



Forfás Annual Report 2006



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 2006.

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, 2006, a dtíolacadh leis seo ag Forfás.

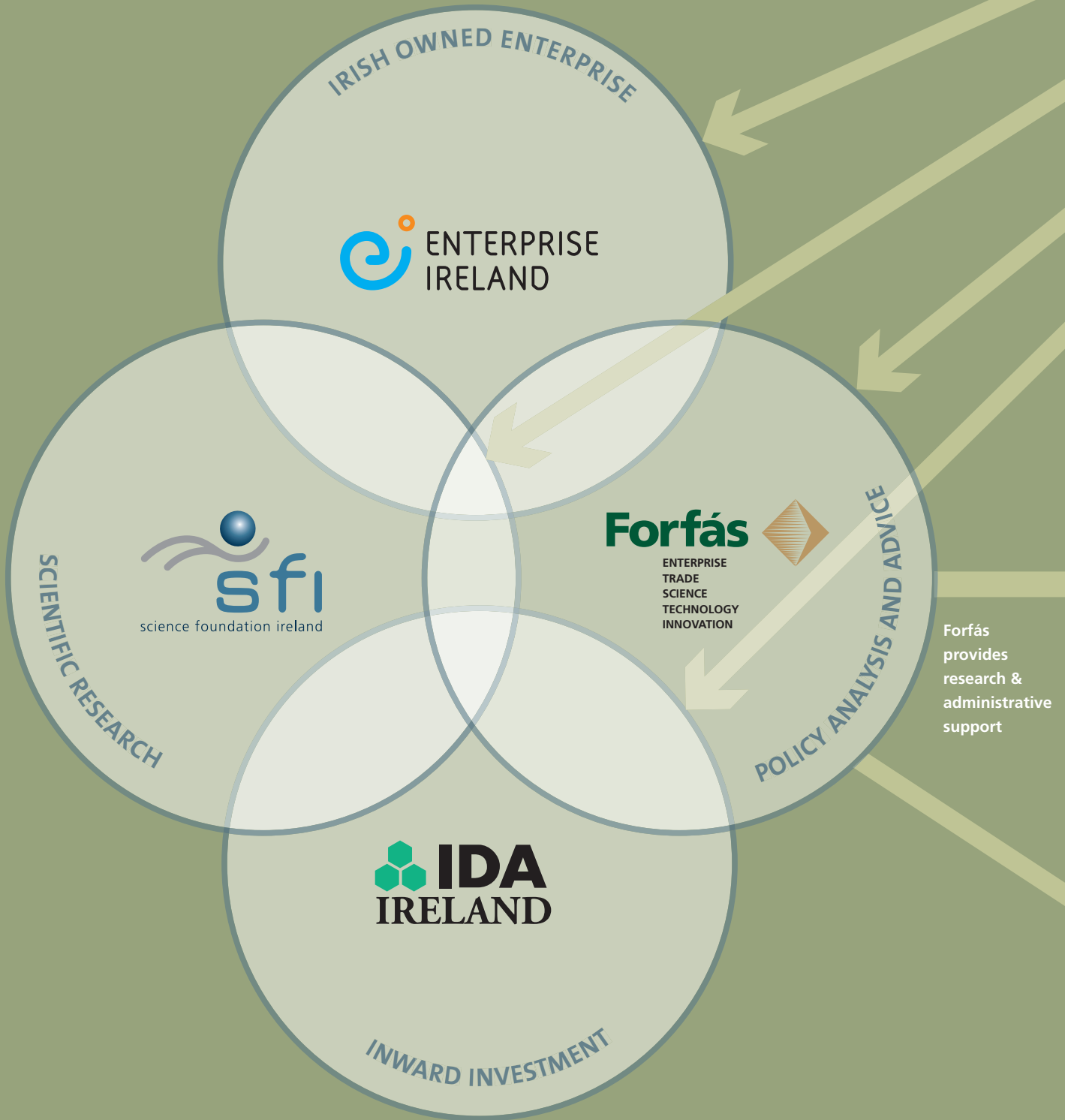


Martin Cronin
Chief Executive



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

Management Development Council

The NCC reports to the Taoiseach on key competitiveness issues

The EGFSN also reports to the Minister for Education and Science



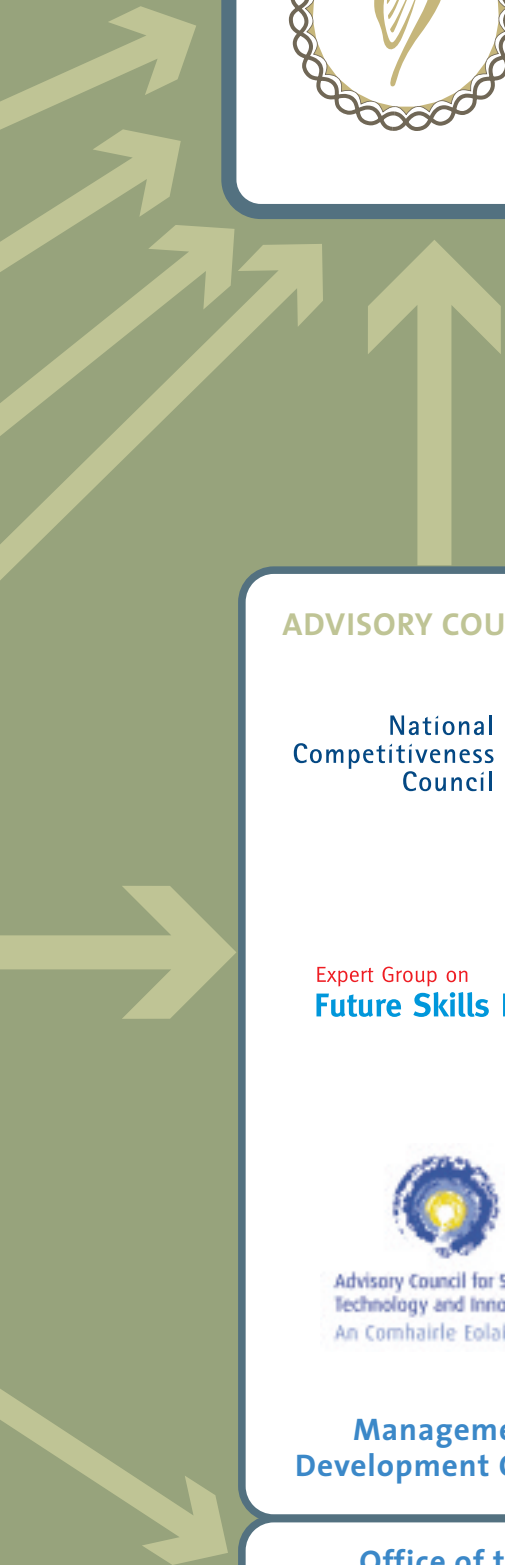
Department of the Taoiseach
Roinn an Taoisigh



AN BÓINE OIDEACHAIS | DEPARTMENT OF
AGUS EDLÁIOCHTA | EDUCATION AND SCIENCE

Office of the Chief Scientific 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 to provide strategic support to scientists, engineers and academic researchers working in biotechnology and ICT development. 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 coordination 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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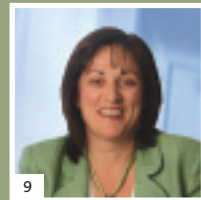
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1 **Mr Eoin O'Driscoll, Chairman**
Managing Director, Aderra

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 **Mr Pat Barry**
Communications Advisor

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

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

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

9 **Ms Anne Heraty**
Chief Executive
Computer Placement Resources (cpl) plc

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

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

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

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

Dr William Harris, Director General, Science Foundation Ireland, resigned from the Forfás Board in June 2006. Prof. Mark Keane, Director General, Science Foundation Ireland, joined the Forfás Board from September 2006 to February 2007.

Forfás Audit Committee

Ms Jane Williams, Chairman
Dr Rosheen McGuckian
Mr Eoin O'Driscoll
Mr William O'Brien

Forfás Management Development Committee

Mr Eoin O'Driscoll
Dr Don Thornhill
Mr Pat Barry

Statement of the Chairman and Chief Executive

Mr Martin Cronin
Chief Executive

Mr Eoin O'Driscoll
Chairman



Overview

By many measures, the Irish economy continues to perform remarkably well. In 2006 employment grew by a further 86,700, the unemployment rate fell to 4.1% and the number unemployed decreased to 88,700. GNP grew by an estimated 7.4%, driven by strong growth in domestic demand, and standards of living and wages continued to increase. This impressive performance is being achieved in the context of a generally favourable international environment of continued recovery of the euro area economies and steady growth of our main trading partners, the UK and the US.

At the same time, our recent success is presenting challenges for enterprise and economic development for the future. Most of our growth is now being driven by domestic demand which is being supported by high levels of borrowing, rather than by international trade. Such domestically generated growth is not sustainable. Increasing standards of living over the long run will require a return to export led growth, which in turn will necessitate a significant improvement in our national competitiveness.

Maintaining Competitiveness

It is important that against the background of our current success we do not get complacent about addressing the strains on those elements of our competitiveness that have underpinned our growth to date. Prices and costs are increasing at rates above those of our main trading partners and wage increases are outstripping growth in productivity. The strength of the euro against the currencies of the UK and the US has also contributed to a weakening in our competitive position. These increases in costs are occurring at a time when productivity growth in the economy in general is slowing. Productivity growth has halved in the past 6 years, from 3.3% over the period 2000-2003 to 1.6% over the period 2003-2006. Low rates of productivity growth in the non-traded sectors of the economy are leading to higher costs for the exporting sector.

Reinforcing the competitiveness of the exporting sector needs to be a high priority for the coming years. While exports of goods and services grew in 2006, the growth rate lags world trends and our share of world trade in goods and services fell.

In the face of increasing costs the internationally trading sector is restructuring with intensive efforts by firms, supported by the development agencies, to raise productivity and to move into higher value and more knowledge intensive products and services. Overall, in 2006 the total number employed in agency-assisted manufacturing and internationally trading services enterprises stood at 341,281, up from 292,745 in 1997.

Encouragingly the manufacturing sector continued to expand its R&D activities in 2006. Business expenditure on R&D increased by an estimated 17.5% in 2006 and has tripled in real terms in the last decade.

In tandem with a strong performance by the indigenous base, the levels of outward direct investment (ODI) from Ireland continue to increase. ODI by successful firms benefits both Irish enterprises and the economy in general through strengthening the employment, productivity and export activities of Irish operations and providing access to markets and capabilities overseas. The growth in ODI reflects the growing cohort of indigenous multinational enterprises in knowledge-intensive, high value-added activities which are prospering internationally. It also reflects the continued evolution of our industrial structure towards higher value-added products and services and the building of expertise in managing international supply chains.

Building on Success

The accelerating pace of globalisation continues to present enormous opportunities for countries with small open economies such as Ireland. The countries that will succeed are those that are agile and can respond quickly to emerging opportunities through coherence in policy choices and responses, and those that can forge knowledge-based partnerships with globally competitive enterprises and that create the conditions necessary to support new and emerging enterprises and innovations.

For Ireland, sustaining improvements in living standards over the long run will necessitate a consensus approach to increase the competitiveness and productivity of the non-traded sectors of the economy and to maintain an attractive business environment for manufacturing and services enterprises to grow and compete successfully on international markets. The essential conditions for growing productivity across the economy include the development of open and competitive markets, greater application of information and communication technologies (ICTs) in business processes, continuing investment in human capital development and research and the efficient creation of critical mass of both services and infrastructures in the regions.

Manufacturing

The manufacturing sector continues to make a vital contribution to the economy and to provide high quality rewarding employment for over 238,000 people. The sector will continue to restructure and evolve over the coming years, moving into more knowledge-intensive, complex and higher value-added products and associated services, in particular through the application of new technologies

in the life-sciences, information and communications and nanotechnology areas. Manufacturing enterprises do need to intensify efforts to increase productivity growth and levels of innovation. The continued success of manufacturing activities will depend on Ireland's ability to improve its costs and competitiveness base, in particular in energy, waste management and transport, to enhance the regulatory environment and to continue to provide the skilled people needed to move into new areas.

Services

Services exports now account for almost 40% of total Irish exports of goods and services. Ireland is the thirteenth largest exporter of services in the world. Harnessing the full potential of services for growth in employment, entrepreneurship and wealth creation requires the development of a conducive environment for services enterprises. Open and competitive markets and a regulatory environment in which innovation can flourish are essential prerequisites. Success in services also depends on the availability of creative and innovative individuals and on creating a strong research and innovation base across diverse areas from digital media to finance and law. It will also require increasing flexibility in the provision of state supports. Forfás has established a high-level Services Strategy Group to map out the areas of opportunity and the policy requirements for the future during 2007.

Human Capital Development

Essential to growth will be continued investment in our people and in our education system. People and knowledge are increasingly important as factors that will differentiate economies in the future. Knowledge creation and diffusion are at the core of economic activity. Knowledge is embodied in people and it is the quality of the human resources that will determine the success, or otherwise, of firms and the economy in the years ahead. It is people who create knowledge and it is people who disseminate, adapt and use data, insights, intuition and experience to create distinctive value.

Our education system has a central role in this regard, from the effective provision of pre-primary education through to establishing a leadership position for the higher education sector. The reforms currently underway in higher education institutions, if sustained, should contribute greatly to providing the high quality people needed to underpin future progress.

Despite the increasing proportion of the labour force with third-level qualifications, a large section of the labour force remains without upper secondary education. The Government's National Skills Strategy sets out the specific employee up-skilling and retraining needs of the workforce to 2020. Achieving the targets in the Skills Strategy will require the tripartite support of Government, employers and individuals, together with greater innovation on the part of education providers through flexible delivery mechanisms, modular accreditation and other initiatives which meet the needs of those in work.

Ireland has also benefited greatly from immigration, in particular from the new EU member states. This has helped to fill gaps in the labour market across all sectors of the economy and to keep wage inflation to a lower level than it might otherwise be at. It is important to ensure that those who come to work in Ireland can contribute to their full potential. This entails full recognition of qualifications of immigrants, the removal of any anti-competitive barriers to practicing in the professions and the provision of supplementary training where necessary to meet Irish qualification requirements and language fluency needs.

Knowledge Creation and Innovation

Our success in increasing innovation in all its dimensions into the future will determine the pace of economic progress. The Government's *Strategy for Science, Technology and Innovation, 2006-2013* provides a comprehensive framework for achieving coherence between the public and private sectors in building research excellence and in producing people with the capacity and the opportunities to transform ideas and knowledge into products and services. The Strategy recognises that as relative latecomers, catching up with other countries will require resources to be focused on the areas that will contribute most to economic and social well-being. We must continue to accord the highest priority to supporting excellent people, teams and ideas in research and in fostering meaningful collaborations between the research base and enterprise.

Weaknesses remain in the higher education and national research infrastructures in terms of the facilities and equipment available to support excellence in education and research. These need to be addressed for Ireland to achieve its full potential.

Recognising that as a small country most of the new knowledge will be generated elsewhere, a strategic approach will be required to fostering effective links between the research base in Ireland and centres of excellence internationally. Effective networking of our research base can contribute to attracting the best people to work in research in Ireland and to building effective channels for transferring leading edge knowledge to researchers and enterprises in Ireland.

Ultimately the success of public investments in research will be judged by the extent to which we succeed in capturing the returns through greater innovation in the enterprise base. The initial indications are of a positive response by the enterprise sector. The challenge is to increase the number of innovating firms and to increase the levels of output and exports of new and improved products and services.

Infrastructure

Good progress is now being made in building the necessary economic and social infrastructures to underpin future growth. The investment programme set out in the Government's *National Development Plan, 2007-2013* will make a major contribution to addressing the remaining supply-side constraints for the enterprise sector. A particular focus is required on accelerating the priorities that will best contribute to overall national competitiveness, in particular to addressing the key deficits in transport, energy and communications and environmental services.

Our success in developing a critical mass of infrastructures and services in regional gateways and hubs under the *National Spatial Strategy* will be a key determinant of future success in attracting investment and in promoting balanced regional economic growth.

The implementation of the Government's *White Paper on Energy* with clear targets for security of supply, competitive cost and environmental sustainability is important for successful enterprise.

We also need to ensure that required strategic investments are made in the next generation broadband networks needed by enterprise and society. Achieving a leadership position in broadband connectivity is essential to underpinning the competitiveness of knowledge intensive enterprise in Ireland and the enterprises of the future, from entertainment and digital content services to financial services, intellectual property and supply chain management activities.

Looking forward

The Irish economy has benefited greatly from globalisation through trade and investment and flows of knowledge workers. It has performed exceptionally well over recent years and has the potential to continue to develop a supportive environment for enterprises to grow and develop in the global economy. The biggest threat to achieving this potential would be complacency in addressing the key competitiveness challenges facing the economy such as:

- achieving continued high levels of infrastructure development to address key deficits;
- accelerated and targeted investment in education, training and research; and
- maintaining our cost base in line with other countries with which we compete, particularly in utilities and a range of other non-traded sectors of the economy.

Other countries are developing and implementing policies to improve the competitiveness of their firms in international markets and to exploit new opportunities emerging in the global knowledge based economy. We need to maintain our ability to adapt and to be responsive to emerging challenges and opportunities and to focus on effective implementation of policies that will drive productivity growth and competitiveness into the future. Forfás will continue to fulfil its role in providing advice to the Minister for Enterprise, Trade and Employment on the policy requirements to address the challenges emerging and to work with relevant Government Departments and agencies in the effective development of that advice.

Acknowledgments

In its day-to-day work, Forfás relies heavily on a partnership approach for success. Our achievements during 2006 were based on collaboration and we would like to acknowledge the contributions of many people and organisations throughout the year. An Taoiseach, Mr Bertie Ahern TD, Mr Micheál Martin TD, Minister for Enterprise, Trade and Employment and his Department, and other Government Ministers and Departments.

The development agencies, Enterprise Ireland, FÁS, IDA Ireland, Shannon Development and Údarás na Gaeltachta all contributed to 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 work 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 chaired by 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 Donal de Buitléir;
- Discover Science and Engineering Programme, chaired by Mr Leo Enright;
- Expert Group on Future Skills Needs, chaired by Ms Anne Heraty;
- National Competitiveness Council, chaired by Dr Don Thornhill;
- Office of the Chief Scientific Adviser headed up by the Chief Scientific Adviser Prof. Patrick Cunningham; and
- Small Business Forum, chaired by Mr Joe Macri.

We also extend our sincere appreciation to Dr William Harris and Professor Mark Keane who served on the Forfás Board during their terms as Director General of SFI. They each 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.

Finally, we offer our appreciation to the management team and staff of Forfás for their dedication and continued achievements throughout 2006. Just as the enterprise environment is becoming more complex, diverse and challenging, so too is the work of Forfás.

A large, stylized number '10' is centered in the background. The '1' is a light grey color, and the '0' is a dark blue color. The number is partially overlaid by a green and blue abstract graphic that resembles a landscape or a stylized wave.

Statistical Overview

Forfás collects and analyses a range of data on employment and expenditure by agency-supported firms, Ireland's performance in R&D and innovation and our development as a knowledge-led economy.

This section provides an overview of these indicators.

Agency Indicators

Expenditure by Agency Supported Firms in the Irish Economy

The Forfás *Annual Business Survey of Economic Impact*, formerly known as the *Irish Economy Expenditure Survey*, presents results relating to all manufacturing and internationally-traded services firms that are under the remit of Enterprise Ireland, IDA Ireland, Shannon Development and Údarás na Gaeltachta. It tracked the performance during 2005 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 payroll spend and purchases of Irish-supplied materials and services.

