monitored and reported on the initial phases of this project in which government departments identified relevant legislation and began to prioritise the regulations that impact most on business. In addition, Forfás prepared a paper for the DETE on the potential of a risk-based approach to enforcement of regulations to contribute to the reduction of administrative burden by reducing the number of inspections to compliant businesses. The paper identified a number of areas where greater collaboration could help realise this potential in relation to data sharing, eGovernment, agreeing memoranda of understanding, developing a unique business identifier, clarifying the data protection issues and establishing common guidelines for using risk-based enforcement.

These issues are now being examined by the Risk-Based Enforcement Discussion Group which comprises the newly named Department of Enterprise, Trade and Innovation (DETI), Forfás and relevant enforcement and inspection agencies.

## Economic Appraisal of State Support to Enterprise Projects

An economic appraisal model is used by the enterprise development agencies to assist them in deciding whether to provide support for enterprise development projects in Ireland. The economic appraisal model helps to discriminate between enterprise projects with different characteristics, so that resources are devoted to assisting those that most closely match the criteria as set down under legislation and industrial policy. It is effectively a cost benefit analysis, designed to assess the likely benefits arising primarily from employment creation projects supported by the development agencies.

In the context of the current economy climate, Forfás undertook a review of a number of key parameters that influence the outcome of the ex-ante project appraisal. The parameters reviewed were the shadow price of labour, migration and unemployment, reference regional wage rates, and discount rates. Adjustments are now reflected in the models in use by the enterprise development agencies so that they more accurately reflect the structural shifts in the economy.

## Productivity

Achieving higher productivity levels is an important ingredient for international competitiveness and sustainability, particularly when today's businesses are facing increased competition and are under pressure to cut costs. Forfás worked with the enterprise agencies and others to develop two publications to help maximise productivity among firms in Ireland. Published in 2009, the first is a short guide aimed at business managers called Boost Your Company's Productivity: Simple Steps, which highlighted some proven tactics for boosting productivity. The publication explains how to measure current productivity levels and make these figures meaningful by tracking them over time. The second publication, Boost Your Company's Productivity: a Guide for Managers and Employees builds on and provides more information on the points highlighted in the short guide.

In 2009, Forfás continued to provide post graduate bursaries to encourage supervised research in productivity that is likely to contribute to the identification of policy options. Bursaries were awarded to four postgraduate students undertaking research on:

- The effects of innovation on productivity in Irish firms;
- Which technology transfer channels are most effective at raising productivity;
- How exporting can drive firm productivity; and
- The links between public investment and enterprise productivity.

## The SSTI Enterprise Feedback Group

The Strategy for Science, Technology and Innovation (SSTI) Enterprise Feedback Group (EFG) was established by the Tánaiste and former Minister for Enterprise, Trade and Employment, Mary Coughlan, TD, in December 2008 to provide advice to the Government on how to ensure that investments made under SSTI are directly linked to economic outcomes like job creation and retention, higher value-added activity, increased exports and increased number of start-ups and spin-outs. The Group forms part of the implementation structure for the Government Strategy for Science, Technology and Innovation (SSTI) 2006-2013. The 14 members of the EFG, chaired by Lionel Alexander of Hewlett Packard, are actively involved in enterprise at a

senior level and broadly represent different company sizes, sectors and regions. Feedback from the EFG will be incorporated into the development of programmes and policy to achieve the SSTI targets. Forfás provides the research support to the Group.

The EFG completed its first submission to the Tánaiste in June 2009. Taking account of the current economic climate, the Group decided on a two year and five year focus for SSTI priorities. The EFG acknowledged the significant investments in R&D capacity made by the Government in the higher education institutions through the Higher Education Authority's Programme for Research in Third Level Institutions (PRTLII) and through SFI programmes and stressed that leveraging this investment should be a priority for economic recovery.

Within the SSTI, the EFG prioritised the following policy actions for enterprise in the short term:

- More integrated enterprise agency coordination at the client interface, and shared metrics for employment, sales and exports to assess the efficacy of the entire system.
- Focus spending within the SSTI on supporting close-to-market research and developing stronger industry led research capacity within the HEIs to ensure a commercialisation pathway for R&D outputs.
- Better alignment of publicly funded research with industry to ensure commercial relevance.
- Review IP arrangements from publicly funded R&D.
- Promote the scaling up of existing enterprises in Ireland through RDI projects that can deliver an early return on R&D investment and/or protect existing employment.
- Allowing the R&D tax credit against payroll costs such as PRSI.
- Implementation of the guidelines on public procurement developed by the Procurement Innovation Group

The Group believes that a key element of Ireland's ability to return to growth will be the availability of high quality graduates in science and engineering. It has identified skills and education as the number one priority for research, development and innovation in Ireland, particularly the supply of science, technology, engineering and maths (STEM) graduates. An area of concern to the EFG was the quality of science and engineering graduates and the availability of engineering graduates.

The EFG believes these challenges have their origin primarily at second level due to the:

- Low number of Leaving Certificate students studying higher level maths;
- Quality of science and maths teaching at second level; and
- Relatively low level of interest in careers in science and maths among second level students.

To address these issues the EFG recommended that:

- Priority continues to be given to the rollout of Project Maths to improve the mathematical literacy of all school leavers.
- Training and continuous professional development of maths and physical science teachers should be prioritised.
- Bonus points for higher level mathematics at Leaving Certificate should be introduced.

- The Department of Education and Skills should examine the feasibility of restructuring the maths Leaving Certificate curriculum so that ordinary level is a subset of higher level, and is examined at the end of 5<sup>th</sup> year. This would allow students secure a pass in lower level maths and proceed to take the higher level paper in 6<sup>th</sup> year without fear of failing to matriculate if they don't pass the higher level paper.
- More opportunities for work experience in enterprise for transition year students to raise awareness of careers in science and engineering.

The Tánaiste responded to the EFG in July 2009 and fully accepted the key message of the Group to ensure alignment with enterprise needs. She assured the EFG that her Department and the agencies will work to achieve this goal. The Tánaiste also agreed on the need to adopt a two year focus to leverage investments made to date in order to return investment in jobs and exports while consolidating what has been built to ensure long term growth. She committed to providing regular updates on these initiatives as they progress.

## Health Life Sciences in Ireland - An Enterprise Outlook

The life sciences sector has contributed significantly to Ireland's economic development over the past decades and it is vital that it continues to play a strong role in realising export-led growth in the future. Forfás, in collaboration with the enterprise development agencies, undertook a study to identify ways in which the sector in Ireland can evolve in an environment where many countries have developed aggressive strategies to support their indigenous sector and attract foreign direct investment.

The study, *Health Life Sciences in Ireland - An Enterprise Outlook*, concludes that Ireland is well positioned to take advantage of global trends as the sector shifts increasingly toward personalised healthcare. It highlights potential in convergence products and devices, functional foods, remote diagnostics and healthcare delivery, and in leading edge manufacturing and translational research. Investments made in R&D in areas directly relevant to the sector, together with our depth of capabilities in ICT and engineering, will continue to serve us well as we shift towards increasingly innovative and research intensive activities.

The report focuses on five key areas of action:

1. Harnessing the proactive engagement of a wide range of contributors for enhanced collaboration. This includes establishing a Life Sciences Alliance and mechanisms for information sharing.
2. Putting in place the necessary infrastructures and supports in translational medicine, which will enable the translation of research from the laboratory through to the development of products, services and solutions.
3. Building on our international reputation for excellence in manufacturing and process R&D. This includes focused training in the areas of process analytical technology; quality by design; lean manufacturing; and the six-sigma business management strategy.



Launch of *Health Life Sciences in Ireland: An Enterprise Outlook*

Pictured at the launch of the report are (l to r) Jane Williams, Chief Executive, Forfás and Mary Coughlan, TD, Tánaiste and former Minister for Enterprise, Trade and Employment

4. Creating, developing and attracting talent relevant to an evolving global sector, including:
  - Establishing an industrial PhD programme, and a masters of business innovation for life sciences;
  - Building expertise in the areas of systems biology, biomarker validation and biomedical imaging; and
  - Enhancing skills to operate within the area of converging technologies.
5. Developing the opportunity areas in physical infrastructure, including bio banks, wet laboratories, supercomputing and next generation networks.

The report acknowledges the complexity of the business environment that is unique to this sector. One of the key recommendations calls for the establishment of an industry led Life Sciences Alliance to drive and influence the implementation of the actions identified.

The Alliance was established in late 2009 and held its first meeting in February 2010. The Alliance is chaired by Paul Duffy, Head of Irish Manufacturing, Pfizer. Its membership includes key stakeholder representatives of industry, the Department of Enterprise, Trade and Innovation, the enterprise development agencies and the health sector in Ireland.

While focusing mainly on the medium to longer term opportunities for the life sciences sector, *Health Life Sciences in Ireland - An Enterprise Outlook* emphasises that immediate action needs to be taken to address the area of cost competitiveness to enable the industry to continue to operate effectively.

## Report of the High Level Group on Green Enterprise

The green economy can make a significant contribution to Ireland's economy by creating employment and export opportunities in areas such as renewable energy, energy efficiency and consultancy, waste management, recovery and recycling, and water and wastewater treatment. There is also an opportunity to help every business to improve their competitive position, for example through actions to improve energy efficiency, energy security of supply, and better utilisation of waste as a valuable resource.

The former Minister for Enterprise, Trade and Employment, Mary Coughlan, TD and the Minister for Communications, Energy and Natural Resources, Eamon Ryan, TD jointly established a High Level Group on Green Enterprise in May 2009. The formation of the Group followed a commitment in the Government's *Building Ireland's Smart Economy* strategy and builds on the Forfás study, *Environmental Goods and Services Sector on the Island of Ireland: Enterprise Opportunities and Policy Implications*, which was published in October 2008.

The Group prepared an implementable action plan on green enterprise development in Ireland with specific actions and timelines for each stakeholder. Forfás provided research and policy analysis to the Group. 55 recommendations were made, most of which are low-cost or cost-neutral. These include:

- The continued development of the electricity grid is essential, both domestically and via interconnection to the UK/Europe. We must adopt an ambitious plan to develop the ICT capabilities of the grid (e.g. smart meters).
- Ireland needs to develop green zones in order to create an environment that can support green enterprise and be used to market Ireland overseas. Developing a green IFSC presents an immediate opportunity.
- Create world-class research centres in niche areas. The pooling of research expertise and/or the development of formal research alliances at national, all-island and international level must be advanced.

The report, *Developing the Green Economy in Ireland*, was launched by the Taoiseach, Tánaiste and the Minister for Communications, Energy and Natural Resources in December 2009. The findings of the report have been communicated widely including several presentations nationwide to stakeholders, all of whom have a role to play in the report's implementation.

The Cabinet Committee on Economic Renewal is mandated to progress implementation of the recommendations, and Forfás and the Department of Enterprise, Trade and Innovation will review progress in late 2010. To date, a number of actions have already been implemented. These include recommendations on the introduction of a carbon tax and extensions to capital allowances for businesses to promote green investment announced in Budget 2010. Other recommendations underway are the commitment of IDA Ireland to retrofit a business park to meet high energy-efficiency standards and proposals are being progressed to introduce water charging. Furthermore, green public procurement guidelines to support the development of green products and services are being developed. In 2010, the Expert Group on Future Skills Needs will publish a report on the skills relevant to the development of the green economy. Further details of this report are available on page 78.



## Energy Related Goods and Services

Energy related goods and services is an important evolving sector where Ireland is in a position to gain competitive advantage. Working with the enterprise development agencies, Forfás completed an assessment of the opportunities for Ireland within the sector, matching international trends in investment to technological advances and domestic capabilities. This report formed an important input into both the *Irish Energy Tetralemma* and the report of the High Level Group on Green Enterprise. Many of the findings and recommendations relating to smart grids, energy management ICT systems, green finance and the integration of renewable energy directly informed the work of the High Level Group, while the enterprise opportunities identified in both fossil fuels generation and renewable alternatives were included in the competitiveness pillar of the Energy Tetralemma (page 84).

## Analysis of Agency Intervention

In 2009, Forfás undertook a comprehensive analysis of development agency interventions in achieving enterprise policy objectives. This analysis was done in the context of understanding that agency interventions are just one factor impacting on firm-level performance. The first analysis was undertaken in 2005, and the collation of data over the intervening years this time enabled Forfás to undertake a more comprehensive trend analysis which was based on data for the period 2003-2008.

Increased exports result in increased economic activity in terms of employment and/or Irish economic expenditure (IEE). The agencies' activities are focused primarily at firm level to stimulate and support new business investments, and to assist existing companies to grow and continuously transform their operations so that they are sustainable in the longer term.

When interpreting the results of the analysis, and the performance of the agency client companies, it is important to consider the economic environment in which the agency inputs and firm level outputs occur. For most of the period under review (2003-2008) the performance of the global economy was relatively robust, with 2008 being the first year that the recent economic crisis was starting to have a visible impact.

The principle messages emerging from the data analysis are as follows:

- The effects of the economic crisis on the performance of the agency client base can most clearly be seen in employment figures, which declined sharply over 2007 to 2008.
- In the years preceding the onset of the crisis, Ireland's competitiveness had deteriorated substantially. Export performance among indigenous companies was subdued when compared to OECD averages for the period, and proportionately less Irish materials and services were being used as inputs to Irish based production processes. The shifting of the enterprise base from manufacturing towards services will also have had an impact on the type of inputs sourced in Ireland.
- Gross value added in indigenous companies was up, as were the numbers of companies engaging in R&D, a positive indicator of Ireland's continuance along an evolutionary path towards higher value activities.
- The analysis underscores the fundamental importance of the competitive health of the Irish economy. Declining competitiveness is not something agency intervention alone can overcome. A significantly greater return on agency investments can only be

achieved together with other measures which increase Ireland's overall economic performance.

## Enhanced Agency Collaboration

The enterprise development agencies play a key role in stimulating entrepreneurship and the development of new businesses, facilitating the expansion of existing companies, and targeting FDI through a broad range of initiatives. Acknowledging that there are already many instances of collaborative cross agency working, the Department of Enterprise, Trade and Employment (DETE) wanted to identify ways in which this could be enhanced further to optimise the collective resources, capabilities and knowledge of the agencies in a more strategic way to the benefit of client companies. Forfás provided support to the DETE review and highlighted areas for action.

### Actions to Enhance Agency Collaboration

Many of the actions identified involve formalising a number of initiatives already in place, and embedding a pervasive culture of collaborative action across the agencies. The agencies work together to ensure that the client perspective and business needs are not compromised by agency structures and operating procedures. Acts include:

- A more structured cross agency 'on-the-ground' approach to the development of sectors is being piloted. It aims to:
  - increase awareness of the full complement of companies, capabilities and capacities in support of international marketing programmes;
  - stimulate effective networking and linkages between foreign and indigenous firms; and
  - facilitate the inclusion of indigenous firms on itineraries for foreign firms, and therefore potential IDA clients.
- Procedures to manage transfer of client companies from the portfolio of one agency to another have been revised resulting in a more proactive approach and a significantly reduced timeframe.
- Newly acquired foreign companies, which were previously indigenous, transfer to IDA's portfolio. Mechanisms are being developed to facilitate access to some Enterprise Ireland supports, such as involvement in trade missions, marketing and leadership skills programmes, where it is deemed to be of benefit to the firms' strategic development.
- A cross agency information sharing team has been established to drive a systematic approach to collating, updating, sharing and disseminating information that is relevant to all agencies. A 'do once, disseminate widely' across all agencies approach is being taken.
- A more structured and proactive approach has been recommended in the recently completed Regional Competitiveness Agendas (page 57) to bring together the relevant stakeholders, expertise and competences to stimulate balanced regional development based on realising the potential of the regions.

## Enterprise Surveys

Robust data and thorough analysis of that data is an essential basis for good policy advice. Forfás endeavours to continuously improve evidence-based policy making by ensuring the accuracy and timeliness of surveys. The organisation undertakes a number of enterprise related surveys which are used across all the policy areas and is also responsible for a number of international surveys which are undertaken on behalf of the Central Statistics Office and the EU Commission.

In 2009 Forfás collected and analysed a range of data on employment and expenditure by agency-supported firms. A joint survey conducted with the Central Statistics Office on the levels, impacts and barriers to innovation in enterprises in Ireland is detailed in the Knowledge & Innovation section on page 47.

Annual Employment Survey 2009

Annual Business Survey of Economic Impact 2008

Key statistics and analysis from these surveys are outlined below.

### Annual Employment Survey 2009

#### Employment in Agency Supported Companies

Total permanent full time employment in agency assisted companies operating in the manufacturing and services sectors amounted to 272,053 in 2009, a decrease of 33,988 jobs (11.1 per cent) on employment levels in 2008. While there were employment losses due to plant closures in 2009, the majority of job losses, 83 per cent, are generated by companies that are continuing to trade but are reducing their staff numbers.

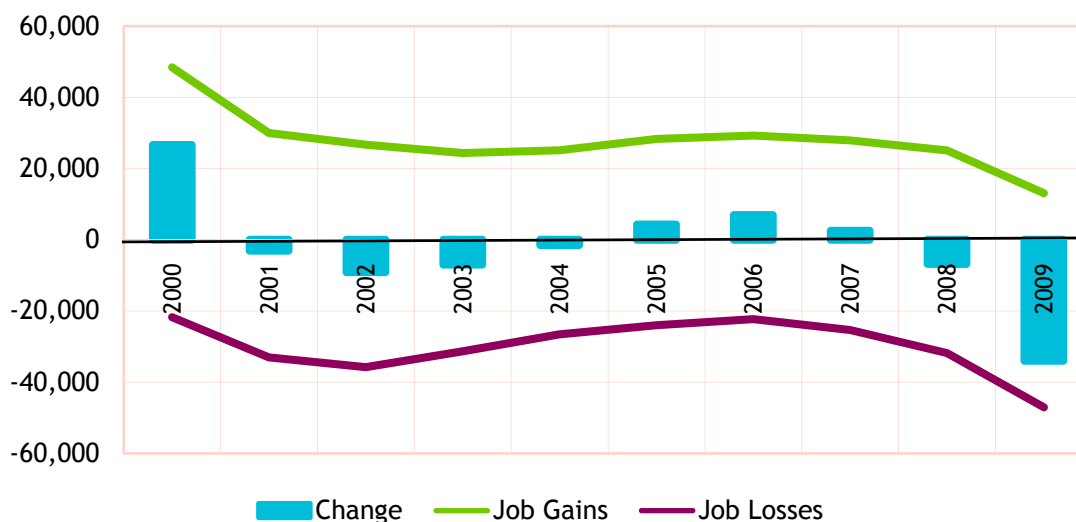
Total full time employment among Irish owned companies amounted to 132,596 in 2009, a decrease of 18,812 on the previous year. This decline of 12.4 per cent comes on top of a 3.5 per cent fall in employment the previous year. Irish owned company employment is currently 20,674 jobs or 13.5 per cent lower than it was in 2000.

Among foreign owned companies, total full time employment amounted to 139,457 in 2009, a decrease of 15,176 (9.8 per cent) on the previous year. These job losses combined with the 0.9 per cent employment decreases in 2008, results in employment among foreign owned companies being 16.2 per cent (26,977 jobs) lower than 2000 employment levels.

In addition to permanent full time employment, there were a further 28,759 jobs of a temporary or part time nature recorded in agency assisted companies in 2009. Taking the two categories of employment together (permanent full time and temporary/part time), there are now 300,812 people employed in agency assisted companies, compared to 355,782 in 2000. Irish owned companies increased the number of part time employees in 2009 by 1.8 per cent, suggesting that posts previously occupied on a full time basis are continuing to be filled, but on a part time basis. Foreign owned companies decreased this type of employment by 15.5 per cent in 2009.

## Gains, Losses and Change in Permanent Employment

Figure 1 Job Gains, Losses and Net Change in Permanent Full Time Employment, 2000 - 2009



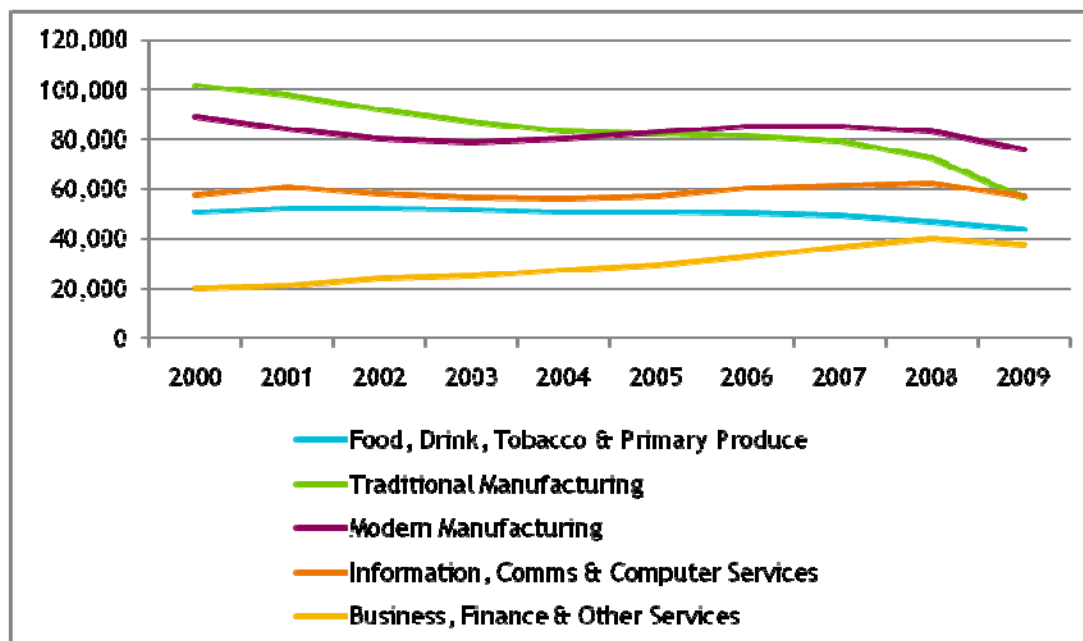
Source: Annual Employment Survey 2009, Forfás, 2010

Figure 1 highlights the trend in the number of jobs being created and lost over the period 2000 to 2009. In the period 2001 to 2004, agency assisted companies recorded net job losses, which was followed by a period of net job creation in 2005 to 2007. 2008 saw net job losses of 6,784. In 2009, 13,059 job gains were outweighed by 47,047 job losses, giving a net job loss of 33,988.

These net job losses in 2009 were concentrated in traditional manufacturing sectors such as food (-2,169), and construction related sectors such as non-metallic minerals (-3,566), and basic and fabricated metal products (-3,111). Computer, electronic and optical products in the modern manufacturing category also experienced net job losses with a decrease of 3,654 jobs in 2009. The medical devices sector was the only manufacturing sector to see employment growth in 2009, with net increases of 365 jobs.

Employment creation has been driven by the services sectors over the past decade, but in 2009 all services sectors saw net employment losses. Computer consultancy and programming sectors saw losses of 4,033 jobs while financial and business services showed net employment losses of 4.6 (972 jobs) and 10 (1,167 jobs) per cent respectively in 2009.

Figure 2 Sectoral Trends in Permanent Full Time Employment, 2000 - 2009



Source: Annual Employment Survey 2009, Forfás, 2010

Figure 2 presents a sectoral breakdown of permanent full time employment in manufacturing and services sectors over the period 2000 to 2009.

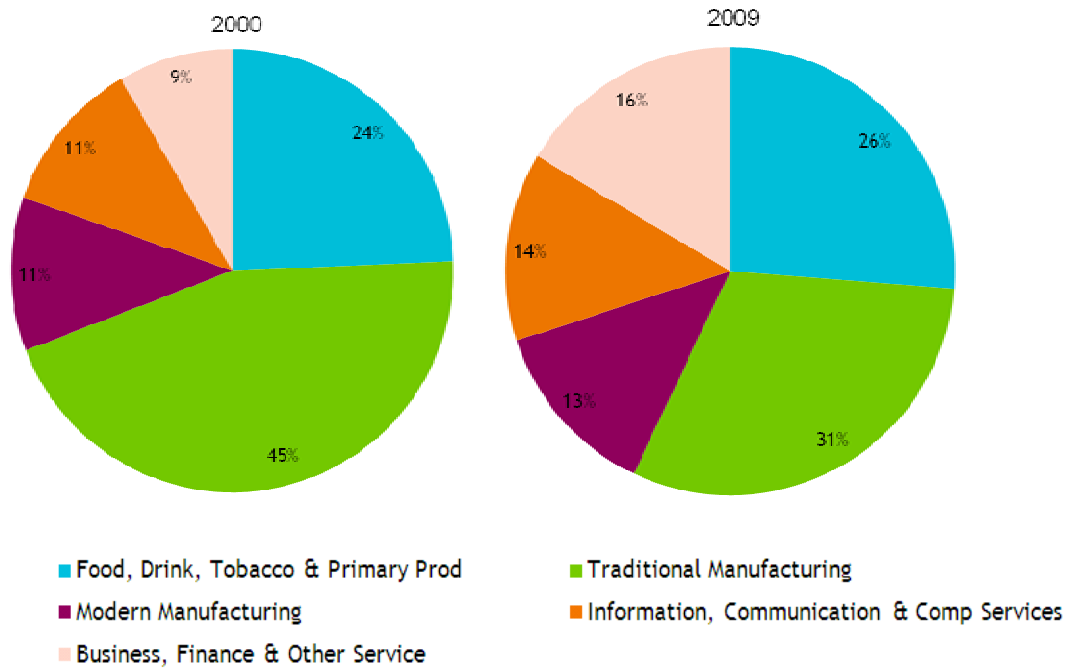
The food, drink, tobacco and primary production sector has shown consistency in this time series, with approximately the same numbers employed in 2006 (50,491) as in 2000 (51,028). However, in the years 2007 to 2009 this sector decreased by 12.7 per cent (6,450 jobs) and now accounts for 16.2 per cent of total agency assisted employment, an increase from the 2000 level of 15.9 per cent.

