New Connections

A strategy to realise the potential
of the Information Society

Government Action Plan, March 2002

Foreword

Information Society developments are transforming the way we interact and do business. This transformation is bringing about the single most dynamic shift in the public policy environment in the history of the State. The pace of change is without precedent.

The phrase Information Society refers to the increasing contemporary significance of information and communication technologies (ICTs). The unfolding influence of these technologies across all areas of economic and social activity in the twenty-first century is increasingly seen in terms parallel to electricity in the twentieth, and railroads in the nineteenth.

The networking technologies of the Information Society allow new ways of interacting that challenge the boundaries of what is traditionally possible – in terms of both time and location. We are living through an era where the full potential of these new possibilities is unfolding. The implications are generally accepted to be as far-reaching as those of the industrial revolution.

We have seen the Information Society agenda take centre-stage at EU level. The Lisbon Summit in 2000 set the goal of establishing Europe as the most competitive and dynamic knowledge-based economy in the world. A new eEurope strategy will be agreed at the Seville Summit in June of this year.

We can expect to see the importance of the Information Society agenda increasingly reflected in other key areas too – including through the social partnership process, and the institutional arrangements for North-South cooperation.

Our engagement with the challenges and opportunities of this agenda is central to future economic and social development. We are experiencing a fundamental change in how business – including the business of Government – is conducted.

We must also ensure that our approach is responsive to the influence of rapidly evolving technologies. The key to competitive advantage will be to retain the capacity to respond quickly to new developments in an environment of ongoing change.

A supportive public policy environment is clearly critical to shaping our development as an Information Society. This Action Plan provides a strategic framework for renewed commitment to this agenda across all areas of Government. I am confident that it gives a solid basis to underpin future economic and social prosperity.

Bertie Ahern
Taoiseach

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Introduction

Background

It is a little over three years since we produced the first Government Action Plan on the Information Society in January 1999. That Action Plan recognised the enormous significance of Information Society developments, and set out key priorities to underpin our progress.

Developments since then have been characterised by an unprecedented pace of change. The growing influence of information and communication technologies (ICTs) in recent years is phenomenal. The internet is the fastest growing communications medium in history. And mobile phones have become part of our everyday lives. We are experiencing a transformation in our daily living and working conditions.

In parallel with our development as an Information Society, we have enjoyed a period of unprecedented economic growth in recent years. It might be easy to overlook how quickly these changes are happening. It is therefore timely to assess how we have progressed, to review our priorities, and to put in place a new strategic framework to take us forward. That is the purpose of this new Action Plan.

A changing environment

The key significance of the Information Society is that it makes possible new connections – connections that challenge traditional assumptions about what is possible, and when it is possible. Networking technologies are presenting a new range of possibilities to complement the ways we traditionally interact and do business.

The major stock market correction of April 2000, and its subsequent impact on the technology sector worldwide, has clearly brought about an adjustment of expectations. But we must caution strongly against any sense of complacency. On the contrary, a renewed commitment is needed to address the competitiveness challenge of the Information Society in the context of a less favourable global economic environment.

This competitiveness challenge is not primarily about new niche markets or sectors. It arises from the permeation of internet technologies across all areas of economic and social activity. What is evolving is a fundamental change in how business is conducted, and how services (including government, health and education services) can be provided.

eEurope

We have seen the Information Society agenda take on a new significance at EU level. The eEurope Action Plan materialised from the Lisbon Summit in 2000, which set the goal of establishing Europe as the most competitive and dynamic knowledge-based economy in the world. The Seville Summit in June of this year will build further on this goal.

Consolidating our success

We have experienced significant success already in positioning ourselves as a world leader for e-business and knowledge-based economic activity. A study based on the OECD's 2001 Science, Technology and Industry Scoreboard ranks Ireland 4th internationally in terms of countries most likely to succeed in new knowledge-based industries.[1] The 2001 EU Innovation Scoreboard places us – with Finland, Denmark, and Sweden – in the top quadrant of Member States that are *moving ahead.* And the 2001 World Competitiveness Yearbook of the Swiss-based IMD ranks Ireland 7th internationally among 49 industrialised and emerging economies.

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1   *Source: Financial Times, November 2001*

In the particular area of e-government, we have also succeeded in positioning ourselves to the forefront of developments internationally. Ireland performed strongest of all Member States in the EU benchmarking exercise carried out in November 2001 to measure progress with delivery of online public services. The *Unexpected eIreland* report produced by Accenture in October 2001 also reflects favourably on our performance in this area, with 65 percent of Irish executives indicating they believed the Irish Government to be an exemplar of e-commerce – the most positive response in any of the countries surveyed, and twice the European average.

We must consolidate and build on this success moving forward. However the standard is rising all the time. Other countries continue to make progress and challenge us. We need to continue innovating and progressing. It is clear that a supportive public policy environment is of critical importance to this end.

New structures

Government agreed on a range of measures in June of last year to strengthen engagement with the Information Society agenda. These include a new Cabinet Committee on the Information Society, and a complementary eStrategy Group at Secretary General level.

We have also appointed a new Information Society Commission. The Commission draws on high-level representation from business, the social partners, and Government itself, and reports directly to the Taoiseach. It will provide independent expert advice to Government, and monitor Ireland's progress as an Information Society.

These new structures are being coordinated by an expanded Information Society Policy Unit (ISPU) in the Department of the Taoiseach.

The new arrangements are designed to deliver a more coherent overall approach, at the highest level of Government, to formulation and implementation of policy on a wide range of issues that increasingly cut across traditional Departmental boundaries – between Departments and Agencies, and between central and local government.

New Action Plan

The diversity of the Information Society agenda is reflected in the range of issues that are addressed in this new Action Plan. We have aimed to bring these diverse elements together in a manner that is accessible, easily understood, and reflects priorities moving forward.

Key infrastructures – Firstly, we address the key infrastructures that are the necessary basis for progress as an Information Society:

- **Telecommunications infrastructure:** developing the capacity necessary for delivery of advanced telecommunications services

- **Legal and regulatory environment:** ensuring a secure and predictable legal framework for electronic transactions that provides the necessary confidence for both business and consumers

- **eGovernment:** a key leadership role for Government in driving wider engagement with ICTs through its own business processes and service delivery arrangements.

Supporting frameworks – Secondly, we address the frameworks where we must build the capacity that is necessary to support and underpin Information Society development:

- ■ **eBusiness:** to support and underpin the competitiveness of business, and of indigenous enterprise in particular, in meeting the challenges of a new competitive environment

- ■ **R&D:** a basis for innovation through science and technology to support knowledge-based economic activity

- ■ **Lifelong learning:** to ensure availability of knowledge and skills, to support the process of adapting to ongoing change, and to build on the potential of ICTs to enable new ways of learning

- ■ **eInclusion:** to ensure that our development as an Information Society is inclusive, and builds on the potential of ICTs to address issues of disadvantage and exclusion.

Moving forward

Information Society developments are bringing about the single most dynamic shift in the public policy environment in the history of the State. We must not just respond accordingly, but seek to take a leadership role. Action across all of the areas set out in this Action Plan will be necessary to build on the progress that we have already made, and to underpin future economic and social development.

A new commitment is needed. In shaping our approach to the future, we must clearly be prepared to revisit arrangements designed to cater for the needs of the past. This approach must bring about the coordination that is necessary to capture the diverse elements of the Information Society agenda in a coherent way. At the same time, it must be characterised by the flexibility necessary to remain responsive to the influence of rapidly evolving technologies, and the changes they are bringing about.

Our relatively small size as a country gives us the capacity to act quickly. It also brings an opportunity to show, through effective leadership, what can be achieved. We must seize the competitive opportunity that this confers, and position ourselves to remain responsive to a new environment of ongoing change, and to help set the global agenda in this area.

This Action Plan provides the framework necessary to move us forward with confidence.

1 Telecommunications Infrastructure

1.1 Why is this important?

The availability of adequate bandwidth and of affordable, always-on access to advanced telecommunications services is fundamental to all Information Society objectives. It is critical to our competitiveness in terms of attracting and retaining foreign direct investment, and ensuring balanced regional development. It is critical to realising the opportunities presented by online provision of government services. And it is critical to unlocking the potential of ICTs to address issues of social disadvantage and exclusion.

Ensuring development of the national infrastructure that is necessary for the delivery of advanced telecommunications services is therefore the single strategic priority of greatest underlying importance to our economic and social development as an Information Society.

1.2 What is the current position?

Since 1998, the Government has liberalised the telecommunications market, established an independent regulator, privatised Telecom Éireann, attracted a significant number of global telecom players into Ireland, co-invested in a €230 million regional broadband programme, successfully brought international connectivity to Ireland, and overseen significant development of mobile telephony services.

1.2.1 **Telecommunications Working Group –** A Telecommunications Working Group was set up in September 2001 under the Cabinet Committee on Infrastructure and PPPs. It was asked to identify and agree priorities for action by Government agencies to facilitate the provision of broadband infrastructure and services at the required world-class levels in Ireland.

1.2.2 **Working Group's Report –** The Working Group on Telecommunications has assessed the broadband situation in Ireland. It concludes that the primary deficit is not at the national or regional level. The key deficit is in local access broadband networks. This results in a lack of availability of affordable always-on local level access to high-speed data transmission services. The Group also noted that all parts of the State are not served by competing providers.

The report of the Working Group on Telecommunications has been accepted by Government and was published on 7 March 2002[2]. An overview of the Working Group's Report is included as Appendix 1.

1.3 What are the key issues moving forward?

Government wants to see the widespread availability of open-access, affordable, always-on broadband infrastructure and services for businesses and citizens throughout the State within three years, on the basis of utilisation of a range of existing technologies and broadband speeds appropriate to specific categories of service and customers. We wish to see Ireland within the top decile of OECD countries for broadband connectivity within three years.

In the medium term, we expect that broadband speeds of 5mbit/s[3] to the home and substantially higher for business users will be minimum standard within 10-15 years for broadband. We will aim for Ireland to be the first country in Europe to make this level of broadband service widely available for its people.

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2 *Available at http://www.gov.ie/taoiseach or http://www.dpe.ie*

3 *The minimum speed at which video-on-demand becomes possible*

The State's role in this area, beyond providing the appropriate regulatory environment, is confined to provision of seed capital. Actions undertaken to meet the three-year objective will ensure that any infrastructures put in place with Exchequer assistance are capable of being upgraded to meet the longer-term target.

1.3.1 **National Development Plan –** The report of the Working Group on Telecommunications follows on the work already undertaken under the Regional Operational Programmes for the Border, Midlands, West and for the South and East, under the National Development Plan, 2000-2006. In the area of promoting the development of advanced telecommunications infrastructure and services, a provision of €200m (of which €90m is ERDF aid) has been made under the eCommerce Measure of the Plan to promote investment in areas where it is clear that the market will not deliver sufficient investment to support the acceleration of the Information Society and e-commerce.

1.3.2 **Context for Government Policy –** Liberalisation of the telecommunications market was a strategically important and successful step. Government is not in the telecommunications business and any Government action on infrastructure needs to attract the optimum level of private sector involvement and result in open-access and pro-competitive solutions. We must also stress the importance of ensuring solutions that represent value for money for consumers. Affordability of broadband services is a key competitiveness issue and will dictate actual up take of services. In this regard, Government notes the National Competitiveness Council's view that supply will drive demand for broadband services. In a time of rapid technology change and future uncertainty, Government interventions should be technology neutral and, in fact, seek to encourage innovation and competition between different technologies to the optimum extent.

As already envisaged under the National Development Plan, Government's role is to address priority areas where the private sector alone will not deliver the necessary infrastructure within the timescale that is necessary to meet critical national development objectives. In this area, there is need for a strategic Government intervention to pump prime investment by providing the necessary seed capital and to ensure that the resulting infrastructure is pro-competitive, i.e. it allows open-access at affordable cost to all service providers wishing to enter the market place.

1.3.3 **Local Access Networks –** Government will target the available funding in this area at procuring open-access, local access networks to remedy the identified deficit, starting with priority areas already identified under the eCommerce measures of the National Development Plan. Appropriate local authority involvement as partners at local level is essential. Two possible options will be pursued in parallel:

1.3.3.1 **Banks Clearing System – Visa model:** This will involve discussions with industry about a Government/industry-wide partnership/Innovative PPP approach – operator-neutral, alternative wholesaler.

1.3.3.2 **Test PPP market for interest by individual firms/consortia:** A wide range of design and phasing options can be explored in this process.

Both these options would involve an independent legal entity and PPP-type contractual arrangements. The model involves Government seed money and industry investment.

1.3.4 **Key features of proposed PPP-type arrangement –** A key feature of the proposed PPP-type arrangement is that no service provider would gain any unfair or anti-competitive advantage by virtue of participation. This will mean complete separation of the ownership and management of local access networks involving public funding from provision of services to customers and that the PPP partner contracted to manage the network or any local part of it would not be allowed provide application services to end-user customers. The objective is to foster real competition amongst service providers companies on the basis of price and service and not on the basis of exclusive access to infrastructure. The other key elements of the proposed action on infrastructure are as follows:

1.3.4.1 Local access networks starting with priority areas already identified will be procured on a PPP-type basis at a national level with relevant local authority involvement (as a continuation and development of a process model already underway).

1.3.4.2 The precise technology will depend on local circumstances and projected demand.

1.3.4.3 Open access local networks will be managed by a PPP operator or operators who will also be operator neutral.

1.3.4.4 The provision of funding for local access networks will be prioritised under the existing NDP measure.

1.3.4.5 Phase 1 will involve elements of the strategy and different technology solutions being trialled and prototyped in a specific number of locations and will commence as soon as possible.

1.3.4.6 Subsequent implementation phases will be contingent on successful implementation of phase 1 and take on board lessons learned.

1.3.4.7 A significant proportion of the capital risk should be taken by the private partner. When a critical mass is achieved, the market response for future implementation proposals would include a growing capital contribution.

1.3.4.8 During the implementation phase the potential for Government Departments and agencies to encourage creation of demand will be kept under review. In addition, the question of leveraging public service data traffic to incentivise private sector participation in provision of the local access networks will be explored.