In 2006, 3,800 companies were surveyed, 720 of which were foreign-owned firms. Of the companies included in the survey, approximately 2,700 were in the manufacturing sector and 1,100 were in the internationally-traded services sector.

The overall output of agency-assisted firms in manufacturing and internationally-traded services increased by 5.2% in 2005 (in nominal terms), while direct expenditure in the economy increased by 1.5% (Table 1).

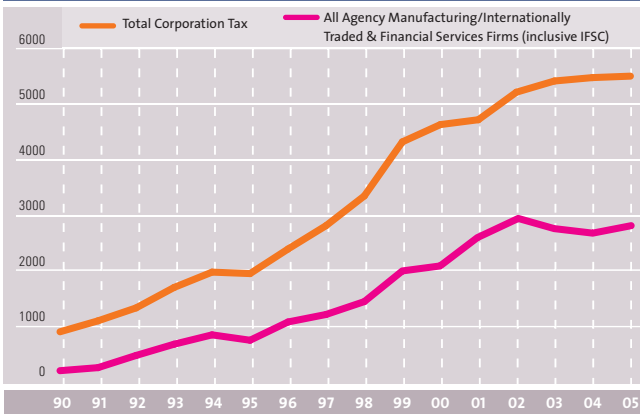
Direct expenditure by these firms in the economy totalled €34.2 billion in 2005, made up of payroll costs (€11.3 billion), Irish raw materials (€13.2 billion) and expenditure on Irish services (€9.7 billion). Irish-owned companies accounted for €16.8 billion of this direct expenditure with raw material inputs accounting for the largest share. Foreign-owned companies spent €17.4 billion directly in the economy, with approximately €6.5 billion being spent on both payroll and services in Ireland.

Table 1
Contribution of Agency Supported Firms in the Irish Economy

		IRISH-OWNED FIRMS		FOREIGN-OWNED FIRMS		ALL FIRMS		CHANGE
		2004	2005	2004	2005	2004	2005	
Sales	€M	23,486	24,987	80,276	84,164	103,762	109,151	5.2%
Payroll Costs	€M	4,428	4,698	6,421	6,573	10,849	11,271	3.9%
Irish Raw Materials	€M	8,407	8,876	4,570	4,337	12,977	13,213	1.8%
Services bought in Ireland	€M	3,012	3,234	6,820	6,442	9,832	9,676	-1.6%
Direct Expenditure in the Economy	€M	15,847	16,808	17,811	17,352	33,658	34,160	1.5%
Direct Expenditure as % Sales	%	67.5	67.3	22.2	20.6	32.4	31.3	-1.1%

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 2005 - coordinated by Forfás and administered by the Survey Unit ESRI

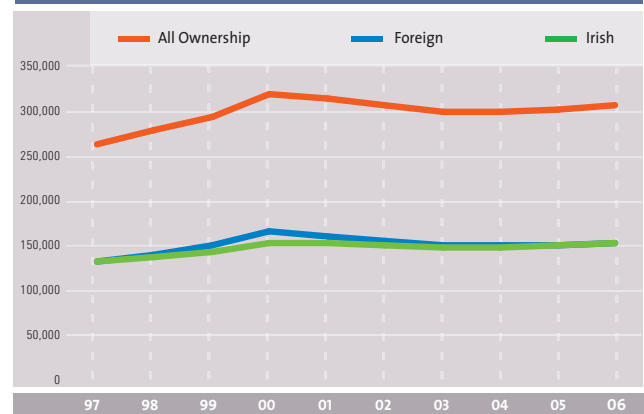
Corporation Tax Payments

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

The total corporation tax yield from all sources was €5.5 billion in 2005 (**Figure 1**), a slight increase in real terms on the previous year. It is estimated that agency-supported firms accounted for €2.8 billion (52%) of the €5.5 billion total corporation tax paid in the economy.

Agency-assisted companies in chemicals/pharmaceuticals and international financial services accounted for 28% and 27% of the €2.8 billion respectively, with ICT hardware and software at 20% of the total.

Figure 2
Permanent Full-Time Employment 1997-2006
Manufacturing and Internationally Traded/Financial Services



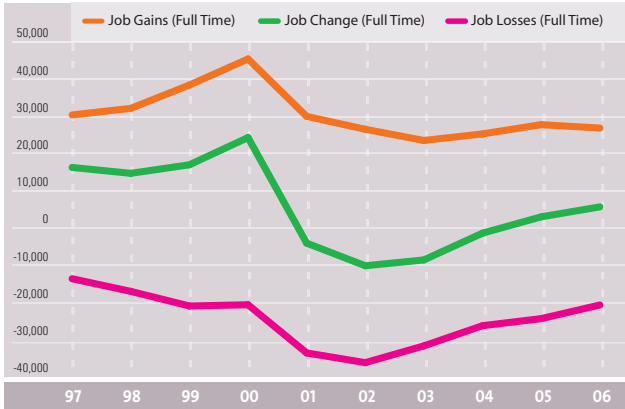
Source: Forfás - Annual Employment Survey

Employment in Agency Supported Companies

Figure 2 shows total full-time employment in companies under the remit of Enterprise Ireland, IDA Ireland, Shannon Development and Údarás na Gaeltachta. In 2006 the total was 305,062, a net increase of 5,927 on the previous year. This increase comprises 2,913 more jobs in foreign-owned companies and 3,014 more jobs among Irish-owned companies in manufacturing and internationally-traded services. Approximately 27,017 jobs were created in manufacturing and internationally-traded services in 2006 with 21,090 job losses during the year.

There are now 43,289 more people employed in agency-assisted manufacturing and internationally-traded services companies than in 1997. Employment in Irish-owned companies has increased from 131,152 in 1997 to 151,710 in 2006, while employment in foreign-owned companies has increased from 130,621 in 1997 to 153,352 in 2006.

Figure 3
Job Gains, Losses and Net Change in Permanent Full-Time Employment 1997-2006 Manufacturing and Internationally Traded/Financial Services



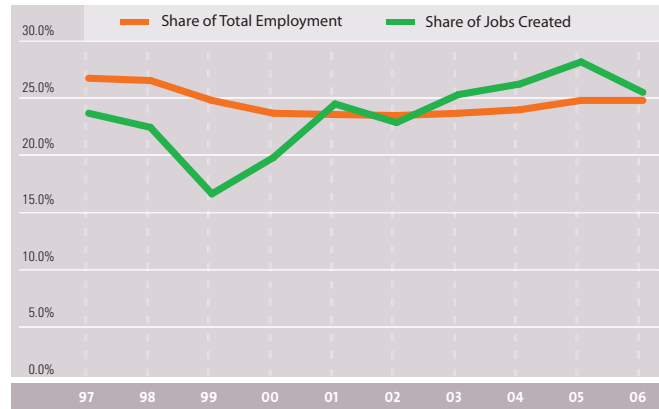
Source: Forfás - Annual Employment Survey

Figure 3 highlights the trend in the number of jobs being created and lost over the 1997-2006 period and shows that the rate of job losses has significantly reduced since 2002.

Net job losses in 2006 were concentrated in manufacturing sectors such as: food products, beverages and tobacco (-1,004); transport equipment (-671); textile and textile products (-408); clothing, footwear and leather (-293); paper, publishing and printing (-150); and chemicals (-69), reflecting ongoing restructuring, productivity improvements and competition from lower cost locations. There were net job increases in some other manufacturing sectors such as electrical and optical equipment (including medical devices) (+1,831).

Overall there were small net gains in manufacturing in 2006. There was a significant net job gain in the internationally-traded services sector. Total employment in internationally-traded services (including financial services) increased to 78,251 in 2006 (+5,205), accounting for 26% of all jobs in agency-supported companies in 2006, compared with just 12% in 1997.

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



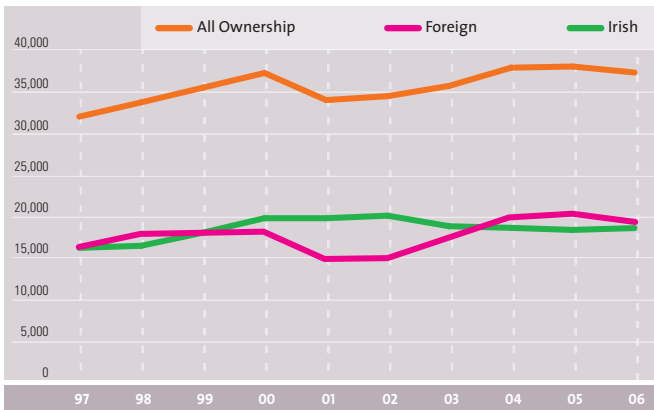
Source: Forfás - Annual Employment Survey

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 1997-2006. In 2006, more than 6,940 jobs were created in the BMW region, which equates to 26% of jobs created in agency-supported firms throughout the country, compared to 20% in 2000, the peak year of employment in agency-assisted companies.

Figure 5
Trends in Part-Time, Temporary and Short-Term Contract Employment 1997-2006* Manufacturing and Internationally-Traded/Financial Services

*Excludes companies under the remit of Shannon Development



Source: Forfás - Annual Employment Survey

Part-Time, Temporary and Short-Term Contract Employment

Figure 5 focuses on the number of part-time, temporary and short-term contract positions in manufacturing and internationally-traded services. In 2006 the number employed was 36,219. Employment in this category has remained steady over the past decade and now accounts for almost 12% of all jobs in agency-assisted companies.

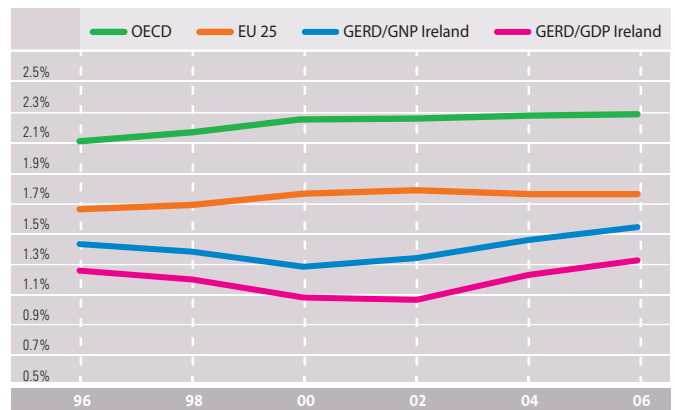
Taking the two categories of employment together (permanent full-time and temporary/part-time), there are now 341,281 people employed in agency-assisted companies, up from 292,745 (up 17%) in 1997.

Knowledge Economy Indicators

Research and Development

Research and Development (R&D) performance is measured by Forfás through its three surveys of R&D - in the business sector, in the higher education sector and in the government sector. Data is gathered using the common methodology laid out in the OECD Frascati Manual, and under the auspices of the European statistical office, Eurostat. This allows meaningful international benchmarking to identify the strengths and weaknesses of the R&D system.

Figure 6
Gross Expenditure on R&D (GERD) as a percentage of GDP/GNP - Ireland, EU and OECD (1996-2006)



* 2006 figures are Forfás estimates.

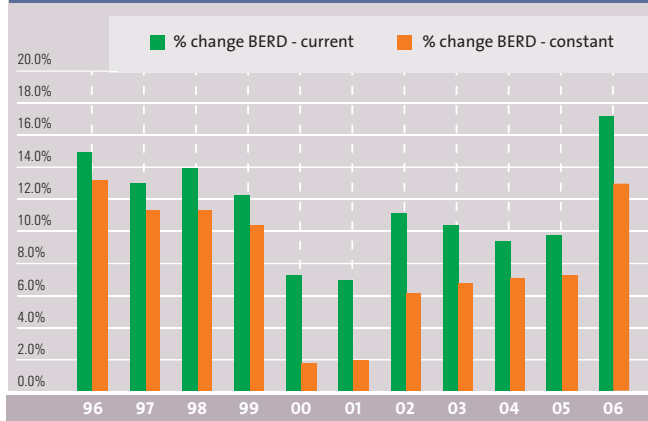
Source: Forfás and OECD - R&D surveys in the business, higher education and government sectors.

Total expenditure on R&D across all sectors of the economy (GERD) continued to grow strongly in 2006. Total R&D spending grew to an estimated €2.33 billion in the year, with annual spending growth quickening to 14.3%. Strong increases in business sector performed R&D (BERD), added to robust gains in R&D performed in the higher education sector (HERD), are driving the overall strengthening in R&D performance.

Ireland is continuing its strong progress in catching up with major competitors' relative spending on R&D.

Figure 6 shows the R&D intensity (total R&D spending as a percentage of total economic activity) from 1996-2006 for Ireland, the European Union and the OECD. Ireland's R&D intensity has climbed from 1.32% of GNP in 2000 to 1.56% of GNP in 2006, as strong R&D spending gains outpaced the dynamic overall pace of economic growth in that period. Ireland is making significant progress in narrowing the R&D intensity gap with the EU and OECD. However, R&D intensities for these regions remained ahead of Ireland in 2006 at 1.77% and 2.26% for the EU and OECD respectively.

Figure 7
Business Sector Performed R&D (BERD)
1996-2006 % Annual Change



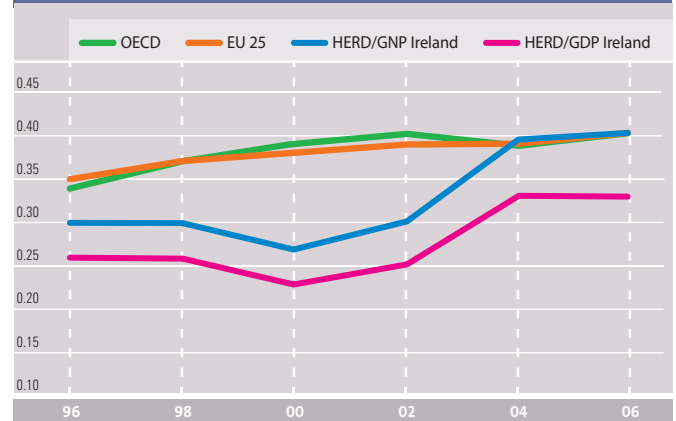
Source: Derived from the Forfás Survey of R&D performed in the business sector (BERD) 2005/6

R&D performed by businesses (BERD) is the largest sector of research performance in the economy. The latest BERD survey for 2005/6 shows that spending on R&D projects in the business sector continued to rise strongly (Figure 7). BERD rose to €1.33 billion in 2005, and is expected to reach €1.56 billion in 2006. Figure 7 shows that the pace of R&D annual spending growth increased to 17.3% in 2006, the strongest rate of expansion since 1996. Over the past four years R&D spending growth has outpaced even our strong economic growth, allowing the R&D intensity ratio to edge upwards.

Increased spending on R&D projects conducted by businesses is evenly distributed between foreign-owned and Irish-owned businesses. The strongest performing R&D sector continues to be the software and computer-related sector accounting for a 31% share of total BERD. Rapid increases in R&D spending by companies in the pharmaceutical sector, has seen that sectoral share rise to 20%.

Compared to its major competitors, Ireland's BERD performance is making strong progress in closing the R&D spending intensity gap. The BERD intensity ratio (business sector performed R&D spending as a percentage of total economic activity) rose to an estimated 1.05% of GNP in 2006, ahead of the 0.94% of GNP ratio recorded in 2002. The BERD intensity ratio though remains below that of the EU and OECD averages of 1.12% and 1.54% of GDP respectively.

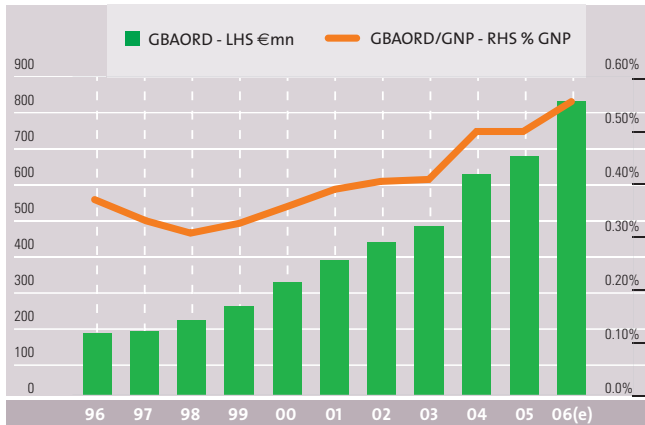
Figure 8
Higher Education Expenditure on R&D (HERD)
as a percentage of GDP/GNP - Ireland, EU and OECD (1996-2006)



Source: Derived from the Forfás survey of R&D performed in the higher education sector (HERD) 2004-2005 and State Expenditure on S&T survey (2006)

Spending on R&D activities performed in the higher education sector (HERD) continued to grow strongly in 2006, boosted by increased public funding (Figure 8). HERD is expected to increase to around €600 million in 2006, the sixth straight year of strong R&D spending growth. Increased funding for third-level R&D activities from Science Foundation Ireland, the Higher Education Authority's Programme for Research in Third-Level Institutions, Enterprise Ireland and other public sector funding agencies boosted R&D performance in the year. In relative terms, the HERD spending intensity rose to 0.40% of GNP in 2006, ahead of the 0.27% intensity ratio recorded in 2002. Ireland's HERD intensity ratio is now in line with the EU and OECD average intensity levels.

Figure 9
Government Budget Outlays on R&D - GBOARD (1996-2006)



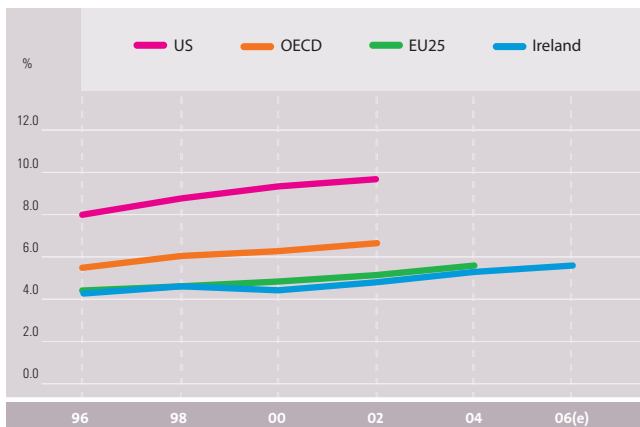
Source: Derived from the Survey of R&D in the Business Sector 2005 (Forfás); Survey of R&D in the higher education sector, 2004 (Forfás); State Expenditure on Science & Technology, 2006 (Forfás)

Figure 9 shows the level of government funding for all R&D activities performed in all sectors of the economy. The Government Budget Appropriations or Outlays on R&D activities (GBAORD) rose to €829 million in 2006, accounting for one-third of total R&D spending. Significant increases in R&D funding from government sources in recent years have allowed the GBAORD intensity ratio to rise from 0.36% of GNP in 1996 to 0.55% of GNP in 2006. Of the €829 million funding from government for R&D activities in 2006, most of the money will be spent on R&D performed in the higher education sector, and this performance will be monitored in future surveys.

Government sector performed R&D (GOVERD) spending rose to €159 million in 2006. This figure included R&D performed in the hospital sector which totalled €22 million. In relative terms GOVERD has remained steady at around 0.11% of GNP for the last decade. R&D intensity in this sector remains below the EU and OECD averages of 0.24% and 0.27% of GDP respectively. In future years this sector will benefit from increased R&D funding for state R&D performing departments, agencies and offices as announced in the recent *Strategy for Science, Technology and Innovation 2006-2013*.