A decline in traditional manufacturing employment is apparent in this graph with a loss of 14,103 jobs (44 per cent) since 2000. The sectors included in traditional manufacturing are textiles, clothing, footwear and leather; wood and wood products; paper and printing; rubber and plastics; non-metallic minerals, basic and fabricated metal products; machinery and equipment; transport equipment; and miscellaneous manufacturing (excluding medical devices).

Over the same period the numbers employed within modern manufacturing have fluctuated from a high of 88,958 in 2000, falling to 79,110 in 2003, increasing again between 2004 and 2007 before falling to a ten year low of 76,048 in 2009. The sub-sectors included in modern manufacturing are computer, electronic and optical; electrical equipment; chemicals; energy; water and waste; and medical devices.

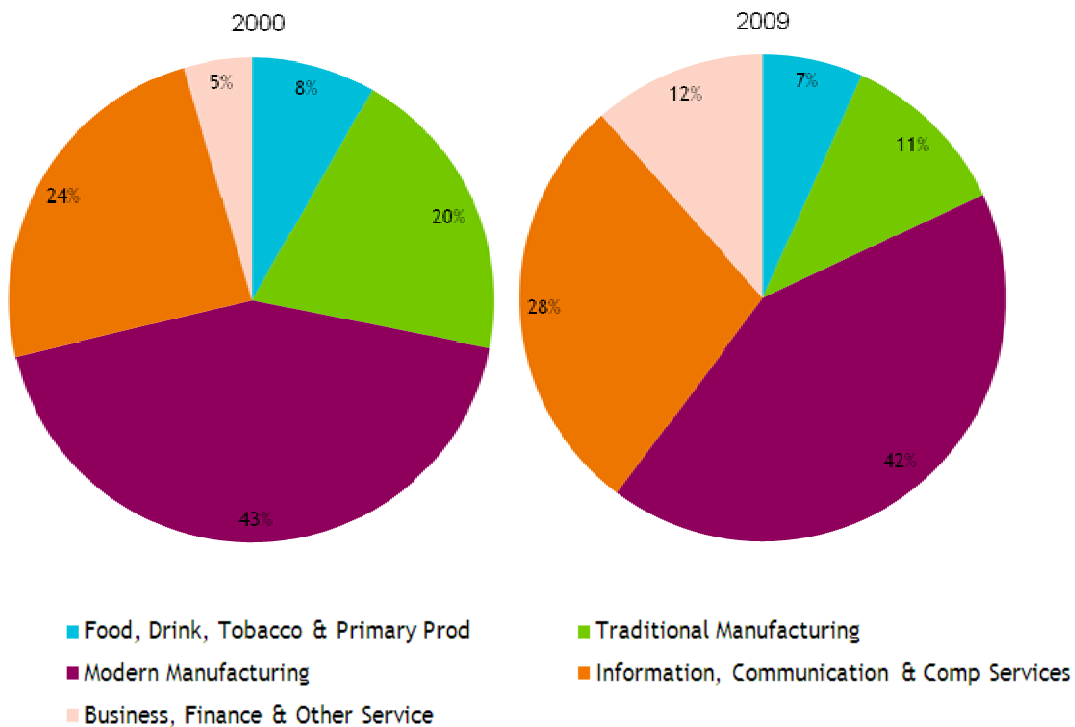
There has been steady growth in the numbers employed in the services sectors in the last ten years. Employment in information, communications and computer services rose to a high of 62,282 in 2008 before dropping by 4,816 (7.7 per cent) in 2009. The business, financial and other services sectors recorded enormous growth in the period, with employment 86 per cent higher in 2009 compared to 2000.

Figure 3 Sectoral Proportions in Permanent Full Time Employment within Irish Owned Agency Assisted Companies, 2000 and 2009



Source: Annual Employment Survey 2009, Forfás, 2010

Figure 4 Sectoral Proportions in Permanent Full Time Employment within Foreign Owned Agency Assisted Companies, 2000 and 2009



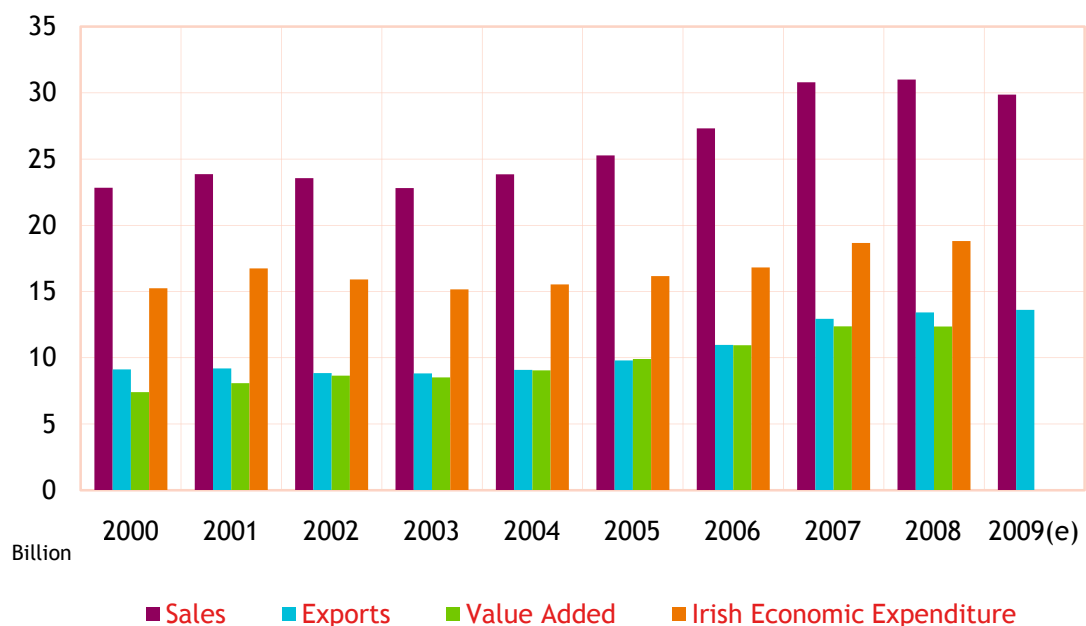
Source: Annual Employment Survey 2009, Forfás, 2010

### Annual Business Survey of Economic Impact

#### Expenditure by Agency Supported Firms in the Irish Economy

The Forfás *Annual Business Survey of Economic Impact 2008* presents results relating to all manufacturing and internationally traded service firms that are under the remit of Enterprise Ireland, IDA Ireland, Shannon Development and Údarás na Gaeltachta. The survey tracked the 2008 performance of agency assisted client companies in terms of outputs (sales, exports, value-added) and monitored the direct expenditure of these companies in the Irish economy in terms of payroll spend and purchases of Irish supplied materials and services.

Figure 5 Contribution of Irish Owned Agency Assisted Companies in the Irish Economy, 2000 - 2009 (€bn)



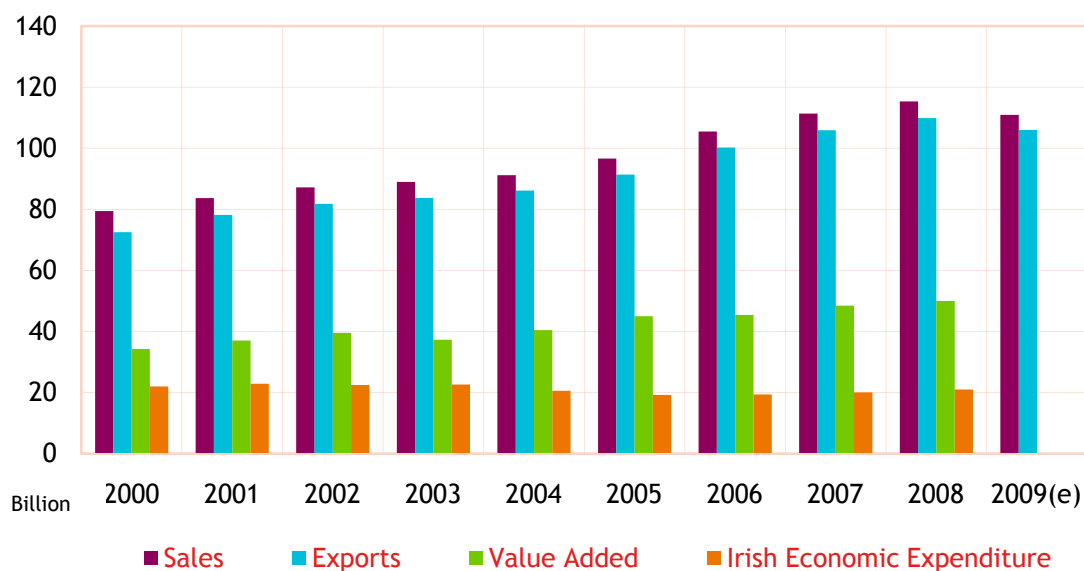
Source: Annual Business Survey of Economic Impact 2008, Forfás, 2009

The overall output of agency assisted firms in manufacturing and internationally traded services increased by 2.9 per cent to €146bn in 2008 (in nominal terms), while direct expenditure in the economy increased by 2.8 per cent. Estimates show an expected reduction in output of 3.8 per cent in 2009.

Total agency assisted exports amounted to €123bn in 2008, an increase of 3.7 per cent from the previous year. Of this, Irish owned companies account for 11 per cent of the total exports. Irish owned exports were 47.1 per cent higher in 2008 than they were in 2000. This compares to an increase in Irish sales of 35.8 per cent over the same period.

Direct expenditure by all agency assisted firms in the economy totalled €39bn in 2008, of which, Irish owned firms spent €18.8bn in the domestic economy in 2008, comprising €5.7bn on payroll costs, €9.3bn on Irish raw materials, and €3.7bn on Irish services. This direct expenditure has increased from €8bn in 1990. Irish owned companies have increased their expenditure in the Irish economy by 23.4 per cent since 2000. Value added in Irish companies has increased by 67 per cent since 2000. Value added in 2008 is 40 per cent of the output of Irish companies, this has increased from 32 per cent of output in 2000.

Figure 6 Contribution of Foreign Owned Agency Assisted Companies in the Irish Economy, 2000 - 2009 (€bn)



Source: Annual Business Survey of Economic Impact 2008, Forfás, 2009

The output of foreign owned companies increased by 3.6 per cent in 2008, which represents an increase in output of 45 per cent since 2000. This can be compared to an increase of 51 per cent in exports over the same period.

Direct expenditure by foreign owned firms amounted to €21bn in 2008, comprising €7.8bn on payroll costs, €2.9bn on materials produced in Ireland and €10.2bn on services purchased in Ireland. This represents an increase in the expenditure by foreign firms in the Irish economy of 4.7 per cent in 2008.

Foreign owned value added increased by 3 per cent in 2008 and 45 per cent since 2000. However, value added as a proportion of output was 43 per cent in 2008, equal to the proportion recorded for foreign-owned firms in 2000.

### Corporation Tax Payments

In addition to their expenditure in the economy, manufacturing and internationally traded and financial services companies provide a very significant direct return to the Exchequer by way of corporation tax payments.

The total corporation tax yield from all sources was €5bn in 2008. It is estimated that agency assisted firms in the manufacturing and internationally traded services sectors accounted for €2.3bn, with an additional €850m from internationally traded financial services firms, amounting to €3.2bn (63 per cent) of the €5bn total corporation tax paid in the economy.



# Knowledge & Innovation

Innovation has no boundaries. It can come from suppliers and customers, competitors and employees, in Ireland or internationally. It can apply to any aspect of a business - new or improved products, services, technology applications, processes, designs and organisation structures. Ireland has made significant strides in building world-class leading edge capability in core technology areas and we can see the fruits of success of this investment in terms of increasing graduate and research outputs of outstanding quality and increasing investment by indigenous and overseas firms in research and innovation in Ireland, underpinning our export performance. While much progress has been made, in the current fiscal context it is essential Ireland optimises investments in all aspects of science, technology and innovation, that the right supports and policy measures are in place and that we ensure enterprises are supported and enabled to convert this investment into commercial products and services.

## Research Strengths in Ireland: A Bibliometric Study of the Public Research Base

Forfás and the HEA began a study during the year designed to optimise the alignment between publicly funded research and the enterprise base. The study is designed to paint a national picture of research activity, assess alignment between public and private activity and identify synergies and gaps. This will inform public policy on future investment and the development of research supports to ensure economic value for the investment in the future. One component of the study is a bibliometric analysis of the Irish public research base.

The bibliometric study profiled research activity and areas of existing and emerging research strengths across the public research base. The study focused on a ten-year period (1998 to 2007) and the research disciplines were mapped with reference to discipline categories linked to the OECD Fields of Science (FoS) Classification. The analysis and the report are based solely on publication and citation data.

The report provides evidence of the transformation that has taken place in the research environment in Ireland over the ten year period:

- The published output of the research base in Ireland more than doubled between 1998 and 2007 at a time when the output of G7 countries remained static. Irish research output in 2007 was 33 per cent higher than the average for the period 2002 to 2006, more than double the growth rate of a group of comparator countries examined. In most of the fields of science examined, Ireland accounts for between 0.3 and 0.4 per cent of world papers. In biological sciences, where growth is strong, its share is higher (around 0.5 per cent) and it is higher again in agriculture (0.6 per cent) and agricultural biotechnology (1.5 per cent). Ireland also performs well in computer science and electronic engineering, although these areas make strong use of non-journal outputs.
- Ireland's share of world citations, at 0.64 per cent in 2007, is greater than its share of publications (0.5) indicating above average citation impact. Whereas Ireland ranks 18<sup>th</sup> by volume, it ranks 8<sup>th</sup> on citation impact and has overtaken Australia and Finland on this measure.
- At subject level, health research and physical sciences perform well in terms of citation impact. Competition in biological sciences constrains relative performance but agricultural biotechnology is stronger. Citation impact in physics and materials and in chemistry is rising and nanotechnology is above average.
- Inter-institutional collaboration is relatively low and collaboration with Northern Ireland is very low compared to typical inter-institutional collaborative links in other countries. Queens University Belfast (QUB) links to 1 per cent of output for UCD and 2 per cent for TCD whereas QUB and University of Ulster share 10 per cent of the University of Ulster's activity. Collaboration between TCD and UCD is less than 3 per cent.
- The number of papers cited more than four times the world average is used as an indicator of scientific excellence. 6.2 per cent of Irish papers fall into this category, slightly ahead of the figure for the UK (6.1 per cent).

## Ireland's International Linkages in Science, Technology and Innovation

Forfás assisted the DETE during 2009 in taking forward the recommendations contained in the Advisory Science Council 2008 report, *Ireland's International Engagement in Science, Technology and Innovation*, and developing a detailed action plan.

Actions are set out in each of the following areas:

- Achieving maximum complementarity between national research funding and the EU Framework Programme (FP7).
- Coordination of research efforts with other countries in Europe (ERA-NETs, Joint Programming Initiatives etc.).
- Ensuring access to research infrastructure abroad and planning national infrastructure investment in the context of EU and global developments.
- Facilitating the inward and outward mobility of researchers.
- Strengthening Ireland's STI linkages with selected, high-priority countries including the US, India and China.
- Ensuring international engagement receives prominence within the governance arrangements for science, technology and innovation in Ireland.

Arising from the recommendations, each of the research funding agencies in Ireland is placing renewed focus on international linkages including participation in collaborative research programmes.

## Irish Representation on CREST

Throughout 2009, Forfás provided inputs to all of the main policy issues discussed at CREST, the high level advisory body that assists the European Commission and the Council of the European Union in the area of science and technology policy, and contributed to the debate on a new mandate and vision for the European body. A co-delegate with DETI, Forfás attaches particular priority to the link between research and innovation, an aspect that has now been placed centre stage in the CREST vision and in European research policy generally. Forfás also helped to coordinate Irish participation in CREST working groups and in special configurations dealing with various topics and European Research Area (ERA) initiatives.

The role of CREST is to:

- Identify strategic priorities for EU policy in the field of research and technological development, thereby helping the European Commission to draw up and focus the EU research programmes.
- Promote coordination by the EU and Member States of their research activities in order to ensure mutual consistency between EU policy on the one hand and national policies on the other hand.
- Keep under review the independent assessment of the EU Framework Programmes for research and their specific programmes.
- Contribute to the formulation of an EU strategy for international cooperation in the sphere of research.

Over the past year CREST has focused on initiatives associated with ERA. In particular, the ERA 2020 Vision has been developed and special configurations of CREST have been established to progress the various ERA initiatives. These include joint programming of research in Europe, the development of European research infrastructures, knowledge transfer across Europe, mobility of researchers and S&T cooperation with countries outside Europe.

## Strategic Forum on International S&T Cooperation (SFIC)

Forfás represents Ireland on a new forum established by Europe's research ministers in 2009. The Strategic Forum on International Cooperation (SFIC) develops a coordinated European approach to S&T cooperation with countries outside Europe, in particular large global players such as the US, India, China, Russia and Japan. The SFIC has been established as a special configuration of CREST, the high level advisory body to the Council and the European Commission.

SFIC has developed a work programme for the period 2009 to 2010 which places an emphasis on:

- Information sharing in order to build a picture of current S&T cooperation priorities with third countries.
- The launch of a small number of pilot initiatives to test the feasibility of developing shared approaches to S&T cooperation.

Forfás contributed to shaping the SFIC work programme, drawing on the principles set out in the recent ASC study *Ireland's International Engagement in Science, Technology and Innovation*. Forfás will continue to consult with the key S&T actors in Ireland to ensure that Ireland can avail of opportunities provided through this new forum.

## Programming of Research in Europe

Joint programming is an initiative to encourage EU member states to work together more closely in tackling the research aspects of key societal challenges facing Europe such as climate change, health and ageing, and food security. Joint Programming Initiatives (JPIs) will operate in addition to the EU Framework Programme and will aim to avoid unnecessary duplication of research effort across Europe. DETI is the national delegate to the High Level European Group on Joint Programming Initiatives.

Forfás provided advice to the DETE in 2009 on the potential for Irish participation in joint programming initiatives and consulted with the key actors in the S&T system to draw attention to the opportunities associated with this European initiative.

Forfás will continue to work with the Department of Enterprise, Trade and Innovation and other relevant departments and agencies in 2010 to ensure optimal involvement in these and future initiatives and will provide advice on the framework conditions associated with joint programming including issues such as peer review, joint evaluation and cross-border financing of research.

## European Strategy Forum on Research Infrastructures

Forfás, together with the Higher Education Authority (HEA), continued to represent Ireland on the European Strategy Forum on Research Infrastructures (ESFRI) in 2009 and is working to ensure that there is a coordinated approach to Irish involvement in projects on the ESFRI Roadmap of Research Infrastructures.

ESFRI was established in 2002 to support a coherent and strategy-led approach to policy-making on research infrastructure investment in Europe and to facilitate multilateral initiatives leading to the better use and development of research infrastructure at EU and international level. One of ESFRI's main outputs is its *Roadmap of European Research Infrastructure*.

The first roadmap, published in 2006, identified 35 projects of pan-European interest to be constructed over the coming 10 to 15 years. Forfás and the HEA seek to ensure a coordinated Irish response to the ESFRI roadmap and to foster participation, where appropriate, in initiatives to realise the projects on the roadmap. Irish research institutions, supported by the relevant funding agencies in Ireland, are already playing a part in 10 of the 35 projects on the original ESFRI roadmap. Many of these projects will move from the planning phase to full implementation over the period 2010 to 2013.

Ireland's involvement to date in the ESFRI roadmap projects has centred on a number of distributed infrastructures where Irish facilities currently under development will be integrated into wider European networks of facilities. Examples include infrastructures in the area of clinical trials, bio-bank facilities, ocean observation facilities, high performance computing and databases of relevance to the social sciences and humanities.

In 2009, the European Commission launched a call for preparatory phase support for a further 10 projects identified by ESFRI in areas such as energy, environmental sciences and biological and medical sciences. Forfás and the HEA are working with the funders of research and research infrastructure in Ireland to ensure continued engagement in the ESFRI process and to ensure that Irish research infrastructure continues to be planned within the context of wider European and global strategies.

## Evaluation of Ireland's Participation in EU Framework Programme 6 (FP6)

The EU 6<sup>th</sup> Framework Programme for Research, Technological Development and Demonstration (FP6) was a group of actions at EU level to fund and promote research. With a budget of €17.8 billion for the years 2002 to 2006, it represented around five per cent of the overall expenditure on research and technological development (RTD) in the EU member states. The DETE requested Forfás to undertake an evaluation of Irish participation in FP6.

The purpose of this evaluation was to determine the effectiveness and impact of FP6 in achieving its objectives. The evaluation investigated the added value and relevance of FP6 to research and development in Ireland, the support structures in place, and the leverage from higher education institutions in assisting and encouraging industry participation in FP6, among other issues.

The results of the study have shown that Ireland's participation in FP6 was strong overall, and that its public and private research communities have played an active role in the Programme.

Success rates within the competition were well above FP6 averages. The share of FP6 funding awarded to Irish participants was in line with Ireland's share of GDP. Its contribution to the EU budget was significantly above its share of GNP and was very high in relation to the size of its population. Funding allocations to Irish participants were above the average amounts awarded during FP6 as a whole.

There are 17 priority areas of FP6 and Ireland has performed strongly in nanotechnologies and nanosciences; food quality and safety; citizens and governance; horizontal research (e.g. marine) involving SMEs, information society technologies; human resources and mobility; and support for the coordination of research priority areas.

The primary benefits of participation in FP6 came in the form of improved relationships and networks, increased knowledge and capabilities (both scientific and technological), and enhanced reputation and image. The benefits of FP6 participation outweighed the costs for the vast majority of Irish participants.

The evaluation of FP6 investigated early views on FP7, and the results are also positive. Ireland's new National Support Network (NSN) introduced for FP7 attracted significant praise, and the research communities appear to be making good use of the support on offer.

Following the FP6 evaluation Forfás is actively collaborating with the new National FP7 Director and key actors in the STI community. Specifically, Forfás is engaged in a data mapping exercise which will clearly identify the overlap of EU and national funding recipients in the Irish R&D community. Forfás is also involved in the organisation of and participates in a quarterly forum at which all the relevant stakeholders attend to ensure a coordinated and coherent approach is adopted for FP7.

## Optimisation of Irish Engagement in EU Framework Programme 7 (FP7)

Arising from the recommendations of Advisory Science Council report *Ireland's International Engagement in Science, Technology and Innovation* published in 2008, the DETE requested that Forfás, working with the FP7 National Director, consider policy options for a more strategic approach to optimising FP7 drawdown. FP7 is a substantial research fund of €50 billion covering the period 2007 to 2013. Maximising Irish participation in the programme has become particularly important as national funding streams come under pressure and, to this end, Ireland has a target to secure €600 million from the programme. The substantial funding of the Irish national public research base over the last decade means that Ireland has now built up a critical mass of research expertise both in terms of size and quality which should allow Ireland to participate more effectively on the international research stage and leverage greater return from FP7.

Following consultation with stakeholders, Forfás produced a policy discussion document containing proposals agreed by the Inter-Departmental Committee on STI. This has led to the establishment of an FP7 Policy Forum to review and monitor leverage opportunities. The forum brings together key stakeholders to share, discuss and action opportunities for increased participation in FP7, with a particular focus on leveraging national investment in R&D.

Forfás undertook significant data analysis work to examine the role of national and European research funding at the level of individual research teams. This work will allow for detailed assessment to be made of the synergy between national research programmes and FP7

funding and will help national research funders, and their funded researchers, to target specific opportunities in the Framework Programme in the future.

## Review of Supports for Exploitation of Intellectual Property from Higher Education Research

In 2009, at the request of the DETE, Forfás undertook a review of the current supports in place to encourage the exploitation of intellectual property (IP) coming from publicly-funded research in the higher education sector.

The impetus to turn good research ideas into commercially successful products and services has been given added urgency by the current economic circumstances and the need to ensure that a demonstrable and fast return on investment through commercialisation is achievable. Concerns have been raised around the suitability and effectiveness of the current IP arrangements. To address these concerns, this systematic review was commissioned in order to determine the validity, the extent and the cause of these issues.

Initial findings show that Ireland's system for commercialising IP from the higher education institutes (HEIs) is making strong progress, given that many of these mechanisms are recently introduced. Much of the perceived instability and change in focus is the result of a nascent commercialisation system that has not had sufficient time to bed down. The focus of this study was on identifying recommendations that will improve effectiveness in the short term and also develop more strategic recommendations that will have an impact in the medium to long term.

### High Level Findings

- Ireland's system for commercialising IP from the HEIs is performing well despite the newness of the system.
- The policies and guidelines are consistent and in line with international good practice, however they are:
  - Founded on a linear model of innovation;
  - Do not distinguish between the different types of IP;
  - Do not distinguish between different disciplines;
  - Do not distinguish between multinational companies and SMEs;
  - Metrics do not include broader knowledge transfer activities; and
  - Communication of the policies to all stakeholders needs to be improved.
- Guidelines need to be more prescriptive.
- Decentralised Technology Transfer Offices (TTOs) based in HEIs is preferable but with greater centralised support from Enterprise Ireland.