1.3.4.9 The question of open access being granted to state-owned sites for the construction of co-location sites will be pursued as a matter of priority.

1.3.4.10 Prelaying and sharing of ducting will be encouraged as far as possible. In this regard, the provisions in the Communications (Regulation) Bill to encourage sharing of ducting are an important step forward. In addition, the Department of Environment and Local Government are considering the question of providing that the terms of future planning permissions in appropriate circumstances should make it obligatory for the developer to lay ducting (conforming to standard specification developed by the Department of Public Enterprise) and transfer it to the local authority when building new urban roads, housing developments and industrial estates.

1.3.5 **Phasing of the strategy –** The proposed strategy going forward is based on the technology, operational and a share of the capital risk resting entirely with the private sector partner(s). It is also based on attracting a growing share of private capital investment over time. The State's role is to provide seed money. By demonstrating in the initial intervention that resolving the specific infrastructural deficit identified will unlock latent commercial and domestic demand for broadband services, it is envisaged that the strategy will attract significant private investment in subsequent roll-out phases.

1.3.6   **Phase 1 –** It is proposed to kick-start the process with a Phase 1 intervention to commence immediately. The purpose of Phase 1 is to identify issues and test assumptions about costs, technical difficulties, technology, network configuration, management and maintenance issues and cost-effectiveness, private sector interest and consumer response. Phase 1 will consist of two parallel actions:

1.3.6.1   The first is the funding of a set of *pathfinder* projects in 19 towns, building on the responses received under the current NDP call. The *pathfinder* projects will consist of metropolitan fibre and duct networks with co-location space available on an open-access basis. These fibre optic infrastructure projects will be adjusted, as necessary, to evaluate the effectiveness and value for money of fixed wireless solutions as a *tail* bringing outlying areas to a central metropolitan ring. In addition, a further 3 areas of an appropriate population size will be identified to trial a fixed wireless approach to provision of the core local access infrastructure, subject to a favourable technical assessment and cost-benefit analysis.

1.3.6.2   The second of the two parallel actions is to explore industry interest in participating in a national PPP-type arrangement for management and operation of local access networks on an open-access, operator-neutral basis. Intensive discussions on this second aspect will take place over the coming months. The objective is to bring into being an operator-neutral, alternative wholesale entity or broker who would manage these open-access local access networks in an integrated manner.

1.3.7   **Subsequent phases –** Subsequent phases will seek to maximise private sector investment and will be contingent on successful implementation of Phase 1. Satisfactory evidence of private sector interest in making capital investment and remuneration of operating costs from network operating income are key issues in this context. It is envisaged that subsequent phases will target additional priority areas that have been identified.

The objective is to have widespread availability of advanced broadband infrastructure and services within three years, subject to the availability of the necessary public and private sector funding. The intention would be to cover the remainder of the 67 towns already identified as priorities in the National Development Plan within three years and, if this is successful, move on to cover all 123 towns in the State with a population over 1,500 within five years. The 67 towns are the essential target for achieving widespread broadband availability within three years. The provision of competitive broadband in all of these towns is critical to the industrial promotion efforts of the industrial development agencies. However, the extent to which these are realisable deadlines and targets will depend on the success of Phase 1 and the availability of necessary public and private funding. In advance of the availability of firm tender prices and of further consultations with the private sector about its willingness to invest, these targets and timescales are necessarily somewhat tentative and will be reviewed.

Later this year, once Phase 1 is well underway and once firm construction prices for the *pathfinder* projects and indications of private sector willingness to invest are available, the strategy's progress in achieving the overall objective will be reviewed in the light of the experience gained, and any necessary modifications, including revised targets and deadlines as appropriate, will be considered.

2 Legal and Regulatory Environment

2.1 Why is this important?

A supportive legal and regulatory environment is widely recognised internationally as critical to successful development as an Information Society.

The role of government is to provide a clear, consistent and predictable legal framework, to promote a pro-competitive environment in which electronic commerce can flourish, and to ensure adequate protection of public interest objectives such as privacy, intellectual property rights, prevention of fraud, consumer protection, and public safety.[4]

Consumers must feel confident that electronic transactions provide the same legal protections as traditional ones. Business must be confident that it is operating in an environment that protects its legitimate interests. And concerns about illegal and harmful uses of the internet present a further set of issues that require a balanced public policy response.

How we manage these legal and regulatory issues is fundamental to consolidating our position as a world leader for e-business and knowledge-based economic activity.

2.2 What is the current position?

Considerable progress has already been made in creating a supportive legal and regulatory framework. Key developments are as follows:

2.2.1 **Electronic Commerce Act, 2000 –** This Act gives legal validity to electronic signatures, electronic contracts, electronic writing and electronic originals. It also provides for the admissibility of electronic communications and documents in court proceedings. The Act underpins and gives security to the new ways in which business is transacted over the internet, and positions Ireland as one of the first jurisdictions to introduce comprehensive legislation in this area.

2.2.2 **Copyright and Related Rights Act, 2000 –** This Act effects a total reform of Irish copyright and related rights law, bringing it fully into line with the requirements of EU and international law in this area. It places Ireland among world leaders in terms of standards for copyright protection.

2.2.3 **Broadcasting Act, 2001 –** This Act will enable the creation of a Digital Terrestrial Television (DTT) platform in Ireland via two separate but interlinked transactions involving on the one hand the award of a licence to operate a DTT multiplex and, on the other, the separation and sale of the existing RTÉ transmission network to a separate company. The intention is that the DTT platform will be used as a vehicle for the development of multimedia services and electronic information services, including those provided by means of the internet.

2.2.4 **Criminal Justice (Theft and Fraud Offences) Act, 2001 –** This Act includes provisions on the illegal use of computers, and effects an updating of the law to protect against the use of computers for dishonest gain.

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4 *Communiqué issued by the United States of America and Ireland on Electronic Commerce, 4 September 1998*

2.2.5 **European Communities (Data Protection) Regulations, 2001 –** These regulations, which take effect on 1 April 2002, transpose certain provisions of the Data Protection Directive (95/46/EC) and provide in particular that transfers of personal data to countries outside the European Economic Area may only take place where an adequate level of protection for such data is deemed to exist.

2.2.6 **Illegal and harmful uses of the internet –** The report of the Working Group on Illegal and Harmful Uses of the Internet was produced in 1998. This led to the establishment in 1999 of a new hotline for reporting child pornography on the internet[5]. A new Internet Advisory Board was also established in February 2000 to monitor the system of self-regulation recommended in the report.

2.3 What are the key issues moving forward?

A key priority moving forward will be the issue of co-ordination across Government to ensure overall consistency and coherence in the legal and regulatory environment. The new ways of interacting and doing business in the Information Society are already subject to existing laws. For the most part, a new set of rules is not needed. Where it is clear that new legislative or regulatory measures are required, we must act quickly. We must also be careful to avoid unnecessary complexity, and the creation of unintentional barriers to Information Society development.

2.3.1 **Coordination –** The Department of the Taoiseach has established an Inter-Departmental Working Group to ensure the necessary coordination across Government in addressing legal and regulatory issues relevant to Information Society development. Reporting to the Cabinet Committee on the Information Society, this Group will:

    2.3.1.1 Ensure overall consistency, coherence, and agreement on priorities

    2.3.1.2 Ensure that emerging bottlenecks are identified and addressed

    2.3.1.3 Ensure that stakeholders are aware in good time of draft legislation impacting on them

    2.3.1.4 Liaise as appropriate with the High Level Group on Regulation (which is progressing the *Better Regulation* reform agenda)

    2.3.1.5 Liaise as appropriate with the new Information Society Commission.

2.3.2 **Telecommunications –** The Communications Regulation Bill was published on 1 March 2002 and will be prioritised to create a Commission for Communications Regulation, dissolve the Office of the Director of Telecommunications Regulation and transfer its functions to the Commission, and increase penalties for breaches of licence conditions by operators from £1,500 to €1,000,000. The Bill also provides for the improved management of public road opening for the purpose of laying telecommunications infrastructure (Department of Public Enterprise).

2.3.3 **Data Protection –** The Data Protection (Amendment) Bill, which will give effect to outstanding provisions of the Data Protection Directive (95/46/EC), will be prioritised during 2002. The aim of the Directive is to establish common standards of data protection across Member States in order to protect personal privacy and ensure the smooth operation of the internal market, and to ensure adequate levels of data protection in countries outside the European Economic Area in order to facilitate and encourage international trade (Department of Justice, Equality and Law Reform).

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5 *http://www.hotline.ie*

2.3.4 **Electronic Commerce –** Transposition of the outstanding provisions of the Electronic Commerce Directive (2000/31/EC) will be completed during 2002. A code of practice will be developed on unsolicited commercial emails to complement the relevant provisions of the Directive (Department of Enterprise, Trade and Employment).

2.3.5 **Public Service Identity –** The Social Welfare (Miscellaneous Provisions) Act 2002 provides a framework for the creation and management of a Public Service Identity to support the delivery of integrated services through the Public Services Broker. A person's Public Service Identity will comprise their Personal Public Service Number (PPSN) and other personal details, and will act as a unique and secure identifier for access to public services. The Civil Registration Bill will be progressed during 2002 to provide a legal framework for the modernisation of the civil registration service and, in particular, for the use of the PPSN as the key identifier in the registration of future life events. Personal data collected from customers in their dealings with public service agencies, including data collected at birth registration, will be used to maintain their Public Service Identity.

2.3.6 **Intellectual Property Rights –** The Patents (Amendment) Bill is designed to implement the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) in respect of patents, and will be progressed during 2002 (Department of Enterprise, Trade and Employment).

2.3.7 **Copyright –** Building on the Copyright and Related Rights Act 2000, transposition of the outstanding provisions of the Directive on Copyright in the Information Society (2001/29/EC) will be completed during 2002 (Department of Enterprise, Trade and Employment).

2.3.8 **Company Law Review Group –** The Company Law Review Group reported in February 2002, including recommendations to facilitate easier registration of new companies, to encourage electronic filing of returns by companies, and to facilitate electronic communications with customers by the Companies Registration Office. Legislative arrangements to give effect to these recommendations will be progressed during 2002 (Department of Enterprise, Trade and Employment).

2.3.9 **Electronic Money –** The Directive on Electronic Money Institutions (2000/46/EC), providing a regulatory framework for e-money institutions, will be transposed by April 2002 (Department of Finance).

2.3.10 **Radio Spectrum –** The Radio Communications Bill will be progressed during 2002 to reform the regulatory framework for radio spectrum policy (Department of Public Enterprise).

2.3.11 **Electronic Signatures –** Building on the Electronic Commerce Act 2000, regulations on Certification Service Providers (Electronic Signatures Directive 99/93/EC) will be completed during 2002 (Department of Public Enterprise).

2.3.12 **Digital Hub –** The Digital Hub Development Agency Bill was published in January 2002. It will provide a statutory basis for Digital Media Development Ltd, the agency that will oversee the development of the Digital Hub as a premier international location for digital content industries. This legislation will be progressed during 2002 (Department of Public Enterprise).

2.3.13 **Processing of Personal Data in the Telecommunications Sector –** The Directive Concerning the Processing of Personal Data and the Protection of Privacy in the Telecommunications Sector (97/66/EC) will be transposed during 2002 (Department of Public Enterprise).

2.3.14 **Cybercrime –** The Council of Europe Convention on Cybercrime was signed by the Minister for Justice, Equality and Law Reform in February 2002 and will be transposed into national law (Department of Justice, Equality and Law Reform).

2.3.15 **Illegal and harmful uses of the internet –** Through the work of the Internet Advisory Board, codes of practice for the ISP (Internet Service Provider) industry have been produced in February 2002. The Board will keep the suitability of these arrangements under review, and will continue to monitor the regime of self-regulation in the industry. The Board will also extend the scope of Irish research on internet safety issues relating to parents and children, and will develop proposals for an awareness road-show (Department of Justice, Equality and Law Reform).

2.3.16 **ICT Accessibility –** The Disability Bill will be progressed during 2002 and provides for the establishment of a Centre of Excellence In Universal Design, whose remit will include ICT-based products, services and systems.

2.3.17 **Public Services Broker –** Proposals will be developed for legislation to underpin the establishment of the Public Services Broker. These proposals will include legal provisions for the establishment and operation of the Broker systems, as well as for the privacy and security frameworks governing the storage and processing of customer data (Department of Social, Community and Family Affairs).

2.3.18 **Electronic Health Services –** The Health Information Bill will be brought forward to underpin the implementation of the National Health Information Strategy that is due for publication in 2002 (Department of Health and Children).

2.3.19 **EU Directives on Electronic Communications –** EU Directives concerning electronic communications were adopted early in 2002. These are part of a regulatory framework dealing with access to and inter-connection of networks, authorisations, universal service and user rights issues, and a common regulatory structure. A further Directive concerning personal data and privacy will also be adopted shortly. Transposition of these Directives into Irish law will begin without delay (Department of Public Enterprise).

2.3.20 **EU VAT Directives –** The proposed EU Directive on VAT invoicing will simplify, harmonise and modernise invoicing requirements for VAT, providing a legal framework for electronic invoicing and electronic storage of invoices. Work has already begun in preparation for this directive, allowing electronic VAT invoicing under any secure system that guarantees the authenticity of origin and integrity of data on invoices. Transposition of the directive will be as flexible as possible, and the aim will be to significantly reduce tax compliance costs in this key area for taxable traders. The VAT on eCommerce Directive will regularise the VAT rules on business-to-business cross-frontier electronic supplies, and establish a VAT charge on electronically delivered services from business outside the EU to consumers within the EU. This will eliminate the competitive VAT advantage which non-EU business currently enjoy. The VAT on e-Commerce Directive will be transposed into national law in the Finance Bill 2003, as will any remaining provisions of the Invoicing Directive (Department of Finance).

2.3.21 **Network Security –** Given the increasing importance of computer networks to the development of the Information Society in Ireland, it is proposed by end 2002 to review existing national arrangements regarding computer emergency response and to have implemented a national campaign to increase awareness of network security issues amongst SMEs, citizens and the public sector (Department of Public Enterprise, Department of Enterprise, Trade and Employment and other relevant Government Departments/Agencies).

