

PRESS RELEASE

- Skills constraints must be addressed

- Forfás Chairman, Peter Cassells

- Economic Downturn: A Timely Jolt to Complacency

- Forfás CEO, John Travers

“The availability of a skilled, knowledge-intensive workforce will be the key determinant of Ireland’s advance, in both social and economic terms, in the coming years. As the global pool of high-skilled labour in engineering, computer-related and science fields continues to shrink, it is critical for Ireland to maintain its share of these scarce resources and to increase the level of qualifications in the work-force generally”, Mr. Peter Cassells, Chairman of Forfás said at the publication of the Forfás Annual Report for 2000 today (August 2nd 2001).

SIX POINT PROGRAMME TO ADDRESS SKILL REQUIREMENTS OF THE ECONOMY

The constraints which restrict the further development of a highly-skilled work-force in Ireland must be addressed within a coherent framework over a sustained period said Mr Cassells. To achieve this he advocated a six point programme:

- The more rapid roll-out of the new science curriculum in primary schools;

- **Urgent new measures to reverse the downward trend in the proportion of second-level students studying physics and chemistry e.g. by enhanced in-course training of science teachers; by a special programme to attract well-qualified science graduates in physics, chemistry and mathematics into teaching; by the reform of the curriculum in these subjects to make it more interesting to students while maintaining fundamentally high standards; by improving the equipment available for the teaching of science in schools and by a proactive information campaign by Government Departments, State Agencies and business which articulates the excitement, challenge and good job-prospects associated with careers relating to science and technology;**
- **The greater development of the third-level sector in providing continuing education to enhance the existing knowledge-base and skills of the labour-force;**
- **Increased investment in training by firms and organisations in all sectors of the economy using the leverage of the State development agencies to achieve this where possible;**
- **A coherent immigration policy which actively promotes the immigration to Ireland of high-skilled, highly-qualified people;**
- **Providing the long-term unemployed, and women wishing to return to the work-force after a period of absence, with the skills they need to engage with confidence and success in modern work-practices.**

TRADE AND INVESTMENT

Mr. Cassells said Ireland's export growth in 2000 continued to drive economic and employment growth. Exports to the US increased by 38 per cent to reach £11.2 (€14.2) billion. Ireland's competitiveness as an export-base contributed greatly to a situation where the US is evolving towards becoming Ireland's largest export market. He noted that this evolution created vulnerabilities as well as opportunities – many of which are associated with currency-exchange uncertainties.

The success of Ireland's export drive to the US, Europe, the Middle East and to other markets world-wide puts our economy at the centre of a fast growing

transatlantic market place. These trends have implications for how the development agencies promote Ireland as a base for both investment and trade and highlights the importance of a healthy and stable US-EU trade and investment relationship to Irish economic prosperity.

Mr Cassells also pointed to the strong growth in outward direct investment by Irish firms over the past decade and more. He noted that while there was a slow-down in this outward investment from Ireland in 2000 it is clear that this investment is on a generally upwards trajectory which is a natural evolution of the development of the business sector in Ireland. In the years ahead more Irish firms will make overseas investments, perhaps relocating operations from Ireland to more cost competitive locations and by doing so maintaining the long-term viability of operations in Ireland. Growing levels of outward direct investment by Irish firms reflect a restructuring of Irish-owned industry into higher-value-added activities that will generate long-term growth in competitiveness, exports and employment.

PHYSICAL PLANNING

An efficient physical planning process is essential to Ireland's economic growth said Mr. Cassells. The scale of investment in infrastructure, for example, in the National Development Plan (NDP) 2000 – 2006 underlines the critical importance of an efficient physical planning process. A major constraint on building economic infrastructure is the time required to design, plan and execute capital projects in a way that both meets environmental regulations and respects the rights of citizens and property owners. There is an unacceptably long delay between identifying the need for infrastructure and its provision on the ground. To reduce this gap there is a need for long-term strategic planning, a willingness to speed up decision-making and the identification and elimination of unnecessary barriers to implementation.

