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Chairman's Foreword

Executive Summary

- We have established a global leadership position in fostering the creation of an innovative and high-tech indigenous enterprise sector.

- Our performance in attracting Foreign Direct Investment is excellent and one of the strongest in the world relative to the size of the economy.

- We have a strong reputation for our well-educated, highly-skilled workforce and have an established responsiveness to the skills needs of the high-tech sector.

Relative Weaknesses

Ireland's relative weaknesses in addressing the challenges of the emerging knowledge society are as follows:

- Levels of broadband connectivity are very low both in absolute and comparative international terms.

- We have traditionally low levels of investment in research and development and a relatively low level of patenting activity.

- General societal engagement with Internet techniter(19.8(w both in aba)733d coIntecuag)17.9(6p Tc(We)Tj1.4407 0 TD( )Tj0.293 0

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4\ Initial Recommendations to Government

The following are the Commission's initial recommendations to Government:

Aggregating Public Sector Demand

8   Government should adopt a clear strategy regarding its role in stimulating demand
    for broadband services and should commit the public sector to broadband adoption.
    This commitment should embrace innovative ways of aggregating public sector demand

17 It should be a requirement amongst all Government agencies involved in the support of

Development of Value Cases

26 Government needs to develop appropriate arrangements to ensure that the assessment of the return on e-government investments captures both tangible and intangible benefits.

Legal and Regulatory Issues

Awareness

27 Government should maximise the benefit of awareness programmes by addressing areas of trust and confidence as experienced by the citizen and the SME sector.

Data Protection and Privacy

28 Legislative proposals regarding Data Protection should be subject to public debate and clarification.

Unsolicited Commercial Email (UCE)

29 EU Directive 2002/58/EC should be transposed as soon as possible. The legal position
r

37 International co-operation mechanisms should include provision for technical back-up to policy makers and enforcement agencies, for stakeholder involvement and for transparency.

ICT in Schools

Community and Voluntary Sector

54 Government must ensure that policy development in relation to the role of community
and voluntary organisations in inclusive Information Society development is underpinned
by a process of dialogue and consultation with the community and voluntary se 0 0 59.8(.)]TJ/F4 1 Tf/Cs5 cs 0.984 0.286 0.11 sc-2.6

1\ The Emerging Knowledge Society

Those who think the New Economy was some late-90s flash-in-the-pan staked to the emergence of dot-coms are roughly equivalent to the great wits who shouted "Get a horse!" at early motorists broken down on the side of the road. In the early 1930s, people might have equated the bankruptcy of car companies with the end of the auto era. But obviously that was just the beginning.

The 2002 State New Economy Index, Progressive Policy Institute[1]

1.1\ Introduction

The industrial revolution laid the foundation for the transformation from agriculture to industry-based economic production. Living standards were raised, and patterns of living changed too.

