



Forfás Annual Report 2005

2005



Forfás is the National Policy and Advisory Board for Enterprise, Trade, Science, Technology and Innovation

Forfás Mission

Forfás' mission is to inform and to build coalitions for change which will influence and underpin implementation of ambitious, coherent and widely understood enterprise, science and innovation policies.

These policies will promote competitiveness and support creative and dynamic management teams and individuals to establish and grow innovative and successful companies in Ireland.

In this way, Forfás and its sister agencies will support Government in improving the economic opportunities for Ireland's people and, ultimately, in delivering higher living standards and quality of life for all.

Forfás is the national policy and advisory board for enterprise, trade, science, technology and innovation

To the Minister for Enterprise, Trade and Employment

Pursuant to the Industrial Development Act, 1993, Forfás herewith presents its report and accounts for the year ended 31 December 2005.

Do Aire Fiontar, Trádála agus Fostaíochta

De bhun an Achta um Fhorbairt Tionscail, 1993, tá a thurascáil agus a chuntais don bhliain dar chríoch 31 Nollaig, 2005, a dtíolacadh leis seo ag Forfás.

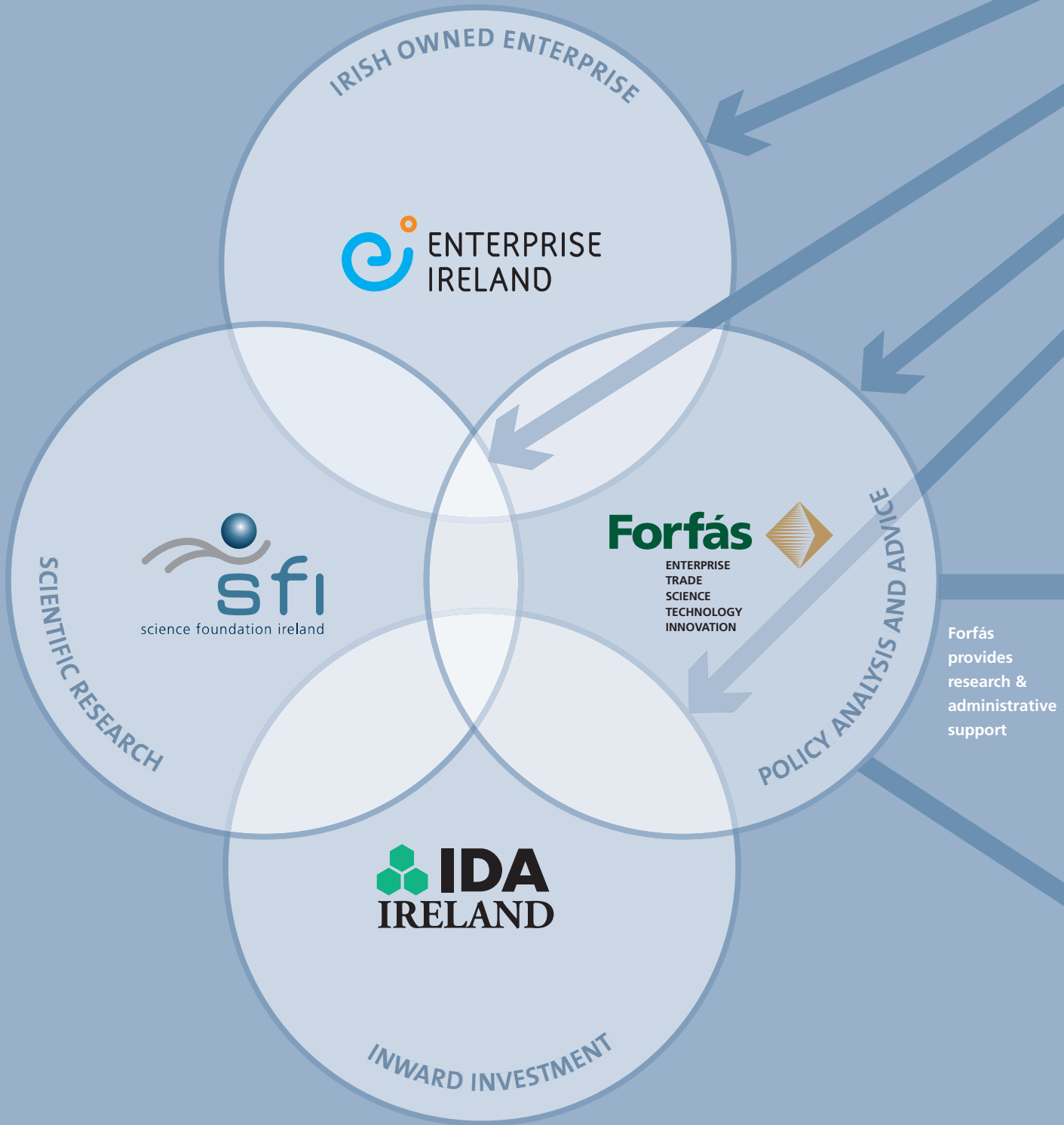


Martin Cronin
Chief Executive



Eoin O'Driscoll
Chairman

Forfás, its Sister Agencies and Advisory Councils





Minister for
Enterprise, Trade
and Employment

ADVISORY COUNCILS

National Competitiveness Council 

Expert Group on Future Skills Needs 

Advisory Council for Science, Technology and Innovation
An Comhairle Eolaíochta 

The NCC reports to the Taoiseach on key competitiveness Issues

The EGFSN also reports to the Minister for Education and Science



Department of the Taoiseach
Roinn an Taoisigh



DEPARTMENT OF EDUCATION
AN RÓINN OIBRÉAGHÁIN, EOLAÍOCHTA
AGUS EOLAÍOCHTA



Office of the
Chief Science
Adviser to the
Government

Cabinet Committee
on Science, Technology
& Innovation

Functions

Forfás is the national policy and advisory board for enterprise, trade, science, technology and innovation. It is the body in which the State's legal power for industrial promotion and technological development has been vested. It is also the body through which powers are delegated to Enterprise Ireland for the promotion of indigenous industry and to IDA Ireland for the promotion of inward investment. Science Foundation Ireland was established as a third agency of Forfás in July 2003. The broad functions of Forfás are to:

- Advise the Minister on matters relating to the development of industry in the State;
- Advise on the development and co-ordination of policy for Enterprise Ireland, IDA Ireland, Science Foundation Ireland and such other bodies (established or under statute) as the Minister may by order designate;
- Encourage the development of industry, technology, marketing and human resources in the State;
- Encourage the establishment and development in the State of industrial undertakings from outside the State; and
- Advise and co-ordinate Enterprise Ireland, IDA Ireland and Science Foundation Ireland in relation to their functions.

Feidhmeanna

Is é Forfás an bord comhairleach agus polasaí náisiúnta do fhiontar, thráchtáil, eolaíocht, theicneolaíocht agus nuálaíocht. Is é an comhlacht ina bhfuil cumhacht dlíthiúil an Stáit dílsithe i leith tionscail a chur chun cinn agus forbairt teicneolaíochta. Is é an comhlacht freisin trína thiomnaítear cumhachtaí go Enterprise Ireland chun tionscal dúchais a chur chun cinn agus do IDA Ireland chun infheistíocht isteach a chur chun cinn. Bunaíodh Science Foundation Ireland mar thríú gníomhaireacht de Forfás in Iúil 2003. Is iad na feidhmeanna leathana de Forfás ná chun:

- Comhairle a thabhairt don Aire ó thaobh cúrsaí a bhaineann le forbairt tionscail sa Stát;
- Comhairle a thabhairt maidir leis an bhforbairt agus an gcomhordú de pholasaí do Enterprise Ireland, IDA Ireland, Science Foundation Ireland agus d'aon chomhlacht eile dá leithéid (bunaithe nó faoi reacht) mar a d'fhéadfadh an tAire a thiomnú de réir ordaithe;
- An fhorbairt de thionscal, theicneolaíocht, mhargaíocht agus acmhainní daonna a spreagadh sa Stát;
- An bunú agus an fhorbairt sa Stát de ghnóthais tionsclaíochta a spreagadh ó áiteanna lasmuigh den Stát; agus
- Enterprise Ireland, IDA Ireland agus Science Foundation Ireland a chomhairliú agus a chomhordú maidir lena bhfeidhmeanna.

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Forfás Board Members



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1 **Mr Eoin O'Driscoll, Chairman**
Managing Director, Aderra

2 **Mr Martin Cronin**
Chief Executive, Forfás

3 **Mr Sean Dorgan**
Chief Executive, IDA Ireland

4 **Mr Sean Gorman**
Secretary General,
Department of Enterprise, Trade
and Employment

5 **Dr William Harris**
Director General,
Science Foundation Ireland

6 **Mr Pat Barry¹**
Communications Advisor

7 **Dr Rosheen McGuckian**
Chief Executive Officer, GE Money

8 **Mr Rody Molloy**
Director General, FÁS

9 **Mr William O'Brien¹**
Managing Director, William O'Brien Plant
Hire Limited

10 **Ms Anne Heraty¹**
Chief Executive
Computer Placement Resources (cpl) plc

11 **Mr Frank Ryan**
Chief Executive, Enterprise Ireland

12 **Dr Don Thornhill**
Chairman,
National Competitiveness Council

13 **Ms Jane Williams**
Managing Director, The Sia Group

14 **Mr Michael O'Leary**
Secretary to the Board

The following members retired from the Forfás Board in December 2005:

Prof. Michael Hillery, Emeritus Professor of Engineering, University of Limerick

Mr William Murphy, Partner, Tynan Dillon and Company

Mr Feargal O'Rourke, Partner Taxation, PricewaterhouseCoopers.

Forfás Audit Committee

Ms Jane Williams, Chairman

Dr Rosheen McGuckian

Mr Eoin O'Driscoll

Mr William O'Brien

¹ Appointed March 2006

Statement of the Chairman and Chief Executive

Mr Martin Cronin
Chief Executive

Mr Eoin O'Driscoll
Chairman



Economic Performance

The Irish economy performed very well in 2005. GNP is estimated to have grown by 5.4 percent in 2005 compared with an OECD average of 2.7 percent. Rapid growth has lifted income per capita in this country to among the highest in the world. Provisional figures for 2005 indicate that GNP per capita reached €31,741, placing Ireland above the EU average.

Total employment reached 1.98 million by the end of 2005, while the labour force is expected to exceed two million for the first time during the summer of 2006. The public finances are in a strong position.

There have been changes in the drivers of Ireland's growth in recent years. In the early years of the "Celtic Tiger" growth was driven by a strong performance in exports. In more recent years, however, Ireland's growth has largely been driven by increases in consumer and Government spending and the growth of the construction sector.

We are a small open economy and we need to continue to focus on building success in international markets, as exports will continue to be a vital determinant of our longer term success. Enterprise Ireland's new strategy for internationalisation, export growth and industry led research and innovation reflects this reality.

So, while overall economic performance remains strong, Ireland now faces an unprecedented challenge to sustain its performance into the future.

Today's challenges

Globalisation

In today's increasingly globalised economy, firms, capital and skilled people are increasingly mobile, and can be attracted by low cost, proximity to markets, access to rapidly growing economies, and – in the case of skilled people – by a high quality of life.

This opens up new opportunities for Ireland - access to new markets and to lower cost goods and services. However, we face more intense competition for market share, for skilled people and in the attraction of investment. Many parts of China, India, South East Asia and Central Europe now also target the kind of high tech manufacturing and service activities that have driven Ireland's growth over the last 15 years.

Continuing Importance of Manufacturing

The Irish manufacturing sector, both indigenous and foreign owned, is a substantial contributor to our economy. It employs 220,000 people and spent over €25 billion on payroll, services and raw materials in the Irish economy in 2004. In the same year manufacturing exports were valued at €84.3 billion. Manufacturing has been a key component of the Irish economy over the past two decades of growth and will remain a very significant contributor to exports, employment and economic growth in the future. While acknowledging the central importance of manufacturing in driving productivity and prosperity in Ireland, it is important to understand the considerable changes underway globally and their implications. Ireland is strong enough in modern manufacturing to consolidate its position, while at the same time building up new areas of capability and competitive advantage.

Growing Importance of Services

Services activities take on increased importance in more developed economies and we are already seeing this shift in emphasis in Ireland's economic structure. One third of Irish exports are now derived from internationally traded services, largely generated by foreign subsidiaries based in Ireland.

We are also seeing the impact of the increased internationalisation of services on the high proportion of Irish enterprise that operates in the domestic market. Historically this sector operated in a relatively sheltered regulatory and competitive environment, but today, international chains across a range of sectors present locally trading indigenous companies with intense competition. However, this trend also presents an opportunity for a growing group of Irish service companies to pursue similar overseas direct investment strategies to deliver their services locally in foreign markets.

We must recognise this shift and actively facilitate continued growth in the international trade of services. Business owners and managers with the ability, ambition and potential to grow their companies into strong entities trading in international markets must be empowered to reach their potential.

Those that continue to trade locally largely determine the cost base for both consumers and other businesses and should be encouraged to innovate in other ways, to maximise efficiency, productivity and quality of product and service.

Addressing the Challenges

As Ireland aims to become a truly knowledge-based economy, we must continue to enhance our competitiveness building from competitive costs, high skills and low tax. As a developed economy, we need to

- Build a partnership approach and improve collaboration across industries, education and government;
- Build a focused research and development capacity;
- Improve productivity; and
- Develop more advanced and pervasive education to support innovation-oriented enterprise.

Collaboration

In this new phase of Irish economic development, Forfás believes that a collaborative approach to innovation-oriented economic growth is required. Significant responsibilities lie in the hands of, among others, the managers and employees of individual firms, educationalists, industry associations and trade unions to promote company capabilities in international sales and marketing, imbue an innovation culture and drive efficient provision of higher value goods and services.

The State also has an important role. A Government strategy to promote competitiveness and growth through innovation in enterprise remains as relevant as ever. Ireland needs joined up public policies that proactively reinforce specific business activities where Ireland can become a significant player in an international context.

Within the family of development agencies, there will be an increasingly critical role in facilitating the creation of networks, enterprise and trade associations, innovation and technology centres that provide an infrastructure for enterprise to drive its development and to take the lead on cross cutting issues.

Science and Technology – The Foundation

The rapid rise in our cost base in recent years is forcing us to accelerate our transition from relatively labour intensive, low value activities to an economy dominated by knowledge intensive, higher value activities.

The Government's Strategy for Science and Technology, will set out a roadmap to optimise the economic and societal benefits of Ireland's considerable investment in scientific research. The investments already made and committed to by Government are now beginning to show results and a focused Strategy will reinforce a research driven culture, enhance the capacity of research

institutions to plan strategically and develop their research strengths. This focused approach will help us achieve the goal of sustaining levels of competitive performance in line with the world's best.

If we wish to compete on knowledge we must be better, not only at undertaking research, but also at innovating and operating businesses which span the value chain from opportunity identification to product and service development and commercialisation.

Productivity and Innovation – Maintaining Competitive Advantage

It is crucial that Ireland has the policies to underpin productivity growth which will ultimately be the long term determinant of our competitiveness.

Our ability to catch up with the living standards of the world's richest regions will depend less on increasing employment and more on increasing the productivity of those at work across all sectors in the economy.

As services continue to play a greater role we must develop our understanding of what drives innovation and productivity increases in the services sector and put in place appropriate policy and programme initiatives.

Education and Enterprise – A Partnership

Without doubt Ireland's education system, primary, secondary and tertiary, played a fundamental role in our economic transformation. The responsiveness of our education system is critical to our future successes. More and different skills are required to generate innovative new ideas and exploit technological change. High performing economies and societies will increasingly rely on a labour force which engages in continuous learning and adaptation. The Enterprise Strategy Group Report, *Ahead of the Curve*, cited world class skills, education and training as one of the key areas of potential advantage for Ireland.

Today's high value enterprises require advanced and pervasive education to succeed. It is fair to say that both enterprise and the education sector share the goal that people should become all they are capable of being – and this goal is best achieved through more pervasive education.

This in turn requires increasing financial commitment to education and increased funding is enabled by more successful enterprise. Without a committed partnership between education and enterprise our workforce will not be able to replicate our previous achievements.

There are four principles which Forfás believes should inform the national approach for the future role of education. We must:

- ▣ Commit to both adequate investment and teaching excellence in our education system;
- ▣ Demonstrate these commitments across the entire education system right through from primary to fourth level;
- ▣ Recognise the growing interdependence, in the best sense of that word, of enterprise and education; and
- ▣ Upskill the existing workforce and raise overall education levels.

We have some way to go in relation to lifelong learning. The initiatives being undertaken in this area to improve educational access are welcomed, but we need a continued focus on this topic. The lower skilled must not be left behind in our move towards a knowledge economy.

Acknowledgements

In its day to day work Forfás itself relies heavily on a partnership approach for success. Our achievements during 2005 were based on collaboration and we would like to acknowledge the contributions of many people and organisations throughout the year. Firstly, the Taoiseach, Mr Bertie Ahern TD, and Mr Micheál Martin TD and Minister for Enterprise Trade and Employment and other Government Ministers and Departments.

The development agencies, Enterprise Ireland, FÁS, IDA Ireland, Shannon Development and Údarás na Gaeltachta all contributed in their respective areas in supporting Ireland's enterprise base and the work of Forfás. Science Foundation Ireland, the education sector, employer bodies, business organisations, trade unions and the media also contributed to the success of Forfás during the year.

We also wish to thank the Irish National Accreditation Board chaired by Dr Máire Walsh, the Interim Board of the National Consumer Agency, Ms Ann Fitzgerald, Executive Chairperson, and the independent advisory groups with which Forfás worked closely during the year including the:

- ▣ Advisory Council on Science Technology and Innovation, chaired by Ms Mary Cryan;
- ▣ Business Regulation Forum, chaired by Mr Dónal de Buitléair;
- ▣ Discover Science and Engineering, chaired by Mr Leo Enright;

- ▣ Expert Group on Future Skills Needs, chaired by Ms Anne Heraty;

- ▣ National Competitiveness Council, chaired by Dr Don Thornill;

We offer our sincere sympathy to the family of Mr William Burgess, who died earlier this year. William served seven years as a member and two years as the Chairman of the Council;

- ▣ Office of the Chief Science Adviser. We wish Mr Barry McSweeney well in his new role in the Department of Communications, Marine and Natural Resources; and

- ▣ Small Business Forum, chaired by Mr Joe Macri.