HIGHLIGHTS OF 2000

Mr Cassells drew attention to some of the highlights of the work of Forfás and its development agencies in 2000:

- Employment in the client firms of the development agencies which operate under the aegis of Forfás increased to a record level of 316,000 people in full time employment by the end of 2000. This was an increase of 22,900 (7.8 per cent) on 1999
- Foreign-owned companies accounted for 16,200 (71 per cent) of the increase, while Irish-owned companies accounted for the remaining 6,700 (29 per cent)
- The regional spread of new jobs also improved. In 2000 almost 21 per cent of jobs created in companies supported by the enterprise development agencies were located in Objective One (Border, Midland and West, BMW) regions. This compares to a figure of 18 per cent in 1999. In the case of foreign-owned projects 50 per cent of all jobs negotiated during 2000 in “greenfield” projects (i.e. new start-up projects) were secured for the Objective One region
- Total corporation tax revenues in 2000 amounted to over £3,062 (€3,888) million, a rise of 587 per cent in real terms since 1988 (equivalent to average growth of 17.5 per cent per annum). Some 43 per cent of total corporation tax revenues in 2000 is estimated to come from manufacturing, internationally traded and international financial services companies.
- The completion and publication by Forfás of *Enterprise 2010: A New Strategy for the Promotion of Enterprise in Ireland in the 21st Century*.
- The establishment, within Forfás, of *Science Foundation Ireland* to promote world-class research projects in biotechnology and information and communications technology and associated areas - the driving forces of future economic and industrial development in Ireland. Arising from this work awards of some £56 million were made for 12 research projects of outstanding calibre in 2001.

INDUSTRIAL POLICY: FORFÁS WORK

Mr. John Travers, CEO, Forfás, pointed to the wide definition of industrial policy within which Forfás activities had been conducted since the development agencies were restructured in 1994 i.e. *industrial policy encompasses all areas of public policy that impact in a significant way on the development of the enterprise sector of the economy*. He said that Forfás has continued to work in close co-operation with Government Departments and agencies on the development and implementation of a range of policy issues relating to the support of enterprise, trade, science,

technology and innovation in Ireland. Forfás also continued to discharge its statutory role of advising the Minister for Enterprise, Trade and Employment and the Minister for Science, Technology and Commerce on these matters. This was achieved by close working arrangements with the Department of Enterprise, Trade and Employment and other Government Departments and with state agencies, the preparation of a series of reports and submissions, both published and unpublished, and direct participation in policy analysis with Government Departments. A list of reports published by Forfás in 2000 is set out in the Appendix.

R&D INVESTMENT

Mr. Travers said Ireland has pursued a successful policy of export led growth over the past ten years. The value of merchandise exports in 2000 was well over £60 billion— a sizeable proportion of which arose from industries heavily dependent on science and technology e.g. pharmaceuticals, electronics, telecommunications, computer hardware and software.

He noted that while investment in R&D by high technology companies has been strongly growing internationally, relatively little of this investment had taken place in Ireland. He said that less than one in four of the top exporting firms are involved to any significant extent in R&D in Ireland. Mr Travers said this is a cause of concern. The factors which determine Ireland's competitive advantage for investment are changing rapidly for both domestic and external reasons. The knowledge base of the labour-force has become increasingly important. R&D, education, training, public policy and societal attitudes are the critical elements, he said, in creating competitive advantage for social and economic development through knowledge.

In these circumstances, Mr Travers said, Ireland simply had no choice but to create an environment and infrastructure for R&D in Ireland that is second to none if the living standards of its citizens are to be sustained and are to continue to improve. He said that “the establishment of *Science Foundation Ireland* by Forfás in 2000 to invest some £560 (€711) million in basic research in biotechnology and information and communications technologies over the period to 2006 will make an important

contribution to the achievement of these objectives". He said that Forfás is very encouraged by the outstanding quality of researchers and research projects which received *SFI* awards amounting to £56 million under the First Call for Proposals 2000/2001.

ECONOMIC/INDUSTRIAL PROSPECTS

Short term prospects

Referring to Ireland's economic prospects Mr. Travers said the economic slowdown in the US has serious implications for the Irish economy in 2001 and beyond along with other countries with strong trading and investment links to the US. He said that this year there will be a significant reduction in the number of US investment projects attracted to Ireland. Job losses in US-owned companies and in associated supplier companies will show an increase for the year – particularly in the ICT sector. But overall these job losses will be more than off-set by increases giving rise to a modest net increase in employment in the client firms of the development agencies. The level of increase, however, will be significantly below the atypical and record levels of increases achieved in recent years which have underpinned the achievement of a close to full-employment economy in Ireland.

Another danger posed by the US slowdown is the likely impact on the euro-sterling exchange rate. A significant drop in the value of the dollar as a result of an extended US downturn would likely be accompanied by a rise in the value of the euro against sterling – a currency which, for many years, has tended to move in concert with the dollar. Any sudden weakening of sterling would seriously threaten the relative competitiveness of Irish firms competing against UK firms not only in the UK itself but also in Ireland and in other markets. This could have a significant detrimental impact on the traditional labour-intensive sectors of industry and emphasises the fundamental need of these sectors to achieve and work off a cost base encompassing labour, materials and services that is sustainable in the longer term.