### Recommendations

- The Forfás recommendations are grouped into five broad categories:
  - Revise and broaden policies, guidelines, schemes and metrics to include an ecosystem innovation model, differentiation of IP and knowledge transfer.
  - Provide greater prescription through national agreements, principles and timelines.

- Greater communication of all policies to all stakeholders.
- Anchoring TTO structure in HEIs (third mission) with improved central support from Enterprise Ireland.
- Ensuring quality and sustainability.

## Commercialisation Strategy for Nanotechnology in Ireland

To ensure that Ireland can strategically position itself to be a competitive nanotechnology player, Forfás, at the request of the Inter-Departmental Committee on Science, Technology and Innovation, undertook a study to investigate various strategies to support the commercialisation of Irish nanotechnology research, both private and public. Nanotechnology is an enabling technology that can have a deep and lasting impact on current Irish businesses as well as current and potential foreign direct investment (FDI) in areas such as medical devices and electronics. Nanotechnology impacted \$254 billion worth of products in 2009. This impact is forecasted to grow to \$2.5 trillion by 2015.

Through this study, Forfás sought to:

- Identify the options and models for the island of Ireland to leverage its existing nanotechnology research base to attract and retain FDI as well as spur the development of indigenous enterprise in the context of the national and international innovation environment.
- Evaluate the feasibility of the various commercialisation options, including the possible establishment of multidisciplinary nanotechnology fabrication (NanoFab) facilities that will provide researchers, enterprise and entrepreneurs with access to pre-commercialisation facilities, keeping in mind timeframes to full operation and return on investment.

A review of nanotechnology infrastructure in Ireland reported that Ireland invested wisely and has established a world class infrastructure. This infrastructure will serve as a strong foundation as Ireland seeks to produce high quality nanotechnology research and push it towards commercialisation.

An analytical review of the complete subset of nanotechnology areas reported that Ireland benchmarks well internationally on the basis of normalised publications, patents and quality of research. It does not, however, have the critical mass to make an impact on the global stage. This assessment reported that Ireland has areas of strength such as electronics, medical devices and pharma, and uncovered hidden gems in unexpected markets such as catalysts. It was noted that Ireland does not have the combination of high critical mass, high quality research and high commercial output in any single nanotechnology area.

These are some of the initial recommendations drawn from the study:

- Focus our resources on technologies in specific market areas where Ireland can build world class quality research and critical mass that will attract industry investment. The report proposes four market areas over the next five years: next generation electronics; medical devices and diagnostics; environmental applications; and industrial process improvements.
- Leverage the investment that has been made to date and build on our achievements
- Network our world-class infrastructure to achieve maximum impact



- Increase our international collaborations to achieve greater visibility and impact and to access additional resources and knowledge.

The recommendations will be submitted to the Inter-Departmental Committee in 2010.

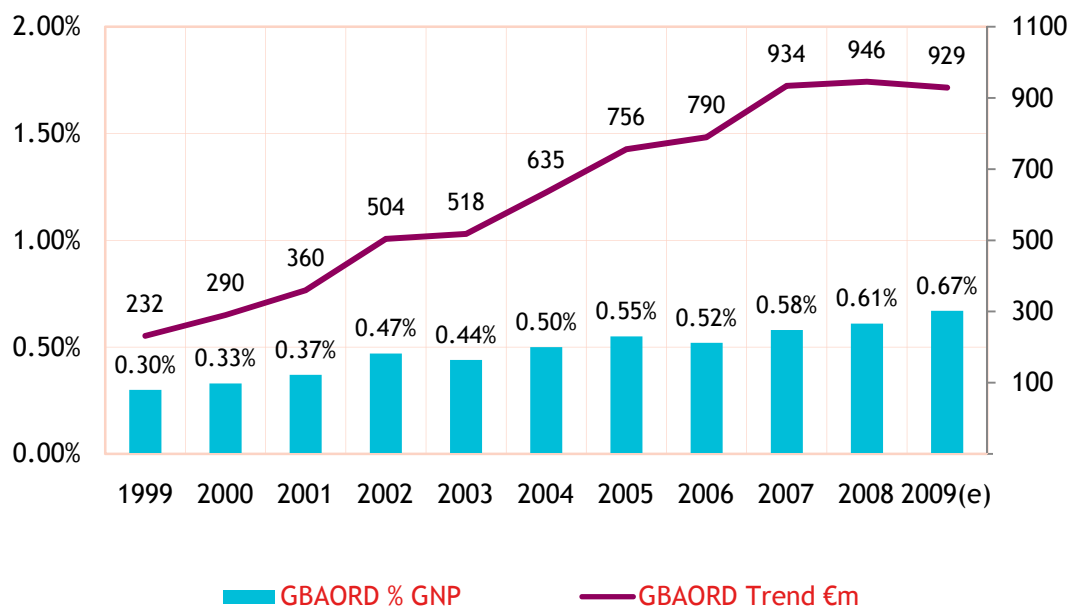
## Innovation Taskforce

The Taoiseach launched the report of the Innovation Taskforce in March 2010. The report sets out a vision for an innovation economy and recommendations as to how it can be achieved. Forfás contributed to the development of the Taskforce Report through the provision of research and secretariat support, together with colleagues in the Department of the Taoiseach and the Department of Enterprise, Trade and Employment.

## R&D and Innovation Surveys

Forfás collected and analysed data on public funding and performance of R&D in its annual Science Budget survey, which gathers data from 41 government departments, agencies and offices active in R&D funding and performance.

### GBAORD Trend (€M.) and GBAORD as a Percentage of GNP (1999-2009)



Source: Science Budget 2008/2009, Forfás, 2010

Government Appropriations and Outlays on R&D (GBAORD) is an R&D indicator as defined in the OECD Frascati Manual which allows comparison across international countries. It includes funding for R&D from direct exchequer sources and the EU including funding for R&D in the humanities and social sciences.

There was a steady increase in GBAORD from €232m to €946m between 1999 and 2008. The slowdown in Government funding for R&D projects in mid 2008 resulted in a drop in GBAORD of 8.1 per cent between the estimated expenditure of €1.03 billion and the actual spend of €946 million. Between 2008 and 2009 Government funding for R&D projects was expected to fall by an additional 1.8 per cent, although these estimates made in the middle of 2009 may again underestimate the fall in public R&D spending which will be confirmed in the 2010 Science Budget survey.

Compared to major competitors Ireland spent an estimated 0.71 per cent of GNP on publicly funded civil R&D projects (excludes spending on R&D in defence projects). Despite the slowdown in public R&D funding in the year, this deceleration in spending was slower than the rapid weakening of economic activity in 2009, resulting in a rise in the civil GBAORD/GNP ratio. Using this metric Ireland performs among a group of countries around the average public R&D/ economic activity ratios.

### Community Innovation Survey 2006-2008

In the period 2006 to 2008 inclusive, 45 per cent of Irish enterprises with 10+ employees indicated that they were engaged in some form of innovative activity. Almost 53 per cent of industrial firms were classed as innovation active, while 41 per cent of services firms were classed as innovation active.

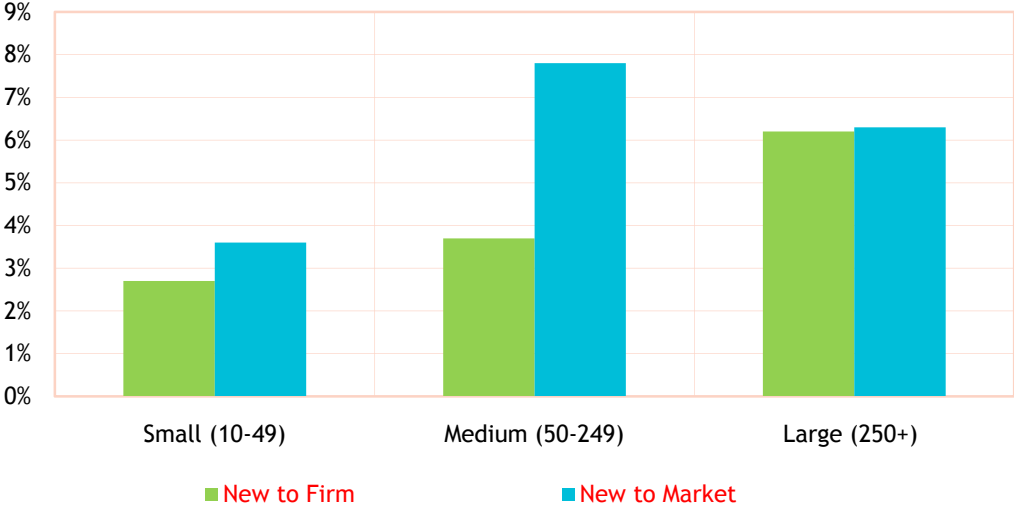
Large enterprises (250+ employees) were the most prolific innovators, with innovation rates of 86 per cent for large industrial firms and 64 per cent for large services firms. This compares with 69 per cent of medium sized industrial firms (50-249 employees) and 53 per cent of medium sized services firms. Small enterprises were the least innovation active group, with 45 per cent of small industrial firms (10-49 employees) and 38 per cent of small services engaging in innovation activities.

Enterprises who are innovation active engage in product or process innovation or both. In the period 2006 to 2008 just over 28 per cent of all enterprises were engaged in some form of product innovation, while 35 per cent of enterprises were engaged in process innovation.

Both product and process innovations tended to be higher as the size of the firm increased. 23 per cent of small enterprises were product innovators, while 42 per cent and 61 per cent of medium and large sized industries were product innovators. Similarly 31 per cent of small enterprises were process innovators, while 46 per cent and 64 per cent of medium and large enterprises were engaged in process innovation.

Innovation Impacts

Figure 7 Turnover Attributed to Product Innovation Activities by Size of Enterprise, % 2006-2008



Source: Community Innovation Survey 2006-2008, CSO/Forfás, 2009

The survey measured the level of total turnover that was attributable to product innovations. Product innovations are separated into new-to-market innovations that are a measure of novelty and creativity, and new-to-firm innovations where the innovation has been adopted by the firm but was invented and created elsewhere.

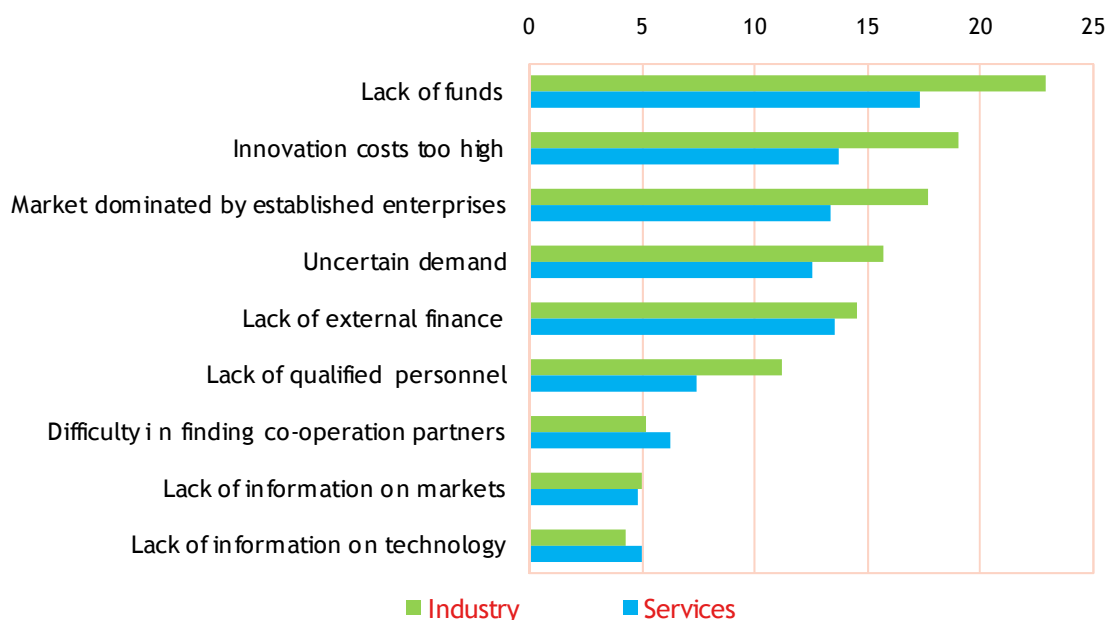
Almost 11 per cent of turnover of all active and non-active innovators in 2008 in the industrial and service sectors was a result of product innovations in the 2006 to 2008 period. Almost 5 per cent of this turnover was from new-to-firm products and over 6 per cent was from new-to-market products.

Large enterprises attributed 12.5 per cent of their turnover to product innovations with over 6 per cent being from new-to-market products. Medium sized enterprises attributed 8 per cent of their total turnover to new-to-market products compared to 4 per cent for new-to-firm products.

A sectoral breakdown of this data shows that around 5 per cent of turnover in both industrial and services enterprises are generated by new-to-firm product innovations. New-to-market innovations account for turnover of approximately 4 per cent in industry and over 7 per cent in services.

## Barriers to Innovation

Figure 9 Highly Important Hampering Factors To Innovation Activities For Innovative Enterprises By Sector, % 2006-2008



Source: Community Innovation Survey 2006-2008, CSO/Forfás, 2009

The survey identified lack of funding, the cost of innovation, lack of external finance and market dominance by established enterprises as the largest hampering factors in undertaking innovative activities in both innovative and non-innovative enterprises.

Figure 9 looks at the results from enterprises that are actively engaged in innovation and shows the hampering factors that these companies have identified as being most significant. From a list of nine options, innovative enterprises (almost 23 per cent in industry and 18 per cent of service enterprises) cited lack of funds as their highest barrier to innovation or hampering factor.

Finance is also a feature in the second highest hampering factor, in this case the cost of innovation is considered to be too high by 19 per cent of industry enterprises and almost 14 per cent of services.

For service enterprises the third hampering factor is also financial, with over 13 per cent of these companies citing lack of external finance as their most important factor.

Apart from financial constraints, market dominance by established enterprises is the most significant hampering factor to innovation.

## Advisory Council for Science, Technology and Innovation

The Advisory Council for Science, Technology and Innovation (ASC) is the Government's high level advisory body on science, technology and innovation (STI) policy issues. It is the primary interface between stakeholders and policymakers in the STI arena. Forfás manages the work of the ASC and provides it with research and analysis. The Board of the ASC is appointed by the Board of Forfás.

The Council's remit is to contribute to the development and delivery of a coherent and effective national strategy for STI and to provide advice to Government on medium and long term policy for STI.

During 2009 the term of office of the ASC's Chair, Mary Cryan, came to an end and Dr Tom McCarthy took on the role of Chairman.

In 2009 the Council concentrated on the following areas:

- Sustaining the Investment in Research And Development
- The Role of PhDs in the Smart Economy
- Research to Revenue Workshop
- Maximising the Environment for Company R&D

### Sustaining Investment in Research and Development

The ASC issued a statement in December 2009 on sustaining investment in research and development. The statement drew attention to the transformation that has taken place in the science, technology and innovation landscape in Ireland over recent years brought about by a combination of government investment and by private sector commitment.

The statement called for a fine-tuning of Ireland's research and innovation strategies to maximise the impact of public investment in R&D and ensure that the benefits gained from ten years of investment would be fully secured. Among the recommendations put forward by the ASC are:

- A priority-setting mechanism should be put in place to validate the areas or disciplines in which investment should be concentrated. Priorities should be reviewed every three to four years so that research and innovation policies are kept under continuous review.
- Special attention should be given to the link between academic research and the needs of enterprise in any review of funding priorities. The aim should be to build centres with critical mass so that the full spectrum of research can be supported and to ensure that the interfaces between basic and applied research, and the translation of research into innovation, are working optimally.
- Any adjustments to the R&D funding structures in Ireland should prioritise the link between research and innovation, including appropriate support for the industry-led competence centre model.

- The R&D Tax Credit should be altered so that it can be claimed against general payroll costs.
- The guidelines on public procurement for innovation published by the Government should be put into practice by departments, agencies and local authorities by attaching specific metrics for innovation outcomes, and where appropriate, ring-fencing resources for innovative solutions within the framework of EU State Aid rules.



### *Role of PhDs in the Smart Economy*

Pictured at the launch of the report in December 2009 were (l-r) Professor Anita Maguire, Chair of the ASC Taskforce; Conor Lenihan, TD, Minister for Science, Technology, Innovation and Natural Resources; and Dr Tom McCarthy, Chairman of the ASC.

## The Role of PhDs in the Smart Economy

The *Role of PhDs in the Smart Economy* was published by the ASC in December 2009. The report highlights Ireland's need to maintain a competitive output of PhDs in relevant disciplines in line with other developed countries. It also sets out a list of recommendations to maximise the development of 4<sup>th</sup> level education in Ireland and its critical relevance to enterprise and society.

The report found that Irish R&D firms employing PhD researchers have rates of patenting 2.5 times greater than similarly active firms that do not employ PhD researchers. They also have vastly higher collaboration rates with both higher education institutes and other firms. While only 29 per cent of R&D active firms employed PhD researchers in 2007, these companies accounted for 70 per cent of business expenditure on R&D.

### Recommendations:

- Funding for structured PhD programmes should be broadly aligned with the sectors of the economy where there is a strong demand for PhD qualified researchers.
- Structured PhD programmes should embody the “Inverted T” shaped model whereby they develop PhD students’ understanding of the discipline as well as in-depth knowledge of research approaches, techniques and methods which are critical to the value of PhDs for enterprise.
- Higher education institutions should adopt systematic and formal consultation with enterprise in the development of structured PhD programmes at discipline level within

the institutions, ideally with the involvement of enterprise boards, to oversee structured programmes where appropriate.

- A user-friendly, centralised system should be developed to allow employers or potential employers to access information on the number of PhD students in the pipeline and the broad theme of the research.
- The ASC strongly endorses the Enterprise Partnership Scheme, which links private enterprise and eligible public bodies to co-fund postgraduate scholarships and postdoctoral fellowships, and recommends that resources are made available to scale up the programme.
- Ireland should develop an enterprise PhD programme building on the model of the Danish Industrial PhD Programme whereby an employee earns a PhD based on research relevant to their company.
- There should be an integrated programme of support and training specifically targeted at PhD students and early postdoctoral researchers, beginning with the PhD education and training period and continuing through to early postdoctoral research stage, to enable them to commercialise their research.

## Research to Revenue Workshop

The Advisory Science Council held an event in May 2009 entitled, *Research to Revenue: Ireland's Opportunity - The Role of Science Policy in Economic Growth*.

The event brought together scientists and innovators from Irish academia and industry to provide an insight into their experiences and plans for moving science from 'Research to Revenue'.

Speaking at the event were Conor Lenihan TD, Minister for Science, Technology, Innovation and Natural Resources; Professor Mark O'Malley, Director of Electricity Research Centre, UCD; Professor Martina Newell McGloughlin, University of California; Professor Luke O'Neill, Trinity College Dublin; and Peter Robbins, GlaxoSmithKline. They gave their opinions on the future science and innovation policies required to assist in this process including an insight into emerging science policy in the USA.

Subsequent discussion focused on the need for continuity of public investment in R&D, people and skills (particularly the STEM pipeline), enterprise science collaborations and commercialisation, in terms of maximising returns from R&D investment.

## Maximising the Environment for Company R&D

The Strategy for Science, Technology and Innovation (SSTI) 2006 - 2013 recognises the need for a transformation in both the quality and quantity of R&D undertaken by industry, both directly by companies and in cooperation with third level institutions. The primary rationale for government investment under the SSTI is to develop a competitive knowledge based economy. It aims to drive innovation in enterprise, build human capital and maximise the return on R&D investment for economic and social progress. To create and sustain high quality employment it is recognised that there needs to be a focus on the rate of innovation and R&D activity in enterprise.

The ASC appointed a taskforce during 2009 to

- Identify critically important factors impacting on the environment for R&D, separately for foreign and indigenous companies.
- Identify sector-specific factors impacting on the environment for R&D, separately for foreign and indigenous companies.
- Develop actionable recommendations for the factors identified above.

### Key Report Findings

The report identifies three overarching barriers which impact the levels of company R&D in Ireland across all enterprise sectors:

- A shortage of high quality industry relevant skills;
- The high cost of R&D; and
- The effectiveness of higher education institutions and enterprise interactions.

The report includes the following recommendations to address these barriers:

- There should be greater involvement of industry in developing postgraduate programmes and this can be achieved through prioritising some of the 4th level funding from PhD programmes towards the development of industry driven masters programmes.
- There should be support for the development of world-class masters programmes that are industry relevant, sector specific and in which industry is engaged.
- Industrial postgraduate programmes should be developed, based on the model of the Danish Industrial PhD Programme.
- A competitive financial incentive to attract industrial R&D leaders to work in enterprise in Ireland should be developed based on a review of tax incentives used in other countries.
- Companies should be allowed the option to offset their R&D tax credit against payroll taxes.
- There should be an increase in the incentives and opportunities for connecting people from enterprise and academia. This should be achieved through the inclusion of industrial engagement as an important criterion for recruitment and promotion of academic or research staff in higher education institutions (HEIs).

The findings of this report fed into the deliberations of the Innovation Taskforce.



# Competitiveness

Our ability to compete in international markets and grow exports of high value added goods and services will be critical to future economic prosperity and standards of living. 2009 saw some improvement in our international competitiveness with costs of energy, labour and property falling, owing largely to the recession. While this improvement is welcome, we need to stay focused on reducing costs in the economy, increasing productivity, ensuring our trade policies are best suited to success in international markets and ensuring public capital investment is directed to areas that will underpin future enterprise development. Access to next generation broadband networks is critical in this regard.

Forfás delivered a range of research, analysis and advice on issues affecting our national competitiveness and focused on protecting our attractiveness as a location to do business.

## Sharing Our Future: Ireland 2025

Forfás undertook a futures orientated review, *Sharing Our Future: Ireland 2025*, to assist policymakers in the development of longer term policy and to ensure that Ireland remains competitive in an increasingly innovation-driven global economy. To remain competitive there is a need to further improve our understanding of longer term trends and to incorporate the necessary flexibility in policy to address these changes.

Sharing Our Future outlines a range of strategic policy requirements for Ireland to optimise future growth out to 2025. It encourages the policy community to factor long term thinking in all short term decision making relating to enterprise in Ireland. This report complements the Government's framework for sustainable economic renewal, Building Ireland's Smart Economy.

The identified strategic policy requirements fall under ten headings. These areas are:

- Governance
- Planning and the Regions
- Information and Communication Technologies
- Energy Supply and Security
- Environment and Climate Change
- Transport
- Education and Skills
- Innovation and Research
- Social Policy and Quality of Life
- Enterprise



### Sharing Our Future

Pictured at the launch of Sharing Our Future at Farmleigh, Dublin are (l to r) Jean-Loup Loyer, Centre d'Analyse Strategique, France; Dr Carlos A. Primo Braga, The World Bank; Tánaiste and former Minister for Enterprise, Trade and Employment, Mary Coughlan, TD; Eoin O'Driscoll, Chairman, Forfás; and Dr Werner Kruckow, Siemens.

*Sharing Our Future: Ireland 2025* was launched by the Tánaiste and former Minister for Enterprise, Trade and Employment, Mary Coughlan, TD, in July 2009 at a futures forum in Farmleigh. Speakers included His Excellency Claes Ljungdahl, Ambassador of Sweden to Ireland; Dr Carlos Primo Braga, Director, Economic Policy and Debt Department, The World Bank; Jean-Loup Loyer, Project Manager, France 2025, Centre d'Analyse Stratégique, France; Dr. Werner Kruckow, Managing Director, Siemens Limited; Sean Gorman, Secretary General, Department of Enterprise, Trade and Innovation; and Dr Eoin Gahan, Head Regulation, Trade and Policy Foresight, Forfás.

## Restoring Ireland's Competitiveness

Forfás worked closely with the DETE, the development agencies and other government departments during 2009 on the key issues for restoring Ireland's competitiveness. Forfás participates in and has provided a range of inputs to the Senior Officials Group on Economic Recovery, which supports the work of the Cabinet Committee on Economic Renewal. This work included research and analysis of policy options for addressing a range of key competitiveness issues in the economy. Forfás also worked with the DETE and the agencies in assessing the economic impact of a number of plant closures over the last year and was represented on the Government established Mid-West Taskforce.

## Regional Competitiveness Agendas

Recent global and national developments mean that, more than ever, every part of the country has a crucial role to play to enable the economy to return to export driven growth.

Forfás launched a suite of *Regional Competitiveness Agendas (RCAs)* reports in January 2010 which assess how each region in Ireland can build on its own potential and continue to develop a competitive environment to support enterprise development. The RCAs propose actions specific to each region to focus efforts on realising the potential and addressing barriers.

There were a number of outputs from the project:

- *Regional Competitiveness Agendas Volume I*: provides a comprehensive analysis of the regions' status across a range of competitiveness factors. It was used to inform stakeholder consultation and workshops.
- *Regional Competitiveness Agendas Volume II: Realising Potential*: provides an overview for each region of future potential and highlights actions specific to the region.
- *Regional Competitiveness Agendas: Overview, Findings and Priorities*: highlights the key findings, differentiating factors and priorities for regional development.

A number of common themes emerged through the study:

- The challenge is to translate national policy into effective regional action.
- Each region faces opportunities and challenges that are specific to it and that require appropriate responses.
- There is a strong interdependence between enterprise development and the planning, development and creation of an attractive business and investment environment at a regional level.

