2003

The Competitiveness Challenge 2003

Forfás

National Competitiveness Council

2003

The Competitiveness Challenge 2003

Annual Policy Statement of the National Competitiveness Council

November 2003

Forfás

National Competitiveness Council

Council Members

Mr William Burgess	Chairman
Mr Rory Ardagh	Leap Broadband Limited
Mr Donal Byrne	Chairman, Cadbury Ireland Limited
Ms Joan Carmichael	Deputy General Secretary, Irish Congress of Trade Unions
Mr Martin Cronin	Chief Executive Officer, Forfás
Dr John Fingleton	Chairperson, Competition Authority
Mr Brendan Butler	Director of Enterprise, IBEC
Ms Annette Hughes	Economist, DKM Economic Consultants
Mr Peter McLoone	General Secretary, IMPACT
Ms Áine Maria Mizzoni	Partner, Mizzoni & Associates
Mr Seamus O'Morain	Assistant Secretary, Department of Enterprise, Trade and Employment
Mr Neil Ormonde	Director, Plato Ireland Limited
Mr Willy Slattery	Chief Executive Officer, State Street International (Ireland)
Mr John Travers	Consultant and former Chief Executive Officer, Forfás
Professor Ferdinand von Prondzinski	President, Dublin City University
Ms Jane Williams	Managing Director, The Sia Group Limited

Secretariat:
Forfás
Wilton Park House
Wilton Place
Dublin 2

Tel: 01 607 3000
Fax: 01 607 3030
Email: ncc@forfas.ie
Web: www.forfas.ie/ncc

Foreword by An Taoiseach

Ireland's international competitiveness, and in particular our highly educated workforce and our favourable business environment, have played a significant role in building the foundations for our recent economic success. Competitiveness is an underlying concern and a guiding principle of economic and social policy. It is fundamentally important in improving the living standards of all citizens.

At present Ireland faces challenges to our competitiveness on several fronts. We must build our future prosperity against the backdrop of slower international growth and increased competition, both in Europe and globally. In addition, the recent appreciation of the euro has undermined our competitive position. Against this difficult global backdrop, it is important to look carefully at the domestic policy environment, where Irish policy makers can exert a positive influence.

It is in this context that the National Competitiveness Council presents its advice to Government on the priority issues relating to competitiveness.

Enhancing the ability of Irish firms to compete in the future for investment and new markets in an ever evolving and increasingly competitive environment will be essential if we are to emulate our past success. The Government is determined to meet the challenges of the new competitiveness agenda to ensure the stability of Ireland's business environment now and into the future. In the short term, we are working to address the cost competitiveness environment by developing our business and work environment while in the medium term we will continue to develop our economic and technological infrastructure, our education system and our ability to innovate to allow business to compete in an innovation-led economy.

We do not under-estimate the challenges and we recognise that we cannot meet all our objectives immediately. In some cases, the benefits of the decisions we take and the work we do today may not be felt for some time. However, we have a framework for action and we are taking concrete steps across a wide range of areas to meet those challenges.

The Council's recommendations, drawing on the expertise of its members, provide the Government with a valuable input into policy formulation and implementation. I am therefore very pleased to introduce both the *Annual Competitiveness Report 2003* and the *Competitiveness Challenge 2003*. The Government will give careful consideration to all of its recommendations.

Mr Bertie Ahern, TD
Taoiseach

November 2003

Chairman's Preface

Business conditions in most industries are tougher now than they have been in over a decade. While this partly reflects the weak international economic climate and the recent strengthening of the euro, we cannot lay the blame for the current economic slowdown entirely at the door of the global economy. Domestically-generated problems such as rising costs, congested infrastructure and limited domestic broadband availability are clearly exacerbating an already difficult trading environment.

This year, the National Competitiveness Council is publishing its sixth *Annual Competitiveness Report* and *Competitiveness Challenge*. Using a wide range of key "input" and "output" indicators, sourced from bodies such as the OECD and Eurostat, the *Annual Competitiveness Report 2003* (ACR) analyses Ireland's competitiveness and compares it to that of Ireland's trading partners and main competitors. Drawing from this analysis, the *Competitiveness Challenge 2003* makes recommendations on the actions needed to improve Ireland's international competitiveness.

What is clear from both reports is that our immediate priority must be to slow the growth of prices and costs. Irish inflation has fallen in recent months, but it is absolutely vital that we avoid complacency. Average prices in Ireland still remain well above those of our main competitors, and we must do everything in our power to reduce the cost of doing business in Ireland relative to other countries. Greater consumer awareness and competition and improved physical infrastructure are important parts of the solution. But Government should also play a more immediate role, in particular by avoiding further inflation-fuelling increases in customs and excise duties, VAT and publicly-administered prices until inflation falls back to a more acceptable rate.

Looking to the future, while Ireland continues to offer an attractive business environment, in terms of taxation, regulation and general education, this will not be enough to sustain economic growth in the future. We must address a new competitiveness agenda of raising productivity by enhancing education and industry-specific skills, promoting innovation, research and creativity and supporting entrepreneurship, all of which will underpin the development of a more knowledge-driven economy. *Competitiveness Challenge 2003* makes recommendations on the policies required to progress all of the above areas.

This is not an agenda that divides business and wider society. Economic dynamism and social progress go hand in hand. An innovative, enterprising economy offers the best opportunity to construct a fair and inclusive society in which all can contribute to and benefit from rising prosperity. During this period of global economic and political uncertainty it is vital that policy-makers maintain a clear focus on the determinants of long-term economic and social progress and improvements in Irish living standards and prosperity.

Ireland has a lot on which to build. The low level of public indebtedness, the strong base of modern manufacturing and internationally-traded service industries (including tourism), the competitive corporate taxation system, growing public investment in research and our traditional ability, because of our small size, to adapt quickly to changing circumstances all constitute a strong foundation for the economy going forward. But there is no automatic link between eventual global economic recovery and a resumption in strong Irish economic growth. Unless national competitiveness is kept at the top of the political agenda, we could find that the inevitable global economic up-turn leaves Ireland behind.

William Burgess
Chairman, National Competitiveness Council

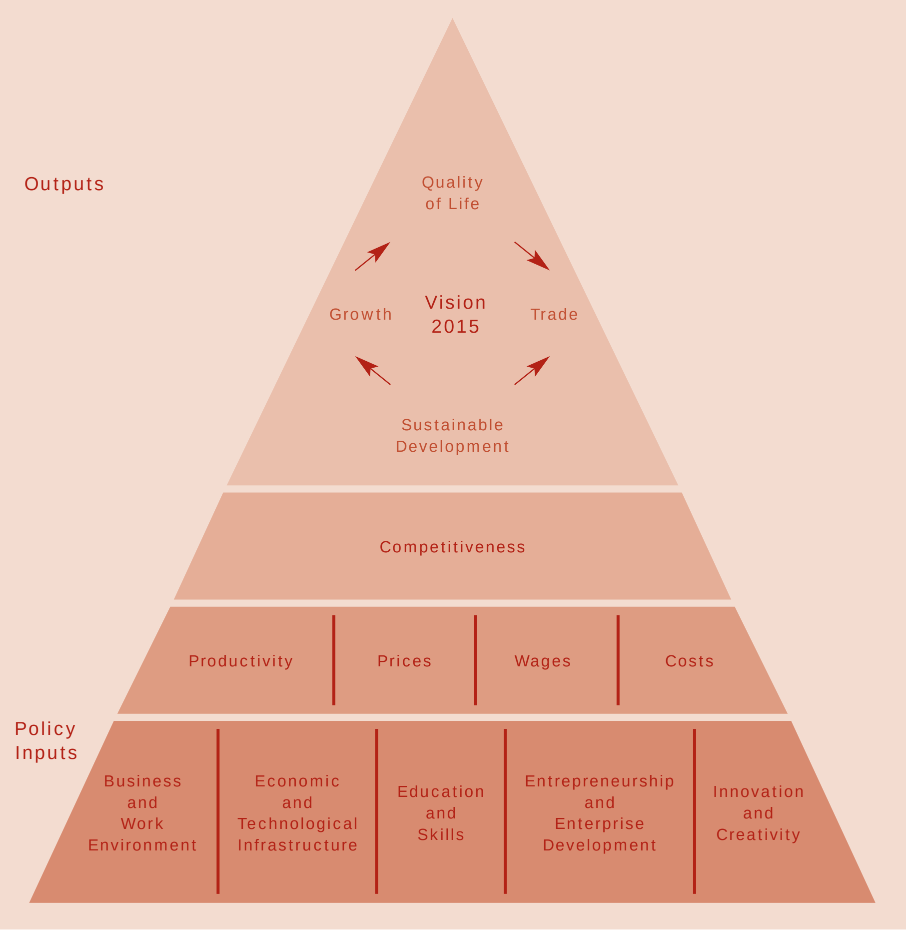
November 2003

Introduction

The National Competitiveness Council (NCC) defines competitiveness as the ability to achieve success in international markets leading to better standards of living for all. It stems from a number of factors, notably firm level strategies and a business environment that support innovation and investment, which combined lead to strong productivity growth, real income gains and sustainable development.

The “competitiveness pyramid” below illustrates the framework used by the National Competitiveness Council for understanding national competitiveness. It distinguishes between the “inputs” into national competitiveness and the “outputs” of national competitiveness. The 2003 *Annual Competitiveness Report* (ACR) and *Competitiveness Challenge* are organised around this framework. The ACR benchmarks Ireland’s performance for both inputs and outputs relative to 15 other countries. Drawing from the analysis in the ACR, the *Competitiveness Challenge* makes recommendations on the policy actions needed to improve Ireland’s international competitive standing. These recommendations are grouped under the five “policy input” headings shown on the bottom level of the pyramid.