The last year has seen a number of retirements and new members joining the Forfás Board. We extend our sincere appreciation to Mr William Murphy who served on the Forfás Board since its establishment in 1994, and to Professor Michael Hillery and Mr Feargal O'Rourke, each of whom served on the Board for seven years. They provided valuable contributions to the work of Forfás, bringing with them a strong understanding of the wide range of issues dealt with by the organisation.

We welcome Mr Pat Barry, Communications Advisor, Ms Anne Heraty, Chief Executive, CPL Resources Plc and Mr William O'Brien, Managing Director, Wm O'Brien Plant Hire Ltd who joined the Board in early 2006.

Finally, we offer our appreciation to the management team and staff of Forfás for their dedication and continued achievement throughout 2005. Just as the enterprise environment is becoming more complex, diverse and challenging so too is the work of Forfás. It is with such strong management and staff commitment that Forfás is able to address the challenges facing Irish enterprise.



Statistical Overview

Forfás collects a range of enterprise indicators. These include the contribution of and employment levels in agency supported firms and a range of data which highlights Ireland's performance in R&D and our development as a knowledge-led economy.

This section provides an overview of these indicators.

Expenditure by Agency Supported Firms in the Irish Economy

The Annual Business Survey of Economic Impact incorporates the former Irish Economy Expenditure Survey. It presents results relating to all manufacturing and internationally-traded services firms (with 10+ employees) that are under the remit of IDA Ireland, Enterprise Ireland, Shannon Development and Údarás na Gaeltachta. It tracks the performance of agency assisted client companies in terms of outputs (sales, exports, net output) and monitors the direct expenditure of these companies within the Irish economy in terms of their payroll costs and purchases of Irish-supplied materials and services.

In 2005, 3,805 companies comprising 2,908 indigenous and 897 foreign owned firms were surveyed. Of these companies included in the survey in 2005, 2,728 are operating in the manufacturing industry and 1,077 in the internationally traded services sector.

Data relating to the direct expenditure on payroll costs, Irish raw materials and services purchased in Ireland, of agency supported companies in 2004 was compiled by Forfás and the agencies (Enterprise Ireland, IDA Ireland, Shannon Development and Údarás na Gaeltachta) during 2005.

The overall output of agency assisted firms in manufacturing and internationally traded services increased by 3.8 percent in 2004 (in nominal terms) while direct expenditure in the economy increased marginally by 0.8 percent.

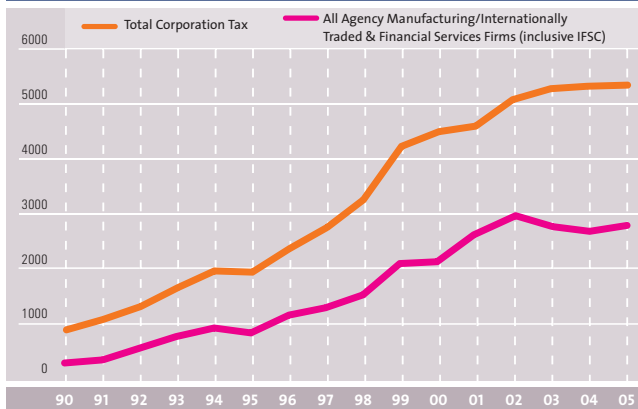
Direct expenditure by these firms in the economy totalled €34.2 billion in 2004, made up of payroll costs (€10.9 billion), Irish raw materials (€13.5 billion) and expenditure on Irish services (€9.8 billion). Irish owned companies accounted for €16.2 billion of this direct expenditure with raw material inputs accounting for the largest share. Foreign owned companies spent €18.0 billion directly in the economy, which was spread quite evenly across the three categories of payroll costs, raw materials purchases and services purchased in Ireland.

Table 1
Contribution of Agency Supported Firms in the Irish Economy

		IRISH-OWNED FIRMS		FOREIGN-OWNED FIRMS		ALL FIRMS		CHANGE
		2003	2004	2003	2004	2003	2004	
Sales	€M	22,460	23,708	79,006	81,612	101,466	105,319	3.8%
Payroll Costs	€M	4,325	4,492	6,121	6,390	10,446	10,882	4.2%
Irish Raw Materials	€M	8,201	8,660	5,426	4,824	13,628	13,485	-1.1%
Services bought in Ireland	€M	2,863	3,050	6,962	6,751	9,826	9,801	-0.3%
Direct Expenditure in the Economy	€M	15,389	16,202	18,509	17,965	33,900	34,168	0.8%
Direct Expenditure as % Sales	%	68.5	68.3	23.4	22.0	33.4	32.4	-2.9

Source: Annual Business Survey of Economic Impact, co-ordinated by Forfás and administered by the Survey Unit, ESRI

Figure 1
Corporation Tax Payments, 1990 - 2005
(Constant 2005 Prices)



Source: Exchequer Returns for 2005, Department of Finance. Annual Business Survey of Economic Impact, co-ordinated by Forfás and administered by the Survey Unit, ESRI

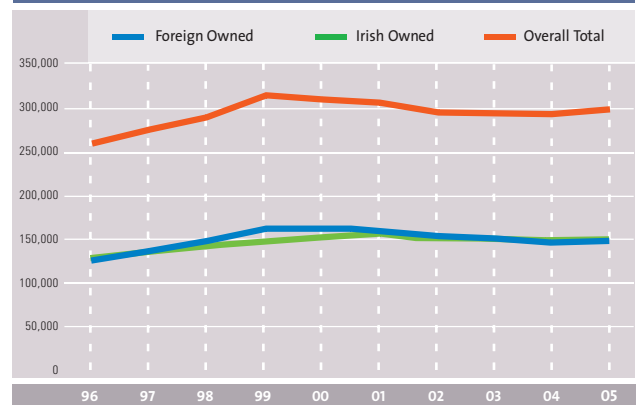
Corporation Tax Payments

In addition to 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 €5.5 billion in 2005, a slight increase in real terms on the previous year. It is estimated that agency supported firms accounted for €2.8 billion (51 percent) of the €5.5 billion total corporation tax paid in the economy.

Agency assisted companies in the chemicals/ pharmaceuticals and international financial services accounted for around 26 and 27 percent of the €2.8 billion, respectively, with ICT- hardware and software accounting for 19 percent of the total figure.

Figure 2
Permanent Full-Time Employment 1996-2005
Manufacturing and Internationally
Traded/Financial Services



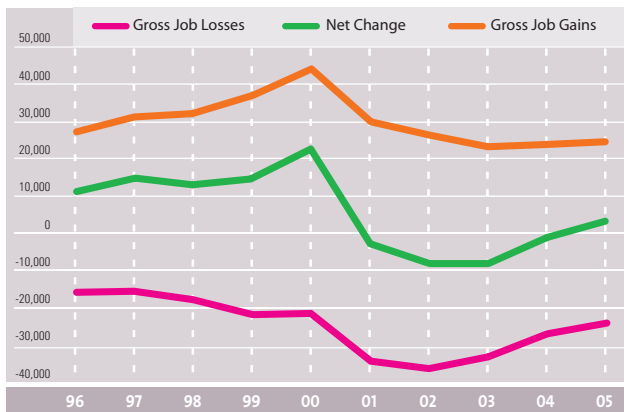
Source: Forfás - Annual Employment Survey

Employment in Agency Supported Companies

Total full time employment in companies under the remit of IDA Ireland, Enterprise Ireland, Shannon Development and Údarás na Gaeltachta amounted to 298,372 in 2005, an increase of 2,879 on the previous year. While figures since 2002 have shown minimal growth in job numbers, this is the highest net jobs increase recorded since 2000. There are now 52,016 more people employed in agency assisted manufacturing and internationally traded services companies than in 1996.

The overall net increase of 2,879 in 2005 comprises 1,610 more jobs in foreign owned companies and 1,269 more jobs among Irish owned companies in manufacturing and internationally traded services. Employment in Irish owned manufacturing and internationally traded services has increased from 125,611 in 1996 to 147,683 in 2005. Employment in foreign owned manufacturing and internationally traded services has increased from 120,745 in 1996 to 150,689 in 2005.

Figure 3
Job Gains, Losses and Net Change in Permanent Full Time Employment 1996-2005 Manufacturing and Internationally Traded/Financial Services

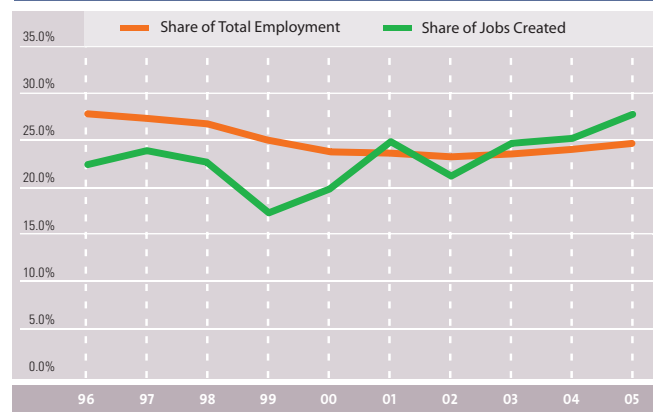


Source: Forfás - Annual Employment Survey

Approximately 27,055 jobs were created in manufacturing and internationally traded services in 2005 with 24,176 job losses during the year. **Figure 3** highlights the trend in the number of jobs being created and lost over the 1996-2005 period and shows that the rate of job losses has significantly reduced since 2002. There are also interesting sectoral dynamics underpinning these aggregate trends:

- Permanent employment in manufacturing companies fell for the fifth successive year to 215,686, down 12 percent from its 2000 peak. Net job losses in 2005 were concentrated in traditional manufacturing sectors such as the food products and beverages (-1,350), non-metallic minerals (-889) and paper, publishing and printing (-502), reflecting on-going restructuring, productivity improvements and competition from lower-cost locations.
- There were net job increases in more modern sectors such as electrical and optical equipment (including medical devices) (+2,042) and chemicals (including pharmaceuticals (+286)).
- Net job losses in manufacturing in 2005 were more than offset by net job gains in internationally traded services sector. Total employment in financial and other international services increased to 71,296 in 2005 (+2,441), accounting for 24 percent of all jobs in agency supported companies in 2005, compared with just 10 percent in 1996. Net job creation was highest in international services (+1,702), with the increase largely accounted for by firms in consulting, software and other computer-related services.

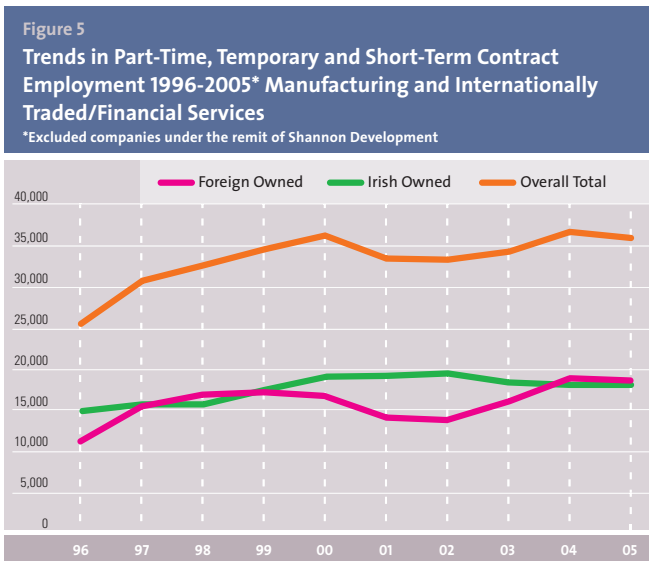
Figure 4
Share of Employment in Agency Supported Companies Accounted for by BMW Region



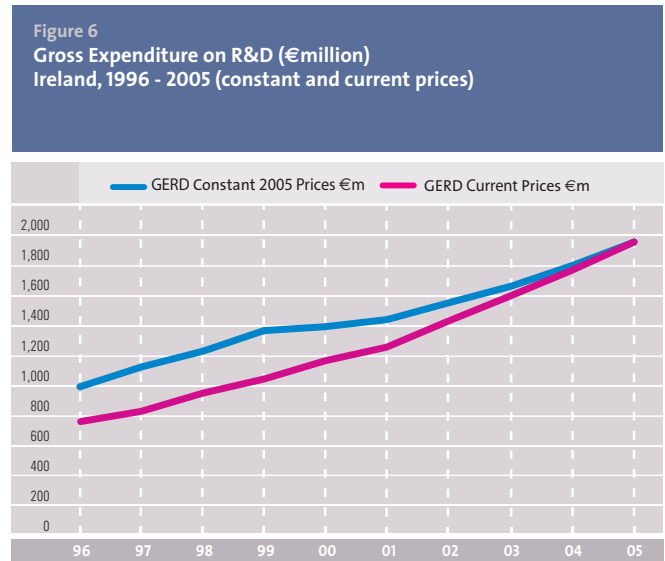
Regional Distribution of Employment

Figure 4 shows the share of employment in manufacturing and internationally traded services accounted for by the Border, Midlands and West (BMW) region over the period 1996-2005. In 2005 more than 7,500 jobs were created in the BMW region which equates to around 28 percent of jobs created in agency supported firms throughout the country, compared to 20 percent in 2000, the peak year of employment in agency assisted companies. While the overall percentage share of jobs created accounted for by the BMW region has increased, the number of jobs created has remained stable since 2002.

There have also been jobs lost in both the BMW region and in the rest of the economy. In aggregate terms, the BMW region accounted for around 24.8 percent of total permanent employment in agency assisted companies throughout the country in 2005.



Source: Forfás - Annual Employment Survey



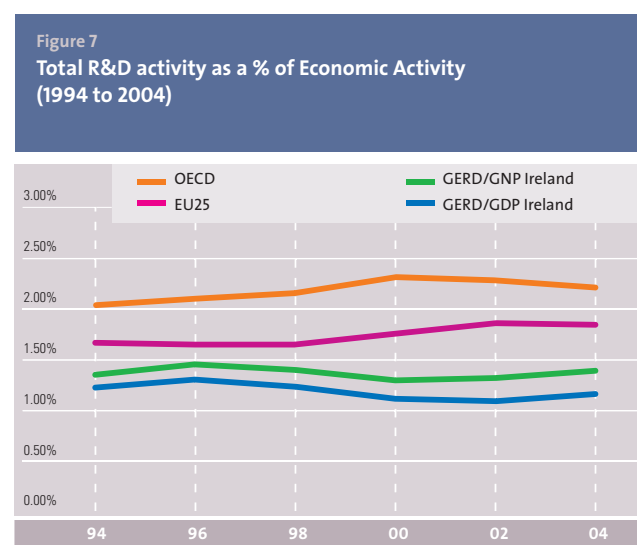
Source: Derived from the Survey of R&D in the Business Sector 2003 (Forfás); survey of R&D in the higher education sector, 2004 (Forfás); State Expenditure on Science & Technology, 2005 (Forfás)

Part-Time, Temporary and Short-Term Contract Employment

In addition to the 298,372 persons employed full time in manufacturing and internationally traded services, 36,156 persons were also employed in part time, temporary and short term contract positions in 2005. Employment in this category has grown over the last decade and now accounts for almost 11 percent of all jobs in agency assisted companies. Taking the two categories of employment together (permanent full time and temporary/part-time), there are now 334,528 persons employed in agency assisted companies, up from 272,598 in 1996.

Research and Development

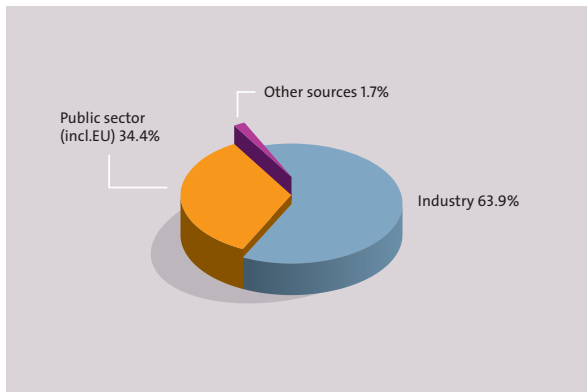
Total expenditure on research and development (R&D) continued to climb strongly in 2005. Figure 6 shows that gross expenditure on R&D activities performed in all sectors of the economy (GERD) rose to an estimated €1,910 million in 2005. This represented a 7.3 percent increase in nominal terms compared to 2004, and an estimated 4.8 percent rise in real terms. The main driver of the total rise in R&D continued to be from increasing R&D activity performed in the higher education sector. Business sector performed R&D is also estimated to have regained momentum in 2005 and will be confirmed in the forthcoming 2005 Business R&D Survey.



Source: Derived from the Survey of R&D in the Business Sector 2003 (Forfás); survey of R&D in the higher education sector, 2004 (Forfás); State Expenditure on Science & Technology, 2005 (Forfás)

Figure 7 shows how total R&D activity performed in relation to the overall economy (GDP and GNP measures). Total R&D intensity rose to 1.43 percent of GNP in 2004 - the same intensity as in 1998 - but a climb from the 1.32 percent ratio recorded in 2000. The continuing trend of strong rises in R&D spending is now pushing the R&D intensity ratio higher, though remains below the average R&D intensities in the EU and OECD which stood at 1.85 percent and 2.24 percent respectively in 2004.

