E-GOVERNMENT AND OLDER PEOPLE IN IRELAND NORTH AND SOUTH

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EXECUTIVE SUMMARY

Governments around the world are becoming increasingly reliant on electronic structures and services. This report focuses on the impact on older citizens of the move to deliver more and more public services online (e-government) on the island of Ireland.

The successful transition to e-government is dependent on citizens having access to the necessary infrastructure (computer and internet connection) and possessing the information and communication technology (ICT) skills to enable them to access public services online as and when they need them.

While there is no one definition of e-government (electronic government), the underlying principle is the use of ICT by governments to benefit people and businesses alongside improving the efficient working of government itself. E-government is about improving service delivery by allowing citizens enhanced access. It offers the potential of generating greater public confidence in government. The e-government agenda in both Northern Ireland (NI) and the Republic of Ireland (ROI) was initially driven by a desire for more efficiency, advancing public management and delivering better government services for citizens. However, since 2008 a new driver has emerged as a result of the economic downturn, and so e-government is now also linked to austerity, cost-cutting and rebalancing budgets.

KEY FINDINGS

E-government policy is at broadly the same stage of development nationally in NI and ROI.

More services can be applied for online in ROI than in NI, a reflection that ROI currently leads the EU in e-government (EC Directorate for Information Society and Media, 2010).

NI (as evidenced in UK national data) is slightly above the EU27 average and ahead of the other UK regions in terms of access to broadband, and ROI slightly below for access to a computer and the internet (Eurostat, 2011).

The number of older adults in households across the two jurisdictions with a computer and the internet is increasing. However, the proportion remains below those for other age groups (Central Statistics Office, 2012; NISRA, 2011).

Within households with ICT, some members are 'e-excluded': they do not use, and have no interest in using, ICT.

In both jurisdictions there is limited use of public services online by older adults, as revealed in both published statistics and the qualitative study.

In ROI, people aged 65 and over living alone are two-and-a-half times more likely to have a computer in the household than those living with others: 56% compared with 21% (Central Statistics Office, 2012).

In ROI, people aged 65+ living on their own are more than two-and-a-half times more likely to have broadband access than people in the same age group living with others in the household (Central Statistics Office, 2012).

The over-55s in NI are less likely to have broadband than those in the rest of the UK (Ofcom, 2012).
In summary, this research shows that there is a spectrum of 'onliness'. There is no simple binary of e-included and e-excluded citizens; rather, some older adults are episodic ICT users, while others have embedded ICT into everyday life. The episodic ICT users need support to improve their ICT skills, and engage with e-government. Within e-included households we found e-excluded household members, who do not use ICT.

E-government is dependent on individuals changing the way they access services. This happens at the micro level, in the home, with individuals supported by kin networks and the wider community. The qualitative experience of ICT is enhanced by good broadband connections. Finally, accessing e-government in the home is not cost-free; it is dependent upon possessing a networked PC and subscribing to an internet package. The continued uptake of public services online is dependent on individual citizens having the skills and confidence to access such services as and when they need.

**RECOMMENDATIONS**

To be effective, e-government must take a whole-of-government approach that links central and local structures.

Among older adults in ROI and NI, there is both a low level of awareness and a low level of uptake of e-government services. Lessons can be learned on how to equip older people for change from the successful digital switchover strategies employed across the UK and Ireland.

E-government should be a key component in formal training courses and peer support programmes developed for older people, especially for those older people with no previous e-government engagement.

E-government and e-inclusion must be seen as a dual strategy for government, and the identification of key target groups, e.g. older people with lower incomes, low educational attainment and older women, is vital.

Greater analysis of usage and non-usage of government sites is required in the development and refinement of e-government services.
1.1 RESEARCH AIMS AND OBJECTIVES

This report focuses on the impact on older citizens of the move to deliver more public services online (e-government) on the island of Ireland.

E-government is dependent on citizens having access to the necessary infrastructure (computer and internet connection) and developing a level of competency in using information and communication technology (ICT) to enable them to access public services online as and when they need them. However, little is known about the factors that support sustained internet use and those that discourage it among older people. This study evaluates the impact of e-government on older people living in ROI and NI. The overarching aim of the report is to increase understanding and stimulate policy discussion on the theme of older people and e-government.

The project that this report describes had five specific objectives:

• to provide an overview and analysis of the literature on ICT usage and older people;
• to examine e-government policy in relation to e-governance;
• to analyse key data sets in ICT access, usage and older people in Ireland, NI and ROI;
• to provide case studies on supporting sustained usage among older people for knowledge-sharing;
• to highlight the implications for policy and practice.

1.2 RESEARCH METHODOLOGY

A mixed-method approach was employed, which included a review of published materials (policy documents, grey literature and academic literature) alongside an analysis of relevant statistical data. A total of 21 in-depth interviews were undertaken with key stakeholders drawn from the statutory and non-statutory sectors in the ROI and NI (see Appendix 1). Four focus groups were held with a total of 31 participants: two in urban areas, one in Dublin, with men and women aged 55–65 who were both ICT users and non-users, and a second one in Belfast, with people aged 75+ years who were non-ICT users (Appendix 2). Two further focus groups in rural locations took place, with men and women aged 65–75 who were both ICT users and non-users, one in NI and one in the ROI.

A limitation of this research is that it does not address the potential use of e-government through smartphones, tablets and other means. In ROI for example, 18% of the over-65s owned a smartphone in 2012, compared to 65% of the 18–24 age group, 61% of the 25–44 age group and 41% of the 45–64 age group. Although under one-fifth of older people owned a smartphone, ownership is increasing very rapidly (Red C Research, 2012). It is therefore important that policy-makers should explore all possibilities for making access to e-government easier for older people in the future by considering a range of technology devices.
1.3 STRUCTURE OF THE REPORT

The report is divided into six sections:

• Section 2 reports on e-government and e-inclusion, including the services available online in NI and ROI.
• Section 3 presents published statistics relating to e-government for the member states of the EU to benchmark progress to date in NI and ROI.
• Section 4 focuses on the perspectives of older people resident in both the ROI and NI on e-government and e-inclusion derived from a series of focus groups.
• Section 5 presents the perspectives of practitioners from the statutory and non-statutory sectors in NI and ROI on e-government and e-inclusion.
• Section 6 focuses on examples of projects where e-government and e-inclusion are facilitated.
• Section 7 presents concluding comments and a reflection on implications for Ireland, ROI and NI.
E-GOVERNMENT AND E-INCLUSION:
2.1 INTRODUCTION

In recent years the internet has become an increasingly important route for accessing information, goods, services (including public services), entertainment, educational and social networking opportunities.

This section provides a context for understanding e-government, beginning with definitions of e-government and e-inclusion. The information contained in Figure 2.1 provides a summary of the terminology linked to e-government.

2.2 WHAT ARE E-GOVERNMENT AND E-INCLUSION?

While many different definitions of e-government (short for electronic government) exist, the underpinning principle is the use of ICT by governments to benefit people and businesses as well as improving the efficient working of government itself (West, 2004; Figure 2.1). In an NI Assembly research paper of 2001, e-government was defined as the use of technology to enhance access to and delivery of government services to benefit citizens, business partners and employees (Northern Ireland Assembly, 2001). The World Bank defines e-government as ‘the use by government agencies of information technologies (such as Wide Area Networks, the internet, and mobile computing) that have the ability to transform relations with citizens,
businesses, and other arms of government.’ E-government is about improving service delivery by allowing citizens enhanced access (in theory 24/7 access), and the potential of generating greater public confidence in government (Gore, 1993).

The actual form of online delivery has changed since the advent of e-government. According to Asgarkhani (2005), at a basic level e-government begins with internal functional efficiency in government departments, health services and local authorities, with subsequent developments including the electronic interconnection of services, such as a single web portal to access all online government services and information. Ultimately electronic democracy and the total electronic integration of services can be achieved (Asgarkhani, 2005). In another study, which built on an analysis of US government websites, West (2004) developed a four-stage typology based on the degree to which there was interactivity between the service provider and client. In stage 1, the ‘billboard’ stage, websites are static mechanisms for the display of information, with little interactivity. Stage 2 consists of a partial service delivery stage where citizens can order and execute a handful of services online, and start to manipulate informational databases. Stage 3 is the portal stage, a one-stop government portal with fully executable and integrated online services which offers considerable convenience to visitors. Stage 4 is interactive democracy, with public outreach and a range of accountability measures. Here, government websites move beyond a service delivery model to system-wide political transformation.

O’Donnell et al (2003) argue that e-government is not about using ICT to conduct business as usual, but instead the focus should be on using ICT to transform the structures, operations and, most importantly, the culture of government, via flatter organisational structures and improved governance. The transformational potential of e-government was highlighted in an NI Assembly report (2001), which conceived of e-government as involving a progression from the simple provision of information electronically to full integration across government of electronic service delivery. Komito (2007) felt that e-government had been successful in delivering better information and access to services, but at that time governance had not been improved.

A United Nations (2012) study argued that those countries at the forefront of developments in e-government had moved to a unified whole-of-government model of e-government. This model aims at centralising the entry point of service delivery to a single portal where citizens can access all government-supplied services, regardless of which government authority provides them. This whole-of-government approach has helped to build ‘a transparent government system with interconnected departments and divisions, feeding into the funnel of greater government’ (UN Department of Economic and Social Affairs, 2012, 5). The report identifies 135 countries that offer a ‘one-stop shop’ portal, including ROI and the UK, and the most effective portals offer a life-cycle approach, with web content organised around life themes and/or specific audiences, such as children or older people (ibid).

The United Nations (2012) report advocated linking across government structures to deliver effective e-government, stating that ‘governments must increasingly begin to rethink in terms of e-government – and e-governance – placing greater emphasis on institutional linkages between and among the tiered government structures’ (ibid, 9). There first needs to be recognition by national governments that e-government could offer opportunities for synergies. Second, a re-engineering of the enabling environment for e-governance needs to occur to enable institutional inter-linkages within government. Third, co-ordination and connectivity between ecosystems and development outcomes should be promoted (UN Department of Economic and Social Affairs, 2012). But effective e-government cannot be achieved unless there is universal access to information and services; e-inclusion is about inclusion for all, including the expansion of information and services to vulnerable groups, residents in isolated rural areas and people with disabilities (UN Department of Economic and Social Affairs, 2012). E-government therefore enshrines a commitment to digital inclusion, a concept that all people should be able to participate in the growing knowledge society – something that can be delivered through e-inclusion, which is about ensuring no one is left behind in using ICT and also the use of ICT to promote social inclusion.

O’Donnell and colleagues argued that in the ROI e-government had been primarily motivated to make government more efficient, citizen-oriented and customer-friendly, with the goal of achieving seamless client-centred service delivery (2003). As noted above, this has been achieved because all the main online information services are organised around the ‘life events’ of individuals and businesses, rather than around the bureaucratic structures of government (UN Department of Economic and Social Affairs, 2012). Such a ‘user’ focus should be applauded as these online systems have been designed with the user in mind. However, there are challenges in getting all users to engage, as addressed in Section 4.

A number of studies have examined the barriers to e-government, including one by the NI Assembly (2001) which identified four barriers: limited public access to the internet; a lack of relevant skills among public servants; low levels of consumer confidence; and inadequate funding. In an Oxford Internet Institute study for the European Union seven major barriers were identified, summarised in Box 2.1 below. The barriers identified included leadership failures; financial constraints; digital divides; poor cross-boundary co-ordination; workplace inflexibility; lack of trust; and technical issues (European Union, 2006). It is interesting to note that in both these studies government barriers and user barriers (digital and knowledge divides) were identified.
1. Leadership failures resulting in slow and patchy progress to e-government.

2. Financial inhibitors limiting the flow of investment to e-government innovation.

3. Digital divides and choices, where socio-economic and physical inequalities lead to differences in motivations and competences that constrain and fragment e-government take-up and a failure to address particular user needs.

4. Poor co-ordination across jurisdictional, administrative and geographic boundaries that holds back e-government networking benefits.

5. Workplace and organisational inflexibility impairing adaptability to new networked forms of information-sharing and service provision.


7. Poor technical design leading to incompatibilities between ICT systems or difficult-to-use e-government services.

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**2.3 E-GOVERNMENT AND OLDER CITIZENS**

For citizens to access public services online they need access to the relevant equipment alongside the possession of a specific skill set, ‘internet self-efficacy’ (Hargatti, 2008).

A recent article by CARDI (2012) on internet use and older adults in Ireland highlighted the use of the internet as both a communication tool and an information resource. It should be borne in mind that older people across the island of Ireland did not learn about ICT when at school. ICT skills have often been acquired in later life. As a result the nature and quality of ICT training and support is critical in supporting older people’s development of ‘internet self-efficacy’ (Hardill and Olphert, 2012). It has been demonstrated that once older people have access to, and acquire the skills to use ICT, it can become part of everyday life, as is illustrated by US research that shows that 70% of people aged 65+ who had started using the internet stated that they typically use it every day (Zickuhr & Madden, 2012).