Mr Travers said that by curbing fast demand growth the current slowdown may provide some benefits by reducing inflationary pressures in Ireland. However, he

pointed out that the current US downturn strongly reinforces the need to maintain a supportive and cost competitive environment for the traded goods and services sectors. He said that there is an urgent requirement to make progress on a number of critical areas which are creating an undue cost burden for business firms at the present time. These include a range of infrastructure deficiencies in areas such as roads, electricity and telecommunications brought about by recent high levels of economic growth and associated demand, the implementation of measures to overcome widespread skills shortages and a continued programme of de-regulation to increase the fundamental competitiveness of the economy.

Medium Term Prospects

A new approach to enterprise policy will be required in Ireland in the coming decade as the country's demographic profile changes dramatically, Mr. Travers said. With employment now below four per cent of the labour force the economy is close to full employment. Female participation in the labour force has risen above average EU levels and the natural rate of growth in the working age population is set to level off.

The focus of Irish enterprise policy, he said must shift from simply generating additional jobs towards improving the productivity and innovation capabilities of firms operating in Ireland and towards restructuring Irish industry to higher-value-added activities. That is why investment in R&D is so important – it provides the seed-corn through which industry in Ireland can grow along the value-added chain. With the necessary policies in place, average Irish productivity growth of three per cent per annum is achievable in the 2000 – 2010 period. Together with growth in employment, this would allow annual average growth in Irish GNP of around five per cent per annum – a far more sustainable rate than the average rate of almost 9 per cent per year achieved over the past 5 years.

ECONOMIC DOWN-TURN: A TIMELY JOLT TO COMPLACENCY

Mr Travers said that the present down-turn in the economy provided, in many ways, a timely jolt to complacency on the part of policy-makers, business and worker-representatives. It made clear that high rates of economic growth, low unemployment and improving living standards are not inevitable. These outcomes are never certain. Where achieved they require constant adjustment of Government policies and a wide-spread societal commitment, expressed through the social partnership process and more widely, to the measures necessary to sustain the competitiveness of the traded goods and services sector of the economy. Such commitment, in turn, requires a recognition that a competitive traded goods and services sector provides the resource base on which wider social and economic objectives can be achieved.

Mr Travers pointed out that the sense of crisis which developed in the mid-1980s concerning social and economic prospects in Ireland was a major factor in identifying and implementing the measures which provided the foundations for the significant advance in social and economic progress achieved in the 1990s. Similarly, he said the reality check which the present down-turn in economic prospects provides can be used to put in place the fiscal and supply-side measures which can provide the foundations for the next wave of economic growth – of a structure and at a level that is more sustainable than the very high rates prevalent over the past decade.

EURO CHANGE-OVER PREPARATIONS: BUSINESS FIRMS TOO COMPLACENT

Mr. Travers said enterprises in Ireland now operate in a single market formed by the eurozone, with almost 300 million consumers and 15 million other enterprises. A new focus is, therefore, needed to take advantage of the opportunities this offers.

Mr Travers pointed to one clear area of complacency highlighted by recent Forfás surveys. In the June 2001 survey of business preparation for the changeover to the euro conducted by the ESRI for Forfás it was found that, while firms are generally well-informed about what is involved, their level of practical preparation remains

surprisingly low. One third of firms have not yet even started to plan for the changeover process, 40 per cent of firms have not yet checked the functionality of their software to establish if it will meet changeover requirements, and 58 per cent of firms do not intend to provide any staff training for the changeover process. And yet firms in Ireland remain among the most optimistic across EU countries on the positive impact which the euro will have on their business prospects!

Mr Travers said firms are unduly complacent about the changeover to the euro and, unless this complacency disappears, it is likely to give rise to lost business opportunities and the disruption of existing business with knock-on negative effects for suppliers and customers. He urged every business firm in the country to avoid such complacency and ensure that they are well-prepared for the changeover process over the critical 5 months transition period that now remains.