- This is why **know-who** becomes increasingly important. Know-who involves information about who knows what and who knows how to do what. It involves the formation of special s
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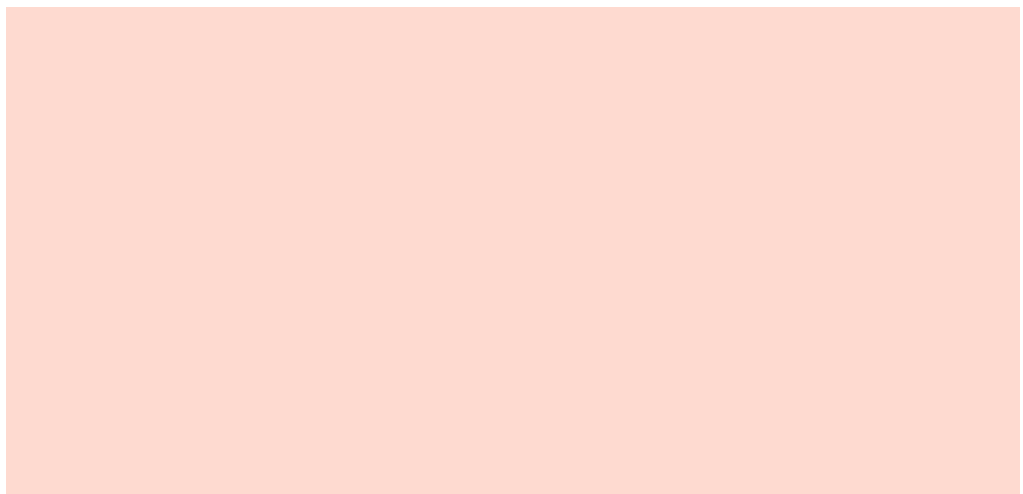
Data storage technologies have evolved at an even faster pace, with disk capacities doubling
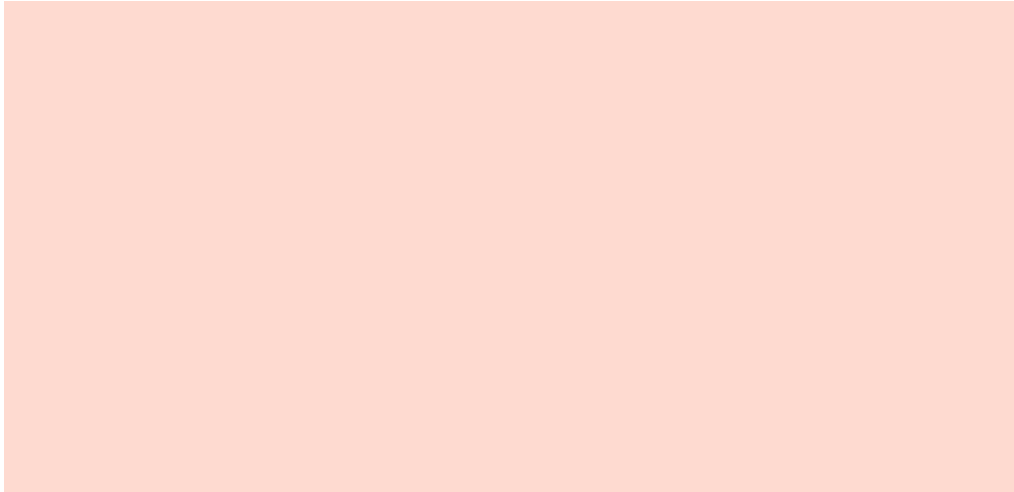
The broad aim of the Futures work of the Commission will be to strengthen awareness about the future implications of the knowledge society among both ordinary people and within institutions and organisations, and to build a shared vision moving forward. This is generally

2\ Assessing Ireland's Performance

The two other most commonly used composite indices in this area are the Harvard Networked Readiness Index (NRI), which ranked Ireland 19th in 2001, and Economist Intelligence Unit's eReadiness Index, which ranked Ireland 15th in 2002. In the 2002 Forfás eBusiness Monitor, Ireland's performa whion all 3 indices is the poorest of the countries reviewed.[20]

In an EUrientext, Ireland ranks 9th of the fourteen countries that are rated, behind Sweden, Finland, Denmark, UK, Netherlands, Germa y, Austria and Belgium – Figure 2.1.
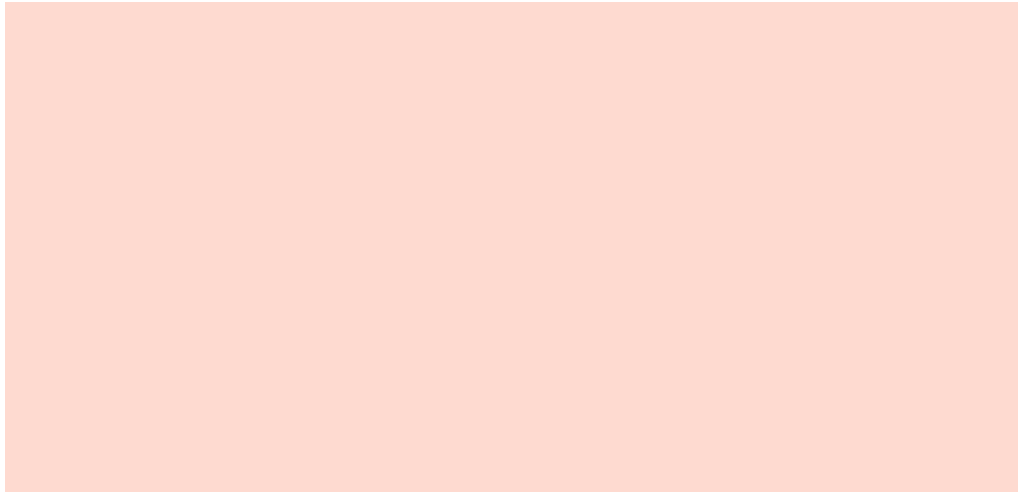
Source: Various