National Competitiveness Framework Model



The analysis and recommendations in *Competitiveness Challenge 2003* focus on two different but complimentary agendas; first, the short-term need to improve the cost competitiveness of the enterprise sector, particularly given the appreciation of the euro against UK sterling and the US dollar over 2003; second, the medium-term challenge of putting in place the foundations for a more entrepreneurial, dynamic and innovation-driven economy. Failure to make progress on both agendas will result in a further deterioration of Ireland’s international competitiveness, will impede future economic growth and will lead, ultimately, to an erosion of Irish living standards relative to other countries.

Recovering Cost Competitiveness

The Council believes that Ireland's immediate competitiveness priority must be to slow the growth of prices and costs. Even high-technology and innovation-driven industries ultimately have to compete on costs. The rising cost of living here also undermines the efforts of our third-level institutions and development agencies to build a new generation of "knowledge-intensive" businesses in Ireland. Attracting high calibre scientists, researchers and other skilled employees from abroad to Ireland is made difficult by high living costs, and in particular by the exorbitant cost of housing. There is strong evidence from the *Annual Competitiveness Report 2003* and elsewhere that many costs and price levels in Ireland are out of line with those of our main competitors. The international competitiveness of our manufacturing and internationally trading services industries was protected during the 1997-2001 period only by a weak currency. This artificial support for national competitiveness has now been removed, leading to a high cost base.

Much of Ireland's cost inflation in recent years stemmed from the inevitable upward pressure on prices and wages from fast economic growth. This pressure is already easing as the economy slows. In order to reinforce the recent fall in inflation and further underpin wage moderation, the Government should avoid further inflation-fuelling increases in customs and excise duties, VAT and publicly-administered prices until inflation falls back below 2.0%, in line with the euro-zone average. This is addressed in more detail in Chapter 1.

There are also, however, more deep-seated structural factors behind the cost escalation in Ireland – factors which, if left unchecked, pose a more fundamental threat to Irish national competitiveness and social and economic development. These include public sector inefficiencies and the legacy of a generation of government regulations in product and service markets that act to inhibit competition, thereby preventing the emergence of more efficient industry structures that would lower costs for businesses and consumers. Recommendations for reducing costs and increasing the efficiency of the economy by improving the intensity of domestic competition are covered in Chapter 1.

Other "structural" factors behind the recent cost escalation in Ireland are the inefficient planning system and the underdeveloped physical infrastructure (transport, communications, etc.), which has failed to keep pace with Ireland's economic growth. Taking into account Ireland's enterprise development priorities into the medium-term, the Council has identified broadband communications, research infrastructure and inter-urban roads as the three categories of economic infrastructure that need prioritisation. While significant public and private financial resources will have to be invested to make progress in these areas, these investments must be combined with measures to improve value for money and accelerate infrastructure delivery. In particular, steps must be taken to improve the planning processes that underpin infrastructure delivery, as well as the project management skills of the public sector. Recommendations to this effect are made in Chapter 2.

Building an Innovation-Driven Economy

Recovering Ireland's cost competitiveness must be the first, but not the sole, priority of the broader economic strategy. In order to sustain the transition to a more dynamic, enterprising and productive economy, it will also be necessary to put in place coherent and consistent policies in the areas of education, entrepreneurship, enterprise development, research and innovation. These policies should be all guided by the need to support the development of higher skill, knowledge-intensive activities in which Ireland can be a significant player and can build truly distinctive competencies. Combined, these topics form a "new competitiveness agenda" for Ireland.

Education Policy

The success of Ireland's strategy to reposition industry towards knowledge-intensive high-technology activities will depend critically on the supply of high-skilled people, including researchers. As economic transformation accelerates in response to globalisation and technological changes, the role of knowledge intensive industries in Ireland will increase, and "intellectual capital" will assume an even greater role in driving the economy. Formal education will need to be enhanced by a commitment to life-long learning, incorporating informal on-the-job experience, as well as a formal framework that encourages both a return to schooling and the constant up-skilling of the workforce. Given this changing context, the Council sees four critical challenges facing the Irish education system:

- reducing the number of secondary level students that leave school before their education is completed;
- ensuring that primary and secondary curricula remain relevant to the needs of an "enterprise society";
- increasing significantly the numbers of part-time and mature students in third level education;
- and strengthening the research capacity of the third and fourth level systems.

These issues are discussed in more detail in Chapter 3, together with recommendations.

Enterprise Policy

Over the last decade, the remit of Irish enterprise policy has broadened from a narrow concern with grants, tax incentives and the activities of the industrial development agencies to include a much wider range of "horizontal" factors that affect all industries to a greater or lesser extent. This policy shift played an important role in improving the attractiveness of the business environment to multinational companies, thereby securing high levels of foreign direct investment (FDI). But a changed domestic and global economic context suggests that Ireland's enterprise policy formula, based around the advantages of a plentiful supply of skilled labour, a broadly attractive business environment, macroeconomic stability and a favourable tax regime, may no longer suffice in sustaining the competitiveness of many Irish-based industries. Irish enterprise policy must again adapt to new conditions, and particularly to the increased levels of competition for FDI flows from Asia and central Europe. Ireland must move beyond our existing advantages to build sustainable competitive advantage based on distinctive competencies in spheres of business where Ireland is, or can be, a significant player.

While FDI must remain a central part of Irish enterprise development, our enterprise policy should also recognise that indigenous business start-ups have the potential to become a more important source of employment and productivity growth. Exploiting the full potential of indigenous entrepreneurship will require Government to put in place a co-ordinated plan of action aimed at removing barriers to business start-ups and growth in small- and medium-sized enterprises. A more detailed analysis of these issues is presented in Chapter 4, together with recommendations.

Research and Innovation Policy

As product and process innovation is a cornerstone of competitiveness in a knowledge-driven economy, Ireland's poor innovation performance, as measured by patent registrations and other indicators, is a cause for concern. Improving the levels of innovation and creativity in the economy is not solely, or even mostly, the job of government. Instead, actions need to come from a broad coalition of government agencies, private businesses, trade associations and professional organisations, universities and research institutions, standards setting bodies, and many other institutions that have an impact on innovation in Ireland. But policy makers also have an important role to play. While recognising that innovation stems from a number of factors, such as competition, education and a deep understanding of international markets and customer needs, the Council believes that three challenges for policy makers stand out in the Irish context:

- allocating adequate resources and ensuring coherence in public investments in research;
- providing the right environment for business investment in research and development;
- and improving research collaboration between universities and industry.

Embedding a "technology foresight" process in public policy making process will be crucial in these areas. Analysis of these challenges is presented in Chapter 5, together with recommendations.

Balancing Fiscal Responsibility and the Public Investments in the Knowledge Economy

Most of the recommendations in this report have no direct exchequer implications, involving only a re-organisation of institutional structures or a re-ordering of policy priorities or spending within existing exchequer allocations to government departments and agencies. Both in this report and in the Council's submission on the mid-term review of the *National Development Plan (NDP) 2000-06*, the Council has also offered guidance to Government with regard to the prioritisation of infrastructure spending over the coming years and possible ways to ensure greater value for money in Ireland's capital investment programme.

Nonetheless, some of the initiatives to promote the knowledge economy do require targeted tax cuts or additional public spending. But the Council believes that there is no inconsistency between these measures and the need to maintain fiscal responsibility. A rough estimate suggests that the net cost to the exchequer of the tax and additional spending measures recommended in this report would be approximately €150 million in 2004. The Council believes that investments of this limited scale could be financed through greater efficiencies in existing programmes. Even if financed by extra borrowing, this would increase the general government deficit by no more than 0.1% of GDP. While these measures inevitably divert resources from other uses, every good strategy necessarily involves trade-offs and choices.

Delivering the "New Competitiveness" Agenda

The Council believes that the key to restoring and improving Ireland's national competitiveness lies in the swift implementation of recommendations proposed herein. But some of these recommendations to Government have been made before, either by the Council or by other government agencies and advisory bodies, yet action is still awaited. While this sometimes reflects fundamental differences between the Council and policy makers on policy priorities and solutions, it often reveals a weak alignment of public policy activity across government departments and agencies in the area of economic development. We need to consider how to reform the institutional structures of state to bring about greater coherence and co-ordination of actions to support national competitiveness and Ireland's transition to a more innovation-driven stage of economic development.

Finally, moving Ireland to the next stage of economic development is not solely the job of government, as many of the actions required are outside the remit of policy makers. There is also an agenda for, among others, industry associations, trade unions, universities and the managers of individual Irish firms. Irish managers need to re-orient company strategies towards a greater level of innovation and the provision of higher value goods and services. This will require increased investments in R&D, skills, modern production and logistics technology and IT to develop and support more sustainable competitive advantages. Firms, and their industry associations, also need to be more pro-active in working with the development agencies. The changing nature of state interventions increases the onus on companies to form collaborative partnerships with suppliers, customers and third level institutions to build networks and clusters of excellence to win competitive advantage through innovation.

Contents

List of NCC Members		ii
Foreword by An Taoiseach		iii
Chairman's Preface		iv
Introduction		v
1	**Business and Work Environment**	2
	Fiscal Policy	3
	Competition Policy	5
2	**Economic and Technological Infrastructure**	7
	Planning Process, Procedures and Legislation	7
	National Project Management	8
	Broadband Telecommunications	9
3	**Education and Skills**	12
4	**Entrepreneurship and Enterprise Development**	16
	Supporting Clusters	16
	Supporting Entrepreneurship	18
5	**Innovation and Creativity**	21
	Ensuring Adequate Resources for and Coherence in Public Investments in Research	21
	Providing the Right Environment for Business Investment in Research and Innovation	22
	Improving Research Collaboration between Universities and Industry	23
NCC Publications		25

National Competitiveness Council

The Competitiveness Challenge 2003

1 Business and Work Environment

The Business and Work Environment refers to the impact of government policies in areas such as business and labour market regulation, competition, international trade and investment, taxation and macro economic management, on the ease and cost of doing business in Ireland. Ireland's geographic peripherality, under-developed transport and research infrastructure and other economic disadvantages such as the high degree of openness, make it essential that Ireland offers a flexible and cost competitive business and work environment.