2.3.22 **Forfás report –** The work of the Inter-Departmental Working Group will take account of the Forfás report, *Legislating for Competitive Advantage in eBusiness and Information Communications Technologies*, being published in March 2002.

2.3.23   **Regulatory Reform –** A High Level Group on Regulation, chaired by the Department of the Taoiseach, is progressing a number of initiatives in response to the OECD review of Regulatory Reform, including preparation of a National Policy Statement on Better Regulation. A model of Regulatory Impact Analysis appropriate to the Irish public sector is also being developed which will provide for structured evaluation of policy options where legislation/regulation is required. A consultation document on *Better Regulation* was launched by the Taoiseach on 27 February 2002, initiating a consultation process prior to preparation of the National Policy Statement.[6]

2.3.24   **Commercial Court –** Following the recommendation of the Committee on Court Practice and Procedure in February 2002, the Board of the Courts Service are actively exploring the creation of a Commercial Court which has the potential to place Ireland as a hub for the settlement of commercial (and e-commerce) disputes and significantly improve the perception of Ireland as a location for commercial investment.

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6   *http://www.betterregulation.ie*

3 eGovernment

3.1 Why is this important?

The technologies of the Information Society present Government with new opportunities to reshape the delivery of government services around user needs, and on a 24x7 basis. They also provide a possible competitive advantage through reduced costs, higher efficiencies, better services and opportunities to allow Irish industry to develop new applications and content around the electronic government services. Online services can be structured around life events and their business equivalents, and need not be constrained by traditional organisational boundaries. ICTs therefore make possible new connections – both within Government itself, and between Government and the citizen and Government and the business users of its services.

The development of e-government is also central to shaping how we evolve as an Information Society. Aside from the objectives of improved service delivery and internal efficiencies, Government business processes clearly serve as key stimulus to wider engagement with ICTs – both within the business community, and among the general public.

Given its key infrastrutural significance, progress with e-government is increasingly seen internationally as a key indicator of wider Information Society development, and a key determinant of national competitiveness.

3.2 What is the current position?

The first Action Plan in January 1999 set out a three-stranded approach to online delivery of public services:

Strand 1 – information services: ensuring all public service information is available online through the websites of Departments and Agencies, and at the same time as it is delivered through traditional channels

Strand 2 – interactive services: delivery of public services online, enabling complete transactions to be conducted through electronic channels

Strand 3 – integrated services: rearrangement of information and service delivery around user needs, and available in an integrated manner through a single point of contact with government.

It is appropriate to recognise that progress with this agenda has been significant. In an EU benchmarking exercise carried out in November 2001 to measure progress with online delivery of public services, Ireland performed strongest of all Member States.

The key developments towards the objectives set out in the first Action Plan have been as follows:

3.2.1 **Website standards –** Guidelines and standards for all public sector websites were produced in November 1999, building on best practice in relation to design, search facilities and accessibility guidelines.

3.2.2 **Reach –** The Reach Agency was established during 1999 to develop a strategy for the integration of public services and the implementation of e-government.

3.2.3 **eStrategies –** Beginning in 2000, all Departments were mandated to produce e-strategies for the delivery of public services online, and to report on progress with implementation in their Annual Reports.

3.2.4   **Public Services Broker –** In May 2000, Government agreed on the Public Services Broker model as the framework for the integrated delivery of public services through multiple channels, accessible from a single point of contact.

3.2.5   **OASIS and BASIS projects –** In the context of progressing central components of the Public Services Broker, the OASIS (Online Access to State Information and Services) and BASIS (Business Access to State Information and Services) projects were initiated during 2000:

    3.2.5.1   The OASIS website was launched in April 2001, providing an integrated online resource of public service information based around citizen-centred life events, and available through a single point of contact (**www.oasis.gov.ie**).

    3.2.5.2   The BASIS website was launched in May 2001, providing an integrated online resource of public service information based around business-centred needs, and available through a single point of contact (**www.basis.ie**).

3.2.6   **Information Society Fund –** The Information Society Fund was established by Government to enable prioritisation of projects in the 1999 Action Plan and other initiatives consistent with its objectives. Up to end-2001, €109m was made available to support approximately 150 projects across a wide range of Departments and Agencies. The Fund has been an important catalyst in promoting successful realisation of Information Society and e-government objectives. Its flexibility as a central fund has facilitated effective responsiveness to evolving needs, and will continue to be critical in responding to the challenges and objectives of this new Action plan.

The following are among the key services, most of which have been supported through the Information Society Fund, that are now available online:

3.2.7   **Revenue Online Service (ROS) –** The Revenue Online Service (ROS) allows the secure and speedy electronic filing and payment of taxes as well as providing online access to customer account information. It is recognised as being to the forefront of e-government developments internationally (**www.ros.ie**).

3.2.8   **FÁS e-recruitment –** The FÁS e-recruitment system is being widely used by both businesses and applicants (**www.fas.ie**).

3.2.9   **Land Registry –** The Land Registry's EAS (Electronic Access Service) provides online access to an electronic database of property ownership records and also supports online applications for Land Registry services (**www.landregistry.ie**).

3.2.10   **Examination results –** From 2001, the Leaving and Junior Certificate examination results are being made available online at results time (**www.examinations.ie**).

3.2.11   **CAO (Central Applications Office) –** Applications for places in third level institutions are now supported online by the CAO (Central Applications Office), including the facility to view and accept course offers from colleges (**www.cao.ie**).

3.2.12   **Driving tests –** Applications for driving tests can now be made online (**www.drivingtest.ie**).

3.2.13   **Government Contracts –** As an initial step in developing a comprehensive and fully interactive e-procurement system, procurement opportunities with public sector agencies can now be accessed online through a dedicated website (**www.etenders.gov.ie**).

3.2.14   **Public Service Recruitment –** Applications for vacancies filled through the Civil Service Commission and the Local Appointments Commission are now facilitated online (**www.publicjobs.ie**).

3.2.15   **National Sheep Identification System (NSIS) –** A sheep tag ordering system has been made available online for selected companies.

3.2.16 **eForms –** The Local Government Computer Services Board has an electronic forms platform to facilitate online application for a range of public services (**www.eforms.gov.ie**).

3.2.17 **Welfare.ie –** A dedicated website enables downloading of the main leaflets and forms in respect all social welfare schemes, including online notification of unemployment (**www.welfare.ie**).

3.2.18 **Libraries –** A complete online guide to Ireland's local authority library catalogues is available through a single website (**www.elibs.gov.ie**).

3.2.19 **Infrastructure.ie –** The Infrastructure.ie website provides details of physical and social infrastructures in key industrial development locations throughout the country, including local water supply and treatment, landfill sites, electricity and gas supplies, telecommunications and transport infrastructures, hospital facilities, demographics, and third-level education facilities. This information service for business is also available through BASIS (**www.infrastructure.ie**).

3.2.20 **Farmer IT Training –** Teagasc have developed online curriculum and associated resource materials to ensure consistency and high quality in the provision of IT skills training for farmers (**www.client.teagasc.ie**).

3.3 Service Delivery – What are the key issues moving forward?

Government is committed to the objective of having all public services that are capable of electronic delivery available online, through a single point of contact, by 2005.

This objective is now a central focus for all Departments and Agencies through their Statements of Strategy under the Public Services Management Act, resulting in the e-government agenda being clearly integrated with mainstream business strategy and objectives.

Government is also committed to ensuring that the benefits of integrated services will not depend on having direct access to the electronic delivery channel. Intermediated access to the Public Services Broker will be a key feature and will be facilitated through both telephone contact centres and one-stop-shops.

3.3.1 **Public Services Broker –** Delivery of all public services will be progressed through the framework of the Public Services Broker, the key features of which are as follows:

 3.3.1.1 **Integration –** The Broker will provide integrated access to all services of central and local government through a single point of contact.

 3.3.1.2 **Multiple Access Channels –** The Broker will make services available through multiple access channels, including online self-service, and intermediated service through both telephone contact centres and one-stop-shops.

 3.3.1.3 **Data Security –** The Broker will provide protected data vaults for secure storage of the personal or business information necessary to facilitate access to public services, while making available to public service agencies only the information that is strictly necessary for the delivery of specific individual services. Provision of data to the Broker will be managed and controlled by the individual or business to whom the data relates, and will, beyond certain core basic data, be on a voluntary basis.

A fuller description of the Public Services Broker is included at Appendix 2.

3.3.2 **Reach –** Reach will be the focal point for the delivery of integrated public services through the Public Services Broker. Its mission is:

> *To radically improve the quality of service to personal and business customers of Government and to develop and deploy the Public Services Broker to help agencies achieve that improvement.*

3.3.3 **Reach Services Portal –** As a key step towards the delivery of a single point of contact for citizen and business users of public services, the Reach Services portal will be available online by April 2002. It will deliver the facilities to:

3.3.3.1 Provide citizen and business oriented information on public services

3.3.3.2 Register as an authenticated *personal* user of online public services

3.3.3.3 Make applications for and avail of public services online

3.3.3.4 Accept payments for services online using debit and credit cards

3.3.4 **Reach Architecture, Components and Timelines –** Reach will develop and publish the Public Services Broker architecture and functionality, a complete programme delivery plan with timelines, and any required enabling legislation. In addition to the type of facilities available in the Reach Services Portal, the Public Services Broker will include facilities to:

3.3.4.1 Register as an authenticated *business* user of online public services

3.3.4.2 Store and keep private any information used in availing of public services – access to information, other than basic identity information, will be under the control of the user

3.3.4.3 Avail of online public services over multiple channels (e.g., web, phone, in-person etc.)

3.3.4.4 Deliver services in an integrated fashion where elements of those services are handled separately by multiple agencies

3.3.4.5 Make payments to customers online

3.3.4.6 Avail of online public services, including information services, through a new national public services call centre.

3.3.5 **Integrated Services –** Best practice guidelines for the deployment of services nationally through the Public Services Broker will be developed building on:

3.3.5.1 A pilot project that is underway in Donegal to identify and resolve issues around integrated service delivery and to pilot a suitable range of services for delivery by Reach.

3.3.5.2 A feasibility study on integration of services for businesses being conducted through the BASIS project

3.3.5.3 A study carried out by the Department of the Marine and Natural Resources on grouping of services to facilitate ease of access.

3.3.6 **Flagship Services to Citizens –** The following flagship citizen-centred services will be prioritised and progressed during 2002, consistent with the principles underpinning integrated delivery of services through the Public Services Broker:

3.3.6.1 **Motor Tax:** The facility to pay motor tax online

3.3.6.2 **Driving Licences:** The facility to apply and pay for a driving licence online

3.3.6.3 **Road Haulage Licences:** The facility to make online applications for road haulage licences

3.3.6.4 **Passports:** The facility to make complete passport applications online

3.3.6.5 **Birth, Death and Marriage certificates:** The facility to make online applications for birth, death and marriage certificates

3.3.6.6 **Local Authority Housing:** A facility enabling online applications for local authority housing, including provision for online self-assessment of eligibility

3.3.6.7 **Planning Applications:** An online facility providing access to the Planning Application and Development Control process, including citizen interaction with the draft development plan and the online registering of unauthorised development, commencement notices, and objections

3.3.6.8 **Court Fines:** A facility for online payment of Court fines

3.3.6.9 **Electoral Register:** The facility to apply online for registration on the electoral register

3.3.6.10 **Child Benefit:** A re-design of the Child Benefit system to support online applications, involving improved integration with the birth registration process and the updating of child dependant payments on social welfare schemes

3.3.6.11 **Adult Education Guidance Project:** An online national database of adult learning opportunities, complemented by a national telephone help-line service. An online management information system will also provide further education centres throughout the country with valuable information on participation patterns and outcomes of further education programmes.

3.3.6.12 **Agriculture:** A new system to allow online access to area aid applications; and a new system to support disease eradication schemes incorporating online access for veterinary practitioners and subsequently catering for farmer access.

3.3.7 **Flagship Services to Business –** The following flagship business-centred services will be prioritised and progressed during 2002, consistent with the principles underpinning integrated delivery of services through the Public Services Broker:

3.3.7.1 **Revenue:** The facility to make all returns and payments to the Revenue Commissioners online

3.3.7.2 **Statistical Returns:** The collection of statistical data from businesses by the Central Statistics Office

3.3.7.3 **Commercial Rates:** A system for payment of commercial rates online

3.3.7.4 **Public Procurement:** A facility providing integrated access to all procurement opportunities with the public sector, evolving towards supporting all stages of the procurement process online

3.3.7.5 **Land Registration:** The development of the Land Registry's EAS (Electronic Access Service) to support access to a broader range of folios and filed map plans

3.3.7.6 **Work Permits:** An online application system for work permits

3.3.7.7 **Companies Registration Office:** The facility to file annual returns online

3.3.7.8 **Patents:** The facility to search the Patent and Trademark designs databases; to renew Patents and Trademarks; and to view, search and renew Industrial Designs

3.3.7.9 **Mining:** The facility to apply online for a prospecting licence and a licence to operate a state mining facility

3.3.7.10 **Forestry:** The facility to apply online for forestry grants

3.3.7.11 **Fisheries:** The facility to apply online for vessel registration certificates and fishing licences

3.3.7.12 **Change of vehicle ownership:** The facility to notify change of ownership of a vehicle online, rolled out initially to major motor traders, and then accommodating smaller traders and person to person transactions

3.3.8   **eHealth –** The future National Health Information Strategy will include an information framework to support the achievement of the goals and objectives as set out in the National Health Strategy.[7] Consistent with the principles underpinning delivery of the Public Services Broker, this will include prioritisation of a number of pilot eHealth projects, embracing:

3.3.8.1   Use of the Public Service Identity

3.3.8.2   Health information web pages that will build on the work of OASIS

3.3.8.3   Appointments for hospital services

3.3.8.4   Medical cost reimbursement: Implementation of online patient identification systems enabling pharmacies to provide improved individualised services

3.3.8.5   Access to laboratory results

3.3.8.6   eLearning for health professionals

3.3.8.7   Exploratory use of digital TV for delivery of health-related services.

3.3.9   **Projects –** A list of projects currently being taken forward by Departments and Agencies is set out at Appendix 3. The services being delivered through these projects will be progressed in the context of the overall objectives set out in this Action Plan, and consistent with the principles underpinning the integrated delivery of services through the Public Services Broker.