The common feature to our performa whion all 3 indices is the relative maturity of the underlying information infrastructure and the low penetration of broadband networking iennectivity relative to leading countries.
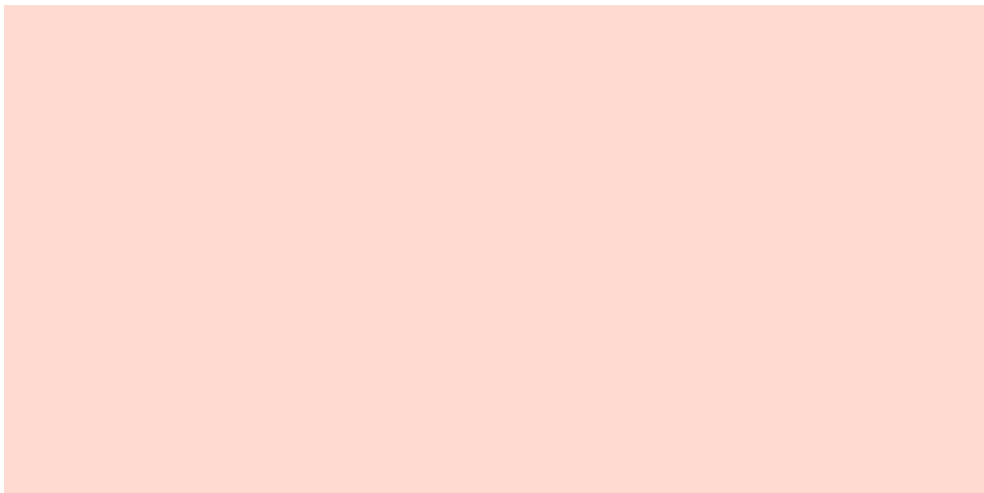
2.2\ Broadband
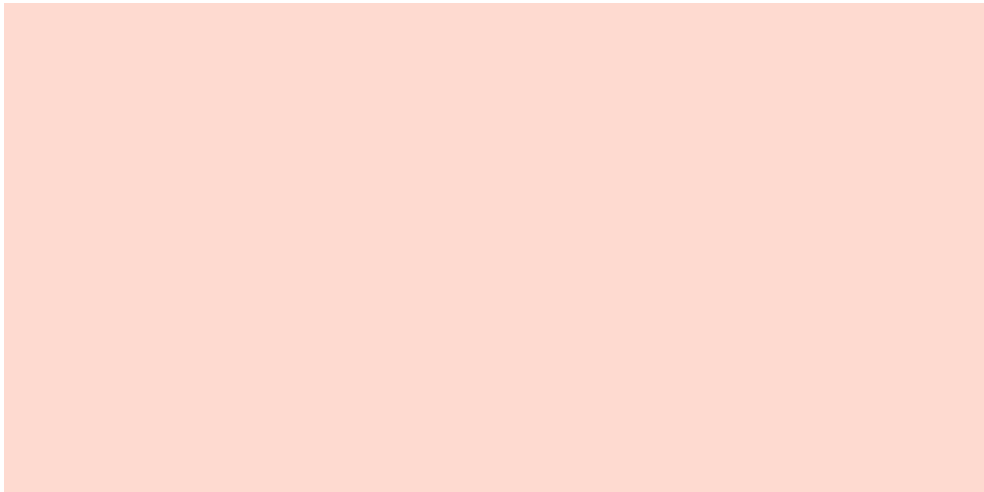
Source: OECD

2.3\ Internet Penetration

The best available indication seems to be that around 34 percent of the population currently accesses the Internet from home in Ireland.[22] This level reflects significant growth from below 20 percent at the beginning of 2000. However, it also reflects a more recent stagnation of

In terms of available data on high-tech **enterprise creation**, Ireland's performance allows it to be regarded as the strongest of the case study countries. We have the highest per capita number of listings in the Deloitte and Touche Fast 500 in Europe. Ireland also performs strongest of the European case study countries in the Tornado 100 listing of Europe and Israel's top high-tech companies. And we have more NASDAQ listings per head of population than any of the case study countries (excluding the US).

2.6\ Foreign Direct Investment

Ireland's performance in the attraction of ICT-related FDI is captured in Table 2.3 – again this data is taken from the 2002 Forfás eBusiness Monitor.[24]

Ireland is, in relative terms, the strongest FDI performer of the group on 2001 data. We attracted the highest per capita number of FDI projects – 38.9, compared to 37.3 in Singapore, and]TJ6 in third-placed UK. We attracted the second highest per capita number of overall ICT FDI projects