It is of great concern, therefore, that Ireland's cost competitiveness has been eroded in recent years by a combination of high domestic price and wage inflation and, more recently, by the appreciation of the euro against sterling and the US dollar. The Central Bank's Real Trade Weighted Competitiveness Index, which measures competitiveness changes due to differential rates of inflation as well as exchange rate fluctuations, estimates that Ireland's real effective exchange rate appreciated by 21 per cent between May 2000 and August 2003. Given the already difficult global trading conditions and highly open nature of the economy, this deterioration in cost competitiveness is the most serious threat currently facing the Irish economy.

The rising cost base affects all businesses, particularly traditional manufacturing industries competing in international markets. But even knowledge-based industries ultimately have to compete on costs. The high cost of doing business here undermines the efforts of development agencies to foster a new generation of innovation-intensive activities and to keep or attract scientists, researchers and other skilled employees in Ireland.

Evidence from this year's *Annual Competitiveness Report* (ACR 2003) shows that insurance, energy and waste management costs have risen sharply in the last three years. Ireland ranked the 3rd most expensive of nine countries for industrial electricity costs[1], 3rd most expensive out of ten countries for landfill costs and the 4th most expensive of 16 countries for insurance premiums per capita. Labour cost pressures also continue to mount as wage growth continues to outstrip the European Union (EU) average.

There is no single explanation for the widening cost gap between Ireland and our trading partners. Factors include:

- faster Irish economic growth compared with other EU countries;
- economic overheating in the 1999-2002 period caused by a combination of tax cuts, falling interest rates, fast growth in public spending and the "dot.com" bubble;
- the impact of the weak euro in 1999-2002 on the prices of Irish imports from the UK and the USA;
- the impact of rapid house price inflation on wage growth;
- continuing regulatory and private restrictions to competition; and
- large increases in the cost of government administered services and in indirect taxes[2].

Although the headline rate of inflation has fallen in recent months, it is absolutely vital that we avoid complacency; both the inflation rate and the price level in Ireland still remain well above those of our main competitors[3]. Moreover, one of the main reasons for the recent fall in inflation is the strength of the euro since 2002, which only adds to the competitiveness difficulties being faced by Irish business.

1 Industrial electricity prices refer to the cost of 10 GWh (including taxes and VAT) measured in euros.

2 In the twelve months to end January 2003, the price of services provided directly by the State to the consumer grew by 15%, compared with national inflation of 4.8%. With regard to the role of government fiscal policy, it is estimated that the increases in excise duties, together with the rise in the lower rate of VAT, introduced in Budget 2003 added around 0.9% to the headline rate of consumer price inflation this year.

3 According to the *Forfás Consumer Pricing Report 2003*, Ireland is now the joint most expensive country in the euro area, along with Finland.

While some of the causes of Irish inflation are outside domestic control, the government must play a leading role in restoring Ireland's cost competitiveness. In its *Statement on Inflation* of May 2003, the Council set out a number of actions for government and the social partners designed to reinforce the recent fall in inflation and reduce the price differential between Ireland and its trading partners. The Council stands over the recommendations made in this Statement, and considers action in two areas as being particularly vital: first, fiscal policy should support competitiveness and low inflation; and, second, price inflation should be lowered by facilitating competition and making markets work better.

Fiscal Policy

Many of the actions needed to lower Irish inflation and improve cost competitiveness set out in the *Statement on Inflation* are medium to long-term in nature. But the upcoming national wage negotiations under the *Sustaining Progress* agreement call for more immediate action to further lower inflationary expectations and reinforce wage moderation. The government should signal a strong commitment to reducing inflation to under two per cent during 2004, in line with the target for the euro area as a whole. Such a commitment can only be delivered by ensuring that a central goal of fiscal policy in 2004 is to reduce the rate of inflation by minimising further increases in customs and excise duties, VAT and administered prices in the upcoming budget. With such a policy, the Council believes that headline consumer price inflation has the potential to fall towards the 2.0 per cent target by early-2004, from 2.9% in the year to September 2003.

The Council recognises that improving public services and infrastructure costs money and that, in certain circumstances, user charges can make for more efficient use of available resources. Indeed, many of the initiatives to support the knowledge economy called for by the Council in this report have implications for public spending. But many of these initiatives can be financed through greater efficiencies in existing programmes, and are not inconsistent with continued fiscal responsibility and pro-competitive tax structures (see Introduction). In contrast, public spending initiatives in recent years has been financed in a way that directly hurt cost competitiveness. Given the ever increasing mobility of capital, labour and intellectual property, there is a need to ensure that the balance of taxation between property, capital, labour and consumer spending is structured in such a way as to ensure that that taxes are raised not only in an equitable manner, but also in a way that supports national competitiveness.

Moreover, the rapid rise in public spending has sometimes reflected not an increase in the quality or quantity of public services, but instead rapid growth in public sector wage costs that was not accompanied by higher efficiency and productivity. When these inefficiencies are passed onto the rest of the economy in the form of increases in taxes and administrative charges, our international competitiveness deteriorates and jobs in the exposed internationally trading sectors of the economy are lost.

In order to achieve a significant improvement in public sector productivity, and ensure that wage increases agreed under the "benchmarking agreement" do not lead to further increases in taxes and administrative charges and losses in competitiveness, the Government has decided that it needs to accelerate the process of public service modernisation, increasing public sector efficiency and improving value for money. Performance Verification Groups established as part of the *Sustaining Progress* agreement must ensure that benchmarking awards are linked to demonstrable improvements in productivity and efficiency. Such improvement should be delivered through investment in training and technology alongside institutional reform. Only in this way can the Government improve public services and infrastructure without adding to inflation and putting at risk Ireland's pro-growth tax structure.

The proposed introduction of carbon taxes and other measures to reduce Ireland's emissions of Greenhouse Gases (GHGs) under the Kyoto Protocol highlights the importance of assessing the cost competitiveness implications of changes in fiscal policy. The Council is concerned about the implications for Ireland's international competitiveness of such measures for two reasons: first, the incomplete participation in the Kyoto Protocol by other developed and developing countries; and second, the fact that few, if any, other countries are required to reduce their GHG emissions from current levels by the same degree as Ireland, reflecting our rapid economic growth since the baseline period (1990). While the obligation relates to reducing emissions for the period 2008-2012, measures are now being proposed, such as mandatory emissions trading for certain industrial facilities from January 2005 and carbon taxation. The Council fears that measures designed to reduce Ireland's GHG emissions have the potential to cause major damage to output and employment in Irish industry.

Given these considerations, the Council believes that Ireland's policy on meeting our GHG emissions commitments should be guided by the following four principles.

- Firstly, the introduction of any carbon tax should cover all sectors of the economy, thereby ensuring a fair distribution of the burden of responsibility. This will maximise the potential to achieve reductions in emissions and provide an incentive for companies to participate in legally binding negotiated energy agreements. These instruments, along with emissions trading will encourage CO_2 abatement whilst minimising the cost implications for businesses.
- Secondly, the introduction of any carbon tax should be announced well in advance, with clear details of operative dates and rates to be applied.
- Thirdly, the tax should be introduced on a phased basis with exemptions provided for businesses engaged in emissions trading or legally binding negotiated energy agreements. Exemptions should also apply to firms engaged in international project mechanisms and those providing 50 per cent or more of their energy from Combined Heat and Power (CHP) or renewable sources.
- Finally, revenue raised from the introduction of carbon taxes should be recycled by government to purchase "emissions credits" through International Emissions Trading or investigating opportunities for investing in international projects mechanisms, thereby reducing the burden on domestic industry and consumers and minimising the risks to cost competitiveness.

1. Recommendations on Fiscal Policy

- **A central goal of fiscal policy in budget 2004 should be to reduce the rate of inflation to under two per cent by minimising increases in customs and excise duties, VAT and administered prices. (Responsibility: Department of Finance).**
- **The Government needs to accelerate the process of public service modernisation, increasing public sector efficiency and improving value for money. Performance Verification Groups established as part of the** *Sustaining Progress* **agreement must ensure that benchmarking awards are linked to demonstrable improvements in productivity and efficiency. (Responsibility: Department of Finance).**
- **The introduction of any carbon tax to reduce Ireland's emissions of Greenhouse Gases (GHGs) under the Kyoto Protocol should cover all sectors of the economy, thereby ensuring a fair distribution of the burden of responsibility. The introduction should also be on a phased basis with key exemption rules outlined. Finally any revenues raised should be recycled by government to purchase "emissions credits" on international markets, thereby reducing the burden on industry and consumers and minimising the risks to cost competitiveness. (Responsibility: Department of Finance).**

Competition Policy

Facilitating markets to operate efficiently by ensuring adequate competition is vital to driving down the cost of doing business in Ireland. Market entry by new firms and a high degree of rivalry between existing firms pushes other companies to lower costs, improve quality and service, and create new products and processes. Intense competition in domestic markets is a powerful stimulus to the creation and persistence of international competitive advantage. Policies that undermine competition, innovation and dynamism among companies represent the most common and most profound error in government policy towards industry.

According to the ACR 2003, however, Ireland ranks only 13th out of 16 countries with regard to the intensity of domestic competition (ranking of one = most competitive). Domestic policy makers have considerable control in this area, and there is no reason why Ireland cannot rank alongside Sweden, New Zealand and other small economies in the top half of this index. Action is required to increase the intensity of competition in Ireland, particularly in the non-traded services sector[4]. The Competition Authority is currently studying competition in banking, insurance and professional services. Greater competition in these and other sectors such as transport, distribution and wholesaling, private refuse collection services, communications, and energy offer the potential for increased productivity and lower costs for both business and individual consumers.

