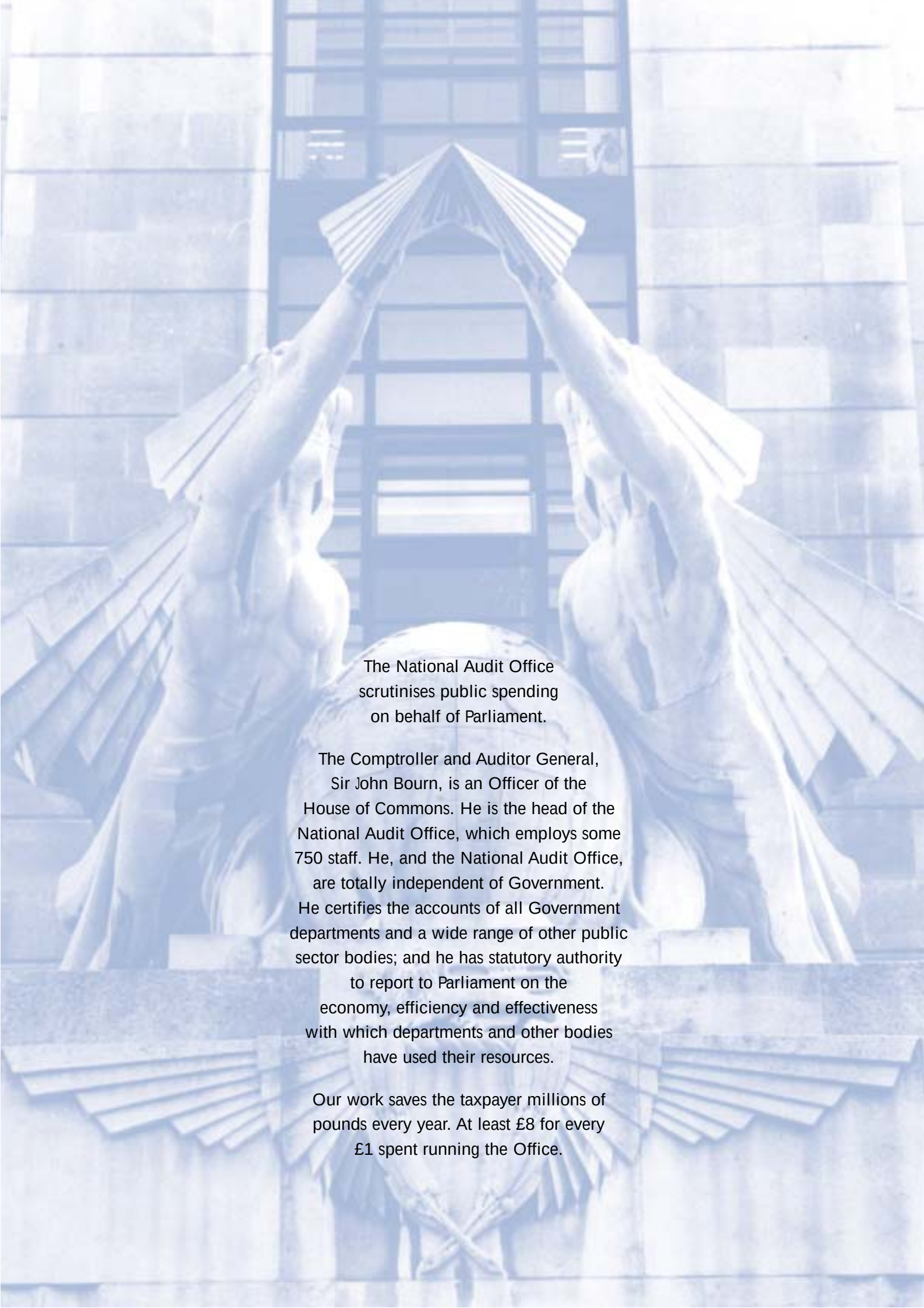
NATIONAL AUDIT OFFICE

Progress in making e-services accessible to all - encouraging use by older people