When compared to international competitors, Ireland's government spending on civil R&D activities (excluding R&D spending by other countries on military and defence programmes) has improved dramatically in recent years. GBAORD spending growth in Ireland averaged 16.6% per annum between 2001 and 2006, well ahead of the EU and OECD average gains in that period of 2.7% and 4.4% respectively. As a result of these increases in R&D funded from the government, the GBAORD spending intensity at 0.55% of GNP is now just below the OECD average for civil GBAORD intensity of 0.56% of GDP. Notwithstanding this, the GBAORD intensity ratio continues to be below other government's funding of civil R&D, with France at 0.79% of GDP and Sweden 0.73% of GDP.

Figure 10
Total Researchers (Full-Time Equivalents) 1996-2006
per 1000 of total in employment



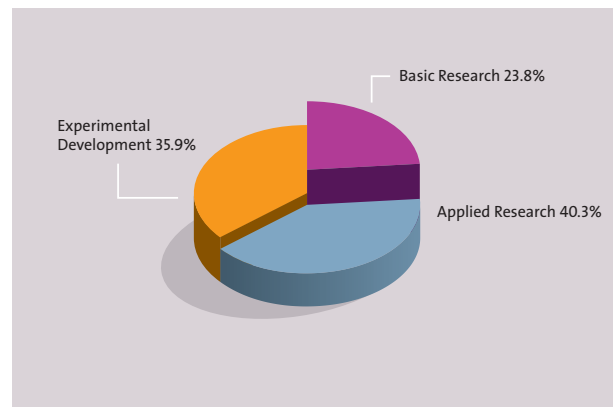
Source: Derived from the Survey of R&D in the Business Sector 2005 (Forfás); Survey of R&D in the higher education sector, 2004 (Forfás); State Expenditure on Science & Technology, 2006 (Forfás)

As well as providing statistics on R&D spending and sources of funding, Forfás compiles important data on R&D human resources, types of research, R&D collaboration and other activities. **Figure 10** confirms that strong increases in R&D spending across all sectors of the Irish economy over the last decade have brought a parallel rise in researcher numbers (Full Time Equivalents (FTE)).

In 2005 there was an estimated 17,950 researchers working on R&D active projects across the Irish economy. 54.6% of these researchers were working in the higher education sector, with 42.8% working in R&D performed in the business sector, and the remainder working in the state sector. In terms of FTEs¹ the total number of researchers in 2005 was nearly 11,500. This represents a strong rise (28.5%) from the 8,950 FTE researchers working on R&D projects in 2001.

In 2005 this represented 5.9 FTE researchers per 1,000 in total employment across the Irish economy, an increase from 4.8 in 1996. Despite the strong gains in research numbers in nominal and relative terms over the last decade, the ratio of researchers to people in employment remains below the OECD and United States levels of 6.9 and 9.6 FTE researchers per thousand in employment.

Figure 11
Types of Research in Ireland
(% of total R&D spending 2006)



Source: Derived from the Survey of R&D in the Business Sector 2006 (Forfás); Survey of R&D in the higher education sector, 2004 (Forfás); State Expenditure on Science & Technology, 2005 (Forfás)

Figure 11 shows the breakdown on spending on research and development projects across all performing sectors of the Irish economy, broken down into types of research in 2005.

In 2005, 23.8% of all R&D spending (€485 million) in Ireland involved basic research² projects. This was an increase from the basic research ratio of 15.8% recorded in 2002. Looking at business sector performed R&D, the basic research ratio rose to 12% in 2005, well ahead of the 4.4% ratio measured in 2001. Alongside the increases in R&D spending, progress is being made in moving up the research value chain.

Of all R&D spending in 2005, 40.3% was directed towards applied research³ projects (€821 million). Again this was ahead of the spending ratio recorded in 2001 of 32.6%. Finally, 35.9% of R&D spending was classed as experimental development⁴ in 2005, a drop from the 51.5% in this classification in 2001.

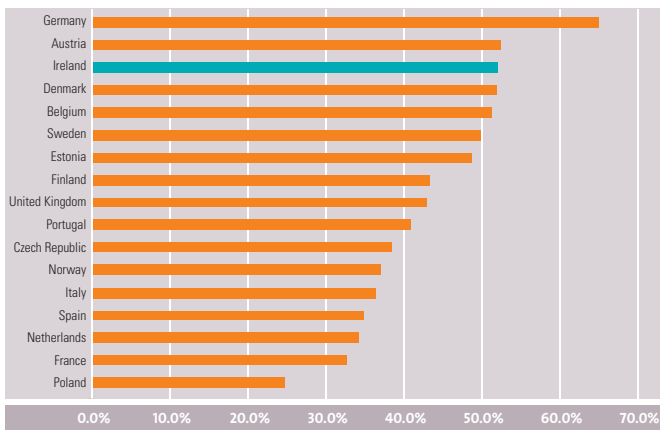
1 Persons spending 50% of their time on research activities and 50% of their time on other activities are counted as 0.5 FTE

2 "involving the experimental or theoretical work undertaken primarily to acquire new knowledge without any particular application or use in view" Frascati Manual: Proposed Standard Practice for Surveys on Research and Experimental Development, OECD, 2002

3 "the original investigation undertaken to acquire new knowledge primarily directed towards a specific practical aim or objective"

4 "systematic work drawing on existing knowledge gained from research and practical experience that is directed to producing new materials, products and devices, to installing new processes, systems and services, or to improving substantially those already produced or installed". Frascati Manual: Proposed Standard Practice for Surveys on Research and Experimental Development, OECD, 2002

Figure 12
Innovation Activity Rates % Total Firms



Innovation Statistics

Forfás collects data on innovation activities through the EU Community Innovation Survey (CIS). This is a harmonised survey for all EU member states in accordance with the methodology laid out in the Oslo Manual. The CIS survey is the largest survey of innovation activities in Ireland, which also allows for international benchmarking of innovation performance with major competitors to be conducted. The latest CIS survey, *CIS4*, was carried out for reference year 2004.

Figure 12 presents data on the percentage of firms (10+ employees) that were classed as innovation active in 2004. To be innovation active, a firm needs to have carried out a product or process innovation between 2002 and 2004. As can be seen in the chart, Ireland performs strongly regarding innovation activity rates compared to other countries. In the core sample, 52.2% of Irish firms were classified as innovation active and this high level of innovation activity will help Irish firms improve productivity and boost competitive performance, a key ingredient for future economic success. Germany was the most innovation active country in 2004, followed by Austria and then Ireland.

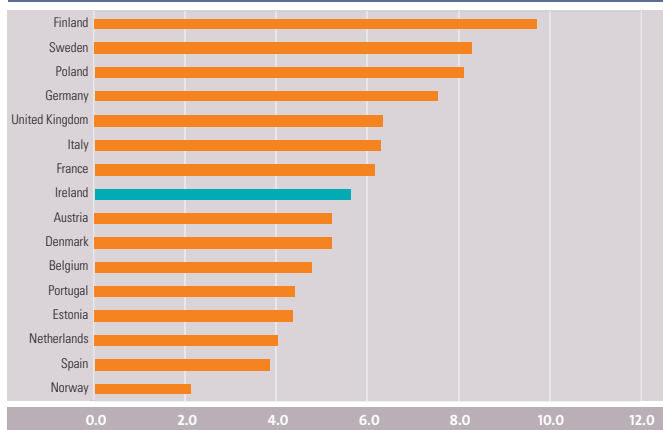
In looking at the detail for Ireland, there are wide differences in the rates of innovation activity for different sizes of firms. As would be expected, large firms (250+ employees) are the most innovation active enterprises across the economy, with an activity rate of 75.1%, well ahead of the activity rates for medium and small firms which are 65.3% and 47.2% respectively. There are also wide differences in the rates of innovation activity across the various sectors of the Irish economy. Rates of innovation activity are higher for firms in industrial sectors of the economy (manufacturing and utilities, mining and quarrying), than for service sector firms.

The latest CIS survey also asked firms to quantify the contribution to their total turnover from innovation activities, broken down into “new to firm” innovations⁵ and “new to market” innovations.⁶ Results from the survey confirm that innovation activities continue to be a strong driver of turnover and profitability for Irish firms.

⁵ Those which were adopted by the firm but invented and created elsewhere

⁶ A measure of novelty and creativity

Figure 13
% Turnover from New to Market innovations



Between 2002 and 2004, €19.3 billion worth of turnover was as a result of “new to market” product innovations (5.6% of total turnover for 2004). **Figure 13** compares Ireland’s performance on the contribution to turnover from “new to market” innovations with several other countries. Ireland’s performance for this indicator is average, with the 5.6% turnover contribution below that of Finland, Sweden and Poland at 9.7%, 8.3% and 8.1% respectively.

There were differences in the effect of “new to market” product innovation on turnover according to size of firm. For large firms “new to market” product innovation was a far stronger driver of overall turnover, contributing 7.8% of total large-firm turnover. For medium-sized firms, the importance of “new to market” product innovation to overall turnover was weaker at 3.9% of the total. For small-sized firms the contribution to total turnover for “new to market” product innovations was 3.6% of the total.

A large, stylized number '2006' is rendered in the background. The '2' and '0' are light grey, while the '0', '6', and the bottom part of the '2' are in a dark blue. The '0' and '6' are a medium green. The background is a gradient of light green to white.

Activities in 2006

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 their contribution to building national competitiveness. Forfás' activities in each area during 2006 and 2007 are detailed in this section.

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Improving Framework Conditions for Innovation and Enterprise Development

The performance of the Irish economy over the past year has been remarkable. We now have a strong fiscal position, virtually full employment and improved living standards. This success also brings challenges to future economic development. To maintain and enhance competitiveness in a higher cost economy a continued focus on the conditions necessary to support innovation and enterprise development is essential. The crucial challenge facing Ireland is to put policies in place to ensure productivity growth is stimulated and trade performance supported.

In 2006, Forfás, the National Competitiveness Council and the Business Regulation Forum provided the Department of Enterprise, Trade and Employment (DETE) and other stakeholders with analysis, advice and support on issues relating to enhancing Ireland's competitive business environment to ensure growth in the enterprise sector and competitiveness in international markets.

National Competitiveness Council Reports

Forfás provides research and secretariat support to the National Competitiveness Council (NCC). The NCC published its Annual Competitiveness Report (ACR) in two volumes: *Volume 1: Benchmarking Ireland's Performance* in October 2006 and *Volume 2: Ireland's Competitiveness Challenge* in February 2007. It published two other reports in October 2006: *Cost of Doing Business in Ireland* and an *Overview of Ireland's Productivity Performance, 1980-2005*.

Benchmarking Ireland's Performance

The NCC defines national competitiveness as all those factors that impact on the ability of firms in Ireland to compete in international markets in a way that provides Ireland's people with the opportunity to improve their quality of life. The NCC *Benchmarking Ireland's Performance* report analyses Ireland's competitive performance using 135 indicators. It concludes that Ireland performs well on a wide range of competitiveness indicators, including investment performance, the regulatory and tax environment and the structure and growth of the labour force. The report confirms that Ireland's economy continues to grow at an exceptional rate by the standards of other advanced economies. However, despite the continuing strong headline performance, there are signs of deterioration in Ireland's underlying competitiveness performance, which could threaten our future growth prospects.

Areas identified in *Benchmarking Ireland's Performance* as key challenges include:

- ❑ **Contribution of trade to growth.** With imports growing faster than exports, Ireland's net export performance is now a drag on economic growth, having driven Ireland's Celtic Tiger boom during the 1990s.
- ❑ **Increased borrowing.** Irish businesses and households are now spending more than they earn.
- ❑ **Slowdown in productivity growth.** Productivity growth has slowed to its lowest rate since the early 1980s.
- ❑ **Manufacturing in transition.** The manufacturing sector is continuing to go through a restructuring process, with a move to more high value-added, knowledge-intensive activities.

Ireland's Competitiveness Challenge

In the context of the success of the Irish economy in recent years and the challenges now emerging, the Council's report, *Ireland's Competitiveness Challenge*, stresses that in the long run success in international markets is the only sustainable driver of economic growth. The underlying impetus to Ireland's continuing economic expansion has shifted from the export-led growth of the late 1990s, to a growth pattern that by 2005-06 has become dependent on domestic consumption, residential construction investment and public spending. A number of international trends are



Pictured at the launch of the *Annual Competitiveness Report 2006, Volume 1: Benchmarking Ireland's Performance* were Chairman of the National Competitiveness Council, Dr Don Thornhill and Mr Micheál Martin TD, Minister for Enterprise, Trade and Employment.

also likely to impact on Ireland's future growth. These include the opportunities emerging with the growing economic importance of China and India, the expansion and development of the EU, increasing concerns about energy prices and security of supply and sustainable development.

Ireland's Competitiveness Challenge outlines key policy recommendations in ten areas that would help to restore Ireland's international competitiveness. Priority areas include:

- **Prices and costs.** Inflation above that of countries with which we compete and a strengthening euro mean that Ireland's cost competitiveness has weakened significantly in recent years in key international markets. Coordinated actions to restore Ireland's cost competitiveness are critical across a range of policy areas, including fiscal policy and infrastructure development. In particular, a strong focus on land planning and competition policy is vital to regaining cost competitiveness, given the relatively high costs of property and locally-traded services in Ireland.
- **Knowledge-intensive workforce.** Ireland's education system is in a period of change with significant progress made in recent years towards improving educational outcomes. Further actions are required to develop a world class education system. In particular, the NCC continues to advocate the establishment of a pre-primary education system, the development of cross-departmental strategies to maintain the momentum in improving secondary school completion rates and policies to make lifelong learning a reality. Continued reforms and additional funding will also be required if our higher education system is to establish a globally competitive position.

□ **Competitively priced and secure supply of energy.**

The Government's White Paper on Energy offers a critical opportunity to set out policies for dealing with the structure of the energy market in a way that enhances competitiveness. We need a determined plan to reduce the growing electricity price differential between Ireland and the countries with which we compete. The NCC believes that high priority needs to be given to identifying key projects to be implemented and funded as part of the NDP.

Cost of Doing Business

The NCC completed a review entitled the *Cost of Doing Business* assessing the impact of differing cost elements across eight important sectors of the enterprise base and compared with eight locations internationally. Although higher costs are to be expected in wealthier countries, it is essential that the cost base does not damage the competitiveness of our internationally-trading sectors. While in the long run productivity is the key determinant of competitiveness, in the short term national developments in costs can have a significant impact on the competitive performance of firms. Hence, cost competitiveness remains critical to ensuring that enterprises based in Ireland can compete successfully in international markets.

The main findings of the 2006 report include:

- Of the main cost inputs to business, labour costs (59%), taxes and transport costs (4%) are competitive when compared with benchmarked locations in the EU-15/US. Irish labour costs in manufacturing are marginally more competitive than in services sectors, compared to other EU-15/US cities. Ireland's cost competitiveness is also supported by relatively low taxes on labour.

- Key business input costs where Ireland's overall comparative cost competitiveness needs to improve include: property costs (11% of costs), both owned and rented; utility costs (9%), particularly electricity; mobile calls; waste disposal; and key non-discretionary services such as IT services.
- At a city level, Dublin's property rental costs, local taxes for industrial sites and general non-discretionary costs need to be kept under review from a competitiveness perspective. In Cork a number of cost elements need to be monitored to ensure they do not fall out of line with competitor locations including local taxes on industrial sites and charges for services such as water.
- Irish cities exhibit the greatest cost competitiveness compared to other EU-15/US cities in the food processing, medical technologies and engineering sectors. They have the smallest cost advantages over other EU-15/US cities in the telecom software, fund administration and business hotel sectors.

Overview of Ireland's Productivity Performance, 1980-2005

High productivity growth rates are essential for Ireland to remain competitive in a higher cost environment. Ireland has enjoyed substantial economic growth since the 1980s. Whereas the growth of other OECD economies over the same period has been driven by increases in productivity more so than in employment, Ireland's growth has been due to gains in both. Productivity increases must be the key driver of future growth in Ireland.

Because of the importance of productivity increases to future growth, the NCC completed a review of Ireland's productivity performance over the last 25 years relative to a range of countries including the EU-15 and the US, at national and sectoral level.

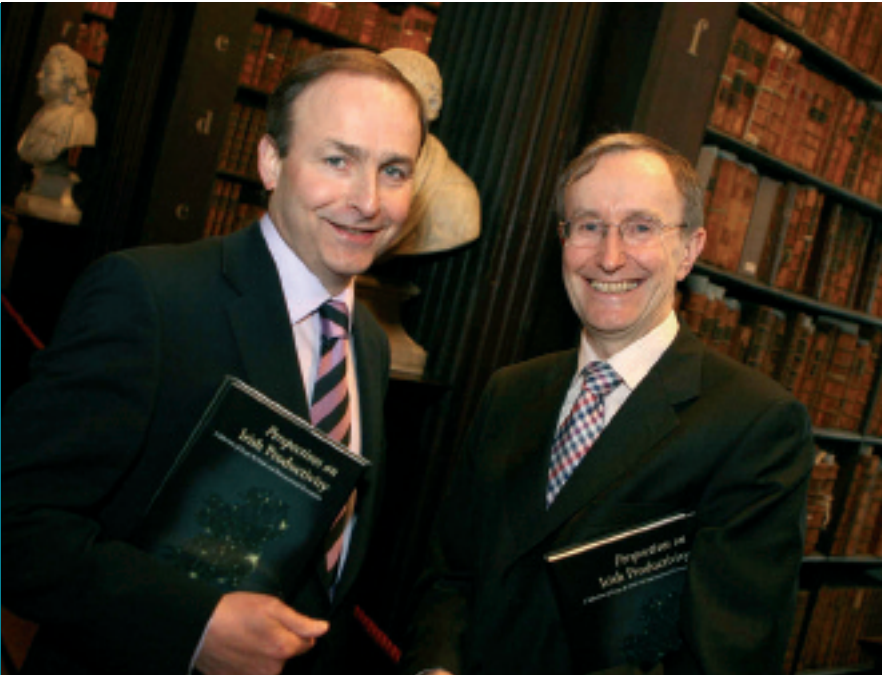
Key findings of the review include:

- Ireland's overall productivity growth rate averaged 3.3% a year between 1990 and 2003. While this is a strong performance, overall Ireland's productivity level remains marginally below the US level.
- While Ireland's productivity growth has been strong and remains strong relative to other countries, between 2000 and 2005 it slowed to its lowest levels since the early 1980s.
- Mirroring international trends, productivity growth rates have been highest in a narrow range of technology-intensive manufacturing and services sectors in Ireland.
- Ireland's productivity growth between 1990 and 2003 was driven by a continued strong performance in modern manufacturing and an improvement in the performance of construction and tradable services. The traditional manufacturing and food and agriculture sectors have not contributed significantly to productivity growth, while non-tradable services have made a relatively small contribution.
- Despite Ireland's overall convergence towards EU and US productivity levels, Ireland's productivity levels lag EU and US levels in several sectors of the economy, but particularly in some traditional manufacturing sectors and in utilities.

Perspectives on Irish Productivity

In 2005 the Minister for Enterprise, Trade and Employment, Mr Micheál Martin TD, asked Forfás to prioritise the issue of research into productivity growth. In response to this Forfás has compiled a book of essays that inform the debate in Ireland on how future productivity growth can be optimised. These essays have been written by leading economic and management thinkers in Ireland and overseas on various aspects of Ireland's productivity challenge. The book, *Perspectives on Irish Productivity, A Selection of Essays by Leading Irish and International Economists*, was published in March 2007.