A digital divide persists in developed countries economies, including Ireland – North and South, linked strongly to educational attainment, income and age. Data from a UK study shows that 61% of internet non-users had no formal education qualifications, compared with only 6% of those with a higher education qualification who were internet non-users (Blank, 2012). The same research also shows that a person’s level of income was positively correlated to internet use and negatively correlated to non-use. Some 43% of those retired people with an annual income of £12,500 or less were internet users, while 99% of those with an income more than £40,000 were users (ibid). Among retired people in the UK, ‘just not interested’ was cited as the most common reason for not using the internet and giving up using it; ‘do not know how to use’ was the second most common reason for non-use, while for retired people ‘not for people my age,’ ‘computer not available’ and ‘too expensive’ were also presented as reasons for non-use (Dutton & Blank, 2011). These same sentiments were found in a study undertaken in 2009 by the Work Research Centre & Age Action of older people in ROI which found that while the numbers of older people using ICT was increasing, a large proportion of older people stated that they were just not interested in learning about ICT. This survey recorded that 23% were interested in learning more about mobile phones, 39% were interested in learning more about computers, and 39% were interested in learning more about the internet. Lower levels of interest in
acquiring ICT skills were found among the groups that most need to be reached, including the older old and those with lower levels of educational attainment (Work Research Centre & Age Action, 2009).

Some studies have pointed to the benefits of internet use. Richards (2006) argued that the internet in general can assist people in making better-informed decisions through providing easy access to information on goods and services. Another UK study of socially excluded groups in London found that using the internet can have clear and quantifiable economic and social benefits for such groups, who, on the whole, are keen to seize the opportunities provided (Foley, 2004).

As part of the ESRC E-Society programme in the UK, Lindsay et al (2008) worked with 108 older adults who were provided with free home computers and a one-year broadband subscription. Half the sample received ICT support in the form of ‘facilitated learning’ while the other half received no support. Lindsay et al (2008) found that many of their participants first needed to overcome their fear of the technology before they could learn how to use it effectively. Significant differences were recorded between those who received ICT support and those who did not six months after being involved in the project. Over half of those who received ICT help subsequently searched for information online on public authority websites, compared with 28% of those who had not received help (ibid, 326). They concluded that older adults first needed some form of encouragement and then a compelling proposition linked to their own lives to help overcome their fear of turning a computer on and going online (ibid, 323).

But not all research findings are positive, as was revealed in a randomised, controlled intervention study of 191 people in the Netherlands in 2007, which sought to examine the effect of computer training and internet usage on older adults. It found that using computers and the internet neither positively nor negatively influenced everyday functioning, well-being and mood, or the social networks of healthy older people (Slegers et al, 2008).

A limited number of studies of older people and e-government have been undertaken, including an ethnographical study conducted in Catalonia in 2011 which found that while older people do want to use e-government services, they feel that society seems not to be concerned about the specific difficulties older people face in using them (Righi et al, 2011). Peer-to-peer support throughout the learning process was a key motivator for older people learning new ICT skills for accessing e-government services (ibid). As part of the New Dynamics of Ageing Sus-IT project during 2010–11 Hardill and other members of the project team worked with 125 adults aged 50+ in the East Midlands to, among other things, explore the extent to which they accessed public services online (Hardill and Olphert, 2012, Hardill and Mills, in press). Only a minority of people recorded that they were confident about, for example, accessing health services online (say, to book a hospital/doctor appointment); a further eight were not confident, while 35 had no desire to access services online, but 29 wished they could do so.

Some studies have focused on how older people access information, and a UK study by Sykes et al (2008) found that older adults tend to access information through personal contacts, especially their social networks. Direct contact with local government or government agencies was minimal, and they tend to look for relevant information that enhances factual information and meets their specific needs (Sykes et al, 2008). A later study published in 2012 and conducted in Spain looked at how information from different sources affects citizens’ adoption of e-government initiatives (Belanche Gracia et al, 2012). Three main information sources, interpersonal, mass media and public administration, were considered. Interpersonal sources and public administration information affected people’s intentions to use e-government, but mass media was a significant influence for young citizens, not older people (ibid). The challenge of implementing e-government was recently illustrated in the ROI with the introduction of the ‘household’ charge, information about the charge was available only online and the charge could not be paid in a post office, a route familiar to many older people – for example, to pay for a television licence. The e-government performance over the issue led to many complaints from older people (ALONE, 2012).
In summary, differences in skill levels (especially related to internet know-how) and a lack of the means (ICT equipment) to access information are significant factors in the divide between people who have the potential to benefit fully from e-government and those who cannot (UN Department of Economic and Social Affairs, 2012). Access remains a significant barrier to the full implementation of e-government for certain groups, but it has been argued that there has been a shift from a lack of access and connectivity to ICT to interpreting and understanding information, or a shift from a digital divide to a ‘knowledge divide’ (Graham, 2011). As broadband becomes increasingly available, the major barrier to the full implementation of e-government services is that of a ‘knowledge divide’ between people who have ICT skills and use them regularly and those who do not.

With the increased use of Skype and other online tools for keeping in touch with family and friends, there may be benefits to health and well-being of internet use among older people that are yet to be fully explored. Thus, promoting digital inclusion and engagement may have significant advantages that have not been examined in government strategies (Mason et al, 2011). While many claims have been made about the benefits of internet use for older people, there is conflicting evidence as to whether or not internet use is empowering or disempowering (ibid) and whether or not the advantages of e-government to older people have been sufficiently demonstrated. It is important that further research is conducted that can evaluate the claims that e-government is beneficial to older adults, and that these benefits are clearly explained to encourage older people to use ICTs as a tool for accessing information and services.
2.4 PUBLIC POLICY CONTEXT FOR E-GOVERNMENT IN THE REPUBLIC OF IRELAND AND NORTHERN IRELAND

2.4.1 Public policy context: introduction

There has been a longstanding commitment to e-government in ROI and NI. In this section the policy context for e-government is followed by an examination of the development of e-government in the two jurisdictions. Responsibility for e-government rests within NI – it is a non-reserved power – but the NI strategy must be fully compatible with the UK approach (Paris, 2005). While the direction of travel of e-government is determined nationally, the spatial scale for the delivery of many services is local. There is a third spatial dimension – an international context – for e-government in NI and ROI because both are part of the EU. In this section e-government is therefore examined on all three spatial strata. The e-government agenda in both NI and ROI was initially driven by a desire for more efficiency, advancing public management and delivering better government services for citizens (Box et al, 2001). However, since 2008 a new driver has emerged as a result of the economic downturn.

E-government at the national level centres on providing information on government services and benefits with some interaction such as completing benefit forms, tax refund claims, and paying fines and charges. At the local level e-government is more about providing services, with an emphasis on improving service quality (Asgarkhani, 2005) and integration between organisations to ensure better management (Rahman, 2010).

The European Commission runs an annual benchmarking project of e-government in member states, one of the flagship studies in measuring public sector performance (see Appendix 3). In the ninth benchmark measurement in 2010, ROI achieved a 100% rating for all the services included in the benchmark and was ranked first of 32 countries for online provision of information and services; online sophistication of its services; e-procurement availability; and integrating services as ‘life events’ for both businesses and citizens. Information specifically for NI is not available because it is subsumed within the UK in this exercise, and the UK was placed ninth for sophistication of services, seventh for full online availability, and was given an 87% score for e-procurement visibility (EC Directorate for Information Society and Media, 2010). The 2010 study revealed a gap of 57 percentage points between the average sophistication of services at the local level compared to the national level (Ibid). The largest cities in Europe perform significantly better than their smaller or rural counterparts and the benchmarking results also show that there is insufficient integration across administrative levels (EC Directorate for Information Society and Media, 2010).

The economic downturn has been accompanied by a renewed commitment to e-government, but levels of investment have varied, with spending on e-government rising in Germany, Japan, the Netherlands, Switzerland and the United States and declining in Austria, Hungary, Iceland and the United Kingdom (OECD, 2009). In most OECD countries, e-government activities now prioritise programmes with a direct impact on efficiency and effectiveness, high-quality services and increased user-centric outcomes (Ubaldi, 2011). In the Basilicata region of southern Italy, for example, new digital information procedures have been introduced.

2 The United Nations also conducts an annual survey on e-government that highlights which countries are the best-performing and the innovative solutions to e-government they provide that can be copied by others.
following the economic crisis for the delivery of social assistance (Mastrosimone et al., 2011). E-government is said to have played a role in the Republic of Korea’s emergence from economic crisis in 1997 (Dongcheol, 2009), and it is now considered the world leader in e-government (UN Department of Economic and Social Affairs, 2012).

Within the EU, the fifth Ministerial e-government Conference with the Malmö Declaration of 2009 gave rise to a new e-government action plan (2011–15), with four political priorities for all European public administrations up to the year 2015:

• Citizens and businesses are empowered by e-government services designed for users’ needs and developed in collaboration with third parties, as well as by increased access to public information, strengthened transparency and effective means for the involvement of stakeholders in the policy process.
• Mobility in the Single Market is reinforced by seamless e-government services for the setting up and running of a business and for studying, working, residing and retiring anywhere in the European Union.
• Efficiency and effectiveness are enabled by a constant effort to use e-government to reduce the administrative burden, improve organisational processes and promote a sustainable low-carbon economy.
• The implementation of the policy priorities is made possible by creating the appropriate key enablers and by establishing the necessary legal and technical preconditions.3

The action plan includes a target that by 2015, 50% of EU citizens will have used e-government services (European Commission, 2010).

The action plan supports and complements the European Commission’s A Digital Agenda for Europe (2010). It is one of the seven flagship initiatives of the 10-year growth strategy governing the European Union, Europe 2020 (European Commission, 2010). The aim of the Digital Agenda is to tackle barriers to digital inclusion alongside improving broadband speeds and access.4 The vision is of ‘empowerment and emancipation: background or skills should not be a barrier to accessing this potential’.5

In these difficult economic times, it is even more important that initiatives to get people using ICT and e-government services are not stalled (EC Directorate for Information Society and Media, 2010). Moreover, digital inclusion was the theme at the British Irish Council December 2010 summit meeting, and a digital inclusion work-stream was approved, focusing on developing a body of knowledge and best practice for programmes to support digital inclusion.

2.4.2 ROI e-government policy context

Since 2008, the Department of Public Expenditure and Reform (the Centre for Management and Organisation Development, CMOD) is responsible for e-government and the Department of Communications, Energy and Natural Resources for e-inclusion. Since 2001, the single main portal in the ROI has been www.citizensinfo.ie. In contrast to the NI website the approach in the ROI has been to provide a portal which has a number of different access points from different government departments and agencies, and a number of different points of referral. Similar to NI's, the website is organised thematically, including a theme for older people.

In January 1999, the ROI government launched Implementing the Information Society in Ireland. This first action plan (1999–2001) covered telecommunications infrastructure improvements (broadband) and measures to improve the online safety of citizens and business (Department of the Taoiseach, 1999). It also introduced a range of e-government initiatives, including quality standards for department websites, interactive services, electronic payment systems and access to online databases (ibid). A second and more ambitious plan, New Connections, was launched in 2002 (Department of the Taoiseach, 2002), which built on and extended the first plan. It included projects to offer online information about services, full online processing of transactions by individuals and businesses, and inter-agency pilot projects designed to improve efficiency (ibid).

In an e-government review (Comptroller and Auditor General, 2007) ROI was around the EU average for e-government, and had achieved the highest level of online service in only ten of 22 key public services for individual and business. Some EU states were delivering a significantly higher level of online service. The review found that while there was ample momentum toward developing e-government in the early years of the decade, efforts had stalled and there had been no formal e-government strategy since the beginning of 2006 (ibid).

A 2009 e-government strategy noted that while most services amenable to e-delivery were already available online (via the www.gov.ie portal), more work was needed to prioritise e-government in civil and public service bodies alongside moving more services online (Department of Finance, 2009). A number of barriers to e-delivery were identified: the need to satisfy legal, international, eligibility or anti-fraud obligations, business process improvement analysis being required before systems and processes could be moved online; and the lack among public bodies of the necessary capabilities to advance e-government exercises. The strategy centred on public bodies undertaking an analysis of their services to identify gaps in online service provision, focusing on electronic methods to minimise the need for paper-based transactions; re-using existing data to simplify or streamline service provision; and reducing the need for or time spent queuing (ibid).

The new administration which came into power in 2011 is prioritising e-government and moving services online linked to the economic recovery plans of ROI. This strategy has been shaped, in part, by A Digital Agenda for Europe: the European e-government Action Plan 2011–2015 (see page 7). A policy document on e-government was published in 2012 by the Department of Public Expenditure and Reform (2012) forming part of the Public Service Reform Plan. In Box 2.2 below the 2012 e-government targets are displayed. The current Programme for Government, Towards Recovery: programme for a National Government 2011–2016, also prioritises e-government and moving government services online, by ICT in schools and healthcare (Fine Gael; Labour Party, 2011). At the time of writing a new National Digital Strategy is being formulated (Jordan, 2012).

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6 It was developed and is maintained by Citizens Information (Agency of the Department of Social Protection) under contract to central government.
7 This site can also be accessed via www.gov.ie
In some cases it is free but it can cost a maximum of €20.