2.7\ R&D
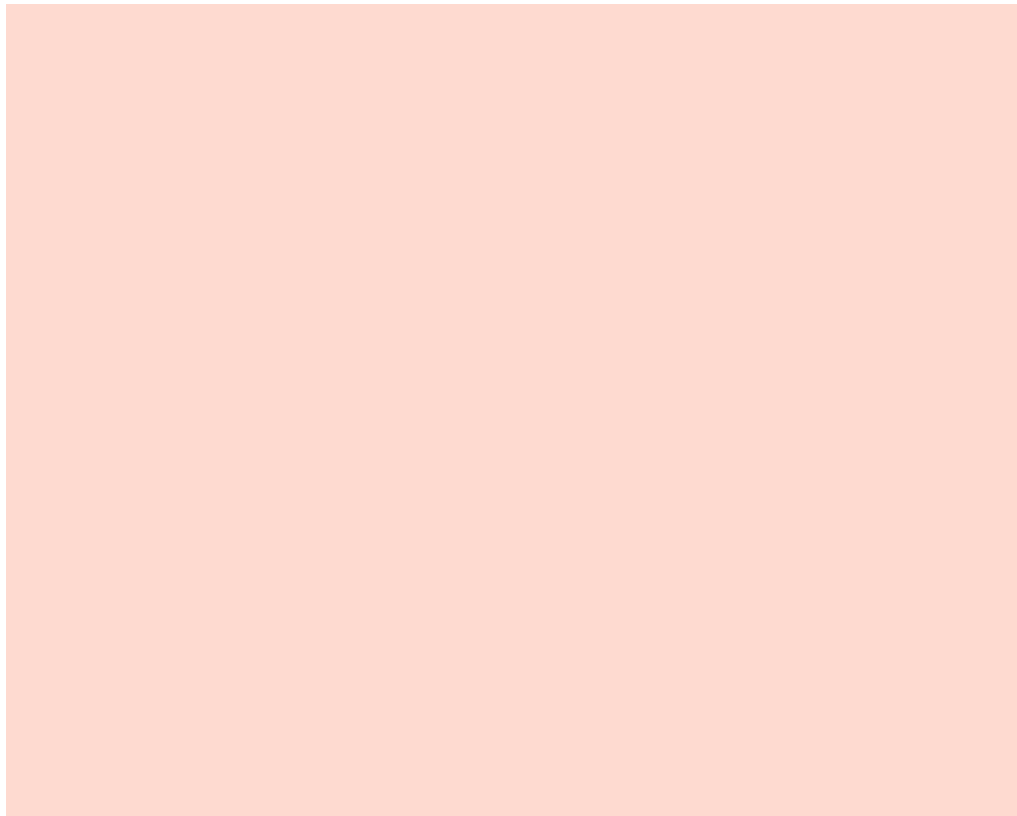
Levels of R&D investment – underpinned by appropriate technology-transfer structures to support commercialisation – are generally regarded as the primary driver of a country's innovation performance. Table 2.4 captures gross expenditure on R&D in Ireland as a percentace of GNP for the years 1991-1999.
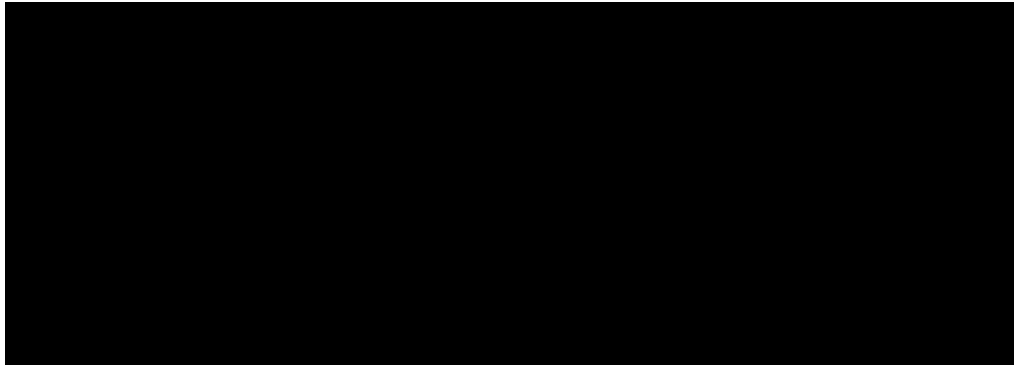
Source: Forfás (GNP used in place of GDP in Ireland)

Gross spending on R&D grew from 1.07 percent of GNP in 1991 to 1.42 percent of GNP in 1999. This remained appreciably below the OECD averace (26 countries) of 2.21 percent of GDP – giving Ireland a ranking of 17th in 1999.