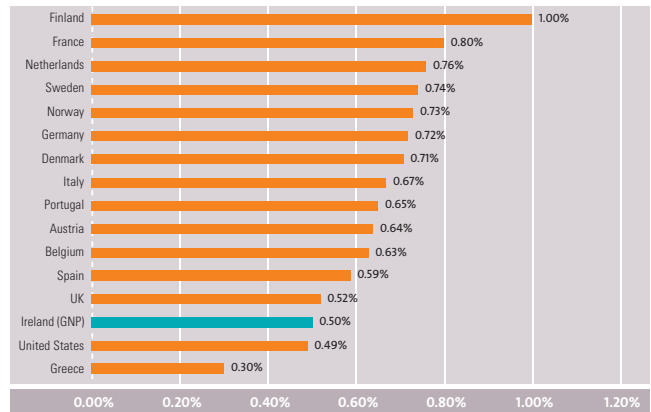
Figure 8
Sources of funding of R&D (% of total) 2004



Source: Derived from the Survey of R&D in the Business Sector 2003 (Forfás); survey of R&D in the higher education sector, 2004 (Forfás); State Expenditure on Science & Technology, 2005 (Forfás)

Figure 9
International Government Budget Allocations to Civil R&D*
(GBAORD as % Economic Activity) - 2004

*(excludes R&D spending on defence)



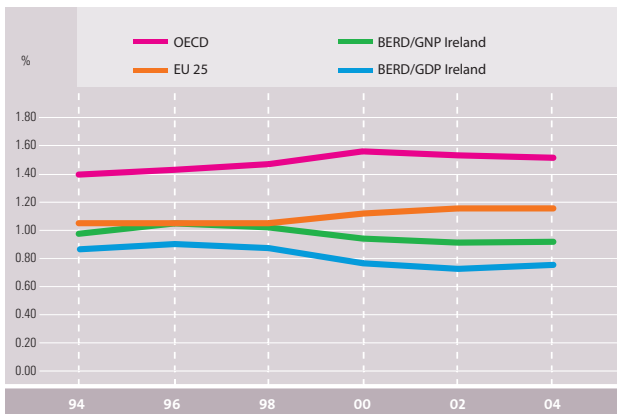
Source: Derived from the State Expenditure on Science & Technology 2005 (Forfás); Main Science & Technology Indicators, 2005-1 (OECD)

Sources of Funding of R&D

All sources of funding (public and private) for research are continuing to rise in nominal terms in parallel with the overall increase in research activities. In 2004, of the total €1.78 billion of performed R&D activities, €1.13 billion was funded from the private sector with €611.9 million of funding sourced from the public sector and €30.8 million funded from other areas. The share of private sector funding as a proportion of total R&D funding has fallen from 71.7 percent in 2000 to 63.9 percent in 2004. In contrast the share of public sources funding of R&D has climbed from a 26.9 percent share in 2000 to a 34.4 percent share in 2004. These changing shares are a result of very strong increases in publicly sourced funding growth, outstripping the more moderate growth in privately sourced R&D funding.

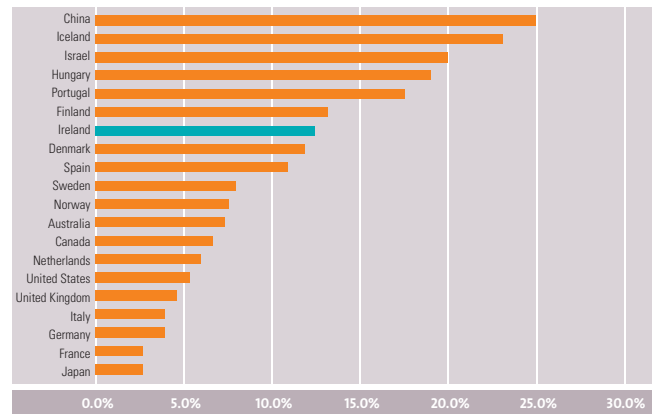
Figure 9 focuses on the Government Budget Allocation to R&D activities and compares them internationally. In Ireland the government budget allocation as a percentage of economic activity rose to 0.50 percent of GNP in 2004 (and an estimated 0.51 percent of GNP in 2005).

Figure 10
Business Sector R&D Performance as a % of Economic Activity (1994 - 2004)



Source: Derived from the Survey of R&D in the Business Sector, 2003 (Forfás), Main Science & Technology Indicators 2005-1 (OECD)

Figure 11
Average Annual BERD Growth Rate (1993-2003)



Source: Derived from the State Expenditure on Science & Technology 2005 (Forfás); Main Science & Technology Indicators, 2005-1 (OECD)

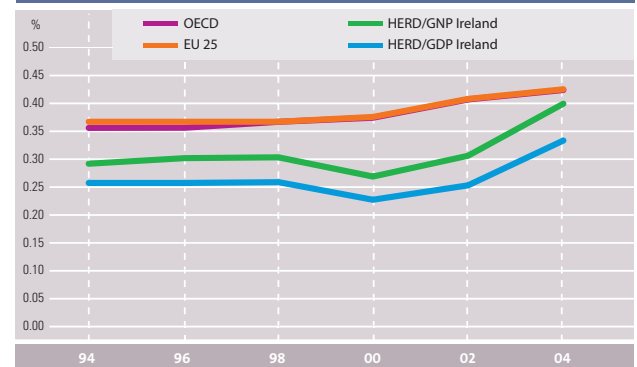
Business Expenditure on R&D (BERD)

R&D performed by the business sector (BERD) climbed to an estimated €1.15 billion in 2004. This represented a 7.0 percent rise in nominal terms compared to BERD in 2003. At present the BERD intensity ratio - R&D expenditure performed in the business sector as a percentage of economic activity - stands at 0.93 percent of GNP. This compares to an intensity ratio of 1.03 percent of GNP in 1998 and 0.93 percent of GNP in 2004. It should be noted that despite strong rises in BERD in recent years (Figure 10), R&D expenditure has continued to be matched by strong growth across the overall economy, therefore constraining the intensity ratio below 1 percent of GNP.

Higher Education Expenditure on R&D (HERD)

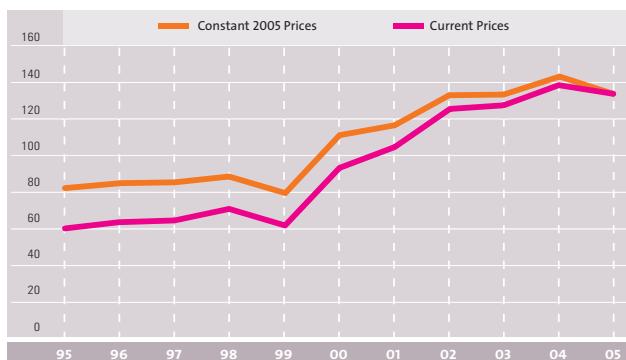
Expenditure on R&D performed in the higher education sector increased strongly in 2004 and 2005. Higher Education R&D spending (HERD) rose to €491.7 million in 2004, a 23.5 percent increase in nominal terms from 2003. HERD expenditure in 2005 is estimated to be around €550 million, backed by further increases in funding from Science Foundation Ireland, Enterprise Ireland, the Programme for Research in Third Level Institutions and from other State sources. Significant increases in funding from state sources over recent years has pushed the HERD intensity ratio (HERD as a % of GNP) from 0.27% of GNP in 2000 to 0.40% of GNP in 2004. Further increases in HERD in 2005 will further push up this intensity, allowing additional narrowing of the HERD intensity gap with the average EU and OECD performance.

Figure 12
Expenditure on R&D performed in the Higher education as a % of economic activity (HERD) - 1994 to 2004



Source: Derived from the Survey of R&D in the Business Sector 2003 (Forfás); survey of R&D in the higher education sector, 2004 (Forfás); State Expenditure on Science & Technology, 2005 (Forfás)

Figure 13
Expenditure on R&D performed in the Public Sector
(Current and Constant Prices) 1995 - 2005



Source: Derived from the Survey of R&D in the Business Sector 2003 (Forfás); survey of R&D in the higher education sector, 2004 (Forfás); State Expenditure on Science & Technology, 2005 (Forfás)

Government Expenditure on R&D

R&D performed in the government sector declined to an estimated €135.1 million in 2005, a fall of 2.5 percent compared to 2004. This represented 0.10 percent of GNP.



Activities in 2005

Forfás fulfilled its mission by pro-actively focusing on a selected number of public policy areas with greatest scope for impact on enterprise in Ireland.

Four policy areas have been prioritised on the basis of contribution to building national competitiveness and the ability of Forfás to add value. Forfás' activities in each area during 2005 and 2006 are detailed in this section.

1

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Improving Framework Conditions for Innovation and Enterprise Development

It has been long recognised that enterprise in Ireland depends heavily on supportive framework conditions in the areas of taxation, education, finance, physical infrastructure and regulation. In 2005, the Government adopted the Enterprise Strategy Group Report, *Ahead of the Curve*, as the blueprint for Ireland's strategy on enterprise framework conditions and put in place an Enterprise Action Plan and Enterprise Advisory Group to give effect to the Report's recommendations.

In 2005, through the international benchmarking of policies and performance, Forfás, with the support of our sister agencies, IDA Ireland and Enterprise Ireland and of the National Competitiveness Council and the Forfás Tax Advisory Group, concentrated its efforts on work to contribute to setting the agenda on framework conditions for Irish enterprise.

Annual Competitiveness Report and Competitiveness Challenge 2005

The National Competitiveness Council (NCC) published its eighth *Annual Competitiveness Report (ACR)* and *Competitiveness Challenge* during 2005. Forfás provides research and secretariat support to the NCC.

The ACR benchmarks Ireland's competitiveness performance. The format of the report was revised in 2005 and analysed Ireland's competitiveness using 171 indicators, drawing on data from bodies such as the OECD, IMD and Eurostat.

The ACR, published in September 2005, highlights the strong performance of the Irish economy over the past decade which reflects a number of national strengths.

- **Taxation:** Ireland remains highly competitive in terms of both corporation tax (Ireland ranks first of the 16 countries benchmarked and on personal taxes first out of 15).
- **Entrepreneurship:** Ireland has a strong entrepreneurial culture. Ireland is ranked second in the EU and 7th among the OECD countries for entrepreneurial activity.
- **Labour market adaptability:** Labour market regulations in Ireland are seen as above average in terms of facilitating business activity (7 out of 16).

- **Openness to trade and investment:** Ireland continues to be one of the most open economies in the world in terms of trade in goods and services and in foreign investment. Ireland continues to have the highest stock of foreign direct investment per capita among the benchmarked countries

The report also highlights areas where Ireland's performance needs to improve to sustain our growth and performance.

- **Education**
While participation rates in secondary education have grown substantially, they remain below those in leading countries. In terms of performance, 15 year olds in Ireland perform strongly in terms of reading skills, although less well in terms of scientific and mathematical literacy. A relatively high proportion of the Irish population in the 25-34 age group has a third level education, and Ireland continues to perform well in terms of science and engineering graduates per thousand population. Participation in life long learning in Ireland has increased considerably in recent years, although there is still a significant gap between Ireland and the leading countries. Despite additional investment, Ireland still invests less than the OECD average in primary and secondary level.



Pictured at the Forfás conference, *Productivity and Public Policy*, are Mr Andrew McDowell, Manager, Competitiveness Division, Forfás, Mr Martin Cronin, Chief Executive, Forfás and Mr Micheál Martin TD, Minister for Enterprise, Trade & Employment.

□ Science and Technology

While both public and business sector investment in R&D have increased substantially in recent years, they are still below the levels pertaining in other advanced economies. Despite progress, patent applications and approval rates remain below those in other countries.

□ Prices and Costs

Prices and costs remain a key competitiveness issue. The ACR outlined that Irish consumer price inflation dropped close to the EU and eurozone average over the course of 2004. However, Ireland remains the most expensive country in the eurozone for consumer goods and services, and the second most expensive country in the EU, behind Denmark.

Drawing on the ACR, the *Competitiveness Challenge* report highlights the significant success of the Irish economy in recent years. However, success brings its own challenges, and the *Competitiveness Challenge* notes that the strategies applied over the last 15 years need to be adapted to take account of far reaching domestic and global economic changes. The NCC considers that there are five interlinked medium term challenges:

□ Globalisation and Increased Competition

The pace and scale of globalisation, the movement of capital, products, services, ideas and people across national borders, are reshaping the international division of labour and the structures of developing and advanced economies alike.

□ Our Rising Cost Base

The intensification of competition from low cost locations has coincided with a sharp rise in Ireland's cost base in recent years. The average cost of Irish goods and services increased by over a fifth relative to our trading partners in the period 2000-2004.

□ Growing Importance of Traded Services

Given growing competition and an increasing cost base, the most cost sensitive parts of the Irish economy are suffering. Employment in manufacturing fell for the fifth successive year in 2005. However, employment and export growth in high value added internationally traded services activities have offset most of the losses in that period.

□ The Increasing Role of Knowledge and Technological Change

Closely linked with globalisation and increased competition is rapid technological change, which is revolutionising business processes and shortening product life cycles. The ability of Irish companies to quickly develop and absorb new technologies into their products and processes will be a decisive driver of future competitive advantage.

□ Quality of Life Issues and Demographic Changes

The growing focus on environmental sustainability, linking economic growth to improvements in quality of life and the effects that demographic changes will have, are also presenting new challenges.

These challenges imply two complementary and crosscutting strategic economic imperatives.

□ Promoting a dynamic and competitive export base

High growth in the Irish economy is currently being sustained primarily by growth in domestic spending from households and government, rather than through growth in exports. The NCC believes that a continuing special policy focus on the competitiveness of our exporting sectors is critical.

- **Raising productivity across the entire economy**
Productivity is the key long term determinant of a nation's living standards and competitiveness. Productivity growth in Ireland has been largely concentrated in a small number of capital intensive industries dominated by multinational companies, such as chemicals, pharmaceuticals and electronics. Productivity levels and growth in more traditional manufacturing sectors, and in those sectors of the Irish economy less exposed to international competition such as construction and retailing, are significantly poorer. Most of the opportunities for improving average Irish productivity and living standards are, therefore, in locally trading and public services.

The *Competitiveness Challenge* report sets out a comprehensive range of policy directions that will be needed to give effect to these strategic imperatives. These are centred on:

- Improving the regulatory and taxation environment;
- Promoting the development of economic infrastructure;
- Enabling an already strong Irish education and training system to become one of the best in the world; and
- Creating an environment that supports the creation and development of more high growth indigenous firms.

Broadband Benchmarking

Forfás measured progress on the supply and demand for broadband telecommunications - a key competitiveness consideration for Ireland. The report, *Benchmarking Ireland's Broadband Performance*, published in December 2005, compares Ireland's broadband performance with that of other countries.

This study, published annually, has become a significant contributor to the debate on policy implementation in telecommunications and related issues. The study includes comparisons between Ireland and other countries on broadband cost, access, quality and take-up. In 2005, the study was broadened to include consideration of the reasons for Ireland's international rankings in broadband availability and take-up. It also focused on the policy and institutional frameworks in other countries, from which lessons might be drawn.

A steering group for the study comprised the main stakeholders from Government, the regulator, the enterprise agencies, regional bodies and selected businesses. Consultations were also held with the main service providers.

Key Findings

- **Broadband Takeup**
At the end of Q2 2005, Ireland ranked 25th of 32 countries for broadband take-up. When the comparator group is limited to the 21 countries benchmarked in the 2004 study, Ireland's position had actually deteriorated, from 18th out of 21 in 2004 to 19th out of 21 in 2005.
- **Broadband Costs**
The cost of entry-level DSL in Ireland has decreased sharply since the launch of services in 2002. Based on the amortised monthly costs for 1Mbit/s, DSL costs in Ireland ranked seventh lowest of 32 countries benchmarked.
- **SME Broadband Take-up**
In terms of broadband take-up by SMEs, out of 20 EU countries included, Ireland ranks 17th for take-up by companies with a workforce of between 10 and 49 employees and 19th for take-up by companies employing 50 to 249 people.
- **Broadband Availability**
Notwithstanding significant improvements in DSL availability in Ireland since its launch in 2002, DSL coverage in Ireland based on population stood at 72 percent, making it the second lowest of the EU15 countries. This figure has increased since the publication of the report, as a number of DSL exchanges have since been enabled.
- **Quality of Service**
A broadband innovation index, used to measure quality of service (bandwidth capacity/choice of advanced products) performance across the benchmark countries, ranks Ireland 21st of 30 countries on this important indicator. A number of operators have since increased the capacity of their entry-level products in 2006.

The report identified a number of issues for further examination and a consultative process was launched to assist in deriving policy conclusions. This continued into early 2006 and involved requests for written submissions from a large range of stakeholders, bilateral meetings with selected companies and institutions and focus groups with small businesses in Sligo and Cork. Outcomes and recommendations will be published during 2006.

Electricity Benchmarking

In 2005 Forfás began research into the effect that electricity pricing and availability have on Ireland's competitive position.

Electricity is a key infrastructure for enterprise. A comparative study of the characteristics of electricity, price, availability, security of supply and quality in Ireland was carried out using key performance indicators. These were identified and measured for all the countries, and the regulatory and market structures were also compared.

The results of the study will inform Forfás inputs into other activities, including the preparation by:

- The Department of Communications, Marine and Natural Resources of a national energy policy for Ireland; and
- The Department of Enterprise, Trade and Employment (DETE) in the preparation of the next National Development Plan.

Waste Management Benchmarking

In 2005 Forfás undertook research into waste management, a policy area identified by the National Competitiveness Council as important for Ireland's competitiveness.

Ireland's recent economic growth has been accompanied by an increase in waste, including municipal waste, industrial waste and hazardous waste. Increasing regulation in the environmental field is encouraging prioritised responses to the waste problem, with prevention as the most favoured option and disposal as the least favoured. From an enterprise perspective, the availability of a range of waste treatment solutions at reasonable cost is an important factor for business growth.

Forfás carried out a benchmarking study by selecting a number of countries and regions for comparison and developing a set of indicators to summarise relative positions in key areas, including waste generation, treatment facilities, costs, ownership, accessibility and capacity.

The report found that Ireland has performed poorly relative to a selection of other countries in meeting the waste needs of enterprise, especially in terms of costs and facilities, better progress has been made in the recycling of municipal waste.

The report concludes that:

- Ireland has the highest municipal waste generation per capita of the 11 benchmark countries and manufacturing waste generation per employee is also relatively high.
- Ireland has made much progress in the area of municipal waste management in recent years with 33 percent being recycled in 2004 compared with 13 percent in 2001. Despite this, Ireland ranks seventh of the ten available countries benchmarked in terms of the proportion of municipal waste recycled. Our industrial waste performance, with a recovery rate of 35 percent in 2004 (25 percent in 2001), also compares poorly relative to the benchmark countries.
- Ireland's dependence on landfill can be attributed to the limited progress in delivering waste infrastructure in preferred waste treatment options such as thermal treatment and biological treatment. These infrastructure deficits are likely to impact on Ireland's ability to meet the targets set down in the EU Landfill Directive.
- Of the countries benchmarked, Ireland has the highest waste management costs for non-hazardous landfill and biological waste treatment. Recycling costs and hazardous waste treatment costs are also higher than most competitor countries because of Ireland's reliance on export markets for the treatment of recyclable materials.