Age Action delivers the Getting Started programme.

Electronic delivery of services will become the norm where appropriate.

Citizens and businesses will have greater opportunities for and greater levels of electronic engagement with public bodies.

Citizens and businesses will access public services using the channel or device of choice.

There will be greater integration of public services around citizen and business life events.

There will be greater sharing of data between public bodies which will mean that citizens and business will be asked for less data.

Greater automation and self-service will free up staff from front-line work to provide value-added services or to provide different or better services.

Greater use of electronic services will reduce the costs of providing services and reduce delivery timelines.

Availability of public service data will promote openness and transparency.

Box 2.2: ROI e-government targets, to be achieved by 2015

Source: Department of Public Expenditure and Reform, 2012

There have been a number of e-inclusion schemes, including the Access Skills and Content scheme (2008). In 2009, Technology Actions to Support the Smart Economy formed part of ROI’s Knowledge Society Strategy (Department of Communications, Energy and Natural Resources, 2009), which centred on motivating people, particularly older people, to develop ICT skills. Under the aegis of this strategy, since 2011 BenefiT 3 has provided one-to-one training for 40,000 non-ICT users. The training includes how to send/receive emails and conduct a transaction (an option is using a government service). The training (about 6 hours) is largely provided in the community by local groups such as Age Action. To date, 36% of participants have been over 65 (Department of Communications, Energy and Natural Resources, 2012). BenefiT 3 is popular (over-subscribed in places) and the course feedback is excellent (Jordan, 2012). A number of other schemes exist, such as Google Silver Surfer Awards and the e-inclusion awards (listed on www.e-inclusion.ie). In addition, there is the Log on Learn partnership between the education and private sectors, including INTEL. This scheme involves transition-year students providing one-to-one training to older people, an example of intergenerational working. DCENR is currently finalising a national e-inclusion strategy, which will focus on getting more people online and improving the skills of those who currently use the internet.

8 In some cases it is free but it can cost a maximum of €20.
9 Age Action delivers the Getting Started programme.
2.4.3 NI e-government policy context

In NI the Department of Finance and Personnel is responsible for both e-inclusion and e-government. In 2002, the Office of the First Minister and Deputy First Minister launched a public consultation, Bridging the Digital Divide in Northern Ireland (OFMDFM, 2002). In 2002, 53% of NI citizens (aged 16 and over) did not have access to the internet (ibid). To bridge this digital divide the vision was “to ensure that every Northern Ireland citizen is fully aware of the opportunities and benefits afforded by ICT, has convenient access to current and emerging technologies, and that those whose wish to will have the appropriate knowledge and skills to use them effectively” (25). The Executive wanted to raise digital awareness, not least by promoting ICT education and improving ICT access (ibid, 25).

In 2003 a digital inclusion strategy was published, and the Digital Inclusion Unit established (Department of Finance and Personnel, 2003).10 The strategy had three phases, beginning with disseminating information on digital inclusion initiatives. The second phase focused on identifying gaps in ICT access, and encouraging more access through training opportunities. This was followed by an ICT review (ibid). But e-government at local level was impeded by the suspension of the NI Assembly (Paris, 2005). The lack of an over-arching NI strategy led to e-government being advanced by individual district councils (ibid).

In 2005, a UK-wide digital strategy was launched by New Labour (Prime Minister’s Strategy Unit, 2005), which noted that while broadband access had improved, the digital divide remained. A number of barriers were identified, including cost, lack of confidence or ICT skills, and ICT not being seen as being relevant to everyday life. The barriers identified are very similar to those identified in ROI and elsewhere in the EU. A key role was identified in the strategy for government to raise public awareness about the internet and to harness the economic and social returns in a way that benefits society (ibid).

In March 2009, NIdirect11 was launched, modelled on the Direct Gov website for Great Britain. It is interactive, and like the ROI website it is organised thematically, under headings such as Money, Tax and Benefits (Northern Ireland Executive, 2009).

In May 2010 the Department of Employment and Learning announced free entry-level computer skills classes (NI Direct, 2010). The Digital Inclusion Unit also offers several services aimed at getting more people using ICT, summarised in Box 2.3 below, as well as improving online public service delivery. The NI initiatives are aligned with the UK Go ON brand of digital inclusion activities.

10. The unit aims “to promote a digitally inclusive society through a range of projects working in partnership with various organisations to help digitally excluded citizens get online” (http://www.dfpni.gov.uk/digitalinclusion).

11. It was developed and is administered within the Department of Finance and Personnel, which works with the Digital Inclusion Unit (www.nidirect.gov.uk)
Box 2.3: Digital Inclusion Unit, Northern Ireland

- The current digital inclusion programme, Go On NI, works with the ‘harder to reach’ digitally excluded sections of the population, including older people and those living in social housing;
- Go On NI works in partnership with:
  - Libraries NI (almost 100 public libraries) – each provides free internet access and support to help people get online;
  - Supporting Communities NI (network of some 4,000 voluntary/community-based groups) – about 400 digital champions across NI have been recruited;
  - Farm-IT – a series of internet taster sessions in partnership with DARD to train farmers on the use of the internet and specific online services associated with the farming community e.g. APHIS online (Animal and Public Health Information System).

Other initiatives from the Digital Inclusion Unit have included the internet Made Easy CD to every household and a range of targeted projects such as Storyfinders, Everybody Online, the University For Industry e-services programme, Broadband Awareness Campaign, Silver Surfers Day, SMS text messaging, Digital TV and the MyGroupNI Community Portal. Getonline promotes the opportunities that ICT can provide to people, particularly in accessing many government and council services.

The Digital Inclusion Unit activities specifically targeted at older people include:
- Silver Surfers Day, an annual event which started in 2002, traditionally occurs across Northern Ireland and delivers one-to-one training to about 1,000 people aged 50+;
- Go ON NI campaign, providing Silver Surfers with the option of continuing their learning by enrolling in further IT courses facilitated by Libraries NI;
- Supporting Communities NI events with digital champions – these include older people and are promoted in various locations NI-wide.

The NI Programme for Government 2011–2015 includes a commitment to improving online access to government services (Northern Ireland Executive, 2011). In the following section we compare e-government services with ROI.

2.4.4 Comparing e-government services, ROI and NI

E-government policy is at broadly the same stage of development nationally in NI and ROI, and the two national websites are both organised thematically. The information displayed in Table 2.1 provides a comparison of selected e-government services in NI and ROI (This information is based on analysis of services as of December 2012). In both jurisdictions information for broadly the same services is available online, but twice as many services in ROI can be applied for online than in NI, a reflection of the fact that ROI leads the EU in e-government – as revealed in the 2010 benchmarking study (EC Directorate for Information Society and Media, 2010). But e-government in both jurisdictions has not yet reached the stage where users have an online identity or account, and local government websites are lagging behind the national web portals. However, the Revenue Online Service in ROI is a leading e-government initiative where most tax-related services can be conducted purely online using a secure login.

Local government websites in NI and ROI tend not to be organised thematically, and very few have a dedicated section for older users, which makes access to services difficult for older people who are not internet-proficient. However, many council services that older people might need in ROI are available through the ‘Fix Your Street’ website. Finally, in both jurisdictions great efforts are being made to reducing the knowledge divide.
Table 2.1: Comparison of selected e-government services for older people, North and South*

<table>
<thead>
<tr>
<th>Service</th>
<th>Access information in NI</th>
<th>Apply online in NI</th>
<th>Access information in ROI</th>
<th>Apply online in ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pensions/Pension Credit</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Winter fuel allowance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Carer’s allowance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Home help</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home care</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Residential/nursing care assistance</td>
<td>✓</td>
<td>n/a</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Public housing</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Free travel</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>ICT training for older people</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* While it is possible to apply for many services online in ROI and NI, this involves printing an application form and sending it by post, rather than a more advanced secure online system.

2.5 CONCLUSION

This section examined e-government in both ROI and NI charting the progress made in integrating public services online, alongside efforts made to reduce the digital divide. These two strategies are closely linked. The use of ICT to automate public sector functions and introduce e-services will not automatically create a better or more open government – unless it is based on policies to promote the effective use of technology (Asgarkhani, 2005) and deliver e-inclusion. E-government projects and services that cross organisational boundaries present opportunities for more efficient and effective delivery of government services, but this has proved difficult to achieve.

For e-government to bring about changes:

- e-government initiatives need to be cross-organisational, with information accessible through a simple-to-use web portal;
- fast broadband and other means to access the internet must be provided, together with help with training for people who lack ICT skills;
- accessing public services online needs to become embedded into daily routines, with monitoring to ensure that no social groups such as older people are left behind.

In the next section we examine published statistics on internet use.
E-GOVERNMENT AND E-INCLUSION IN EUROPE: A QUANTITATIVE ANALYSIS
3.1 INTRODUCTION

In this section quantitative data are used to examine the degree to which citizens are able to engage with e-government, in other words, the degree to which they are ‘digitally included’, and are active participants in the knowledge economy.

As e-government uses the internet as the medium by which people access public services, citizens need to have access to the relevant ICT infrastructure (a computer and an internet connection) and have acquired ICT knowledge (Hargatti, 2008). Hence, the data presented in this section examine computer ownership and usage, internet usage and ICT skills.
3.2 NATIONAL AND REGIONAL PATTERNS OF DIGITAL INCLUSION

The special Eurobarometer (Eurostat 2012b) provides national data (for ROI and UK) on ICT infrastructure (computer, internet and broadband) present in households and ICT use by individuals across the 27 member states of the EU. Figure 3.1 reveals that the Netherlands (93%) has the highest rate of computer ownership, closely followed by Sweden and Denmark, with the East European and Mediterranean states recording rates below the EU average. The rate for the UK (in sixth place) is above the EU average and ROI slightly below the EU average on 67%. But it should be borne in mind that the presence of a computer in a household does not necessarily mean that all household members use it or that they are all equally proficient.

<table>
<thead>
<tr>
<th>Country</th>
<th>Proportion of Households with a Computer, 2011 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NL</td>
<td>93%</td>
</tr>
<tr>
<td>SE</td>
<td>91%</td>
</tr>
<tr>
<td>DK</td>
<td>89%</td>
</tr>
<tr>
<td>LU</td>
<td>81%</td>
</tr>
<tr>
<td>FI</td>
<td>77%</td>
</tr>
<tr>
<td>UK</td>
<td>76%</td>
</tr>
<tr>
<td>FR</td>
<td>75%</td>
</tr>
<tr>
<td>SI</td>
<td>73%</td>
</tr>
<tr>
<td>BE</td>
<td>71%</td>
</tr>
<tr>
<td>EU15</td>
<td>70%</td>
</tr>
<tr>
<td>EE</td>
<td>70%</td>
</tr>
<tr>
<td>DE</td>
<td>69%</td>
</tr>
<tr>
<td>EU27</td>
<td>68%</td>
</tr>
<tr>
<td>IE</td>
<td>67%</td>
</tr>
<tr>
<td>CY</td>
<td>65%</td>
</tr>
<tr>
<td>LV</td>
<td>65%</td>
</tr>
<tr>
<td>AT</td>
<td>64%</td>
</tr>
<tr>
<td>PL</td>
<td>64%</td>
</tr>
<tr>
<td>MT</td>
<td>62%</td>
</tr>
<tr>
<td>CZ</td>
<td>61%</td>
</tr>
<tr>
<td>LT</td>
<td>61%</td>
</tr>
<tr>
<td>IT</td>
<td>60%</td>
</tr>
<tr>
<td>NMS12</td>
<td>59%</td>
</tr>
<tr>
<td>ES</td>
<td>58%</td>
</tr>
<tr>
<td>SK</td>
<td>58%</td>
</tr>
<tr>
<td>HU</td>
<td>55%</td>
</tr>
<tr>
<td>PT</td>
<td>53%</td>
</tr>
<tr>
<td>RO</td>
<td>52%</td>
</tr>
<tr>
<td>EL</td>
<td>47%</td>
</tr>
<tr>
<td>BG</td>
<td>46%</td>
</tr>
</tbody>
</table>

Source: Eurostat 2012b

12 NI is subsumed within UK data.
The pattern of access to the internet displayed in Figure 3.2 is broadly similar to computer ownership, with most households in the Netherlands, Sweden and Denmark having internet access, with rates above the EU average, and the Eastern European and Mediterranean states recording levels below the EU average. The proportion of households in both the UK and ROI with access to the internet is above the EU average. A similar pattern emerges for broadband, with both the UK and ROI above the EU average: the UK is in fourth place (71%); 10 percentage points behind the UK is ROI, in tenth place, with 61% of households having broadband compared with the EU average of 54%.

The information presented in Figure 3.3 relates to the knowledge divide (Graham, 2011), and includes statistics from the main Eurostat database on the extent to which people access the internet at least once per week, including daily use. As with the national digital infrastructure data, the same spatial pattern emerges for the proportion of citizens with digital knowledge as measured by the number that use the internet weekly; most citizens in Nordic13 countries and the Netherlands use the internet weekly, and the proportion in the UK and ROI is above the EU average, along with two East European countries, Estonia and Slovakia. The remaining Eastern European and the Mediterranean states have levels of use below the EU average.