The Competition Act 2002 was a significant step forward in enhancing Irish competition law and strengthening the powers of the Competition Authority. Given the recent changes and the urgency of increasing the intensity of domestic competition, this is an opportune time for the Government to opt for an OECD peer review of the Irish competition policy regime, one of the elective options in the next biannual OECD country review. Pending any such review, there are four areas where measures should be undertaken to strengthen domestic competition.

Firstly, the situation where Ireland, unlike most other EU countries including the UK, Germany and France, has no civil sanctions for infringements of competition law needs to be considered. The absence of civil sanctions for violations of competition law means that the High Court is unable to impose fines where the Authority brings a civil case and has the potential to undermine widespread compliance with competition law enforcement. Only a small set of competition matters are suitable for criminal enforcement; the vast majority of competition matters are only suitable for civil cases and no fines can result from such actions. The Council supports the principle of civil sanctions, and the Tánaiste and Minister for Enterprise, Trade and Employment should direct her department to explore the feasibility of their introduction from a legal and constitutional perspective.

Secondly, impediments to competition as a result of State imposed legislation and regulations need to be removed. The removal of State restrictions on competition is often vigorously resisted by the vested producer interests that benefit from a lack of competition. Historically, the Irish policy response has avoided the introduction of competition unless it is externally imposed, e.g. the telecommunications sector. Another problem is that compensation of vested interests may have been excessive, eliminating many of the benefits of competition. Government policy needs to implement competition-enhancing regulatory reform in those markets where wider benefits to employment and competitiveness outweigh vested interests, and ensure that reform is structured so that these wider benefits are fully realised. This could be supported by the roll-out of regulatory impact analysis for new and existing regulations that have the potential to restrict competition.

4 According to the *Forfás Consumer Pricing Report 2003*, roughly 73% of total Irish inflation originated in the services sector during the period 2000-02.

Thirdly, the Competition Authority should prioritise and expedite its ongoing studies of competition issues in the banking, insurance and professional services markets. Implementation of recommendations emerging from previous studies by the Authority also needs to be accelerated. For instance, the *Report on the Bus and Rail Passenger Transport Sector* (2001) and the *Study on the Liquor Licensing Laws* (1998) have been completed for a number of years yet remain to be implemented in a coherent, strategic manner. Likewise, the Competition Authority submitted a report to the Pharmacy Review Group in the Department of Health in January of this year, yet little progress has been made in terms of implementation.

Finally, the Government should more fully exploit the role of Irish consumers in driving competition by putting in place new arrangements that ensure that consumer interests are better represented in the policy-making process. In many markets, artificial impediments to consumer switching and choice inhibit both competition and the well-being of consumers. When consumers are empowered with accurate information, their behaviour in switching suppliers can act as a powerful tool to support the competitive process. At present there are several organisations currently involved in work in the consumer policy area. The Office of the Director of Consumer Affairs has a narrow consumer law enforcement role, the Competition Authority has responsibility for the advocacy and enforcement of competition law, the Consumers Association has responsibility for awareness campaigns and Forfás has the role of monitoring price changes and cost competitiveness. This piecemeal approach to consumer policy fails to place consumer interests at the heart of public policy making, and the various roles of the respective organisations in the area of consumer advocacy need to be better defined and co-ordinated.

2. Recommendations on Competition Policy

In order to reduce cost pressures by strengthening domestic competition, the Tánaiste and the Minister of Enterprise, Trade and Employment should:

- **request that the OECD conduct a peer review of competition policy in Ireland in the forthcoming OECD biannual country review;**
- **explore, in conjunction with the Competition Authority, the feasibility from a legal and constitutional perspective of introducing a regime of civil sanctions (fines) for infringements of competition law;**
- **co-ordinate with the Department of an Taoiseach to ensure that all individual government departments implement a process of regulatory impact analysis and identify existing regulations that restrict market access and competition;**
- **encourage the Competition Authority to prioritise and expedite its studies of competition issues in the banking, insurance and professional services markets and work with other relevant ministers to implement recommendations from these and previous studies by the Competition Authority; and**
- **put in place new arrangements that ensures that consumer interests are better represented in the policy-making process.**

2 Economic and Technological Infrastructure

The ACR 2003 ranks Ireland 15th out of the 16 countries examined for overall infrastructure quality. While Ireland's geographic peripherality, low population density and growing emphasis on knowledge-based industries (which have lower infrastructure requirements) would suggest that it is neither likely nor necessary that Ireland enjoy a leading position on this indicator, much improvement is still required to sustain competitiveness and support Ireland's transition to an innovation-led knowledge-based economy.

Physical infrastructure is a facilitator, and not a driver, of industrial upgrading, which instead depends primarily on improvements in human and organisational capabilities as a result of education, training, competition and firm-level investment in capital and innovation. Yet inadequacies in Ireland's infrastructure undermine competitiveness in several ways. Ireland's attractiveness as an investment location is diminished by inadequate transport and communications links, which hinder the efficient movement of goods, people and information. The resulting congestion leads to higher inflation, increased costs and lower productivity. Ireland's ambitions of being at the forefront of the knowledge economy are hampered by the high cost and limited availability of broadband communications.

In July 2003, the Council completed a detailed submission to the *Mid-term Review of the National Development Plan (NDP) 2000-06,* completed by the ESRI and DKM Economic Consultants in October 2003. Taking into account Ireland's enterprise development priorities into the medium-term, the submission identified research infrastructure, broadband communications and inter-urban motorways/dual carriageways as the three categories of economic infrastructure that need prioritisation over the remaining three years of the current NDP. While significant public and private financial resources will have to be invested to make progress on these areas, these investments must be combined with measures to improve value for money and accelerate infrastructure delivery. In particular, steps must be taken to improve the statutory planning processes that underpin infrastructure delivery, as well as the project management skills of the public sector.

Planning Processes, Procedures and Legislation

Delays in the planning process and uncertainty over land costs acquired under Compulsory Purchase Order are key impediments to the timely and efficient rollout of economic infrastructure. Greater certainty, speed and consistency in the planning process call for a fast-track system for strategic national infrastructure projects. A number of steps are needed in this regard.

Firstly, the Minister for the Environment, Heritage and Local Government should prepare legislation that sends planning applications for all national infrastructure projects directly to a specialised "one-stop-shop" that can deal with all elements of the process. While it has been suggested that this role be assigned to a new "National Infrastructure Board", the scarcity of skills in this area suggests that this function instead be consolidated within a restructured An Bord Pleanála (ABP), which already deals directly with planning applications from local authorities for infrastructure projects. Either way, it is vital that sufficient resources are provided to ensure that this would speed up project delivery. A framework would also have to be developed that harnesses the expertise of local authorities in infrastructure design at the pre-planning stage. Additionally, an alternative appeal mechanism may also have to be found. Finally, any reorganisation of the planning process must ensure that the quality of the decisions made is not sacrificed for the sake of expediency, which would only hurt competitiveness in the long-run.

Secondly, in order to reduce the time taken for judicial review of planning decisions related to national infrastructure projects, a specialist judge or judges should be appointed to the High Court to deal specifically with the judicial review of national infrastructure projects and planning appeals. In addition, cases relating to strategic national infrastructure projects should be prioritised.

Thirdly, the current method of calculating compensation when land is compulsorily acquired is defective and should be reformed. A pricing mechanism should be developed that is less dependent upon anticipated land values, particularly where these values incorporate anticipated increases in the event of public infrastructure developments, i.e. when the value is only an estimated value based to a large extent on future potential uses of the land. One possible model recommends the payment of cost price plus any interest on borrowings plus a given per cent over the prevailing interest rate. Under such a system, landowners will not lose money on their investments, and neither will they get an exorbitant return simply because the State needs the land.

Finally, the Council would like to see a re-wording of Article 43 of the Constitution designed to give greater weight to 'the common good' and 'essential public infrastructure' in decisions regarding the merits of compulsory purchase orders. *The Whittaker Report on Constitutional Reform 1996* stated that it "did not consider that Article 40.3.2 and Article 43 are satisfactory in their present form". However, given the time required to effect constitutional change, such an amendment should not be seen as a prerequisite to the implementation of other reforms.

National Project Management

Poor administrative arrangements that inhibit good national project management of economic infrastructure delivery under the NDP have caused significant cost over-runs and time delays in the delivery of infrastructure projects. Ireland has an institutional framework for the delivery of infrastructure that has developed around a system of government departments, local and regional authorities and state agencies charged with delivery of particular infrastructure projects. Effective communication and co-ordination between these bodies is crucial to the timely delivery of projects, both at the level of strategic planning and operational infrastructure delivery. In order to streamline the national project management process, fewer Government Agencies and Departments should be involved in the delivery of economic infrastructure.

Each national infrastructure project should be made the responsibility of a single Government Department or Agency which should take the role of national project manager for the delivery of the infrastructure and have both responsibility and accountability for the rollout of that project. In order to make use of their expertise in the field, the National Roads Authority (NRA) should also have a more direct involvement in road project planning, design and construction at the local as well as national level.

The skill of planning and project management has become both more critical and more complex in recent years. The scale of many infrastructure projects, especially in civil engineering, is significantly greater than projects traditionally commissioned by the public sector, and involves a higher number of stakeholders. Accordingly, the Minister for Finance should direct the Centre for Management and Organisation Development (CMOD) at the Department of Finance to carry out a study of the adequacy of existing infrastructure project management skills within government departments (and their agencies), identifying the actions that are necessary to ensure that the supply of staff with such skills meets anticipated demand. CMOD should, by June 2004, report the conclusions of this study for follow-up by the High Level Group on Infrastructure and Public Private Partnerships, which is chaired by the Department of An Taoiseach. On a case-by-case basis, the Government should also consider leveraging private sector expertise to manage certain infrastructure projects. For example, the successful delivery of the Metropolitan Area Networks for broadband telecommunications is evidence of value of harnessing private sector skills (see below).