Forfás collaborated with the enterprise development agencies, the regional and local authorities and other key stakeholders in the development of the study. The report outlines that many regions have initiated collaborative responses to specific challenges and opportunities, which have the potential to inform national policy development.

Recommendations include the need for:

- An enhanced mechanism at the regional level to harness the range of stakeholders and to deliver on a cohesive and coordinated enterprise focused agenda.
- A strengthening of regional governance structures to ensure effective implementation of regional planning guidelines.
- Accelerated development of the gateways, in a coordinated, strategic way that enhances their role as key drivers of economic development and optimises the interaction with hubs and their immediate hinterlands.
- Continued investment in regional infrastructure to address gaps, with a particular focus on broadband provision.

The study supports the role of the enterprise development agencies and outlines opportunities for enhanced collaborative action. It also provides the regional economic strategies for the update of the regional planning guidelines currently under review by the regional authorities, and informed the Forfás response to the Department of Environment, Heritage and Local Government's white and green papers on Local Governance.

## Next Generation Networks: Performance and Policy Actions

Future competitiveness and growth in Ireland will depend on the availability of next generation broadband services to a greater degree than in most other developed economies. Forfás continues to highlight the potential economic, social and technological benefits of advanced broadband and continues to stimulate debate in development of next generation network (NGN) infrastructure, which is important from an enterprise perspective.

The Forfás report, *Ireland's Broadband Performance and Policy Actions*, focuses on the key indicators of Ireland's current broadband performance and recommends a number of policy actions that are required to underpin a knowledge economy. The availability of high quality broadband is vital to improve the productivity of the workforce, facilitate innovation and job creation, attract foreign direct investment and enable Irish firms to compete in international markets.

Ireland has made significant progress in the last two years regarding basic broadband availability. However, we remain behind competitor countries in terms of upgrading the local access network to fibre and in offering very fast connection speeds over fibre.

### Key findings:

- Coverage and take-up rates are converging to the OECD average. Ireland has 21.4 subscribers per 100 inhabitants compared to the OECD average of 22.4. Ireland remains behind leading countries such as the Netherlands (38.1) and Denmark (37).
- The speed and cost of services available to businesses in Ireland have improved in recent years. DSL business services of up to 12 Mb/s are now available in many key urban centres and up to 24 Mb/s in a very limited number of locations in Irish cities.

- The download speeds available in Ireland remain substantially below the fastest speeds available to customers in other OECD countries. In Ireland 5 per cent of broadband connections are above 10Mb/s, a much lower proportion than leading EU countries such as Portugal (47 per cent), Belgium (45 per cent) or Sweden (34.5 per cent).
- In Ireland only 0.6 per cent of total broadband connections are fibre compared to 51 per cent in Japan, 46 per cent in South Korea and 21 per cent in Sweden. On average, 11.3 per cent of subscribers in OECD-28 countries currently access the Internet over fibre connections. Fibre is growing rapidly in Sweden, Denmark, Norway, the Slovak Republic, Hungary and the USA.

Ireland's key weakness is the lack of deployment of fibre infrastructure closer to the consumer for both wired and wireless networks. The report makes a number of immediate policy recommendations to enable Irish firms to compete as significantly faster speeds are becoming widespread in other countries, including:

- Actions to facilitate the necessary investment by private telecommunications operators. The Department of Communications, Energy and Natural Resources and the Commission for Communications Regulation (ComReg) should review options to increase revenues and reduce costs and risks for private sector operators while continuing to support competition in the market. This includes ensuring an appropriate return on investment for private telecoms operators to incentivise investment in next generation networks; examining the potential for infrastructure sharing between telecommunication operators; reducing the costs of building access networks; and enabling wireless spectrum to play a strong role in the delivery of higher-speed broadband.
- Actions to utilise existing State investment and regulation to support development. We need to make it easier to access public ducting and other infrastructure that could be used for fibre deployment. The Department of Communications, Energy and Natural Resources has committed to a "one-stop shop" for State broadband infrastructure to provide broadband operators with integrated access to State-owned infrastructure. Forfás is highly supportive of this initiative which should be progressed swiftly as a first step.
- Extending existing Metropolitan Area Networks (MANs) to key IDA industrial sites in Cork and Waterford to meet existing enterprise needs, and building additional MANs in five outstanding National Spatial Strategy centres can support the availability of advanced broadband services.

During the course of 2009, Forfás developed an implementation plan to ensure the delivery of next generation networks. This plan is based on bundling the telecommunications state assets together on an open access basis. It will be progressed with the various stakeholders during 2010.

Forfás also prepared a submission in response to the ComReg discussion paper on next generation broadband in Ireland. This paper highlights the gap that remains and is widening between Ireland and other developed western European countries in the planning and development of the broadband networks needed for ecommerce, digital business and for the knowledge society in general. It also focuses on the need for a proactive public policy and development plan for next generation networks, for the State to vigorously pursue its own objectives of re-establishing Ireland's leadership in advanced telecommunications and to take action where the market is not delivering.

## Infrastructure Priorities, Coordination and Delivery

During 2009, Forfás developed a paper, *Infrastructure Priorities, Coordination and Delivery*, which examined future public capital investment in infrastructure in light of the current budgetary constraints. High levels of public capital investment in recent years have led to significant improvements in Ireland's infrastructure. Notwithstanding progress, Ireland continues to have significant infrastructural deficits.

The paper provided the joint-agency input into the Department of Finance's ongoing review of capital expenditure projects under the National Development Plan (NDP). It identifies those capital expenditure projects that are most likely to enhance the productive capacity of the Irish economy, enhance competitiveness and achieve maximum value for taxpayers' money. It clearly sets out infrastructure projects which are priorities for the enterprise development agencies and for the productive capacity and future growth of the economy.

As some critical bottlenecks have been addressed and the slowdown in the economy reduces demand, there is a window to plan and deliver our infrastructure needs in a more coordinated fashion. The wide range of bodies involved in planning and delivering infrastructure projects has not allowed Ireland to realise the potential for greater economies of scale and scope from the NDP and has contributed to cost overruns and delays; duplication of resources; a lack of critical mass in terms of developing the capabilities to design and deliver projects; and a greatly weakened ability to integrate and jointly deliver projects.

Forfás proposed a number of alternative coordination mechanisms for infrastructural roll out with potential to maximise collaboration and smart planning, informed through consultations with key actors across expenditure allocation, planning and delivery. Finally, the report outlines a number of cost-neutral regulatory reforms that would enhance competitiveness by improving investment and competition in infrastructure delivery and services.

A final report was presented to the Forfás Board in July 2009 and was subsequently circulated to key stakeholders in the infrastructure domain. The findings were discussed with the Department of Finance officials responsible for reviewing public capital investment programmes.

## Energy Cost Competitiveness

In spite of the recent moderation in energy prices, energy competitiveness remains a key issue for Irish exporters. Forfás continued to work with stakeholders, particularly the Department of Communications, Energy and Natural Resources (DCENR), the Department of Enterprise, Trade and Employment, the Commission for Energy Regulation (CER) and the development agencies, to progress actions to lower energy costs, improve energy security and our environmental performance. While a number of actions were taken by Government in 2009 to improve Ireland's energy cost competitiveness, further structural measures are required to bring about a more sustainable reduction in electricity costs. Forfás and the development agencies will continue to input to important competitiveness related consultations by DCENR and the CER in 2010.

## Ireland's Trade and Investment Policy

As a small open economy highly dependent on international trade and investment for growth and jobs, ensuring that our national trade policies are strategically relevant to facilitate Ireland's enterprises trading internationally and attract new investment is a key priority. Forfás supports DETI with research and advice across a range of international trade policy dimensions, in addition to ongoing advice on improving Ireland's export performance as set out below.

## Trade Negotiation Support

Forfás continues to provide research support and policy advice to the Department of Enterprise, Trade and Innovation in developing Ireland's position both at the World Trade Organisation (WTO) and in negotiations at EU level on future international trade policy. The negotiations are significant for Ireland as a small open economy highly dependent on international trade for growth and jobs. In 2009 Forfás provided updated economic impact analysis on the latest proposals on international trade liberalisation and market access opportunities for companies in Ireland. The analysis provides data for government to help assess the desirability of any new WTO agreement for Ireland by quantifying the gains for our economy in terms of the reduced cost of Irish goods on extra-EU markets, the savings to Irish enterprises from cheaper imported materials, and the reduced prices consumers in Ireland might pay for certain imported goods. It also sets out the potential costs of not concluding a deal.

## Trade Facilitation

For enterprises engaging in international trade there are high and ongoing transaction costs associated with customs clearance and other regulatory compliance requirements. Other countries have sought to reduce these costs by providing simplified single electronic filing of necessary documentation, known as a "single window". Forfás, at the request of the DETE, examined the potential of such a system for Ireland.

As a follow up to the Forfás 2008 Single Window trade facilitation system feasibility study for the Department of Enterprise, Trade and Employment, Forfás worked with the High Level Group on Business Regulation, and the Revenue Commissioners in particular, to identify how best to address the most costly trade related regulations identified in the report. Forfás isolated the four most costly regulations facing Irish exporters and importers: duty relief schemes, customs clearance, VAT Information Exchange, and INTRASat; and set out how savings could be made. This work is now influencing Ireland's engagement at EU level as the new European Modernised Customs Code process is progressed.

## The Impact of Sterling Depreciation for Ireland

In response to the loss in competitiveness experienced as a result of euro/sterling exchange rate movements, Forfás worked with Enterprise Ireland to analyse the impact on enterprises in Ireland, setting out the sectors with especially high exposure and a number of actions that enterprise can take to lessen some of the impact of currency fluctuations. This analysis was provided to the Department of Enterprise, Trade and Employment to inform policy decisions to support vulnerable firms and sectors, and was sent to the development agencies to further inform them of the extent of client and sector exposure as well as providing advice on how to minimise the impact of euro/sterling exchange fluctuation. These include devising new diversification and marketing strategies, and changing production and distribution activities.

## Trade Data And Analysis

During 2009, Forfás provided trade data and analysis to the Department of Enterprise, Trade and Employment and compiled the booklet *Enterprise Statistics at a Glance 2000*, which brings together data from various sources into a single, accessible format. *Enterprise Statistics at a Glance 2009* presents statistics on areas relevant to the performance of Ireland's enterprise sector; employment and output; international trade in goods and services; inward and outward foreign direct investment flows; and business R&D and innovation. The statistics highlight some of the key trends in the activities of enterprises based in Ireland and help describe how they are developing and changing over time.

## A New Strategy For Trade, Investment And Tourism

In support of the development of a new national trade, investment and tourism strategy action plan, Forfás completed three research papers for the Department of Enterprise, Trade and Employment in 2009.

The first, *Patterns in Global Trade: Ireland's Trade in Context*, provided an in depth statistical analysis to help understand Ireland's position in world trade, and the nature and scope of Irish trade. It also presented a summary of the challenges and opportunities relating to Ireland's export potential over the medium term.

The second piece of work, *Ireland's Investment Performance*, set out the levels of foreign investment into Ireland over recent years, and the implications of this for exports, jobs and wider economic impacts. It also examined Ireland's outward investment performance and provides a quantitative basis for upcoming investment policy discussions as part of the strategy formulation process.

Finally, *Import Characterisation Study* sets out how imports impact on our competitiveness, the changing practices among enterprises that are driving import performance, and the sources of our imports with an emphasis on imports as inputs to production. The study pointed to the opportunities for a new trade strategy to bridge gaps in competitive provision and the potential to develop links between foreign owned companies in Ireland and indigenous sub-suppliers.

Forfás will continue to work with the DETI and the cross-departmental group developing the new strategy during 2010.



## Europe 2020

During 2009 the European Union prepared a follow-up to the Lisbon Agenda of 2000, which was a ten year strategy aimed at making the EU the most competitive economy in the world. Forfás, in its input via the Department of Enterprise, Trade and Employment, suggested an emphasis on the steps needed at national and at EU level in order to secure growth, innovation and employment in the years to come. It also highlighted the necessity of taking into account the main trends in technology and globalisation and building upon them in determining the strategic direction. Forfás also provided a submission and presentation to the Joint Oireachtas Committee on European Affairs during 2009 on the key enterprise priorities. The process culminated with the EU Commission's launch in March 2010 of the Europe 2020 Strategy to drive recovery and prepare the EU economy for the next decade.

## National Competitiveness Council

The National Competitiveness Council (NCC) reports to the Taoiseach on key competitiveness issues facing the Irish economy and recommends policy actions required to enhance Ireland's competitive position. The research and analysis underpinning the outputs of the NCC is undertaken by Forfás. The key NCC outputs in 2009 included:

Annual Competitiveness Report 2009 <ul style="list-style-type: none"><li>□ Volume 1: Benchmarking Ireland's Performance</li><li>□ Volume 2: Ireland's Competitiveness Challenge</li></ul>
Getting Fit Again: The Short Term Priorities to Restore Competitiveness
Driving Export Growth: Statement on Sectoral Competitiveness
Costs of Doing Business
Statement on Energy
Our Cities: Drivers of National Competitiveness
Statement on Education and Training

### Annual Competitiveness Report 2009: Volume 1, Benchmarking Ireland's Performance and Volume 2, Ireland's Competitiveness Challenge.

*The Annual Competitiveness Report Volume 1, Benchmarking Ireland's Performance* uses 150 indicators to assess Ireland's competitiveness performance against a range of comparator economies. The aim of this report is to provide an objective evidence base, particularly so that emerging or potential weaknesses in the factors contributing to Ireland's competitiveness can be identified. The Council's competitiveness assessment encompasses policies on:

- The regulatory environment including taxation, competition and the labour market;
- Ireland's physical infrastructure, including transport, ICT and housing; and
- Ireland's knowledge infrastructure, including all levels of education, training and R&D.

The benchmarking report provides the analysis to underpin the work of the NCC in preparing its recommendations to the Taoiseach.

The overarching finding of the 2009 report was that Ireland's competitiveness position, while weakening over a number of years, has not changed dramatically during 2008/2009. The recent rapid decline in national income is primarily a reflection of the collapse of the property market and its effects on the wider economy. Ireland continues to retain a range of important competitive strengths including a young and comparatively well educated

workforce; improving infrastructure; growing levels of research and development activity; a modern internationally trading enterprise base; and a long track record as a successful location for overseas investors. The NCC concluded that the ability of Ireland to protect the gains in living standards of recent decades and to secure future increases rests on our ability to succeed as competitive exporters of high quality goods and services on international markets. Given the severity of our current economic position, Ireland needs to achieve a swift improvement in competitiveness across a range of areas such as cost competitiveness and the broader business environment including taxation, regulation, infrastructure, and education.

Volume 2 of the *Annual Competitiveness Report, Ireland's Competitiveness Challenge*, this year subtitled, *Creating a Better Future*, focused on the national competitiveness issues of most importance to enable our main existing and emerging exporting sectors to compete successfully in international markets and identifies the policy recommendations required to address them. The priority policy recommendations identified by the NCC are:

- **Create Jobs and Tackle Unemployment:** The single biggest challenge for Ireland in 2010 is to create jobs and reduce unemployment. Placing a strong emphasis on skills development is critical to support the competitiveness of existing firms by enhancing their capabilities and increasing productivity growth. It is also essential to keep unemployed workers close to the labour market and help prevent the drift to long term unemployment. Retaining funding for training those in employment, particularly those with low skills in low productivity or vulnerable sectors, remains critical, in spite of the significant pressure to shift investment towards those who have lost their jobs.
- **Reduce the Costs of Doing Business:** The costs of doing business in Ireland, especially energy, waste and professional services, must fall relative to our trading partners. In particular, Ireland needs to ensure open competitive markets in all sectors of the economy and to drive competition in non-traded services sectors in particular through the effective implementation of Competition Authority recommendations.
- **Prioritise Infrastructure Investment to Support Enterprise:** Reducing capital expenditure to maintain current expenditure will not help long term competitiveness. However, clear prioritisation and lower cost delivery can offset some of the impact of reduced budgets. It is vital that the infrastructure projects likely to have greatest impact in terms of attracting overseas investment and supporting firms in Ireland to compete successfully are front-loaded.
- **Tackle the Macro Issues:** Continued action is required to ensure credit is channelled to viable businesses and to restore the sustainability of the public finances. The NCC believes that broadening the tax base is central to repairing the public finances. In the absence of measures to broaden the tax base, taxes on income would inevitably have to rise further in the future. Higher taxes on income are a disincentive to people to remain in or return to the labour market. The NCC welcomes the introduction of a carbon tax in Budget 2010 and the proposals to introduce a property tax and water charges for domestic users.

The NCC believes that the speedy implementation of the priority actions highlighted in *Ireland's Competitiveness Challenge 2009* is as fundamental to Ireland's future as the steps being taken to address the banking crisis and to arrest the decline in the public finances.

## Getting Fit Again: The Short Term Priorities to Restore Competitiveness

In addition to its two annual flagship reports, *Benchmarking Ireland's Performance* and *Ireland's Competitiveness Challenge*, the NCC published a mid-year statement, *Getting Fit Again: The Short Term Priorities to Restore Competitiveness* outlining the immediate actions required to improve cost competitiveness, sustain employment, foster innovation at all levels of economic activity and enhance training and education opportunities. The short term policy priorities identified in *Getting Fit Again* are consistent with the medium term strategy for sustainable growth, as set out in the Government statement, *Building Ireland's Smart Economy*, and helped shape the agenda for Government policy to tackle competitiveness issues.

## Driving Export Growth: Statement on Sectoral Competitiveness

In 2009 the NCC undertook a study to identify the existing and emerging sectoral opportunities that can drive export growth, the key competitiveness factors affecting them, and the sector-specific actions which are required to improve their competitiveness. *Driving Export Growth: Statement on Sectoral Competitiveness*, reviews eight key existing and emerging sectors and highlights the sector specific challenges which need to be addressed if we are to exploit the significant growth opportunities that exist within these sectors. These include:

- The provision of specialised courses for particular sectors such as ICT, financial services and environmental goods and services;
- Enhancing the clinical trials process is key to increasing the size of the pharmaceutical and medical technologies sectors; in particular we need to consolidate and streamline approval processes for new products and technologies;
- Ensuring that various Government departments and agencies work together to implement coherent strategies for their sectors (e.g. food, tourism);
- Upgrading the road infrastructure in and to the west is critical for the medical technologies sector to enable easier access to international markets;
- The strategic and timely implementation of impending EU environmental legislation to develop markets for indigenous green companies and create first mover advantage for Irish companies;
- Coordinating public spending on tourism related investment across Government departments and agencies to ensure that the attractiveness of Ireland's international tourism profile and offering is enhanced.

As well as the unique set of challenges facing individual sectors, a number of issues are common across many or all sectors. These include improving cost competitiveness; increasing productivity; providing advanced broadband services in all national spatial strategy centres; and sustaining investment in the productive sectors of the economy. Actions to address these cross-cutting issues were outlined in the NCC's annual report, *Ireland's Competitiveness Challenge 2009*.

## Cost of Doing Business in Ireland

In 2009 the NCC updated its *Cost of Doing Business in Ireland* report and outlined the policy actions that need to be progressed without delay to reduce the costs of doing business in Ireland. Restoring cost competitiveness is essential to protect our attractiveness as a location to do business and to arrest the current rise in unemployment. While prices in Ireland moderated during 2009, this to a large extent reflects the sharpness of the recession rather than competitive advantages arising from structural changes in the Irish economy. The main recommendations include:

- **Adjusting incomes and prices:** A quick adjustment in price levels is essential to achieve swift improvements in competitiveness. While painful in the short term, the alternative is a prolonged period of weak or negative growth, high unemployment and emigration. The rate at which incomes and price levels generally adjust to the changed economic environment will have a considerable bearing on how fast Ireland can recover.
- **Lowering property costs:** Falling land and property prices do not reduce the necessity for structural change in respect of land planning.
- **Lowering energy costs:** Recent energy price reductions were necessary but are not sufficient. Further actions are required to bring down energy costs. The NCC Statement on Energy, also published in 2009, has further detail on this (overleaf).
- **Tackling administered costs:** Government needs to ensure that its regulators and agencies are prioritising national economic and competitiveness objectives in all regulatory decisions.
- **Reducing business services costs:** A number of outstanding Competition Authority recommendations that affect business services costs need to be implemented as quickly as possible.

The NCC continues to highlight the need for structural changes, such as increased competition in the non-traded sectors, to ensure that prices in Ireland will not escalate and therefore erode competitiveness when the economy returns to growth. The NCC will continue to work with stakeholders in 2010 to progress the policy actions required to improve Ireland's cost competitiveness, particularly in locally traded sectors such as utilities and professional services.

## Our Cities: Drivers of National Competitiveness

The NCC report, *Our Cities: Drivers of National Competitiveness*, published in 2009, examines the core elements that make Irish cities competitive and highlights actions to improve their performance and ultimately enhance our national competitiveness. Cities are increasingly seen as the drivers of national competitiveness and of economic and social development. With the rise in globalisation, cities across the world are becoming less concerned with national rankings of competitiveness and are focusing instead on improving their positions in a global league table of cities. As people become more mobile and firms more selective about where they locate, competitive cities have emerged as magnets for talent and investment.

The NCC report recommends a number of policy actions including:

- Prioritising investments that develop the competitiveness of Dublin and our other main cities. In view of the significant reductions in public investment arising from the deterioration in the public finances, it is critical that city related projects of most importance for future economic growth and those likely to have greatest impact in terms of supporting exporter sectors are prioritised. As Ireland's only city of international scale, continued investment in Dublin is necessary to maintain and improve its position as an internationally competitive location. It is also vital that we develop the potential of our other main cities and create greater links between them so that they can achieve the critical mass required to enable sustainable growth.
- Improving city governance through the development of urban entrepreneurialism among local authorities in city areas. In this system, policymakers from different administrative institutions work in partnership with each other and a variety of public and private stakeholders to develop the city, which in turn enhances its business environment, the quality of life enjoyed by citizens; and the experience of visitors.
- Improving urban land use and planning policy. An integrated approach to land use and transport policies in our cities is critical to allow the efficient movement of people and goods, and to improve the viability of public transport. Combining carefully located, well designed high density developments with social, educational and recreational facilities and world-class transportation connections offers the possibility of increasing the supply of both commercial and residential property in a more cost effective and environmentally sustainable manner.

The key role that strong cities play in driving economic growth and in enhancing regional and national competitiveness was reflected in the Government statement, *Building Ireland's Smart Economy*, which highlighted the need to prioritise future investment in our main cities.

## Statement on Energy

Published in October 2009, the *NCC Statement on Energy* assesses Ireland's energy challenges and sets out priority areas for policy action to improve Ireland's competitiveness both in the immediate and longer term. A reliable and competitively priced supply of energy is vital to enable Irish exporters compete successfully in global markets. From a national competitiveness perspective, the challenge facing Ireland is to reduce energy costs while delivering on our security of supply and environmental sustainability objectives. While reductions in gas and electricity prices in 2009 are a positive development, further immediate action is required to improve Ireland's competitiveness.

A number of factors that affect Ireland's energy cost performance are outside our direct control, such as global fuel price volatility and our reliance on imported fossil fuels such as oil, gas and coal. However, there are a number of areas where Ireland can, and must, act without delay to improve its performance. The main policy actions identified by the NCC to improve Ireland's energy cost competitiveness are set out below:

- Regulation needs to prioritise bringing the differential in controllable domestic costs, i.e. non-fuel costs, into line with costs in our main competitor countries. Every effort now needs to be made to take advantage of the successful creation of the all-island electricity market.

- Given the introduction of the all-island electricity market in November 2007, it is timely to review the market rules to ensure that the market is functioning optimally. In particular, the level of capacity payments (the mechanism designed to ensure adequate electricity supply to meet demand) needs to be reduced further to reflect the fall in capital costs for new plants as well as the decline in electricity demand.
- Electricity generated from renewable sources and peat receives a guaranteed price. These subsidies help reduce Ireland's dependency on imported fuel, and in the case of renewables, help Ireland to meet its renewables and climate change objectives. While public subsidies can play a key role in supporting emerging sectors, the NCC is concerned about the cost implications for the competitiveness of electricity customers. All price support mechanisms for renewables should be designed to be transitional with decreasing support levels over time;
- The carbon windfall should be recovered from electricity generators and passed back to electricity consumers through lower prices, on an annual basis, to 2012.

Reducing our dependence on imported fossil fuels is a significant competitiveness challenge for Ireland. We currently import approximately 90 percent of our energy needs. While Ireland must take steps now to address the longer term security of supply and climate change issues, it is absolutely critical that those steps are consistent with the urgent need to enhance the cost competitiveness of Irish businesses. It is vital that the development of Ireland's considerable renewable energy resources is progressed in a fashion which improves energy cost competitiveness. This presents major policy challenges.

Ireland's energy challenges also present significant opportunities for the enterprise base. As an exporting economy with a strong existing enterprise base, Ireland has opportunities to develop domestic companies in energy and related areas and to attract a greater share of foreign direct investment in the global environmental goods and services sector.

## Statement on Education and Training

Education is central to our ability to improve our quality of life and wellbeing through success in selling goods and services on international markets. The quality of education outcomes is central to national competitiveness. Ireland's education system has been a key contributor to economic growth and improvements in living standards in recent years. The NCC advocated the need to have one of the best education and research systems in the world to drive economic recovery. *Statement on Education and Training*, published in March 2009, outlines priority recommendations to enhance Ireland's education and training system.