13 The Nordic (Nordic name is Norden) countries cover north Europe including Denmark, Finland, Iceland, Norway and Sweden (Mead, 1982).
There is also a strong correlation between take-up of e-government services and broadband access. Statistics from 2008, represented in Figure 3.4 below, show that countries with high levels of broadband penetration also tended to have high levels of uptake of e-government services. In addition to developing the structure for accessing broadband, governments and public authorities have implemented initiatives to increase the use of e-government services and sustain that usage.
Figure 3.4: Relationship between broadband penetration and citizen uptake of e-government services

Source: OECD and Eurostat broadband statistics (2008)

Figure 3.5 presents Eurostat data on the proportion of people accessing online public services, but with no age breakdown. The proportions range from 84% in Iceland to 7% in Romania, but the clear pattern is that most households in northern Europe access public services online. A total of 16 states record levels above the EU average of 41%, including ROI, some East European states (Slovakia and Estonia) almost match the internet use of western European countries such as France and Germany. States recording levels of engagement below the EU average include Mediterranean and East European countries. In Iceland 84% of its citizens used the internet to engage with the statutory sector, and Denmark at 81% recorded the highest rate for the EU. The rate in the UK was 40%, and is unchanged since 2008. In the EU as a whole, the proportion of people using e-government increased from 36% in 2008 to 41% in 2011. The ROI rate increased from 34% to 44% and now exceeds the UK level, which is slightly below the EU average.
Figure 3.5: Individuals aged 16-74 using the Internet for interaction with public authorities within last 12 months for private purposes 2011 (%)

Source: Eurostat 2012b

<table>
<thead>
<tr>
<th>Country</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romania</td>
<td>7</td>
</tr>
<tr>
<td>Italy</td>
<td>22</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>25</td>
</tr>
<tr>
<td>Greece</td>
<td>27</td>
</tr>
<tr>
<td>Poland</td>
<td>28</td>
</tr>
<tr>
<td>Cyprus</td>
<td>29</td>
</tr>
<tr>
<td>Lithuania</td>
<td>30</td>
</tr>
<tr>
<td>Malta</td>
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<td>Portugal</td>
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</tr>
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<td>Hungary</td>
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</tr>
<tr>
<td>Spain</td>
<td>39</td>
</tr>
<tr>
<td>UK</td>
<td>40</td>
</tr>
<tr>
<td>EU 27</td>
<td>41</td>
</tr>
<tr>
<td>Latvia</td>
<td>41</td>
</tr>
<tr>
<td>Czech Rep</td>
<td>42</td>
</tr>
<tr>
<td>Ireland</td>
<td>44</td>
</tr>
<tr>
<td>Slovenia</td>
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</tr>
<tr>
<td>Belgium</td>
<td>47</td>
</tr>
<tr>
<td>Slovakia</td>
<td>48</td>
</tr>
<tr>
<td>Germany</td>
<td>50</td>
</tr>
<tr>
<td>Austria</td>
<td>51</td>
</tr>
<tr>
<td>Estonia</td>
<td>53</td>
</tr>
<tr>
<td>France</td>
<td>57</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>60</td>
</tr>
<tr>
<td>Netherlands</td>
<td>62</td>
</tr>
<tr>
<td>Finland</td>
<td>68</td>
</tr>
<tr>
<td>Sweden</td>
<td>74</td>
</tr>
<tr>
<td>Norway</td>
<td>78</td>
</tr>
<tr>
<td>Denmark</td>
<td>81</td>
</tr>
<tr>
<td>Iceland</td>
<td>84</td>
</tr>
</tbody>
</table>
3.3 THE INFLUENCE OF DEMOGRAPHY, RURALITY AND AGEING ON DIGITAL INCLUSION

Figure 3.6 reveals that in nine north and west European countries the proportion of older adults living in households with a computer is above the EU average. The UK at 41% (compared with 76% of total UK households, see Figure 3.1), although in fifth place (41%), is well behind the Netherlands (75%), and Ireland at 23% (compared with 67% of all Irish households, see Figure 3.1) is also below the EU average (27%). Those states with below-EU-average rates are again Eastern European and the Mediterranean countries.

Figure 3.6: Proportion of households aged 60+ with computer, 2011 (%)

Source: Eurostat 2012b
The pattern for internet access in households is almost identical (Figure 3.7), with the Netherlands recording the highest proportion at 75%, as indeed it did for all households (Figure 3.2) the UK is fifth on 38%, the ROI at 21% again is slightly below the EU average (25%), along with the East European and Mediterranean member states.

**Figure 3.7: Proportion of households aged 60+ with internet, 2011 (%)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>NL</td>
<td>75%</td>
</tr>
<tr>
<td>SE</td>
<td>67%</td>
</tr>
<tr>
<td>DK</td>
<td>60%</td>
</tr>
<tr>
<td>LU</td>
<td>45%</td>
</tr>
<tr>
<td>UK</td>
<td>38%</td>
</tr>
<tr>
<td>FR</td>
<td>35%</td>
</tr>
<tr>
<td>FI</td>
<td>34%</td>
</tr>
<tr>
<td>EU15</td>
<td>27%</td>
</tr>
<tr>
<td>EU27</td>
<td>25%</td>
</tr>
<tr>
<td>BE</td>
<td>25%</td>
</tr>
<tr>
<td>EE</td>
<td>23%</td>
</tr>
<tr>
<td>DE</td>
<td>22%</td>
</tr>
<tr>
<td>IE</td>
<td>21%</td>
</tr>
<tr>
<td>PL</td>
<td>17%</td>
</tr>
<tr>
<td>SI</td>
<td>17%</td>
</tr>
<tr>
<td>CZ</td>
<td>15%</td>
</tr>
<tr>
<td>LV</td>
<td>15%</td>
</tr>
<tr>
<td>IT</td>
<td>14%</td>
</tr>
<tr>
<td>MT</td>
<td>13%</td>
</tr>
<tr>
<td>AT</td>
<td>13%</td>
</tr>
<tr>
<td>NMS12</td>
<td>12%</td>
</tr>
<tr>
<td>LT</td>
<td>10%</td>
</tr>
<tr>
<td>HU</td>
<td>9%</td>
</tr>
<tr>
<td>ES</td>
<td>7%</td>
</tr>
<tr>
<td>BG</td>
<td>6%</td>
</tr>
<tr>
<td>SK</td>
<td>5%</td>
</tr>
<tr>
<td>PT</td>
<td>4%</td>
</tr>
<tr>
<td>RO</td>
<td>4%</td>
</tr>
<tr>
<td>EL</td>
<td>2%</td>
</tr>
<tr>
<td>CY</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Eurostat 2012b
When examining data on broadband internet connections for households aged 60+, the EU average is 21% compared with 25% who have some internet connection. The same EU pattern is repeated with over half of households in the Netherlands, Sweden and Denmark having internet access, a rate double that of the EU average (25%). The rate for the UK (36%) is above the EU average, but again the rate in Ireland, the Eastern European and the Mediterranean member states is below the EU average. The ROI proportion of households with a broadband connection is less than those with an internet connection: in ROI the respective proportions are 17% and 21%, while for the UK they are 36% and 38%.

Finally, a Special Eurobarometer on cyber security (Eurostat 2012) provides information by age group on the ability to use the internet for transactions such as online banking and shopping. The survey records high levels of confidence regarding ability to use the internet, with 71% of respondents aged 15–24 and 74% of those aged 25–39 feeling totally confident. Confidence levels decline with age, with 67% of 40–54-year-olds and 60% of people aged 55+ feeling totally confident.

An important question is whether over time the digital divide is becoming smaller or larger, and as the data presented in Figure 3.8 shows, chronological age does matter. The proportion of NI people aged 70+ with internet access increased from 3% in 2000–1 to 24% in 2010–11 but this was not sufficient to prevent a growing digital divide compared with all other age groups. Internet access for people aged 60–69 rose to a greater extent, from 10% in 2001–2 to 51% in 2010–11.

The gap between those in their 60s and the total population improved somewhat between 2001–2 and 2005–6 but the gap remains at 20% until 2010–11. By contrast, the gap for people aged 70+ increased steadily from 32% in the earliest year to about 44–47% in the middle of the decade and the divide has not been breached since then.

Figure 3.8: Individual internet access in NI by age and year (% gap with all ages)

Source: Eurostat 2012

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14 It presents the data, collected in March 2012, in four broad age groups, 15–24, 25–39, 40–65 and 55+, and by EU member state but does not give any age by country or country by age breakdown.
With reference to the divide between older people and those aged 30–39 years (rather than the total population), the gap is even wider and is widening for both older age groups during the 2000s, especially for those over 70. The digital divide is more pronounced for women than it is for men, and this gap also widened during the 2000s, although this has plateaued for those aged 60–69 in recent years, as is seen in Figure 3.9 below.

**Figure 3.9: Internet access by women in NI 2001**

The two graphs (Figures 3.10 and 3.11) below reveal a very large variation in the uptake of ICT by households in rural areas when compared with urban areas across the EU countries, but an age breakdown is not available in the Eurostat files for these data. The data presented in Figure 3.10 shows that the rate of computer ownership in rural areas is below that for urban areas in almost every country. At one extreme is Bulgaria, where rural households are only 30% as likely as urban ones to have a computer. Ireland is just below the EU average of 86% but the UK is one of five countries where rural dwellers have greater access to computers than those in cities and large towns. Caution must be attached to these data as the countries with a very positive rural position apart from the UK are Belgium, Malta and Luxembourg; all are geographically compact, so in Belgium rural households are 25% more likely to have computers than urban ones, and in Malta the advantage to rural inhabitants is 21%. But the Nordic countries, with very sparse population densities, as in Sweden and Finland, have ratios above the EU average.
In the case of broadband access (Figure 3.11) a similar pattern emerges. Belgian rural households are even further ahead, being 43% more likely to have this service than urban households. Luxembourg comes second, followed by Malta and then the UK, where the rural benefit is 4%. In most countries rural areas are worst served, with a rate of broadband only 79% that of urban areas in the EU as a whole. Ireland is slightly ahead of the average on 80%, while in East European countries such as Romania and Bulgaria the ratio is below the EU average.
Figure 3.11: Rural households with broadband as proportion of urban 2011 (%)

Source: Eurostat 2012
3.4 STATISTICS FOR THE REPUBLIC OF IRELAND

Two data sources are used in this section, the ICT Household Survey Report of the Central Statistical Office (2012) and an older but more detailed survey conducted in 2008 (WRC & AAI, 2009) that focused on older adults – people aged over 50. The 2012 CSO survey recorded some ICT usage information for those in the sample of 10,018 participants aged 60–74 years. Of those aged 60–74, 53% have never used the internet, compared with 3% of those aged 16–29. But the proportion of those aged 60–74 who had used the internet within the last 3 months has increased from 24% in 2008 to 40% in 2012, and while 33% used it to send and receive emails, and 31% used the internet for finding information about goods and services, there was no specific e-government question.

The second survey (WRC&AAI, 2009) of a sample of 1,000 people aged 50+ revealed that, most did not use computers or the internet, nor did they engage with e-government. Among people aged 65+ only 30% used computers and 22% used the internet. But it should be borne in mind that since 2008 computer use among older people has increased substantially: for example, the proportion of 60–74-year-olds who have never used the internet fell from 77% in 2007 to 58% in 2011 (CSO 2011).

Information contained in Figure 3.12 reveals that the two most common reasons for using the internet, for both age groups, were searching for information and emailing, but only 7% of those aged 65+ used e-government services.

Figure 3.12: What older people use the internet for in ROI by age band

Source: Eurostat 2012
With reference to Figure 3.13, about half the respondents aged 50–64 and just over one-third of those aged 65+ reported benefits in accessing information and buying or booking online, but the perceived benefits of other activities were much lower. Only 4% of the oldest group said they benefited from using government services and 2.4% from online banking.

The main factor restricting use of the internet in ROI was lack of skills, cited by 46% of those aged 65+. Well behind, at 23%, was concern about privacy or security issues, followed by poor internet connections (21%), though this was a bigger factor in Connaught and Ulster. Cost was mentioned as an inhibiting factor by 17% of people in the oldest age band.

In terms of older people’s views on learning more, among those who already use the internet 53% would like to learn more and 34% would be interested in attending a class. By contrast, only 29% of non-users aged 50 and older are interested in learning more about the internet and only 19% are keen to attend a class. The report argues in response that attitudinal barriers, especially, need to be tackled to increase interest in home computing among older people, along with perceived and cost issues for those interested in using computers (WRC and AAI, 2009). Finally, the relatively low level of interest among older people with relatively low levels of educational attainment (who make up the majority of non-users) needs special attention (WRC and AAI 2009: 15). These figures confirm that once older adults became aware of how they could derive utility and benefits from accessing knowledge through the internet they wanted to know more. So awareness-raising is the first challenge, and building internet self-efficacy the second (Hargattai, 2008).