The essays focus on the two productivity challenges Ireland faces in the future. The first challenge is how to increase the rate of productivity growth in the non-exporting sectors of the economy. In relation to this, what is most striking is our lack of data on productivity levels or growth in Ireland. While the book contains many valid policy lessons in relation to productivity, many sectors are omitted and many of the policy lessons are based on data from other countries. The greatest difficulties in understanding productivity are in the public sector. This is a serious constraint to understanding Ireland's overall productivity, as the productivity of the public sector is as important to the economic performance of a country as the productivity of the private sector.



Launching the Forfás book *Perspectives on Irish Productivity*, A selection of essays by leading Irish and international economists were Mr Micheál Martin TD, Minister for Enterprise, Trade and Employment and Forfás Chief Executive Mr Martin Cronin.

With respect to driving improvements in productivity growth in non-exporting industries, a dominant theme is the importance of competition in boosting future productivity. The key role for the government in these markets should be to protect the wider public interest by setting quality standards and to act as a purchaser of services for those that could not otherwise afford them. This does not require the government to act as employer or direct provider. Competition in these industries can act as a catalyst for the delivery of cost efficiencies and the discovery of innovative solutions to consumer needs.

Another challenge is to maintain an attractive business environment for exporting firms to maintain high levels of productivity growth. While the economic growth of the last two decades has been built on the success of the internationally-traded sectors, continued productivity growth in these areas cannot be taken for granted. Increasingly, Ireland is facing significant competition in international markets and Irish firms are competing on the basis of a higher cost environment.

Perspectives on Irish Productivity contains a number of lessons to inform Ireland's future industrial policy, which are discussed under four headings, the impact of productivity spillovers, the regional distribution of economic growth, the role of R&D and the role of micro policies aimed at supporting Irish enterprises.

Future productivity work in Forfás will examine in greater detail some of the issues raised in the essays.

Sectoral Productivity Studies

Measuring the productivity performance or efficiency of sectors that are predominantly domestically traded has become increasingly important in Ireland. Since these sectors are only open to limited international competition, the services on offer can often be highly priced or of poor quality and can hinder the overall competitiveness of our economy.

In 2006 Forfás conducted studies on the productivity performance of two large domestically-traded sectors, the Irish residential construction sector and the Irish road freight sector.

The common theme emerging from both of these studies is that while productivity growth has improved, their performance is still poor relative to European best practice, and as such will need a concerted effort from policymakers, business representatives and individual firms to continue and extend the pace of reform in the sectors. In particular, this will require these sectors to improve labour and management skills, ICT usage and levels of mechanisation, while from a policy perspective sustaining an overall competitive regulatory and economic environment will be important.

Forfás has also been a key partner in a study that benchmarks the productivity of Irish pharmaceutical/chemical industry, and the policy recommendations emerging from this study will be published in 2007.

Ireland's Broadband Performance

The 2006 Broadband Benchmarking Analysis, published in November 2006, provided an assessment of Ireland's comparative performance in meeting the needs of enterprise in terms of prices, availability, quality and choice of services, and identifies the key policy issues that need to be addressed.

The availability and effective utilisation of high capacity broadband services is an important contributor to productivity growth at enterprise level. The move towards a services based economy, particularly with the increase in electronic transactions and information flows, makes it essential that Ireland has access to reliable and cost competitive communications services. Competitive provision of broadband is critical for the attraction of foreign direct investment, for the development of indigenous industry and the promotion of the knowledge economy. There are also important societal benefits in areas such as the delivery of health and education services and in increasing access to, and the efficient delivery of, public services.

While Ireland has high levels of international connectivity at competitive prices, the principal findings of the benchmarking exercise include:

- **Take-up:** Broadband take up in Ireland more than doubled in 2006 to 517,000 subscribers. Broadband penetration in Ireland at 11% remains behind the OECD average of 15.5%.
- **Prices:** For entry-level asymmetric broadband services of 0.5-1Mbit/s, Ireland compares well on price relative to the EU-15, ranking 3rd of the EU-15 countries. Ireland also compares favourably for more advanced services such as 34Mbit/s leased lines, which tend to be used by larger companies, ranking 9th cheapest of 20 benchmark countries. However, Ireland is the second most expensive for 2 Mbit/s symmetrical broadband services of the countries benchmarked.
- **Choice/Quality:** Implementation of local loop unbundling (LLU), which has a critical role to play in increasing competition as well as facilitating product innovation, continues to move at a very slow pace in Ireland. Comparative data for 2006 shows Ireland joint 13th of the EU-15 with Greece in terms of the percentage of telephone lines unbundled.

To improve Ireland's comparative performance across key areas such as availability, choice/quality and take-up, two main challenges remain for broadband policy:

- Firstly, Ireland must continue to increase the take-up of existing broadband services across all user groups through: improvement of availability, particularly in regional locations; enhancement of competition and product innovation by broadband suppliers; and improvement of awareness among SMEs.
- Secondly, the availability of two-way, symmetrical broadband speeds and capacity needs to increase dramatically. Ireland should emulate global leaders like Japan, Korea, the Netherlands and Sweden and encourage high levels of investment in the next generation of broadband infrastructures and services required to meet enterprise needs.

Broadband Futures

During 2006 Forfás initiated a more long-term review of Ireland's broadband requirements. This study will assess future global broadband trends over a 10-year period, outline the implications of these trends for Ireland and develop policy options for future-proofing Ireland's broadband requirements.

Advances in communications services and the many applications of information technologies are increasingly driving innovation, competition and productivity growth in markets, business models and products and service development. They are also having a pervasive impact on the development of the information society and in areas such as social networking. Ireland needs to ensure that it has the next generation of Internet Protocol (IP) based networks and services in place to take full advantage of these developments and Forfás has commenced a review of the issues involved. To inform this forward-looking research, Forfás consulted with national and international experts to develop a more medium to long-term perspective on future trends in broadband technology, regulation, market dynamics and applications. The outcome of this work was presented and discussed at a seminar hosted by Forfás in November 2006, which included stakeholders from key government departments, competition and regulatory interests and the development agencies. This study will continue during 2007 with the objective of developing an agreed vision for Ireland's next generation broadband network requirements and policy options to support their development.

Waste Management Benchmarking

Maintaining economic progress in Ireland is contingent on good environmental standards and the availability of modern waste management services to meet the needs of the enterprise sector. The availability of waste management services and facilities and the associated costs continue to be a key competitiveness issue for enterprise in Ireland. Forfás benchmarked waste management services in Ireland with a range of other countries, comparing Ireland's performance in waste generation, treatment facilities, costs, ownership, accessibility and capacity, and identified policy requirements,

Ireland is achieving reductions in per capita municipal waste generation and the levels of recycling are rapidly improving. However, competitiveness weaknesses remain in meeting the waste management needs of enterprise in terms of costs and a heavy reliance on landfill.

The Forfás benchmarking analysis has highlighted a number of issues that need to be addressed to improve Ireland's comparative performance in meeting the waste management needs of the enterprise base:

- ❑ **Addressing Infrastructure Deficits:** While significant progress has been made in recent years to increase the percentage of waste being recycled, Ireland's dependence on landfill remains very high relative to other countries. This is mainly due to the limited progress being made in delivering waste infrastructure. Specific infrastructure deficits that need to be addressed include thermal treatment for hazardous and non-hazardous waste, biological treatment and reprocessing facilities.
- ❑ **Removing Barriers to Infrastructure Delivery:** Accelerating the rollout of waste infrastructure facilities will require the development of a competitive market structure, improved coordination of regional waste plans and accelerating the planning process for waste infrastructures. Increasing coordination of regional waste management plans would help to ensure that Ireland is benefiting from the economies of scale that can exist in the delivery of waste infrastructure.

- ❑ **Waste Minimisation and Prevention:** Investing resources in waste minimisation and prevention offers potential long-term benefits for the competitiveness of enterprises of all types. A range of waste/pollution prevention initiatives are being undertaken by different organisations such as the development agencies, IBEC and the Environmental Protection Agency (EPA). These organisations should continue to enhance their efforts to ensure that businesses are fully aware of the benefits of waste prevention.

Electricity Benchmarking Analysis

In December 2006 Forfás published its first *Electricity Benchmarking Analysis*, assessing Ireland's comparative performance in meeting the needs of enterprise across the key issues of price, security of supply, access/quality and market concentration in supply and generation.

A reliable and competitively-priced supply of electricity is a vital ingredient in Ireland's international competitiveness and long-term economic development. This is all the more important in the context of the rapid growth in demand for electricity. The growth in demand in Ireland is outstripping the rest of the EU, with annual growth of 3.1% in 2005 compared with the EU average of 1.1%. Annual average growth in Ireland is forecast at 4% per annum over the medium term. A significant improvement in our energy competitiveness is required.

In summary:

- ❑ Ireland recorded the second highest price increase of the EU-15 in the period 2000-2006, with electricity prices increasing 52.7% during this period, compared to 28.9% in the EU-15. This moved Ireland from below the EU average on costs in 2001 to being one of the more expensive countries currently.
- ❑ Ireland has a low level of spare electricity capacity during peak demand compared to the other countries. While it is expected that there will be sufficient generation capacity to meet demand until 2010, the margin will remain tight pending the installation of additional capacity.
- ❑ Both the electricity generation and retail supply markets are relatively more concentrated in Ireland than in other countries.

- Ireland is the second most reliant of the 13 benchmark countries on fossil fuels for electricity generation (gas, oil and coal combined); 93% of Ireland's fuel for generation comes from fossil fuels.

Ireland's ability to continue attracting high levels of foreign direct investment and to provide a supportive environment for Irish enterprise generally will depend on its capacity to deliver a secure and uninterrupted energy supply at a competitive cost. It is imperative that the decisions in the Government's White Paper on Energy are effectively implemented in a way that deliver this supply.

Submission on Energy Green Paper

In October 2006 the Department of Communications, Marine and Natural Resources invited submissions from stakeholders on its Energy Green Paper, *Towards a Sustainable Energy Future for Ireland*. The Forfás submission highlighted the energy priorities from an enterprise development perspective and the key issues identified are included in the Government's White Paper on Energy.

Three areas that would have a positive impact on investment and energy competitiveness were identified as follows:

- **Market Structure:** Liberalised and competitive markets can contribute to security of supply through pro-competitive regulation that sends the right investment signals to industry participants. A stable policy and regulatory framework are key for the efficient functioning of the energy market. The critical issues to be addressed include:
 - Committing to specific targets for price competitiveness and generation adequacy that will influence the choices to be made on market structure;
 - Separating ownership of the transmission network from the ESB Group, while retaining it in state ownership, so as to promote competition and investment from new entrants; and
 - Putting in place the market and regulatory conditions to act as an incentive to new entrants to the electricity generation market.

- **Interconnection:** Increased interconnection with the UK is critical both from a security-of-supply perspective and for developing a more competitive market. While plans to build a second North-South interconnector and an East-West interconnector are welcomed, work on putting these infrastructures in place needs to start immediately and be completed by the end of the decade. In addition, given the importance of energy to overall competitiveness, exchequer funding should be used to finance major strategic energy investment projects such as the interconnectors under the *National Development Plan, 2007-2013*, and all investments should be based on a detailed cost-benefit analysis.

- **Fuel Mix:** The Green Paper proposed a target of 30% for renewable electricity generation capacity by 2020. Given the speed of technological change (e.g. clean coal technology), Forfás, in consultation with the Commission for Energy Regulation and the transmission operator, Eirgrid, recommended that it should be left to the market to decide the appropriate fuel mix that delivers a reliable and environmentally sustainable supply of energy in the most cost effective way. Renewable energy sources are best promoted through support for R&D, adequate grid investment (including interconnection), and by ensuring that prices for all fuels reflect their social and environmental costs.

A Baseline Assessment of Ireland's Oil Dependence

As part of its work on policy foresight, to assess emerging challenges to competitiveness and sustainable economic growth in the future, during 2005 Forfás undertook an analysis of Ireland's oil dependency. The report, *A Baseline Assessment of Ireland's Oil Dependence*, was published in April 2006.

Ireland is one of the most oil-dependent countries in the world, ranking third-highest in the EU-25 in 2002. This makes Ireland vulnerable from at least two points of view: the possible interruption of supplies due to crises in oil-producing countries; and the more fundamental problem posed by the "peaking" of oil production. The timing and consequences of 'peak oil' are disputed, but may be imminent, and preparations will require both significant time and investment. The implications of action to mitigate the consequences of oil peaking were explored

in the report, which highlighted the need for a programme of action that addressed the use of oil in transportation, security of supply measures, renewable energy, energy efficiency, and spatial strategy.

Climate Change – Emissions Trading

Forfás is a member of the National Allocation Advisory Group which advises the Environmental Protection Agency (EPA) in relation to the second phase of the EU Emissions Trading Scheme (2008–2012), the National Allocation Plan 2 (NAP2).

In advising on the allocation of the emissions allowances for the trading sector Forfás made a submission to the EPA on the issues of competitiveness, accounting for growth, benchmarks and the combustion definition, and how these can best be incorporated in NAP 2. Discussions took place during the year with Enterprise Ireland, IDA Ireland, the DETE, and with members of the Forfás Industry Liaison Group in formulating this input.

Submission to NDP 2007-2013

The National Development Plan (NDP) 2007-2013, entitled *Transforming Ireland - A Better Quality of Life for All* was published in January 2007. During 2006 Forfás coordinated inputs, on behalf of the development agencies, to inform the DETE submissions to the Department of Finance. The National Competitiveness Council (NCC) also made a formal submission to the Department of Finance highlighting seven priority areas.

Improved and sustainable competitiveness is vital to build on Ireland's recent success and to ensure better standards of living and quality of life. Notwithstanding significant increases in investment in infrastructure, education and R&D in recent years, in large part through the NDP 2000-2006 programme, Ireland continues to lag behind its main competitors in a number of areas crucial to national competitiveness and economic growth.

Given its broad scope, the preparation of NDP 2007-2013 provided an ideal opportunity to put in place the improved framework conditions required to give further impetus to Ireland's future economic and social development. Among the priority areas identified by

Forfás and the development agencies are:

- **Infrastructure:** Continued focus on improving Ireland's transport, waste management, energy and broadband infrastructure;
- **Science & Technology:** Significant resources to develop sophisticated planning, review and evaluation mechanisms to ensure full implementation of the *Strategy for Science, Technology and Innovation 2006-2013 (SSTI)*;
- **Human Capital Development:** An improvement in the quality of Ireland's labour supply to maintain Ireland's current economic growth rate, in line with the recommendations of the National Skills Strategy;
- **Regional development:** Prioritisation of the development of the Gateways as key drivers to achieving balanced regional development; and
- **Implementation and Value for Money:** Given the huge human, financial and institutional resources that a new NDP requires, it is crucial that the process through which spending is allocated and managed is robust and that lessons are learned from the previous NDP.

Business Regulation Forum

The Business Regulation Forum was established by the Minister for Enterprise, Trade and Employment in late 2005 to examine regulations and regulatory issues affecting business. Its members are drawn from the business community, business organisations, government departments and Forfás.

During 2006 the Forum maintained a strong focus on collecting information to ascertain the extent to which regulation may be burdensome for businesses in Ireland. In this regard, the Forum heard from guest speakers, both national and international, on a range of topics relating to regulation. The Forum secretariat, along with the Chairman and some members, visited other countries to explore best practice in tackling regulatory issues.

A number of projects were also conducted by the Forum, including:

- A call for submissions on regulatory issues for business in the early part of the year, which resulted in 40 responses from interested parties;

- A number of case studies were put together to understand the day-to-day difficulties of businesses in dealing with regulation; and
- A pilot exercise to test the applicability of the Standard Cost Model in the Irish context - this model is a method of measuring the administrative burdens of regulation and is used in many European countries and by the European Commission.

The evidence gathered by the Forum indicates that most regulatory burdens on business arise in the following areas: tax, health & safety, environment, requests for statistical information, and employment and company law. The Forum's report was launched in April 2007 by the Minister for Enterprise, Trade and Employment.

Global Socio-Economic Scenarios

Ireland's ability to shape certain developments in the world economy is limited. To remain competitive Ireland must understand longer-term trends and incorporate the necessary flexibility in policy to address these global changes.

Scenarios have been used for many years by both the public and private sector as inputs to their strategic planning processes. Scenarios can be used as frameworks for the identification of strategic issues, and may also be the starting points for the development of robust strategic policy responses.

Taking a long-term perspective is a dimension of the policy advisory process, which Forfás consistently seeks to develop. Therefore, Forfás initiated work on socio-economic scenarios to provide a context in which the dimensions of potential challenges and opportunities could be explored, and in which the necessary responses could be broadly examined. Due to Ireland's strong links with the world economy, the analysis of global scenarios to identify key global drivers constituted phase one of the project. Analyses of the global scenarios identified a number of external driving forces that could have a major impact on the Irish economy and the competitiveness of Ireland. A number of issues emerged as important policy considerations to ensure a sustainable competitive enterprise sector in Ireland in 2025: globalisation; security of energy supply; climate change; demographics; application of technology; and social policy.

A high level advisory group has been established to progress the development of scenarios for Ireland over the long term and these will be completed during 2007.

Trade Policy

Forfás continued to support the Department of Enterprise, Trade and Employment in developing Ireland's position both at the World Trade Organisation (WTO) and at the EU level, particularly in relation to the Services Directive.

In particular, Forfás provided economic advice on the implications of the ongoing discussions at the WTO Non-Agriculture Market Access (NAMA) negotiations and of the EU Services Directive. Forfás also provided analysis of Ireland's trade and investment position through the Trade and Investment report, which was published in January 2006.

Forfás continued to support the work of the Trade Facilitation Forum, in particular in scoping the policy and other requirements for the development of a 'single window' for the management of reporting obligations in relation to import and export activities.

Consumer Policy

Forfás provided secretariat and research support to the Interim Board of the National Consumer Agency, established by the Minister for Enterprise, Trade and Employment in May 2005.

This followed the recommendations made by the Consumer Strategy Group in the report *Make Consumers Count*. Forfás provided research and administrative support to this group whose objective was to advise and make recommendations on the development of a national consumer policy strategy.

Forfás provided secretariat and research support to the Interim Board of the National Consumer Agency. The National Consumer Agency was established as a statutory entity on 1 May 2007.

2

Advancing Coherent and Dynamic Enterprise Development Policies

Enterprise development supports and initiatives are provided by a number of different enterprise development agencies. These include IDA Ireland, Enterprise Ireland, Údarás na Gaeltachta, FÁS and the County Enterprise Boards, each of which focuses on different aspects of enterprise promotion. The effectiveness of state supports is enhanced when they are complementary and informed by an overarching vision of enterprise development and a clear strategy of how to get there.

Forfás continues to work closely with the Department of Enterprise, Trade and Employment (DETE) and our sister agencies, to deliver coherence in Ireland's enterprise development policies and to ensure timely delivery of high quality intelligence to the DETE on enterprise performance, challenges and opportunities.

Small Business Forum

The Small Business Forum was established by the Minister for Enterprise, Trade and Employment in July 2005 to consider the current environment for small businesses in Ireland and to advise on the adequacy and appropriateness of public policy in relation to small business, including the interventions by the enterprise development agencies. The Forum's report *Small Business is Big Business*, was launched in May 2006 and included a total of 15 recommendations.

The Forum comprised stakeholders involved in small business development in Ireland, including representatives of various sectors of small business, representative associations, academics and State development agencies. Forfás acted as Secretariat to this group, coordinating and preparing papers for each meeting, initiating a range of internal research projects to inform discussion themes, and coordinating a broad public consultation process.