3. Recommendations on Infrastructure Planning and Project Management

- **The Minister for the Environment, Heritage and Local Government should prepare legislation that would send planning applications for all national infrastructure projects directly to a specialised, dedicated body.**
- **A specialist judge or judges should be appointed to the High Court to deal specifically with the judicial review of national infrastructure projects and planning appeals and legislation should be enacted to the effect that this judge or judges will only deal with other cases if there are no judicial reviews of decisions related to national infrastructure projects awaiting hearing. (Responsibility: Department of Justice, Equality and Law Reform).**
- **The current method of calculating compensation when land is compulsorily acquired is defective and should be reformed. (Responsibility: Department of Environment, Heritage and Local Government).**
- **Article 43 of the Constitution should be re-worded to give greater weight to 'the common good' and 'essential public infrastructure' in decisions regarding the merits of compulsory purchase orders. (Responsibility: Department of Environment, Heritage and Local Government).**
- **The National Roads Authority should have a more direct involvement in road project planning, design and construction at the local as well as national level. (Responsibility: Department of Transport, Department of Environment, Heritage and Local Government).**
- **The Minister for Finance should direct the Centre for Management and Organisation Development (CMOD) at the Department of Finance to carry out a study of the adequacy of existing infrastructure project management skills with government departments (and their agencies), identifying the actions that are necessary to ensure that the supply of staff with such skills meets anticipated demand. CMOD should, by June 2004, report the conclusions of this study for follow-up by the High Level Group on Infrastructure and Public Private Partnerships.**

Broadband Telecommunications

Many of the institutional reforms recommended are unlikely to have an impact on infrastructure delivery for several years. But Ireland cannot afford to wait that long for broadband telecommunications, which is an essential component of a knowledge-based economy. Ireland's geographic location and emphasis on high-technology industries means that we are more dependent than most on an efficient telecoms sector for both domestic and overseas manufacturing activities and services. A report conducted by the Brookings Institute forecasts that widespread broadband rollout would benefit U.S. consumers by as much as $300 billion per year and US producers by $100 billion per year. A study conducted by Peter Bacon and Associates suggests that similar benefits would accrue to the Irish economy, albeit at a reduced scale, through, among other benefits, efficiency improvements, increases in FDI and greater regional development.

Ireland remains, however, a laggard in the availability and cost of broadband communications. The ACR 2003 ranks Ireland last out of 13 countries for overall broadband take-up, 13th out of 14 countries for broadband access and 12th out of 13 countries for the cost of broadband. Furthermore, Ireland has been ranked by the European Commission at the bottom of the EU league with regard to the cost of "backhaul broadband" – a crucial issue for alternative telecoms operators seeking to deliver competitively priced broadband services across the country.

Our goal of becoming a leading knowledge-based economy requires that we move into the top quartile for each of these measures. State leadership has been crucial to a successful roll-out of broadband infrastructure in other advanced economies (including Singapore, Korea and Sweden), and was also vital in driving down, through the Global Crossing Project, the cost of international broadband connectivity out of Ireland. The Council believes that in Ireland more government leadership is required in rolling out domestic broadband. This must happen on two fronts:

Co-ordinating Broadband Infrastructure Deployment

Drawing from the *New Connections* report, the Minister for Communications, Marine and Natural Resources should take responsibility for the preparation and implementation of a phased, costed and transparent plan, with clear multi-annual output targets regarding public and private-sector roll-out of national broadband infrastructure. Clearly, adequate resources and credible multi-annual budgeting will be required for implementation of the strategy, which should include the following elements.

- **Fostering competition in broadband delivery.** Ultimately, the most important policy tool available to boost broadband access will be competition among private sector infrastructure and service providers. Effective competition in Ireland has, however, been handicapped by the lack of an alternative broadband infrastructure (such as cable) which can compete with the existing telecoms infrastructure, as well as by the slow progress that has been made in facilitating access by alternative telecoms operators to the incumbent's network. This reflects not so much deficiencies in the regulatory regime, but rather an unacceptably long time lag between regulatory decisions and their implementation. In this regard, the Council welcomes the establishment of an independent appeals board to deal with decisions taken by the regulator. Additional reforms of the court system may also need to be considered to speed up judicial review of regulatory decisions.

- **Direct Provision.** More direct state interventions are also needed to accelerate broadband delivery. In this regard, the Council welcomes the Government's support for broadband deployment by local authorities through the Metropolitan Area Networks (MANS) program. Through the provision of this alternative broadband infrastructure, the state is helping to negate the impact of a single dominant service provider, thereby encouraging price competition. Although the Government has budgeted €152 million for the program, only €65 million has been allocated to date. The Council recommends that the remaining NDP funds for regional broadband deployment be delivered through a guaranteed multi-annual budget needed for effective long-term planning.

- **Use of Existing State Networks.** In addition, the state owned backbone networks of ESB, CIE and Bord Gáis should be made available at competitive rates to telecoms operators in order to form an effective national backbone to service MANS and Ireland's excellent international connectivity. This would in turn reduce the cost differential for buying international broadband in key development hubs such as Cork and Galway compared with Dublin.

- **Proper Planning.** In order to ensure that the necessary infrastructure for broadband (including DSL) rollout is available to all new developments, all new roads should be ducted and laid with fibre during construction and all new county development plans should mandate the building of ducts as part of the planning permission for new residential and industrial centres.

Stimulating Demand for Broadband Services

The Government should also take responsibility for putting in place measures to stimulate demand for broadband services to coincide with the infrastructure roll-out and stimulate private sector activity. These measures should include the following:

- **Accelerating eGovernment.** As a demonstration of its commitment to broadband technology, the Government needs to accelerate the rollout of eGovernment, initially targeting the completion of a comprehensive system of e-procurement, e-payment and e-recruitment by January 2006. The Cabinet Sub-Committee on the Information Society (within the Department of the Taoiseach) should put in place a new institutional structure to complete this task by 30th April 2004, involving a process, timetable and framework similar to those adopted by the Euro Changeover Board to manage the successful euro conversion.
- **Driving Down Prices.** Regardless of improvements to the broadband network, consumers will continue to be excluded from the broadband market unless a competitive pricing model is introduced by suppliers. International evidence indicates that €30 per month (inc. VAT) is a critical price point to encourage mass household adoption of broadband services. Accordingly, the Council believes that the Minister for Communications, Marine and Natural Resources and ComReg, the communications regulator, should continue to exert pressure on broadband suppliers to cut the retail price of broadband services on a national basis through increased efficiencies.

4. Recommendations on Broadband Communications

- **The Minister for Communications, Marine and Natural Resources should be empowered and resourced to take responsibility for the preparation and implementation of a phased, costed and transparent plan, with clear multi-annual output targets, for public and private-sector roll-out of national broadband infrastructure.**
- **The Minister of Finance should allocate the remaining budget under the NDP for the first phase of the MANS programme with a guaranteed multi-annual budget.**
- **The Minister for Communications, Marine and Natural Resources should co-ordinate with other relevant ministers to ensure that state owned backbone networks of ESB, CIE and Bord Gáis are made available at competitive rates to telecoms operators in order to form an effective national backbone to service MANS and Ireland's excellent international connectivity.**
- **The Minister for the Environment, Heritage and Local Government should put forward planning regulations to ensure that all new roads should be ducted and laid with fibre during construction and that all new county development plans should mandate the building of ducts as part of the planning permission for new residential and industrial centres.**
- **An Taoiseach, through the auspices of the Cabinet Sub-Committee on the Information Society, should put in place a new institutional structure by 30th April 2004 to accelerate the rollout of eGovernment, initially targeting the completion of a comprehensive system of e-procurement, e-payment and e-recruitment by January 2006.**
- **The Minister for Communications, Marine and Natural Resources and ComReg, the communications regulator, should continue to exert pressure on broadband suppliers to cut the retail price of broadband services on a national basis.**

3 Education and Skills

It goes without saying that education and learning fulfil a number of social and individual goals unrelated to economic development. Nonetheless, policy makers in Ireland have long appreciated the importance of an education system that meets the needs of the enterprise sector. Much of the credit for Ireland's economic boom in the 1990s was directly attributable to long term investment in the education system. Radical changes in education policy in the 1960s allied to significant investment in primary, secondary and more recently further and higher education and training, produced a large pool of well-qualified potential employees.

This is evidenced by data from the ACR 2003. Ireland is ranked 1st out of 12 countries examined concerning the proportion of science and engineering graduates per 1,000 population aged 20-34. Irish students also perform very well in terms of reading and scientific literacy according to the OECD; Ireland is ranked 3rd and 6th respectively out of 15 countries by this measure in a recent study.

Significantly, these strong educational outcomes have been produced with limited resources. Currently, Irish expenditure on education as a proportion of GDP is just 4.6 per cent, which, according to the ACR 2003 ranks Ireland just 15th out of 16 countries. Using GNP instead, Ireland spends approximately 5.7 per cent of national income on education, and is ranked 7th out of 16. This is considerably less than Korea and United States, which spend 7.1 and 7.0 per cent respectively on education.

While the focus must remain on educational outputs rather than inputs, it is not clear that the existing level of spending by Ireland on education will be sufficient to meet the needs of the knowledge economy. The success of Ireland's strategy to reposition industry towards knowledge-intensive high-technology activities will depend critically on the supply of high-skilled workers and researchers. As economic transformation accelerates in response to globalisation and technological changes, the role of knowledge intensive industries in Ireland will increase, and "intellectual capital" will assume an even greater role in driving the economy. Formal education will need to be enhanced by a commitment to life-long learning, incorporating informal on-the-job experience, as well as a formalised framework that encourages both a return to schooling and the constant up-skilling of the workforce.

Given the changing context, the Council sees four major challenges facing the Irish education system. The Minister for Education and Science should ensure that these challenges are addressed in the recently announced reviews of the Irish education system by both the OECD and by the Department of Education and Science.