Oil Dependency

Forfás published a study, in April 2006, which analysed Ireland's oil dependency. The study was conducted in 2005 and it examined the extent to which the economy was vulnerable to an oil shock and oil peaking scenarios. The policies required were explored through national and international analysis.

Early consideration of emerging long term issues at international level which may have implications for enterprise policy in Ireland is a key part of Forfás' remit.

The area of oil dependence and peaking was considered in the light of spatial development issues, Ireland's environmental obligations and increased international uncertainty of oil supplies.

Principal conclusions of the report include:

- There is growing evidence to suggest that the era of a plentiful supply of conventional oil is coming to an end. Various experts have developed projections for when peak oil will occur. While there is a wide variation of estimates about the likely timing, most expert commentators believe that in ten to twenty years from now conventional oil supply may no longer be capable of satisfying world demand at current prices.
- Ireland is particularly vulnerable to an oil shock whether in the form of high prices or the unavailability of oil. Taking into account the Irish economy's relative dependence on imported oil and the relative share of oil in total Irish energy consumption, Ireland is among the most sensitive to rising oil prices and therefore among the most vulnerable to a peak oil scenario.
- Ireland consumed nine million tonnes of oil in 2004, an amount that has doubled since 1990. In 2002, Ireland ranked third highest among the EU-25 countries in terms of oil consumed per capita. Electricity generation and transportation are the two main reasons for Ireland's high oil dependence. For electricity generation Ireland is the sixth most oil dependent country of the EU-25 countries. For transportation Ireland consumed 50 percent more per capita than the average of the EU-25.
- As it will take ten to fifteen years to significantly reduce our dependence on oil the report recommends that we prepare a national strategy to deal with the challenge. It outlined a list of key policy options for Ireland that should be considered including initiatives aimed at reducing the usage of oil in transportation, addressing security of supply concerns and improving energy efficiency.

Business Regulation Forum

The Government announced the establishment of the Business Regulation Forum in June 2005, as part of its programme on better regulation. The Forum will analyse existing and proposed regulations and the wider regulatory process from a business perspective and will make proposals for the reduction of the regulatory burden on business. Forfás is a member of the Forum and provides the Forum with research support and advice.

The Minister for Enterprise, Trade and Employment announced the membership of the Business Regulation Forum in October 2005, which includes business associations, individual businesses, Forfás and representatives from a number of Government Departments including the Department of the Taoiseach, the Department of Finance and the DETE. The Secretary to the Forum has been provided by Enterprise Ireland and Forfás provides research support and advice.

The inaugural meeting was held in December 2005. The Forum has finalised its priorities and work programme for 2006. The programme includes a review of existing recommendations on regulatory reform and the identification of particular regulatory issues at sectoral and cross-sectoral level. The work of the Forum is expected to lead to improved framework conditions for enterprises operating in Ireland.

Trade and Investment Report

The annual Forfás *International Trade and Investment Report 2005*, published in February 2006, presented an analysis of Ireland's trade and investment performance in the context of international developments. The report highlights the emergence of trends in the Irish economy which indicate that Ireland is evolving towards a new stage of economic development.

Key conclusions of the report include:

- Services exports continued to expand rapidly, particularly in computer, finance and insurance services. The importance of internationally traded services exports to the economy, measured as a percentage of GDP, now surpasses that of many other developed economies by a significant margin.
- While still very large by international standards, the merchandise trade surplus has been declining since 2002, reflecting slow export growth and a surge in imports. The rise in imports was driven by buoyant consumer demand and the reliance of Ireland on increasingly expensive imported fuels.
- The continuing evolution of the Irish economy is reflected in outward direct investment (ODI) flows. Ireland is following the path of other high income developed economies by increasing its direct investments abroad.

- Ireland continues to attract a large share of global FDI inflows for its size. While our share fell significantly in 2004, this largely reflected changes in the financial operations of multinationals based here, rather than a reduction in new operating facilities. In fact, the number of new IDA supported jobs has been increasing steadily since 2003.

National Trade Forum

In June 2005, Forfás and the DETE jointly organised the inaugural meeting of the National Trade Forum in Farmleigh House.

The National Trade Forum is a new consultative forum designed to give interested stakeholders an opportunity to input into Forfás' trade research programme and Ireland's trade policy. The event opened with the launch of the National Trade Strategy, prepared by the DETE with the support of Forfás. This was followed by a presentation by Prof. Philip Lane of Trinity College outlining the challenges for trade policy and a presentation from Forfás outlining current trade research.

The inaugural meeting engaged senior representatives from industry, the social partners and NGOs in a discussion on key trade policy issues. There was a positive response to the establishment of the Forum and to the trade research that has already been undertaken by Forfás. Research themes that have been identified by the Forfás following the Forum include:

- Assessing the relationship between trade and productivity;
- Identifying the latest outward direct investment (ODI) trends and the merits of ODI;
- Identifying opportunities offered by the World Trade Organisation (WTO) for Irish services companies; and
- Developing a better understanding of the trade performance of services sectors.

It is envisaged that meetings of the Forum will be held every 18 months to take stock of intervening developments, to report on the findings of research and to discuss new research areas.

Trade Negotiations Impact Study

Forfás commissioned a study on behalf of the DETE in the context of the then upcoming WTO Ministerial which was held in Hong Kong in December 2005.

The study quantified the economic effects of potential outcomes of the negotiations and was published in September 2005.

Key Findings:

- The research indicated that impacts of further trade liberalisation on Ireland are generally small, but positive.
- Most sectors of the economy are only marginally affected by reform. Services and industrial liberalisation scenarios generate positive gains to Ireland, while agricultural liberalisation has a slightly negative effect.
- In aggregate, of the total economy-wide GDP growth of 4.6 percent per annum forecast for Ireland for the 2001–2014 period, only +0.01 percent can be attributed to these trade reforms.
- Given the modest scale of the benefits, the most important focus of trade policy in the future is the maintenance of the WTO as the guardian of a rules based free trade regime and the continued development of an effective adjudication mechanism in case of dispute.

Consumer Policy

Forfás provided research and administrative support to the Consumer Strategy Group (CSG), which published its report in May 2005. Following the acceptance by Government of the proposal in the CSG report to establish a national consumer agency, the Minister for Enterprise, Trade and Employment appointed an Interim Board for the National Consumer Agency (NCA). Forfás will provide administrative and research support to the NCA until the necessary legislation is enacted to establish the Agency as a statutory body.

Good consumers make good businesses. Confident, sophisticated and well informed consumers have the potential to drive business performance and are an essential part of innovation driven economies.



Pictured launching the National Consumer Rights Card were Mr Micheál Martin TD, Minister for Enterprise, Trade & Employment and Ms. Ann Fitzgerald, Executive Chairperson, The National Consumer Agency.

Established in 2004, the CSG was set up to advise and make recommendations on the development of a national consumer policy strategy. The Group's report contained a comprehensive set of recommendations covering regulatory and institutional change. Entitled *Making Consumers Count*, the report identified the key components of consumer policy, reviewed experience to date and the approach taken in other countries, compared prices in Ireland with those in other euro zone countries for a wide range of branded goods, analysed key sectors and the findings of surveys on consumer awareness and assessed the existing systems of redress available to consumers.

The main recommendations of the report include:

- The establishment of a national consumer agency to provide a range of services to consumers and help in their empowerment; and
- The abolition of the Groceries Order.

The establishment of a national consumer agency was accepted by Government, and Forfás will provide a secretariat to the Interim Board of the National Consumer Agency until legislation is enacted for its establishment as a full statutory body. A high level inter departmental group, to review the other recommendations contained in the CSG report and to advise the Government accordingly was also established.

Minister Martin instituted a process of consultation on the abolition of the Groceries Order. The NCA prepared a submission recommending the abolition of the Order and conducted a public awareness campaign informing consumers on the Order. In October 2005 the Government announced the decision to abolish the Groceries Order, as advocated by the CSG. It was abolished in March 2006.

The NCA has also conducted a major awareness campaign on consumer rights which included:

- A TV and print advertising campaign;
- The provision of a call centre for consumers to access information on their rights; and
- The distribution of a consumer rights card to all households nationwide.

2

Advancing Coherent and Dynamic Enterprise Development Policies

Each of Ireland's enterprise development agencies – IDA Ireland, Enterprise Ireland, Shannon Development, Údarás na Gaeltachta, Science Foundation Ireland, FÁS and the County Enterprise Boards – focuses on different aspects of enterprise promotion in Ireland. State supports for enterprise development are most effective when they are complementary and consistent with an overarching vision of enterprise development and a strategy to achieve it.

During 2005 Forfás sought to work with the Department of Enterprise, Trade and Employment (DETE) and our sister agencies to deliver coherence and responsiveness in Ireland's enterprise development policies. We also worked to ensure the quality and timeliness of the intelligence being received by the DETE on enterprise performance, and we provided advice on Ireland's enterprise strategy needs to ensure that Ireland can respond to emerging challenges and opportunities.

Small Business Forum

Forfás was requested by the DETE to provide administrative and research support to the Small Business Forum. The industry led Forum was convened by Mr Micheál Martin, T.D. Minister for Enterprise, Trade and Employment (DETE), to consider the current environment for small business in Ireland and to advise on the adequacy and appropriateness of public policy in the context of that environment, including interventions by the enterprise development agencies.

During 2005, Forfás coordinated and prepared input papers to each of the meetings of the Forum and initiated a range of internal research projects to inform discussion themes identified by the Forum. In addition, Forfás coordinated a public consultation process and provided administrative and facilitation support to a number of public outreach sessions held in Dublin, Cork, Galway and Carlow.

The report of the Small Business Forum, *Small Business is Big Business* was published in May 2006 and the key recommendations can be grouped under the following headings:

- **A better environment for all small business:**
 - Better regulation;
 - A balanced approach to Local Authority charges;
 - Enhanced access to information and advice; and
 - An annual publication of small business data.

- **Stimulating growth aspiration and potential by:**
 - Broadening access to finance;
 - Advancing management capability;
 - Leveraging ICT; and
 - Stimulating research, development and innovation.
- **Inspire entrepreneurial culture:**
 - A national entrepreneurship policy.

At the launch of the report Minister Martin announced that he is seeking to implement the recommendations that fall within the remit of the DETE including:

- Raising the standard of management capability through the establishment of a Management Development Council;
- Providing Knowledge Acquisition Grants;
- Making Innovation Vouchers available to small business;
- Providing funding to allow small businesses avail of an ICT Audit;
- Developing a National Entrepreneurship Policy;
- Developing networks of Business Angels; and
- Compiling and publishing comprehensive data on the small business sector.



Pictured at the launch of the Report of the Small Business Forum, *Small Business is Big Business* with Mr Micheál Martin TD, Minister for Enterprise, Trade and Employment were the Forum members and the Secretariat to the Forum (from left to right) Ms Rosemary Sexton, Enterprise Ireland, Mr Michael Johnson, Dun Laoghaire/Rathdown Enterprise Board, Mr Daniel Hickey, ISME, Mr Brian Cogan, Forfás, Ms Jacqui McNabb, Chambers Ireland, Prof. Frank Roche, UCD, Mr James O'Sullivan, M&P O'Sullivan Ltd, Mr Joe Macri, Microsoft Ireland and Chairperson of the Small Business Forum, Mr Conor O'Mahony, DETE, Ms Rita Shah, Shabra Plastics & Packaging, Ms Breda O'Driscoll, Ultrasonic Scientific Ltd. Ms Marie Bourke, Forfás and Mr Des Cummins, Small Firms Association.

He also announced that he would work closely with his Government colleagues to look at an implementation path for the remaining recommendations. To ensure a seamless implementation process the Small Business Forum members will remain in place to review implementation of the Report's recommendations and progress in achieving the core objectives of the Report.

Productivity

In 2005 Forfás was requested by the DETE to lead research into Ireland's productivity performance and the policies that are important to drive future productivity growth.

To advance this work, Forfás organised a conference on productivity and public policy in October 2005. The aim of the conference was to investigate how productivity analysis has helped policy makers in other countries and how policies can influence productivity improvements.

Following the conference, Forfás developed a number of themes on which to base a programme of productivity related research for 2006 in the following areas:

- ❑ Sectoral and firm level productivity;
- ❑ Public sector productivity;
- ❑ The role of ICT in driving productivity growth;
- ❑ Review of existing data and what new data is required to assess Ireland's productivity performance;
- ❑ The role of R&D in driving productivity growth; and
- ❑ How productivity analysis can be used to evaluate public policy.

Gateways Study

In response to the recommendations of the ESG Report, *Ahead of the Curve* and the subsequent Action Plan, Forfás and the Department of the Environment, Heritage and Local Government jointly undertook a study to identify the actions required to further stimulate the development of the gateway towns identified in the National Spatial Strategy as key drivers of regional economic growth.

The *National Spatial Strategy* (NSS), launched in late 2002, identified nine key locations as gateways to the regions. The successful development of these gateway towns is crucial to provide each region with locations of scale that possess the population, skills, business services, infrastructure and enterprise base necessary to optimise the competitiveness of the indigenous sector and to attract foreign direct investment.

The joint study provides a snapshot of each of the gateways across the range of factors, including:

- ❑ Physical infrastructure;
- ❑ Enterprise and economic base;
- ❑ Labour force, skills and innovation;
- ❑ Quality of life factors and local capacity and leadership; and
- ❑ Short-term investment priorities.

The report states that while there are plans and strategies in place at both national and local level and significant progress has already been made in addressing infrastructure deficits, there are two recurring processes that need to be improved if we are to fully realise the potential of the gateways as economic drivers:

- ❑ **Budgetary prioritisation and funding availability for the gateways.**
Each of the gateways faces significant challenges in terms of funding the required scale of investment in areas such as urban renewal, non-national roads, cultural facilities and marketing and branding. Development of the gateways requires funding commitments, at both local and national levels, to deliver the prioritised investments identified.
- ❑ **Coordination of gateway planning and investment within and between the local and national levels.**
The development of the gateways requires clear and dynamic leadership and the coordination of a wide number of stakeholders at local, regional and national levels. These levels need to have a shared vision for the gateway and agreement on what coordinated investments and other steps are needed to get there.

Regional Aid Guidelines 2007 – 2013

Forfás, in conjunction with IDA Ireland and Enterprise Ireland, provided research and support to the DETE in formulating its negotiating position on the Regional Aid Guidelines with the European Commission.

Regional aid is used in Ireland to support investment and job creation. The European Commission and member states have been engaged in a process of negotiations on the Regional Aid Guidelines for the Union for the period 2007-2013 for the past 18 months.

The key objectives of the Commission are to reduce the levels of state aid across the EU, to focus state aid on disadvantaged regions and to avoid distortion of competition within the internal market. Ireland's ability to continue to provide regional aid at current levels has been impacted by the enlargement of the EU and by Ireland's increased GNP per capita arising from its recent economic success.

The Commission adopted the 2007-2013 Regional Aid Guidelines in December 2005. The key implications for enterprise policy in Ireland are as follows:

Large Enterprises (250+ employees)

- ❑ The maximum level of aid to large enterprises in the Border, Midlands and West (BMW) region will be reduced on a phased basis from the current ceiling of 40 percent to 30 percent in 2007, then to 15 percent in 2011.
- ❑ Part of the Southern and Eastern Region (Dublin and surrounding counties) will no longer be entitled to investment aid after 2006. Other areas, not yet designated, will remain eligible for investment aid only until the end of 2008, during which time the maximum aid rate for large companies in these areas will be 10 percent.

Medium Size Enterprises (50-250 employees)

- ❑ The maximum level of aid to medium sized enterprises in the BMW region will be reduced on a phased basis from the current ceiling of 55 percent to 40 percent in 2007, then to 25 percent from 2011.
- ❑ In the Southern and Eastern Region, the maximum level of aid to medium sized enterprises will fall from the current level of 30 percent to 20 percent in those areas which retain entitlement to investment aid.

Small Enterprises (<50 employees)

- ❑ The maximum level of aid to small enterprises in the BMW region will be reduced on a phased basis. The maximum aid rates for such companies will fall from the current ceiling of 55 percent to 50 percent in 2007, then to 35 percent from 2011.
- ❑ In the Southern and Eastern Region, the maximum level of aid to small enterprises will remain at 30 percent in those areas which retain entitlement to investment aid.

Consultations are ongoing with respect to environmental state aids and state aids for R&D and innovation. Forfás continues to work closely with the DETE and the development agencies

Environmental Supports and Incentives for Enterprise

Forfás conducted a study into best practice where environmental aid and incentives are used to promote enterprise development.

Environmental issues have come increasingly to the fore in the development of enterprise policy in Ireland over the past decade. While enterprise must comply with a growing range of environmental regulations and costs, there are also opportunities for gains in competitiveness from the introduction of new products and processes, improved efficiency in resource utilisation and enhanced brand image, which good environmental practices can deliver.

Compared with other EU countries, environmental aid is currently used to a negligible extent in Ireland. For example in Denmark, it represents almost 45 percent of all State Aid to enterprise, delivered in the form of both grant aid and fiscal incentives. Across the EU-15, the average level of aid granted for environmental objectives is 18 percent of total State Aid. In Ireland, only 2.6 percent of total State Aid was for environmental objectives.

This study assessed best practice where environmental aid and incentives are used to promote enterprise development, and outlined the characteristics of successful schemes in a number of leading EU countries. Based on the outputs of this study, which identified a number of programmes that might be relevant to the Irish context, the enterprise development and environmental agencies will review the potential for enhancing existing environmental programmes, and developing new schemes that will support enterprise development.

Pre-Budget Submission

In its Budget 2006 submission to the DETE, Forfás called for the introduction of new measures relating to the promotion of innovation and research and development among firms in Ireland including:

- Extending the base year of 2003 for calculation of incremental R&D under the R&D Tax Credit beyond its current roll-over date of end 2006, for a further four years to 2010.
- Supporting investment in and management of intellectual property in Ireland, extending capital allowances to allow deductions for investment in capital assets (eight year straight line write off) to include
 - Intangible assets;
 - Making such capital allowances available where intangible assets are acquired from third parties and;
 - Allowing indefinite carry-forward of any such unused allowances.
- Retention of the Patent Royalty Exemption, in advance of a comprehensive cost/benefit analysis of the scheme once 2004 Corporation Tax returns are available. As an interim precaution against potential abuses of this exemption, validation of short term patents through appropriate searches and qualifying criteria for the exemption should be required.