Positioning our economy towards knowledge-intensive high technology sectors requires a supply of people with mathematics, science, engineering and technology skills of the highest calibre. Disincentives for students taking higher level Leaving Certificate mathematics should be addressed and professional development opportunities for second level mathematics teachers should be enhanced. Implementation of the government's *Strategy for ICT in Schools* remains critical for future competitiveness and innovative solutions to the current funding impasse should be explored.

The NCC believes that schools have the potential to achieve excellent outcomes on a system-wide basis if given the incentives, supports and opportunities to do so. Curricula and assessment mechanisms should promote critical thinking, entrepreneurship and innovation. Teacher professional development should be frequent, continuing and progressive during a

teacher's career and not limited to introduction of new syllabi. Equally, outstanding teachers need to be recognised with merit based promotion. Greater autonomy for principals in setting and achieving goals and greater performance incentives related to funding would support quality in education and raise national outcomes.

Irish third level education has performed well in expanding participation rapidly in recent years while maintaining quality. The significant levels of institutional autonomy given to universities and institutes of technology through the funding framework managed by the Higher Education Authority has been an important contributor to this outcome. However, autonomy needs to be balanced with institutional accountability for processes, programmes and outcomes, and continued developments in these areas will be important.

The current arrangements whereby undergraduate student fees are largely met by the Exchequer are no longer sufficient to meet the funding needs of higher education institutions on a sustainable long-term basis. The NCC advocates it is appropriate and equitable that graduates, who will benefit significantly from higher education in terms of increased earnings over the course of their life, should contribute a portion of the cost of their education. Moving towards this does not necessarily require the introduction of upfront tuition fees. Many other approaches involving income-contingent loans and graduate taxes have been adopted in other countries.



# People

Continued strategic investment in the development of our people is an essential component in Ireland's economic success. Providing education, training and upskilling that meets the needs of current and future enterprises must be at the heart of our enterprise policy.

In 2009 Forfás continued to support the development of Ireland's people by providing a range of analysis and advice on the skills needs of Irish enterprises, on how Ireland can address the upskilling needs of those who have lost or are losing their jobs and the training needs of those in employment particularly in vulnerable sectors and companies.

## Review of Labour Market Programmes

At the request of the DETE, Forfás undertook a review of labour market programmes funded by the DETE from the Exchequer, the National Training Fund and the European Social Fund. A Steering Group was established to guide the review, comprising representatives from the DETE, the Department of Social and Family Affairs, the Department of Education and Science, FÁS and Skillnets. The Steering Group was chaired by the DETE.

The review focused on FÁS and Skillnets programmes in terms of their efficiency and effectiveness and drew conclusions about the balance of resources in the context of current and future labour market policy challenges. The key performance metrics which formed the focus of this review comprised the benefits to Government, individuals and enterprise arising from:

- People obtaining employment on completion of a programme;
- People progressing to further training or education; and
- Qualifications awards received by individuals.

The review draws a substantial amount of data together on the performance of labour market programmes including cost, activity, participant profiles and outcomes. The analysis was based upon 2007 and 2008 data and included a multi-metric analysis of individual programmes, ensuring that outcomes of programmes are compared in a balanced way taking account of different client profiles.

The review considered that the focus of labour market programmes should be on three main areas:

- **Activation** - activation measures aimed at improving the employability of unemployed persons by providing progression pathways of relevant job search, training, education and employment opportunities for different target groups.
- **Upskilling** - boosting our human capital by enhancing education and skills levels in line with the National Skills Strategy and the needs of the Smart Economy.
- **Participation** - ensuring that the training and education needs of target groups such as young unemployed; those previously employed in sectors most affected by restructuring; long term unemployed; older workers; and women returners are provided for on the programmes most relevant to them and that the objectives and practice of programmes reflect this.

The review concluded that in a climate of tighter resources, priority will need to be given to those programmes that are capable of delivering on labour market objectives. The most effective programmes for the unemployed were those closest to the labour market and with employer involvement. These courses were found to have the best employment outcomes of all the programmes reviewed. The review also concluded that the allocation of resources to workplace training would continue to be important to ensure that the labour force is continually upskilled, thereby maintaining employment retention. It was considered that optimal programmes are those that are demand led, based on employer and employee identified needs, aligned with national labour market policy objectives and with a focus on training for results.

The report was published by the Tánaiste and former Minister for Enterprise, Trade and Employment in March 2010.

## Profile of Employment and Unemployment

Over the course of 2009, Forfás was requested by the DETE to provide regular updates on the labour market and to provide inputs to the development of activation policies. The outcome of this is a working paper, *Profiling Employment and Unemployment*, which will be continually updated over the next year.

The recent rise in unemployment is one of the most pressing issues in Ireland today. This paper analyses where employment declines have taken place and identifies the common characteristics of those that are unemployed. The objective is to highlight where unemployment is concentrated and to inform the design and targeting of labour market activation measures. The paper includes:

- A commentary on available labour market statistics and issues around defining unemployment.
- Overview of broad labour market trends including shifts in employment, labour market participation, educational attainment and employment by sector, occupation and nationality.
- Profile of current unemployment according to characteristics such as age, educational attainment, gender and nationality.
- Employment outlook - short and medium term including skills demands.
- Guiding principles for addressing the current rise in unemployment.

This paper has helped to inform Government in the targeting of certain labour market cohorts in the development of activation measures. These include the under 35's; the low skilled; young graduates; and those that have lost their jobs in sectors worst affected by unemployment, namely construction, traditional manufacturing and retail.

In addition to providing regular updates to the DETE on the factors impacting on the labour market, over 2009 Forfás also provided them with a range of inputs and technical advice such as updates on movements in earnings and labour costs and advice on the development of employment measures.

## Economic Migration Policy

Forfás continues to provide advice to DETI on economic migration policy. Advice in 2009 primarily centred on labour market trends and the resulting skills shortages. The Department in turn, used this input to determine those categories of occupations which were deemed eligible for Green Cards and Work Permits. This list is available on the DETI website [www.deti.ie](http://www.deti.ie). It is worth noting that as a result of the loosening labour market situation, the list of occupations considered to be experiencing skills shortages was significantly reduced in comparison with previous years.

In addition to labour market updates, Forfás continued to provide input into the DETE on a number of economic migration issues as required, including the arrangements relating to non-European Economic Area (EEA) students seeking employment in Ireland and the operation of the employment permit scheme for non-EEA graduates.

## National Strategy for Higher Education

In February 2009 the former Minister for Education and Science, Batt O’Keeffe, TD launched a new National Strategy for Higher Education in Ireland. The new strategy addressed the need for a strong and dynamic policy formulation process that will allow the higher education system to meet new challenges in a rapidly changing global environment.

Throughout 2009 Forfás provided research support, together with the Higher Education Authority and the Department of Education and Science, to the Strategy Steering Group. The Group developed a vision and related set of national policy objectives for Irish higher education for the next 20 years with more focused targets for the sector for the next five years.

In October 2009, Forfás made a submission to the Higher Education Strategy Group. The submission relates primarily to the skills and research requirements of enterprise and the economy from the higher education system. Forfás proposes the following high level objectives for higher education:

- A quality mass higher education system that meets the needs of the individual;
- A higher education system that contributes to societal and cultural development and makes Ireland an attractive place to live and work; and
- A higher education system that supports the development of enterprise and the economy through the delivery of relevant skilled individuals and relevant quality research.

## Expert Group on Future Skills Needs

The Expert Group on Future Skills Needs (EGFSN) advises the Government on the skills needs of the economy and on other labour market issues that impact on Ireland's enterprise and employment growth. It has a central role in ensuring that labour market needs for skilled workers are anticipated and met.

Forfás manages the work of the Group and provides it with research and analysis. The FÁS Skills and Labour Market Research Unit (SLMRU) provides the Group with data, analysis and research, and manages the National Skills Database.

The Expert Group on Future Skills Needs provides advice to Government on skills issues impacting enterprise through:

- Skills foresight and benchmarking;
- Strategic advice on building skills through education and training;
- Data collection and analysis on demand and supply of skilled labour; and
- Influencing and monitoring implementation

The following initiatives were undertaken by Forfás and the EGFSN in 2009.

### Future Skills Requirements of the Food and Beverages Sector

The food and beverage sector is Ireland's largest indigenous sector, accounting for 8% of GDP and employing 50,000 people directly, with a further 60,000 indirect employees and some 120,000 farmers. Even with the current economic challenges, the sector will continue to provide significant direct and indirect employment. In this context, we must ensure that those working in the industry are continually upskilled and those entering the area are equipped with the appropriate skills.

The EGFSN Report, *Future Skills Requirements of the Food and Beverage Sector*, was published in November 2009 with a number of key recommendations for the sector:

- Establish an interagency, third level institute and industry forum to discuss and address the ongoing skills, training and development needs of the industry.
- Develop and roll out operative upskilling and technical accreditation programmes, as well as recognised and accredited craft accreditations for operatives.
- Tailor and promote Enterprise Ireland's Supply Chain Management initiative and its Leadership4Growth programme, to the food sector.
- Pilot the development of supply partner networks comprising retailers (with Irish operations), FMCG, logistics and warehousing companies.
- Develop a pilot international graduate marketing and management programme for SMEs.
- Develop bespoke modularised interventions to improve commercial acumen of line managers, functional heads and operatives.

These recommendations were proposed on the basis that they are funded from within existing resources namely, the Department of Agriculture, Fisheries and Food; FÁS; the Further Education and Training Awards Council (FETAC); the National Adult Literacy Agency (NALA); Enterprise Ireland; Bord Bia; and Teagasc.



*The launch of **Future Skills Requirements of the Food and Beverage Sector***  
Martin Shanahan, Manager, Science, Technology, Innovation and Human Capital Policy Division, Forfás pictured with Sean Haughey, TD, Minister for Lifelong Learning, at the launch of the EGFSN report in November 2009.

## Future Skills Requirements of the Wholesale and Retail Sector

In September 2008, the Expert Group on Future Skills Needs was requested to provide an in-depth skills study of the wholesale and retail sector by the DETE. The objective of the study is to assess the skills requirements of the wholesale and retail sector in Ireland up to 2016, with particular consideration for the upskilling targets of the National Skills Strategy, and to assess the performance of the structures already in place for the sector.

Poor perceptions held by potential recruits and the wider public is a key issue for employers in the sector. Unclear career progression prospects, lack of awareness of the high skilled job opportunities and an uneven approach to the quality and amount of training activity are seen as barriers to recruitment.

The central recommendation of the report is to develop a Skills Framework for the sector that will operate within and in harmony with the National Framework of Qualifications. This has the potential to allow employees to obtain national qualifications on the basis of meeting competency standards, without requiring employers to make fundamental changes to the training they provide. This has the potential to open up qualifications to tens of thousands of employees.

Addressing these perceptions, the report recommends:

- Establishing competency standards recognised throughout the industry as a skills framework for the sector will facilitate developing recognition of prior learning in the sector.
- It is intended that the National Framework of Qualifications will facilitate and encourage people to move up the ladder of qualifications. A sectoral framework will facilitate links between courses at different levels in the National Framework, and will

therefore facilitate progression of and contribute to the upskilling objectives of the National Skills Strategy. It will also make opportunities for progression more visible.

- Qualifications awarded under a skills framework should facilitate mobility across the industry, by making clear and transparent statements about the competencies of people interested in moving between employers. This should improve the scope to build careers in the sector, particularly for employees of small enterprises who may not have good opportunities for promotion.
- More broadly, the skills framework has the potential to improve productivity and competitiveness within the sector through the development of the skills base, which can have positive impacts in the wider economy.

The report is based on extensive consultations and overseen by a Steering Group comprising industry, union and education and training stakeholders from the retail sector. The report was published in May 2010.

## Skills in Creativity, Design & Innovation

The EGFSN report, *Skills in Creativity, Design and Innovation*, published in November 2009, addresses Ireland's need for skills in creativity, design and innovation. Skills in these areas are key drivers of productivity improvement, and are considered integral to the Government's wider strategy for economic renewal, reflected in the plan *Building Ireland's Smart Economy - A Framework for Sustainable Economic Renewal*. Most productivity improvement arises from new or improved products, services and business processes, which allow businesses to create more value from the efforts of each worker.

The main measures the recommendations focus on are:

- Responsibility for improving performance in 3<sup>rd</sup> and 4<sup>th</sup> level colleges: all Irish higher education institutions should set objectives in developing creativity and capability to innovate among their students. This should be monitored and progress should be subject to frequent review.
- Higher education institutions should make a major effort to break down the disconnect between science, engineering and technology on one hand, and business disciplines on the other. FETAC should also encourage providers of further education and training to adapt the content to the subject matter of each course.
- Assisting Irish businesses in assessing their skills in creativity, design and innovation using the frameworks presented in this report along with material from other sources, and to help them to respond to opportunities and deficiencies that they identify. An audit tool for this purpose should be developed.
- The role of networks: Skillnets and its stakeholders should place an increasing emphasis on funding networks that target skills in creativity, design and innovation.
- The role of agencies and organisations: organisations such as Enterprise Ireland, industry representative bodies and relevant higher education institutions should consider introducing a placement programme for product design graduates, broadly similar to the existing Export Orientation Programme.

## Submission to Higher Education Labour Market Activation Response Group

A Higher Education Labour Market Activation Response Group was established in 2009 in response to the increased need for new and expanded types of education and training provision targeted at those who are losing their jobs, or who face uncertain employment prospects. The EGFSN Head of Secretariat participated in the Group and the EGFSN and Forfás identified future skills needs within industry.

Forfás made a submission to the proposed Supplementary Budget Measures to provide 1,500 part time third level places. The Forfás submission was circulated in mid-May 2009 to all the higher education institutes in the Higher Education Authority's call for submissions under this Budget measure. Forfás also submitted guiding principles for the Work Placement Scheme announced in the April 2009 Budget, which includes 1,000 graduates and 1,000 other work placements, to both the Department of Education and Science and the DETE.

The core objectives of the Group were as follows:

- To develop the short term and longer term responses that the sector can make to the emerging training and education needs arising from recent growth in unemployment;
- To ensure how best any new or expanded provision can be aligned with predicted future skills needs; and
- To develop enhanced collaboration with other education and training providers in meeting the skills needs of the workforce.

## Submission on Skills to the High Level Group on Green Enterprise

The EGFSN made a submission to the High Level Group on Green Enterprise in 2009. The emerging green economy is seen as resulting in a new skills paradigm that places greater emphasis on professions from different disciplines working in multi-disciplinary teams. This means that generic skills as well as technical skills sets will be important. The specific skills associated with green jobs are not seen as being entirely new skills, rather it is expected that they may be an add-on to existing skills or an amalgam of existing skills.

Further work is underway to address Ireland's need for skills applicable to green industries and its associated occupations. The EGFSN will review the current and future requirement of skills relevant to the development of the green economy and make proposals to ensure that these skills, both in quality and quantity, are in place to realise the employment and export potential of the sector. This report is expected to be published in the third quarter of 2010.

## Statement on Funding for In-Company Training From The National Training Fund

The EGFSN submitted a statement to the DETE outlining the importance of maintaining State investment in in-employment training, notwithstanding current economic difficulties in response to announced exchequer allocations in 2009. In particular, the submission emphasises the key role that State-funded in-employment training can play in combating the effects of the recession. It can boost productivity, assist job retention, and ultimately enhance competitiveness leading to expedited economic growth. Investment in in-



employment training will also be important for the long term development of the economy. The importance of the National Training Fund in funding in-employment training, especially in recessionary times when employers cut back on the funding, is also considered.

## Collaboration with FÁS Skills and Labour Market Research Unit

During 2009, Forfás continued to work closely with the FÁS Skills and Labour Market Research Unit (SLMRU) that operates the National Skills Database on behalf of the EGFSN. Both organisations have worked with relevant stakeholders to identify and develop useful sources of data which help build a profile of Ireland's current and future skills capability and develop the database in terms of the regional and occupational aspects of the information held.

FÁS published three reports on behalf of the EGFSN:

- The *National Skills Bulletin 2009* provides a detailed overview of the Irish labour market in terms of employment trends by sector and occupation, and latest statistics on outputs in education and training.
- *Monitoring Ireland's Skills Supply: Trends in Education/Training Output 2009* provides an indication of the supply of skills to the Irish labour market from the formal education and training system.
- *A Quantitative Tool for Workforce Planning in Healthcare: Example Simulations* developed a series of quantitative models and produced simulated projections on the demand and supply of healthcare workers to assist the Department of Health and Children and the HSE in workforce planning.

## Management Development Council

The Management Development Council (MDC) was established by the former Minister for Enterprise, Trade and Employment to advise Government on the adequacy and relevance of management development provision in Ireland and to promote a coordinated approach to building awareness and appreciation for the value of and need for upgrading leadership and management skills in the small and medium sized business sector.

The Council believes that continued investment in management development can help to counteract the impact of the recession and contribute to economic growth. Management development that focuses on issues of immediate concern to SMEs can allow managers to put in place practices which will assist their firms to survive the current recession. Management skills are crucial for firms adapting their business offerings, and moving into new markets. All of these activities contribute to job retention, thus reducing the impact of the recession on unemployment and subsequently on social welfare payments, while at the same time adding to government revenues through income tax, VAT and corporation tax.

In the longer term, improvements in Irish management practices could potentially generate significant benefits for the Irish economy. Based on work undertaken by McKinsey & Co. at the request of the MDC, it is estimated that even a moderate improvement in management practice in Ireland could be worth between €500m and €2.5bn in terms of increased gross value added in the manufacturing sector alone.



### Management Development in Ireland

Mary Coughlan TD, Tánaiste and former Minister for Enterprise, Trade and Employment pictured with Prof. Frank Roche, Chairman of the Management Development Council at the launch of the Council's report "Management Development in Ireland" in March 2010.

Published in early 2010, the report outlines the Council's ambitious vision for management practice in Ireland where managers in Ireland would not just meet best international standards, but would in fact set these standards. More specifically, the Council would like to see the proportion of SMEs participating in management development, particularly in transformational and strategic courses, to increase from:

- 45 per cent to 70 per cent for micro firms (approximately 53,000 firms - most typically the hard-to-reach cohort);
- 62 per cent to 80 per cent for small firms (approximately 8,000 firms); and
- 87 per cent to 90 per cent for medium firms.

To achieve this vision, an overhaul in provision is required, with new providers being enticed into the market where opportunities arise and existing providers demonstrating greater flexibility and relevance in their offerings. At the same time, the Council would like to see a greater appreciation of the value of management development and its potential contribution to economic growth amongst both SME firms and policy-makers. Additionally, the Council would like to see a greater proportion of firms engaging in longer term, transformational, productivity-enhancing courses that will effect a major positive step change in firm level performance than the current practice of firms engaging in primarily short term, often compliance related courses.

The Council recommends that participation in management development should be increased through the creation of a Management Development Network, essentially similar to existing training networks, which would replace the current fragmented range of State supports for management development. Further, it would represent a practical solution to achieving the multiplier effect needed to engage a large number of SMEs through a combination of bottom up firm led activity and top down target driven activity. The Management Development Network would also be a demand led method of increasing SME participation in management development training and would also utilise face to face interaction with SME managers in order to boost participation. In addition, the network would leverage significant matching private sector funding. Finally, the network could be designed to operate as a one-stop-shop tasked with overseeing the promotion of the management agenda, and responsible for improving information flows and the development of an appropriate training needs diagnostic tool.



# Sustainability

Sustainability encompasses our ability to continue to achieve economic gains while ensuring that our enterprise activities do not impact negatively on the physical environment.

The rapid pace of change in energy and environment markets and policy development is presenting a range of enterprise and competitiveness opportunities and challenges for Ireland. From a sustainability perspective it is essential that Ireland can continue to thrive and prosper without impacting negatively on the environment.

During 2009 Forfás worked with the DETE to ensure that Ireland's enterprise policy meets our environmental requirements, our competitiveness is not negatively affected and that we are well positioned to take advantage of new opportunities emerging. This work included analysis and advice on issues arising in negotiations at national level and EU level on climate change, as well as analysis and advice on energy, environment and waste management policy.

## Long Term Energy Framework

Forfás has developed a long term energy policy framework for Ireland to assist policymakers in energy policy development. The focus of *Irish Energy Tetralemma - A Framework for Fuel Choices for Ireland* is on the assessment of fuel choices into the future, both in terms of an input into energy policy but also in realising the enterprise opportunities that may arise. The project reviewed eleven fuel types taking into account the associated trade-offs with each fuel type.

There is a recognition that fossil fuels, in particular gas, will continue to play a part in Ireland's future fuel mix particularly as back up generation will be required for increased penetration of renewables, specifically wind energy. Fuels were ranked in terms of their attractiveness in meeting the competing objectives of competitiveness, which are security of supply, sustainability and climate change. Overall the relative ranking is most influenced by three factors:

- The degree to which there is a supportive national and regulatory framework in place;
- Changes in commodity and technology prices over the next decade; and
- The pace of technological development.

There are strong prospects of renewable energy becoming fully competitive in terms of delivered energy costs as technology matures and Ireland is well placed to take advantage of opportunities arising. It is planned that the output from this project will be published later in 2010.

## Outcome of EU Council Negotiations on a Post-Kyoto Climate Change Agreement

In January 2008 the EU Commission announced ambitious and controversial policy proposals to counteract climate change. Referred to as the 20-20-20 package, the proposals aimed to cut EU-wide CO<sub>2</sub> emissions by 20 per cent; achieve EU renewable energy penetration of 20 per cent; and improve EU energy efficiency by 20 per cent by 2020. A key concept of the package was that companies should have to pay for all of the carbon they emit by 2020.

Forfás research in early 2009 highlighted that this would have significant cost implications for Irish firms and would give non-EU companies a significant competitive advantage. Throughout 2009, Forfás worked closely with the DETE and other relevant stakeholders to address Irish concerns. A compromise agreement was reached in December 2009. A number of changes were made to the EU climate change package that will support our competitiveness including:

- The deadline for paying for all carbon emissions may be pushed back seven years from 2020 to 2027 for many companies.
- Interim 2020 commitments are less onerous for most companies.
- The process may be implemented across Europe in a fashion that is advantageous for Ireland. Emissions allowances for vulnerable sectors will be granted on the basis of benchmarking against best available technology.
- The EU created the potential for certain sectors to be treated more favourably if they are strategically important to the EU and the climate change package imposes particularly high costs on them which could result in relocation to non-EU countries.

Alumina, steel, iron and cement producers are likely to benefit from the preferential regime. The challenge for Ireland is to include the food and drink sector in this list of vulnerable sectors.

Given our small scale, Ireland is perceived to have performed well in terms of influencing the final package. The changes above provide more time for Irish firms to adjust and lower the cost implications of the original package. However, the agreed package presents Ireland with significant challenges to reduce our carbon intensity and maintain cost competitiveness. For example, under the revised scheme, electricity producers will need to buy 100% of their CO<sub>2</sub> emission permits by 2020. The European Commission believes this will cause electricity prices to rise by 10 to 15 per cent across the EU.

Forfás worked with the DETE to make a strong case to the European Commission for the favourable treatment of the food and drink sector, given its strategic importance to the Irish economy. Analysis was also undertaken on other key sectors impacted by carbon leakage proposals (i.e. cement and alumina). Forfás also undertook further analysis on compliance costs of EU environmental policy, described in the Towards Copenhagen section below.

## Towards Copenhagen: Issues for Enterprise

Recent ambitious commitments at both EU and national level in regard to greenhouse gas emissions reductions mean that Ireland faces an unprecedented challenge to maintain competitiveness whilst operating in a carbon constrained environment. In the run up to the United Nations Climate Change Summit in Copenhagen, the EU proposed to extend the target to cut EU-wide CO<sub>2</sub> emissions by 20 per cent to 30 per cent.

Forfás has been working closely with the DETI Environment Unit to address the challenges to Ireland posed by EU Commission proposals in this area. To ensure an appropriate policy response, the DETE requested Forfás to undertake a detailed quantitative analysis on the potential compliance costs arising from a move to a 30 per cent emissions target and the possible means of addressing it.

### Key findings:

- Based on the proposed step up to a 30 per cent emissions cut, firms such as power producers and large industrial plants involved in the EU Emissions Trading Scheme (ETS) will spend an average of almost €400m annually purchasing emissions allowances between 2013 and 2027. Up to 90 per cent of these costs will fall on the power generation sector, which will be passed through to all energy users. However, sectors such as food and drink will also have to pay relatively high direct compliance costs of €9 to €12 million on average per annum to 2027.
- The formulae developed to determine national targets under the EU burden sharing arrangements is critical. A key issue for Ireland will be to achieve recognition by the EU of the dominance of Ireland's agricultural sector and the difficulty this places on Ireland to cut emissions without punitive costs.

The Forfás analysis was presented to the Senior Officials Group on Climate Change and Energy Security in December 2009 and the key recommendations were discussed. Forfás attended part of the UN Climate Change Summit in December 2009 as a member of the Irish delegation. Although a formal protocol was not agreed, a Copenhagen Accord was realised. Forfás is assessing the implications of this accord for Ireland and will continue to assess the implications of any international climate change agreement for the Irish enterprise base.

## Waste Management Benchmarking

The availability of waste management services and facilities and the associated costs continue to be a competitiveness issue for enterprise in Ireland. In 2009, Forfás updated its waste management benchmarking assessment and highlighted the policy actions that need to be prioritised to ensure that Ireland meets the waste management needs of enterprise now and in the future.