3.3.10   **Monitoring arrangements –** To ensure the necessary momentum, progress by Departments and Agencies towards electronic service delivery targets will be the subject of quarterly reports to the Cabinet Committee on the Information Society. In this context, Departments will have coordinating responsibility for agencies under their aegis. An eGovernment Implementation Group will monitor and promote the implementation of e-government across the Public Sector, taking into consideration the role of the Reach Agency in promoting online public services. The remit of the Implementation Group will include the development of a communications strategy for the e-government process both internally and externally.

3.4 Modernisation – What are the key issues moving forward?

Modernisation of the Irish public service has been ongoing since the initiation of the SMI process in 1994. In the period since then a number of initiatives have been launched to improve quality of service to the public and to change the culture of the public service itself. Developments in e-government closely support the modernisation programme, and will be central to issues such as further deepening of the Quality Customer Service initiative, devolving more decision-making closer to the customer, improved financial information systems, and effective mechanisms for addressing cross-cutting policy issues. A key challenge will to ensure that the full synergies between e-government and the wider modernisation process are realised, including through the SMI Implementation Group of Secretaries General.

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7   *http://www.doh.ie/hstrat/index.html*

Building on the work that is being progressed in delivering integrated services through the Public Services Broker, there is growing acceptance of the need for a greater internal e-government focus on streamlining background processes, facilitating cross-organisational collaboration, continuing to develop an organisational culture with a user-centric focus, and achieving the full benefits from the substantial investments in technology across the public service. Further development of the SMI process, including the Strategy Statement and Business Planning process, the Quality Customer Service initiative and reforms in relation to HR management and financial management, is essential to ensure that the public sector is positioned to rise to these new challenges.

The implications of this are significant for staff and management at all levels – for what they actually do, for taking ownership, for the way they work, the organisational structures within which they work, and the way they share knowledge. There are also implications for citizens, corporate citizens and other stakeholders, all of which need to be addressed.

3.4.1   **eEnabling the Public Service –** Work towards e-enablement of particular processes, including the business of Government itself through the eCabinet project, is already underway and is set out below. In support of these cross-agency initiatives, the parallel creation of a *knowledge-based* organisation is a natural extension of the e-government process. It will necessitate a re-configuration of the ICT infrastructures across the public service to provide for greater use of intranets and extranets and a greater emphasis on sharing of services and common automated processes using web technologies. It also means a new approach to IT governance, organisation and development, human resource management, leadership and support. The Department of the Taoiseach and the Department of Finance will progress further proposals during 2002 to shape developments in this area in the context of the unfolding modernisation process.

3.4.2   **eCabinet Project –** The eCabinet project will bring the application of new technologies to the Cabinet process. In particular it focuses on:

3.4.2.1   Electronic distribution and management of Cabinet papers

3.4.2.2   Use of technologies to improve presentation of complex issues at Cabinet

3.4.2.3   Use of technologies in direct support of Cabinet meetings

3.4.2.4   Creation of new information resources.

The initial research, scoping, consultation and feasibility phase was undertaken by consultants PwC in consultation with the Cabinet Secretariat. Their report was presented to Government in December 2002. The implementation phase of the project commenced in early 2002. A prototype will be developed in 2003 with full deployment thereafter.

3.4.3   **eLegislation Project –** Proposals are being progressed to support e-enablement of the process governing the preparation of legislation, contributing to an efficient, accurate, cost-effective and seamless delivery of Bills to Government.

3.4.4   **eProcurement Project –** The Irish public sector procurement portal was launched in December 2001 providing online access to public sector procurement opportunities (**www.etenders.gov.ie**). Information is updated on a daily basis and is provided free of charge to all registered users. A facility enabling suppliers to reply to tenders electronically will become available during April 2002 as a further phase in a process that is underway towards fully integrated electronic procurement procedures across the public sector.

3.4.5   **Department of Finance –** Progress is underway towards e-enabling the processes through which Departments and Agencies interact with the Department of Finance in relation to the administration of the public finances, including the Estimates process and the ongoing monitoring of public expenditure.

3.4.6 **Planning Applications –** In addition to the citizen-focused aspects of the planning process, this project will facilitate electronic integration and dissemination of planning files with third party organisations and partners who contribute to the planning process. The heritage aspects of the planning process carried out by Dúchas will be included as part of this facility.

3.4.7 **Integrated Housing Package –** The exchange of information between local authorities and the Department of the Environment and Local Government will be automated through this project, which will be implemented in all housing authorities over the next three years.

3.4.8 **Communications Infrastructure –** A new VPN (Virtual Private Network) will be progressed during 2002 to enhance existing infrastructure for communications between Departments and Agencies and to support the delivery of the Public Services Broker and the e-government process. It will provide for:

3.4.8.1 Fixed, mobile and lo-call voice services for all sectors of Government

3.4.8.2 Managed data services to support the intranet needs of various sectors of the public service, interconnectivity with the Public Services Broker, and public service access to the internet

3.4.8.3 Mobile or e-working employees and agents of Government to access Government servers and portals securely.

3.4.9 **Electronic Payments Strategy –** Work towards establishing a comprehensive framework for transferring value electronically throughout the economy will be progressed during 2002 through a Steering Group under the aegis of the Department of the Taoiseach. Priorities will include:

3.4.9.1 A leadership role for Government in fostering wider engagement with electronic payment channels in the context of overall Information Society objectives

3.4.9.2 A consultative approach involving the social partners in building consensus around the issues arising in making greater use of electronic payments in the economy

3.4.9.3 The e-enablement of all payments to and from Government, consistent with the principles underpinning the integrated delivery of services through the Public Services Broker

3.4.9.4 The development in this context of electronic payment solutions for those who do not currently hold bank accounts

3.4.9.5 Active involvement of IPSO (Irish Payment Services Organisation) and other interested parties in progressing this agenda.

3.4.10 **National Spatial Data Infrastructure (NSDI) –** Work towards establishing a National Spatial Data Infrastructure (NSDI) will be progressed during 2002 as a strategic priority in the context of the overall development of the e-government process. The key focus will be the integration of spatial data (or geographically referenced information) with all wider information-management processes across Government, consistent with the principles underpinning integrated delivery of services through the Public Services Broker.

3.4.10.1 The NSDI strategy will be overseen by a Steering Group established under the aegis of the Department of the Taoiseach.

3.4.10.2 As an initial step, a multi-agency proof-of-concept project will be progressed during 2002 focusing on a defined geographic area (to include both urban and rural topologies).

3.4.10.3 The proof-of-concept will examine the practical issues involved in creating a shared, standard set of spatial data to provide improved public service delivery to the citizen, new opportunities for the business community, and optimal integration of public sector information and systems.

3.4.10.4 The initial participants will include: Ordnance Survey Ireland, Environmental Protection Agency, Department of the Environment and Local Government, Local Government Computer Services Board (on behalf of local authorities), Land Registry, Dúchas, the Department of Agriculture, Food and Rural Development, and the Department of the Marine and Natural Resources.

3.4.10.5 During the initial stages of the project, extending participation to other public sector organisations will be kept under review.

3.4.10.6 Involvement of private sector interests during later phases of the project will also be examined.

3.4.10.7 The project will complement progress towards delivery of integrated services through the Public Services Broker in shaping an agreed understanding around optimising the use of location-based services.

4   eBusiness

4.1 Why is this important?

The challenges and opportunities of the Information Society are now central to business competitiveness. And business competitiveness determines the security of peoples' jobs, the income levels they enjoy, and the resources which underpin Government expenditure.

eBusiness developments present firms with routes to increased competitiveness, including the opportunity to increase sales, improve internal processes, shorten supply chains, and reduce transaction costs. It can create new market opportunities for existing enterprises, and reduce barriers to entry for others. We are competing in a global economy in which firms, large and small, are now rapidly adapting to e-business strategies either in addition to or instead of conventional business methods. The speed with which Irish firms adapt to the challenge of e-business will increasingly determine their future prospects, and, increasingly too, our wider economic competitiveness.

Public policy towards the development of e-business is focused primarily on fostering a supportive environment: ensuring affordable access to advanced telecommunications services; providing a secure and predictable legal framework; acting in anticipation of future skills needs; driving engagement with ICTs through Government's own business processes; and promoting targeted support measures to build the e-business capacity of the indigenous SME sector.

4.2 What is the current position?

A number of targeted support initiatives have been advanced to assist Irish companies in developing the appropriate strategies to successfully harness the potential of ICTs. These initially concentrated on promoting awareness, then deployment of applications, and exemplars of deployment. An e-business survey produced by the Chambers of Commerce in September 2001 points to the level of progress being achieved. Amongst the SME sector:

- 90% had at least 1 computer
- 81% had internet access
- 46% had a website
- 33% had a defined e-business strategy.

Building on the first Action Plan, and the subsequent *Report on e-Commerce: the Policy Requirements* produced by Forfás in July 1999[8], the key developments have been as follows:

4.2.1   **ECBAC –** An Electronic Commerce Business Awareness Campaign (ECBAC) directed at the SME sector was run by the Information Society Commission and IBEC during 1999 and early 2000. 11 seminars were held nationwide attracting a strong response and over 1,500 participants.

4.2.2   **SME Masterclasses –** Building on the success of the ECBAC initiative, the Department of Enterprise, Trade and Employment, the Information Society Commission and IBEC ran a series of SME-focused regional master classes during 2002 that were devised to assist companies in applying ICTs to enhance business capacity. A video entitled 'Click onto eBusiness' was commissioned to support the initiative.

4.2.3 **Accelerator Fund –** The eBusiness Accelerator Fund was established by Enterprise Ireland in March 2000 to fast-track significant scale projects designed to integrate ICTs into business processes.

4.2.4 **Openup.ie –** A dedicated e-business website has been developed by Enterprise Ireland as an integrated source of information and advice to the business community[9]. It includes an e-zine, discussion forum and a range of dedicated reference guides.

4.2.5 **Empower Initiative –** The Empower Initiative was implemented through the 35 County Enterprise Boards to accelerate the uptake of e-commerce opportunities by SMEs. The initiative moved participants from awareness through to adoption of new technologies. It also addressed e-business skill shortages and provided practical mechanisms for Enterprise Board companies to create wealth and employment.

4.2.6 **Chambers of Commerce of Ireland (CCI) SME project –** Complementary to the work undertaken by the state agencies and other business support organisations, the CCI SME project was designed to build e-business capacity through delivering awareness raising and training activity among its client base. An integral element has been to ensure that training is enterprise led and addresses the business issues of implementing an ICT strategy within a small to medium sized business.

4.2.7 **ShiPP Project –** Shannon Development has had significant success with the ShiPP project (Shannon Information Society Partnership Project) leading to development of the Shannon Regional Information Society Action Plan. The agency's e-Region Initiative is co-ordinating and implementing the Action Plan while simultaneously building awareness of the Information Society. Associated initiatives include:

4.2.7.1 **AcceleratePLUS.com –** designed to assist internet start-up companies that were capable of achieving significant scale, giving these companies direct access to large technology providers, infrastructure providers, training and consultancy

4.2.7.2 **Digitech Business Development Programme –** established to encourage and support the development of technology and knowledge-intensive manufacturing and service businesses.

4.2.8 **eBusiness Monitor –** During 2000, Forfás commissioned Accenture to produce periodic reports that are designed to:

4.2.8.1 Monitor e-business development in key sectors of the Irish economy, assess its implications and identify the opportunities, threats and the required actions

4.2.8.2 Monitor and assess key environmental factors necessary for e-business development

4.2.8.3 Compare Ireland's environment for e-business growth and the performance of key sectors in e-business with those in leading countries, and to identify required actions.

4.2.9 **Forfás –** In addition to the eBusiness Monitor, Forfás has undertaken a number of reviews on strategic e-business issues such as Internet Data Centres, e-Marketplaces and e-Procurement, legislating for competitive advantage, and developments in the telecommunications market.

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9 *http://www.openup.ie*

4.2.10 **IDA strategy –** IDA Ireland developed and rolled out a marketing strategy in June 1999 that was successful in attracting investment from companies that are part of the value chain for B2B activities, including: data hosting providers, e-services, technology platform vendors, security providers, content companies, trading, e-procurement, e-marketplace and system integrators.

4.2.11 **eWork –** In response to the Report of the National Advisory Council on Teleworking (NACT), the eWork Action Forum was established in November 1999 to act as a focal point for the development of Ireland as an e-work friendly location and to advance the recommendations in the NACT Report. Considerable progress has been achieved to date including:

4.2.11.1 The initiation of the eWork Business Awareness Campaign in 2000 and 2001

4.2.11.2 The endorsement of a Code of Practice on e-working by the Social Partners

4.2.11.3 The production by the Revenue Commissioners of a leaflet *eWorking and Tax* which clarifies the tax treatment of e-working employees.

4.2.11.4 The commitment in the *Programme for Prosperity and Fairness* that Government will introduce teleworking options into mainstream public service employment and that all publicly funded organisations will develop a teleworking policy for implementation by 2002.

4.3 What are the key issues moving forward?

Fostering a supportive environment for e-business and knowledge-based economic activity remains the key issue moving forward, and is fundamental to the overall objectives of this Action Plan. Within this context, the challenge is clearly to build on the results already achieved in the application of e-business, and to target those areas where more work needs to be done. While awareness levels have increased among SMEs, it is evident that only a minority have as yet defined complete or high-level e-business strategies built around good business models in which transactions with suppliers, buyers and customers can be completed online. A multi-layered approach is needed catering for companies at all levels of the e-business development ladder.

The key task in e-business application will be to have optimal engagement by indigenous firms in the tradable goods and services sector with high-level online approaches, either complementary to or replacing existing business models.

The key task for the industrial promotion agencies will be the ongoing promotion of Ireland as a centre for e-business content services and applications, including their development production and research.

The continued development of the Digital Hub project will support this task, providing a centre of excellence for innovation, creativity, research and learning for Irish and international digital content and media companies.

An ongoing task will be to inform policy development through benchmarking of competitor countries and from independent evaluations of existing measures.