Increasing Secondary School Completion Rates

Firstly, there is a need to combat social disadvantage by increasing secondary school completion rates. At present, it is estimated that approximately 20 per cent of Irish 17 year olds have dropped out of formal education.[5] It is vital that a greater focus should be placed on remedying this state of affairs, the root causes of which often stem from disadvantage in the primary school system. In addition to the social costs borne by both individuals and communities, as well as the impact on the living standards of society, this situation represents a significant long-term drag on the economy. Tackling this will require not just financial resources but also cultural change. Students (and their parents) in certain 'education black spots' must be persuaded of the benefits of continuing education. In this regard, existing policies such as the School Completion Programme require ongoing support and an extension of funding.

5 Source: The Joint Committee on Lifelong Learning, *Actions for Learning Society* (2001).

Increasing participation and completion rates within the secondary school system may be further facilitated by a more vocationally oriented leaving certificate. Although the development of the Applied Leaving Certificate is a welcome move, a system that integrates and formalises the apprenticeship and vocational qualification systems would significantly improve the number of people who leave the secondary school system with a recognised qualification. In addition, more imaginative use of the transition year programme would be useful. “Second chance” initiatives offering adults the opportunity of returning to second level or further education, such as the Back to Education Initiative, also require significant resources.

Updating Primary and Secondary School Curricula

Secondly, the importance of the primary and secondary education system to the competitiveness of the enterprise sector should not be underestimated. It is essential that curricula at these levels remain relevant to the enterprise sector and that the system produces students who can meet the personal and intellectual challenges posed by an ever changing and dynamic world economy. In this regard, improved aptitude among Irish students in the fields of science, mathematics, modern languages and ICT will be particularly important for both individuals and future national prosperity. Accordingly, the Council welcomes the discussion initiated by the National Council for Curriculum and Assessment in its publication *Developing Senior Cycle Education: Directions for Development*.

Developing Research Excellence in the 3rd and 4th Levels

Thirdly, there is a need to develop excellence in the 3rd and 4th levels of the education system, and in particular to strengthen the research capacity of the university sector. Ireland cannot afford to renege on its commitment to advancing research and development within the third level system. There is an ever-increasing need for continued and consistent investment in research centres and fourth level education. Any further pause of capital funding under the Programme for Research in Third Level Institutions (PRTLI) will have a detrimental long-term impact on the growth potential of the economy and will seriously damage Ireland’s international image as a country committed to developing a knowledge driven economy[6].

Promoting Lifelong Learning and Up-skilling

Finally, there is a need to put in place measures to increase significantly the numbers of mature students in part-time at third-level. Demographic changes mean that the number of school leavers (and the number of full-time third level students) is going to decline over the coming years[7]. This demographic shift, combined with the relentless transformation pressures being exerted on industry by global competition and technological change, mean than up-skilling by workers through part-time education must assume a much greater role than ever before.

Currently, Ireland performs poorly in relation to the number of 25-64 year olds participating in continuing education and training: the ACR 2003 ranks Ireland just 9th out of 12 countries for this measure. According to data from the Higher Education Authority (HEA) and the Institutes of Technology, less than nine per cent of new entrants into undergraduate courses for the 2001/2002 academic year are 23 years of age or over. This is considerably less than the 15 per cent target set by the *Report of the Commission on the Points System* published in 1999 and compared with an OECD average of almost 25 per cent.

6 This issue is dealt with in greater detail in Chapter 5.

7 According to Economic and Social Research Institute (ESRI) estimates, the annual inflow of 15-24 year olds to the labour force will decline from approx. 59,000 p.a. in 2000 to 54,000 in 2005.

The Department of Enterprise, Trade and Employment, the Department of Education and Science and the Further Education and Training Sector have put in place a number of excellent initiatives aimed at up-skilling the workforce through access to second level further education and higher education and training, e.g. Skillnets, in-company training through Enterprise Ireland; the National Access Office established by the Higher Education Authority, the Return to Learning Initiative, etc. Another important development has been the launch of the National Framework of Qualifications, which will bring increased clarity to the meaning of different types of qualification and allow qualifications to be compared easily. Together with the associated policies on access, transfer and progression, the framework promotes wider access to awards, creating additional opportunities for transfer to different programmes and encouraging learners to progress to awards at higher levels. The Council believes that this system will boost demand for part-time education and urges all stakeholders involved in education to speedily implement the National Framework for Qualifications.

But the disappointing statistics regarding participation in part-time education in Ireland suggest that there may be a more fundamental structural bias against part-time education in the higher education system that hinders the up-skilling of workers. With free fees for full-time under-graduate students, 3rd level institutions have fallen back on fee increases for part-time students to generate resources.

In the short term, the Ministers for Finance and for Education and Science should jointly explore the feasibility of reducing the financial burden faced by workers that are seeking to re-skill through part-time education by increasing the maximum level of spending on third level fees that is allowable for tax relief and by making relief available at the higher rate of income tax. There is also a need to ensure that the tax and grants systems for education interact in such a way as to ensure that all workers, and particularly the low-paid, have adequate financial resources and incentives to re-skill through part-time education. In this regard, the Council welcomes the review of the Department of Education and Science report *Supporting Equity in Higher Education* (August 2003) and encourages the Department to address this important issue as part of that review.

In the medium term, the Council believes that the debate surrounding third level fees should address, among other issues, the structural bias against increased part-time education. As part of any future reforms of the third level fees structure, this inherent bias against part-time education should be removed.

Financial constraints are not the only obstacle to the promotion of up-skilling and lifelong learning. A more flexible third level system, with course offerings and timetables tailored for the needs of to part-time students (weekend courses, evening classes and distance learning) will greatly contribute to developing a culture of further education and lifelong learning. In light of the falling number of CAO applications, it is clear that over the coming years, the third level system in Ireland will enjoy an amount of excess capacity. This increase in supply over demand provides the various third level institutions with the opportunity to refocus their roles to better match the needs of both the enterprise sector and the population at large.

5. Recommendations on Education Policy

In order to address the needs of enterprise development, as well as wider socio-economic objectives, the Minister for Education and Science should ensure that the reviews of Ireland's education system currently being undertaken embrace the following four medium-term challenges:

- **Reducing the percentage of second level students that leave school before their education is completed;**
- **Ensuring that primary and secondary curricula remain relevant to the needs of the enterprise sector, in particular by improving the aptitude of Irish students at these levels in the fields of science, mathematics, modern languages and ICT;**
- **Strengthening the research capacity of the third and fourth level system; and**
- **Increasing significantly the numbers of part-time and mature students in third level education.**

In the short term, the Ministers for Finance and for Education and Science should jointly explore the feasibility of reducing the financial burden faced by workers that are seeking to re-skill through part-time education by increasing the maximum level of spending on third level fees that is allowable for tax relief and by making relief available at the higher rate of income tax.

4 Entrepreneurship and Enterprise Development

The remit of Irish enterprise policy has broadened considerably over the last decade. The focus of Irish enterprise policy shifted, partly as a result of the 1992 *Culliton Review*, from a narrow concern with grants, tax incentives and the activities of the industrial development agencies to consider a much broader range of "horizontal" factors – factors that affect all industries to a greater or lesser extent. These factors include taxation, transport and communications infrastructure, the cost base (utilities, etc.), and the orientation of the education system – issues that affect the overall environment for enterprise in Ireland. The subsequent initiatives to improve the broad business environment in Ireland were an important element in Ireland's economic success during the 1990s.

But a changed domestic and global economic context suggests that Ireland's enterprise policy formula in place since the *Culliton Review*, based around the advantages of a plentiful supply of skilled labour, macroeconomic stability, a broadly attractive business environment and a favourable tax regime, may no longer suffice in sustaining the competitiveness of many Irish-based industries. This is evidenced by the high numbers of factory closures and staff redundancies in the electronics and other sectors in recent months. In order to counter the difficult global economic environment and increased level of competition from eastern Europe and Asia, future Irish enterprise policy must adapt and create conditions to facilitate a sustained shift to higher skill, higher value activities in knowledge-intensive sectors. Ireland must build distinctive sources of competitive advantage in niche industrial activities that are complex and difficult to replicate.

Significant progress has been made in this direction over the last decade, but Ireland still has a long way to travel. Evidence from the ACR 2003 confirms that there is still a large discrepancy between Ireland's image as a "high-technology" production base and its underlying "knowledge base". With some major exceptions, much of the foreign-owned sector in Ireland is, by the standards of other advanced industrialised countries, still positioned at a relatively low point in the value chain. The R&D, marketing and other capabilities that underlie the competitive strength and success of these firms are not, for the most part, located in their Irish operations. Notwithstanding the progress made during the 1990s, indigenous enterprise remains hampered by small-scale, low productivity and over-concentration in traditional sectors and on the home and UK markets, as well as low levels of R&D and innovation.

In this regard, the Council welcomes the recent establishment by the Tánaiste and Minister for Enterprise, Trade and Employment of an Enterprise Strategy Group to develop a new strategy for Irish enterprise development over the coming decade as an important start to addressing the challenge ahead. While not wishing to pre-empt the work of the Group, the Council has set out below a number of elements that should be reflected in Irish enterprise policy over the coming decade.

Supporting Clusters

With increasingly sophisticated and intense global competition, macroeconomic stability and a broadly attractive business environment alone will not drive forward Irish industrial development. Government policy towards industry must recognise that firms compete primarily within industries, not within nations. Firm productivity growth and international competitive advantage are heavily influenced by the dynamics and forces operating within each industry. Accordingly, there is a need to go beyond broad environmental measures by making industry-specific interventions to support emerging *clusters* of firms and related suppliers, buyers and collaborators.

Clusters can be defined as "geographically proximate groups of interconnected companies, suppliers, services providers and associated institutions in a particular field, linked by commonalities and complementarities". There are a number of benefits to firms that operate within clusters, including the development of a common supplier base and labour pool, smoother production processes, faster rates of innovation and product development, and new business formation that re-enforces the cluster development.