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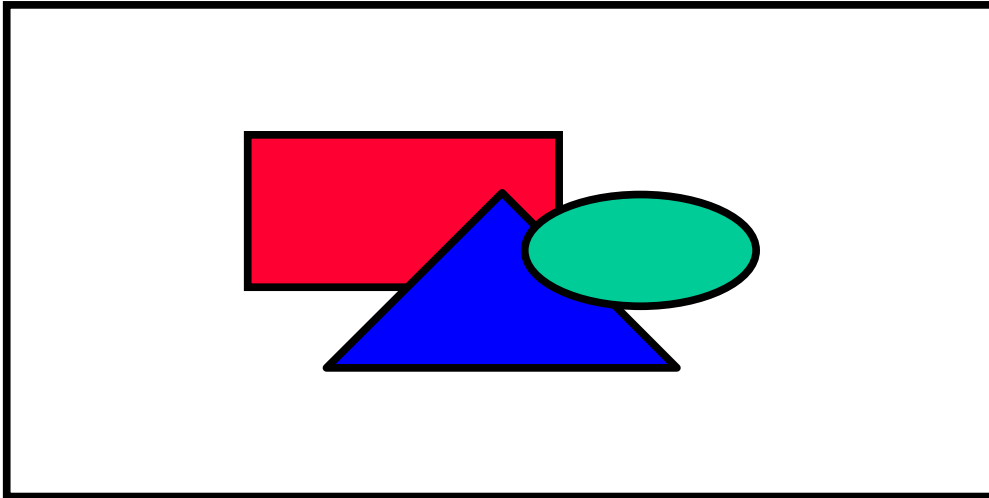
Tel: 01-6073085

APPENDIX

This appendix contains a series of charts and graphs highlighting the outturns for 2000 in areas such as employment, corporation tax, Irish Economy Expenditures, spend on Science and Technology and publications.

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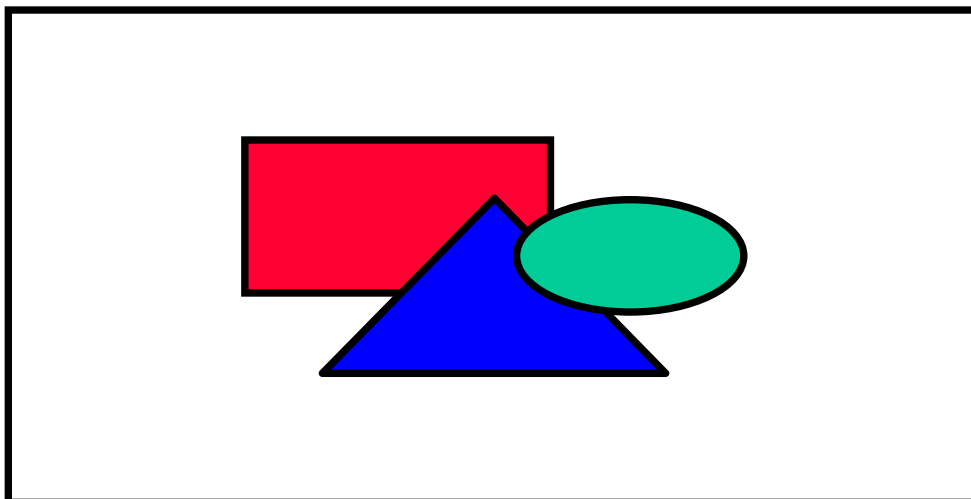
Figure 1



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Overall Total	215,063	215,165	217,393	224,536	235,175	247,601	263,542	278,237	293,051	315,959
Irish Owned	117,898	117,588	117,394	119,352	122,864	127,795	133,810	139,369	145,593	152,301
Foreign Owned	97,165	97,577	99,999	105,184	112,311	119,806	129,732	138,868	147,458	163,658

Source: Forfás Annual Employment Survey

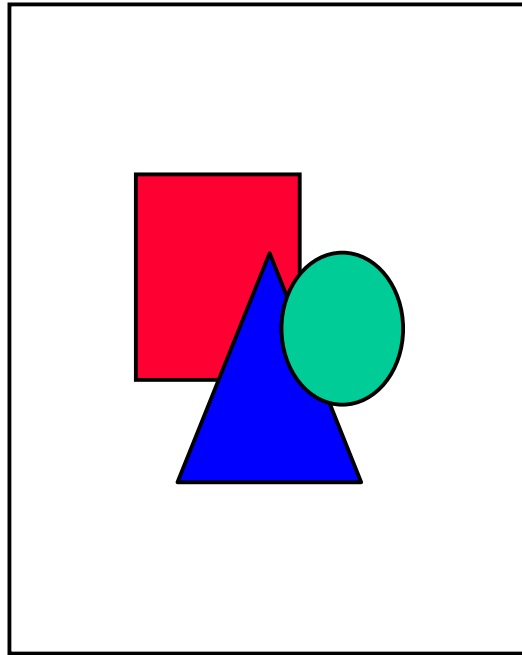
Figure 2



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Job Gains	19,008	19,025	20,007	23,079	26,131	28,182	30,433	32,384	36,355	44,035
Job Losses	-18,617	-18,923	-17,779	-15,936	-15,492	-15,756	-14,492	-17,689	-21,541	-21,127
Net Change	391	102	2,228	7,143	10,639	12,426	15,941	14,695	14,814	22,908