Internet Data Centres

A study was jointly undertaken by Forfás and IDA Ireland to review key developments in the IDC sector both internationally and in Ireland.

Internet Data Centres (IDCs) are advanced energy intensive facilities with high-speed connections to the internet backbone. They allow telecommunications carriers to interconnect and other IT intensive companies (e.g. internet service providers) to store and exchange data. IDCs form a critical part of the value chain of the IT services industry, as they are necessary to attract and develop higher value IT activities which are being increasingly consolidated (and outsourced) by companies. The study found that:

- Global market demand is developing and excess capacity is starting to be utilised. Market capacity utilisation in Ireland stands at 43 percent. While there is not an immediate need for additional data centre capacity, investment decisions will need to be addressed due to the substantial amount of time required in planning for (e.g. electricity infrastructure) and building IDC facilities.
- The provision of IDCs in locations outside of Dublin would enhance the proposition of the regions for a wide range of agency supported data-intensive industries.
- Most IDC operators are endeavouring to transition towards higher value added managed services, which require a more complex set of skills and capabilities in areas such as marketing, law and business and systems operations.

In terms of maintaining a competitive business environment, two key issues were raised:

- ❑ **Electricity:** in terms of cost and security of supply. Forfás continues to undertake research and benchmarking in this area and to provide inputs to the development of a national energy strategy.
- ❑ **Telecommunications:** Ireland currently offers the lowest international leased line costs in the OECD. Forfás recommends the rapid implementation of the Enterprise Strategy Group recommendation to develop a single national rate for backbone access (over state owned networks) and promoting the deployment of broadband access to give Irish companies the capability of availing of managed service offerings.

Implementation of ebusiness Strategy

During 2005 Forfás provided the DETE with research support on a number of topics arising from the publication of its ebusiness strategy.

A project group led by the DETE and comprising representatives of the development agencies and Enterprise Boards published an ebusiness strategy in April 2005, designed to encourage and assist SMEs, including micro-enterprises, to use information and communication technologies (ICTs) to optimise their competitive advantage.

Following publication of the Strategy, the working group continued to monitor progress and to undertake further research to better understand key elements of the ebusiness environment. In particular Forfás provided research to the DETE on the following topics:

- ❑ The precise nature of the barriers to online trading cited by enterprises;
- ❑ An assessment of the potential to leverage the opportunities and mitigate the threats posed by public sector eprocurement; and
- ❑ The establishment of targets for ICT adoption and mechanisms for the monitoring of such targets.

A progress report was presented to the Minister for Enterprise, Trade and Employment in April 2006. The findings of the group indicate that although significant progress is being made in terms of providing supports to SMEs, there remain a number of key challenges that need to be proactively addressed. In particular relating to awareness, training and eprocurement:

Awareness

Despite the fact that a significant number of guides have been produced to inform business of the advantages of ICT, awareness remains relatively low amongst SMEs. The objective going forward is to leverage work already undertaken; to increase coordination in the way in which state funded ebusiness related material is developed and disseminated; to make access to all related information easy and to ensure that the relevant advisory bodies are kept up-to-date with current information.

Training

A key issue is the dearth of training and education courses that address the need of the non-technological manager, and that provide the level of understanding and awareness of the strategic importance of ICTs to a company's competitiveness and productivity. Where such courses are available, their direct relevance, cost effectiveness, ease of access and time required to undertake them are critical to their success.

Eprocurement

Recommendations focus on reducing the administration burden for SMEs in responding to e-tenders, enhancement of the e-tenders website to facilitate joint bids by small enterprises, and the provision of workshops and seminars to share experiences and advice.

Open Source Software

As Ireland is a key location for software development internationally, Forfás commissioned an analysis of the opportunities and implications of open source software (OSS).

Open Source Software (OSS) programs are programs whose licenses give users the freedom to run the program for any purpose, to study and modify the program and to redistribute copies of either the original or modified program freely. There is a movement towards increasing use of OSS at the global level, partly because it lowers the barriers to entry for using and teaching software skills and partly because it is seen to increase competition in the marketplace and to stimulate innovation.

The report, to be published in the second half of 2006, will:

- Provide guidelines to SMEs and to higher education institutions (HEIs) undertaking software development within the OSS environment;
- Assist the agencies in determining how value for money may be achieved from investment in R&D in OSS based projects;
- Outline the factors that need to be taken into consideration at the early stages of development to ensure a full understanding of the extent of obligations to the community when using open source; and
- Outline licensing models and case studies of workable revenue models to help inform developers.

Patent Royalty Exemption

A review was announced by the Minister for Finance in Budget 2005 into a range of tax incentive schemes, including the Patent Royalty Exemption. To inform the review process, Forfás undertook a survey of selected enterprise development agency clients and potential users of this exemption, to ascertain the extent and nature of its use and to inform a cost benefit analysis.

Forfás recommended that it would be inappropriate to abolish or substantially limit the scope of the Patent Royalty Exemption in its present form. This view was reached on the basis that incomplete data and a limited survey response rendered impossible a formal cost benefit analysis at that point. Such an analysis should be carried out once 2004 Revenue statistics on usage of the Exemption become available. As an interim precaution to guard against exploitation of the exemption by patents lacking sufficient innovation and substance, Forfás suggested a change in Revenue criteria, requiring that qualifying Short Term Patents show completion of at least one search validated by the Patents Office to support the innovative nature of the underlying process or product.

Employee Financial Participation

During 2005, Forfás conducted a review of Irish provisions in the area of Employee Financial Participation (EFP), with the intention of identifying measures to extend the usage of EFP among firms in Ireland, particularly small and medium sized (SMEs) firms.

This work was initiated as a response to a recommendation of the Enterprise Strategy Group that the concept of gainsharing should be investigated as a potential means of stimulating productivity among firms in Ireland. The ESRI conducted a desk review of existing National and International data and primary research on behalf of Forfás. Forfás will publish the report in 2006 which makes recommendations under the following headings:

- Actions to highlight the benefits and awareness of existing EFP;
- Significant changes to the Revenue approved profit sharing schemes for small non-quoted companies;
- Steps to ease the administrative burden of EFP schemes; and
- Initiatives to examine the merits of gain-sharing.

Enterprise Areas Certification

Forfás, in conjunction with the enterprise development agencies, recommends projects for consideration by the Minister for Enterprise, Trade and Employment under the Enterprise Areas Scheme.

The Enterprise Areas Scheme was introduced in the Finance Act 1995 to provide incentives to undertakings locating in disadvantaged areas in Dublin, Cork and Galway in order to promote economic development in those areas. Under the terms of the Finance Acts, Forfás, in conjunction with Enterprise Ireland, IDA Ireland and Udarás na Gaeltachta (as appropriate) recommends projects to the Minister for Enterprise Trade and Employment, who may issue a certificate entitling the companies concerned to benefit from tax and other incentives. Recommendations are made in accordance with guidelines laid down by the Minister.

Four new firms were approved for Enterprise Areas certification in 2005, bringing the total number of certified enterprises to 112.

3

Human Capital Development to Support an Innovation Driven Economy

Ireland's education system – primary, secondary and tertiary – played a fundamental role in the country's economic transformation over the last three decades. Public investment in higher education from the early 1980s produced a well educated workforce with technical and business qualifications that supported Ireland's manufacturing and traded services boom of the 1990s.

In the face of global competition and relatively high domestic costs, many businesses in Ireland are still caught in a trap where they require ever higher skills and struggle to achieve higher levels of value added. In the future we will need a workforce with higher skills levels, operating in a dynamic and flexible labour market. More and different skills will be required to generate innovative business ideas and fully exploit technological change. High performing economies and societies will increasingly rely on a culture of continuous learning and technology adoption. A process of modernisation is needed in Ireland's education and training systems to prepare our people for the economy of the future. We must commit to both adequate investment and world leading excellence in our education, and demonstrate these commitments across the entire education system from primary to fourth level.

Among the ways in which Forfás focused on this priority policy area during 2005 was through its administrative and research support to the Expert Group on Future Skills Needs (EGFSN) and its management of the Discover Science and Engineering Programme.

Skills Needs in the Irish Economy and the Role of Migration

In October 2005, Forfás and the Expert Group on Future Skills Needs (EGFSN) published *Skills Needs of the Irish Economy: The Role of Migration*. The report was launched and endorsed by the Minister for Enterprise Trade and Employment, Mr Micheál Martin, TD.

In 2005, Minister Martin published the Employment Permits Bill 2005. The Bill includes a provision for more managed economic migration into Ireland through ministerial regulations influenced by the prevailing economic climate. *Skills Needs of the Irish Economy: the Role of Migration* sets out the options for such a managed system.

The report also outlines the sectors and occupations where there are labour and skill shortages.

Key conclusions from the report include:

- ▣ Ireland's skills and labour needs will be met primarily from within the European Economic Area (EEA);
- ▣ There will remain a need for some high skilled migration from outside the EU; and
- ▣ A dual system of green cards and work permits was recommended to regulate migration.

National Skills Strategy Research

In September 2005, the Expert Group on Future Skills Needs initiated research to underpin the development of a National Skills Strategy at the request of the Department of Enterprise, Trade and Employment (DETE).

The research will examine the skills requirements of the economy to 2020, based on a vision of a knowledge based, innovation driven, high growth, participative and inclusive economy. This work on behalf of the EGFSN will be completed during 2006.

Languages and Enterprise

In June 2005, the EGFSN launched its report, *Languages and Enterprises*. A study was commissioned to investigate the importance of foreign languages for the future development of the Irish enterprise sector.

Key findings of the report include:

- Foreign language skills will be important to the successful future development of enterprise in Ireland, with any deficit in this area resulting in firms failing to achieve full potential.
- There was little evidence of a current deficit in the availability of language skills, but the report highlighted the prospective future benefits for exports and foreign direct investment, flowing from an increased emphasis on language skills by the State and enterprise.
- The profile of languages currently being studied in the public education system has arisen in an ad hoc manner and owes more to historical factors than any analysis of the needs of learners and the State.

In-Employment Education and Training in Ireland

The EGFSN published its report, *In-Employment Education and Training in Ireland*, in April 2005.

Those already in the workforce will play an increasingly critical role in meeting the future skills needs of the Irish economy. This study, published in April 2005, focuses on continuing vocational education and training (CVET) of those at work and provides analysis of expenditure, participation and access, providers, certification, educational attainment of those at work and comparative indicators of CVET. The study also covers both public and private expenditure, provides an international comparison of in-employment education and training and indicates where gaps exist in the current availability of relevant data.

The report confirms that participation is strongly related to previous educational attainment in all forms of continuing education and training – the higher the level of educational attainment the greater the rate of participation in vocational education and training. The report provides base data for some aspects of the National Skills Strategy Research.

Skills Requirement of the International Digital Content Industry

At the request of the EGFSN, Forfás identified emerging and future skills requirements of leading international firms, across seven sub-sectors of the digital content industry, namely, digital film; digital TV; computer generated animation/special effects; emusic; wireless/mobile; and elearning. The study looked at occupations spanning artistic/creative roles, technical roles and project management within these sub-sectors.

Among the key findings of the study were:

- Strong software programming skills across sub-sectors and increased technical proficiency across occupational roles are important because of the increasing pervasiveness of technology at all levels within the industry.
- Other skills growing in importance include non-technical skills such as management, IPR, marketing, soft skills etc.
- In relation to the current education provision, the study identified issues in relation to the scope of courses currently available in Ireland and the need for better processes for developing and updating courses.

Career Guidance Information Dissemination

During 2005, the EGFSN in cooperation with the National Guidance Forum, commenced a study to examine strategies for the dissemination of skills and labour market information.

The study looked at the availability of information to promote lifelong learning and the provision of advice on future labour market needs through guidance structures.

The study outlined that:

- While Ireland is well supplied in terms of the content and availability of careers information, labour market information tends to be incidental to the courses and careers information provided.
- The particular requirements of more mature users are less well catered for.
- Awareness of the various websites available for career guidance was found to be very low among those surveyed.



Pictured at the launch of the EGFSN/Forfás report *Skills Needs in the Irish Economy: The Role of Migration* were Mr Micheál Martin TD, Minister for Enterprise, Trade & Employment and Ms Anne Heraty, Chairperson, Expert Group on Future Skills Needs.

Regional Skills Gap in Ireland

The EGFSN carried out an assessment of the regional variations in the supply and demand for skills in a number of important sectors to 2010.

The report examined the clustering effect in six sectors (ICT software, ICT hardware, pharmaceuticals/ biotechnology, engineering, medical devices and internationally traded services) on a regional basis and the demand and supply of skills within those regions. The outputs of this research will be of benefit to regional policy development in relation to skills and will also have relevance to work on the National Workplace Strategy. This report was published in May 2006.

The study found that:

- In view of Ireland's small geographical size a key role for the State in addressing regional labour market imbalances should be to facilitate normal labour market adjustments such as commuting and inter-regional migration through provision of transport infrastructure and by addressing planning issues.
- Regional interventions, through the higher education institutions, can play an important role in spurring regional innovation and entrepreneurship by infusing higher skills into a region.

Submissions by the Expert Group on Future Skills Needs

During 2005, the Expert Group made a submission to the Department of Education and Science (DES) outlining its observations on the *OECD Review of Higher Education in Ireland Examiners Report, Chapter 7 Research and R&D and Innovation*.

In its submission, the EGFSN agrees with the principle of increased investment in research and R&D. It believes that such investment should be made within the context of a clear national plan which ensures that the appropriate skills are available.

It also states that building research capability of staff in higher education institutions through the upskilling of existing staff and the addition of new researchers needs to go hand-in-hand with increased funding.

National Workplace of the Future

During 2005 Forfás contributed to the work on the implementation of the National Workplace Strategy.

Forfás is represented on the High Level Implementation Group (Chaired by Minister Tony Killeen) for the *National Workplace Strategy*. Forfás has been identified as having a role in implementation of a number of recommendations in the *National Workplace Strategy*. Recommendations span the areas of skills, employee financial participation, benchmarking and workplace innovation. The Group requested that Forfás prepare action plans in consultation with appropriate agencies and facilitate their implementation. The development of these detailed action plans continues into 2006.

Forfás submission to NQAI on European Qualifications Framework

In November 2005, Forfás took part in the consultation process on the European Commission proposal for a European Qualifications Framework (EQF) for Lifelong Learning. Forfás submitted a joint response with IDA Ireland and Enterprise Ireland.

Forfás welcomes and supports the work of the National Qualifications Authority of Ireland (NQAI) which promotes the use of the National Framework of Qualifications (NFQ). The overarching objectives of the EQF proposed in the submission are further facilitating and promoting life-long learning and enhancing the flexibility and responsiveness of the European labour market through increased mobility of workers.

Forfás views the development of the EQF as an important step in implementing both the European Higher Education Area and the European Research Area which should enhance the competitiveness of the EU and advance the Lisbon agenda.

Discover Science and Engineering

Ireland's future growth and development will increasingly depend on the scientific literacy of our society. Discover Science and Engineering (DSE) is an integrated national science awareness programme managed by Forfás on behalf of the DETE Office of Science and Technology. The programme aims to both inspire and support current and future generations to pursue careers in science and technology.

Discover Science and Engineering was developed in association with the Department of Education and Science, FÁS and Engineers Ireland and in consultation with many groups involved in science promotion nationwide. DSE brings together and enhances a number of pre-existing science awareness activities and was established in response to a recommendation by the Task Force on Physical Sciences.

DSE's overall objectives are to increase the number of students studying the physical sciences, to promote a positive attitude to careers in science, engineering and technology and to foster a greater public understanding of science and engineering and their value to Irish society.

The major initiatives of DSE have helped to lay substantial foundations and form strong communication networks throughout the country, developing the programme and enriching our engagement with science. For example the Discover Primary Science Programme will be offered to all national primary schools (3,300) by the end of 2007. Thus, approximately 4,000 participant teachers will in turn involve, through their teaching, approximately 100,000 pupils per annum in 'hands-on' science and engineering activities.

The DSE budget has grown from €1.6 million in 2004 to €2 million in 2005 reflecting the Government's commitment to support the development of Ireland as a knowledge economy. Key DSE initiatives during 2005 were:

Science Week Ireland

This key initiative in the DSE programme co-ordinates nationwide events, provides science road shows at selected venues around the country and promote Science Week nationwide. During 2005, over 350 Science Week Ireland activities took place in schools, colleges, universities, scientific organisations, businesses and public libraries. Science Week Ireland aims to provide a diverse, regionally spread, informative and entertaining focal point for science promotion in order to stimulate public interest.

A dedicated website, www.scienceweek.ie, provides resources, such as a downloadable guide with advice on how to get involved. The site allows people to register events, order official Science Week Ireland merchandise and keep up to date with what's happening throughout the week with the on-line calendar of events.

Pictured are three budding young scientists at the Awards of Science Excellence in Limerick.



Discover Primary Science

The Discover Primary Science Programme is DSE's key activity in support of Government policy in the area of primary science. Designed to introduce students to science in a fun and interactive way, Discover Primary Science supports teachers in delivering the SESE (Social, Environmental and Scientific Education) curriculum. Hands-on training sessions are provided for all teachers taking part, while a range of resources are supplied to participating classes.

The dedicated site, www.primaryscience.ie, provides resources to both students and teachers alike and activities are available in both English and Irish.

The Discover Primary Science Programme is currently in its second academic year, following an extremely successful first year pilot (approximately 550 schools participating). The take up in the second year (approximately 600 schools) will involve around 1,300 teachers throughout the country who in turn will be typically teaching 32,000 pupils each year. Ultimately this programme should have approximately 4,000 participant teachers at the end of 2007. The success of the programme reflects the continued support from the DETE and the Department of Education and Science. Regional education centres have played a vital role in the facilitation of the Induction Days for teachers. Their trainers offer continued support to the implementation of the Programme.

Schools registered for Discover Primary Science are encouraged to apply for an Award of Science Excellence and to work to retain it annually thereafter. 108 schools were successful in achieving the Award in the inaugural year and were presented with plaques at regional ceremonies.

Television

SCOPE is a successful science entertainment programme which is sponsored by DSE. The first series began in 2003 on RTÉ 2 and the third series commenced in January 2006. The programme specifically targets post-primary students and their parents in raising awareness about science. Using popular teenage interests (music, fashion, sport) it explores science and engineering in everyday life and also features young professionals, all science or engineering graduates, describing their jobs.