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
HC 428 Session 2002-2003: 20 February 2003



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Comptroller and Auditor General

National Audit Office
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1 Older people are major users of a wide variety of public services **(Figure 1)**. For example, 50 per cent of social security expenditure is spent on those aged 65 or over[1], and some 40 per cent of NHS expenditure[2]. Although it is hard to generalise, many older people have contact with public services because they:

- tend to have greater need for them than younger people (for example, health and social care);
- tend to have less money than other age groups;
- experience significant life changes (for example, retirement or bereavement of a spouse);
- may be offered services, for example, preventative 75 year health checks; and
- have more time available than other age groups, offering the chance, for example, to use libraries or community facilities.

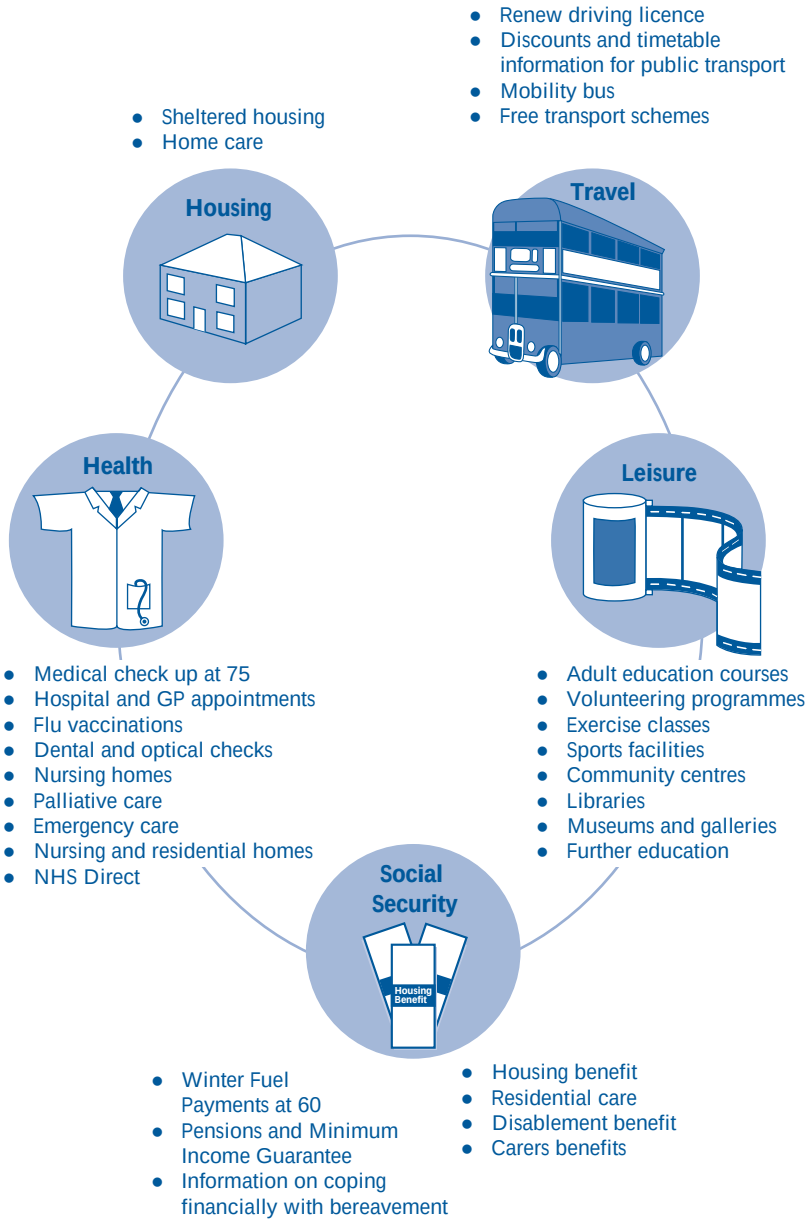
2 Traditionally, public services have been provided face-to-face (for example, in a local office), by correspondence, or by home visit. Information on government services has been supplied in leaflets (available, for example, in Post Offices) or advertising in national or local papers. More recently, the public sector has sought to develop new options, recognising that no single means will satisfy every circumstance. This has led to the creation of, for example:

- one-stop-shops, where visitors can receive advice in one place on a wide range of different services provided, for example, by a local authority;
- the establishment of call centres such as NHS Direct; and
- services tailored for those who do not speak English. For instance, the Department for Work and Pensions' Pensions Direct call centre has access to interpreters who can speak in a variety of languages.