4.3.1 **Accelerator Fund –** The Accelerator Fund operated by Enterprise Ireland will continue in 2002. It will complete ongoing projects and develop case studies and models of best practice for dissemination throughout the SME sector.

4.3.2 **ITS 2007 –** Enterprise Ireland's ITS 2007 Report sets out a range of initiatives that will be progressed aimed at developing high value-added, knowledge-intensive industries, and helping them to achieve fast growth. These actions will support e-enablement of companies in the high tech sector countrywide.

4.3.3 **The Digital Hub –** The Digital Hub[10] is being established in central Dublin to create a centre of excellence for innovation, creativity, research and learning for Irish and international digital media companies:

4.3.3.1 It will provide start-up facilities for early stage, fast growth and established companies to undertake R&D into digital industries.

4.3.3.2 Dublin City Council, Enterprise Ireland and IDA Ireland are key partners in The Digital Hub and are committed to developing the project as a focal point for the digital media sector in Ireland.

4.3.3.3 MLE (Media Lab Europe) is in place as a flagship project.

4.3.3.4 Digital Media Development Ltd has been established to develop the Hub and has appointed an Executive Services Team to undertake day-to-day operations.

4.3.3.5 The Digital Hub Development Agency Bill will be progressed during 2002 to provide a statutory basis for Digital Media Development Ltd.

4.3.3.6 The Development strategy for the Hub was launched in December 2001.

4.3.3.7 Funding of €74m has been approved as capital expenditure for property purchase for the period 2001 to 2002.

4.3.3.8 Funding of €2m per annum is being provided for operational expenses for the period 2001-2003 inclusive.

4.3.3.9 Funding of €2.29m has been allocated to Dublin City Council to have the necessary telecommunications infrastructure for the Hub in place by mid-2002.

4.3.4 **National Linkage Programme –** Enterprise Ireland has established a key e-procurement action within its National Linkage Programme. The objective is to work with major OEMs and their Irish suppliers, to establish electronic trading between them. This will extend to purchasing and sales, production management, and inventory control. IBM is a partner in this action and is supporting a series of workshops and seminars to apprise companies of the opportunities and good practice in this area.

4.3.5 **Business Development –** Enterprise Ireland will continue to provide developmental support for new and existing companies in the e-business sector who are developing and supplying hardware, software and services. Many of these companies will be in the e-content business, particularly in new media and digital media, and will be supported under the EI Business Development Model – in the areas of strategy, marketing, finance, innovation, operations and human resource development.

4.3.6 **Chambers of Commerce SME project –** The Chambers of Commerce training and awareness building programme will continue in 2002, building e-business capacity within the SME sector by delivering training and awareness activity amongst its client base.

4.3.7 **Shannon Development –** Shannon Development is taking forward a number of initiatives to build on the progress achieved through the ShiPP project:

4.3.7.1 **Knowledge Networks:** The Knowledge Networks project is creating a network of key technology locations in the region in order to bring business, education and innovation together, creating dynamic and exciting world-class locations for living and working in the knowledge age

4.3.7.2 **e-Cluster Programme:** The pilot e-Cluster programme is assisting companies to create and implement an ICT Improvement Plan focused on meeting the needs of both customers and suppliers.

4.3.7.3 **Usher Programme:** The USHER programme is focussed on improving the support that Regional Development Agencies can offer to small business by creating a regional development e-commerce delivery strategy.

4.3.8 **IDA focus –** IDA Ireland will continue a strong concentration on developing Ireland as a centre for e-business services, applications and content with a particular emphasis on projects that will have strategic or functional responsibility across the EMEA region. These typically Pan-European operations will play a key role in determining the future direction of the companies involved and the future rollout of e-business.

4.3.9 **eBusiness Monitor –** Forfás will continue to benchmark the competitiveness of Ireland in the digital economy through the e-business monitor, which will also act as a platform for ongoing Information Society policy development.

4.3.10 **Forfás –** In addition to the e-business monitor, Forfás will:

4.3.10.1 Continue its review of data centres, e-market places and e-procurement

4.3.10.2 Monitor the issue of VAT on e-business

4.3.10.3 Complete a study on the Digital Content Industry

4.3.10.4 Complete reviews of third generation mobile communications and m-commerce

4.3.10.5 Progress completion of benchmarking reports on Telecommunications and Policy Analysis.

4.3.11 **InterTradeIreland (ITI) –** The benefits from all-Island cooperation in the Information Society area will be explored through InterTradeIreland in the context of developing Ireland's standing as world-leading location for e-business and knowledge-based economic activity.

4.3.12 **eWork Awareness –** Enterprise Ireland will continue The eWork Business Awareness Campaign during 2002. This will be complemented by further surveys through the eWork Action Forum to monitor the uptake by business of the e-working option.

4.3.13 **eWork Training –** Proposals will be progressed through the eWork Action Forum during 2002 for development of a recognised scheme of accreditation in the competencies necessary to support successful e-working arrangements.

5 R&D

5.1 Why is this important?

A clear framework for R&D-based technological progress and innovation will be an essential basis for our successful development as an Information Society, and to underpin our attractiveness as a world-leading location for e-business and knowledge-based economic activity. An advanced science and technology base is increasingly necessary to secure ICT-based investment, to develop skills and the knowledge base, and to enhance the international competitiveness of indigenous enterprise.

There is clear evidence of the links between investment in Research, Technological Development and Innovation (RTDI) and enhanced economic activity through increased competitiveness, company growth and new company start-ups. In this context the underpinning of economic development by a commitment to research has been a fundamental part of industrial development strategy and has become even more important as we enter the Knowledge Age.

A strong scientific and research capability and an abundance of intellectual capital are necessary to ensure our success as a world class, knowledge-based society.

5.2 What is the current position?

The Research Technological Development and Innovation Priority (RTDI) in the National Development Plan 2000-2006 aims to continue and develop the support provided under the Community Support Framework 1994-1999 in key areas where public investment remains fundamentally necessary to sustain economic growth and to facilitate the transition to an economy based on knowledge and new technologies.

5.2.1 **NDP allocation –** In recognition of the driving role of RTDI in economic development, Government has made provision for the sum of around €2.5 billion in the National Development Plan (2000-2006) for RTDI activities across all Government Departments and Agencies. A complementary set of programmes are being put in place to provide funding for the training and development of researchers, project financing, growth of institutional research capacity, mission oriented research and the development of internationally significant research programmes.

5.2.2 **RTDI in Education –** The National Development Plan provides €698m to strengthen the capacity and capability of research in the higher education sector. The four complementary sub-measures will engender a strategic view of research in higher education; ensure that the infrastructural supports for research are in place and provide the necessary supports for researchers at both the project and individual level.

5.2.3 **Technology Foresight Fund –** In February 2000, Government established the Technology Foresight Fund, providing more than €635m over the seven-year period of the National Development Plan (2000-2006) for investment in world-class research in niche technology deemed capable of driving economic competitiveness in the longer term. Initially at least the Fund will be focussed on creating a critical mass of world-class research within Information and Communication Technologies (ICTs) and Biotechnology. A new body, Science Foundation Ireland, which presently operates under the aegis of Forfás, has been established as the mechanism for the management, allocation, disbursal and evaluation of the Technology Foresight Fund.

5.2.4   **Programme for Research in Third Level Institutions –** The Programme for Research in Third Level Institutions (PRTLI) is the core element of the RTDI and Education measure provided for in the National Development Plan. The Programme's objective is to strengthen the long-term capacity of third level institutions for high quality research. The defining characteristic of PRTLI is support for institutions with strategically focused and managed research programmes. Proposals must satisfy demanding criteria in regard to research quality, support for learning and teaching at the institution and the contribution to realising the goals and objectives of the institution's long-term research strategy. To date awards amounting to €605m have been announced for third level institutions, following competitive processes involving the application of international standards.

5.2.5   **Irish Research Council for the Humanities and Social Sciences –** The Irish Research Council for the Humanities and Social Sciences was established to encourage excellence and the highest standards in research in the humanities and social sciences. It operates a range of research scholarship schemes for postgraduate researchers, postdoctoral researchers and academic faculty members. All applications are assessed by international and national independent peer review.

5.2.6   **Media Lab Europe –** During 2000, Media Lab Europe was established as a third level research and development educational facility under a unique collaboration between Government and the Massachusetts Institute of Technology (MIT), and modelled on MIT's world famous Media Laboratory. Taking an interdisciplinary approach, it will specialise in learning through research in digital technologies. Though its primary emphasis will be on pre-competitive research, it is expected that its activities will lead to the commercial application of new technologies and inventions. It is the flagship project of the Digital Hub and is located in the former Guinness Hopstore.

A top class research team is being assembled and already includes over 50 researchers and students. Funding of up to €35.55m is being provided in start-up capital over 4 years. There is also funding of €1.27m per annum under the NDP to support Irish universities' involvement in collaborative research projects with Media Lab Europe.

5.3 What are the key issues moving forward?

The €2.5 billion allocation under the NDP will be used as a means of enhancing innovation and competitiveness, in order to increase output and employment. This will be achieved through focused support for in-company R&D, the networking of companies with the wider science and technology infrastructure, the better use of technology in balanced regional development, and the preparation for future technological opportunities through the establishment of Science Foundation Ireland. Within the education sector, the complementary measures being funded under the NDP will ensure the necessary infrastructural supports and the individual supports for researchers while enhancing and developing the capacity of our third level institutions for high quality research.

5.3.1   **NDP objectives –** The RTDI objectives of the NDP will be advanced by a range of measures which are designed to:

5.3.1.1   Help firms to develop innovative products, services and processes

5.3.1.2   Increase the number of companies performing effective R&D in Ireland as well as the scale of that investment

5.3.1.3   Embed the culture of R&D in companies by upskilling their RTI capability through a series of appropriate interventions

5.3.1.4   Encourage firms to access and exploit R&D and technology from international sources

5.3.1.5   Increase the quantity and quality of the R&D linkages between companies and between third level institutions and companies

5.3.1.6   Increase the numbers of researchers and other research personnel employed in Irish industry

5.3.1.7   Build, through Science Foundation Ireland, the long-term national research capability in niche technologies to underpin the long-term development of industry

5.3.1.8   Commercialise research leading to the introduction of new knowledge-based products and services into industry and to the creation of new technology-based firms

5.3.1.9   Promote private investment in R&D and in new technology-based firms

5.3.1.10 Contribute to balanced regional development by strengthening the technological infrastructure of the regions and matching them to the needs of enterprise

5.3.1.11 Develop a word class research environment in our higher education institutions and State research agencies

5.3.1.12 Ensure a vibrant and dynamic pool of high quality, technically literate graduates, from the graduate to postdoctoral levels, to service the needs of a knowledge-based economy.

5.3.2   **Science Foundation Ireland –** Science Foundation Ireland is a newly established, dedicated research body that has been set up to administer the Technology Foresight Fund. Currently operating under the aegis of Forfás, it will be established as a separate legal entity. The long-term objective of the Foundation is to create a highly visible critical mass of world-class research excellence in niches areas of ICTs and Biotechnology, considered central to Ireland's future industrial development. Industry and related international investment are becoming ever increasingly knowledge based as new research and technologies translate into global marketable products and services. We therefore need to focus now on building new sources of competitive advantage for indigenous companies and on ensuring that Ireland becomes one of Europe's most attractive locations for knowledge-based enterprise – both Irish owned and foreign owned. SFI has already announced awards amounting to €71m for Principal investigators, following a world-wide competition, who will head up teams carrying out leading edge international research. A series of new funding programmes were also announced in February 2002. It is intended that SFI will ultimately make Ireland an attractive location for R&D and will:

5.3.2.1   Embed existing firms in the Irish economy and facilitate their re-positioning higher up the value chain

5.3.2.2   Attract the R&D activities of foreign investment projects

5.3.2.3   Foster the start-up of high potential technology based firms.

5.3.3   **EU Sixth Framework Programme (2002-2006) –** Proposals will be progressed to ensure optimal promotion of and participation in the Sixth Framework Programme for research, technological development and demonstration activities (2002-2006), with a particular focus on supporting Information Society development. All Departments and Agencies will fully explore the potential of funding mechanisms under the Sixth Framework Programme in progressing the objectives and commitments set out in this Action Plan.

5.3.4   **Irish Research Council for Science, Engineering and Technology –** The Irish Research Council for Science, Engineering and Technology was established in 2001 to promote excellence across a broad range of research in science, engineering and technology. The Council will establish schemes of support for researchers in science, engineering and technology including new and improved grant schemes for postgraduate scholars and post-doctoral fellows as well as providing funding for research projects. The emphasis will be on innovative and original research, which is aimed at generating knowledge. The Council will make its first awards during 2002 and a total of €95 million will be allocated over the lifetime of the National Development Plan.

5.3.5   **Researchers Group –** As recommended by the Expert Group on Future Skills Needs, a working group is being established by the Higher Education Authority to examine ways to attract researchers into Ireland and to promote research as a career option to undergraduates. The Group will comprise representatives from the research faculties in third level institutions, Forfás/SFI, the Irish Research Councils and the Health Research Board.

5.3.6   **Broadband Infrastructure for Education and R&D –** Government has stated its intention that Ireland should develop as a global leader in the knowledge economy. One critical determinant in making this happen is ensuring that our educational sector is underpinned by best-in-class broadband infrastructure. In the context of leveraging the eCommerce measures of the National Development Plan, proposals will be progressed in support of this objective and will be informed by ambitious targets for first, second and third levels.

These proposals will be designed to significantly enhance and build on the investments already undertaken by the State in recent years in research and education, in particular the Schools IT 2000 programme, the National Development Plan funding of research and development, the Next Generation Internet Project and the Media Lab Europe project (Department of Public Enterprise, Department of Education and Science).

6 Lifelong Learning

6.1 Why is this important?

Learning issues are central to our development as an Information Society and as a mature knowledge-based economy. We must ensure the availability of the knowledge and skills that are necessary to underpin economic competitiveness, while at the same time fostering a learning environment that facilitates the process of adapting to ongoing change. In an era where change has become one of the few certainties, we can also build on the potential of ICTs to deliver new learning opportunities.