The third series of SCOPE, broadcast in early 2006, had an average viewership of 78,167 per episode, up 12 percent on the average figure of 69,500 viewers for the second series broadcast in 2005.

BT Young Scientist & Technology Exhibition

In 2005, Discover Science and Engineering became a Gold Partner for the 2006 BT Young Scientist & Technology Exhibition. The DSE stand, on the theme of robots, was shared with the Engineers Ireland programme, STEPS to Engineering, and included a number of interactive attractions for children and adults alike. The DSE Programme also sponsored the very popular Theatre of Science at the exhibition.

The BT Young Scientist & Technology Exhibition continues to grow each year in popularity and reputation, showcasing some of the finest work that the young scientific minds of Ireland have to offer.

4

Capturing the Economic Benefits from Public Investment in Research

To prosper, Irish companies need to expand their involvement in international markets through the development of innovative new products, services and technologies. Ireland's technological innovation performance – our ability to turn research and ideas, from Ireland and overseas, into profitable business opportunities is improving, but is still limited compared with other advanced economies. Ireland does not yet have enough companies, either foreign or indigenous, engaged in significant levels of scientific or engineering R&D. While Ireland has experienced a step change in public investment in research in the last five years our research system is still at an early stage of development compared with other EU countries such as Finland or Denmark.

Growing research and technological innovation in enterprise will be key to achieving higher levels of productivity. The State needs to ensure its increased support for research is framed in a way that supports the ability of Irish enterprises to develop innovative new products and services and thereby earns a high return to the Irish tax payer.

During 2005 Forfás worked with various stakeholders including the Department of Enterprise, Trade and Employment (DETE) and the Advisory Council for Science, Technology and Innovation (the Science Council) and the Higher Education Authority on policy issues which will influence Ireland's ability to translate our science capabilities into economic and social benefit for Ireland.

Strategy for Science, Technology and Innovation 2006 - 2013

Forfás provided research and technical support to the Inter-Departmental Committee on Science, Technology and Innovation, Government Departments, and the Research Funders' Group chaired by the Chief Science Adviser, in the development of strategies, policy and investment requirements for the period 2007 to 2013.

In 2004, Forfás prepared and published, under the auspices of the Inter-Departmental Committee on Science, Technology and Innovation (IDC) the R&D Action Plan, *Building Ireland's Knowledge Economy – The Irish Action Plan for Promoting Investment in R&D to 2010*. The Action Plan set out:

- ▣ A vision for Ireland as an innovation driven economy;
- ▣ Appropriate targets for Ireland's R&D performance and human capital development over the short and medium term; and
- ▣ Key policy requirements.

The Action Plan was formally endorsed by Cabinet in January 2005 and it requested the development of strategies required to give effect to and implement the Action Plan. The IDC undertook this work during 2005. Forfás provided research and technical support to the IDC, Government Departments and the Research Funders' Group, chaired by the Chief Science Adviser, in the development of required strategies, policy and investment requirements for the period 2007 to 2013.

This work culminated in the adoption by Government in early 2006 of the Strategy for STI, 2006-2013. The Strategy provides the overall framework for national STI policy and investment over the next seven years. The key objectives are to:

- ▣ Accelerate the rate of human capital development in the country, through increased investment in research by teams of excellence that will produce the skills and graduates required for the enterprise sector of the future and for economic and social well-being;
- ▣ Proactively support and encourage much greater commercialisation of the output of research through more timely and efficient technology transfer to enterprise and a higher level of technology based start-up enterprises;

- Increase significantly the capacity to absorb technology and the R&D performance of enterprises in Ireland, so as to secure the current employment base, create new jobs and wealth and increase productivity. This can be done through increasing in-company R&D and promoting greater links between the enterprise sector and the science base in academia; and
- Internationalise further Ireland's innovation system through the continued attraction of excellent researchers and talent to Ireland, the attraction of mobile enterprise R&D and effective linkages of researchers and companies in Ireland with technology networks, centres of excellence and scientific infrastructures on the island of Ireland, in Europe, the US and elsewhere.

A number of tasks relating to the implementation of the Strategy over the coming years will need to be addressed by Forfás. These include:

- Maintaining coherence among the enterprise development agencies in R&D promotion;
- Advising the DETE in relation to the policy requirements in the Strategy; and
- Monitoring and evaluating progress on the objectives and targets.

Assessment of National Investment Options for Nanotechnology

Forfás is currently undertaking a **Technology Assessment (TA) exercise to identify investment and policy options for the successful development and application of nanotechnology in Ireland. The NanoIreland project is being undertaken on behalf of the DETE.**

Nanotechnology is the science of the very small and is a collective term involving the manipulation of atoms at the scale of a nanometre – one billionth of a metre, or about 80,000 times smaller than the width of a human hair.

The Global Promise of Nanotechnology

Nanotechnology is a generic technology which will lead to new materials and components with new properties. Viewed by some as the next industrial revolution, nanotechnology promises lighter and stronger materials, energy-efficient manufacturing, advances in medical monitoring and bioremediation and much more powerful computers. Consequently, it has the potential to provide many sectors of the Irish economy with opportunities to enhance competitiveness by developing new and improved products and processes in sectors such as:

- Pharmaceuticals and medical devices;
- Energy;
- Consumer goods;
- Automotive components;
- Aerospace; and
- Environment.

Many governments worldwide are making nanotechnology a priority and investing heavily in new research. The business community is also investing in nanotechnology, with new companies beginning to emerge almost as rapidly as internet and biotechnology companies in the 1990s. The National Science Foundation in the US has predicted that nanotechnology could become a \$1 trillion global market by 2015.

Forfás has established a Task Force, chaired by Mr. Mike Devane, Vice President and Managing Director of Lucent Technologies, to oversee the TA process. The TA process will enable Forfás to develop robust and fact based analysis on which coherent public and private policy and investment decisions can subsequently be based.

This project is being undertaken on an all-island basis and was launched in the first quarter 2005. Four panels have been established:

- **NanoBio**
Chair, Mr Brian MacCraith, National Centre for Sensor Research, DCU.
- **NanoElectronics**
Chair, Ms Helen Keelan, Intel.
- **NanoMaterials**
Chair, Mr Jim McLaughlin, University of Ulster, Jordanstown
- **Communications**
Chair, Mr Paul Breen, Élan.

Ireland is one of the first countries to take such a proactive, systematic, market-led and socially responsible approach to investigating the optimum national investment options for nanotechnology. Leading in this way should provide potential investors, public and private, with a sure knowledge of the Irish policy position on nanotechnology thereby offering a more secure framework for investment decisions.

Advisory Council for Science, Technology and Innovation

Forfás provides research and administrative support to the new Advisory Council for Science, Technology and Innovation (Science Council).

The Science Council is the Government's high-level advisory body on science, technology and innovation (STI) policy issues. It serves as the primary interface between stakeholders and policymakers in the STI arena. Established by Government in April 2005 under Forfás legislation, it succeeds the Irish Council for Science Technology and Innovation (ICSTI).

The Council operates within the context of the arrangements put in place by Government in June 2004 for the coordination and governance of STI matters, which include the Cabinet Committee and the Inter-Departmental Committee for STI and the Office of the Chief Science Adviser.

The Council's Work Programme was approved by the Inter-Departmental Committee (IDC) on STI in September 2005 and includes the following priority areas:

- Advising the Inter-Departmental Committee on STI on issues relating to the formulation of the national Strategy for STI 2006-2013. This strategy will implement the Government's R&D Action Plan, *Building Ireland's Knowledge Economy – The Irish Action Plan to Promote Investment in R&D to 2010* (Forfás, August 2004).
- Enterprise Higher Education Collaboration - examining issues and policy requirements to promote greater enterprise-higher education collaboration.
- Health Research – developing a vision and strategy to drive a step change in the level, quality and commercialisation of health research leading to enhanced patient care and increased economic activity and wealth creation.

- Biotechnology – identifying where biotechnology is enabling new opportunities for growth and employment and the areas where Ireland can develop competitive advantage.

National Code of Practice for Managing and Commercialising Research from Collaborative Public-Private Research

Forfás supported the preparation and publication of the *National Code of Practice for Managing and Commercialising Intellectual Property (IP) from Public-Private Collaborative Research* by the Science Council in 2005.

The Code of Practice, published in November 2005, outlines the national policy on the management and commercialisation of intellectual property from collaborative research between enterprise and academic partners. This publication complements the *National Code of Practice for Managing and Commercialising Publicly funded Research* published by the Irish Council for Science, Technology and Innovation (ICSTI) in April 2004. It provides practical guidelines and an overarching framework under which parties to an IP agreement may negotiate.

The Code contributes to strengthening Ireland's international reputation as a location of choice for collaborative research by providing clarity, certainty and predictability for all parties in the negotiation of collaborative research projects regarding their respective rights and expectations in the management of IP. Templates for collaboration agreements for use by industry and PRO partners embarking on collaborative research projects were also developed.

Pictured launching the *National Code of Practice for Managing and Commercialising Intellectual Property (IP) from Public-Private Collaborative Research* were Dr Ena Prosser, Chair of the Science Council Task Force, Mr Micheál Martin TD, Minister for Enterprise, Trade & Employment and Ms Mary Cryan, Chairman, the Science Council.



Review of implementation of the National Code of Practice for Publicly Funded Research

The National Code of Practice for Managing Intellectual Property (IP) from Publicly Funded Research was published in April 2004. Monitoring the implementation of the Code of Practice is particularly important as the guidelines are voluntary. Forfás conducted an audit of IP policies in public research organisations (PROs), on behalf of the Science Council, 12 months following publication of the Code.

While good progress was being made in revising institutional policies, a number of key areas were identified that public research organisations need to incorporate in their institutional policies. These include:

- Upgrading IP performance in third level institutions requires that IP management and commercialisation be seen as a central part of the institution's mission and have equal standing alongside the traditional activities of teaching and basic research.
- The key to an IP policy is that it is clear, unambiguous and sets out the policy of the PRO in respect of all principles of the Code. All IP policies should therefore be revised in order to ensure they meet these criteria.

Strengthening Commercialisation Infrastructure for Research

During 2005 Forfás proposed an approach to increase the commercialisation of research in publicly funded research institutions.

Recent years have seen major increases in the public funding for research and development in Ireland. The commercialisation of intellectual property arising from this investment has the potential to bring wide ranging benefits to society as a whole. There is a need for a significant change in the resourcing and organisational arrangements for the commercialisation of research, commensurate with current and projected future levels of investment in research.

In this regard, Forfás developed an approach to ensure that adequate resources and expertise are made available to underpin a professional technology transfer function in Irish public research organisations (PROs).

It recommended two parallel strands to strengthen the commercialisation infrastructure in Irish PROs:

- A building up of the technology transfer offices within PROs; and
- The establishment of a centralised entity to provide specialist technology transfer support to all PROs. Resourcing is not just a matter of funding, but also of having experienced, professional and specialist expertise to negotiate with industry on technology transfer.

The approach formed the basis for input to the Strategy for Science, Technology and Innovation and is being incorporated by Enterprise Ireland in developing technology transfer support mechanisms between the higher education sector and industry.



Pictured at the launch of *Science Foundation Ireland: The First Years, Report of an International Evaluation Panel*, is Prof. Sir Richard Brook, Chairman of the International Evaluation Panel.

Evaluation of Science Foundation Ireland

In 2005 Forfás commissioned an independent evaluation of the performance and impact of Science Foundation Ireland (SFI). The report of the International Review Panel was published in December 2005.

SFI was established by the Government to undertake and support strategic research of worldclass status in key areas of scientific endeavour underpinning Ireland's enterprise strengths. It became operational in 2001.

The DETE, which funds SFI, asked Forfás to organise a review of the performance and impact of SFI to date. There is a full understanding that SFI is a long-term investment and that the early stage development of the organisation is critical. A small international review panel, chaired by Sir Richard Brook of the Leverhulme Trust in the UK, was assembled to undertake the task.

The report of the panel was publicly launched by Minister Martin in December 2005. Its major finding was that SFI, with the help of other funding agencies such as the Higher Education Authority, has been a most positive driving force for change in the Irish research system and has raised the international visibility of Ireland in research from the low level at which it was pre-2000. Impressive progress in a very short time was noted in the development of a strong research capability in biotechnology and in ICT. In particular, the SFI Centres for Science, Engineering and Technology have the potential to have a strong influence on the interaction between academic research and industry.

The four major recommendations of the panel were:

- ❑ SFI awards must continue to be made on the criterion of research excellence;
- ❑ It is essential for Government to continue to take a long-term, strategic view of funding for research;
- ❑ All research funding agencies must assume a shared responsibility for a coherent and coordinated approach to the development of the research system; and
- ❑ Relevant institutions should support the commercialisation of SFI funded research through an integrated system built on a foundation of realistic expectations.

EU Seventh Framework Programme Negotiations

Forfás provided policy advice to the Office of Science and Technology (OST) at the DETE on the European Commission's proposals for the Seventh EU Framework Programme for Research (FP7) which were the subject of political negotiation throughout 2005.

The Commission's proposals for FP7 were published in April 2005 (overall programme) and September 2005 (specific programmes) and were the subject of discussion by Ministers at the European Competitiveness Council throughout 2005. Based on a national consultation process which commenced in 2004, Forfás provided briefings to OST on Irish priorities for FP7. Ireland's main priorities can be summarised as follows:

- ❑ New initiatives (e.g. European Research Council) in FP7 should not be funded at the expense of the established pillars of the programme such as trans-national collaborative research and mobility actions;

- Special initiatives for SMEs, underpinned by a specific target for SME participation, should be incorporated into the design of the programme;
- While areas such as ICT, biotechnology and nanotechnology are priorities for European research, greater prominence should be given to natural resource areas such as food, agriculture, forestry and marine sciences in FP7.

With a budget of €48 billion over the period 2007 to 2013, the main structural elements of FP7 will comprise:

Cooperation	Collaborative research in thematic areas, Joint Technology Initiatives and coordination of national programmes
Ideas	Proposed initiative for funding excellence in basic research including proposed European Research Council (ERC)
People	The Marie Curie initiatives for training and mobility of researchers
Capacities	Mix of activities including support for research infrastructures, research for SMEs, Science in Society, International Cooperation
Other ring-fenced funding	Activities of Joint Research Centre, Euratom Framework Programme

On the basis of the negotiations to date, Ireland is satisfied that its priorities have been reasonably well reflected in the final design of the programme.

Irish Participation in the Sixth EU Framework Programme for Research

Forfás monitors the participation of Irish researchers in the EU Framework Programme and provides advice to the OST on the support available nationally to facilitate participation in the programme.

The current Framework Programme (FP6) involves a total budget of €19.5 billion for the period 2002 to 2006 with the principal aim of supporting enterprise development by encouraging trans-national collaborative research among academic and industry partners and facilitating researcher mobility across Europe through Marie Curie actions.

By the end of 2005, Irish researchers had secured €160 million or 1.1 percent of allocated funding with 80 percent of this funding going to higher education and other public research organisations. Irish academic groups and enterprises have been particularly successful in securing funding under the Marie Curie actions (2.8 percent of the allocated budget) and in certain collaborative research areas. In other parts of the programme, there is scope for increased participation from Ireland, especially in light of recent national investment to build research capacity.

At the request of the OST, Forfás commenced a study in 2005 to examine the support available nationally to facilitate and encourage researchers to take advantage of the opportunities afforded by the programme. The study involves consultation with users of the support service from both the academic and enterprise communities and an examination of the support provided in other European countries. Forfás will provide recommendations to OST in 2006 with a view to having any modifications to existing support structures in place well in advance of the first calls for proposals under FP7.

European Strategy Forum on Research Infrastructure

Forfás is participating in a European Strategy Forum on Research Infrastructure (ESFRI) exercise to produce a roadmap for research infrastructure investment for the next 15 to 20 years.

ESFRI was established in 2002 to provide a mechanism through which member states can discuss priorities for new large scale research infrastructures and upgrades to existing facilities. The aim of the Forum is to bring about a more coherent approach to the planning, construction and maintenance of specialised research infrastructures and to avoid unnecessary duplication in the construction of such facilities.

ESFRI embarked on a significant exercise in 2005 to create a roadmap for research infrastructure investment over the next 15 to 20 years. This will be the first such roadmap undertaken at a European level and will parallel similar exercises in the US and elsewhere. The roadmap will identify priorities for Europe which may be funded in the future using a mix of funding instruments, including the possibility of funding from Community sources.

Forfás is participating in the work of ESFRI and together with the OST and will seek to ensure an appropriate level of involvement from Ireland. Working groups have been established in three broad areas (physical sciences and engineering; biological and medical sciences; and humanities and social sciences) and Ireland is represented on each of these groups. The first draft of the European Roadmap is due to be published in Autumn 2006.



The Irish National
Accreditation Board
(INAB)

The Irish National Accreditation Board (INAB)



Dr Máire C. Walsh
Chairperson

The Irish National Accreditation Board (INAB) is Ireland's national body within a European network of accreditation bodies. INAB assesses certification bodies, laboratories and inspection bodies against internationally agreed standards. This accreditation provides assurance that these bodies demonstrate competence and performance capability, to the relevant EU standards, in carrying out their work.

Accreditation plays an important role in guaranteeing the access of Irish products and services to both EU and worldwide markets. 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 co-operation for Accreditation (EA) and worldwide through the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF). It is also the national statutory monitoring authority for the OECD Good laboratory Practice (GLP) Scheme under S.I. No.4 of 1991 as amended by S.I. 294 of 1999.

Greenhouse Gas Emissions Allowance Trading Scheme

In 2005, INAB in cooperation with the Environmental Protection Agency (EPA), established a new accreditation programme to underpin the implementation of the EU Greenhouse Gas emissions trading allowance 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 developed with the support of the EPA provides Irish industry and the regulator with a useful tool to verify compliance with the Directive.

Three organisations were granted accreditation as Greenhouse Gas verifiers in 2005. It is anticipated that further applications for accreditation in this field will be received as the scheme develops.

Medical Laboratory Accreditation

During 2005 INAB accredited a medical testing laboratory to the international standard ISO 15189, bringing the total number of medical laboratories accredited for this standard to three.