A further report (CSO, 2011) about the Republic of Ireland shows that, outside the home, one-third of the youngest age group (16–29) use mobile or smart phones to access the internet and 70% use a laptop/portable computer. In the oldest group surveyed (aged 60–74), only 9% use a mobile or smart phone and 47% use a portable computer; nearly half of this age group do not use any portable device.
The 2011 Census in ROI provides a comprehensive picture of computer ownership and internet access for 1.65 million households, including a breakdown by age group but not by sex. In the case of ownership of a personal computer, the proportion rises from 63% for the youngest group to about 85–86% for households where the reference person is aged 30–49 (Figure 3.14). The rate of ownership then declines to two-thirds of 60–64-year-olds and 42% of households headed by a person aged 65+. In all cases, the rate of broadband internet access is somewhat lower, rising from 60% of households aged under 25 to three-quarters of those in their 30s and 40s and then declining to 59% for the 60–64 age range and 36% of households aged 65+.

Figure 3.14: PC ownership and broadband access by age group in ROI, 2011

Source: Census 2011
The CSO gives a further breakdown of those over 65 depending on whether they live alone or with others (e.g., a spouse or family). As Figure 3.15 shows, households where the household reference person lives alone are much more likely to own a computer and have broadband access than older people who live with others.

It is notable that older people living alone in ROI are two-and-a-half times more likely to have a computer in the household than those living with others: 56% compared with 21%. Similarly, people aged 65+ living on their own were more than two-and-a-half times more likely to have broadband access than people in the same age group living with others in the household. There is a need to investigate this further as computers could be being used for overcoming social isolation.
Data relating to internet and computer access from the NI Continuous Household Survey 2010/11 displayed in Figure 3.16 reveals a broadly similar pattern of usage recorded in ROI, with older adult households recording the lowest usage. While there is a gender gap in all age groups, it is more severe in the older households. Those aged 70+ in households with a male head of household (37%) are twice as likely to have internet access via home computer as those in households with a female head of household (18%).

At the level of the individual rather than the household, the gender differential disappears and women are more likely to have computers and internet access than men in most age groups (Figure 3.17). Significantly, though, there is a significant drop in access by older people, from about 90% at the peak ages to only 24% for people aged 70+. In addition, older men are much more likely to have ICT facilities than older women: 29% compared with 19% in 2010–11.
In this section published statistics for the EU have been presented at two spatial levels, national and regional, to benchmark progress to date in ROI and NI for e-government and e-inclusion. The proportion of individuals and households with access to the infrastructure and skills to access public services online varies greatly across the EU. While the vast majority of households in northern Europe (especially the Netherlands, Sweden and Denmark) have a computer and an internet connection at home, and most household members have the skills and confidence to use them, this is not the case in most other countries, including ROI and NI.

The data presented for NI and ROI on internet and computer access reveals a broadly similar pattern of access and use in both jurisdictions, despite the greater penetration of broadband in NI when compared with ROI. In both jurisdictions the lowest usage of the internet and computers was found in older adult households, and a gender gap was identified. Older people living alone in ROI were two-and-a-half times more likely to have a computer than those living with others.
OLDER PEOPLES PERSPECTIVES
4.1 INTEGRATING TECHNOLOGY INTO EVERYDAY LIFE

This section reviews qualitative data derived from an indicative sample of 31 older adults, 16 residing in ROI and 15 residing in NI.

The 31 participated in four focus groups (two in urban areas and two in rural areas) that were held in November 2012. Focus groups were held to examine the qualitative experience – older people’s feelings, good or bad, about using ICT. Engaging with ICT is accompanied by the experience of multiple emotions, which can have enabling or negative consequences for ICT users. These feelings include deep attachment experienced by those for whom ICT has become integrated into the performance of everyday tasks, such as maintaining contact with children. ICT also brings excitement when new ways of using the technologies are mastered. But there can be negative emotions, such as frustration caused by forgetting how to use them. Policy-making can be made more effective by understanding the barriers or facilitators to integrating ICT into everyday life, or embodiment (Anderson and Smith, 2001; Hardill and Mills, in press).
Two of the four focus groups were convened in NI and two in the ROI, with participants aged from 55 to over 75, and included ICT users and non-users. Recruitment to the focus groups was undertaken by Ipsos MORI in adherence with market research standards and codes. While most participants (n=26) had a computer and/or the internet in their own home, 55% (n=17) indicated that they used the computer/internet. A greater proportion of focus group participants recorded they were resident in households with a computer than the level recorded for ROI (67%) and NI (76%) in the EU data displayed in Figure 3.1, and the NUTS 2 level data in Figure 3.8. The participants reveal a pronounced knowledge divide, as only half revealed that they use a computer in their home: this is below the rate for all the NUTS 2 level regions in Ireland displayed in Figure 3.9.

The computer users indicated that while they were, on the whole, long-term, intensive, daily users, some had been using computers for much longer than others. The variation in the length of time people had used ICTs is linked to those who used them when in paid work, and those who took up ICT when they retired. One ICT user of 30 years explained, ‘I started at work and did courses on financial packages’ (male participant, ICT user 30 years). He used computers in his paid work, but he also indicated that he has also broadened and updated his ICT skills: ‘I’m self-taught on the internet’ (male participant, ICT user 30 years). Retirement can be an important catalyst for older adults to begin new activities (Hardill and Baines, 2009), including using ICT, as one focus group participant indicated: ‘I started when I retired’ (male participant, 7 years). While two ICT users use a range of applications they are not that confident. One said, ‘I’m not confident – I can google, do online shopping and email’ (female participant, Fermanagh). This participant is supported by her two daughters, who ‘have helped set up email for me and helped with online shopping’ (female participant, Fermanagh). As all 17 ICT users accessed the internet from home, and do not use PCs elsewhere, the support from family members can be crucial in sustaining and supporting ICT use. Focus group participants were aware of public availability of networked computers; one woman in the Fermanagh focus group noted that networked computers were ‘in library in Enniskillen; there is always someone there to help if you get stuck’ (female participant, Fermanagh).

<table>
<thead>
<tr>
<th>Location</th>
<th>Age range</th>
<th>Computer/internet in own home</th>
<th>Users</th>
<th>Non-users</th>
<th>Total participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>55–65</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Belfast</td>
<td>75+</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Galway</td>
<td>65–75</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Fermanagh</td>
<td>65–75</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

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15 Ipsos MORI follows the requirements of the Market Research Society (MRS) Code of Conduct, the International Chamber of Commerce (ICC) and European Society for Opinion and Marketing Research (ESOMAR). In addition, Ipsos MORI is accredited to the quality standard ISO 20252, ISO 9001 and ISO 27001.
Box 4.1 Engaging with ICTs

**Never engaged with ICTs**

‘I’ve no interest’ (Belfast focus group – female participant)

‘Have got through life so far without it’ (Belfast focus group – female participant).

‘I never started but I have regrets… as time goes on it is essential’ (Galway focus group – male participant)

**Confidence**

‘I imagine I can’t do it so I won’t do it’ (Belfast focus group – female participant)

**Awareness of ICT**

‘I would like to be able to use Skype to talk to family abroad’ (Dublin focus group – female participant)

‘There are big savings available online’ (Dublin focus group – male participant)

Would like to learn it so if I am unable to get out or am ill, I could do my shopping online’ (Belfast focus group – female participant)

**Support of family and friends**

‘I get my daughter to help if I need anything’ (Galway focus group – female participant)

‘Children… don’t have the patience… much too quick’ (Galway focus group – female participant)

‘My grandson aged 10 showed me email… more patient than a 30-year-old. They don’t understand how you possibly couldn’t know something’ (Fermanagh focus group – female participant)

The information contained in Table 4.1 reveals that almost half (n=14) of the focus group participants did not use the computer or laptop that was available at home. While two participants could not provide a specific reason, six revealed that they had no interest (Box 4.1), but some revealed that they had children who were ICT users (Box 4.1). There was a tinge of regret for one non-user: he had never started but his family look up whatever he wants on the internet. A further six revealed an interest but had encountered difficulties using/accessing/getting started and lacked the confidence to continue (Box 4.1). The barriers were imagined as much as real, but these imagined barriers are enough to cause ICT use to stop (Hardill and Olphert, 2012). The non-users were aware of the benefits ICT could bring to some everyday tasks, such as talking to family abroad and shopping online. While the total numbers of participants are small, they reveal the nature of the knowledge barriers that need to be overcome for all older adults to be able to access e-government.

Family and friends supported users and non-users alike. With regard to non-users, most indicated that they had someone else in the family – sons, daughters, husbands – to access the internet for them (Box 4.1). While most were content with family members accessing information for them there was also an underlying view that a family member was not always the best person to be a teacher, because they lack the patience to explain things simply.
### Table 4.2: Preferred learning methods

<table>
<thead>
<tr>
<th>Learning method</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-taught</td>
<td>11</td>
</tr>
<tr>
<td>Course/learning through work</td>
<td>4</td>
</tr>
<tr>
<td>Course in community</td>
<td>3</td>
</tr>
<tr>
<td>Family taught me</td>
<td>1</td>
</tr>
<tr>
<td>Friend taught me</td>
<td>1</td>
</tr>
<tr>
<td>Books and manuals</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

Note: Some participants recorded more than one learning method.

Source: Focus groups

### Box 4.2: Learning routes

**Learning routes: ICT users**

- ‘Trial and error’ (Belfast focus group – male participant)
- ‘I went to a computer class… but I really forgot everything after a while. I’m now attending another class’ (Fermanagh focus group – female participant)
- ‘Preference for one-to-one learning’ (Belfast focus group – female participant)

**Learning routes: non-users**

- ‘One-to-one is much better – groups are a turn-off’ (Dublin focus group – male participant)
- ‘Some groups are very good. All are retired people and it is good for a get-together if nothing else’ (Fermanagh focus group – female participant)

With reference to the preferred learning methods of the 17 computer/internet users (Table 4.2) most indicated that they were self-taught. One male participant summed his learning as, ‘trial and error’ (Belfast focus group – male participant). He also went on to say, ‘I’ve no interest in courses’ (Belfast focus group – male participant). Those who first started using ICT as part of their paid work did reveal that they did their own skills updating. Some participants had attended computer classes, indeed one female focus group participant was currently attending a second class because she had forgotten what she learned on the first computer course she attended. There were mixed views on the merits of courses: generally those who had been using computers longer had no interest in a course, while novice users expressed some interest in a tailored course that would help them, but there was a clear preference for one-to-one learning, especially task/problem-based to ‘sort out glitches’ (Belfast focus group – male participant).
The 14 non-users also provided feedback on both the type of training and the type of wider support which they felt would encourage or help them to access computers and the internet. In terms of the nature of courses non-users expressed a clear preference for one-to-one training rather than group settings (Box 4.2). These views match the form of training provided by such schemes as BenefIT 3 in the ROI (Section 2); but trainees also need informal support from family and friends to supplement the one-to-one training. There was a feeling that group settings reinforced previous poor learning experiences, and tutees can end up feeling left behind.

Cost per se was not perceived as a barrier, and if the training was tailored specifically to participants’ needs ‘you felt you were benefitting’ (Fermanagh focus group – female participant) and people would willingly pay. But training needs to be delivered simply, with a hard copy of notes for reference purposes to help when using a computer/the internet at home, and with ‘no computer jargon’ (Dublin focus group – female participant). Attending a course, they felt, has to be sparked by an interest or desire to get online and become computer-literate, and there was a preference to be taught by someone of their own generation, although they did also see the merit in intergenerational schemes/programmes, as long as the training was provided in a one-to-one setting.

The information contained in Table 4.3 highlights the computer usage of the 17 users. The most common use of the computer/internet was for sending and receiving emails (n=12) and searching for useful information (n=11): ‘I check products, price and availability online... but I don't actually shop online’ (Dublin focus group – male participant). Of the 17, six used the internet to Skype, six for entertainment, and only three engaged in online banking, as did three for paying bills, such as those for utilities. Government services were not mentioned.

There was no clear understanding of e-government in any of the focus groups, and only two (NI groups) participants had heard of the relevant government single portal or overarching website in their respective jurisdiction. One commented about using Nidirect, ‘you have to be very dedicated and patient to work your way through it – press the right buttons’ (Belfast focus group – male participant). None of the ROI participants independently mentioned the Citizens Information site but as the discussion developed they spoke more knowledgeably and expansively about both types of government websites available in ROI. Some talked about checking out pensions and entitlements online, with mixed experiences. One said the Revenue Commission website ‘is good – you get email response, individual attention, always get call back’ (Galway focus group – male participant) while another said the same website ‘is desperate – requires a lot of digging’ (Dublin focus group – male participant). One concluded, ‘if it is simple, people will use it’ (Dublin focus group – male participant).

Users in the two NI groups mentioned government websites relating to pensions and entitlements. A participant in the Belfast group commented on the Housing Executive website which he had looked at in relation to Housing Benefit and felt it was too complicated – ‘it was all too much’ (Belfast focus group – male participant). But the ease with which information can be accessed from web portals was identified as an ‘advantage’ by another participant – one can ‘get information anonymously’ (Belfast focus group – male participant). Despite these comments, knowledge of specific government websites and usage of them was significantly lower in the NI focus groups compared to ROI participants.