Business sector spending on R&D grew at an annual averace rate of 14.6 percent for the overall
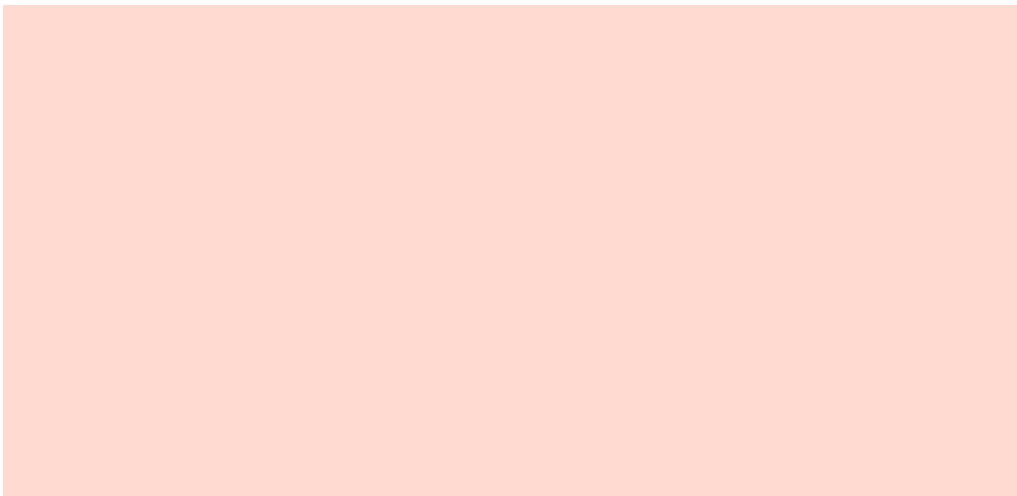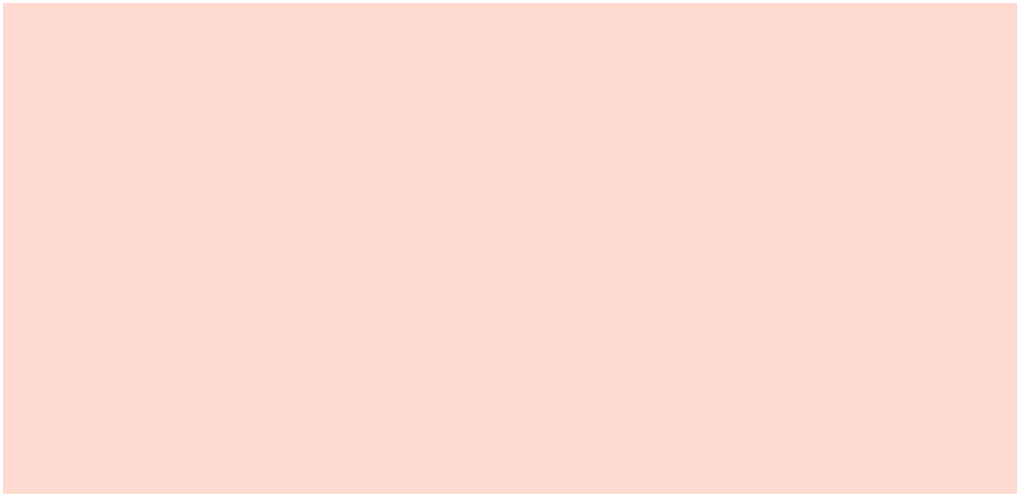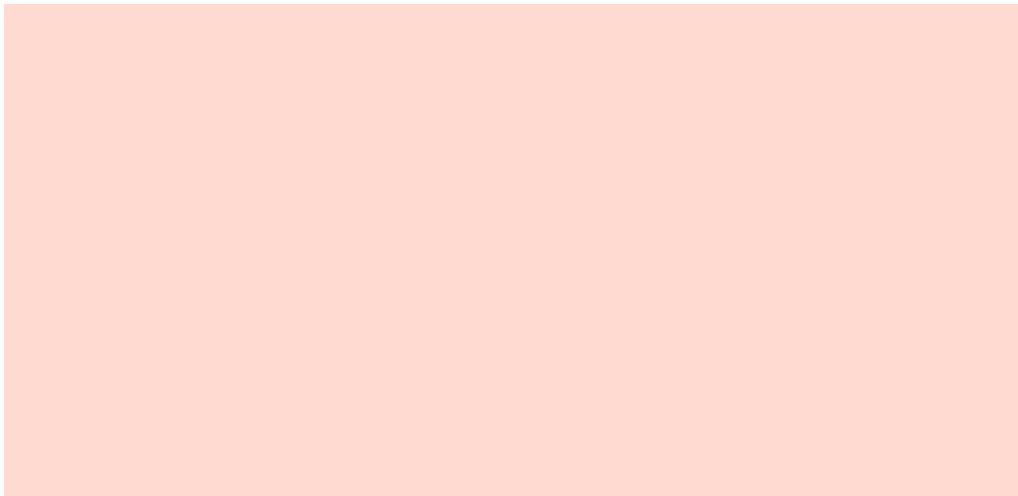
Ireland's approach is seen as somewhat distinctive in placing a high emphasis on integration of service delivery through a single point of contact[25], and it is recognised that this may have an i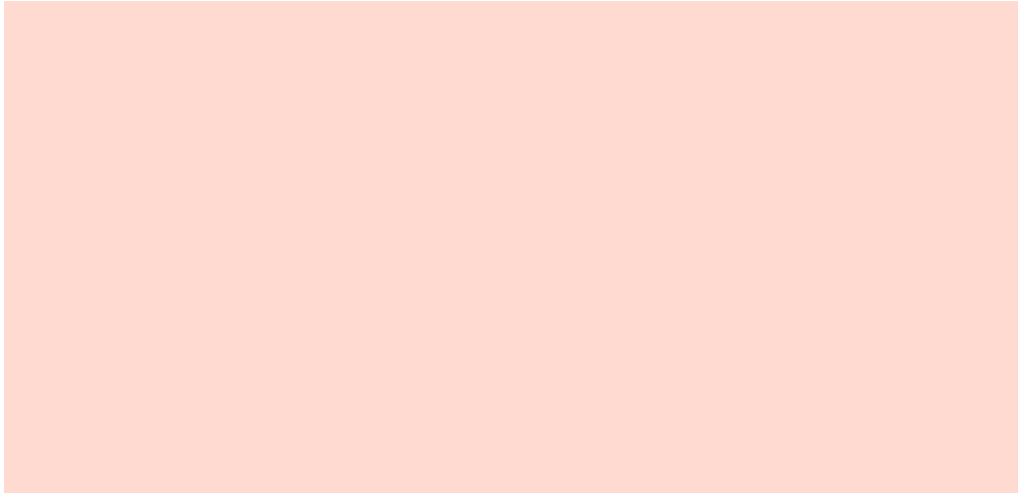mpact in terms of capacity to deliver early wins on individual services. Under the *New Connections* Action Plan, Government is committed to the objective of having all public services that are capable of electronic delivery available online, through the Public Services Broker, by 2005.