The Forum made recommendations in the following areas:

- **Creating a better environment for all small business through:** better regulation; a balanced approach to Local Authority charges; enhanced access to information and advice; and an annual publication of a small business data release.
- **Stimulating growth aspiration and potential by:** broadening access to finance; advancing management capability; leveraging ICT; and stimulating research, development and innovation.

- **Supporting an entrepreneurial culture by:** developing a National Entrepreneurship Policy.

At the launch of the report, Minister for Enterprise, Trade and Employment, Mr Micheál Martin TD, announced that he would seek to implement the recommendations that fall within the remit of the DETE and that he would work closely with his government colleagues to outline an implementation path for the remaining recommendations.

The members of the Forum are to remain in place to review implementation and progress in achieving the core objectives. Its meeting in November 2006 reported progress on the following recommendations:

- Raising the standard of management capability through the establishment of a **Management Development Council** – the Council was established in May 2007.
- Providing **Knowledge Acquisition Grants** – will be delivered by Enterprise Ireland in 2007.
- Making **Innovation Vouchers** available to small business – this scheme is to be rolled out by the City and County Enterprise Boards in 2007 under the auspices of Enterprise Ireland.
- Providing funding to allow small businesses avail of an **ICT Audit** – funding was announced in November 2006 for a scheme to be provided by the City and County Enterprise Boards in early 2007.



Pictured launching *The Changing Nature of Manufacturing and Services in Ireland* were Mr Micheál Martin TD, Minister for Enterprise, Trade and Employment and Mr Martin Cronin, Chief Executive, Forfás.

- ▣ Developing a **National Entrepreneurship Policy** - Forfás is currently researching and compiling a draft Statement for the DETE.
- ▣ Developing networks of **Business Angels** – a pilot scheme is underway and a review will be completed in late 2007. Pending the outcome of the review further developments as suggested by the Forum will be considered.
- ▣ Compiling and publishing comprehensive **data on the small business sector** – the Central Statistics Office (CSO) is actively compiling this data with a view to publication in 2007.

This implementation process received a further boost in Budget 2007 with the announcement of changes to the Business Expansion and Seed Capital Schemes and the introduction of a package of measures recommended by the Forum that aim to reduce the administrative burden facing small businesses.

Budget 2007 Submission

In line with the work of the Small Business Forum's Report, the Forfás Budget 2007 submission to the DETE primarily focused on small business issues, although broader issues in relation to the promotion of research and development were also proposed.

In terms of improving financing for small business, the submission recommended extension and improvement of the Business Expansion Scheme (BES) and Seed Capital Schemes (SCS). In line with this, Budget 2007 made significant changes to the schemes by extending their lifetime to 2013, increasing the individual investment ceilings for the schemes from their current levels of €31,750 to €150,000 for the BES and to €100,000 for the SCS and

increasing the turnover threshold below which a company can raise funds under the schemes from the current limit of €1 million to €2 million.

Tax simplifications for the small business sector, which were called for by the Small Business Forum, were reiterated in the Forfás pre-budget submission, and improvements have been made in Budget 2007 to the levels of VAT exemptions for goods and services, the cash basis of accounting for VAT and preliminary tax payment by the small business sector.

In addition to SME-specific measures, the pre-budget submission called for the promotion of innovation, research and development among firms in Ireland, by maintaining 2003 as the base year for the R&D tax credit for a further three years to 2009 when calculating the incremental R&D expenditure. This was accepted in Budget 2007.

The Changing Nature of Manufacturing and Services

Forfás conducted a study to analyse the changing nature of Ireland's economy in a global context. The report, *The Changing Nature of Manufacturing and Services*, was launched in July 2006 by the Minister for Enterprise, Trade and Employment, Mr Micheál Martin TD.

Economic development in OECD countries is characterised by a gradual process of structural change. In recent years, many OECD economies have experienced a decrease in the number of jobs in the manufacturing sector with a rise in the number of jobs in services. International trends indicate that although manufacturing production and the value-added continue to experience strong growth, its share of total value-added in the global economy is declining and services now account for 68% of gross value-added in the OECD.

This study was undertaken to gain an understanding of the performance of Ireland's trading sectors within the context of these international trends, and shows that manufacturing continues to play an important role in Ireland's economy.

Specifically:

- Manufacturing output continues to grow, increasing by 28% in volume terms from 2000 to 2005.
- There has been a reduction in the number employed in manufacturing in recent years, following a 30-year period of growth.
- Manufacturing production continues to increase despite decreases in employment in recent years, indicating strong productivity growth in manufacturing.
- The manufacturing sector makes a significant contribution to the economy, with an estimated expenditure of €25 billion in 2004 on wages, Irish materials and services, and accounts for 28% of total corporation tax yield.

The report also showed that internationally tradable service activities continue to grow and Ireland has become one of the leading world exporters of services:

- Ireland increased its share of world services exports from 0.36% in 1980 to 2.2% in 2004, ranking Ireland the 13th highest exporter of services in the world in 2004.
- Between 2000 and 2005 the total contribution of services to total Irish exports of goods and services increased from 22% to 35%.
- Total employment in services, both international and domestic, increased by 411,000 between 1997 and 2005 and now represents 68% of total employment.

Although the statistical analysis in the report demonstrates Ireland's strong performance internationally, there are some issues that merit further consideration:

- To date Ireland has been a major beneficiary of global foreign direct investment and offshoring by foreign-owned firms into Ireland, and continues to perform relatively well in attracting inward investment. However, Irish outward direct investment (ODI) has also been increasing with ODI flows estimated at €12.7 billion in 2004 – the largest total ever recorded.
- Export performance in manufacturing and services is significantly reliant on foreign-owned enterprise, although the indigenous enterprise base is growing steadily in high value-added sectors.

- Services employment in agency-assisted internationally-traded services firms is concentrated in the Dublin region, which accounts for 67% of total employment.

During 2007 Forfás will support the DETE in its secretariat role for the High Level Manufacturing Group that has been established in response to the *Towards 2016* partnership talks. Forfás will also develop a strategy to foster services activities, by examining the conditions required to stimulate further growth in Ireland's services export base and how locally traded services could be further developed in terms of productivity and competitiveness.

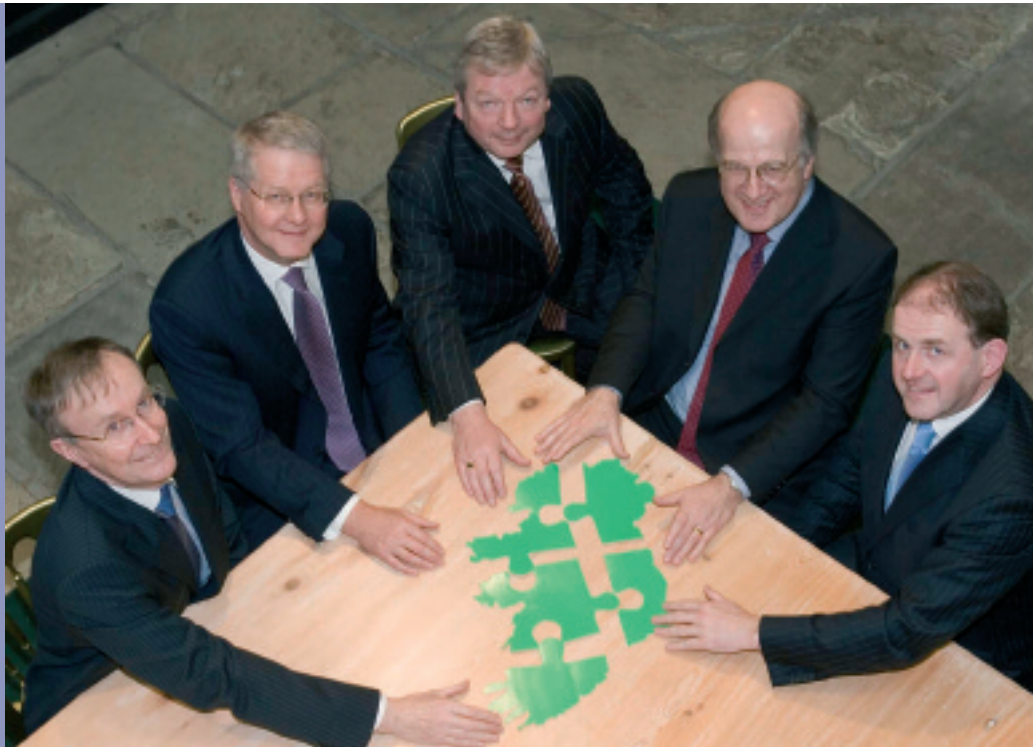
Value for Money Indicators

In 2005 A Value for Money (VFM) Steering Group was established, chaired by the DETE, and consisting of representatives from the development agencies to examine the VFM indicators currently in use in relation to enterprise development and how they might be updated.

The group developed a comprehensive suite of indicators, which is designed to provide information on the financial inputs and the nature of the outputs from the activities of the development agencies on an annual basis. The principal messages emerging from the data analysis of 2003-2005 are as follows:

- State expenditure on enterprise development through the three agencies (Enterprise Ireland, IDA Ireland and Údarás Na Gaeltachta) remained static, and marginally decreased in real terms.
- Strong increases in the levels of sales, exports, gross value-added per employee in multinational and indigenous enterprise, and average salary per job created in multinational subsidiaries.
- Positive trends in levels of R&D activity, numbers of high potential start ups and foreign direct investment projects supported.
- Little or no real growth in traditional sources of direct economic return from agency expenditure, e.g. employment and Irish economy expenditure. Corporation tax receipts have continued to increase in real terms.

The VFM group will continue to develop indicators to measure the impact of non-financial supports by the agencies during 2007.



Pictured at the launch of the *Business Networks Forum* were Mr Martin Cronin, Chief Executive, Forfás, Mr Leslie Morrison, Chief Executive, Invest Northern Ireland, Mr Liam Nellis, Chief Executive, InterTrade Ireland, Mr Sean Dorgan, CEO, IDA Ireland and Mr Frank Ryan, CEO, Enterprise Ireland.

Regional Strategic Agendas

The development agencies have a strong role to play in the achievement of a more balanced spatial strategy in Ireland. In 2002, the agencies, together with Forfás, outlined strategies for developing their client base in each of their operational regions to 2006. The strategies set out the regional development priorities within the region and the requirements in terms of the regional infrastructures needed to support enterprise development.

Four years on, significant changes have occurred in investment in physical and social infrastructures, amendments to EU State Aid and regional policies, the adoption of Regional Planning Guidelines and the publication of studies on the National Spatial Strategy Gateways and the Atlantic Corridor. In this context, the development agencies' Regional Strategic Agendas (RSAs) have been reviewed and updated. A statistical analysis is provided for each of the regions, outlining trends in population growth, employment patterns and gross value-added. Employment trends for agency-supported sectors are also outlined and an indication of emerging sectors within regions is provided.

Based on enterprise development needs, the RSAs identify the specific hard and soft infrastructures required to create a competitive enterprise environment within each of the regions and identify areas for cross-agency collaborative efforts at a regional level on sectoral and network development. The RSAs also help ensure consistency of message from the development agencies in contributing toward regional development initiatives.

Gateway Investment Priorities Study

In November 2006 Forfás and the Department of Environment, Heritage and Local Government published its report *Implementing the NSS: Gateway Investment Priorities Study*.

One of the key findings related to the significant challenges faced by the gateways in terms of funding the required scale of investment in areas such as urban renewal, non-national roads, cultural facilities and marketing and branding. The report noted the opportunity presented by the new 2007-13 NDP to make the NSS a reality as the framework for regional investment development. The study called for a reaffirmation in the NDP of the role of Gateways as the drivers of growth in their region and explicit commitment to meeting their prioritised investment needs.

Forfás welcomes the 2007-13 NDP, particularly with regard to its prioritisation of the development of the Gateways as key drivers to achieving balanced regional development, and to the establishment of a Gateways Innovation Fund as a mechanism to bring about better coordination in gateway development. The fund is intended to support distinctive and innovative projects in Gateway areas which are contributing to the development of the Gateways and their wider regions.

Business Networks Forum

More than 150 invited experts from business, government, research and academia gathered at Farmleigh House, Dublin, in January 2007 for the *Business Networks Forum: Collaborate for Commercial Success*. Forfás, in conjunction with executives from Enterprise Ireland, InterTradeIreland, Invest NI and IDA Ireland organised the Forum, which highlighted the potential business and economic benefits of collaboration across the island of Ireland.

The event was organised in response to the *Enterprise Strategy Group: Ahead of the Curve*, 2004 Report, which recognised the strategic importance of business networks and was the outcome of a key recommendation of the British-Irish Inter Governmental Conference (BIIGC). The BIIGC identified a number of areas where coordinated policy intervention could prove beneficial to citizens in both jurisdictions on the island. It follows growing evidence on the island of Ireland and globally that collaborative networks can help businesses to achieve competitive advantage faster and cheaper, and with less risk and disruption to their operations than if they were to operate independently.

The Forum was opened jointly by Mr Micheál Martin TD, Minister of Enterprise, Trade and Employment and Ms Maria Eagle, Minister for Enterprise, Trade and Investment in Northern Ireland, who outlined the approaches of both governments to collaborative business networks on the island of Ireland.

The conference covered a wide range of topics including:

- Case studies of business networks in Ireland in R&D collaboration, market development, skills development and supply chain;
- Multinational corporation's viewpoints on the opportunities presented by business networks; and
- The Public Policy and Strategy Response of the enterprise development agencies.

The Forum is expected to provide input to networks development policy on the island of Ireland and will also provide useful input into the preparation of the European Cluster Memorandum, which focuses on developing cluster and network initiatives throughout the EU.

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 companies locating in disadvantaged areas in Dublin, Cork and Galway 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, where relevant, recommends projects to the Minister for Enterprise Trade and Employment, who may issue a certificate entitling those companies concerned to benefit from tax and other incentives. Recommendations are made in accordance with guidelines laid down by the Minister.

In 2006 Forfás processed three new applications for Enterprise Areas certification and handled amendments to the details of two existing certificates, bringing the total number of certified enterprises to 115.

SME Finance/Equity Survey 2006

At the request of the Department of Enterprise, Trade and Employment, Forfás conducted a survey to examine the current market conditions faced by Irish SMEs in accessing finance. The results of the survey were used in the context of a review of the Business Expansion Scheme (BES) and Seed Capital Schemes (SCS).

The key findings were:

- Among the companies that attempted to raise finance/equity from all sources in the past three years, 65% indicated that they were able to raise all of the finance required. This varied significantly across various employment size categories, ranging from 43% in the employment category "less than 3 employees", to 85% in the "51-100 employees" category.
- 48% of the companies that attempted to raise finance in the range of €250k-€500k were not able to raise all of the finance required. Among the companies that wanted to raise less than €100k, 42.5% were not able to raise all of the finance required.

- Firms within the “3-9”, “10-19” and “20-50” employment categories rely more on the BES than companies in the larger employment size categories, with 35%, 25% and 25% of companies in these categories using the BES. The highest usage of the Seed Capital Scheme is in the “3-9” and “10-19” employment categories.
- 53% of the companies who regarded themselves in the development phase used BES as a source of finance, followed by starts-up at 16%. Results are similar for the Seed Capital Scheme.
- 54% think that it is difficult to raise finance/equity today, however this ratio goes down to 39% when they are asked about the next three years.
- Companies that employ less than 50 regard the BES as an important expected source of raising finance/equity in the next three years, with 94% indicating that they expect to use it. 88% of respondents that employ less than nine people expect to use the SCS as a source of raising finance/equity in the next three years.

Entrepreneurship Policy Statement

The Small Business Forum recommended that the government adopt a national entrepreneurship policy focused on optimising the number of start-up businesses and maximising the number of start-ups aspiring to high growth. The Department of Enterprise, Trade and Employment requested that Forfás provide research and executive support to the development of such a policy.

Phase 1 of this work was completed during the year, which includes an inventory and gap analysis of existing entrepreneurship schemes across government departments and state agencies, educational initiatives and competitions/awards in the private sector, and an overview of international practice in supports for entrepreneurship.

An Expert Advisory group comprising individuals from the public and private sector has been established to provide input into such a policy, and work is underway on the statement, which will address the following areas:

- Framework conditions for entrepreneurship;
- Improving coherence of policy instruments;
- Promoting the culture for entrepreneurship;
- Reinforcing entrepreneurship education; and
- Stimulating latent entrepreneurial performance, particularly among women and immigrants.

Business Continuity Planning – Responding to an Influenza Pandemic

Forfás undertook a study on behalf of the DETE to identify issues for enterprise in the event of an influenza pandemic, and to develop a user-friendly check-list for enterprise for business continuity planning purposes. The report was published in February 2007.

The influenza pandemic study was designed to assist enterprises to prepare for an influenza pandemic by recommending best-practice policies, standards and procedures for business continuity planning. The work was undertaken in the context of preparedness plans being developed by all government departments and agencies.

A steering group comprising representatives of DETE, Forfás, IDA Ireland and Enterprise Ireland was established, and expert consultancy on the issue was commissioned. The consultants conducted interviews with relevant government departments, agencies, key utility and industry organisations and enterprises across a range of sectors. The key outputs from this work included:

- A published report containing business continuity planning guidance for enterprises, ten illustrative case studies for enterprises across a range of sectors, and a user-friendly preparedness checklist.
- Recommendations for government departments and agencies regarding steps to be taken to avoid disruption in the business enterprise sector in the event of a pandemic.

3

Human Capital Development to Support an Innovation Driven Economy

Skills and human capital development have played a very significant role in productivity increases, economic growth and improvements in living standards in Ireland and will continue to play a key role in economic growth into the future.

Ireland must be able to respond rapidly to changes in the world economic and technological environment. Virtually all sectors of industry are becoming more knowledge intensive and innovative, resulting in changes in the skills required, such as the increasing importance of both generic skills and individuals abilities to adapt to change. A workforce that is better educated and trained can produce higher value goods and services and is more likely to be innovative. Therefore, sustained and enhanced investment in the educational and training infrastructure is essential to our economic and social development over the medium term.

Forfás focused on human capital development during 2006 through its administrative and research support to the Expert Group on Future Skills Needs (EGFSN) and its management of the Discover Science and Engineering Awareness Programme.

Pictured at the launch of the EGFSN report *Tomorrow's Skills, Towards a National Skills Strategy* were Chairperson, EGFSN, Ms Anne Heraty, Minister for Enterprise, Trade and Employment, Mr Micheál Martin TD, Minister for Education and Science, Mary Hanafin TD and Mr Martin Shanahan, Head of EGFSN Secretariat, Forfás.



National Skills Strategy Research

During 2006 the Expert Group on Future Skills Needs (EGFSN) undertook extensive research to underpin the development of a National Skills Strategy at the request of the Minister for Enterprise, Trade and Employment.

The objectives of this study were to:

- ❑ Identify the skills required for Ireland to make the transition to a competitive, innovation-driven, knowledge-based, participative and inclusive economy by 2020;
- ❑ Provide projections of the labour force skills profile required to make the transition to such a knowledge based economy; and
- ❑ Provide training and education objectives where gaps and deficiencies are evident between the desirable situation and the likely supply.