Internationally, promoting a culture of lifelong learning has become a key public policy objective. We must acknowledge that it is an objective that presents many challenges to structures for education and training that have evolved in response to the needs of a different era. However, it is clear that more flexible and more responsive arrangements are needed.

The Information Society increasingly demands the facility to continuously acquire knowledge, skills and competencies in an environment of constant change. The goal of *work for life* is increasingly supplanting that of a *job for life.* We are seeing a shift in emphasis away from storing and memorising facts towards a more sophisticated view which brings together information (know what), technique (know how) and understanding (know why).

Where previously lifelong learning might have been seen as, at best, the province of the professionals or knowledge workers the need to continuously adapt and upgrade knowledge skills and competencies is now seen to apply across the gamut of jobs and workplaces.

The development of a strategic framework for lifelong learning is also critical to active citizenship and social inclusion objectives and it is essential that we create the conditions whereby citizens have the skills, motivation and opportunity to access and benefit from learning.

6.2 What is the current position?

The following have been the key developments in this area:

ICT at primary and secondary levels

6.2.1 **Policy at primary and secondary level –** At primary and secondary level, the immediate challenge is to ensure that all pupils and teachers have the opportunity to improve their skills in the acquisition and management of information and communication through ICT. Policy is focussed on:

6.2.1.1   The provision of assistance to every school in building up its technology infrastructure

6.2.1.2   The development of teacher skills, and

6.2.1.3   The establishment of support services.

6.2.2 **Schools IT2000 –** Since 1997 there has been significant progress made under the Schools IT2000 project in the achievement of these core objectives. Findings from recent surveys indicate progress in a number of key areas:

6.2.2.1   There are at least 56,000 computers in Irish schools.

6.2.2.2   Every Irish school has been given an Internet connection.

6.2.2.3   Cutting-edge pilot projects on the technology in schools have been undertaken or are in progress.

6.2.2.4   Over 34,000 teachers have received training ranging from basic ICT skills through more specialised use of technology in their pedagogy.

6.2.2.5   ICT training is being included in pre-service training for teachers.

6.2.2.6   Flexible learning and certification options are being explored.

Surveys have also indicated that ICT usage has increased significantly across the range of schools activities including use in the classroom. Teachers also indicated that an increase in training and infrastructure provision would further encourage greater use of ICTs in the classroom.

6.2.3   **ICT Policy Unit –** The ICT Policy Unit in the Department of Education and Science manages formulation and implementation of policy, including coordination of the support arrangements set out below.

6.2.4   **NCTE –** The National Centre for Technology in Education (NCTE) has responsibility for the operational implementation of ICT integration in education.

6.2.5   **NCCA –** The National Council for Curriculum and Assessment (NCCA) is responsible for the implementation of curricula and provides guidance on the integration of ICT into learning and teaching.

6.2.6   **Education Centres –** The network of Education Centres plays a major role in teacher support and development as regards ICT integration in schools. A regional network of Educational ICT Advisers is in place in the full-time Education Centres.

6.2.7   **Scoilnet –** The Scoilnet[11] education portal is in place providing a valuable resource for schools.

6.2.8   **Pilot projects –** Innovative and creative Pilot Projects have been or are being undertaken in a variety of areas including software/resource development, ICT integration, technical infrastructure, curriculum delivery, project management, and teacher development. The outcomes of these projects will help to inform future practice.

6.2.9   **Partnership –** It has been recognised that major change such as that arising from the integration of ICT into teaching and learning requires a national partnership. Such a partnership involves both the Department of Education and Science and its agencies and also school management, teachers, parents, local communities, third-level colleges together with public and private sector organisations in order to ensure that the outcomes have optimum effect. It is evident from The National Policy Advisory and Development Committee (NPADC) report that the Government commitment to the integration of ICT into Education has received significant support from public and private sector organisations and from parent groups, local communities, local business and third-level colleges.

ICT in second chance, further and higher education

6.2.10 **Policy in second chance further and higher education –** ICT is an integral component of the vast majority of programmes. A vibrant self-funded local part-time adult education programme is also provided in second and further level schools and colleges. Courses range from hobby and cultural pursuits to personal development, basic education, vocational training and certified learning options, and are availed of by some 147,000 adults each year. Within this figure, substantial numbers of adults are availing of training in basic ICT applications.

6.2.11 **eLearning –** FÁS Net college, based in Loughlinstown Training Centre, OSCAIL, the National Distance Education Centre and a number of third level colleges are expanding and developing their range of e-learning courses, and elements within courses which are available in ICT-based distance learning format.

6.2.12 **HEA Technology Initiative –** The Higher Education Authority introduced a three year targeted funding initiative in 2001 to support the use of technology in education. Having invited proposals from its designated institutions, the Authority is supporting a range of proposals including:

6.2.12.1 The development of student response technology to provide greater interaction in lectures

6.2.12.2 The development of inter-institution virtual classrooms; and

6.2.12.3 The development of pilot technology-mediated educational programmes aimed at mature and disadvantaged students.

6.2.13 **White Paper on Adult Education –** The White Paper on Adult Education: Learning For Life highlights the importance of mass familiarity with ICT applications in the knowledge society, especially in preventing new forms of exclusion, as well as the vital role ICT can play as an innovative pedagogical tool, as a key access route to knowledge and information, an important motivator in learning, and as a vehicle in overcoming barriers of distance, timing and mobility, particularly for those with disabilities, older people, and those in the workforce. The link between ICT and television is also highlighted in the context of plans to develop a digital educational channel.

6.2.14 **Expert Group on Future Skills Needs –** The development of knowledge-based economies is critically dependent on having an adequate supply of people with the relevant skills. The Tánaiste and Minister for Enterprise, Trade and Employment in conjunction with the Minister for Education and Science recently re-established the Expert Group on Future Skills Needs under a new mandate to continue its work in identifying existing and future skills needs and developing measures to address identified deficits. The Group's Third Report contains an overview of the progress to date on the implementation of its recommendations.

6.2.15 **Taskforce on Lifelong Learning –** The Government has established the Taskforce on Lifelong Learning under the ambit of the Programme for Prosperity and Fairness. The ongoing work of the Task Force on Lifelong Learning is exploring, inter alia, the issues of increasing adult access to basic ICT skills training, using technology flexible learning options to upskill those in the workplace, and making specific efforts to target the over 55s. The Taskforce is currently finalising its report to Government.

6.3 What are the key issues moving forward?

Progress moving forward will build on the initiatives being progressed in the context of integrating ICT to the learning environment at first, second and third levels, including the recent Blueprint for the Future of ICT in Education (2001-2003). Meeting the skills needs of the knowledge-based economy will continue to be a priority for the education and training systems. The forthcoming report of the Task Force on Lifelong Learning will be of critical importance in putting the necessary strategic framework in place.

ICT at primary and secondary levels

6.3.1 **Blueprint for the Future of ICT in Education –** Building upon existing structures, the Government's new Blueprint was produced in December 2001 and will significantly enhance ICT in Education. Over €107m will be invested during the period 2001-2003 to build on the exceptional progress that has been made over the past four years in integrating ICT into every school in the country. This will be done by:

6.3.1.1 Augmenting the ICT capital provision to schools

6.3.1.2 Expanding access to and use of internet technologies

6.3.1.3 Further integrating ICT into school curricula

6.3.1.4 The enhancement of teacher professional development.

6.3.2 **Blueprint objectives –** The following are the broad objectives set by the new Blueprint:

6.3.2.1 A major development of wiring-networking infrastructure in all schools so that schools may be prepared for the introduction of broadband access to the internet

6.3.2.2 A significant lowering of the computer/pupil ratio

6.3.2.3 The further development of teaching skills to fully integrate ICT into learning and teaching

6.3.2.4 The facilitation of software/multimedia resource development for use in schools.

6.3.3 **Curriculum integration –** In the context of the new Blueprint, the NCCA (National Centre for Curriculum Assessment) is actively examining the issues arising regarding the integration of ICT into education at first and second level. At present the issues of ICT in the primary curriculum, skill sets and measurement, and ICT as a separate subject at second level are being examined. The results of this work will further refine overall ICT policy.

6.3.4 **Industry Advisory Group –** Under the new Plan, an Industry Advisory Group is being established to formalise links between the IT industry and schools at national level. This Group will contribute to the development and continuation of the partnership process.

6.3.5 **Schools Internet connectivity –** It is clear that affordable access to adequate bandwidth is central to realising the potential of the investments in hardware and software that have been made under Schools IT2000 and which are now being enhanced under the new Blueprint strategy document. Progress in this area will build on the strategy for developing the Telecommunications Infrastructure that is set out in Section 1.

Second chance, further and higher education

6.3.6 **Policy focus in second chance, further and higher education –** The key goals of ICT policy in the area of second chance, further and higher education will be:

6.3.6.1 To significantly increase ICT education and training so that as many adults as possible have the chance to become digitally literate

6.3.6.2 To invest systematically and strategically in the development of a collaborative national e-learning framework across the education and training sector at further and higher levels to ensure flexible adult access to lifelong learning, building on initiatives to date and best international practice

6.3.6.3 To ensure the continued supply of highly skilled technicians and graduates to meet the needs of Irish industry in the technology sector, as well as having the necessary innovation and R&D skills to encourage new growth and inward investment in this critical area.

6.3.7 **ICT Training –** Proposals will be progressed for continued expansion in the numbers of adults availing of ICT training at modest cost under the schemes in second level/further education schools and colleges, and in training centres, which support adult self-funded learning.

6.3.8 **Back to Education Initiative –** Expansion of opportunities for Basic ICT Skills Training for adults will be progressed as a key component within the Back to Education Initiative, offering part time flexible options in Further Education. 6000 part time places will be provided in 2002, and this will increase on a phased basis with a view to ensuring 20,000 extra part-time places per annum by 2006. 10% of all expansion under the initiative will be for community education providers.

6.3.9 **Developing eLearning Potential –** Government will issue a call for proposals shortly to explore the potential for e-learning to contribute to the education and training sectors, at further and higher levels. The strategies for the development of e-learning will facilitate the realisation of lifelong learning objectives by providing flexible approaches to learning, building on best international practices. The strategies will address the technological, educational and organisational structures required to deliver an integrated e-learning framework.

6.3.10 **eLearning Strategy for Further Education –** An expert working group will be established to prepare a Strategic Plan for the development of a national collaborative e-learning framework across the further education and training sectors. The plan will give critical attention to:

6.3.10.1 High speed internet access and infrastructural issues

6.3.10.2 The framework and structures for cost-effective collaboration in the development of course content, course approval processes, marketing and accreditation, student guidance and support, and funding mechanisms

6.3.10.3 A programme of investment in equipment and networking and technical supports, which has not had access to such funds to date

6.3.10.4 Investment in a national ICT staff development programme aimed at developing a thorough knowledge of applications technology, methodologies for successful integration of ICT in curricula and teaching and learning approaches, distance learning delivery, the integration of ICT into emerging developments under the digital educational TV channel

6.3.10.5 ICT as a vital part of an adult information and guidance system

6.3.10.6 Optimum use of ICT in promoting the availability of flexible and frequent assessment and accreditation options for adult learners

6.3.10.7 The scope for international co-operation in the development of high quality e-learning options, including exploring joint initiatives with the Northern Ireland/UK Learn Direct initiative.

6.3.11   **ICT in Adult Literacy –** The use of ICT as an integral element of adult literacy programmes will also increase in line with resources. Given that no country reaches more than 5-10 percent of its target population through conventional literacy schemes, research will be undertaken on the development of distance learning ICT literacy programmes which can be used by adults in their homes, in the workplace, in public libraries, and in education and training centres. Building on the success of the TV series READ WRITE NOW, the use of TV in delivering back up supports to the literacy programmes will also be explored.

6.3.12   **Skills Needs In IT and Science –** The Government has taken a number of initiatives to ensure a sufficient supply of skilled personnel in emerging labour market needs areas. For example 5,400 IT-related third-level places are being provided in response to the needs identified in the First Report of the Expert Group on Future Skills Needs. Proposals will be progressed to build on its most recent Report which has recommended that a new additional investment of €165m be made in the IT area over a five year period. Having regard to the expansion underway and the labour market and demographic constraints, the Group recommends that this investment be focused on maximising existing graduate potential and on the provision of part-time education including company training.

6.3.13   **Task Force on the Physical Sciences –** The Expert Group on Future Skills Needs has expressed its concern over the number and quality of students choosing to study science at third level. The Task Force on the Physical Sciences was established in October 2000 to address the issues in relation to the uptake of the sciences at both second and third level. Proposals will be progressed to build on the work of the Task Force, which is expected to report shortly.

6.3.14   **Taskforce on Lifelong Learning –** Proposals will be progressed to prioritise the recommendations of the Taskforce on Lifelong Learning, which is reporting to Government shortly. The key goal of the Taskforce is to establish a strategic framework for lifelong learning. Among the issues which are central to this framework are the development of the national qualifications system, ensuring basic skills for all, more flexible, accessible delivery systems, improved information and guidance, and measures to ensure lifelong learning for those in work.

7   eInclusion

7.1 Why is this important?

As outlined in the revised National Anti-Poverty Strategy, building an inclusive society is the key priority of the Government[12]. It is clear that the technologies of the Information Society present new opportunities to address traditional problems of disadvantage and exclusion in society. ICTs deliver new channels of access and participation, and have the potential to offset the disadvantages associated with remoteness and restricted mobility. However it is also clear that public policy interventions are needed to avoid the danger of exacerbating existing inequalities, and to prevent the emergence of what has become known internationally as a digital divide.

To be on the wrong side of the digital divide means less opportunity to take part in the Information Society, in which more and more jobs will be related in some way to the use of ICTs. It also means a loss of opportunity in education, learning, training, shopping, entertainment and communications, all of which are increasingly becoming available online. As more and more people regularly use ICTs in their daily activities, people who lack access to these tools are at a growing disadvantage. Therefore, raising the level of access and participation by increasing the numbers using the tools of the digital age has become an important national goal.