Source: European Commission (Cap Gemini Ernst & Young)

In the eEurope benchmarking process, Ireland performed strongest of all member states in November 2001 in terms of online availability of 20 basic public services (12 for citizens,

3 Key Messages for Government

3\ Key Messages for Government

3.2\ Making it Happen

An underlying theme of the knowledge society is the rapid pace of change brought about by developments with information and communications technologies. This clearly presents new challenges for Government and for public policy development.

A review of developments in the Information Society policy area since the original *Strategy for Action* was produced in 1996 points to a level of progress that is disappointing in some respects. While the policy issues that need to be addressed are reasonably well established, it would seem to the Commission that there is room for a stronger engagement by Government in

Innovation fundamentally means coming up with new ideas about how to do things better or faster. It is about making a product or offering a service that no one had thought of before. And it is about putting new ideas to work and having a skilled work force that can use those new ideas.

The key role of information and communication technologies in this context will be as facilitators of innovation – including innovation in public sector organisational and service delivery arrangements. Success in the knowledge society means that innovation must become everyone's business.

3.6\

The emergence of the knowledge society means an ever-increasing demand for a well-educated

4\ Initial Recommendations to Government

**Joint Research Centre of the European Commission –
Futures Project**

Information and communication technologies will be one of the key drivers of

4.1\

Recommendation 3:

Recommendation 9:

The Minister for Communications should conduct an early review of the regulatory

framework for managing radio frequency spectrum and should bring forward proposals

Commercialisation of Publicly Funded Research

Unsolicited Commercial Email (UCE)

One of the most frustrating aspects of using the Internet is the rapid spread of unsolicited commercial e-mail or spam, as it is commonly known. At little or no cost to themselves,

Recommendation 31:

An in-depth qualitative and quantitative analysis should be conducted into the extent and impact of cyber-crime in Ireland.

Recommendation 32:

Cyber-crime should be given a high priority by the Garda Síochána and adequate resources

International regulatory co-operation in the Information Society area is more likely to succeed where there is a clearly defined and realistic goal capable of delivering a specific outcome within a reasonable timescale.

Recommendation 36:

Ireland's approach to international regulatory co-operation in the Information Society field should be based on needs and priorities.