The strategy was jointly launched by Mr Micheál Martin TD, Minister for Enterprise, Trade and Employment and Mary Hanafin TD, Minister for Education and Science in March 2007. The EGFSN proposes a vision of Ireland in 2020 in which a well-educated and highly-skilled population contributes to a competitive, innovation-driven, knowledge-based, participative and inclusive economy. Specifically, the EGFSN concludes that if Ireland is to realise this vision of a new knowledge economy, which can compete effectively in the global market place, enhancing the skills of the resident population, increasing participation in the workforce and continuing to attract highly-skilled migrants will all be necessary.

The report sets out specific targets for Ireland's skills profile in 2020, with a target of 45% of the population with third or fourth level qualifications. The EGFSN outlined specific objectives, which included the upskilling of 500,000 people within the labour force by at least one level on the National Framework of Qualifications, increasing the Leaving Certificate Completion rate to 90% by 2020 and increasing of the progression rate from second to third level to 72% by 2020.

National Skills Conference: The Skills Needs of the Irish Economy to 2020

The EGFSN held a National Skills Conference in Farmleigh House in October 2006. The conference was organised by Forfás on behalf of the EGFSN, with the support of the DETE, the Department of Education and Science (DES), FÁS and the Higher Education Authority. The conference was used as a forum to present the EGFSN's developing vision in relation to the National Skills Strategy and to seek stakeholder feedback on this.

The theme of the conference was meeting the skills needs of a competitive, knowledge based, participative and inclusive Irish economy over the period to 2020. The conference was opened by the Minister for Enterprise Trade and Employment, Mr Micheál Martin TD, and included a distinguished group of national and international speakers and panel members. Key stakeholders from education, training and enterprise were represented at the conference.

The conference highlighted the significant progress Ireland has made in recent years in terms of the educational attainment of its labour force. It also highlighted the challenges that face Ireland from a skills perspective if it is to move to a knowledge based, innovation driven economy. The conference concluded with a consensus on the key issues to be addressed: upskilling of the workforce and assessing the language skills needs of the migrant population.

Skills Requirement of the Digital Media Industry in Ireland

In July 2006 the EGFSN published its report *Future Skills Requirements of the International Digital Media Industry: Implications for Ireland*. The report examines the skills challenges which Ireland faces to derive maximum benefit from a global industry, which was worth over \$965 billion in 2004, and which is projected to grow to \$1.5 trillion by 2009. The report investigates the occupational composition and associated skills requirements of the leading international firms in the digital media sector.

The study was based on an analysis of seven key Digital Media subsectors: Electronic Games; Computer Generated Animation and Special Effects; Digital Film; Digital Television; eMusic; Wireless and Mobile Services; and eLearning.

The study highlighted the need for a combination of creative and technical skills to drive the industry. It also noted the increasing importance of non-technical skills such as project management, sales and marketing, communication and interpersonal skills.

The findings of this report should facilitate education and training providers to keep their curricula and programmes up-to-date with developments in the industry and thereby maximise the employability of their graduates. The report is a resource for Irish industry as it identifies the skills utilised by the leading international companies in the industry, and it provides a skills road-map for Irish digital media firms seeking to compete internationally.

Careers and Labour Market Information in Ireland

Careers and Labour Market Information in Ireland was launched in July 2006 by the Minister for Education and Science, Mary Hanafin TD. The report examines awareness levels of current and future employment opportunities amongst a variety of groups including school students, college students, women seeking to return to the workforce and those with experience of redundancy. The EGFSN found that there is a low level of awareness of labour market and careers information in Ireland.



Launching the EGFSN report *Career and Labour Market Information in Ireland* were Ms Anne Heraty, Chairperson of the EGFSN and Mary Hanafin TD, Minister for Education and Science.

The report highlights a strong interest from individuals at all levels for more information and guidance on where opportunities exist and how to access them. The report recommends that this information be made available in a coherent and streamlined way to both individuals and career guidance professionals, primarily through the establishment of a central careers portal site, which would direct each user to the information most relevant to him or her.

New Economic Migration Arrangements

In January 2007 the Minister for Enterprise, Trade and Employment, Mr Micheál Martin, TD, launched the New Employment Permits Arrangements including a new Green Card Scheme.

The new arrangements reflect policy advice provided by the EGFSN and Forfás during 2005 and 2006 on the rationale for implementing a system of high-skilled economic migration to meet Ireland's skills needs. The EGFSN and Forfás also provided advice on the implementation of the Employment Permit Regulations, providing data on occupations and sectors that are experiencing, or are likely to experience, skills gaps.

Management Development

Forfás worked with FÁS and Enterprise Ireland on the production of the *SME Management Development in Ireland Report* for the EGFSN, which identifies the improvement of management capability as an important function for Ireland's success, and outlines the barriers to take-up of management development opportunities amongst SMEs.

The report recommended the establishment of a committee or forum as an additional mechanism for coordination of management development opportunities among SMEs. This, coupled with the subsequent recommendation of the Small Business Forum that a Management Development Council consisting of management development providers and industry be established, led to the establishment in May 2007 of a Management Development Council under the aegis of Forfás. Forfás is to provide research and technical support to this council.

Skills Database

During 2006 Forfás worked in close collaboration with Government Departments and other agencies including FÁS, the Central Statistics Office (CSO), the National Qualifications Authority of Ireland (NQAI) and awarding bodies in further developing a sound database in the education, training and skills area upon which to provide policy advice.

FÁS manages the Skills Database on behalf of the EGFSN. Forfás worked in close collaboration with the FÁS Skills and Labour Market Research Unit and the CSO in relation to the collection and coherence of data to further develop the national skills database.

Forfás also made a submission to the CSO during the consultative process on the National Employment Survey. In its submission, Forfás stated that a dedicated module aimed at capturing labour market dynamics would be an extremely valuable exercise and strongly supported the proposal put forward by FÁS in a parallel submission for a dedicated module on skills.

National Workplace Strategy

During 2006 Forfás contributed to the implementation of the National Workplace Strategy through its membership of the High Level Implementation Group chaired by Minister of State at the DETE, Mr Tony Killeen TD.

Forfás worked closely with the National Centre for Partnership and Performance (NCPP) and other stakeholders on the development of benchmark indicators in relation to workplace innovation. Forfás also provided input to *Improving Performance, Sharing the Gains* published by the NCPP in January 2007 and consulted with them in relation to the synergies which exist between the National Workplace Strategy and the National Skills Strategy research undertaken by Forfás.

Discover Science and Engineering

Discover Science and Engineering (DSE) is an integrated national science awareness programme managed by Forfás on behalf of the Office of Science, Technology and Innovation in the DETE. It brings together many science, engineering, technology and innovation awareness activities that were previously managed by different public and private bodies. DSE aims to build and expand on these activities and to deliver a focused, strategic and quantifiable awareness campaign.

DSEs overall objectives are to increase the number of students studying the physical sciences, promote a positive attitude to careers in science, engineering and technology, and foster a greater public understanding of science and engineering and their value to Irish society. It has strategically defined its audience as students at all levels, with a particular focus on primary and secondary, their parents and teachers, as well as the wider public. The programme also works closely with third-level institutions and with intermediate audiences such as industry and the media.

Significant progress was made during 2006 in the development of DSE Primary Science Programme and a series of targeted programmes for second-level schools commenced. These second-level initiatives involve two pilot projects aimed at key decision-making milestones in the secondary school curriculum in relation to choosing science and technology as a career. The first pilot project is the Discover Sensors project, which supports the recently-modified junior science curriculum. The second

pilot project is an ICT careers campaign conducted in cooperation with the *STEPS to Engineering* campaign, which is targeted at school leavers.

Science Week Ireland

Science Week Ireland continues to be one of the key elements of the DSE programme each year. There was a 10% increase in the number of nationwide events during 2006, up to 400. Events took place in a variety of locations including schools, colleges, universities and libraries, and DSE continued to provide roadshows to a number of venues throughout the country.

The theme of Science Week 2006 was *Science in our Future* and to celebrate this an exhibition was mounted in St Stephen's Green, Dublin, showcasing 100 predictions for the future from school children and a host of well-known personalities. A number of these predictions was also projected onto high profile buildings in Dublin, Cork and Galway to increase awareness of Science Week among the general public.

To strengthen the regional presence of Science Week, strategic partnerships were formed with Discovery 2006 in Cork and the Galway Science and Technology Festival.

NanoQuest

In 2006 DSE developed a 3D computer game aimed at encouraging young people (specifically 13 to 14-year olds) to learn about the new and exciting world of nanotechnology. The game was launched during Science Week and was distributed to schools via Junior Science teachers and through the *GameStop* chain of shops. An extensive communications campaign was developed around the game including the use of non-traditional media channels, involving the social networking websites *Bebo* and *YouTube*. The campaign continued in 2007 when a new level of the game was launched during the BT Young Scientist Exhibition.

Discover Primary Science

The Discover Primary Science Programme was at its most active during 2006 in terms of teacher registration and induction training. The number of teachers registered during the year was in excess of 2,800, almost double on 2005, and this Programme is well on the way to being available to all 3,300 national primary schools by the end of 2007. There was increased participation in 2006 of over 300 schools in the *Awards of Science Excellence*, which was triple that in 2005.

Pictured at the official launch of Science Week 2007 were Minister for Enterprise, Trade and Employment, Mr Micheál Martin TD, performers from the Tumble Circus and children from the Gardiner Street and Star of the Sea National Schools.



Green Wave

The Green Wave project was piloted in 2006 and delivered through schools registered for Discover Primary Science. The project involved school children observing and recording the budding date of the Horse Chestnut and Hawthorn trees in spring, all of which were subsequently mapped nationwide and made available online at www.greenwave.ie. The project has been further developed for 2007 and was launched nationally in late February.

Discover Sensors

The Discover Sensors project provides structured training and resources (including website and video) to support science teachers in the teaching of the junior science curriculum which, since 2006, includes assessment of project work as part of the Junior Certificate examination process.

DSE is leading this project in conjunction with Junior Science Support Services (JSSS), National Centre for Technology in Education (NCTE), the National Council for Curriculum and Assessment (NCCA) and the regional education centres. The project has a dedicated website (www.discoversensors.ie).

Television

DSE uses television in two ways. The first is 'standard' programming, delivered through the SCOPE television programme on RTE. The programme links science to popular teenage interests and typically gets 80,000 viewers per episode. Secondly, DSE provides stories and footage to television news desks of scientific and engineering developments and events.

BT Young Scientist

DSE is a Gold Partner in the Young Scientist and Technology Exhibition held in January each year. The theme for the DSE exhibit was NanoWorld, which aimed to bring the NanoQuest game to life. The exhibit included a number of interactive activities related to the world of nanotechnology, and was co-hosted by Engineers Ireland's *STEPS to Engineering* programme and CRANN (The Centre of Research for Adaptive Nanostructures and Nanodevices) in Trinity College, who were also partners on the development of the NanoQuest game. Activities included the NanoLounge where visitors could play the NanoQuest game and enter a high score competition each day, participate in workshops to make Buckyball or NanoBot, experience the Three Drops Nano exhibit, or make a Nano tube in the K'NEX Workshop.

DSE also sponsored the *Physics of Breakdancing* show, which explained the physics involved in a number of breakdancing moves, and also co-sponsored a show entitled *The Science Behind Climate Change*. The other sponsors were the *Exploration Station* and the *Power-of-One* Campaign.

4

Capturing the Economic Benefits from Public Investment in Research

Economic studies suggest that technology is the single most important determinant of long-term economic growth and scientific research provides the basis for technological advances. Together, science and technology can drive productivity growth and the emergence of new industries. Public science and the institutions that engage in publicly-funded research provide a foundation and seedbed for innovation. These institutions directly and indirectly are vital enablers of economic growth.

The focus of Forfás policy work in 2006 was to foster excellence, relevance and coherence in publicly-funded research and support the ability of universities to interface with enterprise. Progress in these areas will increase the opportunities to strengthen the enterprise base through public investments in scientific research.

Strategy for Science, Technology and Innovation 2006 - 2013

In January 2005 the Government adopted the R&D Action Plan, *Building Ireland's Knowledge Economy*, which was prepared by Forfás in association with a wide group of stakeholders from industry, education and public policy areas. Consequent to that, the *Strategy for Science, Technology and Innovation 2006-2013 (SSTI)*, was approved by the Government in June 2006. The Strategy incorporates the Government's response to the key R&D recommendations of the reports by the Enterprise Strategy Group and the Small Business Forum.

Throughout 2006, Forfás worked intensively with the DETE, the Higher Education Authority (HEA), the Department of Education and Science (DES), the Department of Finance and other Government Departments in the preparation of the Strategy. The Strategy calls for:

- ▣ Sustained increases in support for: building research excellence in strategic areas; building research capacity to meet the medium-term requirements of enterprise; restructuring of post-graduate training; investment in technology transfer and commercialisation capacity in the third-level sector; and increased participation in trans-national research activity.
- ▣ Significant increases in the number of new doctoral awards in Science, Technology and Engineering and in Humanities and Social Sciences, from a total of 730 in 2005 to an estimated 1,312 in 2013. This increase will be matched by a sustained improvement in the quality of research output as measured by publications and citations. Each research organisation will also have specific targets in relation to research commercialisation and will be benchmarked against leading international institutions.
- ▣ Specific targets for doubling the numbers of indigenous and overseas companies in Ireland doing significant R&D, with a range of measures set out to increase the absorptive capacity for technology and research of the enterprise base. Specifically the Strategy sets a target to double 'the proportion of sales in indigenous enterprises from innovative products and processes introduced in the most recent two years' by 2013.
- ▣ Total government investment of €8.35 billion in research in the higher education and public sectors, and in support of enterprise R&D through Enterprise Ireland and IDA Ireland, over the period of the National Development Plan to 2013. This compares with €2.48 billion under the previous NDP 2000-2006. Of the additional investment proposed, 56% is being allocated for building research capacity in the third-level sector, 30% for support for enterprise R&D,

and the remainder for additional research to support the public policy priorities of various government departments.

A number of new mechanisms are set out in the Strategy to provide for its coherent and efficient implementation. It is envisaged that, under the aegis of the Cabinet Committee on Science, Technology and Innovation (STI), the Inter-Departmental Committee (IDC) on STI will drive the Strategy's implementation. Working to the IDC, two implementation mechanisms have been established - the Higher Education Research Group (HERG) and the Technology Ireland Group, comprising Forfás, IDA Ireland, Enterprise Ireland and Science Foundation Ireland. The latter is chaired by the Office of Science, Technology and Innovation at the DETE. The IDC and the associated implementation groups are supported by a Joint Secretariat comprising representatives of the DETE, the DES, the HEA and Forfás.

Seventh EU Framework Programme (FP7)

Forfás provided policy advice and support to the Office of Science, Technology and Innovation (OSTI) at the DETE in relation to the negotiations at European level on the Seventh EU Framework Programme (FP7), and the support structure required for improved participation in the programme by Irish enterprises and researchers.

Negotiations continued throughout 2006 in the European Parliament and Council to achieve agreement on the budget and structure for FP7. Ireland participated actively in these negotiations and sought to influence the structure of the programme to achieve the maximum synergies between FP7 and the SSTI, both of which will cover the period to 2013.

The agreed programme, which will have a budget in excess of €50 billion, reflects many of Ireland's priorities going into the negotiations:

- ❑ Collaborative research will remain at the heart of FP7 with thematic areas that are closely aligned with Irish research priorities (e.g. ICT, life sciences, nanotechnology etc.).
- ❑ There will be increased emphasis on industry participation in the programme, which will be reflected in the content of the calls for proposals and will be underpinned by a target for SME participation.

- ❑ The Marie Curie actions for researcher mobility, which proved very popular in Ireland, will continue in FP7 with increased budgets. This part of FP7 has the potential to contribute to the objectives on researcher numbers and career paths in the SSTI.
- ❑ A European Research Council has been established to reward excellence in frontier research, and will contribute to the achievement of targets set out under the "world class research" pillar of SSTI.

To support strong participation by Irish enterprises and researchers, Forfás assisted the OSTI in the design of a new support structure for the programme to be led by Enterprise Ireland. Specific recommendations made by Forfás, which were implemented during 2006, include:

- ❑ The appointment of a National Director for FP7 to coordinate and lead Irish participation in the programme;
- ❑ The appointment of specialist National Contact Points covering each part of the programme;
- ❑ The appointment of an executive to Enterprise Ireland's Brussels office to forge STI linkages with other member states and the European Commission; and
- ❑ Implementation of mechanisms to formally involve industry, academic and other stakeholders in the new support structure.

The new national support structure was presented to academic and industry researchers as part of a major national launch event for FP7 in November 2006.

Research Infrastructures

During 2006 Forfás was involved in work at both national and European level to advance a coherent policy for investment in physical research infrastructure.

Investment in physical research infrastructure that will underpin investment in research teams is identified as a priority in the SSTI. Forfás was involved in two studies, one at national level and the other at European level, to develop a coherent policy for national research infrastructure that would take into account developments at the European level.

At the national level, Forfás worked with the HEA on a joint study to assess the quantity and quality of space and facilities for research in Irish higher education institutions. The study, which includes a detailed analysis of each of the main fields of science in Ireland, will guide decision making for future investments, including those under the Cycle 4 Call in January 2007 of the Programme for Research in Third-Level Institutions (PRTLII).

At the European level, Forfás participated in the European Strategy Forum on Research Infrastructures (ESFRI), which, in 2006, published the first comprehensive roadmap for investment in large-scale pan-European research infrastructures. The roadmap identifies 35 mature projects and also identifies a range of emerging proposals that may become candidates for investment in the years ahead. Member states will be invited to advance the ESFRI proposals through inter-governmental and other multilateral arrangements, which may also involve an element of community funding.

Based on the analytical work undertaken at national and European level in these two studies, there is a strong evidence base to guide decision-making in this area and to ensure that national investment in research infrastructure takes cognisance of existing and planned large-scale infrastructures at European level.

Advisory Council for Science, Technology and Innovation

The Advisory Council for Science, Technology and Innovation (ASC) is the Irish 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. The Council is an important element in the new STI governance structure which also includes the Inter-Departmental Committee for STI, the Cabinet Committee for STI and the Chief Scientific Adviser to the Government, Professor Patrick Cunningham.

The Council's remit is to contribute to the development and delivery of a coherent and effective national strategy for STI, and to provide advice to Government on medium and long-term policy for STI and related matters. Its work programme is implemented through the establishment of Task Forces, which are to bring forward draft recommendations on agreed priority topics for ratification by the Council.

The Council has twelve members and is chaired by Ms Mary Cryan, Cryan Associates. It is the successor body to ICSTI, the Irish Council for Science, Technology and Innovation.



Pictured at the launch of the Advisory Science Council Report *Towards Better Health, Achieving a Step Change in Health Research* were: (back row, l-r) Mr Reg Shaw, Managing Director, Wyeth Biopharma Campus, Ms Mary Cryan, Chairman of the Advisory Science Council, Prof. Tim O'Brien, Advisory Science Council and Mr Martin Cronin, Chief Executive, Forfás (front row, l-r) Ms Mary Harney TD., Minister for Health and Children and Mr Micheál Martin TD, Minister for Enterprise, Trade and Employment.

Towards Better Health – Achieving a Step Change in Health Research

The central premise of the report *Towards Better Health - Achieving a Step Change in Health Research*, launched in November 2006, is that health research can improve patient outcomes and contribute to the development of the knowledge economy. There is significant potential for Irish industry to translate the results of such research into new diagnostics, medical devices and therapies. The objective of the report was to suggest how Ireland might realise that potential.

The Government commissioned the Advisory Science Council to produce the report and it was jointly launched in November 2006 by the Minister for Enterprise Trade and Employment, Mr Micheál Martin TD, and the Minister for Health and Children, Ms Mary Harney TD.