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16 Four users in Belfast, three users in Dublin, four users in Galway and six users in Fermanagh.
17 www.nidirect.gov.uk
18 www.citizensinformation.ie and website – www.gov.ie
A recurrent theme in all four focus groups centred on computer jargon and terminology, which some found off-putting – such as being asked to ‘download [their] cookies’ (Belfast focus group – female participant). She went on to comment, ‘Can you tell a 75-year-old what a cookie is?’ (Belfast focus group – female participant). On the whole the NI and the ROI participants prefer to use the telephone rather than go online for local government and central government services, from refuse collection to pensions: ‘I like to speak to a person’ (Belfast focus group – male participant). Only one participant in all four focus groups had contacted a political representative, in this case a councillor during an election period, by email (Belfast focus group – male participant). There was no evidence of engaging with political representatives as part of wider e-government engagement.

Rural issues relating to the internet were primarily directed to the focus group participants in Galway and Fermanagh. However, the Dublin participants also raised rural issues as a topic, when discussing internet provision in general. There was a general feeling that people in rural areas ‘will be disadvantaged… not 100% coverage’ (Dublin focus group – male participant). In the Galway focus group the only rural issue raised related to broadband internet providers, or lack of choice: ‘all we can get is Eircom’ (Galway focus group – male participant). The Fermanagh participants were particularly vocal and responsive to the discussion on rurality and internet provision. Some commented on slow broadband connections and poor mobile phone coverage. This group also examined the benefits of being online in terms of accessing information online as and when needed: ‘[it is] great for older people living in rural areas’ (Fermanagh focus group – female participant). The findings have to be viewed with caution as they are based on very small numbers.

Super-Fast Broadband (SFBB) is available in 95% of premises in NI compared with the UK average of 65% and only 37% in Wales (Ofcom Infrastructure Report 2012 Update (published 16 November 2012). In NI SFBB is available in 97% of premises in urban areas and 91% in rural areas. Again a useful comparison is with Wales where SFBB coverage is 88% in urban areas and only 6% in rural areas (ibid). But that said, recent statistics published by Ofcom (2012) indicate that the over-55s in NI are less likely to have broadband than in the United Kingdom – less than half (44%) of those aged 55+ in Northern Ireland compared to 59% UK-wide (Ofcom Northern Ireland report 2012). An analysis of data contained in the NI Communications report (2012) reveals that broadband users use the internet for sending/receiving emails (69%), for general surfing/browsing (68%), social networking (52%), online banking (50%) but only 10% for using local council/government websites. These findings are broadly similar to those reported in Section 3.4 using data for the ROI. Networked computers are seen as an important vehicle for accessing information – but not information on public services – as well as for maintaining contact with family and friends.
4.2 CONCLUSION: E-INCLUSION AND INTERNET SELF-EFFICACY

In summary, the focus group participants concluded that e-government is inevitable and that older people will have to get on board; they also identified a number of barriers that need to be addressed in order to achieve e-inclusion. These barriers are summarised in Box 4.2 below, and include lack of interest/relevancy, fear, costs, and lack of skills/confidence. There is a remarkable similarity with the barriers identified in other studies, at a number of spatial levels, elsewhere in the EU, the UK, ROI and NI (Section 2). But these barriers all relate to older people and highlight lack of interest/relevance, financial considerations and knowledge. There was a perception from both the NI focus groups that e-government as a strategy is more about serving government’s needs rather than those of individuals, particularly older people.

Box 4.3: Barriers to older people accessing services online

- **Lack of interest and relevance** – non-users in the four focus groups indicated that the main barrier for them was the fact that they could not relate to the internet and therefore did not see where or how it would be relevant or useful in their own lives.

- **Fear of using computer**: ‘If you can get over the fear factor of using, you are halfway there. People have a fear’ (Dublin focus group – male participant).

- **Fear of internet safety**: ‘Never use it for anything to do with my credit card. Buy everything with cheques. I have a deep ingrained distrust’ (Belfast focus group – male participant).

  ‘I only go on sites with the security padlock symbol’ (Belfast focus group – male participant).

  ‘There is a criminal element abusing the internet – scams etc. You never really know when you are secure’ (Galway focus group – male participant).

- **Cost**: ‘There is also the issue of cost for older people – cost is a barrier’ (Dublin focus group – female participant).

  ‘They are going to give you good ideas and give you recommendations but expect you to pay for it. A good idea is a good idea if you can afford it. If someone had the choice between a bag of coal and computer I know what they would pick’ (Belfast focus group – male participant).

- **Practicalities and know-how**: ‘There is also the practical problem for people living in remote rural areas actually going to get a computer – if they don't have their own transport’ (Dublin focus group – male participant).

- **Lack of skills and lack of confidence**: ‘I imagine I can't do it so I won't do it. I probably could do it but I think it does take over your life. My daughter is on it constantly’ (Belfast focus group – female participant).
Those focus group participants who use networked computers do so for accessing information and for contacting others, but not e-government, which aligns with those identified in the published datasets for ROI (Figure 3.19). The preferred ways of learning about computers (one-to-one) described by the focus group participants fit with the methods employed in ROI via BenefIT 3. While the greater proportion of our focus group participants are in households with a networked computer, almost half do not use them. Overcoming a range of emotional barriers is crucial to e-inclusion, convincing older adults that the performance of everyday tasks can be improved/made easier/made cheaper by integrating ICTs into everyday life; as White and Selwyn (2011) state, 'Policy interventions aimed at both increasing and widening internet access and use will be ineffective unless the social, rather than technological, basis of inequalities in access and use [is] recognised' (2011, 1).

While there was a broad consensus regarding ICT and e-government between the focus group participants in NI and ROI, those in ROI had engaged with e-government slightly more than the NI participants. Moreover the specific challenges of engaging with e-government in rural areas were more stridently presented in the ROI focus groups than in NI, and rural issues were recognised by the ROI urban focus group participants. The focus group participants used the internet as a source of information and for maintaining contact with family and friends; also, they confirmed that awareness-raising is the first hurdle to e-inclusion, while building internet self-efficacy is the second one. But an additional dimension to e-inclusion has been raised: convincing those household members in households with ICT who are non-users that embracing ICT is useful; this could potentially be quite a challenge, as despite living with people who have internet savoir-faire these non-users have not persisted and embraced ICT in their everyday lives.
5.1 INTRODUCTION AND CONTEXT

This section draws on 21 anonymised in-depth interviews (for a full list see Appendix 1), which included participants from key government departments, local authorities and a range of organisations in the voluntary and community sector. This section draws on the in-depth interviews to illuminate the barriers and facilitators to e-government (and e-inclusion) in ROI and NI.

A number of interviews particularly with participants from ROI suggested that the drivers of e-government had changed from the promotion and accessibility of government information and services to more of a cost-cutting and budget-driven exercise, aimed primarily at reducing expense. In the words of one interviewee, ‘The policy and thrust [of e-government] has changed… and this is as much to do with austerity’ (ROI interviewee), perhaps reflecting the emphasis in Towards Recovery: programme for a National Government 2011–2016 described in Section 2 (Fine Gael; Labour Party, 2011). A similar message was delivered in NI, where interviewees spoke in terms of the need for efficiencies and cost savings, one interviewee described Nidirect as delivering ‘efficiency’ (NI interviewee). Across the EU (EC Directorate for Information Society and Media, 2010) and the OECD e-government activities have shifted towards programmes with a direct impact on efficiency and effectiveness, as well as delivering higher-quality services and increased user-centric outcomes (Ubaldi, 2011). So the new e-government drivers in both jurisdictions are replicated in states across the EU and OECD.
A recurrent theme in the interviews was the perception that e-inclusion (both as an aspiration and as a strategy) and e-government (as a strategy and methodology) are intertwined: e-inclusion was viewed as an essential part of enabling e-government to work. In NI responsibility for e-government and e-inclusion rests within one department (Finance and Personnel), while in ROI responsibility is split between two departments (Public Expenditure and Reform and Communications, Energy and Natural Resources). There was a North/South divide regarding perceptions as to whether these two key policies are ‘joined up.’ Interviewees in NI tended to think that there was some level of interconnection between e-government policies and strategies and the government’s push for and support of extending broadband coverage and helping people get online. According to one ROI interviewee, ‘what is lacking is a top-down approach that links the e-government policy to the delivery of getting older people online... the facilities and skills necessary to engage in it’ (ROI interviewee). This perception could be because two separate departments are responsible for e-government and e-inclusion. There is an e-inclusion strategy in ROI, which includes the delivery of BenefIT 3, and one particular target group is older adults.

Given the current strategic importance of e-government, one NI interviewee raised concerns about the level of budget being allocated to e-government and e-inclusion: it ‘doesn’t get either the resources or approaches or collaboration required to up this as an agenda’ (NI interviewee). The concern centred on the level of resources allocated to e-government and e-inclusion and what is being expected of e-government as part of the drive to deliver public service cost savings. The cost savings are linked to more and more people accessing public services online. The interviews were undertaken when digital switchover (from analogue to digital television) was taking place. Digital switchover has been viewed as a success, because of the strategic approach adopted, including the way in which the statutory and non-statutory sectors worked closely together to deliver digital inclusion. One interviewee suggested that a similar strategic approach is needed for e-government and e-inclusion: ‘I don’t see that strategic thinking and articulation’ (NI interviewee). So there was a feeling that a more strategic approach is needed to bring about e-inclusion to increase the proportion of the population accessing public services online.
5.2 BARRIERS TO E-INCLUSION

A strong theme to emerge in the interviews was about the barriers to e-inclusion. They are viewed as being the ultimate barrier to interaction with e-government. But delivering e-inclusion for older people is challenging because of their sheer diversity, with very variable levels of digital engagement: ‘not all old people are the same’ (NI interviewee).

Box 5.1: Barriers to e-inclusion

1. Cost of equipment and internet access, including rural premium.
2. Broadband access and connectivity.
3. Knowledge divide: the level of skills and confidence older people possess for using ICT.
4. Internet security fears.
5. Types of training courses available.

Practitioners identified six e-inclusion barriers older people face (Box 5.1): cost, broadband provision, the knowledge divide, internet security fears, the types of training courses available and lack of relevance to everyday life. These barriers match those identified in studies undertaken in the EU and NI reported in Section 2 (European Union, 2006; Northern Ireland Assembly, 2001) but they differ from those reported by the participants in the focus groups reported in Section 4, as the older participants identified only the barriers relating to them, not barriers that providers might face.

Cost (in terms of equipment) was identified by most of interviewees: ‘some people… would like to buy a computer but find them too expensive’ (ROI interviewee). Accessing the internet is not cost-free; it requires a computer and an internet connection, with monthly payments to an internet provider. A rural premium was also mentioned regarding the availability of broadband: ‘some consumers have had to go to the very top end of the internet contract’ (NI interviewee). Another commented that ‘ whilst finance may be one reason to go in the direction of e-government it can also be a barrier to its delivery’ (ROI interviewee). In both ROI and NI suites of free networked computers are provided by the statutory and non-statutory sectors, but none of the older adults who participated in this study used them – all preferred to use their own equipment.

A second barrier relates to broadband access and connectivity, but opinions differed across the two jurisdictions. In NI it was the speed of broadband rather than coverage – ‘speed rather than reach’ (NI interviewee) – while in ROI ‘ connectivity and access varies greatly across and between areas’ (ROI interviewee). The paucity of provision in rural areas was forcefully commented upon by the ROI older participants.

A third barrier identified is the knowledge divide: the level of skills and confidence older people possess for using ICT. There was a recognition that while for some people the learning journey to integrate ICT into everyday life is hard, a lot of older people have ‘had a go [but] who are not comfortable to use computers on a daily basis’ (ROI interviewee). One interviewee spoke about the ‘huge fear factor… pressing wrong button, breaking computer, wiping everything’ (ROI interviewee). Some suggested that the fear factor stopped people trying to learn, speaking of ‘a cohort who are frightened of technology’ (NI interviewee), who ‘retired before the use of computers – even just keyboard use’ (ROI interviewee).
These fears spread to a fourth barrier, about security, prompting fears of ‘online fraud, identity theft’ (NI interviewee). A second interviewee said that concerns about personal and especially financial data stop people going online: ‘uncertainty around security of data’ (NI interviewee).

A fifth barrier is the type of training courses available. Some interviewees thought that the method of delivery of ICT training was off-putting: ‘structured set courses… four weeks on databases… set criteria to work to – that really put people off’ (NI interviewee). In other studies, older people have indicated that they prefer one-to-one training that is task-related, such as ‘how to email’ (Hardill and Olphert, 2012). Formal courses can be off-putting for people with ‘bad classroom experiences’ (ROI interviewee), while another participant raised ‘literacy and numeracy issues. These need to be built into any drive towards e-inclusion and ICT’ (ROI interviewee).

The sixth and final barrier identified was relevance: ‘one of the biggest hurdles for those who have never been online is showing them the relevance… that [it] will be useful’ (NI interviewee). This interviewee went on to describe the value of awareness-raising workshops: ‘they saw there was relevance… cheap flights, theatre tickets, saving money by going online’ (NI interviewee).