Recommendation 37:

International co-operation mechanisms should include provision for technical back-up to

4.5\ Skills and Learning

Taskforce on Lifelong Learning

The structural adjustment to embrace a culture of lifelong learning in the education and training sectors represents one of the key challenges of the emerging knowledge society. The Commission welcomes in this context the recent publication by Government of the Report of the Taskforce on Lifelong Learning. It is also appropriate to acknowledge the progress that is already underway in a number of key areas identified by the Taskforce, building also on the White Paper on Adult Education produced in 2000. These include the development of a National Framework of Qualifications; work by FÁS towards the accreditation of prior and experiential learning;.8(ginstablishment of 2e ed of 2)9.9(ear of an IT Fund of)]TJ/F6 1 Tf34.8033 0 TD0 Tc0 Tw()Tj/F2 1 Tf0.765

Recommendation 39:

Basic ICT skills training for adults should be established as a key component of the Back to Education Initiative and should also, as far as possible, be integrated as a core component of mainstream education and training provision.

Recommendation 40:

Government needs to acknowledge the fee barriers that deter participation of adults in part-time courses. The Commission supports the recommendation of the Taskforce on Lifelong Learning that a grant-in-lieu-of-fees scheme should be introduced for part-time participants in courses in publicly funded further and higher education and training institutions.

Recommendation 41:

The Commission wishes to highlight and endorse the 11 recommendations made by the Taskforce on Lifelong Learning in relation to workplace learning (Chapter 7), and emphasises a particular importance in Government addressing this area in the context of the new need for ongoing training and skills enhancement in the emerging knowledge society.

Recommendation 42:

The National Adult Learning Council needs to be established on a statutory basis as soon as possible in the light of the role it is being given in coordinating, reviewing and reporting on the implementation of the framework set out in the Taskforce report.

eLearning

Government's commitment to exploring the potential for e-learning to contribute to the education and training sectors is welcome. Progress in this area should be accorded a priority consistent with the opportunity that exists to introduce new flexibility to learning provision and to support overall lifelong learning objectives. The Commission would urge the development of an integrated, user-oriented solution across the education and training sectors that avoids r

Recommendation 43:

The Department of Education and Science needs to develop an overarching e-learning strategy that builds on and is responsive to the needs of all sectors.

Recommendation 44:

Proposals for the development of a national e-learning platform should be expedited and should, as far as practicable, deliver an integrated solution across the education and training sectors.

Recommendation 45:

Specific provision needs to be made for the building of ICT capacity in the further education sector, including capital investment in the purchase of hardware and development of an appropriate technical support solution.

Social Inclusion Context

Building an inclusive society is set out as the ke, priority of Government in the National Anti

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Role of Community Champions

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The NDA should establish a monitoring process to determine levels of compliance with the IT Accessibility Guidelines and whether further actions may be needed to promote their adoption.

DTT (Digital Terrestrial Television)