INAB also continued 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 or international legislation for medical laboratories and developments in hospital services accreditation generally. Statutory Instrument S.I. No. 360 of 2005 transposed the European Directive 2002/98/EC on setting standards of quality and safety for the collection, testing, processing, storage and distribution of human blood and blood components. This statutory Instrument requires blood banks (approx. 60 laboratories) to operate to ISO 15189 by November 2008. INAB expects that these laboratories will present for accreditation over a three year period and that a significant number of new applications for laboratory accreditations to ISO 15189 from this sector will be received during 2006.

Energy Management Certification

In 2005, INAB developed and started an accreditation scheme for the new Energy Management Standard IS 393.

A new Energy Management standard IS 393 has been developed by the National Standards Authority of Ireland (NSAI) in cooperation with Sustainable Energy Ireland (SEI) and other relevant stakeholders as a tool for organisations to take a systematic approach to the continual improvement of energy performance. Organisations adopting IS 393 require third party certification bodies to confirm that they are operating in compliance with IS 393. The scheme will be developed so that the market can have confidence in the competence and integrity of the certifications they issue.

Multilateral Agreements

INAB undertook a complete review of its accreditation systems and procedures to align these systems and procedures with the new International Standard (ISO 17011) for Accreditation Bodies.

INAB maintained its membership of the multilateral agreements (MLAs) for Europe through the European Cooperation for Accreditation (EA) and world-wide through the International Laboratory Accreditation Co-operation (ILAC) and the International Accreditation Forum (IAF). INAB undergoes regular international peer evaluations of its accreditation activities to determine if it can remain a signatory to these Multi-Lateral Agreements (MLAs).

A complete assessment took place in early 2006 to enable EA undertake a full evaluation of INAB. The peer evaluation group recommended that INAB continues to be a signatory of the European Multilateral Agreements (EMLA) for testing, calibration and certification for quality management systems and to extend the EMLA signatory status to the accreditation of inspection bodies.

INAB Functions

There are six distinct functions of INAB, each operating to specific European and international standards and/or regulations.

Laboratory Accreditation

Laboratory accreditation granted by the INAB provides a formal recognition of the competence of the laboratory to perform specific tests.

During 2005 INAB awarded accreditation to 13 new laboratories and is currently maintaining 102 laboratory accreditations. There were 12 applications in hand at year end. During the year INAB carried out 131 on-site inspections on accredited/applicant laboratories within the Laboratory Accreditation Programme.

Accreditation of Certification Bodies

The INAB accredits certification bodies operating product certification, quality system certification and certification of personnel. It also accredits certification bodies for environmental management systems (EMS) certification to standards such as the EN ISO 14000 series and EMAS – the EU Eco Management and Audit Scheme and Information Security Management Systems (ISMS).

At the end of 2005 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 2005 INAB accredited a new certification body for Quality Management Certification and maintained a further three certification bodies in this programme. INAB currently maintains accreditation of three certification bodies for Product Certification and one certification body for Environmental Management Certification. These certification bodies have, in turn, certified more than 2,000 organisations to the ISO 9000 series of standards and more than 150 organisations to ISO 14001 under INAB accreditation.

Food product certification continues to be a significant growth area of national importance principally as a result of BSE and Foot and Mouth outbreaks. As a result Irish food producers supplying the UK market are now 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 European markets are also required by European Food retailers to have their food products certified to meet EUREPGAP requirements.

In 2005 INAB maintained accreditation for three certification bodies providing food quality assurance schemes for food products to international requirements, such as the British Retail Consortium (BRC) and EUREGAP schemes, as well as national food quality assurance schemes, such as the Bord Bia and Bord Iascaigh Mhara schemes. Food product certification will therefore continue to be one of INAB's growth areas of activity for the immediate future. Furthermore, the International Organisation for Standardisation (ISO) has developed a new international standard ISO 22000 for food safety management and it is expected that over the next few years food retailers will also require accreditation for food products under this new food safety standard. In addition, 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 and it is anticipated that INAB will process a number of applications for this scheme over the next two to three years.

Accreditation of Attestors and Attestation Bodies

Attestation is the examination of the conditions under which tenders are sought for large contracts offered by the water, energy, transport or telecommunications sectors (utilities). The accreditation criteria are in accordance with the European Standard EN 45503 and INAB regulations.

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. At the end of 2005 INAB had maintained three inspection bodies accreditation and had two applications in hand.

Good Laboratory Practice

The 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. During 2005, INAB undertook seven GLP study audits of a Canadian GLP facility in Quebec on behalf of the European Medicines Agency which is the licensing authority for the release of medicinal products in all EU member states. INAB also carried out two study audits on behalf of the US FDA (Food and Drugs Administration), which is the licensing authority for the release of medicinal products in the United States. At the end of 2005 five test facilities held GLP Compliance Statements under this programme.

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 2005 INAB maintained eight 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 Board Members 2005

Dr Marie C. Walsh, Chairperson
Former State Chemist, State Laboratory

Dr Nuala Bannon¹
Inspector, Department of Environment, Heritage and Local Government

Mr Donal Connell
Former Vice President, 3Com

Dr Fiona Kenny¹
Consultant Microbiologist, Sligo General Hospital

Mr Tom Beggan
CEO, Health and Safety Authority

Mr Richard Howell
Agriculture Inspector, Department of Agriculture

Ms Fiona Lalor²
Head of Regulatory Affairs, Food and Drink Industry, IBEC

Mr Michael Maloney
Director of Horticulture, An Bord Bia

Mr Vagn Anderson¹
Manager of International Affairs, Danish Accreditation Body (DANAK)

Mr Pat O'Mahony
CEO, The Irish Medicines Board

Mr Iain MacLean³
Former Director, Environmental Protection Agency (EPA)

Ms Jonie Burns³
Department of Environment, Heritage and Local Government

Mr Paul Kelly⁴
Director, Building Materials Federation, IBEC

Dr John O'Brien
Chief Executive, Food Safety Authority of Ireland

Mr Tom Dempsey (ex-Officio)
Chief Executive, INAB

¹ Appointed September 2005

² Resigned January 2006

³ Resigned May 2005

⁴ Retired June 2005

Statutory Obligations

Board Members

In accordance with Department of Finance Guidelines for State Agencies, Forfás Board Members register their interests in other undertakings with the Secretary on their appointment and during their tenure in office.

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 have complied 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 new 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.

Since 2001 Forfás has responded to a number of FOI requests.

Equality

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

A policy on Protection of Dignity at Work was developed in 2003.

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, which meets monthly, is welcomed as a positive process by both management and staff.

Safety, Health and Welfare Act, 1989

In accordance with the Safety, Health and Welfare Act (1989), Forfás has prepared a safety statement that encompasses all the aspects affecting staff and visitor welfare. This was updated in early 2005.

Clients' Charter

Forfás updated its Clients' Charter in 2004 (originally published in 2000) setting out its commitment to a high quality of service to clients and to the general public. This Charter includes a procedure for dealing with complaints. In 2005 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.

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 2005.

- (a) 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 cheques are issued as required to ensure timely payments.
- (b) 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 2006.



Forfás Management Structure and Advisory Councils

Forfás Management Structure



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Enterprise Policy and Corporate Services Division

Competitiveness Division

1 Martin Cronin
Chief Executive

2 Brian Cogan
Executive Director

3 Marie Bourke
Tax, Finance & Enterprise Surveys Department

4 Martin Craig
Finance Department

5 Maria Ginnity
Enterprise Policy & Communications Department

6 Eamonn Kearney
Systems Department

7 Michael O'Leary
Human Resources Department

8 Ignatius Rossi
Facilities Department

9 Andrew McDowell
Competitiveness Division

10 Adrian Devitt
National Competitiveness Department

11 Eoin Gahan
Regulation, Consumer Policy & Infrastructure Department

12 Martin Shanahan
Expert Group on Future Skills Needs



13



14



16



15



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Science, Technology & Innovation Policy and Science Awareness Division

- 13 Helena Acheson**
Science, Technology & Innovation and Science Awareness Division
- 14 Seamus Bannon**
National & EU Innovation Policy and STI Surveys Department
- 15 Peter Brabazon**
Discover Science and Engineering Awareness Programme
- 16 Michael Fitzgibbon**
Evaluations Department
- 17 Declan Hughes**
National & EU Science and Technology Policy Department



18

Secretary's Office

- 18 Michael O'Leary**
Secretary



19

Irish National Accreditation Board

- 19 Tom Dempsey**
*Manager
Irish National
Accreditation Board*

Ms Mary Cryan
Chairman



Advisory Council on Science, Technology & Innovation

Chairman

Ms Mary Cryan
Cryan Associates

Members

Dr Leonora Bishop	Manager, Research, Skills, Manufacturing	IDA Ireland
Prof. Dolores Cahill	Director	Conway Institute, National University of Ireland, Dublin
Mr Ian Cahill	Director, National Institute of Technology Management	NovaUCD; Chairman, LM Ericsson Ltd
Mr Martin Cronin	Chief Executive	Forfás
Prof. Donald Fitzmaurice	Director	ePlanets Ventures
Prof. Tom McCarthy	Chief Executive	Irish Management Institute
Prof. Anita R. Maguire	Prof. of Pharmaceutical Chemistry	National University of Ireland, Cork
Prof. Timothy O'Brien	Director, Gene Therapy Programme	Regenerative Medicine Institute (REMEDI), National Centre for Biomedical Engineering Science & Prof. of Medicine and Consultant Endocrinologist, National University Ireland, Galway
Dr Siobhan O'Sullivan	Scientific Director	The Irish Council for Bioethics
Dr Ena Prosser	Partner	Foundation Healthcare Partners
Dr Reg Shaw	Managing Director	Wyeth Biopharma Campus

Ms Anne Heraty
Chairperson



Expert Group on Future Skills Needs

Chairperson

Ms Anne Heraty	CPL Resources PLC
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Members

Mr Senan Cooke	Manager, Training and Communications	Waterford Crystal Ltd
Mr Jack Golden	Director, Human Resources	Cement Roadstone Holdings PLC/IEI
Ms Una Halligan	Manager, Government and Public Affairs for Ireland	Hewlett Packard
Mr Joe McCarthy	Director	Arkaon Ltd
Dr Sean McDonagh	<i>Former Director</i>	Dundalk IT
Ms Aileen O'Donoghue	Director, FSAI	IBEC
Mr Peter Rigney	Industrial Officer	ICTU
Ms Linda Tanham	Divisional Organiser	Mandate
Dr Brendan Murphy ¹	Director	Cork Institute of Technology

Advisers to the Group

Mr Pat Hayden ²	Principal Officer	Department of Enterprise, Trade and Employment
Ms Ruth Carmody	Principal Officer	Department of Education and Science
Mr Andrew McDowell ³	Manager, Competitiveness Division	Forfás
Mr Fergal Costello	Head of IT Designation	Higher Education Authority
Mr Roger Fox	Director, Planning, Research and EU Affairs	Fás
Ms Ann Nolan	Principal Officer	Department of Finance
Mr Martin Shanhan	Head of Secretariat	Forfás

¹ Dr Brendan Murphy, Cork Institute of Technology, appointed with effect from May 2005

² Pat Hayden, DETE, replaced David Barry, DETE, with effect from August 2005

³ Andrew McDowell, Forfás, replaced Brian Cogan, Forfás, with effect from August 2005

David Lowe, Goodbody Stockbrokers, resigned with effect from February 2005

Dr Don Thornhill
Chairman



National Competitiveness Council

Chairman

Dr Don Thornhill	Chairman
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Members

Mr Rory Ardagh	Director	Leap Broadband
Mr Brendan Butler	Director, Social Policy	IBEC
Mr Donal Byrne	Chairman	Cadbury Ireland Ltd
Mr Martin Cronin	Chief Executive	Forfás
Mr Pat Delaney	Director	Small Firms Association
Ms Thia Hennessy	Economist	Teagasc
Ms Annette Hughes	Economist	DKM Economic Consultants
Mr Patrick O'Brien	Partner	Arthur Cox
Mr Seamus O'Morain	Assistant Secretary	Dept. of Enterprise, Trade & Employment
Mr William Prasifka	Chairperson	Competition Authority
Mr William Slattery	Chief Executive	State Street International (Ireland)
Mr Paul Sweeney	Economic Adviser	Irish Congress of Trade Unions
Mr John Travers	Former Chief Executive	Forfás
Prof. Ferdinand von Prondzinski	President	Dublin City University

Dr John Fingleton, former Chairman of the Competition Authority, resigned with effect from September 2005

Mr Peter McLoone, General Secretary, IMPACT, resigned with effect from November 2005

Mr Leo Enright
Chairman



Discover Science & Engineering Steering Group

Chairman

Mr Leo Enright Chairman

Members

Ms Helena Acheson	Manager, Science, Technology & Innovation Policy and Science Awareness Division	Forfás
Mr John Cahill	Manager of Science & Technology Unit	FÁS
Ms Ruth Carmody	Principal Officer	Department of Education & Science
Dr Sheila Donegan	Director, CALMAST	Waterford Institute of Technology
Ms Siobhan Greer	Former Chairperson	Irish Science Teachers' Association
Ms Una Halligan	Government & Public Affairs Manager	Hewlett Packard
Mr Mattie McCabe*	Director of Secretariat & External Relations	Science Foundation Ireland
Mr Paul Holden	Managing Director	Rédacteurs Ltd
Mr Kevin Kernan	Director General	Engineers Ireland
Mr Matt Moran	Director	Pharmaceutical Ireland, IBEC
Dr Pat Morgan	Faculty of Science	National University of Ireland, Galway
Ms Ellen MacCafferty	Assistant Principal,	Office of Science & Technology
Mr Frank Turpin	Education Manager	Intel Ireland
Dr Siobhan O'Sullivan	Liaison and Support Officer/ Lecturer in Science Education	Faculty of Food, Science and Technology, University College, Cork

* Dr William Harris, Director General, Science Foundation Ireland was replaced by Mr Mattie McCabe

Publications – 2005/2006

Waste Management Benchmarking Study, A Baseline Assessment	June 2006
Report of the Small Business Forum Small Business is Big Business	May 2006
SME Management Development in Ireland Expert Group on Future Skills Needs	May 2006
A Baseline Assessment of Ireland's Oil Dependence	April 2006
International Trade & Investment Report 2005	February 2006
Research and Development in Ireland, 2005 – at a glance	February 2006
State Expenditure on Science and Technology and Research and Development 2004 and 2005	February 2006
Survey of Research and Development in the Higher Education Sector 2004	January 2006
Benchmarking Ireland's Broadband Performance	December 2005
Data Analysis of In-Employment Education and Training in Ireland Expert Group on Future Skills Needs	December 2005
Science Foundation Ireland: The First Years 2001-2005 Report of an International Evaluation Panel	December 2005
National Code of Practice for Managing and Commercialising Intellectual Property from Public-Private Collaborative Research Advisory Council for Science Technology and Innovation	November 2005
Competitiveness Challenge National Competitiveness Council	November 2005
National Skills Bulletin Expert Group on Future Skills Needs	November 2005
Skills Needs in the Irish Economy: The Role of Migration Expert Group on Future Skills Needs	October 2005
Economic Consequences of the Doha Round For Ireland	October 2005
Annual Competitiveness Report National Competitiveness Council	September 2005
Annual Report 2004	June 2005
Languages and Enterprise - The Demand & Supply of Foreign Language Skills in the Enterprise Sector Expert Group on Future Skills Needs	June 2005
Business Expenditure on Research & Development (BERD) Ireland 2003/2004	May 2005
Make Consumers Count: A New Direction for Irish Consumers Report of the Consumer Strategy Group	May 2005
Annual Employment Survey, 2004	April 2005
An Impact Assessment of the Proposed EU Chemical Policy (REACH) on Irish Industry	April 2005
International Trade & Investment Report, 2004	April 2005

Forfás Websites

The publications of Forfás and the independent advisory councils to which it provides administrative and research support are available on the Forfás website www.forfás.ie

The websites under Forfás' management provide comprehensive information on the work and programmes of Forfás and its advisory councils.

Forfás	www.forfás.ie
Advisory Council for Science, Technology and Innovation	www.sciencecouncil.ie
Expert group on Future Skills Needs	www.skillsireland.ie
Irish National Accreditation Board	www.inab.ie
National Competitiveness council	www.forfas.ie/ncc
National Consumer Agency	www.consumerconnect.ie

Websites of Discover Science & Engineering

Discover Science & Engineering	www.science.ie
Discover Primary Science	www.primaryscience.ie
The Greenwave Mass Experiment	www.greenwave.ie
Science Week	www.scienceweek.ie
SCOPE TV Programme	www.science.ie/scope

To receive notification directly to your email box on the latest announcements, press releases and publications please sign up for our email alerts through our website.

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 2005 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 Balance Sheet, the Cash Flow Statement, the Statement of Total Recognised Gains and Losses 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 on 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's compliance with the Code of Practice for 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.

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 and assessment of the significant estimates and judgements made in the preparation of the financial statements, and of whether the accounting policies are appropriate to Forfás's 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.

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's affairs at 31 December 2005 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 Purcell
Comptroller and Auditor General

13 June 2006



Financial Statements

Statement of Board Members' Responsibilities

For 2005 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



Martin Cronin
Chief Executive Officer

Statement on System of 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.

I confirm that in respect of the year to 31 December 2005, the Board conducted a review of the system of internal financial controls.

Signed on behalf of the Board



Eoin O'Driscoll
Chairman

Accounting Policies

Industrial Development Acts 1993, 1995, 1998 and 2003

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 7 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. Fixtures, Fittings and Computer Equipment below the capitalisation threshold of €1,000 are expensed in the Income & Expenditure Account in the year of purchase.

(4) Capital Account

The Capital Account represents the unamortized 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) Pension Costs

Forfás operates 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 & Employment and from contributions deducted from staff salaries. In addition, two funded defined benefit schemes pay a retirement gratuity and an annual pension, fixed at retirement. 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 & Employment.

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 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.

In accordance with the requirements of FRS17 - Retirement Benefits, the Income and Expenditure Account, Statement of Recognised Gains and Losses and Balance Sheet now recognise pension transactions, movements and balances which were previously shown only as a note to the Financial Statements. Consequently, the corresponding year's figures have been restated.