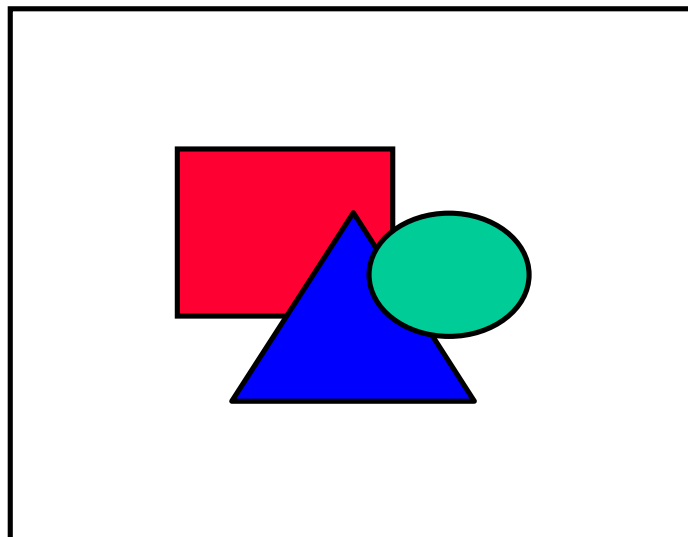
Source: Forfás Annual Employment Survey

Figure 3



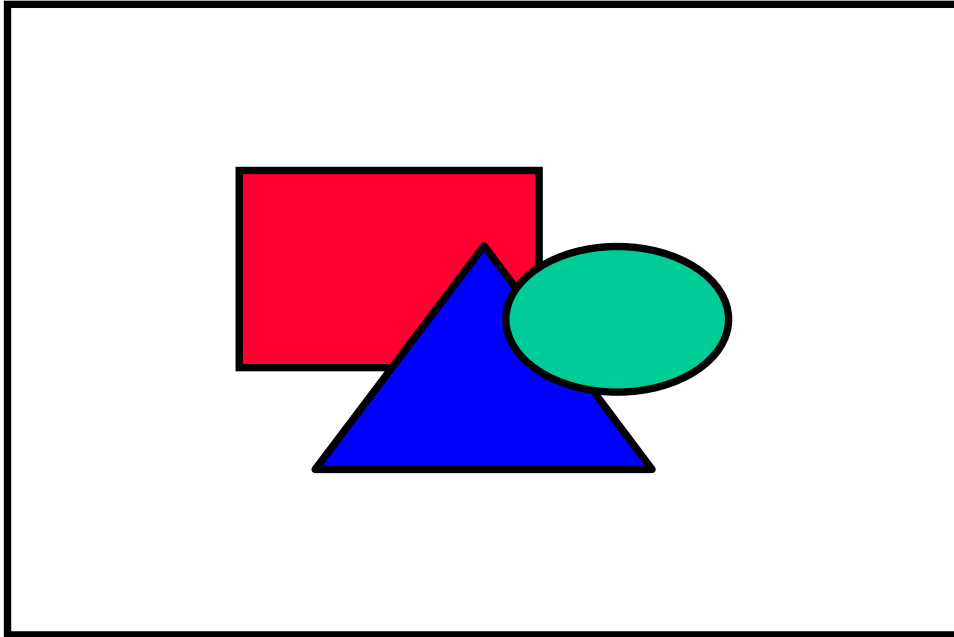
Source: Forfás Employment Survey, CSO Census of Population and Quarterly National Household Survey