Finally, are these six barriers age specific? The specificities of the cohort effect barrier will disappear over time. In conclusion, it remains the case that ICT training and support are critical in supporting older people’s development of ‘internet self-efficacy’ (Hardill and Olphert, 2012). It has been demonstrated that once older people have access to it and are given the right support, ICT can become part of everyday life (Zickuhr & Madden, 2012).
5.3 DELIVERING E-GOVERNMENT AND E-INCLUSION

At various points in this report the need for e-government to be accompanied by e-inclusion policies has been emphasised. In the words of one stakeholder, ‘we can’t expect to do business with older people digitally unless Government ensures this group can get online and sustains this’ (ROI interviewee).

A key concern raised by interviewees from the non-statutory sector North and South centred on the fact that for some people e-government could mean diminishing access to information and services: ‘it is exclusion if people don’t have the skills or infrastructure to be able to access’ public services online (NI interviewee). Another spoke in terms of disempowerment: ‘what is the cost to people left behind… being disempowered from traditional means of accessing information?’ (ROI interviewee).

While the benefits of e-government were widely recognised by the interviewees real concerns were expressed for older adults: ‘we see the move towards e-government as positive if complimentary and not as a replacing measure’ (ROI interviewee).

Interviewees outside the statutory sector engaged directly with e-inclusion rather than e-government, especially the delivery of services to assist and aid older people to get online. A number indicated that they would be keen to engage more directly with e-government. But e-government is impacting on the work of the non-statutory sector. A typical response was ‘our primary focus is on service delivery – advice... E-government... is going to impact on people and how we respond as an organisation’ (NI interviewee).

There was a growing awareness of the direction and content of e-government: for example, advice- and advocacy-based organisations were clear that many of their excluded and vulnerable clients were going to face difficulties because they were either not online and/or did not have access to the relevant technology. ‘A lot of it is about digitising services – e.g. Welfare Reform Bill – it’s been described as the first digital by default benefit’ (NI interviewee).
5.4 CONCLUSION: FUTURE CHALLENGES

In summary, while it is true that in the future the numbers of people who have not encountered digital technologies will diminish, they will not disappear, and this is reflected in concerns about a total reliance on e-government as a mechanism to deliver welfare and benefit changes and services: ‘there are major difficulties already in relation to... benefit uptake. Millions being unclaimed every week... moving things online will [create]...additional barriers for older people’ (NI interviewee).

A second dilemma centres on sustainability. There will be a constant need to support people to sustain their use of digital technology because technology continually changes and advances: ‘there is going to be progression in technology and development... you need to maintain and develop the skills and confidence’ (NI interviewee).

As a result e-government will only bring about the cost-savings so vitally needed in these difficult economic times if e-inclusion is geared to helping the digitally excluded, as well as supporting people to sustain their digital engagement.
E-GOVERNMENT KNOWLEDGE-SHARING
This section presents examples of projects led by both government and non-government agencies where e-government or e-inclusion sharing is facilitated. It looks at European and international examples to show where e-government services have been developed and usage of those services, particularly among key target groups, has been increased.

**KEY POINTS**

Successful e-government projects tend to be supported at the national, regional and local levels.

Offering training for specific groups is an important approach, but measures must also be taken to follow up on training and ensure that the targeted groups continue to use ICT and e-government services.

**DIEGO PROJECT**

The DIEGO (Digital Inclusive e-government) project was co-financed by the European Commission and ended in September 2012 (see also Table 6.1). DIEGO aimed to provide access to e-government services for all citizens, with special attention to older people, those with disabilities or people with a lack of user skills.

The target population groups were those most likely to be digitally excluded. The main objective was to provide access to e-government services that are comfortable, user-friendly and available by means of multiple channels: TV, PC, mobile phone and kiosks provided by town councils. There were 11 project partners across six member states:

- Spain: IDI EIKON (IT sme/Coordinator) – DIPUTACIÓN DE VALENCIA – FUNDACIÓN CV REGIÓN EUROPEA – LOCAL COUNCIL OF QUART DE POBLET
- UK: Cambridgeshire County Council
- ROI: Mid-West Regional Authority
- Greece: Altec (IT Company)
- Italy: Associazione Regionale delle Autonomie Locali del Lazio (ARALL) and Provincia di Bergamo
- Cyprus: Interfusion (IT sme), Municipality of Pafos.
Through DIEGO public websites were transformed to make them more accessible to users. This included simplifying the design, ensuring the font size could be adjusted and including features for deaf or blind users. The multichannel delivery strategy was key, ensuring that users could access the project websites through PCs, smartphones, smart TVs and dedicated kiosks. The participating websites had a special link which brought users to the much-simplified DIEGO page where they could access services. In order to sustain e-government usage, a central objective of the DIEGO project was to build the capacity of civil servants and other practitioners to acquire new skills and, at the same time, to provide easy, accurate and personalised content delivery to the end users of the services. In ROI, the Mid-West Regional Authority participated in the DIEGO project and the City of Limerick website has a dedicated URL (simply.limerick.ie) for users to gain access to the version of the website which has been designed in accordance with the DIEGO project. The project looked at e-government from two perspectives, the user as well as the provider, enskilling both.
Denmark national strategy

Denmark is one of the leading countries in the EU in terms of ICT equipment in the home and engagement with e-government; for example, in 2011, 87% of people in Denmark were using the internet at least once each day for personal use (Eurostat, 2011). Denmark is fourth in the United Nations 2012 list of world leaders in e-government (UN Department of Economic and Social Affairs, 2012). It is also a clear leader among EU countries in terms of the take-up of e-government services by the population. When asked how they had interacted with public authorities using the internet in 2011, 86% had obtained information from government or public authority websites, and 70% had submitted online forms to public authorities (Eurostat, 2011).

The success of e-government in Denmark has been attributed to the ‘continuous commitment and strategic approach shown by the Danish government in using ICT to strengthen the performance of its public sector in providing high quality public services to its citizens and businesses’ (Ubaldi, 2010). In 2007, the government published a national strategy for e-government, Towards Better Digital Service, Increased Efficiency and Stronger Collaboration (The Danish government, Local Government Denmark (LGDK) and Danish Regions, 2007).

The strategy focused on making gains from the digitalisation of services through improving services to citizens and businesses, enabling resources to be transferred from administration to citizen-focused services and cross-governmental collaboration at all levels. It was supported by funding of DKK 268 million to implement the 35 initiatives. Ministries and other public agencies in Denmark have worked together to ensure connectivity to ubiquitous and affordable broadband, education of citizens to increase digital literacy, e-accessibility, addressing the needs of older workers and older people in general, promoting cultural diversity in relation to inclusion, and promoting inclusive e-government. The aim is to ensure that people who are disadvantaged in accessing ICT remain motivated to learn and understand why they can be an indispensable tool for personal empowerment and to use the services provided electronically (Ubaldi, 2010).

A number of measures have been undertaken to ensure sustained usage of e-government services in Denmark. These include the initiative ‘The Danes’ IT Skills’, which explores how the IT skills of users can be improved and includes an annual measure of performance of skills. In 2008, the Ministry of Science, Technology and Innovation launched ‘Learn More’, a partnership that provides public and private authorities, organisations and other associations with a framework for teaching ICT skills. The Ministry has also worked with other ministries and government departments to build partnerships to promote e-government and awareness of the necessity to promote ICT skills development (Ubaldi, Denmark, Efficient E-government for Smarter Public Service Delivery, 2010). This national case study is one of a long-term national commitment to e-government and e-inclusion that has resulted in public engagement with ICT on a scale that far exceeds ROI, NI and the UK. The message is one of ‘joined-up working’ at a number of spatial levels.
Canada

Canada is a leader in e-government. Statistics Canada gathers robust data on ICT, and in one study Underhill and Ladds (2007) undertook an analysis of the 2005 Canadian Internet Use survey (CIUS) of 30,000 Canadians which found that in 2005 52% of home internet users went online at some point for government-related information, and nearly one-quarter (23%) communicated with government using the internet.

Service Canada

Service Canada was created in 2005 to improve the delivery of government programmes and services to Canadian citizens, by making access to them faster, easier, and more convenient. It offers a single portal for access to federal government services in Canada, through different media such as online, by telephone or through Service Canada centres. A total of 78 services are available through Service Canada, which works across departments, agencies and other public bodies.

An important role of Service Canada is reaching out to individuals and communities who might otherwise have little or no access to its services. Outreach services can be scheduled by communities on a regular basis, while Service Canada staff can also work with communities in times of need, such as a natural disaster or plant closure.

The website is designed to address a series of life events, including finding a job, raising a family, having a baby and retirement planning. The retirement planning section provides an estimated income calculator as well as full details of all available pensions and allowances. Users can create a Service Canada account, where they can view retirement contributions to date and determine what benefits they are entitled to. Service Canada also provides detailed information for caregivers, including options for public benefits and also advice for carers on keeping healthy.

Service Ontario

Service Ontario is a provincial e-government public-facing delivery organisation, with responsibility for:

- delivering routine transactions to both individuals and businesses;
- managing the end-to-end customer experience for all transactions;
- providing information services for all Ontario ministries and intake and referral services for more complex services within the Ontario public sector and on behalf of other jurisdictions.
Service Ontario was created in 2000 with the objective of working with government ministries in Ontario to develop a multi-channel service delivery system, with particular emphasis on online channels. The programme is housed within the Ministry of Government and Consumer Services (now Ministry of Government Services). It has the support of the cabinet, the minister, a board comprised of deputy ministers from other ministries providing service, and key corporate stakeholders.

Access to government information and services can be achieved through four channels: online, in person, free kiosks or by telephone. Users are encouraged to use online services through a guarantee that services will be delivered within two days.

While the involvement of other ministries was voluntary at first, the mandate for Service Ontario was greatly expanded by cabinet approval in 2006, which led to all ministries providing e-government services through the single portal. Service Ontario’s business model is based on enhancing customer service, with service and channel enhancements which focus on providing full benefits to the customer. Services are grouped under eight topics: driver; vehicle; health; identification and certificates; outdoor; home, land and property; education and training; and business. The website also has a simple-to-use search portal for all e-government services. It is linked with the Ontario Seniors’ Secretariat, which advises older people on services available as well as representing older people in policy decision-making across Ontario.

An important aspect of Service Ontario is its continual community engagement and effort to sustain use of its services. This is done through offering in-person service centres, making 390 internet workstations available in public libraries for users with no broadband access and working with stakeholders to develop the service. Computer and internet training for older people is available in Ontario through several different organisations. Colleges and universities offer formal courses while public libraries all offer instruction on how to use the internet. There is also a series of older adult centres throughout the province that provide educational programming, including computer training.

Canada has a high rate of sustained internet usage and 81% of people in Ontario were using the internet for personal use by 2010. Some 68% of people aged 65+ were using the internet at least once a day, with a further 23% of those aged 65+ using the internet at least once a week (Statistics Canada, 2011). There has since been even more rapid growth in older people using the internet, including a 6% increase between Q4 2010 and Q1 2011 among those aged 55+ (ComScore, 2012).
Finally, e-government is dependent on the behavioural change of individuals. E-inclusion happens at the micro level, in the home, with individuals supported by kin networks and the wider community, including the work of community groups. It offers an example of how community groups can be mobilised to address e-inclusion. Age UK, created in 2009, is both a charity and a social enterprise. It is one of the UK’s largest charities, formed by the merger of two previous charities that date back several decades (Hardill and Baines, 2011). The charity Age UK, which works with and for older people, runs the Age UK Digital Inclusion Network, UK.

In 2006, Age UK established its Digital Inclusion Network in co-operation with Age Scotland, Age Cymru and Age NI. The purpose of the network is to provide support to all organisations and groups that deliver digital inclusion initiatives for people in later life. This UK-wide initiative has three aims:

- to ensure that people in later life have the ability to engage with computers and the internet and to progress their learning to other types of digital technologies;
- to develop, encourage and share best practice approaches for the digital inclusion of people in later life;
- to work with key stakeholders to gather intelligence and provide a channel for discussion, debate and engagement on digital inclusion issues at a local, regional and national level.