(7) Operating Leases

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

Income and Expenditure Account

Year Ended 31 December 2005

	Notes	2005 €'000	2004 €'000 As Restated
Income			
Oireachtas Grant	1	27,576	22,395
Professional Fees - National Accreditation Board	2	767	742
Other	3	779	692
Departmental Programmes	5	3,431	2,290
Net Deferred Funding	7 (c.ii)	29,382	31,199
		61,935	57,318
Expenditure			
Administration and General Expenses	4	15,115	13,710
Depreciation	6	215	216
Pension Costs	7 (c.iii)	43,144	41,035
Departmental Programmes	5	3,431	2,290
		61,905	57,251
Surplus for Year		30	67
Balance at beginning of Year		1,758	1,591
Transfer (to)/from Capital Account	8	(19)	100
Balance at end of Year		1,769	1,758

STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES

Surplus for Year		30	67
Actuarial (Loss) on Pension Liabilities	7 (c.iii)	(132,845)	(85,324)
Adjustment to Deferred Pension Funding	7 (c.iii)	132,845	85,324
Total Recognised Gain for Year		30	67

The Accounting Policies, Cash Flow Statement and Notes 1 to 15 form part of these Financial Statements.

On behalf of the Board:



Martin Cronin
Chief Executive Officer



Eoin O'Driscoll
Chairman

Balance Sheet

As at 31 December 2005

	Notes	2005 €'000	2004 €'000 As Restated
Fixed Assets			
Tangible Fixed Assets	6	278	259
Total Fixed Assets		278	259
Current Assets			
Accounts Receivable	9	3,748	5,048
Bank		40	48
		3,788	5,096
Accounts Payable	10	2,019	3,338
Net Current Assets		1,769	1,758
Deferred Funding Asset	7 (c.iv)	817,742	657,477
Pension Liability	7 (c.v)	(817,742)	(657,477)
Total Assets Less Current Liabilities		2,047	2,017
Represented By:			
Capital Account	8	278	259
Income and Expenditure Account		1,769	1,758
		2,047	2,017

The Accounting Policies, Cash Flow Statement and Notes 1 to 15 form part of these Financial Statements.

On behalf of the Board:



Eoin O'Driscoll
Chairman



Martin Cronin
Chief Executive Officer

Cash Flow Statement

Year Ended 31 December 2005

	Notes	2005 €'000	2004 €'000
Reconciliation of Net Movement for Year to Net Cash Flow from Operations			
Net Movement for Year		30	67
Bank Interest		(31)	(40)
(Profit)/Loss on Disposal of Assets		(3)	20
Depreciation Charge:			
- Tangible Fixed Assets	6	215	216
(Increase)/Decrease in Accounts Receivable		1,300	(624)
Increase/(Decrease) in Accounts Payable		(1,319)	423
Net Cash Flow from Operations		192	62
Cash Flow Statement			
Net Cash Flow from Operations		192	62
Returns on Investment and Servicing of Finance			
Bank Interest		31	40
Cash Flow before Capital Expenditure		223	102
Capital Funding			
Disposal of Tangible Fixed Assets		3	-
Purchase of Tangible Fixed Assets	6	(234)	(136)
Cash Flow after Capital Expenditure		(8)	(34)
(Decrease)/Increase in Cash		(8)	(34)
Reconciliation of (Decrease)/Increase in Cash to Cash at Bank			
Movement in Cash for the Year		(8)	(34)
Cash at Bank at 1 January		48	82
Cash at Bank at 31 December		40	48

Notes to the Accounts

Year Ended 31 December 2005

(1) Oireachtas Grant

	2005 €'000	2004 €'000
Forfás		
Administration and General Expenses	27,576	22,395

- a) Under Section 35 of the Industrial Development (Science Foundation Ireland) Act, 2003, 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 €3,400,000,000. At 31 December, 2005 the aggregate amount so provided was €2,467,326,030.
- 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, 2005 the aggregate amount so provided was €13,547,211.

(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, and certification of quality, product, and personnel management systems in Ireland and is also the statutory GLP (Good Laboratory Practice) compliance monitoring authority. 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

	2005 €'000	2004 €'000
Rental Income	743	637
Sundry Income	5	15
Bank Interest	31	40
Total	779	692

Notes to the Accounts (cont.)

Year Ended 31 December 2005

(4) Administration and General Expenses	2005	2004
	€'000	€'000
Board Members' Remuneration and Expenses	301	289
Pay Costs	7,318	6,897
Other Personnel Costs	366	380
Travelling Expenses	427	470
Specialised and Professional Services	886	855
Research and Studies	1,178	1,289
Rents, Rates, Repairs and Maintenance ¹	2,245	1,984
Other Operating Expenses	1,663	1,435
Office of the Chief Science Adviser ²	351	96
Interim National Consumer Agency ³	362	-
Audit Fee	18	15
Total	15,115	13,710
Pay Costs comprise:		
Wages and Salaries	6,785	6,420
Social Welfare Costs	393	371
Superannuation Costs	140	106
Total	7,318	6,897

1 These are net of rentals received from sub-tenants of former Industrial Development Authority headquarter buildings.

2 The Office of the Chief Science 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 Science Adviser are funded by Forfás. The Office of the Chief Science 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.

3 Forfás is administering the activities of the Interim National Consumer Agency on behalf of the Department of Enterprise, Trade and Employment. Total expenditure on this programme amounted to €542,000 in 2005 - funded €362,000 from Forfás resources and €180,000 direct funding from the Department of Enterprise, Trade and Employment (Note 5).

(5) Departmental Programmes - Income and Expenditure

These Programmes are administered by Forfás, on behalf of the funding bodies listed below:

Programme		2005	2004
		€'000	€'000
Discover Science and Engineering	1	2,471	1,751
Expert Group on Future Skills Needs	2	525	324
Irish Council for Bioethics	3	255	215
Interim National Consumer Agency	4	180	-
Total		3,431	2,290

Details of Funding Bodies:

1 Office of Science & Technology of the Department of Enterprise, Trade & Employment

2 National Training Fund of the Department of Enterprise, Trade & Employment

3 Department of Enterprise, Trade and Employment

4 Department of Enterprise, Trade and Employment

Notes to the Accounts (cont.)

Year Ended 31 December 2005

(6) Tangible Fixed Assets	Computer Equipment €'000	Motor Vehicles €'000	Fixtures & Fittings €'000	Total €'000
COST				
At 1 January 2005	1,380	59	3,388	4,827
Additions	158	-	76	234
Disposals	(57)	-	(76)	(133)
At 31 December 2005	1,481	59	3,388	4,928
DEPRECIATION				
At 1 January 2005	1,279	44	3,245	4,568
Charge for Year	120	15	80	215
Disposals	(57)	-	(76)	(133)
At 31 December 2005	1,342	59	3,249	4,650
NET BOOK AMOUNT				
At 1 January 2005	101	15	143	259
Net Movement for Year	38	(15)	(4)	19
At 31 December 2005	139	-	139	278

The cost of Tangible Fixed Assets is written off by equal instalments over their expected useful lives as follows:

- | | | |
|-------|---------------------|---------|
| (i) | Computer Equipment | 3 years |
| (ii) | Motor Vehicles | 4 years |
| (iii) | Fixtures & Fittings | 5 years |

Notes to the Accounts (cont.)

Year Ended 31 December 2005

(7) 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.	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.
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. Post retirement increases are unfunded and met by Forfás from Oireachtas Grant.
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.

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

- (b) 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.

Notes to the Accounts (cont.)

Year Ended 31 December 2005

(7) Superannuation (cont.)

(c) FRS 17 Retirement Benefits

For accounting periods ending on or after 1 January 2005, 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.

The valuation used for FRS17 disclosures has been based on a full actuarial valuation at 31 December 2005 by an independent qualified actuary to take account of the requirements of FRS17 in order to assess the scheme liabilities at 31 December 2005. The financial assumptions used to calculate scheme liabilities under FRS17 are:

(c.i) Valuation method:	Projected Unit:			
	2005	2004	2003	2002
Discount Rate	4.10%	4.70%	5.25%	5.50%
Salary Increases	4.00%	4.00%	4.00%	4.00%
Pension Increases	3.50%	3.50%	3.50%	3.50%
Inflation Rate	2.25%	2.25%	2.25%	2.25%

The market value of the assets in the pension schemes, the expected rate of return and the schemes' liabilities at 31 December, 2005 were:

	Expected Return 2005	Expected Return 2004	Market Value at 31 December 2005 €'000s	Market Value at 31 December 2004 €'000s
Equities	7.10%	7.30%	141,610	112,879
Bonds	3.10%	3.80%	21,772	21,999
Property	6.00%	5.30%	13,495	11,379
Other	2.50%	3.00%	3,059	5,462
			179,936	151,719
Present Value of pension schemes' liabilities			997,678	809,196
Net deficit in pension scheme			(817,742)	(657,477)
Related deferred tax liability			-	-
Net pension asset/(liability)			(817,742)	(657,477)

(c.ii) Net Deferred Funding for Pensions in year

	2005 €'000s	2004 €'000s
Funding recoverable in respect of current year pension costs	47,774	43,514
Pension payments and employee contributions (funded)	(18,392)	(12,315)
	29,382	31,199

Notes to the Accounts (cont.)

Year Ended 31 December 2005

(7) Superannuation - FRS17 Retirement Benefits (cont.)

(c.iii) Analysis of total pension charge	2005 €'000s	2004 €'000s
Service costs	19,586	17,320
Interest on Pension Scheme Liabilities	28,188	26,194
Employee Contributions	(4,630)	(2,479)
	<u>43,144</u>	<u>41,035</u>
 Analysis of Service Costs		
Current Service Cost	19,385	16,212
Past Service Cost	201	1,108
	<u>19,586</u>	<u>17,320</u>
 Analysis of Interest on Pension Scheme Liabilities		
Interest on scheme liabilities	37,972	36,023
Expected return on scheme assets	(9,784)	(9,829)
	<u>28,188</u>	<u>26,194</u>
 Analysis of amount recognised in statement of total recognised gains and losses		
Actual return less expected return on scheme assets	20,260	3,429
Experience gains and (losses)	(51,159)	(19,547)
Changes in assumptions	(101,946)	(69,206)
	<u>(132,845)</u>	<u>(85,324)</u>

(c.iv) Forfás recognises these amounts as an asset corresponding to the unfunded deferred liability for pensions on the basis of the set of assumptions described above 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 2005 amounted to €818 million (2004: €657 million).

The quantification of the liability is based on the financial assumptions set out in Note 7 (c.i). The assumptions used, which are based on professional actuarial advice, are advised to the Department of Enterprise, Trade and Employment but are not formally agreed with the Department.

Notes to the Accounts (cont.)

Year Ended 31 December 2005

(7) Superannuation - FRS17 Retirement Benefits (cont.)

(c.v) Analysis of the movement in deficit during the year is as follows:	2005 €'000s	2004 €'000s
Deficit at the beginning of the year	(657,477)	(547,201)
Current service cost	(19,385)	(16,212)
Unfunded payments to pensioners	17,185	15,598
Contributions (funded)	3,169	2,964
Past service costs	(201)	(1,108)
Other finance income/(charges)	(28,188)	(26,194)
Actuarial gain/(loss)	(132,845)	(85,324)
Deficit at end of year	(817,742)	(657,477)

(c.vi) History of experience gains and losses	2005	2004	2003	2002
Difference between the expected and actual return on scheme assets				
amount (€'000)	20,260	3,429	7,327	(39,724)
percentage of scheme assets	11.3%	2.3%	5.2%	-31.5%
Experience (Gains)/losses on scheme liabilities				
amount (€'000)	(51,159)	(19,547)	(65,770)	(5,890)
percentage of the present value of scheme liabilities	-5.1%	-2.4%	-9.6%	-1.0%
Total amount recognised in STRGL				
amount (€'000)	(132,845)	(85,324)	(86,977)	(89,634)
percentage of the present value of scheme liabilities	-13.3%	-10.5%	-12.6%	-15.8%

(d) Effect of Change in Accounting Policy

The effect of the change in accounting policy arising from the introduction of FRS17 is to recognise as expenditure in the year the cost of pensions earned rather than the payments made to pensioners, and a corresponding funding amount. In addition, the Balance Sheet recognises the cumulative liability for pensions earned by employees as at 31 December 2005 together with a corresponding asset, whereas previously this liability was disclosed by note only.

(8) Capital Account

	€'000	€'000
At 1 January 2005		259
Transfer to/from Income and Expenditure Account		
- Cost Additions	234	
- Cost Disposals	(133)	
- Depreciation Additions	(215)	
- Depreciation Disposals	133	
		19
At 31 December 2005		278

Notes to the Accounts (cont.)

Year Ended 31 December 2005

(9) Accounts Receivable	2005 €'000	2004 €'000
General Debtors	1,950	3,068
Prepayments	1,586	1,725
Inter Agency Balances	212	255
Total	3,748	5,048

General Debtors include €585,885 (2004: €1,579,905) VAT recoverable by Forfás on behalf of the Forfás VAT Group (Forfás, IDA Ireland & Enterprise Ireland).

Interagency Balances represents amounts due, if any, from the Forfás Agencies (IDA Ireland, Enterprise Ireland and Science Foundation Ireland).

(10) Accounts Payable	2005 €'000	2004 €'000
General Creditors	248	24
Accruals	979	1,101
Payroll	8	58
Inter Agency Balances	784	2,155
Total	2,019	3,338

Interagency Balances represents amounts due, if any, to the Forfás Agencies (IDA Ireland, Enterprise Ireland and Science Foundation Ireland) and includes VAT payable of €620,696 (2004: €1,850,212) to IDA Ireland and Enterprise Ireland, when refunded by the Collector General.

(11) Commitments under Operating Leases

A net total of €1,497,000 (2004: €1,040,000) has been charged in respect of operating leases on buildings in the accounts of Forfás. Forfás has commitments of €7,158,000 to pay during 2006 in respect of leases expiring as set out below. Costs arising out of these commitments in 2006 will be shared between Forfás Agencies and tenants in proportion to agreed office space occupied. The net Forfás share of these costs in 2006 is anticipated to be approximately €2,484,000.

	€'000
(i) 2006	153,000
(ii) 2007 - 2010	-
(iii) 2011 Onwards	7,005,000

Notes to the Accounts (cont.)

Year Ended 31 December 2005

(12) 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.

(13) 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.

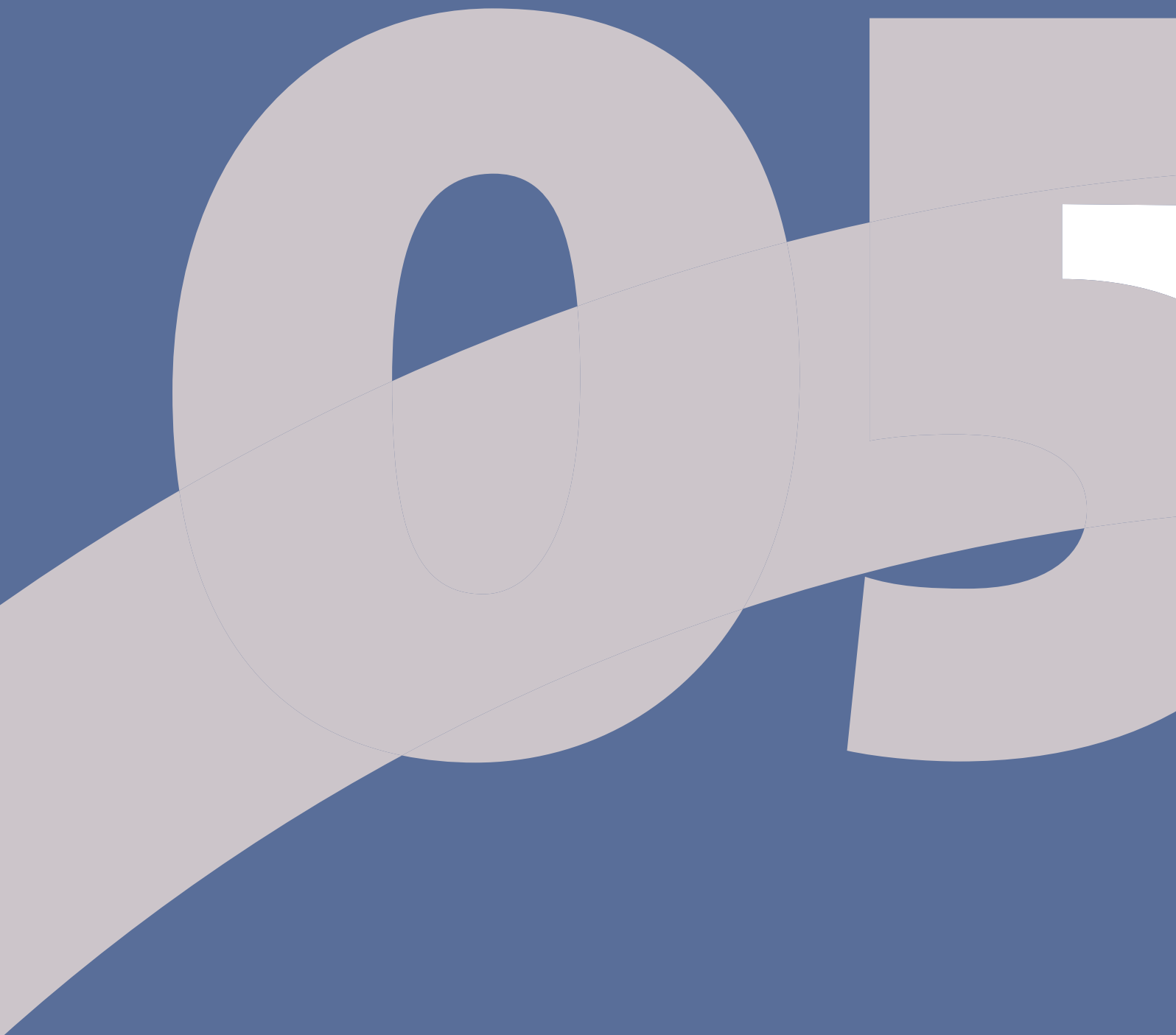
During 2005, payments amounting to €237,962 were made to organisations in which Board Members declared an interest, in respect of services provided by those organisations to the Agency. The members concerned did not receive any documentation on the transactions nor did the members participate in or attend any Board discussion relating to these matters.

(14) Contingencies and Legal Actions

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

(15) Approval of Financial Statements

The Financial Statements were approved by the Forfás Board on 21 March, 2006.





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In accordance with the Official Languages
Act 2003 this publication is available in Irish.