It is clear that the digital television has important potential to support greater access to new online content and services through a medium that is user-friendly and already a familiar household appliance. Government had intended that the DTT (Digital Terrestrial Television) platform be introduced in Ireland by two separate transactions – the selection of a DTT multiplex i108nsee, and the sale of the RTÉ transmission network. In the light of the unsuccessful outcome1.88the competition to select8the multiplex i108nsee, Government needs to develop a new strategy for the DTT platform as quickly as possible.
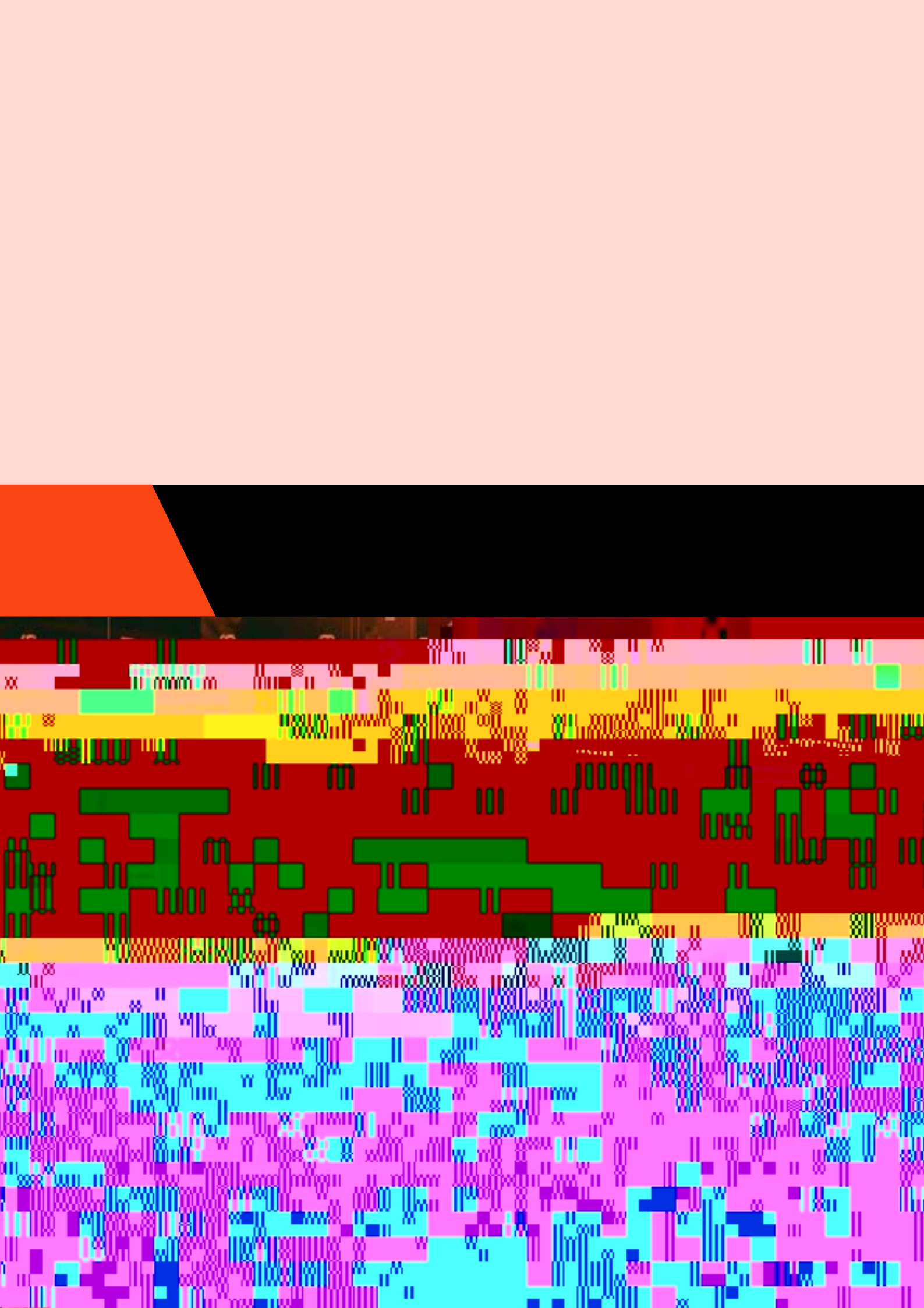
Appendix 1
Glossary of Abbreviations

ADR – Alternative Dispute Resolution

CAIT – Community Application of Information Technologies

CDBs – County and City Development Boards

CERT – Computer Emergency Response Team

COMREG – Commission for Communications Regulation

CIA – Central Intelligence Agency

DBG – Delivering Better Government

DCA – Director of Consumer Affairs

DSL – Digital Subscriber Line

D&T – Deloitte and Touche

EIU – Economist Intelligence Unit

EPO – European Patents Office

EC – European Commission

EU – European Union

FDI – Foreign Direct Investment

GDP – Gross Domestic Product

GNP – Gross National Product

Appendix 3
Membership of Working Groups

Broadband Working Group

Chair

Dr Patricia O'Hara, Western Development Commission

Members

Mr Rory Ardagh, Leap Broadband

Ms Dee Carri, Torque Management

Mr Adrian Devitt, Forfás

Mr Tim Duggan, Department of Finance

Ms Karen Hynes, Chambers of Commerce of Ireland

Ms Fiona Murphy, CMS Peripherals

Mr Deaglán Ó Briain, Department of the Taoiseach

Mr Niall O'Donnchú, Department of Communications, Marine and Natural Resources

Legal Issues Working Group

Chair

Ms Dee Carri, Torque Management

Members

Mr Michael Clarke, Department of Enterprise, Trade and Employment

Mr Liam Kennedy, A&L Goodbody

Mr Martin Kinsella, Technobyte Ltd

Mr Enda Kyne, The National Microelectronics Applications Centre Ltd

Mr Conleth O'Reilly, Xerox (Europe) Ltd

Mr Sean A O'Sullivan, VP Finance Europe

Mr Peter Ryan, Department of the Taoiseach

Mr Caoimhin Smith, Department of the Taoiseach

Mr Christopher Took, Web Developer*

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Brian McAufield *(brian.mcaufield@t.gov.ie)*

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* Resigned September 2002