The network is a membership organisation which provides information on funding opportunities, information and advice, publications, networking opportunities, events and resources. It has over 200 member organisations, of which five are in NI. It is notable that this network mobilises older people to help others. Through various projects the skills and expertise of older ICT users who volunteer to work on digital inclusion projects support non-ICT users, thereby reducing the number of people who are e-excluded. The charity also supports intergenerational projects.
<table>
<thead>
<tr>
<th>Project</th>
<th>Area covered</th>
<th>Type</th>
<th>Key features</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIEGO Project</td>
<td>Six pilot areas in Europe</td>
<td>E-inclusion/e-government</td>
<td>Pilot project to provide access to e-government services for all citizens, with special attention to older people, those with disabilities or people with a lack of user skills. Multi-channel delivery of e-government services.</td>
<td>Initial pilot project websites are still operational, including the City of Limerick website in ROI.</td>
</tr>
<tr>
<td>Danish e-government strategy</td>
<td>Denmark nationwide</td>
<td>E-government</td>
<td>National e-government strategy to improve services and get citizens to interact with government online. Fully funded strategy with key support from all government ministries and agencies.</td>
<td>In 2011, 87% of people in Denmark were using the internet at least once each day for personal use. 86% had obtained information from government or public authority websites, and 70% had submitted online forms to public authorities.</td>
</tr>
<tr>
<td>Service Canada</td>
<td>Canada nationwide</td>
<td>E-government</td>
<td>Created in 2005 to improve the delivery of government programs and services to Canadian citizens. Offers a single portal for access to federal government services in Canada, through different media such as online, by telephone or through centres.</td>
<td>Paid out CAD 88 billion in benefits in one year. In one year, made 9.8 million visits at in-person locations, responded to 58.6 million telephone calls, had 55.1 million visits to the website.</td>
</tr>
<tr>
<td>Service Ontario</td>
<td>Ontario province, Canada</td>
<td>E-government</td>
<td>Public-facing delivery organisation for government services. Multi-channel and inter-department and inter-agency delivery. Continual community engagement and efforts to sustain usage.</td>
<td>-68% of people aged 65+ in Canada use the internet for personal use at least once a day. 81% of people in Ontario use the internet (2010).</td>
</tr>
<tr>
<td>Age UK Digital Inclusion Network</td>
<td>UK</td>
<td>E-Inclusion</td>
<td>A network giving support to all organisations and groups that deliver digital inclusion initiatives for people in later life. Provides information on funding opportunities, information and advice, publications, networking opportunities, events and resources.</td>
<td>Over 200 member organisations, including five in NI.</td>
</tr>
</tbody>
</table>
Conclusion

The case studies in this section indicate that successful e-government projects tend to be supported at the national, regional and local levels: at the national level through a government strategy that works across all relevant departments, at the regional level through providing training where required to communities and support services in the community, and at the local level through supporting e-inclusion for key target groups such as older people.

The example of Denmark shows that a government strategy that is supported by all departments, agencies and branches of local government in a concerted effort can massively improve the take-up of e-government services. However, e-government cannot reach all people without e-inclusion, and the Danish example also shows how an e-government strategy works best when supported by local initiatives to sustain e-government usage among the population. Offering training for specific groups is an important step, but measures must also be taken to follow-up on training and ensure that the targeted groups continue to use ICTs and e-government services. The Digital Inclusion Network in the UK is one means for supporting ICT and e-government usage at a local level. It is important to note that hard-to-reach groups are unlikely to access formal training and services and networks.

In Canada, the single government portal is widely used by citizens to interact with government but, importantly, it is supported by community services that ensure people are not excluded from services who may not have the necessary skills or internet access to use e-government services. Service Ontario is notable for its effort to engage with people who do not have broadband access at home, making internet workstations available in public libraries as well as providing computer and internet training through different organisations, including public libraries and older adult centres. E-government services must also be simple to use. The internet can be baffling for first-time users, as the experience of some of the older people in the focus groups has shown. As a result, projects like DIEGO could be implemented on a wider scale, with a simplified version of all e-government sites made available for inexperienced users.
CONCLUSION
In this report the impact on older people of the move to deliver more and more public services online (e-government) across the island of Ireland has been examined. The research has highlighted that e-government and e-inclusion are linked. E-government requires a transformation in the way in which public services are delivered and e-inclusion aims to ensure that people are able to participate in the growing knowledge society.

The analysis of published statistics has revealed that while the number of older adults in households across the two jurisdictions with a computer and the internet is increasing, the proportion remains below those for other age groups. Moreover focus groups work with older adults highlighted that even among those that live in e-included households some household members are ‘e-excluded’. According to the latest ROI Census older people living alone are two-and-a-half times more likely to have a computer in the household than those living with others: 56% compared with 21%. Similarly, people aged 65+ living on their own were more than two-and-a-half times more likely to have broadband access than people in the same age group living with others in the household. While a recent Ofcom report (2012) shows that NI is ahead of the UK with access to broadband, the over-55s in NI are less likely to have broadband than those in the rest of the UK. A recurrent theme in the qualitative in-depth interviews reported was concern about the quality of internet connections in rural parts of the ROI. In both jurisdictions use of public services online by older adults is limited, as revealed in published statistics and our in-depth qualitative study.

A spectrum of ‘onlineness’ should be recognised, rather than simply categorising people as being online or not. For e-government to succeed it is dependent on citizens being confident internet users, possessing a specific skill set, such as establishing and maintaining an internet connection, and able to navigate websites (Hargatti, 2008). A diverse array of barriers that impede older adults in using e-government have been identified by older adults who participated in the focus groups, as well as by key stakeholders.

E-government and e-inclusion are linked. E-government requires a transformation in the way in which public services are delivered and e-inclusion aims to ensure that people are able to participate in the growing knowledge society.

The onset of the economic downturn has been accompanied by a push for the delivery of more and more services online; e-government is here to stay, so a commitment to the e-inclusion of all older adults is vital.

Today e-government in ROI and NI forms part of the strategy to help address budget deficits but two policies, e-government and e-inclusion, are inextricably linked; e-government cannot succeed without e-inclusion. E-inclusion needs to support people getting online, as well as supporting people to sustain their online presence. E-inclusion is not cost-free to citizens.

It is also important that e-government is accessible to all citizens in terms of providing websites that are easy to read, easy to navigate and easy to find information on.
A possible strategy for supporting e-excluded older adults could be via ‘digital champions’, especially e-included older adults as e-government champions offering one-to-one support for sustaining online access. Older adults possess a wide spectrum of ICT skills and significant numbers have the online skills needed to be e-government champions. Another strategy could be intergenerational working, with young people acting as e-government champions to older adults.

It is important that the relevant organisations in the voluntary and community sector continue to play a strong advocacy role, speaking up for older adults, e-government and e-inclusion. The sector should continue to support older people’s online skills training, supporting them through upgrades in technology and as they face personal changes (such as health-related, economic, etc.), so that they remain e-included.

Finally, e-government is a tool which, regardless of its potential power, has limited value and relevance on its own. E-government offers the potential to help governments balance budgets through cost savings, but these cost savings will be achieved only when most citizens naturally turn first to access public services online.

**RECOMMENDATIONS**

To be effective, e-government must take a whole-of-government approach that links central and local structures.

Among older adults in ROI and NI, there is both a low level of awareness and a low level of uptake of e-government services. Lessons can be learned on how to equip older people for change from the successful digital switchover strategies employed across the UK and Ireland.

E-government should be a key component in formal training courses and peer support programmes developed for older people, especially for those older people with no previous e-government engagement.

E-government and e-inclusion must be seen as a dual strategy for government, and the identification of key target groups, e.g. older people with lower incomes, low educational attainment and older women, is vital.

Greater analysis of usage and non-usage of government sites is required in the development and refinement of e-government services.
## APPENDICES

### Appendix 1. 21 stakeholder interviews

<table>
<thead>
<tr>
<th>Name</th>
<th>Job Title</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorna Armstrong</td>
<td>Head of nidirect Central Editorial Team</td>
<td>NI Direct</td>
</tr>
<tr>
<td>Mark Bennett</td>
<td>Digital Inclusion Manager</td>
<td>Information Strategy &amp; Innovation Division, DFP</td>
</tr>
<tr>
<td>Pól Callaghan</td>
<td>Head of Information and Policy</td>
<td>Citizens Advice</td>
</tr>
<tr>
<td>Dr Trudy Corrigan</td>
<td>School of Education Studies</td>
<td>Dublin City University</td>
</tr>
<tr>
<td>Seamus Donnelly</td>
<td>Rural Older People Development Officer</td>
<td>Rural Community Network</td>
</tr>
<tr>
<td>Duane Farrell</td>
<td>Director of Policy</td>
<td>Age NI</td>
</tr>
<tr>
<td>Sinéad Gibney</td>
<td>Social Action Manager</td>
<td>Google Ireland Ltd</td>
</tr>
<tr>
<td>Carolyn Hale</td>
<td>Development Officer, Learning Age Project</td>
<td>Workers’ Educational Association (WEA)</td>
</tr>
<tr>
<td>Dr Albert Jordan</td>
<td>Assistant Principal, Knowledge Society Division</td>
<td>Department of Communications, Energy and Natural Resources</td>
</tr>
<tr>
<td>Graham Long</td>
<td>Information Resources/Production Manager</td>
<td>Citizens Information</td>
</tr>
<tr>
<td>Eddie Lynch</td>
<td>Chief Executive Officer</td>
<td>Age Sector Platform</td>
</tr>
<tr>
<td>Joan Martin</td>
<td>County Manager</td>
<td>Louth County Council</td>
</tr>
<tr>
<td>Sonya McAnulla</td>
<td>Policy Officer</td>
<td>Omagh District Council</td>
</tr>
<tr>
<td>Derek McCallan</td>
<td>Chief Executive</td>
<td>NI Local Government Association (NILGA)</td>
</tr>
<tr>
<td>Aodhan O’Donnell</td>
<td>Director of Policy</td>
<td>General Consumer Council for NI (GCCNI)</td>
</tr>
<tr>
<td>Fergus O’Keane</td>
<td>Head of Information Services</td>
<td>Meath County Council</td>
</tr>
<tr>
<td>Diarmaid O’Sullivan</td>
<td>Campaign Researcher</td>
<td>Older and Bolder</td>
</tr>
<tr>
<td>Pauline Power</td>
<td>Development Manager</td>
<td>Age Action</td>
</tr>
<tr>
<td>Louise Richardson</td>
<td>Vice President (IRL)</td>
<td>Age Platform Europe</td>
</tr>
<tr>
<td>Jonathan Rose</td>
<td>Director</td>
<td>Ofcom Northern Ireland</td>
</tr>
<tr>
<td>Sarah Weatherald</td>
<td>Regional Programme Manager West</td>
<td>Age Friendly Counties</td>
</tr>
</tbody>
</table>
Appendix 2. Details of the focus groups

<table>
<thead>
<tr>
<th>Location and date</th>
<th>North/ South split</th>
<th>Urban/rural split</th>
<th>Age range</th>
<th>Users/non-users split</th>
<th>Gender split</th>
<th>Total participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin – Gresham Hotel 1 November</td>
<td>Republic of Ireland</td>
<td>Urban</td>
<td>55–65</td>
<td>3 users 4 non-users</td>
<td>4 men 3 women</td>
<td>7</td>
</tr>
<tr>
<td>Galway – Oranmore Lodge Hotel 12 November</td>
<td>Republic of Ireland</td>
<td>Rural</td>
<td>65–75</td>
<td>4 users 5 non-users</td>
<td>3 men 6 women</td>
<td>9</td>
</tr>
<tr>
<td>Belfast – Wellington Park Hotel 6 November</td>
<td>Northern Ireland</td>
<td>Urban</td>
<td>75+</td>
<td>4 users 3 non-users</td>
<td>3 men 4 women</td>
<td>7</td>
</tr>
<tr>
<td>Fermanagh – Belmore Court Hotel 13 November</td>
<td>Northern Ireland</td>
<td>Rural</td>
<td>65–75</td>
<td>6 users 2 non-users</td>
<td>3 men 5 women</td>
<td>8</td>
</tr>
</tbody>
</table>
Appendix 3. EU benchmarking text

Since 2001 the European Commission has conducted an annual e-government benchmarking survey. DG Information Society’s annual e-government benchmark is one of the flagship studies in measuring public sector performance. The benchmark is, notably, a collaborative exercise, designed by and involving both the European Commission and Country Representatives. The benchmark uses a comprehensive ranking system to identify those European countries that have implemented the most mature e-government services.

The 2010 benchmark which we draw on in this report uses data provided by representatives of the 32 participating countries.

Three main sources of data are used for the benchmark:

(i) online service analysis across some 10,000 portals and websites;
(ii) surveys carried out with nominated representatives from the administrations in the Member States;
(iii) impartial evaluations carried out by experts from the e-government domain.

Core measurements centre on:

• online sophistication: the extent to which government services allow for interaction and/or transaction between the administration and citizens or businesses; this measure covers 20 basic public services such as online tax-filing, obtaining permits, enrolling in schools and many others;

• full online availability: the extent to which there is fully automated and proactive delivery of the 20 key public services. A comparison over time illustrates the speed and extent of convergence in performance in Europe.

The 2012 benchmark included for the first time:

• sub-national analysis: for the first time, the 20 service metrics have been applied at NUTS (Nomenclature of Territorial Units for Statistics) levels, providing a measure of e-government performance across regional and local administrations;

• e-procurement availability for the post-award phase: an analysis of e-ordering, e-invoicing and e-payment services provided by e-procurement platforms in the public sector.

Moreover, given the continual evolution of the use of ICT by European governments, new indicators have emerged as a so-called ‘proof of concept’ (i.e. indicators tested for the very first time), including:

• the maturity of ‘life events’: customer journeys and related services are benchmarked for:
  (a) ‘Starting up a business’ and
  (b) ‘Losing and finding a job’;

• the availability and use of key enablers: assessing what organisational and technical frameworks govern the implementation of back-office building blocks such as eID, authentic sources, interoperability guidelines, the adoption of open standards and Single-Sign-On.

Finally, qualitative assessments have been made to identify leading practice in the benchmarked countries in terms of efficiency, take-up and user-centricity.
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