Figure 4



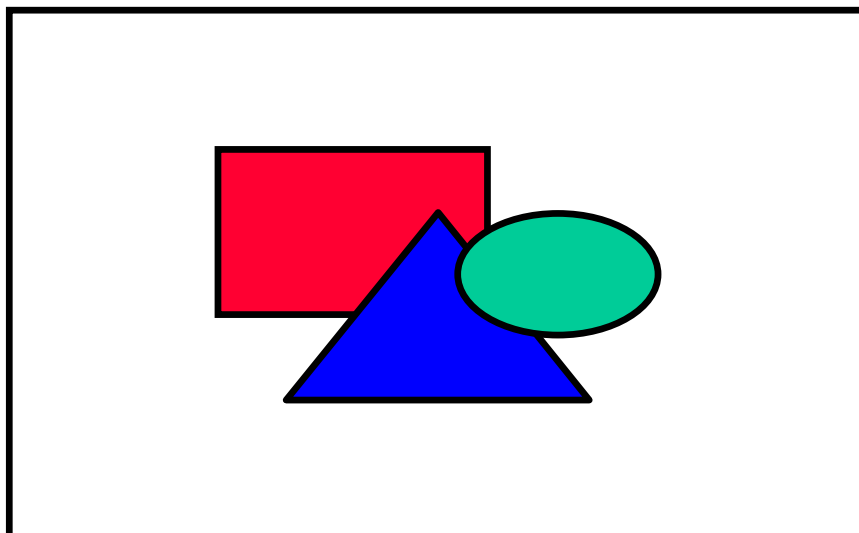
**Excludes companies under the remit of Shannon Development.
Source: Forfás Annual Employment Survey*

Figure 5



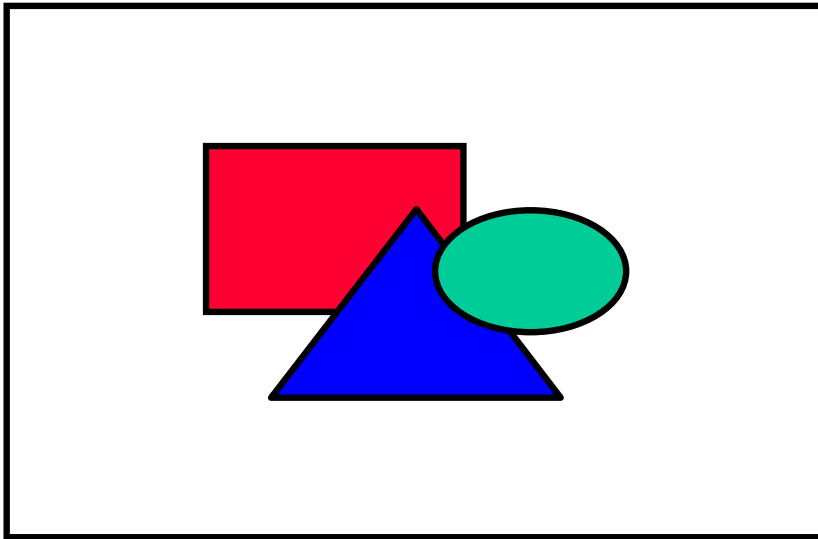
Source: Forfás Irish Economy Expenditure Survey

Figure 6



Source: Forfás Corporation Tax Survey

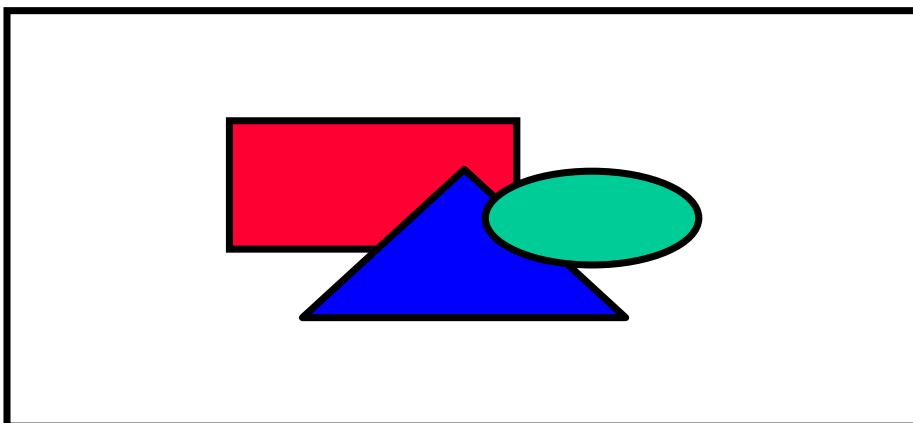
Figure 7



Source: Forfás Support by Government for the Development of Enterprise in Ireland

* Includes financial supports, cost of marketing development services and administration for enterprise development agencies and expenditure by NSAI, County Enterprise Boards, IPC, An Bord Bia, NMRC, ICC, and funds administered through the Departments of Enterprise, Trade and Employment and Finance.