The report made a number of recommendations on how policy-makers, implementation bodies, universities, hospitals and enterprise can meet the challenges facing the health research sector. These include:

- ❑ Funding for health research to be increased to the levels in benchmarked health systems;
- ❑ Funding to be allocated on the basis of excellence;
- ❑ The immediate appointment of 30 extra clinical scientists with protected time for research;
- ❑ Incentives to medical professionals to pursue research careers;
- ❑ New centralised structures to drive national policy including an Assistant Secretary in the Department of Health with designated responsibility for health research policy and an inter-departmental health research group;

- ❑ Joint governance of teaching hospitals and universities for research purposes;
- ❑ Streamlining and professionalising Ireland's ethics committees; and
- ❑ Making Ireland a hub for translational research – bringing research developments "from bench to bedside".

The report also recommends the streamlining of the approvals process for clinical trials, which it describes as "fragmented, slow and under-resourced".

The Council engaged in wide consultation with stakeholders in the preparation of the report. It received over 80 submissions from professional bodies, patients groups, the Health Research Board, universities, clinicians, researchers and others.

Promoting Enterprise - Higher Education Relationships

In April 2007 the Advisory Science Council published the report *Promoting Enterprise-Higher Education Relationships*. The report reviewed the relationship between enterprises and higher education (HE) institutions both in Ireland and in a number of comparable countries.

The SSTI recognises the importance of developing HE-industry relationships in Ireland. The recent significant public investment in research and in building excellence in the HE system means companies, large and small, can use the knowledge, expertise and facilities of the universities and institutes of technology to help build their technological capability and develop the technologies that will underpin future products and

Launching the Advisory Science Council Report *Promoting Enterprise-Higher Education Relationships* were Ms Leonora Bishop, Head of the Task Force, Minister for Education and Science, Mary Hanafin TD, Minister for Enterprise, Trade and Employment, Mr Micheál Martin TD and Ms Mary Cryan, Chairman of the Advisory Science Council.



services. Enterprise-HE links also offer Higher Education Institutions (HEI) the opportunity to see their research brought to market for the benefit of the wider society.

Most dynamic and innovative countries have developed policies to encourage enterprise-HE collaborations, and in preparing the report the Council drew upon international good practice.

The Council found that the two key constraints to the deepening of enterprise-HE research collaborations in Ireland are the low absorptive capacity of enterprises for research, and a gap in the availability of applied research capability that enterprises can readily access.

One necessary condition for good collaboration is the existence of a substantial and sophisticated business sector R&D performance (BERD), with an absorptive capacity for research and technological developments. Levels of BERD in Ireland remain below the EU average and this is a major contributor to the low levels of interaction with HE researchers.

Enterprises in Ireland are particularly reliant on HE researchers given the relatively small number of applied and industry-focused public sector research institutes. Intermediary structures between HEIs and enterprise have been successful in facilitating greater linkages between the two sectors in other countries. These intermediaries are generally active in the applied research space. For support measures for HE-enterprise linkage to work effectively the absorptive capacity of firms must be developed and the 'applied research gap' must be addressed.

The Council proposes that the development of an applied research capability be prioritised under the SSTI to give SMEs access to scientific and technological knowledge that they can apply to the development of their products and processes. Good practice in other countries is to apply an enterprise driven approach to define and develop

thematically-focused joint research programmes. Thus, the teams have a long-term perspective of cooperation, and rely, at least partially, on an 'infrastructure' approach, i.e. the establishment of institutions and/or facilities that are operated both by enterprises and science institutes.

Nanoreland Technology Assessment

During 2006 Forfás undertook a pilot Technology Assessment (TA) exercise to identify investment and policy options for the successful development and application of nanotechnology in Ireland. The Nanoreland project was undertaken on behalf of the DETE and is cited in the SSTI as an important priority-setting mechanism for research investments and for providing a basis for establishing a clear industrial input into the overall research agenda.

TA is the application of systematic, well-informed efforts to make choices which are more likely on average to be optimum and lower risk. It is a professionally managed, multidisciplinary research and multi-stakeholder communication process, which systematically assesses the impacts of possible decisions or investment options.

A Steering Group, chaired by Mike Devane of Lucent Technologies, supported the Forfás Executive in the scoping and implementation of the project, which was undertaken on an all-island basis. The Steering Group comprised representatives from industry, academic research, ministries (or their designated agencies) and organisations responsible for consumer protection. Three expert working panels undertook the development of future-oriented scenarios in the area of nano-electronics, nano-biotechnology and nano-materials. The scenarios integrated key Scientific, Technological, Economic,

Environmental, Political, Values, Social, (STEEP_V_S) drivers.

The particular socio-economic significance of nanotechnology springs from a number of factors:

- ❑ It is a cross-discipline and cross-sectoral enabling technology that has potentially profound implications across a very wide range of economic activity.
- ❑ The current pace of change, and its highly globalised nature, mean these developments could occur much more rapidly than in previous technological revolutions.
- ❑ Nanotechnology's interdisciplinary nature requires cross-discipline cooperation.
- ❑ Ireland's competitors, within and outside the EU, are already investing in nanotechnology, and leading countries continue to juggle for competitive position in this key area.
- ❑ The potential implications of nanotechnology go well beyond research, technology, development and innovation, and industry and economic competitiveness. Its development and use will have wider implications in areas such as medicine, healthcare and wider lifestyles, giving rise to associated social, moral, ethical and environmental issues.

Using the scenarios, strategies are being developed for building up the necessary knowledge base and human capital, together with appropriate risk assessment and societal dialogue mechanisms, to ensure that Ireland is well positioned to undertake early planning to realise the potential offered by nanoscience and nanotechnology. The report will be considered by the Inter Departmental Committee for Science, Technology and Innovation in 2007.

Review of the Role of the Institutes of Technology in Enterprise Development

During 2006 Forfás and the HEA began a review of the capabilities and capacities of the Institutes of Technology in Ireland, with particular focus on their role in underpinning enterprise growth, in the context of their essential role in Ireland's social, cultural and economic development.

The objective of the review was to develop a comprehensive mapping of the diversity and depth of the Institutes' activities and to provide indications of the future potential of the sector, which would in turn input to national policy formulation. Surveys, site visits and wider stakeholder dialogue took place in the last quarter of 2006, and the report, due to be published in 2007, will cover the following areas reflecting the breadth of activity that is taking place in the Institutes:

- ❑ Education and training;
- ❑ Research activity;
- ❑ Collaboration;
- ❑ Company formation;
- ❑ Resources and staffing; and
- ❑ Strategic development.

The report will present detailed profiles of each of the Institutes under these themes. It will also put forward findings and analysis of the key policy requirements to be addressed for the optimisation of the Institutes future role in enterprise development across Ireland.

Ex Ante R&D Evaluation

Forfás worked closely with the development agencies to develop a comprehensive framework to assist in ex ante evaluation of research and development projects.

Forfás and the development agencies currently utilise an ex-ante cost benefit analysis model as one element of its overall evaluation process, to ascertain the potential benefits arising from supporting industrial development projects. The model was originally developed in the late 1970s, updated in 2001-2002, and published in 2003.

In recent years, the Government's national strategy of actively promoting R&D has resulted in its support of a greater number of projects that are largely or exclusively R&D in nature. However, the current evaluation is unsatisfactory for these types of project for two reasons:

- ❑ Its heavy reliance on financial flows (sales, taxes, etc.), which can be particularly uncertain in R&D projects; and
- ❑ Its reward of all R&D investment in the same manner, regardless of the specific characteristics of the project.

Forfás' research indicates that no country has yet developed a semi-quantitative structured model to address this issue. Forfás, together with the development agencies, is in the final stages of developing a multi-criteria framework that will complement the existing commercial and technical assessments. The Framework enables decision makers to gain a more in-depth understanding of the potential private and social benefits arising from investment in a particular R&D project, depending upon its characteristics. The Framework is currently being assessed on a pilot basis and will be rolled out across the agencies during 2007.

Services and Innovation

In September 2006 Forfás published the report, *Services Innovation in Ireland - Options for Innovation Policy*, which identifies the need for Ireland to develop specific policies in relation to services innovation. The report includes case studies of leading Irish services companies, and reviews and examines the nature and extent of innovation in services in Ireland. It identifies the main drivers of innovation in services and the barriers faced by companies in developing and implementing innovation strategies. It also suggests an approach to developing and implementing policies and focusing on supporting non-technological innovation in services companies.

The services sector in Ireland, in common with other OECD economies, constitutes an increasing proportion of value-added, reaching almost 60% in 2004. Between 1995 and 2004, employment in services grew by 58.1%, in contrast with manufacturing employment growth of 5.6%. Ireland's share of global services trade reached 2.2% in 2004 and this compares with global share of the world economy, which stands at 0.32%.

Reviews to date of policy in this area have concentrated on attempts to match manufacturing innovation approaches with services industries. In the report Forfás suggests approaches to policy in this area. Key findings of the report call for:

- ❑ A statement on services innovation policy that demonstrates the sector is valued and encourages innovation in services.
- ❑ The development of a supportive and flexible regulatory environment for service providers.
- ❑ The development of a services innovation culture, that recognises the need for increased risk and flexibility in the provision of industry supports.
- ❑ The development of a business support framework for services innovation.
- ❑ Continued focus on accelerating the development of ICT and broadband infrastructures, which is a pre-requisite for a highly innovative services economy.
- ❑ The development of concentrations of activity through networks, clusters and centres of excellence.
- ❑ The cultivation of creativity at an early stage in the education cycle through to vocational college and university teaching and lifelong learning.



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 cooperation 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 Trading Scheme

INAB, in cooperation with the Environmental Protection Agency (EPA), has established a new accreditation programme to underpin the implementation of the EU Greenhouse Gas emissions trading scheme set out in European Directive 2003/87/EC.

This Directive takes into account the commitments established under the Kyoto Protocol and the accreditation scheme, developed with the support of the EPA, provides Irish industry and the regulator with a useful tool to verify compliance with the Directive.

The scheme was successfully implemented in 2006 and INAB intends to develop further guidance to support the next phase of the scheme, which is scheduled for

implementation in 2008, when it is expected that the application of the Greenhouse Gas Emissions Trading Scheme will be extended to a wider range of activities.

Medical Laboratory Accreditation

During 2006, INAB maintained three medical laboratory accreditations to the international standard ISO/IEC 15189.

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 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 (approximately 60 laboratories) to operate to ISO 15189 by November 2008. In 2006 a joint INAB–Irish Medicines Board Expert Group produced technical guidelines to assist blood banks meet the requirements of the Directive. INAB expects that these laboratories will present for accreditation over the next two years, and that a significant number of new applications for laboratory accreditations to ISO 15189 from this sector will be received during 2007.

Energy Management Certification

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

The new Energy Management standard IS 393 was 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. SEI has developed an Energy Agreements programme for large energy-intensive enterprises, based on IS 393. It will support firms in protecting their competitiveness in the context of high and rising energy prices, by providing them with the opportunity to apply a structured approach to reducing costs through an agreed schedule of energy efficiency measures over a three-year period. Organisations adopting IS 393 require third party certification bodies to confirm that they are operating in compliance with the standard. In 2006 SEI, in cooperation with INAB, developed guidelines designed to give the market confidence in the competence and integrity of the certifications to IS 393 to underpin the implementation of the Energy Agreements programme.

Multilateral Agreements

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

The European Cooperation for Accreditation (EA), which monitors the performance of national accreditation bodies in Europe, together with the European Commission, undertook a full evaluation of INAB during January, February and October 2006. The evaluation confirmed that INAB would remain signatory to the international multilateral agreements for accreditation of laboratories, certification bodies certifying quality management systems, environmental management systems and products. INAB was also admitted as a signatory for the multilateral agreement for accreditation of inspection bodies.

Accreditation Awareness

Accreditation and awareness activities were significantly increased during 2006.

A celebration to mark INAB's 21st anniversary was held in Dublin Castle in October 2006, at which more than 90 clients and stakeholders were represented. The event was opened with a presentation on the history and development of accreditation during the past 21 years by Mr Michael Ahern TD, Minister for Trade and Commerce.

Four editions of the INAB newsletter comprising a total of 10,000 copies were distributed in 2006.

The INAB website was updated to improve navigation and readability, and use of the extranet was increased.

A client survey on the accreditation process was completed. In response to this survey it is proposed to hold client seminars in 2007 in Cork and Dublin.

INAB Functions

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

Laboratory Accreditation

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

During 2006, INAB awarded accreditation to 11 new laboratories and maintained 102 laboratory accreditations. During the year INAB carried out 137 onsite inspections on accredited/applicant laboratories within the Laboratory Accreditation Programme.

Accreditation of Certification Bodies

INAB accredits certification bodies operating product certification, quality system certification and certification of persons. 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). During 2006 INAB accredited the first certification body for certification of persons for gas installers and oil firing technicians. INAB also maintained one certification body as a certification service provider (CSP) for the ecommerce accreditation scheme in support of the EU Directive on ecommerce. In 2006 INAB accredited a new certification body for Quality Management Systems Certification and maintained a further four certification bodies in this programme. INAB currently maintains accreditation of three certification bodies for verification of Greenhouse Gas emissions and one certification body for Environmental Management Systems Certification. These certification bodies have, in turn, certified more than 2,000 organisations to the ISO 9000 series of standards, 100 organisations for Greenhouse Gas emissions 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 2006, INAB maintained and extended 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

lascaigh Mhara schemes. Food product certification will therefore continue to be one of INABs growth areas of activity for the immediate future. Furthermore, the International Organisation for Standardisation (ISO) has developed a new international standard ISO 22,000 for food safety management and it is expected that over the next two 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 applications for this scheme during 2007. INAB carried out 37 onsite inspections on accredited/applicant certification bodies during 2006.

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. In 2006 INAB accredited two new Inspection bodies and maintained a further three inspection bodies accreditation. INAB accredited the first inspection body and is processing three further applications under the new national accreditation programme for verifying the emission of volatile organic compounds from SMEs such as dry cleaners and paint spraying workshops in accordance with the EC Directive on volatile organic emissions. During 2006 INAB carried out 11 onsite inspections on accredited/applicant inspection bodies.

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. At the end of 2006 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 2006 INAB maintained eight organisations registered to EMAS, which had their environmental management systems verified by accredited EMAS verifies 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 Máire C. Walsh¹, Chairperson
Former State Chemist, State Laboratory

Dr Fiona Kenny, Vice Chairperson
Consultant Microbiologist, Sligo General Hospital

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

Mr Michael Maloney¹, Director of Horticulture
An Bord Bia

Mr Donal Connell², Former Vice President,
3Com

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

Mr Tom Beegan, CEO
Health and Safety Authority

Mr Richard Howell, Agriculture Inspector,
Department of Agriculture

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

Mr Pat O'Mahony, CEO,
The Irish Medicines Board

Mr Tom O'Neill³, Site Leader,
Pfizer, Little Island

Mr Neil McGowan³, Regulatory Affairs Executive,
Food and Drink Industry, IBEC

Mr Tom Dempsey (exOfficio), Manager,
INAB

1. Reappointed September 2006
2. Resigned June 2006
3. Appointed September 2006

Corporate Governance

Forfás was established under the Industrial Development Act, 1993 and operates in accordance with the provisions of the Industrial Development Acts 1986 to 2006 and under the aegis of the Minister for Enterprise, Trade and Employment.

Obligations under Code of Practice for the Governance of State Bodies

Forfás has put in place procedures to ensure that it complies with the provisions of the Code of Practice for the Governance of State Bodies.

Board Members – Disclosure of Interest

In accordance with Code of Practice for the Governance of State Bodies, 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 provide statements of interests in accordance with both Acts.

Freedom of Information (FOI)

Forfás is covered by the provisions of the Freedom of Information (FOI) Acts, 1998 and 2003. 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.

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 is in place.

Forfás complies with its Statutory obligations under the Equality Acts 1998 and 2004.

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 in place a safety statement that encompasses all the aspects affecting staff and visitor welfare. This was updated in early 2005.

Clients' Charter

The Forfás Clients' Charter sets 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 2006 no complaints were received. The Charter is available on the Forfás website at www.forfas.ie.

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.

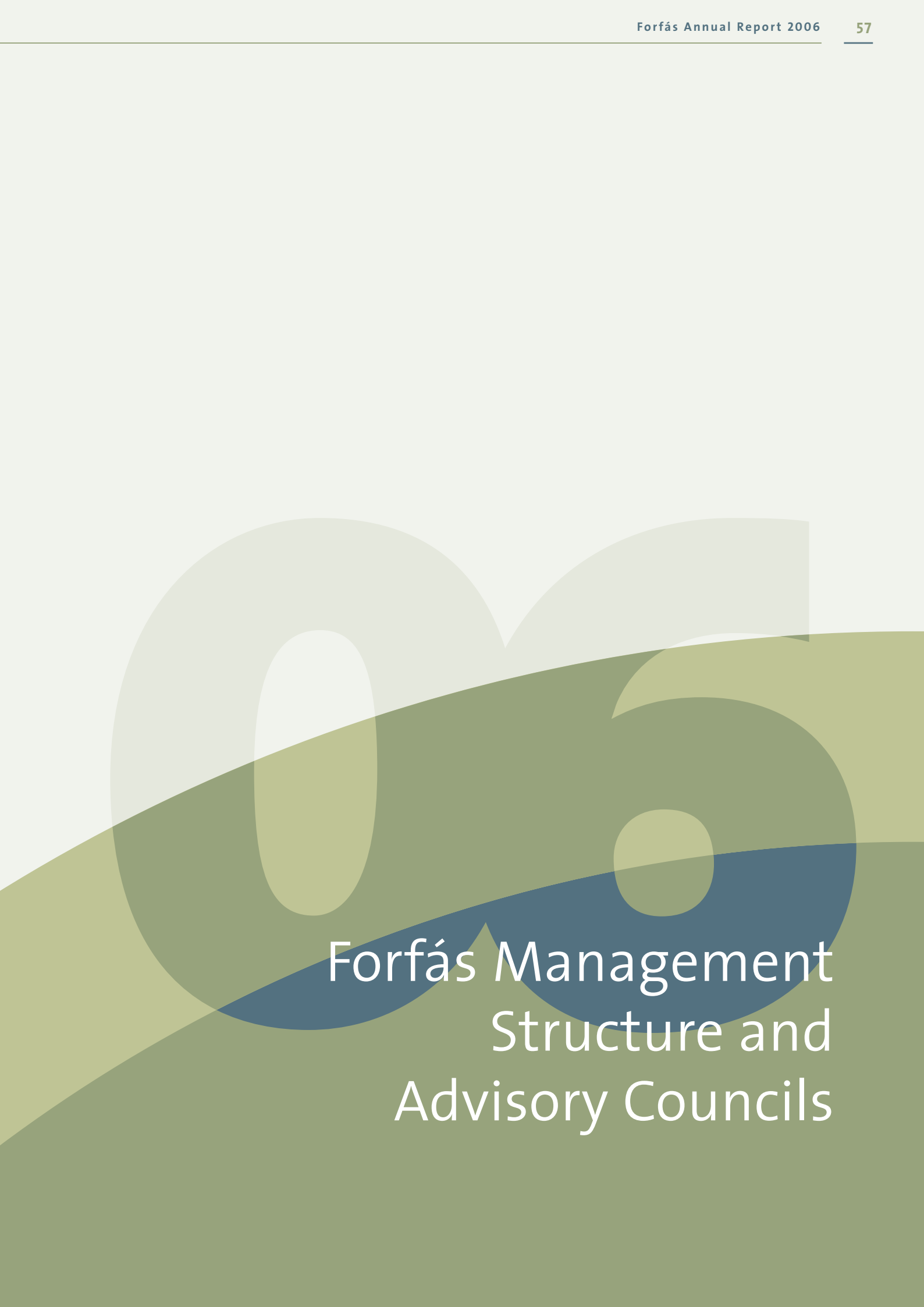
The Prompt Payment of Accounts Act 1997 (the Act), which came into operation on 2 January 1998, was amended by the European Communities (Late Payment in Commercial Transactions) Regulations 2002.