The benchmarking assessment showed that the cost of waste management in Ireland across all the main treatment options remains high when compared to competitor countries. Ireland continues to have a relatively high reliance on landfill for waste treatment and Irish companies continue to have a limited choice of waste treatment solutions compared to their competitors.

The report highlights the current uncertainty about the future direction of Irish waste management policy and identifies the following waste policy actions that need to be prioritised:

- Creating policy and regulatory certainty in the waste sector to incentivise private investment in waste infrastructure and to speed up waste management infrastructure rollout in Ireland.
- Sending appropriate price signals to the private sector to support national competitiveness objectives in the short and medium term, whilst also ensuring that Ireland meets its environmental obligations. In particular, the report highlights that Ireland needs to ensure that further increases in the landfill levy are not introduced until adequate new alternative waste treatment facilities are operational. It is also seen as critical that we assess what measures are required to ensure that alternative waste treatment options in Ireland are competitively priced and not determined by landfill costs which are among the three most expensive of the benchmarked countries.
- The need to coordinate regional waste management plans at national level to attract investment in waste infrastructure in a way that maximises economies of scale and competition, and enables the market to pass on the benefits to businesses and householders.

Specific waste management infrastructures that are priorities to develop include:

- Thermal treatment capacity to recover energy from municipal and industrial waste;
- Thermal treatment or landfill capacity for hazardous waste;
- Biological treatment (composting, anaerobic digestion) throughout Ireland; and
- Reprocessing capacity for recovered materials (e.g. paper, glass and plastic recycled materials).

Despite the completion of the International Review of Waste Management for the Department of Environment, Heritage and Local Government, certainty in the waste management market is not any closer. Forfás has expressed concerns about the lack of focus on competitiveness issues in the recommendations of the International Review. A recent report by the Economic and Social Research Institute has referenced the findings of the Forfás Waste Benchmarking Report and has reiterated concerns that some of the proposals in the International Review, if adopted, would not enhance the international competitiveness of Irish enterprise.



## Ongoing Research and Policy Advice to the Department of Enterprise, Trade and Innovation's Environment Unit

Forfás continues to provide research and policy analysis support to the DETI Environment Unit on environmental and sustainability policy matters for the enterprise sector using an evidence based approach. Key policy areas in 2009 included:

- **Developing the Irish position on carbon leakage:** This involved a detailed assessment of sectors of industry at risk of relocation outside Ireland and the EU as a result of EU proposals for the EU Emissions Trading Scheme (ETS) which could place certain industries in the EU at a competitive disadvantage.
- **Analysis on the Aviation Directive and implications for enterprise:** The revised EU ETS includes an aviation directive which effectively brings all Irish airline carriers into the EU ETS. Forfás undertook a detailed analysis on the implications of this directive on Irish enterprise and circulated this paper to relevant stakeholders. Forfás is currently working with the Department of the Environment, Heritage and Local Government, the department responsible for transposing this directive into Irish Law, to ensure Irish enterprise concerns are included in the regulatory impact assessment.
- **EU policy on benchmarking methodology:** This involved the ongoing monitoring of EU policy developments on the allocation of permits in the EU ETS based, on the benchmarked approach (which replaces the grandfathering arrangements of Phases I and II of EU ETS) and formulation of the best policy position for Ireland.
- **EU policy on auctioning of carbon emissions allowances:** Forfás engaged in ongoing monitoring of EU policy developments on auctioning of permits in the ETS and the formulation of the best policy position for Ireland.

Forfás participates in meetings of the Senior Officials Group on Climate Change and Energy Security. Forfás is also a permanent member of the EPA coordinated National Allocation Advisory Group for the EU ETS, and is a member of both the cross-departmental Technical Analysis Steering Group and cross-departmental Preferred Policy Measures Group. Forfás also sits on the EPA Climate Change Research Committee (Socio-Economic Working Group).



# Discover Science & Engineering

Discover Science & Engineering (DSE) is Ireland's national science promotion programme.

It aims to increase interest in science, technology, engineering and mathematics (STEM) among students, teachers and members of the public. DSE is managed by Forfás and brings together many science and engineering awareness activities that were previously managed by different public and private bodies.

## Discover Science & Engineering

Discover Science & Engineering (DSE) aims to deliver a focused, strategic and quantifiable awareness campaign. DSE's overall objectives are to:

- Increase the number of students studying the physical sciences and mathematics;
- Promote a positive attitude to careers in science, technology, engineering and mathematics; and
- Foster a greater public understanding of the physical sciences, engineering and mathematics and their value to Irish society.

During 2009 the activities of DSE were in the following areas:

- General Awareness
- Primary Level Science
- Second Level Science

### General Awareness

#### Science Week Ireland

Science Week Ireland is one of the biggest events in the DSE calendar. Science Week 2009 adopted the theme *Inspiring Creativity & Innovation* tying in with the EU Year of Creativity & Innovation. Almost 500 events were held nationwide in schools, colleges, universities and libraries.

As part of its overall coordination role for Science Week, DSE provides road shows to venues across the country and in 2009 over 80 shows were provided. The Science Week Lecture Series, which was aimed specifically at second level students, took place in the Science Gallery, Trinity College Dublin and the topics included Design Creativity & Innovation; Lasting the Pace in Space; Sensing the Future; and Energy: The Challenges and Opportunities. The Science Week Corporate Partners Programme continued to grow in 2009 with companies from various industries participating in science outreach activities. Indigenous and multinational companies participated, united by their interest in promoting science, engineering and technology to young people and the general public. Notwithstanding a reduced budget in 2009, strategic partnerships with a number of regional festivals continued successfully.

#### DSE Online

In 2009 DSE continued to communicate with its target audiences through the use of social media platforms such as Twitter, YouTube and Bebo. It continues to make use of the most up-to-date, relevant web tools to maximise opportunities for connecting and interacting with young people. DSE continues to lead by example in encouraging young people and teachers to use ICT for learning and communicating science, in particular with projects such as SciFest.

SciFest is a one day science fair jointly funded by Discover Science & Engineering and Intel. It is held regionally in all 14 institutes of technology and is open to second level students. It

aims to encourage an interest in science through an investigative approach to learning. A blogging initiative called Project Blogger has been made available to SciFest students, as well as to participating students at the BT Young Scientist & Technology Exhibition, to keep an online journal or blog about their projects. This supports them in building their ICT skills, improving their writing and communications skills, as well as offering them the chance to collaborate online with each other and digitally archive their work.

### Discover Science Careers

Discover Science & Engineering continues to act as a key sponsor and coordinator of the science and technology content on [www.careersportal.ie](http://www.careersportal.ie), a dedicated careers website for Ireland which was launched in 2008. The website profiles all employment sectors in Ireland and features videos of a number of young qualified scientists and engineers from DSE's Science Ambassador programme, who talk convincingly about pursuing a career in science, engineering and technology. In 2009, [www.MyScienceCareer.ie](http://www.MyScienceCareer.ie) was created to re-house the growing body of careers content into one dedicated location. This careers site is a useful resource for career guidance counsellors, parents and students with everything from profiles on famous Irish scientists, to explanations of the different career types and a career glossary.

### St Patrick's Festival Big Day Out

Discover Science & Engineering participated in the St Patrick's Festival Big Day Out in March 2009. DSE provided content for the Science Zone which included a science show as well as a number of smaller interactive exhibits. This event enabled DSE to interact with a very mixed audience including families and young people with their peers.



### BT Young Scientist Exhibition

Taoiseach Brian Cowen, TD; Batt O'Keeffe, TD, former Minister for Education and Science and current Minister for Enterprise, Trade and Innovation; and Conor Lenihan, TD, Minister for Science, Technology and Innovation pictured with the winners of the 2010 BT Young Scientist Exhibition, John D O'Callaghan (3<sup>rd</sup> from left) and Liam McCarthy (4<sup>th</sup> from left) from Kinsale Community School with their parents and teachers. Sponsors of the Exhibition including Peter Brabazon from the DSE programme are also pictured.

## BT Young Scientist Exhibition

DSE is a Gold Sponsor of the BT Young Scientist and Technology Exhibition held in January each year. Work for the 2010 event was undertaken in the second half of 2009 to prepare for the Discover Sport stand which highlighted some of the many ways that science and engineering are linked to some of the most popular sports such as Formula 1, rugby, human performance analysis and sensors in sport. Our partners for this event included STEPS to Engineering, T4 - the Technology Subjects Support Service, the School of Health & Human Performance at Dublin City University, Clarity, Adidas and Coaching Ireland.

## Primary Level Science

### Discover Primary Science

The Discover Primary Science programme (DPS) was active in over 3,000 primary schools, which represents 90 per cent of all national primary schools, in 2009 with 4,502 teachers now registered to participate in DPS. The programme works directly with teachers and students to develop scientific skills through interactive science based activities. DPS completed whole-school training during this academic year with over 700 new teachers trained.

Primary school children are invited to submit projects to the annual Awards of Science Excellence. The 2009 Awards received entries from 512 schools. This academic year 2009/2010, the Awards of Science Excellence criteria has been changed to reflect the incorporation of maths into the programme. DPS also collaborated with Froebel Teacher Training College to pilot an elective science module for teacher education. This pilot study finished in March 2010.



### Awards of Science and Maths Excellence

4<sup>th</sup> class pupils Kelsey Muresan (11) and Jessica Boylan (10) are pictured with Minister Conor Lenihan TD, Minister for Science, Technology and Innovation at Gardiner Street National School in Dublin at the launch of the Discover Science and Engineering Awards of Science and Maths Excellence 2010.

### Greenwave

The Greenwave project is targeted at primary school children and involves the observation and recording of the springtime arrival of different species into Ireland and the budding of the Horse Chestnut and Hawthorn trees. The observations are recorded online by primary schools throughout the country at [www.greenwave.ie](http://www.greenwave.ie). In 2009 the project included the physical measurement of rainfall where each school was given details of how to make their own rain gauge. Greenwave 2010 will continue the physical measurement theme with all participating schools building their own anemometer to measure the wind speed in their local area. In 2010 our partner, Met Éireann, will continue to support the project. International collaboration under an EU funded programme will mean that Greenwave will be introduced to schools in up to 24 other European countries later this year.

## Second Level Science

### Discover Sensors

Discover Sensors supports the use of sensor technology in “hands on” scientific investigations by Junior Cert science students. The project provides students with an experience of real science in the classroom by supporting the investigative approach promoted by the Junior Cert science syllabus. DSE’s partners in the project include the Second Level Support Service (SLSS), the National Centre for Technology in Education (NCTE), the National Council for Curriculum & Assessment (NCCA), the regional education centres and IBEC.

The project began with a pilot involving 90 teachers from 45 schools throughout Ireland in 2006/2007. Based on feedback, evaluation and benchmarking against international best practice, it has expanded and evolved.

Discover Sensors has a cohort of 25 facilitators who are mainly science teachers. These facilitators have worked with our project partners and education consultants in developing and agreeing an inquiry based science teaching and learning framework which forms the main focus of our current round of in-school training sessions. Our facilitators demonstrate how they use this approach with their students to support the investigative approach. Almost 500 Junior Cert science teachers have been involved to date.

For teachers, Discover Sensors takes a blended approach to continuous professional development and central to the project is a teacher section on [www.discoversensors.ie](http://www.discoversensors.ie). Through the forum teachers collaborate and share ideas.

### Project Blogger

DSE’s Project Blogger tool, [www.projectblogger.ie](http://www.projectblogger.ie) continued to develop in 2009. The tool can be used by students to create their own science blogs in which they can share their experiences in science or document particular projects. Students can decide with whom to share their blogs, either within or beyond their own school. Project Blogger can be particularly useful for collaborative projects such as SciFest or BT Young Scientist & Technology Exhibition projects and allows teachers to provide assistance and comments on projects online. Project Blogger can also be used for collecting and storing science project videos, ideas, pictures, graphs and thoughts in one location.

### Launch of the European Space Education Resource Office (ESERO) in Ireland

In November 2009, Conor Lenihan TD, Minister for Science, Technology and Innovation, launched the European Space Education Resource Office supported by the European Space Agency (ESA) to promote the wider study of science using space as a theme in schools. DSE is partnering with the European Space Agency to establish the European Space Education Resource Office (ESERO) in Ireland.

The ESERO, based in DSE, will provide educational material and activities which will make science more exciting to young people by using space observation and exploration as an engaging theme. The newly established European Space Education Resource Office also reflects Ireland's increasing involvement in the space industry. Ireland is the fifth country across Europe to establish a European Space Education Resource Office.



# Corporate Shared Services

Forfás provides centralised services to IDA Ireland, Enterprise Ireland, Science Foundation Ireland and the Office of the Chief Scientific Adviser in areas where the agencies' activities are most efficiently and effectively handled centrally by Forfás or, where Forfás' obligations as legal employer of staff in the agencies requires central management and/or coordination of these activities. This includes aspects of financial and accounting services; human resources; pensions; facilities and property management; and management of a Freedom of Information network for the enterprise agencies and some other public bodies.

## Corporate Shared Services

### Pensions, Pay and Staff Relations

As legal employer of staff across the development agencies, Forfás centrally manages the pension schemes of Forfás itself and its preceding organisations (Industrial Development Authority, Eólas, National Board for Science and Technology, An Bord Trachtála and the Irish Goods Council), the associated pension compliance obligations, and related staff benefits and insurance schemes. Forfás centrally handles certain pension queries from staff across the agencies, administers pension related matters for approximately 1050 pensioners and their related records as well as records and queries from approximately 510 former employees with deferred pension benefits.

Forfás also arranges, through the Department of Enterprise, Trade and Innovation, for central approval of changes to pay scales for grades in use across the agencies; coordinates general terms of employment contracts in use across the agencies; and also coordinates issues which could have cross agency staff relations implications.

### Property and Facilities Management

Forfás holds the head leases of the former headquarter buildings of the Industrial Development Authority, including Wilton Park House. In Wilton Park House, Forfás provides for the central procurement and management of facilities, cleaning, courier, travel, telecoms, catering, security, procurement and storage of stationary and related goods for IDA Ireland and Science Foundation Ireland. Forfás is also responsible for the property management of Wilton Park House including rent reviews, tenant liaison, landlord consents etc. Activity in 2009 included the relocation of Sustainable Energy Authority of Ireland to Wilton Park House and rent reviews on a number of buildings. Significant energy efficiency upgrade works were also undertaken in Wilton Park House during the year.

Forfás provides facilities and property management services to Carrisbrook House and Knockmaun House, both of which had previously been leased by the former Industrial Development Authority.

### Finance and Accounting

In the finance and accounting area, Forfás provides shared services to the agencies including coordination of VAT returns; coordinating the Revenue on Line (ROS) system; certain aspects of payroll and other payments on behalf of The National Consumer Agency, payroll on behalf of Science Foundation Ireland; payment to approximately 1050 cross agency pensioners; coordinating collection of pension contributions from across the agencies (funded and unfunded); completing FRS 17 accounting obligations in the Forfás Annual Financial Statements for the group; and payment and recovery from other agencies and tenants of property and facility related charges for Wilton Park House.

Total pensions paid in 2009 amounted to €35 million. This was funded by an Oireachtas Grant, employee contributions to unfunded schemes and the former Industrial Development Authority pension fund. At the end of 2009 the former Industrial Development Authority pension fund and the Irish Goods Council pension fund transferred to the National Pensions Reserve Fund under the Financial Measures (Miscellaneous Provisions) Act 2009. Under this legislation the benefits under both of these schemes will be met directly by the Exchequer from 1 January 2010.

### Insurances

Forfás coordinates cross agency procurement of general insurances for Forfás, IDA Ireland, Enterprise Ireland, Science Foundation Ireland, the National Standards Authority of Ireland, and the Sustainable Energy Authority of Ireland. This shared approach has yielded substantial value for money to the agencies involved over the years.

### Reception/Telephonist Services

Forfás provides reception services in Wilton Park House to IDA Ireland, Science Foundation Ireland, the Sustainable Energy Authority of Ireland and the Office of the Chief Scientific Adviser. Forfás also provides a centralised telephonist service to IDA Ireland, Science Foundation Ireland, and the Office of the Chief Scientific Adviser.

### Freedom of Information Network

Forfás manages, on behalf of the Department of Enterprise, Trade and Innovation, an FOI network information and advisory service to 17 organisations. The organisations in this network are:

- Forfás
- IDA Ireland
- Enterprise Ireland
- Science Foundation Ireland
- Shannon Development
- FÁS
- Skillnets Limited
- The National Consumer Agency
- The Crafts Council of Ireland
- Health & Safety Authority
- Udarás na Gaeltachta
- Fáilte Ireland
- Labour Relations Commission
- Commission for Energy Regulation
- Commission for Communications Regulation
- National Standards Authority of Ireland
- Office of the Director of Corporate Enforcement



# Irish National Accreditation Board (INAB)

Accreditation plays an important role in guaranteeing the access of Irish products and services to both EU and worldwide markets. The demand for accreditation has increased significantly in recent times as national regulators continue to rely on conformity assessment as a mechanism to support the implementation of legislation and assure competence. The Irish National Accreditation Board is a division of Forfás. It is Ireland's only signatory to the multilateral agreements (MLAs) for Europe through the European cooperation for Accreditation (EA) and worldwide through the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF).

## The Irish National Accreditation Board (INAB)

The Irish National Accreditation Board (INAB) is Ireland's national body within a European network of accreditation bodies and is a Division of Forfás. INAB assesses certification bodies, laboratories and inspection bodies for conformity against internationally harmonised standards providing assurance that these bodies demonstrate competence and performance capability in carrying out their work.

INAB's membership of international agreements ensures that accredited certificates and test results produced in Ireland are acceptable worldwide, reducing technical barriers to international trade. INAB is a signatory to the multilateral agreements (MLAs) for Europe through the European cooperation for Accreditation (EA) and worldwide through the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF).

## INAB Functions

INAB has five distinct functions, each operating to specific European and international standards and / or regulations.

- Laboratory Accreditation
- Accreditation of Certification Bodies
- Accreditation of Inspection Bodies
- Good Laboratory Practice
- National Competent Body for the EU Eco Management and Audit Scheme (EMAS)

### Laboratory Accreditation

#### Testing and Calibration to ISO/IEC 17025:2005

Laboratory accreditation to ISO/IEC 17025:2005, granted by INAB provides a formal recognition of the competence of the laboratory to perform specific tests. During 2009, INAB carried out 118 onsite inspections of accredited/applicant laboratories within the Laboratory Accreditation Programme which resulted in the maintenance of 94 laboratory accreditations; award of accreditation to 8 new laboratories; and award of extensions to scope across a range of disciplines.

#### Medical Laboratory Accreditation to ISO/IEC 15189:2007

INAB maintained five medical laboratory accreditations to the international standard ISO/IEC 15189:2007 during 2009. Furthermore, in continuing to support the requirements of the Department of Health and Children and the Irish Medicines Board for accreditation to ISO 15189 in the health sector, arising from national legislation for medical laboratories and developments in hospital services accreditation generally, INAB carried out 79 onsite inspections to applicant and accredited organisations and awarded accreditation to ISO/IEC 15189:2007 to 34 hospital laboratories in 2009.

In addition, INAB received a further thirty four applications for accreditation from this sector during 2009 which continues to make it the area of greatest growth in demand for accreditation.

#### Accreditation of Certification Bodies

INAB accredits certification bodies operating product certification, management systems certification and certification of persons. It also accredits certification bodies for environmental management systems (EMS) certification to EMAS, the EU Eco Management and Audit Scheme.

These certification bodies, in turn, certify organisations to the ISO 9000 series of standards (quality management systems); to ISO 14001 (environmental management systems); to EN 16001:2009 (energy management systems); to ISO 27001 (Information security management); certify products and persons; and verify Greenhouse Gas emissions under INAB accreditation.

INAB carried out 47 onsite inspections of accredited/applicant certification bodies during 2009.

#### Greenhouse Gas Emissions Trading Scheme

INAB, in cooperation with the Environmental Protection Agency (EPA), established and implemented an accreditation programme in 2006 to underpin the implementation of the EU greenhouse gas (GHG) emissions trading scheme set out in European Directive 2003/87/EC. This Directive takes into account the commitments established under the Kyoto Protocol and the accreditation scheme provides Irish industry and the regulator with a useful tool to verify compliance with the Directive. The GHG Emissions Trading Directive (2003/101/EC) was amended in November 2008 to include aviation activities in the scheme for greenhouse gas emission allowance trading within the EU. This new 'Aviation' Directive (2008/101/EC) came into force in February 2009.

The Aviation Directive requires all (EU and non-EU) operators of fixed or rotary-wing aircraft over 5,700 kg (12,566 pounds) who fly to, from or within EU countries to participate in the EU Emissions Trading Scheme starting in 2012.

Other compliance requirements for aviation operators commenced in 2009 and so aviation operators have submitted monitoring and reporting plans to the EPA. Verified emissions reports will need to be submitted to the EPA before the 31 March 2011.

The EPA is the designated competent authority for the implementation of the Directive in Ireland. INAB continues to be the accreditation body responsible for accrediting verifiers to carry out verifications of the emissions reports according to the relevant legislation.

#### Management Systems Certification

The European Energy Management Systems Standard, EN16001 was introduced in 2009 and INAB managed the transition of its three accredited certification bodies to enable certification of Irish companies to this standard. This Energy Management Standard is a tool for organisations to take a systematic approach to the continual improvement of energy performance with a consequent reduction in energy costs. It is anticipated that this systems standard will further evolve to an international standard for energy management systems in 2010.

In addition, INAB maintained one certification body as a certification service provider (CSP) for the ecommerce accreditation scheme in support of the EU Directive on ecommerce. In 2009 INAB also maintained a further four certification bodies for quality management system certification and two certification bodies for environmental management systems certification.

### Product Certification

Food product certification continues to be a significant growth area of national importance. Irish food producers supplying the UK market are required by British food retailers to have their food products certified to the British Retail Consortium (BRC) specification. In addition, Irish food producers supplying to international markets are also required by food retailers to have their food products certified to meet EUREPGAP/GLOBALGAP requirements.

In 2009, INAB maintained and extended accreditation for two certification bodies providing food quality assurance schemes for food products to international requirements, as well as national food quality assurance schemes, such as Bord Bia and Bord Iascaigh Mhara schemes. Food product certification will continue to be a growth area for INAB for the foreseeable future.

The Department of Agriculture and Food has specified INAB accreditation for certification of organic farming activities in Ireland, in accordance with the EU Directive on Organic Farming. INAB awarded accreditation to one certification body for this scheme in 2009 and is currently processing the second applicant.

### Accreditation of Inspection Bodies

INAB accredits bodies whose work include the examination of materials, products, installations, plant, processes, work procedures or services and the determination of their conformity with requirements and the subsequent reporting of results of these activities. In 2009 INAB maintained the nine inspection body accreditations in the system. Extensions to scope to existing accredited inspection bodies were awarded in the areas of food and engineering inspections.

During 2009 INAB carried out fifteen onsite inspections of accredited/applicant inspection bodies.

### Good Laboratory Practice

INAB is the national monitoring authority for the inspection and verification of Good Laboratory Practice (GLP) under S.I. No.4 of 1991 European Communities (GLP) Regulations. At the end of 2008 four test facilities held GLP Compliance Statements under this programme. Two on-site inspections of compliant GLP facilities were carried out in 2009.



### National Competent Body for EMAS

INAB is the designated competent body in Ireland for the registration of sites participating in the EU Eco Management and Audit Scheme (EMAS). During 2009 INAB maintained seven organisations registered to EMAS, which had their environmental management systems verified by accredited EMAS verifiers in accordance with the Eco Management and Audit Scheme set out in Regulation (EC) No. 761/2001 of the European Parliament and the Council. INAB received one application for registration for this scheme in 2009.

### Regulation 765/2008

The Council of the European Union and the European Parliament has agreed an EU Regulation (765/08) that will, for the first time, provide a legal framework for the provision of accreditation services across Europe. The Regulation sets out the requirements for accreditation and market surveillance relating to the marketing of products. The Regulation, formally adopted on 9 July 2008, takes effect from 1 January 2010 and applies to accreditation of laboratories, inspection bodies and certification bodies providing accredited conformity assessment services either on a voluntary basis or in support of legislation. It sets out the obligations for member states, conformity assessment bodies, accreditation bodies and the European cooperation for Accreditation (EA).

The Regulation obliges member states to recognise accreditation as the preferred means to demonstrate the competence of conformity assessment bodies. The legal framework for the provision of accreditation services established by this Regulation will enhance the confidence in conformity assessment and encourage the mutual recognition of conformity assessment results and certificates.

### Multilateral Agreements

INAB maintained its membership of the multilateral agreements (MLAs) for Europe through the European cooperation for Accreditation (EA), and worldwide through the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF).

### Accreditation Awareness

Accreditation awareness and feedback from stakeholders continued to be a priority activity during 2009. Two editions of the INAB newsletter were produced and distributed in 2009 and INAB continued to enhance its website content. In 2009, INAB conducted three surveys, two of which were client oriented and one specifically for INAB assessors.