Despite efforts by the development agencies, evidence from the ACR 2003 indicates that cluster development in Ireland remains limited compared with other advanced economies, ranking Ireland just 8th out of 16 countries for the state of cluster development.

Of course, our small size means that the promotion of clusters will never be the solution to the needs of all industries and firms in Ireland. Many innovative Irish firms will continue to compete in global markets without the benefit of operating in a geographic concentration. Others will benefit from close linkages with suppliers and buyers operating in distant markets, facilitated by improved transport and communications networks.

Nonetheless, Irish enterprise policy should recognise the strong evidence internationally that a firm's competitive advantages – particularly in innovation-driven industries – often lie outside the firm itself and are rooted in geographic location and local industry dynamics. The State and industry should jointly and pro-actively create the industry-specific conditions that the development of higher skill, knowledge-intensive activities in which Ireland can be a significant player and can build truly distinctive competencies. Interventions could include specialised training and infrastructure, research institutions, formal networks and other semi-public "collective assets" for industries that are capable of enjoying sustainable competitive advantage in Ireland. These interventions should be financed and implemented jointly between government and industry.

This should not be about protecting "favoured" industries from competition. On the contrary, finding ways to stimulate greater domestic competition within particular industries is essential for driving greater innovation. Neither should it be about politicians and development agencies "picking winners" among competing technologies and sectors. As economies become more advanced, it is impossible for the state to micro-manage industrial development, given the sheer breadth and complexities involved and the intricate interactions and inter-dependencies between different industries. While the development agencies have enjoyed some success in the past in predicting business trends, their real strength was not the ability to spot winning sectors or emerging technologies, but rather an ability to quickly and pragmatically respond to what was working well and to reinforce it. This approach of "industry self-selection" rests on the ability to secure early and good intelligence from the marketplace about which industries are competitive in the national business environment.

Government and agency supports for industry should be increasingly organised around clusters and sectors, and there is a need to more closely integrate FDI with indigenous industrial development. FDI should be used more strategically to support indigenous industry and to "fertilise" indigenous industrial clusters. This will require greater coherence in the activities of Enterprise Ireland, IDA Ireland and Science Foundation Ireland.

This also suggests an agenda for managers of Irish firms. Companies and their industry associations need to play a more thoughtful role in working with government to develop a more sophisticated and challenging home environment that drives innovation and international competitiveness. Companies need to work alongside state agencies to invest in networks and other institutions of collaboration that support technological alliances, knowledge sharing, sharing key suppliers, attracting high-quality labour pools to specific areas, shared research and development, joint product development and international marketing ventures.

6. Recommendation on Clusters

- **Government and development agency supports for industry should increasingly be organised around industry-specific interventions to support "spheres of business" and clusters of related enterprise activities. As part of this shift in Irish enterprise policy, there will be a need to more closely integrate FDI with indigenous industrial development. This will require greater coherence in the activities of Enterprise Ireland, IDA Ireland and Science Foundation Ireland. (Responsibility: Department of Enterprise, Trade and Employment; Enterprise Strategy Group).**

Supporting Entrepreneurship

While FDI will remain a central part of Irish industrial development, indigenous business start-ups have the potential to become an increasingly important source of employment and productivity growth. While the ACR 2003 shows that Ireland performs strongly compared with other countries for entrepreneurship (as measured by the number of start-ups), significant improvement is still needed to bring Ireland up to the performance of the leading entrepreneurial countries, such as the USA, New Zealand and the Republic of Korea.

The Council believes that further improvement in this area requires that the Tánaiste and Minister for Enterprise, Trade and Employment direct her Department to promote indigenous enterprise through a published *Strategy on Entrepreneurship*, setting out a comprehensive vision and co-ordinated plan of action aimed at encouraging business start-ups and SME growth. Such a strategy should address the following challenges:

- **Reducing the administrative burden on entrepreneurs:** While the Council recognises that Ireland has traditionally placed a relatively light administrative burden on entrepreneurs (the ACR 2003 ranks Ireland 6th out of 16 countries on this measure), there is a danger that we may be losing our traditional advantage on this issue. For example, recent changes to the Companies Act are making it increasingly difficult for start-up companies to attract non-executive directors.

- **Removing regulatory obstacles to market entry and exit:** Some of the biggest impediments to entrepreneurship arise from State imposed laws and regulations that prevent new business from competing in certain markets. Government needs to implement competition-enhancing regulatory reform in those markets in order to promote entrepreneurship. Another important role for the State in fostering firm creation is to provide bankruptcy and insolvency provisions that encourage risk-taking.

- **Increasing the low level of female entrepreneurship:** The ACR 2003 indicates that men in Ireland are 2.25 times more likely to start a business than women, ranking Ireland 13th out of 16 countries. In the USA, the number of firms created and managed by women has grown twice as fast as those set up and managed by men in recent years.[8] The barriers facing female entrepreneurs need to be identified, understood and tackled.

8 Source: OECD *Conference on Women Entrepreneurs in Small and Medium Enterprises* (1997).

- **Improving the "investor readiness" of Irish entrepreneurs:** Potential Irish investors commonly find a lack of investor readiness amongst entrepreneurs seeking development funding. A campaign to educate entrepreneurs has already been developed within State Agencies through the provision of mentor panels for new business ideas, and should be extended to the education system, to improve the quality of applications for grants, loans and equity, resulting in a speedier approval system.
- **Improving the marketing skills of Irish SMEs:** Ireland has become very good at producing high numbers of well-educated technology graduates, but still does not have enough people with the experience and training necessary to link technology and international markets. This is borne out by the ACR 2003, which found that Ireland ranked 11th out of 16 countries for the extent of marketing. This is proving a major barrier to the development of innovative indigenous firms past the start-up stage.
- **Making entrepreneurship more attractive to young people:** Too many young people in Ireland shy away from business, and instead pursue careers in the professions. This partly reflects the high incomes available in those professions that are protected from competition. But the current structure of the Irish education system and the emphasis accorded to courses which prepare students for life in the professions has resulted in a costly misallocation of talent. This needs to be addressed through further inclusion of entrepreneurship in second and third level curricula.
- **Consolidating supports for entrepreneurs:** Existing programmes to support entrepreneurs, in both the public and private domains, are currently too fragmented. There are a large number of organisations and agencies assisting entrepreneurs and small businesses (e.g. FÁS, Enterprise Ireland and the County Enterprise Boards) and these should be brought under a common heading. Greater public awareness and understanding of the supports available, from both public and private sources, should be achieved through the creation of a "one-stop-shop" for this information. This should be hosted on a dedicated website.
- **Increasing the availability of seed capital for start-ups:** The most immediate issue facing Irish start-ups and SMEs is the reduced availability of risk capital since the end of 2001. While this is in line with global developments, a number of recent studies suggest that there may be a particular problem in Ireland[9]. The ACR 2003 ranks Ireland just 8th out of 12 countries for the percentage of private equity investment directed to start-up/seed technology companies. This poor performance threatens to weaken the "pipeline" of new employers and exporters in the medium-term.

  While such market realities do not always imply a role for the State, now is not the right time to remove existing state initiatives aimed at increasing the availability of risk capital for start-ups. The Business Expansion Scheme (BES) and Seed Capital Scheme (SCS) have both been important sources of finance for start-ups and early stage business ventures. The BES is an income tax based incentive for private investors to invest long-term equity in companies. The SCS enables an investor in his/her own business to claim a tax refund on up to five years of previous earnings. Both schemes are due to expire on December 31, 2003. Both schemes should be renewed and, at the same time, should be reviewed to ensure that both schemes are limited to projects that would not otherwise receive financing.

9 Sources: The Department of Enterprise, Trade and Employment, *Equity Capital Survey* (2002); InterTrade Ireland, *The Seedcorn Funding Report* (2002); Enterprise Ireland, *Global Entrepreneurship Monitor* (2002).

7. Recommendations on Entrepreneurship

- **The Tánaiste and Minister for Enterprise, Trade and Employment should direct her Department to promote indigenous enterprise through a published Strategy on Entrepreneurship, setting out a comprehensive vision and co-ordinated plan of action aimed at encouraging business start-ups and SME growth.**
- **The Tánaiste and Minister for Enterprise, Trade and Employment should direct her Department to establish a "one stop shop" for information on private and public sector seed capital and other supports for entrepreneurs. This information should be hosted on an interactive dedicated website.**
- **The Minister for Finance should extend the BES and SCS for a further 3 years and should, at the same time, review both schemes to ensure that they are limited to projects that would not otherwise receive financing.**

5 Innovation and Creativity

Innovation is the creative process that transforms technology and new discoveries into commercial value. As innovation is a cornerstone of competitiveness in a knowledge-driven economy, the quality of innovation support policies are critical levers of economic development. Innovation is dependent on understanding the needs of international markets, an open competitive environment and the ability to foresee changes in demand and market conditions, as well as investment in Research & Development (R&D).

Patent registrations and other indicators published in the ACR 2003 suggest that companies in Ireland (and particularly Irish-owned companies) perform poorly in terms of product and process innovation. Ireland ranked 10th out of 12 countries examined concerning patents granted by the U.S. Patent Office per million of population, 10th out of 14 countries surveyed for patent applications per million of population to the European Patent Office and 10th out of 16 countries surveyed for production process sophistication. This is despite high levels of employment in high technology activities (particularly electronics, pharmaceuticals and software) and high numbers of science and engineering graduates, relative to other European countries. This is the core of the paradox of Ireland's image as a technology-based economy combined with the absence of high levels of innovation activity and research investment to back up that image.