Figure 8



Source: Forfás Annual Employment Survey

Figure 9

State Expenditure on Science and Technology (Exchequer and EU Supported Funds)

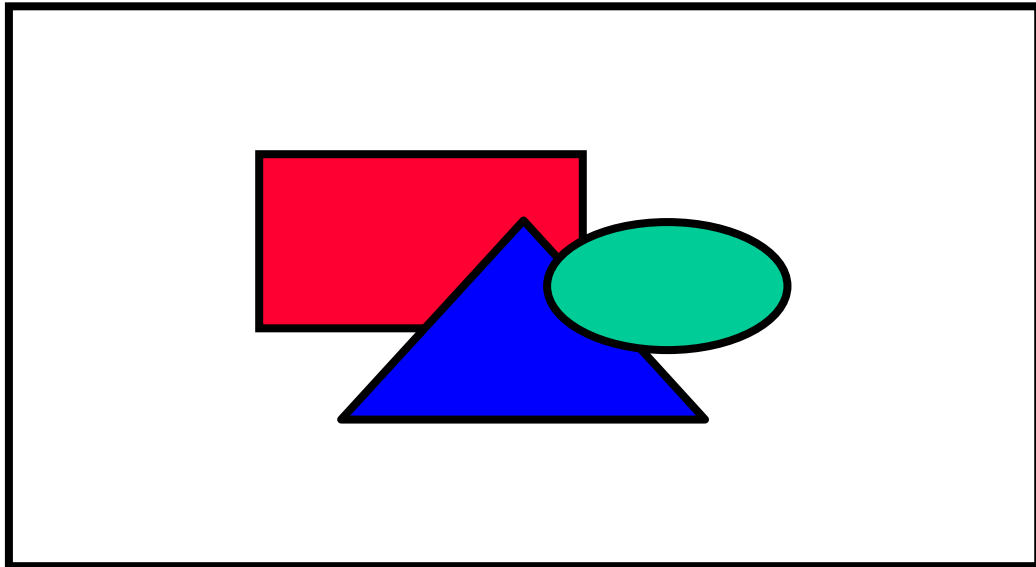
	Government Department	Total Public Allocation		% Total
		IR£'000	€'000	
	Taoiseach	470	597	0.05
	Finance	3,373	4,282	0.36
	Environment and Local Government	11,628	14,765	1.24
	Education and Science	591,250	750,733	63.30
	Marine and Natural Resources	19,771	25,104	2.12
	Arts, Heritage, Gaeltacht and the Islands	3,910	4,965	0.42
	Agriculture and Food	72,228	91,711	7.73
	Enterprise, Trade & Employment	145,723	185,029	15.60
	Public Enterprise	15,085	19,154	1.61
	Social, Community and Family Affairs	12,148	15,425	1.30
	Health and Children	18,981	24,101	2.03
	Government Offices	39,501	50,156	4.23
	Grand Total	934.067*	1.186.021*	100.00

**These figures do not include 'earned income' (such as fees for technical services) which amounted to IR£166 million (€211 million) in 2000.*

The inclusion of earned income brings the total to IR£1,100 million (€1,397 Million).

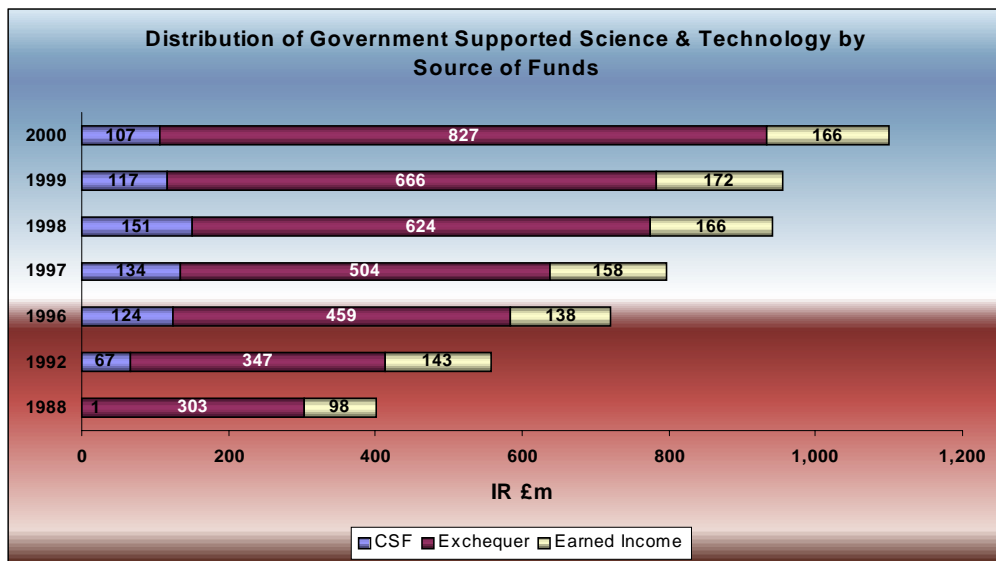
Source: Forfás – State Expenditure on Science & Technology, 2000 Survey.