## INAB Board Members 2009



Tom O'Neill, Chairman<sup>2</sup>  
Site Leader, Pfizer, Little Island

Michael Maloney <sup>3</sup>	Director of Horticulture, Vice Chairperson, An Bord Bia
Dr Andrew Hodgson, <sup>4</sup>	Consultant Haematologist, Sligo General Hospital
Dr Nuala Bannon	Inspector, Department of Environment, Heritage and Local Govt
Martin O'Halloran	Chief Executive, Health and Safety Authority
Vagn Anderson	Manager of International Affairs, Danish Accreditation Body (DANAK)
Pat O'Mahony	CEO, The Irish Medicines Board
John Shine <sup>5</sup>	Director of Consumer Practices, National Consumer Agency
Prof. Alan Reilly <sup>6</sup>	Chief Executive, Food Safety Authority of Ireland
Dermot Hayes <sup>7</sup>	State Chemist, State Laboratory
Tom Dempsey	Former Manager INAB
Dr Adrienne Duff	(ex-Officio) Manager INAB

<sup>2</sup> Tom O'Neill was appointed Chairman of INAB following the retirement of Dr Máire C. Walsh in 2009

<sup>3</sup> Michael Moloney was appointed Vice-Chair in July 2009

<sup>4</sup> Dr Fiona Kenny retired from the INAB Board in July 2009 and was replaced by Dr Andrew Hodgson

<sup>5</sup> John Shine was appointed to the INAB Board in July 2009

<sup>6</sup> Prof. Reilly was appointed to the INAB Board in January 2010

<sup>7</sup> Dermot Hayes was appointed to the INAB Board in January 2010

Dr John O'Brien retired from the INAB Board in September 2009

# Corporate Governance

## Corporate Governance

Forfás was established under the Industrial Development Act 1993 and operates in accordance with the provisions of the Industrial Development Acts 1986 to 2008 and under the aegis of the Minister for Enterprise, Trade and Employment. Forfás has put in place procedures to ensure compliance with the following specific requirements:

### Ethics in Public Office Act, 1995 and Standards in Public Offices Act, 2001

In accordance with the provisions of the Ethics in Public Office Act, 1995 and Standards in Public Offices Act 2001, Forfás Board Members furnish statements of interests each year to the Secretary and copies have been provided to the Commission Secretary, Standards in Public Office Commission.

In addition, Forfás staff members holding designated positions comply with both Acts.

### Freedom of Information (FOI)

With effect from January 2001, Forfás is covered by the provisions of the Freedom of Information (FOI) Acts. These Acts established three statutory rights:

- A legal right for each person to access information held by public bodies;
- A legal right for each person to have official information held by a public body relating to him/herself amended where it is incomplete, incorrect or misleading; and
- A legal right to obtain reasons for decisions affecting oneself taken by a public body.

### Employment Equality Acts, 1998 and 2004

Forfás is committed to a policy of equal opportunities and adopts a positive approach to equality in the organisation.

We operate a number of schemes, providing staff with options in relation to meeting their career and personal needs, such as job sharing, study leave, educational programmes and career breaks.

Forfás complies with its statutory obligations under the Equality Acts 1998 and 2004. A policy on the Protection of Dignity at Work is in operation and has been communicated to all staff.

### Worker Participation (State Enterprises) Act, 1988

Sub-Board consultative structures have been put in place by Forfás to support the organisation's communications and consultative structure. The Joint Participation Forum has been welcomed as a positive process by both management and staff.

## Safety, Health and Welfare Act, 2005

In accordance with the Safety, Health and Welfare at Work Act 2005 and the Safety, Health and Welfare at Work Act (General Applications) Regulations 2007, Forfás has prepared a safety statement that encompasses all the aspects affecting staff and visitor welfare. This document is updated on an on-going basis.

## Prompt Payment of Accounts Act 1997 as amended by the European Communities (Late Payment in Commercial Transactions) Regulations 2002.

The Prompt Payment of Accounts Act 1997 (the Act), which came into operation on 2 January 1998, was amended by the European Communities (Late Payment in Commercial Transactions) Regulations 2002.

The payment practices of Forfás, as required by the Act, are reported on below for the year ended 31 December 2009.

1. It is the policy of Forfás to ensure that all invoices are paid promptly. Specific procedures are in place that enable it to track all invoices and ensure that payments are made before the due date. Invoices are registered daily and payments are issued as required to ensure timely compliance.
2. The system of internal control incorporates such controls and procedures as are considered necessary to ensure compliance with the Act. The organisation's system of internal control includes accounting and computer controls designed to ensure the identification of invoices and contracts for payment within the prescribed payment dates defined by the Act. These controls are designed to provide reasonable, and not absolute, assurance against material non-compliance with the Act. The Accounts Department produces a report that identifies unpaid outstanding invoices and this report is reviewed regularly.

Management is satisfied that Forfás complied with the provisions of the Act in all material respects.

There have been no material developments since 1 January 2010.

## Code of Practice for the Governance of State Bodies, 2009

Following the revision of the Code of Practice for the Governance of State Bodies in 2009, Forfás has reviewed its processes to ensure that it is complying with the provisions of the Revised Code.

### Board Members Disclosure of Interests

In accordance with the Revised Code of Practice for the Governance of State Bodies, 2009, Forfás Board Members, on their appointment to the Board and during their tenure in office, furnish details of interests which could involve a conflict of interest or could materially influence the member in relation to the performance of his/her functions as a member of the Board.

## Board Attendance

Board Member		Fees €	Attendance (10 meetings held in 2009)
Eoin O'Driscoll		22,400	10
Martin Cronin	(retired August 2009)	7,817	6
Jane Williams	(appointed September 2009)	3,944	4
Pat Barry		13,067	9
Prof. Frank Gannon		Nil	6
Sean Gorman		Nil	7
William O'Brien		13,067	5
Barry O'Leary		Nil	5
Frank Ryan		Nil	9
Dr Don Thornhill		13,067	8
Paul O'Toole	(appointed June 2009)	Nil	4
Ann Heraty	(resigned February 2009)	2,333	0

## Board Expenses

The total expenses paid to Forfás Board members in 2009 was €1,068 comprising:

	€
Mileage	302
Trains, Taxis & Vouched expenses	766

## Chief Executive's Salary

The rate of pay for the Chief Executive of Forfás in 2009 was:

1 Jan 2009 to 5 Aug 2009: €222k p.a. (Contributory Pension Scheme Rate)

7 Sept 2009 to 31 Dec 2009: €211 p.a. (Non Contributory Pension Scheme Rate) plus 12% contribution to Personal Pension Plan

## Customer Charter

Forfás' Customer Charter sets out its commitment to a high quality of service to our customers. This is available at [www.forfás.ie](http://www.forfás.ie). This Charter includes a procedure for dealing with complaints. In 2009 no complaints were received.

## Energy Efficiency

In each area relevant to energy usage and services to its buildings, Forfás endeavours to employ the most energy efficient and environmentally friendly means available. In compliance with regulatory requirements Forfás displays a Display Energy Certificate in its reception area. An upgrade of the lighting systems in Wilton Park House was completed in 2009 in conjunction with the Sustainable Energy Authority of Ireland, resulting in measurable improvements in overall energy efficiency.

## Report of the Comptroller and Auditor General for presentation to the Houses of the Oireachtas

I have audited the financial statements of Forfás for the year ended 31 December 2009 under the Industrial Development Act 1993.

The financial statements, which have been prepared under the accounting policies set out therein, comprise the Accounting Policies, the Income and Expenditure Account, the Statement of Total Recognised Gains and Losses, the Balance Sheet, the Cash Flow Statement and the related notes.

### Respective Responsibilities of the Board and the Comptroller and Auditor General

Forfás is responsible for preparing the financial statements in accordance with the Industrial Development Act 1993 and for ensuring the regularity of transactions. Forfás prepares the financial statements in accordance with Generally Accepted Accounting Practice in Ireland. The accounting responsibilities of the Members of the Board are set out in the Statement of Board Members' Responsibilities.

My responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements and International Standards on Auditing (UK and Ireland).

I report my opinion as to whether the financial statements give a true and fair view, in accordance with Generally Accepted Accounting Practice in Ireland. I also report whether in my opinion proper books of account have been kept. In addition, I state whether the financial statements are in agreement with the books of account.

I report any material instance where moneys have not been applied for the purposes intended or where the transactions do not conform to the authorities governing them.

I also report if I have not obtained all the information and explanations necessary for the purposes of my audit.

I review whether the Statement on Internal Financial Control reflects Forfás' compliance with the Code of Practice for the Governance of State Bodies and report any material instance where it does not do so, or if the statement is misleading or inconsistent with other information of which I am aware from my audit of the financial statements. I am not required to consider whether the Statement on Internal Financial Control covers all financial risks and controls, or to form an opinion on the effectiveness of the risk and control procedures.

I read other information contained in the Annual Report, and consider whether it is consistent with the audited financial statements. I consider the implications for my report if I become aware of any apparent misstatements or material inconsistencies with the financial statements.



## Basis of Audit Opinion

In the exercise of my function as Comptroller and Auditor General, I conducted my audit of the financial statements in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board and by reference to the special considerations which attach to State bodies in relation to their management and operation. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures and regularity of the financial transactions included in the financial statements. It also includes an assessment of the significant estimates and judgments made in the preparation of the financial statements, and of whether the accounting policies are appropriate to Forfás circumstances, consistently applied and adequately disclosed.

I planned and performed my audit so as to obtain all the information and explanations that I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements


### Emphasis of Matter - Non-effective Expenditure

Without qualifying my opinion, I draw attention to the fact that non-effective expenditure on rent and associated costs of approximately €1,470,000 is included in the reported expenditure of Forfás for the year ended 31 December 2009. The non-effective expenditure arises from the fact that office space was unoccupied for part of the year. The associated leasehold arrangements had been entered into by predecessor organisations and subsequently assigned to Forfás.

## Opinion

In my opinion, the financial statements give a true and fair view, in accordance with Generally Accepted Accounting Practice in Ireland, of the state of Forfás' affairs at 31 December 2009 and of its income and expenditure for the year then ended.

In my opinion, proper books of account have been kept by Forfás. The financial statements are in agreement with the books of account.



John Buckley

Comptroller and Auditor General

10 May 2010



# Financial Statements

# Statement of Board Members' Responsibilities

## For 2009 Annual Financial Statements

Paragraph 7(2) of the First Schedule to the Industrial Development Act, 1993 requires Forfás to keep, in such form as may be approved of by the Minister for Enterprise, Trade and Employment with the consent of the Minister for Finance, all proper and usual accounts of money received and expended by it.

In preparing those financial statements, Forfás is required to:

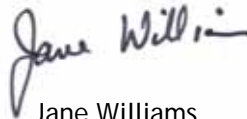
- select suitable accounting policies and apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that Forfás will continue in operation;
- disclose and explain any material departures from applicable Accounting Standards.

The Board is responsible for keeping proper books of account which disclose with reasonable accuracy at any time its financial position and which enables it to ensure that the financial statements comply with Paragraph 7(2) of the First Schedule to the Industrial Development Act, 1993. These books of account are located at the Agency's headquarters, Wilton Park House, Wilton Place, Dublin 2. The Board is also responsible for safeguarding its assets and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

On behalf of the Board:



Eoin O'Driscoll  
Chairman



Jane Williams  
Chief Executive

## Statement on Internal Financial Control

On behalf of the Board of Forfás I acknowledge our responsibility for ensuring that an effective System of Internal Financial Control is maintained and operated in the Agency.

The system can only provide reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or would be detected in a timely period.

The Board has taken steps to ensure an appropriate control environment is in place by:

- Establishing formal procedures for monitoring the activities and safeguarding the assets of the organisation;
- Clearly defining management responsibilities and powers;
- Developing a culture of accountability across all levels of the organisation.

The Board has established processes to identify and evaluate business risks by:

- Identifying the nature, extent and financial implication of risks facing the body including the extent and categories which it regards as acceptable;
- Assessing the likelihood of identified risks occurring;
- Working closely with Government and various Agencies to ensure that there is a clear understanding of Forfás goals and support for Forfás strategies to achieve those goals.

The System of Internal Financial Control is based on a framework of regular management information, administration procedures including segregation of duties, and a system of delegation and accountability. In particular it includes:

- A comprehensive budgeting system with an annual budget which is reviewed and agreed by the Board;
- Regular reviews by the Board of periodic and annual financial reports which indicate financial performance against forecasts;
- Setting targets to measure financial and other performance;
- Formal project management disciplines.

Forfás has an outsourced internal audit function, which operates in accordance with the Framework Code of Best Practice set out in the Code of Practice on the Governance of State Bodies and which reports directly to the Audit Committee. The work of internal audit is informed by analysis of the risk to which the body is exposed, and annual internal audit plans are based on this analysis. The analysis of risk and the internal audit plans are endorsed by the Audit Committee. The Audit Committee meets quarterly to review with the Internal Auditor the outcome of their audits and to confirm the ongoing adequacy and effectiveness of the System of Internal Financial Control.

The Board's monitoring and review of the effectiveness of the System of Internal Financial Control is informed by the work of the internal auditor and the Audit Committee which oversees the work of the internal auditor and the control exercised by the executive managers within Forfás who have responsibility for the development and maintenance of the financial control framework and comments made by the Comptroller & Auditor General in his management letter.

I confirm that in respect of the year to 31 December 2009, the Board conducted a review of the effectiveness of the System of Internal Financial Control.

Signed on behalf of the Board

A handwritten signature in black ink, appearing to read 'Eoin O'Driscoll', written in a cursive style.

Eoin O'Driscoll

Chairman

## Accounting Policies

### Industrial Development Acts 1993, 1995, 1998, 2003 and 2009

Forfás, the policy advisory and co-ordinating board for industrial development and science & technology in Ireland, was established on 1 January, 1994, under the provisions of the Industrial Development Act 1993, as amended by subsequent legislation. It is the body through which powers are assigned to Enterprise Ireland, for the promotion of indigenous industry, and to IDA Ireland, for the promotion of inward investment.

In addition to its core advisory and co-ordinating function, Forfás has the additional responsibility for pension costs of retired staff of Forfás, IDA Ireland, Enterprise Ireland, Science Foundation Ireland and certain former agencies, under the Industrial Development Acts 1993, 1998 and 2003, as set out in Note 8 of these Financial Statements.

#### 1. Basis of Accounting

The Financial Statements have been prepared under the historical cost convention in the form approved by the Minister for Enterprise, Trade and Employment with the consent of the Minister for Finance under the Industrial Development Act 1993. The Financial Statements are prepared on an accruals basis, except where stated below and are in accordance with generally accepted accounting practice. Financial Reporting Standards, recommended by the Accounting Standards Board, are adopted as they become effective.

#### 2. Income Recognition

Income from Oireachtas Grant represents actual cash receipts in the year.

#### 3. Fixed Assets and Depreciation

Fixed Assets comprise tangible fixed assets which are owned by Forfás and are stated at cost less accumulated depreciation. Depreciation is calculated in order to write off the cost of fixed assets over their estimated useful lives as follows:

- Computer Equipment: 3 years
- Motor Vehicles: 4 years
- Fixtures and Fittings: 5 years

Depreciation is charged in the year of purchase and not charged in the year of disposal. Fixtures, fittings and computer equipment below the capitalisation threshold of €1,000 are expended in the Income & Expenditure Account in the year of purchase.

#### 4. Capital Account

The Capital Account represents the unamortised funds utilised for the acquisition of Fixed Assets.

## 5. Foreign Currencies

Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rates ruling at the Balance Sheet date. Revenues and costs are translated at the exchange rates ruling at the dates of the underlying transactions.

## 6. Debtors

Known Bad Debts are written off as they arise and specific provision is made where recovery is considered doubtful.

## 7. Pension Costs

In the year under review Forfás operated four unfunded defined benefit pension schemes, which are funded annually on a pay as you go basis from monies available to it, including monies provided by the Department of Enterprise, Trade and Employment and from contributions deducted from staff salaries. In addition, two funded defined benefit schemes that pay a retirement gratuity and an annual pension, fixed at retirement were operated. Applicable pension increases for members in these schemes are funded on a pay as you go basis from monies provided by the Department of Enterprise, Trade and Employment.

Under the Financial Measures (Miscellaneous Provisions) Act 2009 the assets of the two funded pension schemes were transferred to the National Pension Reserve Fund on 31 December 2009. The pension schemes associated with these two funds continue in force for existing members. As of the 1st of January 2010 funding to meet pension payments arising on these schemes will be provided in full by the Exchequer through the annual Oireachtas Grant.

Pension costs reflect pension benefits earned by employees in the period and are shown net of staff pension contributions which are retained by Forfás. An amount corresponding to the pension charge is recognised as income to the extent that it is recoverable, and offset by grants received in the year to discharge pension payments.

Actuarial gains or losses arising on scheme liabilities are reflected in the Statement of Total Recognised Gains and Losses and a corresponding adjustment is recognised in the amount recoverable from the Department of Enterprise, Trade and Employment.

Pension liabilities represent the present value of future pension payments earned by staff to date. Deferred pension funding represents the corresponding asset to be recovered in future periods from the Department of Enterprise, Trade and Employment.

## 8. Operating Leases

The rentals under operating leases are accounted for as they fall due.



## Income and Expenditure Account

Year Ended 31 December 2009

	Notes	2009 €'000	2008 €'000
<b>Income</b>			
Oireachtas Grant	1	36,527	36,033
Professional Fees - National Accreditation Board	2	1,756	1,828
Other	3	1,159	806
Departmental Programmes	6	3,375	5,962
Net Deferred Funding	8 (e)	28,445	34,581
		71,262	79,210
<b>Expenditure</b>			
Administration and General Expenses	4	15,861	18,758
Depreciation	7	147	190
Pension Costs	8 (c.i)	50,800	53,823
Departmental Programmes	6	3,375	5,962
		70,183	78,733
Surplus for Year		1,079	477
Pension Contribution	5(a)	-	2,550
Contribution to Exchequer	5(b)	(635)	(2,699)
Balance at beginning of Year		2,517	2,095
Transfer (to)/from Capital Account	9	158	94
Balance at end of Year		3,119	2,517

## Statement of Total Recognised Gains and Losses

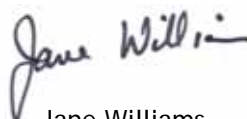
	Notes	2009 €'000	2008 €'000
Surplus for Year		1,079	477
Actuarial Gain/(Loss) on Pension Liabilities	8 (c.iv)	(6,824)	91,236
Adjustment to Deferred Pension Funding	8 (c.iv)	6,824	(91,236)
Transfer of Assets to National Pension Reserve Fund	8 (a.i)	(186,274)	-
Increase in Deferred Pension Funding	8 (a.i)	186,274	-
<b>Total Recognised Gain for the Year</b>		<b>1,079</b>	<b>477</b>

The Accounting Policies, Cash Flow Statement and Notes 1 to 16 form part of these Financial Statements.

On behalf of the Board:



Eoin O'Driscoll  
Chairman



Jane Williams  
Chief Executive

## Balance Sheet

As at 31 December 2009

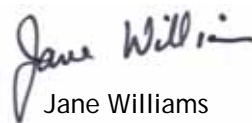
	Notes	2009 €'000	2008 €'000
<b>Fixed Assets</b>			
Tangible Fixed Assets	7	130	288
<b>Total Fixed Assets</b>		<b>130</b>	<b>288</b>
<b>Current Assets</b>			
Accounts Receivable	10	3,446	3,457
Bank		1,185	110
		<b>4,631</b>	<b>3,567</b>
<b>Accounts Payable</b>	11	<b>1,512</b>	<b>1,050</b>
<b>Net Current Assets</b>		<b>3,119</b>	<b>2,517</b>
<b>Deferred Funding Asset</b>	8 (d)	<b>892,116</b>	<b>672,128</b>
<b>Pension Liability</b>	8 (d)	<b>(892,116)</b>	<b>(672,128)</b>
<b>Total Assets Less Current Liabilities</b>		<b>3,249</b>	<b>2,805</b>
<b>Represented By:</b>			
<b>Capital Account</b>	9	<b>130</b>	<b>288</b>
<b>Income and Expenditure Account</b>		<b>3,119</b>	<b>2,517</b>
		<b>3,249</b>	<b>2,805</b>

The Accounting Policies, Cash Flow Statement and Notes 1 to 16 form part of these Financial Statements.

On behalf of the Board:



Eoin O'Driscoll  
Chairman



Jane Williams  
Chief Executive

# Cash Flow Statement

Year Ended 31 December 2009

	Notes	2009 €'000	2008 €'000
<b>Reconciliation of Net Movement for Year to</b>			
Net Cash Flow from Operations			
Surplus for Year		1,079	477
Bank Interest		(30)	(45)
(Profit)/Loss on Disposal of Assets		7	-
Depreciation Charge:			
- Tangible Fixed Assets	7	147	190
(Increase)/Decrease in Accounts Receivable		11	3,585
Increase/(Decrease) in Accounts Payable		462	(4,207)
<b>Net Cash Flow from Operations</b>		<b>1,676</b>	<b>-</b>
<b>CASH FLOW STATEMENT</b>			
Net Cash Flow from Operations		1,676	-
Returns on Investment and Servicing of Finance			
Bank Interest		30	45
<b>Cash Flow before Capital Expenditure</b>		<b>1,706</b>	<b>45</b>
<b>Capital Funding</b>			
Disposal of Tangible Fixed Assets		25	-
Purchase of Tangible Fixed Assets	7	(21)	(96)
<b>Cash Flow after Capital Expenditure</b>		<b>1,710</b>	<b>(51)</b>
Pension Contributions Received	5(a)	-	2,550
Contribution to Exchequer	5(b)	(635)	(2,699)
<b>Increase/(Decrease) in Cash</b>		<b>1,075</b>	<b>(200)</b>

## Cash Flow Statement (cont.)

Year Ended 31 December 2009

	Notes	2009 €'000	2008 €'000
Reconciliation of Increase/(Decrease) in Cash to Cash at Bank			
Movement in Cash for the Year		1,075	(200)
Cash at Bank at 1 January		110	310
Cash at Bank at 31 December		1,185	110

# Notes to the Accounts

## Year Ended 31 December 2009

1. Oireachtas Grant	2009 €'000	2008 €'000
Forfás		
Administration and General Expenses	36,527	36,033
<p>a) Under Section 11 of the Industrial Development Act, 1993, as amended by Section 4(a) of the Industrial Development Act, 2009, the aggregate amount of grants made by the Minister to Forfás and its Agencies, to enable them to discharge their obligations and liabilities shall not exceed €7,000,000,000. At 31 December, 2009 the aggregate amount so provided was €3,676,428,030.</p> <p>b) Under Section 14(3) of the Industrial Development Act, 1986, Section 37 of the Industrial Development Act, 1969, and Sections 2 and 3 of the Industrial Development Act, 1977, the aggregate amount of grants made by the Minister to Forfás and its Agencies to enable them to meet their obligations or liabilities in respect of principal and interest on foot of Loan Guarantees under any of these sections shall not exceed €158,717,260. At 31 December, 2009 the aggregate amount so provided was €13,547,211.</p>		

### 2. Professional Fees - National Accreditation Board

The Irish National Accreditation Board (INAB) was established as a Committee of Forfás under Section 10 of the Industrial Development Act, 1993 as amended by Section 46 of the Industrial Development (Enterprise Ireland) Act, 1998 to perform the functions specified below.

It is the national body responsible for accreditation of organisations involved in calibration, testing, inspection and certification of quality, product, and personnel management systems in Ireland and is also the statutory GLP (Good Laboratory Practice) compliance monitoring authority. It is the competent body for EMAS (European Eco-Management and Audit Scheme). Professional Fees are generated from these activities which involve assessment of laboratories and certification bodies. Costs incurred in generating this income are included in the relevant expenditure heading.

### 3. Other Income

	2009 €'000	2008 €'000
Rental Income	1,114	761
Bank Interest	30	45
Other Income	15	-
<b>Total</b>	<b>1,159</b>	<b>806</b>

## Notes to the Accounts (cont.)

Year Ended 31 December 2009

4. Administration and General Expenses		
	2009 €'000	2008 €'000
Board Members' Remuneration and Expenses (Including Chief Executive Remuneration) <sup>1</sup>	362	413
Pay Costs	7,780	8,437
Other Personnel Costs	272	488
Travelling & Subsistence Expenses	234	397
Specialised and Professional Services	928	1,137
Research and Studies	650	1,726
Rents, Rates, Repairs and Maintenance <sup>2</sup>	4,267	4,211
Other Operating Expenses	1,034	1,633
Office of the Chief Scientific Adviser <sup>3</sup>	314	295
Audit Fee	20	21
<b>Total</b>	<b>15,861</b>	<b>18,758</b>
Pay Costs comprise:		
Wages and Salaries	7,200	7,824
Social Welfare Costs	471	490
Superannuation Costs	109	123
<b>Total</b>	<b>7,780</b>	<b>8,437</b>

#### 4. Administration and General Expenses (cont.)

	2009 €'000
<sup>1</sup> Board Members' Remuneration was as follows:	
Eoin O'Driscoll	22
Don Thornhill	13
Anne Heraty	2
William O'Brien	13
Pat Barry	13
Jane Williams	4
Sean Gorman	-
Barry O'Leary	-
Frank Ryan	-
Frank Gannon	-
Paul O'Toole	-
Martin Cronin	8
Board Members Expenses in 2009 amounted to €1,068 broken down €302 mileage and €766 trains, taxis and vouched food expenses.	

##### Chief Executives Remuneration:

During the period 1/1/2009 to 5/8/2009 a remuneration package comprising salary of €222,488 per annum subject to standard public sector pension arrangements, and a company car subject to benefit in kind (€20,430) was applicable. A performance bonus for 2008 amounting to €27,811 was paid in 2009. The net performance bonus paid was returned.