7.2 What is the current position?

In line with the emphasis when the first Action Plan was produced in 1999, the progress that we have made to date has been principally in the areas of building awareness, and creating new access opportunities. The key developments have been as follows:

7.2.1   **Awareness initiatives by first ISC –** Part of the remit of the first Information Society Commission, which served to end-2000, was to raise awareness of the opportunities presented by the Information Society. It ran a range of initiatives directed toward late adopters of new technologies, the most high-profile of which were the Netdays project in association with the NCTE in November 1999[13], and the Dot.what? TV series that was broadcast on RTÉ during 2000[14].

7.2.2   **Library internet access –** Internet access is now generally available through the public library network with over 1,400 access points, up from 108 in June 1999. An Comhairle Leabharlanna have developed an Internet Users Guide for library users and all library staff have been trained in providing instruction to their customers in the use of PCs and the internet. Proposals are also being advanced to install optical scanning equipment to facilitate internet access for the visually impaired.

7.2.3   **Equalskills –** The Equalskills project is a basic ICT literacy initiative that is being piloted in the South West and Shannon regions[15]. The project was launched in September 2001, will run until September 2002, and aims to provide 100,000 people with the basis skills to use a PC, browse the internet, and use email.

12 *Building an Inclusive Society, Review of the National Anti Poverty Strategy under the Programme for Prosperity and Fairness (2002)*

13 *http://www.netdaysireland.ie*

14 *http://www.rte.ie/tv/dotwhat*

15 *http://www.equalskills.com*

7.2.4   **CAIT –** The CAIT initiative is drawing on funding of €5m for the period from July 2001 to December 2002 to support 71 community-led projects aimed at engaging late adopters of new technologies[16]. It builds on the experience, local knowledge and relationships of the community and voluntary sector to implement demonstration projects that address the issue of the digital divide.

7.2.5   **Local authorities –** A number of local authorities have been proactive in using their websites as a medium to facilitate the provision of local community content online. Examples include Kildare (**www.kildare.ie**), Meath (**www.meath.ie**) and Carlow (**www.carlow.ie**) County Councils, Dublin City Council (**www.dublin.ie**), and Athlone UDC (**www.athlone.ie**), where the approach to local content has been complemented by making access and training opportunities available through local authority facilities.

7.2.6   **Muintir na Tíre project –** Drawing on support from the Department of Social, Community and Family Affairs, Muintir na Tíre have built a portal website that facilitates easy creation of online content by local member branches[17]. It presents a model that may have wider community and voluntary sector application.

7.2.7   **Accessibility –** Under the eEurope Action Plan, all public sector websites are required to be WAI[18] (level 2) compliant by end-2001.

7.3 What are the key issues moving forward?

Ensuring development of an inclusive Information Society has become a public policy priority. It is increasingly evident that our approach must extend beyond raising awareness and providing points of public access to the internet. Measures are needed to build the capacity necessary to support inclusive Information Society development, and to actively promote participation among late adopters of new technologies.

It is clear that community and voluntary organisations have the potential to play an important role in making the necessary connections, a point reinforced by a key report produced recently for the European Commission's Information Society Technologies (IST) Research Programme:

> *The study suggests that voluntary organisations have a vital role to play in a more inclusive information society, and that the task of national level policy should be to facilitate and develop this role wherever possible.[19]*

It identifies this role as threefold: as champions, as mediators, and as supporters in bringing the potential of ICTs to disadvantaged groups.

We must position our approach in the context of wider social inclusion objectives, including through the National Anti-Poverty Strategy, the National Office for Social Inclusion, and the Implementation and Advisory Group established under the *White Paper on Supporting Voluntary Activity and for Developing the Relationship between the State and the Community and Voluntary Sector.*

The key objective will be to build on the potential of ICTs to offer new solutions to traditional problems of disadvantage and exclusion. To make the Information Society relevant, technology must be matched with need.

16 *http://www.cait.ie*

17 *http://www.mnt.ie*

18 *http://www.w3.org/wai*

19 *Towards an Inclusive Information Society: The Role of Voluntary Organisations, Models Research (October 2001), available at http://www.models-research.ie/*

7.3.1 **Coordination and Policy Development –** The Department of the Taoiseach has established an Inter-Departmental Working Group to bring about the coordination that is necessary across Government on eInclusion issues, and to support a coherent approach to policy development in this area. The Working Group will report to the Cabinet Committee on the Information Society.

7.3.2 **Universal Participation initiative –** A comprehensive Universal Participation initiative will be developed through the County and City Development Boards (CDBs) in the context of their remit in supporting wider social inclusion objectives. The initiative will:

7.3.2.1 Build on the role of the Boards in bringing together budget-holders and decision-makers from the key public service and local development agencies to work towards more integrated and holistic development of each County and City

7.3.2.2 Build on the Community and Voluntary Fora established by the Boards to bring together the community and voluntary organisations in their areas

7.3.2.3 Ensure a structured and coordinated approach to e-inclusion objectives at local level

7.3.2.4 Act as an integrated information resource for local community and voluntary groups

7.3.2.5 Employ *Community Champions* and local supporters, under the remit of the Directors of Community and Enterprise, to work with the various education, training, business, local development, and community and voluntary interests to agree objectives, encourage engagement with ICTs, and create a shared sense of purpose in Information Society development.

The initiative will be progressed during 2002 on a proof-of-concept basis in a select number of locations (Department of Environment and Local Government).

7.3.3 **ISP, web-hosting and technical support –** Proposals for low-cost ISP, web-hosting and technical support solutions for community and voluntary groups will be progressed through the Inter-Departmental Working Group on eInclusion.

7.3.4 **Second CAIT programme –** A second CAIT programme will be progressed during 2002, and will build on experience and best practice from the first initiative that is currently underway. A priority focus will again be to harness the experience, local knowledge and relationships of community and voluntary organisations in engaging late adopters of new technologies (Department of Public Enterprise).

7.3.5 **CAIT evaluation –** Social and economic consultants have been engaged to research the impact of projects commissioned under the CAIT initiative. It is intended that the results of this research will be published in early 2003 and will inform the development of subsequent CAIT programmes (Department of Public Enterprise).

7.3.6 **Capacity Building –** To complement the Universal Participation initiative and the focus of the CAIT programme in engaging late adopters, proposals will be developed during 2002 for a programme of structured support to build and enhance ICT capacity among community and voluntary organisations (Department of Social, Community and Family Affairs).

7.3.7 **Equalskills –** The Equalskills pilot in the South West and Shannon regions is due to be completed in September 2002 and will be evaluated with a view to determining its suitability for implementation nationally.

7.3.8 **Research –** The Information Society Commission will be asked, in the context of shaping its recommendations to Government, to conduct further research to determine the nature and extent of the digital divide in Ireland and to support an informed approach to the actions that are needed to foster inclusive Information Society development.

7.3.9 **Accessibility –** IT Accessibility Guidelines for all electronically delivered services will be produced by the National Disability Authority during March 2002. The guidelines will:

    7.3.9.1 Help service providers in the public and private sectors understand and identify accessibility barriers created by the user interface of the IT aspect of their service delivery

    7.3.9.2 Give service providers direction on best practices for designing usable IT interfaces for services and information delivery

    7.3.9.3 Provide technical direction and references for avoiding and solving accessibility problems

    7.3.9.4 Identify or provide easy-to-use tools which can be used by service providers and interface designers for self-evaluation or by NDA evaluators to determine compliance.

7.3.10 **Centre of Excellence in Universal Design –** The Disability Bill, which is being progressed during 2002, provides for establishment of a Centre of Excellence In Universal Design, whose remit will include electronic and ICT-based products, services and systems.

7.3.11 **eGovernment –** A key focus of the development of e-government will be to ensure that the benefits are clearly available to those who are not in a position to avail of direct access to services delivered through the internet. The Public Service Broker (see section 3.3) will be delivered through multiple access channels, including telephone contact centres and one-stop-shops.

Appendix 1

Overview of the Report of the Telecommunications Working Group, March 2002

1   The Working Group was established as a subgroup of the Cross-Departmental Team on Infrastructure and PPPs in September 2001, with representation from the following Departments and agencies: Arts, Heritage, Gaeltacht and the Islands, Education and Science, Enterprise, Trade and Employment, Environment and Local Government, Finance, Forfás, Public Enterprise, Taoiseach. It was asked to identify and agree priorities for action by Government agencies to facilitate the provision of broadband infrastructure and services at the required world-class levels in Ireland. This is a key strategic issue for Ireland's future competitiveness. It is also a complex issue, both in technology and in policy terms.

2   Since the Government's decision to liberalise the market early from December 1998, telecommunications policy has two broad strands: firstly to develop a fully-competitive market to support required investment by the private sector, and secondly, to pump prime the required investment in a strategic way through use of public funds where the required infrastructure and services were not being delivered quickly enough by the market. In that regard, the Group noted the funding programmes under way by the Department of Public Enterprise under the current and previous National Development Plans.

3   The Group has assessed the broadband situation in Ireland. **It concludes that the primary problem is not at the national or regional level. The key deficit is in local access broadband networks. This results in a lack of availability of affordable 'always-on' local level access to high-speed data transmission services.** The Group also notes that all parts of the State are not served by competing providers.

4   Three key questions arise for policy in Ireland at present:

- What needs to be done to facilitate the provision of a widely-available, always-on, open access cost-effective and affordable broadband network with significant private sector involvement and with a role for the State in providing the necessary seed capital, within a three-year timeframe?

- What is the minimum level of infrastructure and services that we require in the short-term?

- Can a genuinely competitive market for broadband services ever be achieved in a situation where the physical network at local level is owned by a vertically-integrated dominant provider? Should ownership/management of any publicly-funded local area access network be separated from provision of application services?

5   A programme of Government supported action on broadband needs to be driven by and public support harnessed in the context of a clear vision for the future of these services in Ireland and how they contribute to the national goal of sustainable economic and social progress and balanced regional development. The Group recommends Government adopt the following in this regard:

The Government wants to see the widespread availability of open-access, affordable, 'always on' broadband infrastructure and services for businesses and citizens throughout the State within three years, on the basis of utilisation of a range of existing technologies and broadband speeds appropriate to specific categories of service and customers. We wish to see Ireland within the top decile of OECD countries for broadband connectivity within three years.

In the medium-term, we expect that broadband speeds of 5mbit/s[20] to the home and substantially higher for business users will be the minimum standard within 10-15 years for broadband. We will aim for Ireland to be the first country in Europe to make this level of broadband service widely available for its people.

The State's role in this area is confined to provision of seed capital. Actions undertaken to meet the three-year objective will ensure that any infrastructures put in place with Exchequer assistance are capable of being upgraded to meet the longer-term target.

6   The strategy recommended for Government action to address the identified deficit in local access networks is as follows:

■   Local access networks starting with the priority areas already identified and agreed, to be procured on a PPP-type basis at national level with relevant local authority involvement (as a continuation and development of a process model already underway in DPE).

■   The precise technology will depend on the local circumstances and projected demand. In line with the norm in PPP arrangements, output specifications will be determined, rather than input specifications. In many urban areas with volume demand, fibre optic cable may be the optimum solution. Wireless or DSL technologies etc. will be the most appropriate solution in other cases. The network will include either ducting and dark fibre, or other technology equipment and bases, as appropriate, but will include hubs and terminators in all cases and will provide bearer services. The key point is that the technology risk should lie with the private sector partner.

■   The open-access local networks would be managed by the PPP operator(s) who would be operator-neutral (a PPP process on similar lines has been initiated by DPE). In effect, this involves creation of a "carriers' carrier" who provides services for other telecommunications companies, but does not compete for end-user customers.

■   No service provider should be allowed to gain any unfair or anti-competitive advantage by virtue of participation in the proposed PPP. This will mean complete separation of the ownership and management of local access networks involving public funding from provision of services to customers and that the PPP partner contracted to manage the network or any local part of it would not be allowed provide application services to end-user customers. The objective is to foster real competition amongst service provider companies on the basis of price and service and not on the basis of exclusive access to infrastructure.

■   It is important that provision of funding for such local access networks continues to be prioritised under the existing NDP measure provision

■   PPP contracts involve an element of capital risk sharing, with a significant portion of that risk to be taken by the private partner. In this case, we expect that the operational cost risk would be taken entirely by the private partner. This means that at a minimum, the private partner would meet operating costs from charges levied on service providers who use the facility – charges would be determined as part of the PPP process and we envisage a growing capital input from the private sector over time.

- Phase 1 should involve elements of the strategy and different technological solutions (wireless, fibre optic, etc.) being trialled and prototyped in a specified number of locations and should commence as soon as possible. The purpose of the trial phase is to identify issues and test assumptions about costs, technical difficulties, technology, network configuration and cost-effectiveness, private sector interest and consumer response.

- Subsequent implementation phases would depend on successful implementation of phase 1 and would target additional priority areas to be identified and agreed at that stage and would build on the learning and experience of Phase 1. The extent of targeted network coverage – and hence the extent of possible Exchequer exposure – would be specified for each phase. The intention is that the Exchequer investment in the local access networks in Phase 1 will be leveraged to encourage significant private sector investment in subsequent phases. This will be done by migrating the local projects to be funded in Phase 1 to the proposed national PPP-type entity.

- Once a critical mass is achieved, we would anticipate that the market response to future implementation proposals will include a growing capital cost element.

- Control and monitoring of standards (e.g. civil engineering, equipment fibre spec. data encapsulating and system interoperability protocols) and ensuring of open access by the DPE.

- The question of leveraging public service data traffic to incentivise private sector participation in provision of the local access networks should be explored.

- During the implementation phase, the potential for Government Departments and agencies to encourage creation of demand to be kept under review, so as to ensure that demand for services emerges in tandem with the infrastructural bottleneck being resolved. There is particular scope for the industrial development agencies, the Educational sector and the Health services to take lead roles in developing new, cost-effective and innovative ways of delivering their services that would utilise a high broadband capacity once it becomes available at affordable cost to users.

- Open access be granted as a matter of priority to State-owned sites for the construction of co-location sites. This would serve to advance the e-Government agenda and act as a spur to the private sector (it may require legislation).

- The final phase of the Strategy will involve State withdrawal.