3 In addition, Government has increasingly looked to offer electronic services (e-services) to widen choice further. Most public organisations now have websites. A small number of departments and local authorities are piloting digital television and electronic information kiosks. And there are initiatives to increase use of e-services via public facilities and by providing cheaper internet access from home. These run parallel with developments in the private sector. Many banks allow customers to transact electronically, and retailers have created websites so customers can order from home.

1 *National Statistics, Social Trends UK (2001).*
2 *Department of Health, National Service Framework for Older People (2001).*

1 Examples of common services used by older people



Source: NAO

4 Previous NAO reports[3] have examined the management of websites and call centres in order to meet the target that all government services are available electronically by the end of 2005. This report examines progress towards another Government objective - that of ensuring that everyone who wants it can access e-services by the same deadline. It focuses on older people, who to date have been low users of such facilities, and looks in particular at:

- what government has done to extend opportunities for older people to access a range of electronic media (Part 2); and
- what departments and a range of other bodies are doing to ensure government e-services are accessible to older people (Part 3).

As well as older people, the messages are also relevant to other groups of citizens, such as those of all ages with disabilities or those on low incomes.

E-services potentially offer older people a range of valuable services

5 It is not realistic to expect everyone to use new technology. In particular, many older people do not see the internet as relevant to them, and prefer traditional channels of contact. However, certain characteristics of many older people suggest innovative e-services could benefit them if developed and marketed appropriately. In particular, many:

- **are less mobile due to illness or disability:** call centres and interactive services allow people to handle their affairs without having to travel. For example, the Pensions Direct call centre has ensured many unnecessary visits to benefit offices are avoided;
- **need information on a wide range of issues but are unsure how to find it:** internet portals and electronic kiosks could enable older people to gain information on health, consumer rights and benefits from a single source, saving them time and inconvenience;
- **live alone or are far from relatives:** some 60 per cent of women and one third of men over 75 live alone. E-mail would keep them in touch with friends and family easily;
- **wish to maintain their independence:** technology exists for people to consult doctors and monitor their health using telephone and video links, so avoiding the need to move into a home; and
- **wish to be involved and consulted on issues relevant to them:** in 2002 an online consultation (Seniorspeak) was organised by the Hansard Society to convey the views of older people, their families and carers to politicians in the Westminster and Edinburgh Parliaments on the subject of long term care and health.

3 *Government on the Web II (HC764, Session 2001-02), Better Public Services through e-Government (HC704-1, Session 2001-02), Call centres (HC134, Session 2002-03).*

The Government aims for everyone who wants it to have access to the internet but must be proactive to overcome barriers to take up

6 The Government expects to invest some £6 billion in e-services by March 2006 to achieve the Prime Minister's goals that all government services are available electronically and that everyone who wants it has access to the internet, both by the end of 2005. The latter target assumes that some will use e-services at home, and others in public places such as libraries. It also acknowledges that some may not want access. Meeting this target is not an end in itself, but would help achieve other government objectives such as avoiding social exclusion, encouraging lifelong learning and promoting equity in service provision.

7 To optimise the return on the investment and to secure value for money, the Government needs as many people as possible to utilise e-services. The number of households with access to the internet trebled between 1999 and 2002, and by October 2002, some 28.6 million adults in Great Britain had used it somewhere[4]. However, use varies significantly according to characteristics such as age, income and location. These variations are often referred to as the 'digital divide', with age perhaps the most pronounced. While 94 per cent of 16-24 year olds have accessed the internet, only 47 per cent of those between 55 and 64 and 17 per cent of those over 65 have. The main barriers that discourage usage by older people are summarised in **Figure 2**.