Figure 10



Source: Forfás Survey of Research in the Higher Education Sector 1998

Figure 11



Source: Forfás – State Expenditure on Science & Technology Surveys

Figure 12:

Reports Published by Forfás in 2000

- *Enterprise 2010 – A New Strategy for the Development of Enterprise in Ireland for the 21st Century*
- *International Trade and Investment Report, 2000*
- *The 4th Framework Programme in Ireland*
- *The Dynamics of the Retail Sector in Ireland*
- *Survey of Research and Development in the Business Sector*
- *Management Development in the Republic of Ireland: Patterns and Trends*
- *State Expenditure on Science and Technology, 1999*
- *Annual Survey of Irish Economy Expenditures, 1998*
- *Survey of Research in the Higher Education Sector*
- *Telecommunications for e-Business: A User's Guide (jointly with IBEC, Department of Public Enterprise and CBI and IRTU in Northern Ireland)*
- *Annual Employment Survey 1999*

In conjunction with the Irish Council for Science, Technology and Innovation (ICSTI):

- *Benchmarking Science, Technology and Mathematics Education in Ireland Against International Good Practice*
- *Commercialisation of Publicly Funded Research*

In conjunction with the National Competitiveness Council (NCC):

- *Proposals on Transport Infrastructure, the Planning Process and Public Transport*
- *Annual Competitiveness Report, 2000*
- *The Competitiveness Challenge, 2000*
- *Statement on Telecommunications, e-Business and the Information Society*
- *Statement on Regulatory Reform*
- *Statement on Labour supply and Skills*

In conjunction with the Expert Group on Future Skills Needs:

- *The second Report of the Expert Group on Future Skills Needs*
- *Report on e-Business Skills*
- *Report on In-Company Training*
- *Business Education and Training Partnership – 2nd Forum*

Figure 13

List of Science Foundation Ireland Research Awards* 2000-2001.

Professor Seamus Martin, currently based in Trinity College Dublin, who will head up a team investigating how the body eliminates cells that are infected, damaged, malfunctioning or simply no longer required. His team will be bringing highly sophisticated research techniques, not previously available in Ireland, to bear.

Prof. Kingston Mills, originally in NUI Maynooth and now based in Trinity College will examine how the immune system protects against infectious agents and disease with a view to developing more effective medicines and vaccines.

Professor Ken Wolfe, of Trinity College, will significantly expand his research into evolving genomes, and will tackle the fundamental question of whether there are “rules” governing where a gene is located on a chromosome

Prof. Michael Coey, of Trinity College, investigating the electronic properties of magnetic materials leading to an industrial shift from semiconductor devices to magnetic devices in meeting the storage demands of information technology in the 21st century.

Prof. Eugene Freuder, originally in University of New Hampshire, USA and now based in NUI-Cork, will research into methods for solving very complex problems that conventional computer programming techniques often cannot handle – these will have applications in bioinformatics, computer and telecommunications networks and e-commerce.

Dr. Douglas Leith, originally in University of Strathclyde, UK, and now based in NUI-Maynooth, will develop new, practically useful methods for the analysis and design of interacting computer controlled systems, which will have future applications in the aerospace, automotive, bioscience and telecommunications industries.

Prof. John Lewis, originally at Dublin Institute for Advanced Studies and now based in the Dublin Institute of Technology, will investigate new techniques that can effectively optimise the scarce resources of broadband communications networks, operating systems and parallel processors.

Prof. Eoin O’Reilly, originally in University of Surrey, UK, and now based at the NUI-Cork, will carry out research enabling the design of innovative photonic devices which use light instead of electrons to communicate leading to the development of systems with increased bandwidth which will enable the communication of much larger quantities of information.

* Awards on which contracts had been agreed by July 2001.

Prof. John Pethica, originally in University of Oxford, UK, and now based in Trinity College. Will develop the key tools and materials for working at the molecular level, atom by atom, to create structures with a fundamentally new molecular organisation. The potential applications from this work span many areas of science and technology including for example, improved faster, and more powerful electronic and photonic devices.

Dr Igor Shvets, of Trinity College will investigate the surfaces and interfaces of magnetic materials, leading to the development of magnetic devices which are smaller and faster than corresponding semiconductor devices and will enable the design of more powerful computers.