The payment practices of Forfás, as required by the Act, are reported on below for the year ended 31 December 2006.

- (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 2007.

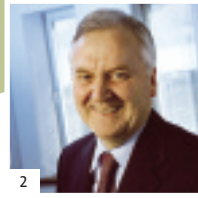


Forfás Management Structure and Advisory Councils

Forfás Management Structure



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11

Enterprise Policy and Corporate Services Division

Competitiveness Division

1 Martin Cronin
Chief Executive

- 2 Brian Cogan**
Executive Director
- 3 Marie Bourke**
Tax, Finance, Environment Policy and Enterprise Surveys Department
- 4 Martin Craig**
Finance Department
- 5 Maria Ginnity**
Enterprise Policy & Communications Department
- 6 Eamonn Kearney**
Systems and Facilities Department
- 7 Michael O'Leary**
Human Resources Department

- 8 Declan Hughes**
Competitiveness Division
- 9 Adrian Devitt**
National Competitiveness and Infrastructure Department
- 10 Eoin Gahan**
Regulation, Trade and Policy Foresight Department
- 11 Martin Shanahan**
Human Capital and Labour Market Policy Department



12



13



14



15

Science, Technology & Innovation Policy and Science Awareness Division

- 12 Helena Acheson**
Science, Technology & Innovation Policy and Science Awareness Division
- 13 Seamus Bannon**
National & EU Innovation Policy and STI Surveys and Evaluations Department
- 14 Peter Brabazon**
Discover Science and Engineering Awareness Programme
- 15 John Dooley**
National and EU Science and Technology Policy



16

Secretary's Office

- 16 Michael O'Leary**
Secretary



17

Irish National Accreditation Board

- 17 Tom Dempsey**
Irish National Accreditation Board

Ms Mary Cryan
Chairman



Advisory Council for Science, Technology & Innovation

Chairman

Ms Mary Cryan
Cryan Associates

Members

Dr Leonora Bishop	Education Skills Research Division	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, Analytical and Biological Chemistry Research Facility	National University of Ireland, Dublin
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 Jack Golden	Director of Human Resources	Cement Roadstone Holdings/IEI
Ms Una Halligan	Government & Public Affairs Manager	Hewlett Packard/IBEC
Dr Brendan Murphy	Director	Cork Institute of Technology
Mr Joe McCarthy	Director	Arkaon
Dr Sean McDonagh	Director	Skills Initiative Unit
Mr Peter Rigney	Industrial Officer	Irish Congress of Trade Union
Ms Linda Tanham	Divisional Organiser	Mandate
Mr Senan Cooke	Training & Communications Manager	Waterford Crystal
Ms Aileen O'Donoghue	Director	Financial Services Ireland Association, IBEC

Advisers to the Group

Mr Pat Hayden		Department of Enterprise, Trade & Employment
Mr Andrew McDowell	Manager	Competitiveness Division, Forfás
Ms Ruth Carmody	Principal Officer	Department of Education & Science (DES)
Mr Fergal Costello	Head of IoT Designation	Higher Education Authority (HEA)
Ms Ann Nolan		Department of Finance
Mr Roger Fox	Director of Planning	Research & EU Affairs, FÁS
Mr Martin Shanhan	Head of Secretariat	Forfás

Dr Don Thornhill
Chairman



National Competitiveness Council

Chairman

Dr Don Thornhill	Chairman
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Members

Mr Rory Ardagh	Director	Magnet Networks Ltd
Mr Brendan Butler	Director, Social Policy	IBEC
Mr Donal Byrne	Chairman	Cadbury Ireland Ltd
Mr Martin Cronin	Chief Executive	Forfás
Mr Shay Cody ¹	Deputy Secretary General	IMPACT
Mr Pat Delaney	Director of Business Sectors	IBEC
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 ²	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

1 Appointed November 2006

2 Appointed February 2006

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 ¹	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
Mr Pat Nolan ¹	Office of Science and Technology	Department of Enterprise, Trade and Employment
Dr Siobhan O'Sullivan ²	Liaison and Support Officer	Faculty of Food, Science and Technology, University College, Cork
Mr Frank Turpin	Education Manager	Intel Ireland

Mr Pat Morgan, NUI Galway, resigned in 2006

Ms Ellen MacCafferty, Office of Science and Technology, DETE, resigned in 2006

¹ Joined September 2006

² Joined May 2006

Publications – 2006/2007

Review of Governance Options for Collaborative Research Ventures	April 2007
Report of the Business Regulation Forum Business Regulation Forum	April 2007
Promoting Enterprise-Higher Education Relationships Advisory Council for Science, Technology and Innovation	April 2007
Research and Development Statistics in Ireland 2006 – at a glance	March 2007
Research and Development Performance in Business Sector in Ireland 2005/6	March 2007
Perspectives on Irish Productivity A selection of essays by leading Irish and international economists	March 2007
Waste Management in Ireland Benchmarking Analysis and Policy Requirements	March 2007
Tomorrow's Skills: Towards a National Skills Strategy Expert Group on Future Skills Needs	February 2007
Business Continuity Planning – Responding to an Influenza Pandemic Advice to Businesses on Preparing for a Pandemic	February 2007
State Expenditure on Science & Technology and Research and Development 2005 and 2006	February 2007
Annual Competitiveness Report 2006, Volume 2 – Ireland's Competitiveness Challenge National Competitiveness Council	February 2007
Enterprise Statistics – at a glance, 2006	January 2007
Electricity Benchmarking Analysis Report	December 2006
Overview of Ireland's Broadband Performance	December 2006
SME Finance Equity Survey	November 2006
Towards Better Health: Achieving a Step Change in Health Research in Ireland Advisory Council for Science, Technology and Innovation	November 2006
Annual Business Survey of Economic Impact (ABSEI) 2005	November 2006
Overview of Ireland's Productivity Performance National Competitiveness Council	October 2006
Annual Competitiveness Report 2006, Volume 1 National Competitiveness Council	October 2006
Services Innovation in Ireland – Options for Innovation Policy	September 2006
Forfás Annual Employment Survey 2005	July 2006
Careers Information and Labour Market Information in Ireland Expert Group on Future Skills Needs	July 2006
The Changing Nature of Manufacturing and Services - Irish Trends and International Context	July 2006
Future Skills Requirements of the International Digital Media Industry: Implications for Ireland Expert Group on Future Skills Needs	July 2006
International Digital Media Industry: Implications for Ireland Expert Group on Future Skills Needs	July 2006
Annual Business Survey of Economic Impact (ABSEI) 2004	July 2006
Open Source Trends and Business Models	July 2006

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.forfas.ie.

Email notifications direct to your inbox are available on the latest announcements, press releases and publications.

Forfás	www.forfas.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.competitiveness.ie
Chief Scientific Adviser	www.chiefscientificadviser.ie
Business Regulation Forum	www.businessregulation.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
Discover Sensors	www.discoversensors.ie

To receive notification directly to your email box on the latest announcements, press releases and publications please sign up for our email alerts at info@forfas.ie.

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 2006 under the Industrial Development Act, 1993.

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

Respective Responsibilities of the Board and the Comptroller and Auditor General

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

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

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

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

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

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

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

Basis of Audit Opinion

In the exercise of my function as Comptroller and Auditor General, I conducted my audit of the financial statements in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board and by reference to the special considerations which attach to State bodies in relation to their management and operation. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures and regularity of the financial transactions included in the financial statements. It also includes 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' 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 Practice in Ireland, of the state of Forfás' affairs at 31 December 2006 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

5 April 2007

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.

A large, stylized number '66' is centered in the background. The first '6' is light grey and the second '6' is a darker olive green. A dark blue wave-like shape overlaps the bottom of the second '6'.

Financial Statements

Statement of Board Members' Responsibilities

For 2006 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; and
- 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 2006, the Board conducted a review of the effectiveness 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) Debtors

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

(7) 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.

(8) Operating Leases

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

Income and Expenditure Account

Year Ended 31 December 2006

	Notes	2006 €'000	2005 €'000
Income			
Oireachtas Grant	1	30,181	27,576
Professional Fees - National Accreditation Board	2	950	767
Other	3	861	779
Departmental Programmes	5	6,806	3,431
Net Deferred Funding	7 (c.ii)	43,001	29,382
		81,799	61,935
Expenditure			
Administration and General Expenses	4	16,749	15,115
Depreciation	6	226	215
Pension Costs	7 (c.iii)	57,878	43,144
Departmental Programmes	5	6,806	3,431
		81,659	61,905
Surplus for Year		140	30
Balance at beginning of Year		1,769	1,758
Transfer (to)/from Capital Account	8	(140)	(19)
Balance at end of Year		1,769	1,769

STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES

Surplus for Year		140	30
Actuarial Gain/(Loss) on Pension Liabilities	7 (c.iii)	83,399	(132,845)
Adjustment to Deferred Pension Funding	7 (c.iii)	(83,399)	132,845
Total Recognised Gain for the Year		140	30

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 2006

	Notes	2006 €'000	2005 €'000
Fixed Assets			
Tangible Fixed Assets	6	418	278
Total Fixed Assets		418	278
Current Assets			
Accounts Receivable	9	3,356	3,748
Bank		45	40
		3,401	3,788
Accounts Payable	10	1,632	2,019
Net Current Assets		1,769	1,769
Deferred Funding Asset	7 (c.iv)	775,812	817,742
Pension Liability	7 (c.v)	(775,812)	(817,742)
Total Assets Less Current Liabilities		2,187	2,047
Represented By:			
Capital Account	8	418	278
Income and Expenditure Account		1,769	1,769
		2,187	2,047

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 2006

	Notes	2006 €'000	2005 €'000
Reconciliation of Net Movement for Year to Net Cash Flow from Operations			
Net Movement for Year		140	30
Bank Interest		(34)	(31)
(Profit)/Loss on Disposal of Assets		1	(3)
Depreciation Charge:			
- Tangible Fixed Assets	6	226	215
(Increase)/Decrease in Accounts Receivable		392	1,300
Increase/(Decrease) in Accounts Payable		(387)	(1,319)
Net Cash Flow from Operations		338	192
Cash Flow Statement			
Net Cash Flow from Operations		338	192
Returns on Investment and Servicing of Finance			
Bank Interest		34	31
Cash Flow before Capital Expenditure		372	223
Capital Funding			
Disposal of Tangible Fixed Assets		-	3
Purchase of Tangible Fixed Assets	6	(367)	(234)
Cash Flow after Capital Expenditure		5	(8)
(Decrease)/Increase in Cash		5	(8)
Reconciliation of (Decrease)/Increase in Cash to Cash at Bank			
Movement in Cash for the Year		5	(8)
Cash at Bank at 1 January		40	48
Cash at Bank at 31 December		45	40

Notes to the Accounts

Year Ended 31 December 2006

(1) Oireachtas Grant

	2006 €'000	2005 €'000
Forfás		
Administration and General Expenses	30,181	27,576

- 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, 2006 the aggregate amount so provided was €2,746,519,030.
- 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, 2006 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

	2006 €'000	2005 €'000
Rental Income	764	743
Sundry Income	63	5
Bank Interest	34	31
Total	861	779

Notes to the Accounts (cont.)

Year Ended 31 December 2006

(4) Administration and General Expenses

	2006	2005
	€'000	€'000
Board Members' Remuneration and Expenses	371	301
Pay Costs	7,543	7,318
Other Personnel Costs	516	366
Travelling Expenses	403	427
Specialised and Professional Services	956	886
Research and Studies	1,645	1,178
Rents, Rates, Repairs and Maintenance ¹	3,568	2,245
Other Operating Expenses	1,599	1,663
Office of the Chief Science Adviser ²	128	351
Interim National Consumer Agency ³	-	362
Audit Fee	20	18
Total	16,749	15,115
Pay Costs comprise:		
Wages and Salaries	6,995	6,785
Social Welfare Costs	432	393
Superannuation Costs	116	140
Total	7,543	7,318

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 currently administers 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. Funding in 2006 was received in full from the Department of Enterprise, Trade and Employment (Note 5).

(5) Departmental Programmes

These externally funded programmes are administered by Forfás, on behalf of the funding bodies listed below. Under/over expenditure on these programmes is shown in accounts payable(note 10)/receivable(note 9) as appropriate.

Programme		2006	2005
		€'000	€'000
Discover Science and Engineering	1	3,783	2,471
Expert Group on Future Skills Needs	2	544	525
Irish Council for Bioethics	3	339	255
Interim National Consumer Agency	4	2,140	180
Total		6,806	3,431

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 2006

(6) Tangible Fixed Assets	Computer Equipment €'000	Motor Vehicles €'000	Fixtures & Fittings €'000	Total €'000
COST				
At 1 January 2006	1,481	59	3,388	4,928
Additions	73	-	294	367
Disposals	(262)	-	(490)	(752)
At 31 December 2006	1,292	59	3,192	4,543
DEPRECIATION				
At 1 January 2006	1,342	59	3,249	4,650
Charge for Year	111	-	115	226
Disposals	(262)	-	(489)	(751)
At 31 December 2006	1,191	59	2,875	4,125
NET BOOK AMOUNT				
At 1 January 2006	139	-	139	278
Net Movement for Year	(38)	-	178	140
At 31 December 2006	101	-	317	418

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 2006

(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.

Notes to the Accounts (cont.)

Year Ended 31 December 2006

(7) Superannuation (cont.)

(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.

(c) FRS 17 Retirement Benefits

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. This has been updated to 31 December 2006 by an independent qualified actuary to take account of the requirements of FRS17 in order to assess the scheme liabilities at 31 December 2006. The financial assumptions used to calculate scheme liabilities under FRS17 as at 31 December were as follows:

(c.i) Valuation method:	Projected Unit:			
	2006	2005	2004	2003
Discount Rate	4.70%	4.10%	4.70%	5.25%
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, 2006 were:

	Expected Return 2006	Expected Return 2005	Market Value at 31 December 2006 €'000s	Market Value at 31 December 2005 €'000s
Equities	7.50%	7.10%	158,955	141,610
Bonds	3.90%	3.10%	19,731	21,772
Property	6.50%	6.00%	15,232	13,495
Other	2.50%	2.50%	2,477	3,059
			196,395	179,936
Present Value of pension schemes' liabilities			972,207	997,678
Net deficit in pension schemes			(775,812)	(817,742)
Related deferred tax liability			-	-
Net pension asset/(liability)			(775,812)	(817,742)

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

	2006 €'000s	2005 €'000s
Funding recoverable in respect of current year pension costs	62,852	47,774
Pension payments and employee contributions (funded)	(19,851)	(18,392)
	43,001	29,382

Notes to the Accounts (cont.)

Year Ended 31 December 2006

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

(c.iii) Analysis of total pension charge	2006 €'000s	2005 €'000s
Service costs	33,306	19,586
Interest on Pension Scheme Liabilities	29,546	28,188
Employee Contributions	(4,974)	(4,630)
	57,878	43,144
Analysis of Service Costs		
Current Service Cost	23,814	19,385
Past Service Cost	-	201
Settlements and Curtailments*	9,492	-
	33,306	19,586
Analysis of Interest on Pension Scheme Liabilities		
Interest on scheme liabilities	41,113	37,972
Expected return on scheme assets	(11,567)	(9,784)
	29,546	28,188
Analysis of amount recognised in statement of total recognised gains and losses		
Actual return less expected return on scheme assets	6,667	20,260
Experience gains and (losses)	(22,110)	(51,159)
Changes in assumptions	98,842	(101,946)
	83,399	(132,845)

* Enterprise Ireland introduced a Voluntary Leaving Programme during 2006. The Amount of €9,492 million shown in 2006 as Settlements and Curtailments represents the increase in the actuarial value of these members' accrued benefits under the Voluntary Leaving Programme.

(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 2006 amounted to €776 million (2005: €818 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 2006

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

(c.v) Analysis of the movement in deficit during the year is as follows:	2006 €'000s	2005 €'000s
Deficit at the beginning of the year	(817,742)	(657,477)
Current service cost	(23,814)	(19,385)
Unfunded payments to pensioners	17,991	17,185
Contributions (funded)	3,392	3,169
Past service costs	-	(201)
Settlements & Curtailments	(9,492)	-
Other finance income/(charges)	(29,546)	(28,188)
Actuarial gain/(loss)	83,399	(132,845)
Deficit at end of year	(775,812)	(817,742)

(c.vi) History of experience gains and losses	2006	2005	2004	2003
Difference between the expected and actual return on scheme assets				
amount (€'000)	6,667	20,260	3,429	7,327
percentage of scheme assets	3.4%	11.3%	2.3%	5.2%
Experience (Gains)/losses on scheme liabilities				
amount (€'000)	(22,110)	(51,159)	(19,547)	(65,770)
percentage of the present value of scheme liabilities	-2.3%	-5.1%	-2.4%	-9.6%
Total amount recognised in STRGL				
amount (€'000)	83,399	(132,845)	(85,324)	(86,977)
percentage of the present value of scheme liabilities	8.6%	-13.3%	-10.5%	-12.6%

(8) Capital Account

	€'000	€'000
At 1 January 2006		278
Transfer to/from Income and Expenditure Account		
- Cost Additions	367	
- Cost Disposals	(752)	
- Depreciation Additions	(226)	
- Depreciation Disposals	751	
		140
At 31 December 2006		418

Notes to the Accounts (cont.)

Year Ended 31 December 2006

(9) Accounts Receivable	2006 €'000	2005 €'000
General Debtors	1,449	1,830
Prepayments	1,662	1,586
Inter Agency Balances	222	212
Departmental Programmes	23	120
Total	3,356	3,748

General Debtors include €221,875, (2005: €585,885) 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	2006 €'000	2005 €'000
General Creditors	230	223
Accruals	586	979
Payroll	66	8
Inter Agency Balances	612	784
Departmental Programmes	138	25
Total	1,632	2,019

Interagency Balances represents amounts due, if any, to the Forfás Agencies (IDA Ireland, Enterprise Ireland and Science Foundation Ireland) and includes VAT payable of €422,185 (2005: €620,696) to IDA Ireland and Enterprise Ireland, when refunded.

(11) Commitments under Operating Leases

A net total of €2,490,000 (2005: €1,497,000) has been charged in respect of operating leases on buildings in the accounts of Forfás. Forfás has commitments of €7,160,000 to pay during 2007 in respect of leases expiring as set out below. Costs arising out of these commitments in 2007 will be shared between Forfás Agencies and tenants in proportion to agreed office space occupied. The net Forfás share of these costs in 2007 is anticipated to be approximately €2,090,000.

	€'000
(i) 2007	90
(ii) 2008 - 2011	65
(iii) 2012 Onwards	7,005

Notes to the Accounts (cont.)

Year Ended 31 December 2006

(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 2006, a payment amounting to €2,360 was made to an organisation in which a Board Member declared an interest, in respect of services provided to the Agency. The member concerned did not receive any documentation on the transaction nor did the member 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 Board on 23 February 2007.



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