A salary of €211,364 per annum and a contribution of 12% of salary to a personal pension plan was paid to an interim Chief Executive for the period 7/9/2009 to 31/12/2009.

<sup>2</sup> These are net of rentals received from sub-tenants of former Industrial Development Authority headquarter buildings.

<sup>3</sup> The Office of the Chief Scientific Adviser (CSA) was established by the Government on 1 September 2004 to provide independent expert advice on any aspect of Science, Technology and Innovation (STI) as requested by Government. In relation to these functions it operates independently from and is not accountable to the Board or management of Forfás. The day to day budgetary requirements of the Office of the Chief Scientific Adviser are funded by Forfás. The Office of the Chief Scientific Adviser reports to the Chief Executive of Forfás on administration issues and is required to comply with Forfás policies and procedures and other governance obligations.

The Office of the CSA is responsible for hosting the European City of Science in Dublin in 2012 (Note 6).



## Notes to the Accounts (cont.)

### Year Ended 31 December 2009

#### 5. Contribution to the Exchequer

- a) Amount received in 2008 was for pensionable service transferred from SfadCo to Forfás to cover the pension entitlements of SfadCo staff who moved to Enterprise Ireland with the SfadCo indigenous companies portfolio. These staff are now members of the Forfás Pension Scheme which is unfunded, consequently the full amount was remitted to DETE as a contribution to the Exchequer.
- b) Income, surplus to budgeted requirements, surrendered to the Exchequer. The 2008 figure was comprised of the €2,550,000 pension contribution as detailed in note 5(a) together with €149,000 surplus own income.

#### 6. Departmental Programmes

These externally funded programmes are administered by Forfás, on behalf of the funding bodies listed below. These programmes are accounted for by matching income to expenditure. Over/under expenditure on these programmes is shown in accounts receivable (note 10)/payable (note 11) as appropriate.

a) Programmes		2009 €'000	2008 €'000
Discover Science and Engineering	1 & 6(b)	2,784	5,204
Expert Group on Future Skills Needs	2	482	535
European City of Science	3	109	223
<b>Total</b>		<b>3,375</b>	<b>5,962</b>

##### Details of Funding Bodies:

- 1 Office of Science & Technology of the Department of Enterprise, Trade and Employment
- 2 National Training Fund of the Department of Enterprise, Trade and Employment
- 3 Department of Enterprise, Trade and Employment. (In 2008 eight state agencies were involved in funding the application to host European City of Science project to be held in 2012)

b) Discover Science and Engineering Expenditure		2009 €'000	2008 €'000
Pay & Expenses		353	369
Communication		507	995
Programme Activities		1,924	3,840
<b>Total</b>		<b>2,784</b>	<b>5,204</b>

## Notes to the Accounts (cont.)

Year Ended 31 December 2009

7. Tangible Fixed Assets				
	Computer Equipment €'000	Motor Vehicles €'000	Fixtures & Fittings €'000	Total €'000
<b>Cost</b>				
At 1 January 2009	999	65	2,862	3,926
Additions	-	-	21	21
Disposals	(20)	(65)	(24)	(109)
At 31 December 2009	979	-	2,859	3,838
<b>Depreciation</b>				
At 1 January 2009	924	32	2,682	3,638
Charge for Year	55	-	92	147
Disposals	(20)	(32)	(25)	(77)
At 31 December 2009	959	-	2,749	3,708
<b>Net Book Amount</b>				
At 1 January 2009	75	33	180	288
Net Movement for Year	(55)	(33)	(70)	(158)
At 31 December 2009	20	-	110	130

## Notes to the Accounts (cont.)

### Year Ended 31 December 2009

#### 8. Superannuation

- a) Forfás has responsibility for the pension costs of retired staff of Forfás, IDA Ireland, Enterprise Ireland, Science Foundation Ireland and certain former agencies, under the Industrial Development Acts 1993, 1998 and 2003. These costs arise under the terms of the following schemes:

Scheme	Staff Covered	Type
Forfás	The Forfás scheme covers the following categories of staff in Forfás and its Agencies - (a) staff recruited up to 5 April 1995 who became pensionable after that date, (b) staff recruited after 5 April 1995, (c) a small number of staff previously covered by the Garda Síochána Superannuation Scheme, (d) a small number of staff previously covered by the FAS/AnCO Schemes, (e) a small number of staff previously covered by the Shannon Free Airport Development Co. Ltd Superannuation Scheme.	Contributory, Defined Benefit, Unfunded.  A small number of those in category (b) are included on a non contributory basis.
Former Industrial Development Authority	Staff of the former IDA and those recruited by Forfás and its Agencies in the appropriate grades between 1 January 1994 and 5 April 1995.	Contributory, Defined Benefit. Funded to meet pension costs at retirement. Post retirement increases are unfunded and met by Forfás from Oireachtas Grant. (See Note 8(a.i))
Former Eolas	Staff of the former Eolas (other than those covered by the former NBST scheme below) and those recruited by Forfás and its Agencies in the appropriate grades between 1 January 1994 and 5 April 1995.	Non Contributory, Defined Benefit, Unfunded.
Former National Board for Science and Technology (NBST)	A small number of staff of the former NBST serving on 31 December 1987.	Contributory, Defined Benefit, Unfunded.
Former Irish Goods Council	A small number of staff of the former Irish Goods Council serving on 31 August 1991.	Contributory, Defined Benefit. Funded to meet pension costs at retirement. (See Note 8(a.i))
Former An Bord Tráchtála (ABT)	Staff of the former ABT (other than those covered by the former Irish Goods Council scheme above) who were pensionable employees on 22 July 1998.	Contributory, Defined Benefit, Unfunded.

## Notes to the Accounts (cont.)

Year Ended 31 December 2009

Apart from the former Irish Goods Council Scheme, each of the Schemes include Spouses' and Children's Schemes.

Forfás meets the net costs arising from normal retirements. These are paid out of current income. Contributions received by Forfás from staff in the contributory unfunded schemes outlined above are used to part fund ongoing pension liabilities.

(a.i) Under the Financial Measures (Miscellaneous Provisions) Act 2009 the assets of the two funded pension schemes were transferred to the National Pension Reserve Fund on 31 December 2009. The pension schemes associated with these two funds continue in force for existing members with no impact on benefits or associated provision for members. All future pension costs will be paid by Oireachtas Grant. The effect of this transaction has been to increase the pension liability recognised by Forfás by €186,274,000 and to increase the amount recoverable from the Department by a similar amount. Both amounts are reported in the Statement of Total Recognised Gains and Losses.

### b) Pension Disclosures under FRS 17

Financial Reporting Standard 17 (FRS17) requires financial statements to reflect at fair value the assets and liabilities arising from an employer's superannuation obligations and any related funding and to recognise the costs of providing superannuation benefits in the accounting periods in which they are earned by employees.

c)	2009	2008
c.i) Analysis of total pension charge	€'000	€'000
Service costs	16,895	19,906
Interest on Pension Scheme Liabilities	39,558	39,849
Employee Contributions (Unfunded)	(5,653)	(5,932)
	50,800	53,823
c.ii) Analysis of Service Costs		
Current Service Cost	16,895	19,906
Past Service Cost	-	-
	16,895	19,906

## Notes to the Accounts (cont.)

## Year Ended 31 December 2009

c.iii) Analysis of Interest on Pension Scheme Liabilities	2009 €'000	2008 €'000
Interest on scheme liabilities	49,406	51,400
Expected return on scheme assets	(9,848)	(11,551)
	39,558	39,849
c.iv) Analysis of amount recognised in Statement of Total Recognised Gains and Losses (STRGL)		
Actual return less expected return on scheme assets	(3,149)	(22,731)
Experience gains and (losses)	43,262	(11,377)
Changes in assumptions	(46,937)	125,344
Actuarial Gain/(Losses)	(6,824)	91,236
d) Net deficit in Pension Scheme	(892,116)	(672,128)
made up of:		
Present Value of pension schemes' liabilities	(892,116)	(857,222)
Fair value of schemes' assets (See Note 8(a.i))	-	185,094
<b>Change in Pension Schemes' Liabilities</b>		
Present value of schemes' obligations at start of year	(857,222)	(929,488)
Current Service Cost	(16,895)	(19,906)
Interest Costs	(49,406)	(51,400)
Payments to Pensioners	34,990	29,522
Premiums Paid	92	83
Actuarial gain/(loss)	(3,675)	113,967
<b>Present value of schemes' obligations at end of year</b>	<b>(892,116)</b>	<b>(857,222)</b>

## Notes to the Accounts (cont.)

### Year Ended 31 December 2009

d.i) Change in Plan Assets	2009 €'000	2008 €'000
Fair value of schemes' assets at start of year	185,094	199,183
Contributions	3,188	3,252
Benefits Paid from schemes' assets	(8,707)	(6,161)
Expected return on schemes' assets	9,848	11,551
Actuarial gain/(loss)	(3,149)	(22,731)
Transfer of Assets to the National Pension Reserve Fund (Note 8(a.i))	(186,274)	-
<b>Fair value of schemes' assets at end of year</b>	<b>-</b>	<b>185,094</b>
e) Net Deferred Funding for Pensions in year	2009 €'000	2008 €'000
Funding recoverable in respect of current year pension costs	56,453	59,755
Pension payments less Recovery of Voluntary Leaving Programme funding	(28,008)	(25,174)
	<b>28,445</b>	<b>34,581</b>

Forfás recognises as an asset an amount corresponding to the unfunded deferred liability for pensions on the basis of the set of assumptions described below and a number of past events. These events include the statutory basis for the establishment of the superannuation schemes, and the policy and practice currently in place in relation to funding public service pensions including contributions by employees and the annual estimates process. Forfás has no evidence that this funding policy will not continue to meet such sums in accordance with current practice.

The deferred funding asset for pensions as at 31 December 2009 amounted to €892 million (2008: €672 million).

The quantification of the liability is based on the financial assumptions set out in Note 8 (f). The assumptions used, which are based on professional actuarial advice, are advised to the Department of Enterprise, Trade and Employment.

## Notes to the Accounts (cont.)

### Year Ended 31 December 2009

f) The valuation used for FRS17 disclosures has been based on a full actuarial valuation at 31 December 2009. The financial assumptions used to calculate scheme liabilities under FRS17 as at 31 December were as follows:

Valuation method:	Projected Unit:	
	2009	2008
Discount Rate	5.50%	5.75%
Salary Increases	3.50%	3.50%
Pension Increases	3.00%	3.00%
Inflation Rate	2.25%	2.00%

Weighted average life expectancy for mortality tables used to determine benefit obligations at:

Member age 65 (current life expectancy in years)	21.8	20.8
Member age 40 (life expectancy at age 65 in years)	24.3	21.9

The market value of the assets in the pension schemes, the expected rate of return and the schemes' liabilities at 31 December, were:

	Expected Return 2009	Expected Return 2008	Asset Composition 2009	Asset Composition 2008		Market Value at 31 Dec 2009	Market Value at 31 Dec 2008
						2009 €'000	2008 €'000
Equities	n/a	8.00%	n/a	30.33%		-	56,139
Bonds	n/a	4.00%	n/a	63.37%		-	117,294
Property	n/a	6.50%	n/a	6.09%		-	11,272
Other	n/a	3.00%	n/a	0.21%		-	389
						-	185,094

## Notes to the Accounts (cont.)

Year Ended 31 December 2009

g) History of experience gains and losses	2009	2008	2007	2006	2005
History of defined benefit obligations, assets and experience gains and losses					
Defined benefit obligation (€'000)	892,116	857,222	929,488	972,207	997,678
Fair value of plan assets (€'000) (Note 8(a.i))	-	185,094	199,183	196,395	179,936
Deficit/(Surplus) (€'000)	892,116	672,128	730,305	775,812	817,742
Difference between the expected and actual return on scheme assets					
amount (€'000)	(3,149)	(22,731)	(7,856)	6,667	20,260
percentage of scheme assets	n/a	-12.3%	-3.9%	3.4%	11.3%
Experience (Gains)/Losses on scheme liabilities					
amount (€'000)	43,262	(11,377)	(2,625)	(22,110)	(51,159)
percentage of the present value of scheme liabilities	4.8%	-1.3%	-0.3%	-2.3%	-5.1%
The total recognised actuarial gain since 2004 is €30 million					
h) Funding of Pensions					
Payments for unfunded obligations are expected to amount to €36 million in 2010					



## Notes to the Accounts (cont.)

Year Ended 31 December 2009

9. Capital Account		
	€'000	€'000
At 1 January 2009		288
Transfer to/from Income and Expenditure Account		
- Cost Additions	21	
- Cost Disposals	(109)	
- Depreciation Additions	(147)	
- Depreciation Disposals	77	
		(158)
At 31 December 2009		130
10. Accounts Receivable		
	2009 €'000	2008 €'000
General Debtors	1,119	1,501
Prepayments	1,630	1,674
Inter Agency Balances	613	278
Departmental Programmes	84	4
Total	3,446	3,457
<p>General Debtors include €155,559 (2008: €0) VAT recoverable by Forfás on behalf of the Forfás VAT Group (Forfás, IDA Ireland, Enterprise Ireland and Science Foundation Ireland).</p> <p>Interagency Balances represents amounts due, if any, from the Forfás Agencies (IDA Ireland, Enterprise Ireland and Science Foundation Ireland) and includes VAT receivable of €459,673 (2008: €140,109) from Enterprise Ireland and Science Foundation Ireland.</p>		

## Notes to the Accounts (cont.)

Year Ended 31 December 2009

11. Accounts Payable		
	2009 €'000	2008 €'000
General Creditors	265	528
Accruals	144	328
Payroll	394	121
Inter Agency Balances	709	46
Departmental Programmes	-	27
<b>Total</b>	<b>1,512</b>	<b>1,050</b>

General Creditors include €0 (2008: €263,173) VAT payable by Forfás on behalf of the Forfás VAT Group (Forfás, IDA Ireland, Enterprise Ireland and Science Foundation Ireland).

Interagency Balances represents amounts due, if any, to the Forfás Agencies (IDA Ireland, Enterprise Ireland and Science Foundation Ireland) and includes VAT payable of €709,211 (2008: €46,182) to IDA Ireland.

### 12. Commitments under Operating Leases

A net total of €3,046,000 (2008: €2,651,000) has been charged in respect of operating leases on buildings in the accounts of Forfás. Forfás has commitments of €7,071,000 to pay during 2010 in respect of leases expiring as set out below. Costs arising out of these commitments in 2010 will be shared between Forfás Agencies and tenants in proportion to agreed office space occupied. The net Forfás share of these costs in 2010 is anticipated to be approximately €3,102,000.

	€'000
(i) 2010	66
(ii) 2011- 2015	1,200
(iii) 2016 Onwards	5,805

### 13. Taxation

Section 227 of the Taxes Consolidation Act, 1997, exempts Forfás from further taxation on Case IV and Case V rental income in excess of that deducted at source.

## Notes to the Accounts (cont.)

Year Ended 31 December 2009

---

### 14. Board Members - Disclosure of Transactions

In the normal course of business, Forfás may enter into contractual arrangements with undertakings in which Forfás Board Members are employed or otherwise interested. Forfás has adopted procedures in accordance with the guidelines issued by the Department of Finance in relation to the disclosure of interests by Board Members and these procedures have been adhered to by Forfás during the year.

During 2009, no payments were made to any organisations associated with Board Members.

---

### 15. Contingencies and Legal Actions

There are no contingencies or legal actions which require specific provision in the Financial Statements.

---

### 16. Approval of Financial Statements

The Financial Statements were approved by the Board on 25 March 2010

---

# Appendix: Advisory Councils

## Advisory Science Council



Dr Tom McCarthy, Chairman<sup>8</sup>  
Chief Executive, Irish Management Institute

Dr Sean Baker	Independent Consultant and founder of IONA Technologies plc
Bernadette Butler	Managing Director, Good 4U Food and Drink Company Limited
Prof. Dolores Cahill	Professor of Translational Science, Conway Institute, University College Dublin
Marion Coy	President, GMIT, Galway
Martin Cronin <sup>9</sup>	Former Chief Executive, Forfás
Mary Cryan	Cryan Consulting, former Chairman, Advisory Science Council
Prof. Anita R. Maguire	Prof. of Pharmaceutical Chemistry, Director, Analytical and Biological Chemistry, Research Facility, University College Cork
Prof. Brian MacCraith	Director, Biomedical Diagnostics Institute, Dublin City University
Paul McCambridge	Business Consultant
John McGowan	Ex Intel and Michael McNamara & Co
Larry Murrin <sup>11</sup>	Chief Executive Officer, Dawn Farm Foods
Martin Shanahan	Division Manager, Forfás
Dr Reg Shaw	Chairman, Health Research Board and Former Managing Director, Wyeth Medica Ireland
Prof. Roger Whatmore	Chief Executive Officer, Tyndall National Institute

<sup>8</sup> Dr Tom McCarthy replaced Mary Cryan as Chair in November 2009

<sup>9</sup> Martin Cronin and Larry Murrin resigned from the Council during the year. Martin Shanahan replaced Martin Cronin on the Council.

## Expert Group on Future Skills Needs



Una Halligan, Chairperson  
Director, Government and Public Affairs for Ireland, Hewlett Packard

Inez Bailey	Director, National Adult Literacy Agency
George Bennett	Departmental Manager, Clean Tech, IDA Ireland
Marie Bourke	Head of Secretariat and Department Manager, Human Capital and Labour Market Policy, Forfás
Liz Carroll	Training and Development Manager, ISME
Terry Corcoran <sup>10</sup>	Director of Planning and Research, FÁS
Ned Costello	Chief Executive, Irish Universities Association
Margaret Cox	Managing Director, I.C.E. Group
Tony Donohoe	Head of Education, Social and Innovation Policy, IBEC
Brendan Ellison	Principal Officer, Department of Finance
Anne Forde	Principal Officer, Department of Education and Skills
Pat Hayden	Principal Officer, Department of Enterprise, Trade and Employment
Garry Keegan	Director, Acumen
Enda McDonnell <sup>11</sup>	Sectoral and Enterprise Development Policy, Enterprise Ireland
John Martin	Director for Employment, Labour & Social Affairs, OECD
Dermot Mulligan	Assistant Secretary, Department of Enterprise, Trade and Employment
Frank Mulvihill	Former President of the Institute of Guidance Counsellors
Dr Brendan Murphy	President, Cork Institute of Technology
Alan Nuzum	CEO, Skillnets

<sup>10</sup> Replaced Roger Fox, FÁS, in January 2010

<sup>11</sup> Replaced David Hedigan, Enterprise Ireland, in October 2009

Muiris O'Connor <sup>12</sup>	Higher Education Authority
Peter Rigney	Industrial Officer, ICTU
Martin Shanahan	Division Manager, Forfás
Jacinta Stewart	Chief Executive, City of Dublin VEC

<sup>12</sup> Replaced Fergal Costello, Higher Education Authority in February 2009

## Management Development Council



Prof. Frank Roche, Chairman  
Deputy Principal, College of Business and Law, UCD

Patricia Callan	Director, Small Firms Association
David Cronin	CEO, Wild Geese Group
Pat Hayden	Principal Officer, Department of Enterprise, Trade and Employment
Briga Hynes	Kemmy Business School, University of Limerick
Martin Lynch	Assistant Director General, Services to Business, FÁS
Ian Talbot <sup>13</sup>	CEO, Chambers Ireland
Ivan Morrissey	Business Information Systems IS Laboratory Manager and Lecturer, National University of Ireland, Cork
Alan Nuzum	CEO, Skillnets
Liam O'Brien	Managing Director, BT Business <sup>14</sup>
Liam O'Donohoe	Senior Manager, Client Manager Development Division, Enterprise Ireland
Anne O'Leary	Head of Business and Enterprise Sales, Vodafone Ireland
Sean O'Sullivan	Seabrook Research Limited
Gail Power	UK & Ireland Online Sales and Operations Manager, Google <sup>15</sup>
Eilis J. Quinlan	Managing Director, Eilis J. Quinlan & Co
Eamon Ryan	CEO, Limerick City Enterprise Board
Tom McCarthy <sup>16</sup>	CEO, Irish Management Institute

<sup>13</sup> David Bourke and Rachel MacGowan also represented Chambers Ireland during the Council's tenure

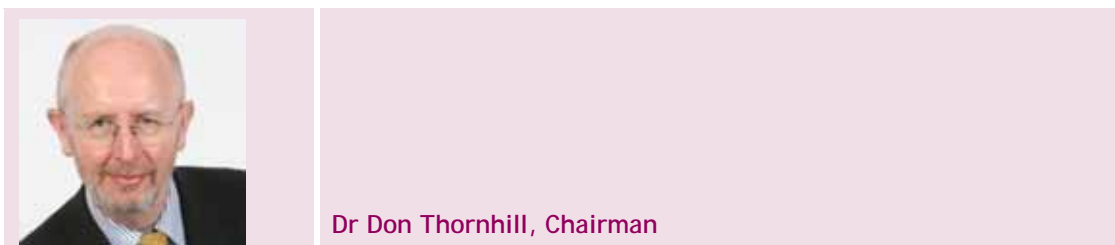
<sup>14</sup> Liam O'Brien left this post in mid-2009

<sup>15</sup> Gail Walker left this post in mid-2009

<sup>16</sup> Tom McCarthy replaced Tim Wray, former Registrar at IMI, in September 2009



## National Competitiveness Council



Rory Ardagh	Telecom Property Holdings Limited
Brendan Butler	Director of Strategy, Trade, EU and International Affairs, IBEC
Donal Byrne	Chairman, Cadbury Schweppes Ireland Limited
Shay Cody	Deputy General Secretary, IMPACT
Pat Delaney	Director of Sectors and Regions, IBEC
Clare Dunne	Assistant Secretary, Department of Enterprise, Trade and Employment
Marcus Hewson	Senior Vice President, McDonalds Corporation
Annette Hughes	Director, DKM Economic Consultants
Seán Murphy	Deputy Chief Executive, Chambers Ireland
William Prasifka <sup>17</sup>	Chairperson, Competition Authority
Professor Ferdinand von Prondzynski	President, Dublin City University
William Slattery	Executive Vice President and Head of European Offshore Domiciles, State Street International (Ireland)
Paul Sweeney	Economic Adviser, Irish Congress of Trade Unions
John Travers	Consultant and Founding Chief Executive Officer, Forfás and Science Foundation Ireland
Jane Williams	Chief Executive, Forfás

<sup>17</sup> William Prasifka retired from the NCC Board in February 2010

## Publications 2009/2010

Future Skills Needs of the Wholesale and Retail Sector EGFSN	May 2010
Review of Supports for Exploitation of Intellectual Property from Higher Education Research Forfás, DETI	May 2010
Expert Group on Future Skills Needs - Statement of Activity 2009 EGFSN	April 2010
Single Window: Assessment of the Costs of Trade-Related Regulatory Requirements in Ireland Forfás	March 2010
Annual Employment Survey 2009 Forfás	March 2010
Evaluation of Framework Programme 6 in Ireland Forfás	March 2010
Maximising the Environment for Company Research and Development Advisory Science Council	March 2010
Review of Labour Market Programmes Forfás, DETE	March 2010
Profile of Employment and Unemployment Forfás	March 2010
Management Development in Ireland Management Development Council	March 2010
Forfás Evaluation of Irish Membership of the European Molecular Biology Laboratory Forfás	March 2010
Ireland's Broadband Performance and Policy Actions Forfás	January 2010
Regional Competitiveness Agendas Forfás	January 2010
Annual Business Survey Of Economic Impact 2008 Forfás	January 2010
Annual Competitiveness Report 2009, Volume Two: Ireland's Competitiveness Challenge National Competitiveness Council	January 2010
The Role of PhDs in the Smart Economy Advisory Science Council	December 2009
Research Strengths in Ireland: A Bibliometric Study of the Public Research Base Forfás, HEA	December 2009

Driving Export Growth: Statement on Sectoral Competitiveness National Competitiveness Council	December 2009
Sustaining Investment in Research and Development Advisory Science Council	December 2009
Developing the Green Economy in Ireland Higher Level Group on Green Enterprise	December 2009
Future Skills Requirements of the Food and Beverage Sector EGFSN	November 2009
Health Life Sciences in Ireland - An Enterprise Outlook Forfás	November 2009
Skills in Creativity, Design and Innovation EGFSN	November 2009
Monitoring Ireland's Skills Supply - Trends in Education and Training Outputs 2009 EGFSN, FÁS	November 2009
National Strategy for Higher Education - Forfás Submission Forfás	October 2009
Statement on Energy National Competitiveness Council	October 2009
Costs of Doing Business in Ireland National Competitiveness Council	September 2009
Enterprise Statistics at a Glance 2009 Forfás	September 2009
Boost Your Company's Productivity: Simple Steps Forfás	August 2009
Waste Management in Ireland: Benchmarking Analysis and Policy Priorities Forfás	August 2009
Annual Competitiveness Report: Volume 1 Benchmarking Ireland's Performance National Competitiveness Council	August 2009
Sharing Our Future: Ireland 2025 Forfás	July 2009
National Skills Bulletin 2009 Expert Group on Future Skills Needs	July 2009





Notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

The publications of Forfás and the advisory groups to which it provides research support are available at [www.forfas.ie](http://www.forfas.ie)

To sign up for our email alerts contact us at [info@forfas.ie](mailto:info@forfas.ie) or through the website.

June 2010

## **Forfás**

Wilton Park House  
Wilton Place  
Dublin 2

Tel: +353 1 607 3000

Fax: +353 1 607 3030

[www.forfas.ie](http://www.forfas.ie)