7   The key questions arising from our work and our interim conclusions were presented at workshops in mid-February facilitated by DPE and Forfás for key industry and user representatives. These workshops provided a useful opportunity to test the interim conclusions and seek industry and consumer response to the key questions arising. This dialogue needs to continue. This should include exploring whether there would be any interest in the idea of a number of operators in the industry coming together in a new legal entity to provide shared infrastructure on the proposed PPP basis.

8   **These and other implementation issues should be addressed in detail in the course of an intensive preparatory implementation phase we recommend take place over the next three to four months.**

Regulation

9   Any legal and regulatory barriers to **convergence** of and competition between technologies should be removed as soon as possible. This means that, in general, licences should not be exclusive[21] and any service company should be able to provide voice telephony, TV and Internet access combined on competing technology platforms. It also means that the question of a multi-service provision licence should be seriously examined with a view to early action.

10   In the short-term, we consider that the ODTR should be asked by the Department of Public Enterprise to bring forward a strategy as soon as possible to secure unbundling of the local loop. If additional powers are required to enable the Office to achieve ULL in practice, then necessary legislation should be brought forward as a priority. **We also regard it as important that a resolution to the delay in making DSL available should be found by the parties concerned immediately.** It should be noted that progress in this area would have a very significant short-term impact in terms of Ireland's standing in international league tables.

Costings

11   €200 million is allocated to the NDP eCommerce measure 2000-2006. The cost of our proposals insofar as the priority areas identified by the industrial development agencies and targeted already by DPE under the NDP calls can be accurately estimated as soon as firm market prices are available in respect of the local authority-led projects that have been submitted under the current NDP call and we will return to this issue later in the year.

12   The PPP process will allow for market testing of a range of phasing options. Assuming that implementation is prototyped in a specified number of locations first, then subsequent phases should be timed so as to maximise the private sector contribution. However, PPP market exploration should include testing of interest in the maximum range of phasing options.

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21   *There may, however, be a case for exclusive licences for a defined period, to address under-served regions, test new technologies, or address a particular public policy issue*

Appendix 2

The Public Services Broker

The Public Services Broker will serve as a single point-of-contact for accessing all public services. It will:

■ Provide easy-to-understand information on rights and entitlements for all public services

■ Provide 24x7 access to public services through the internet and over the phone, while maintaining existing face-to-face operations

■ Act as an intermediary between customers and service-delivery agencies:

    ■ Providing packaged multiple services, normally delivered by different agencies, e.g. applying for a birth certificate and child benefit simultaneously

    ■ Removing the need for customers to provide information previously supplied, or information not essential to the delivery of a service, by:

        ■ Simplifying the process by which customers must identify themselves

        ■ Storing personal information securely (in a personal data vault), under customer control, with customer privacy guarantees

        ■ Releasing this information to public service agencies only on the instruction of the customer wishing to avail of a service

    ■ Providing customers with updates on the progress of their service request.
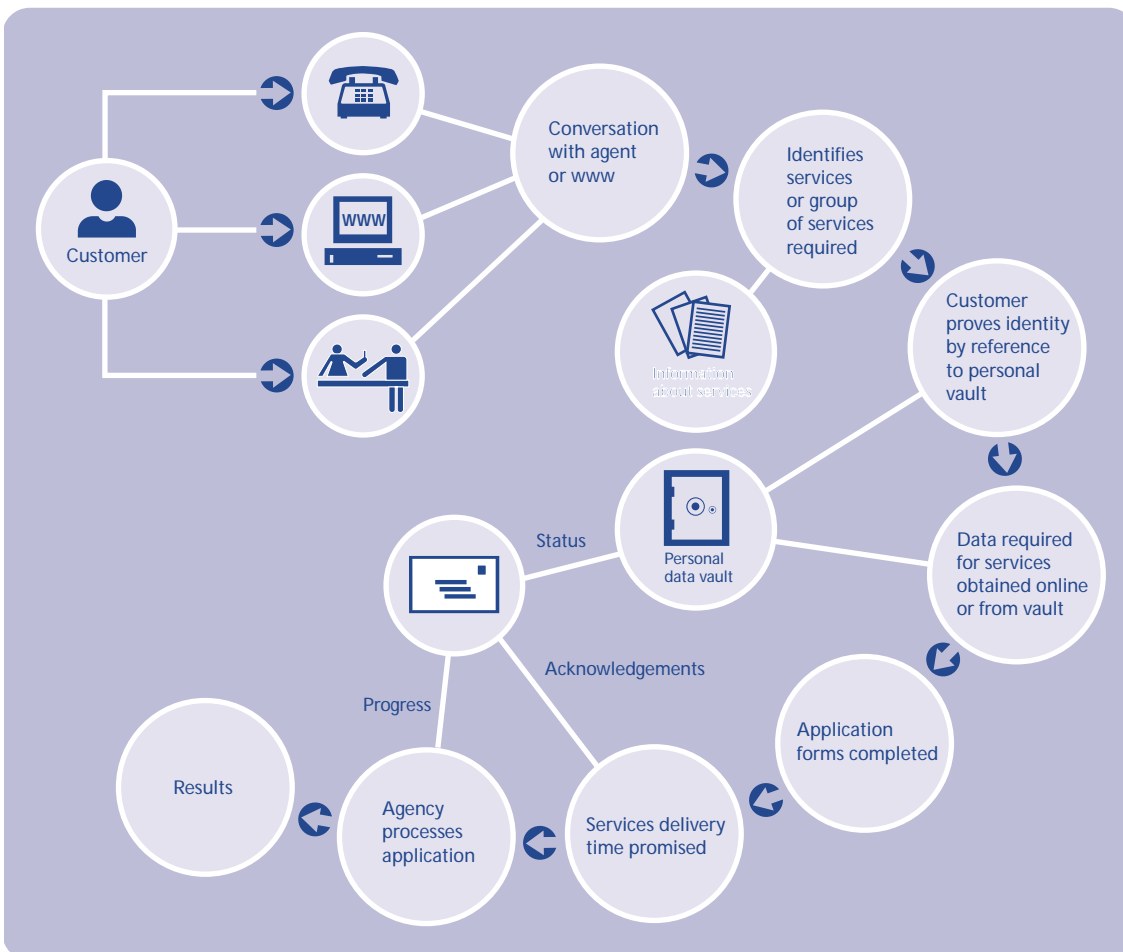
A depiction of how the Public Services Broker will work

Appendix 3

eGovernment Projects being progressed by Departments and Agencies

	Description	*Delivery date*
Central Statistics Office		
Census of Population	Online dissemination of Census 2002 statistics	Phased basis from Mid 2003
Online Data Collection	Online data submissions for:	
	Services inquiry	Mid 2002
	Business Register inquiry	Early 2003
	Agricultural inquiry	Mid 2003
Courts Service		
Fines	Online payment service for Court fines	Mid 2003
Small Claims	Online procedure for lodgement of small claims	Mid 2003
Department of Agriculture, Food and Rural Development		
Animal Health	Online system to support disease eradication schemes	End 2002 for PVPs End 2004 for farmers
Area Aid	Online Area Aid applications, integrated with Land Parcel Information	End 2002
Teagasc Online Analytical Systems	Online information on samples submitted for analysis (soil, silage, blood, water, grass)	End 2002
Teagasc Profit Monitoring Systems	Profit monitors to assist farmers in identifying improved returns achievable from their enterprises	Phased basis from early 2002
Department of Arts, Heritage, Gaeltacht and the Islands		
Online Heritage Licences	Online licence processing for archaeological licences, excavation reports and hunting licences	End 2002
Botanic Gardens Catalogue Management System	Online catalogue management system for the Botanic Gardens	End 2002
National Library Catalogue	Online catalogue management system for the National Library	End 2003
Heritage Aspects of Planning	System for facilitating links between public sector heritage workers and other specialists when processing Planning Applications	End 2003
National Archives	New online facility to allow reservation of catalogue items in advance will be developed, including integration with a proposed GIS browser	End 2003
National Museum	Online catalogue management system for the National Museum collection	End 2003
GIS Heritage Information	Online provision of geographic information systems relating to heritage	End 2003

	Description	Delivery date

Department of Arts, Heritage, Gaeltacht and the Islands *continued*

	Description	Delivery date
Gaeltacht Grants	Online applications system for Gaeltacht Grants	End 2002
Heritage Online System	Online sale of Departmental publications and heritage cards, tracking of heritage cards usage, survey forms for citizens, education information packs and heritage event information	Early 2003

Department of Education & Science

Adult Educational Guidance	Online information service of learning opportunities for second and third level students, adult learners and guidance counsellors, complemented by a national telephone helpline service	End 2003
School Information Database	Online school information database.	End 2002
Further Education Management Information System	Online management information system, for use by further education centres	End 2003
Student Grants	Fully transactional online facility, including payments of student grants for third level education	Mid 2004

Department of Enterprise Trade and Employment

Annual Returns to Companies Registration Office	Online filing of annual returns	End 2002
Online Registration of a Company	Online registration of a new company	Early 2004
Patents	Online availability of the Official Journal, viewing and searching the Trade Mark & Patent databases, renewal of Patents and Trademarks, and viewing, searching and renewing industrial designs	Phased basis from mid 2002
Redundancy Payments	Online service to calculate redundancy payments for employers and employees	End 2002
Work Permits	An online application system for work permits will be provided	Early 2003

Department of the Environment & Local Government

Motor Taxation	Online motor tax payment	End 2002
Driving Licence Application	Online application and payment for a provisional or full driving licence	End 2003
Change of Vehicle Ownership	Online notification of changes of vehicle ownership by major motor traders	End 2002

Department of Finance

Procurement: Online Tendering	Online tendering for state contracts	Early 2002

Department of Foreign Affairs

Passport Applications	Online applications for a passport	End 2003

	Description	Delivery date
Department of Health & Children *(including Health Boards)*		
Integrated Services	Development of a single point of access to all relevant health information and services as an integral part of the development of eGovernment services generally	End 2003
eHealth Pilot Projects	A selection of pilot eHealth projects covering such areas as: electronic health records; e-learning for health professionals; appointments for hospital services; access to laboratory results; exploratory use of digital TV to deliver appropriate services	End 2002
Medical Services: Pharmacy Payments	Development of an online client identification database by the GMS (Payments) board to improve the capability of Health Service Agencies and primary care contractors to deliver health services to citizens	Mid 2003
Department of Justice, Equality & Law Reform		
Land Registry Electronic Access Service	Extension of the existing *Electronic Access Service* (EAS) to provide access to a broader range of folios and filed map plans	Phased basis from mid 2002
Integration of Systems	Strategic examination of modern integration technologies for the Garda, Courts Service (criminal), Probation and Welfare Service and Prison Authority to facilitate the development of e-government in this area	End 2003
Asylum/Immigration Services	Strategy for delivering integrated services in the immigration/asylum/refugee area	End 2003
Department of the Marine & Natural Resources		
Forestry Grant Payments	Online applications for forestry grant payments	End 2002
Mining Licence	Online application for prospecting licence and a licence to operate a State Mining Facility, including access to Geographical Information Data	Mid 2002
Fishing Vessel Registration and Licensing	Online application for vessel registration certificates and fishing licences	End 2002
Management of Aquaculture and Foreshore Licensing	Online system for the management of services offered in the coastal zone (e.g. aquaculture and foreshore licensing)	End 2003
Department of Public Enterprise		
Road Haulage Licence	Online applications for road haulage licences	End 2002
Earth Resources Information Warehouse	Online provision and purchase of geological data	End 2002
Public Transport Smart Cards	Smartcard initiatives to enable integrated ticketing, park'n'ride schemes and concessionary travel	End 2003
Public Transport: Real-time Information	Pilot real-time passenger information initiatives	End 2003

	Description	Delivery date
Department of Social, Community & Family Affairs		
Social Welfare Schemes	Online social welfare schemes (e.g. Disability Benefit, Unemployment Benefit, Pensions, Child Benefit, etc.)	Phased basis, beginning with Child benefit in early 2003
General Registrar's Office		
Civil Registration	Online applications for birth, death and marriage certificates	Early 2003
Local Authorities and Local Government Computer Services Board		
Commercial Rates	Online pilot system for commercial rates payments in Dublin City	Early 2003
	Online payment of commercial rates countrywide	End 2003
GIS Strategy	National framework for Sectoral Geographical Information Systems	Mid 2002
Security Policy	Security policy & architecture for the local government sector	Mid 2002
Self-assessment for Housing	Online self assessment and applications for local authority housing services	End 2002
Planning	Online access to the Planning application and Development Control process, including citizen interaction with the draft development plan, registering of unauthorised development, commencement notices and objections	Mid 2003
Electoral Register	Online application for registration on the electoral register	Mid 2003
Dublin City Council Domestic Refuse	Pilot online system for payment of domestic refuse charges	Early 2003
Dublin City Council Private Rented Dwellings Fees	Pilot online system for payment of Private Rented Dwellings Fees	Early 2003
Ordnance Survey Ireland		
Ordnance Survey eCommerce System	Online access to digital data and maps for corporate clients and the general public	Phased basis from mid 2002
Office of Public Works		
Hydrometric Information	Online availability of information concerning water levels.	Mid 2002
Iris Oifigiúil	Online availability of Iris Oifigiúil	Early 2002
Planning Consultations	Online viewing of and submissions concerning proposed OPW developments	End 2002
National Art Online	Online viewing of the state art collection	End 2002

	Description	Delivery date
Revenue Commissioners		
Revenue Online Service (ROS)	Online filing and payment of: Form 11 for the short tax year; Deposit Interest Retention Tax (DIRT); Life Assurance Exit Tax (LAET); Investment Undertaking Tax (IUT); Dividend Withholding Tax (DWT); Professional Services Withholding Tax (PSWT); Environmental Levy Tax	Early 2002
	Gift & Inheritance Tax Returns (IT38) (for solicitors and individuals)	End 2002
	Online banking and enhanced management services for customers	End 2002
	Online Vehicle Registration Tax for motor vehicle dealers	Mid 2003
	Filing and payment options for the construction industry in relation to Relevant Contract Tax	Mid 2003
	Inter-community acquisitions and disposals, i.e. Intrastat and VIES returns. Online Import/ Export declarations (SADs) and payments	End 2003
	Online provision of Tax Clearance Certificates	Early 2004

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