Improving the levels of innovation and creativity in the economy is not solely, or even mostly, the job of government. Instead, actions need to come from a broad coalition of government agencies, private businesses, trade associations and professional organisations, universities and research institutions, standards setting bodies, and many other institutions that have an impact on the environment for innovation in Ireland. Irish managers need to re-orient company strategies towards a greater level of innovation and the provision of higher value goods and services. This will require increased investments in R&D, skills, modern production and logistics technology and IT to develop and support more sustainable competitive advantages. Firms, and their industry association, also need to be more pro-active in working with the development agencies. The changing nature of state interventions increases the onus on companies to form collaborative partnerships with suppliers, customers and educational institutions to build networks and clusters of excellence to win competitive advantage through innovation.

But policy makers also have an important role to play. The Council believes that three challenges for policy makers stand out in the Irish context:

- Ensuring adequate resources for and coherence in public investments in research;
- Providing the right environment for business research and development; and
- Improving research collaboration between universities and industry

Ensuring Adequate Resources for and Coherence in Public Investments in Research

Notwithstanding the hugely increased allocations to research under the NDP 2000-06, the ACR 2003 ranks Ireland only 11th out of 16 countries for gross domestic expenditure on R&D. Moreover, there is also a perceived lack of certainty and stability in public funding for research by government departments. These concerns stem mainly from the "pause" in the Programme for Research in Third Level Institutions (PRTLI) announced in 2002. The PRTLI was established in 2000 with the aim of building a world-class research infrastructure in Irish universities and colleges. This "pause" in the PRTLI has resulted in delays in university laboratory building programmes, deferral of equipment purchase and installation, including equipment part funded with private sector donors. This "stop-go" approach to R&D funding has raised questions internationally as to the seriousness and certainty of Ireland's commitment to building a knowledge-based economy. It is also endangering significant private sector matching funds that are contingent on the full provision of the promised PRTLI financing. It is imperative that science investments under PRTLI and Science Foundation Ireland be kept on target. Maintaining support for research is vital to retaining and creating jobs in a knowledge-driven economy.

The provision of significant public resources for investments in R&D must be matched by the establishment of an institutional structure accountable for monitoring, evaluating and reviewing the effectiveness of publicly-funded R&D expenditure, particularly with regard to its impact on the national economy. Similarly, a framework is needed to provide strategic direction to and co-ordination of the R&D funding programmes across all Government departments, to ensure that they are coherent, synergistic and aligned. Irish public research spending is currently spread too thinly across a wide number of government departments. Given the small size of Ireland's economy, the budget for state investment in R&D is too small to create critical mass in all sectors. The state should concentrate research funding in a number of niche sectors of strategic economic opportunity. Embedding "technology foresight" in the policy making process will be crucial in this regard.

Forfás has the legislative mandate to measure, monitor and review the effectiveness of publicly-funded science and technology expenditures. The reporting by Forfás in this area needs to be strengthened and positioned within a wider institutional structure that can act on its data and analysis. To this effect, the Tánaiste and Minister for Enterprise, Trade and Employment should bring a proposal to Government to re-institute a Cabinet Sub-Committee on Science and Technology at ministerial level, to be chaired by the Taoiseach or his nominee. The role of the existing inter-departmental committee on science and technology, which is chaired by the Tánaiste, should also be strengthened. In this regard, the Council looks forward to a Government response to the work completed in 2002 on institutional arrangements for science, technology and innovation by the Irish Council for Science, Technology and Innovation.

8. Recommendations for Public Investments in Research and Innovation

- **The Minister for Education and Science should reinstate funding for the Programme for Research in Third Level Institutions in 2004.**
- **To maximise the effectiveness of publicly-funded science and technology expenditures, the Tánaiste and Minister for Enterprise, Trade and Employment should bring a proposal to Government to re-institute a Cabinet Sub-Committee on Science and Technology at ministerial level, to be chaired by the Taoiseach or his nominee. The role of the existing inter-departmental committee on science and technology should also be strengthened.**

Providing the Right Environment for Business Investment in Research and Innovation

The major state investments in public R&D infrastructure need to be complemented by a sustained rise in business expenditure on R&D (BERD), both among indigenous firms and foreign firms in high-tech sectors whose research intensity lags that of indigenous industry and industry in other advanced economies. The ACR 2003 ranked Ireland 11th out of 16 countries for BERD. Ireland needs to arrest the decline in the growth and intensity of BERD that has occurred in recent years. In real terms, the average annual growth rate for BERD for the period 1999-2001 was 4 per cent per annum, down from 11.8 per cent per annum for the previous period 1997-1999. BERD amounted to 0.95 per cent of GNP in 2001, down from 1.03 per cent in 1999. This compares poorly with the EU average of 1.21 per cent of GDP and the OECD average of 1.56 per cent of GDP[10].

Business investment in research and innovation must be encouraged through a number of mechanisms: ensuring an adequate supply of skilled researchers and engineers, facilitating industry-university interactions (see below) and ensuring a high degree of competition. But the positive spill-over effects associated with R&D have prompted nearly all OECD governments to also encourage business R&D through grants, loans and tax credits. Tax credits are particularly effective for large firms and for attracting mobile enterprise R&D activities; 17 OECD members, including France, the Netherlands, Spain and the UK, now provide tax credits or enhanced tax allowances for this purpose.

Ironically, Ireland's low rate of corporation tax acts as a disincentive to locating R&D activities here[11]. The Council are unanimous in their belief that companies should be rewarded for investing in R&D through the tax system and that a tax credit for R&D would reduce Ireland's competitive disadvantage as a location for mobile R&D projects. A minority within the Council believe that a tax credit for R&D should only be introduced in the context of a higher standard rate of corporation tax. A majority believe that a tax credit should be introduced without any change to the current 12.5% standard rate of corporate taxation. It is their view that the development agencies have presented workable proposals for an R&D tax credit to the Department of Finance, which should be implemented in the 2004 budget.

9. Recommendation for Business Investment in Research and Innovation

- **The Minister for Finance should include in the 2004 Finance Bill a provision for a tax credit for incremental R&D expenditure above a specified baseline.**

Improving Research Collaboration between Universities and Industry

Close working relationships between firms, universities, research institutes and other possible collaborators provide advantages in innovation and upgrading. The reported levels of R&D collaboration by Irish firms in 2001 are, however, almost the same as those reported in 1993. The intervening period has not led to any significant increase in co-operative behaviour, particularly with the higher education sector, despite numerous policy initiatives aimed at raising such co-operation[12]. While such co-operation is for the most part the responsibility of individual firms and universities, government and its development agencies can play a supporting role. The Council recommends that the Office of Science and Technology at the Department of Enterprise, Trade and Employment and Forfás explore new ways to improve the current industry-university collaboration system, considering the following issues:

10 Source: Forfás, *Survey on Research & Development in the Business Sector 2001* (2003).

11 As business R&D expenditures in most countries are treated as tax deductible expenses, there are advantages to locating such activities in high tax jurisdictions.

12 Source: Forfás, *Survey of Research & Development in the Business Sector 2001* (2003).

Firstly, there is a need to examine the effectiveness of the mechanisms and systems already in place to encourage collaboration. There are several State funded initiatives and exchange programmes to encourage collaboration, but they require more publicity and awareness, particularly among industry. These programmes should encourage partnerships between academia and high growth sectors in industry.

Secondly, there must be more recognition that small businesses cannot afford to invest money or people in research partnerships. To encourage the formation of consortia of small companies to invest in R&D, a state-wide technology transfer support network, or intermediary structure, is needed to pool limited resources. In parallel, existing industry liaison offices based in third level institutions should pool resources to strengthen campus-based technology transfer functions and to provide funding for and access to a network of technology transfer resources and external expertise.

Thirdly, as discussed in the previous chapter on enterprise policy, there may also be a need to shift state support away from individual projects to investment in sector-specific "institutions of collaboration". These are public or quasi-public organisations where competitors, suppliers and buyers can interact to exchange information, ideas and technologies (e.g. sector-specific industry associations, incubators, university-industry centres).

Finally, it is important that a framework is in place to facilitate the diffusion of knowledge generated from publicly funded research. Uncertainty about IP ownership is a significant barrier to effective technology transfer and research collaboration as it leaves researchers and campus based companies open to exploitation and sends a signal of uncertainty to potential industry partners. Once protected, it is important to ensure that inventions resulting from publicly funded R&D are available to industry on a licence basis in order to get the balance right between IP protection and diffusion. While a code of practise addressing these uncertainties in IP management would be a welcome addition to the policy environment, it is also vital that the state provide support services and advice to those (particularly academics, etc.) negotiating IP agreements with private bodies. Such a service would promote greater industry-university co-operation, thus increasing our systemic capacity to convert technological breakthroughs into industrial and commercial successes.

10. Recommendation for Improving Research Collaboration between Universities and Industry

- **The Tánaiste and Minister for Enterprise, Trade and Employment should direct Forfás and the Office of Science and Technology at the Department of Enterprise, Trade and Employment to review existing industry-research collaboration programmes and explore new ways to improve collaboration.**

NCC Publications

Annual Competitiveness Report, 1998	March 1998
The Competitiveness Challenge Summary Statement	March 1998
Statement on Telecommunications: A Key Factor in Electronic Commerce and Competitiveness	November 1998
Statement on Skills	December 1998
Annual Competitiveness Report, 1999	May 1999
Report on Costs	June 1999
Statement on Social Partnership	September 1999
Proposals on Transport Infrastructure, the Planning Process and Public Transport	March 2000
The Competitiveness Challenge	May 2000
Annual Competitiveness Report, 2000	May 2000
Statement on Telecommunications, e-Business and the Information Society	July 2000
Statement on Regulatory Reform	July 2000
Statement on Labour Supply and Skills	September 2000
The Competitiveness Challenge, 2001	December 2001
Annual Competitiveness Report, 2001	December 2001
The Competitiveness Challenge, 2002	November 2002
Annual Competitiveness Report, 2002	November 2002
Statement on Inflation	May 2003