2 Barriers that discourage older people from using electronic services

- Physiological effects of ageing, including loss of dexterity or diminution of vision or hearing.
- Lack of confidence or familiarity with new technologies, resulting in lack of awareness of potential.
- Cost, or concern about anticipated cost, especially for people in low-income households.
- Style and language used which can be a deterrent if, for example, it is overly formal or technical.
- Lack of knowledge and skills leading to some reluctance to seek assistance to access online services.
- Belief that e-services are of no relevance to them.
- Inconvenient or inappropriate locations putting off potential users because of discomfort using such services in public or fear of being unable to deal with problems at home.
- Inaccessible web designs that cannot be read by the access technology that people with disabilities rely on.

4 *National Statistics Omnibus Survey (October 2002).*

8 A 'digital divide' could undermine progress towards widespread use of government e-services, but there are some grounds for optimism that age will become less of a barrier. The 55-64 age cohort makes significantly greater use of the internet than those over 65[5]. Many retiring now have used computers at work, although those who did not work in an office remain unlikely to have much IT experience[6]. There is also evidence of an unwillingness to accept that new technology is only for the young[7], although health factors - such as poor manual dexterity - are likely to persist as a barrier. This may place a natural limit on take-up, although even this may be more about perceptions, since technical solutions to help those, for example, with poor sight are available.

9 Previous NAO reports on e-services (Better Public Services through e-Government (HC 704 Session 2001-02) and e-Revenue (HC 492 Session 2001-02)) have highlighted the potential savings for Government from development of e-services. In addition, there could be significant benefits to individuals from well designed e-services, but only if they are convinced of their value. Given current low levels of take-up among older people, finding incentives is particularly important with this group.

There are some limited signs that older people are taking advantage of government initiatives to increase access to e-services

10 The Government has developed a number of initiatives to provide access from public places and from home, and to provide and encourage training. The Department for Education and Skills and the Department for Culture, Media and Sport have jointly established a network of **UK online centres**, for which older people not engaged in learning are a key target group. The Prime Minister announced that the target of 6,000 centres by the end of 2002 had been met ahead of schedule in November 2002. Sustainability is an issue for some centres, and progress in setting them up in deprived areas was slower than planned (750 by August 2002 compared with 2,000 planned). However, 2,840 such centres had been opened by the end of 2002. The Department for Education and Skills have also launched a Wireless Outreach Network which provides laptop training facilities for adult learning and community centres.

11 Many users have been pleased with their experience of the UK online centres. To date, some centres have found it more difficult than expected to attract older people and the disadvantaged, but early management returns from centres located in deprived areas show that 70 per cent of clients are from the target groups. An evaluation found that around 80 per cent of users already have access to the internet elsewhere[8], although the New Opportunities Fund consider it is not unusual at an early stage of a funding programme for the most disadvantaged groups to remain wary of computer training opportunities.

5 *National Statistics Omnibus Survey (October 2002).*
6 *Participants in our focus groups who did not use computers regularly said that their previous and current employment did not require them to use IT.*
7 *For example, our focus groups found that older people generally had positive feelings about using computers.*
8 *Hall Aitken, UK online centres (CMF funded) - initial report (September 2002).*

12 Many centres have done good work in drawing in new users, but others could be more proactive. An online marketing toolkit and dedicated centres support website have been set up to assist centres. Poorer performing centres will be offered support to increase quality, but where not considered compliant with grant contracts, funds will be reclaimed and the grant terminated. To date, information on attendance levels and the quality of centres is limited, and arrangements are only now being introduced to monitor them. Without closer attention to the profile of users there is a risk that resources will not be spent on target groups. It is also important that centres are equipped appropriately to meet the requirements of people with physical disabilities such as blindness and partial sight. Centres should be able to provide learners with disabilities with appropriate support.

13 **Information kiosks** have been installed in public places such as shopping centres and hospitals, offering information through a touch-screen facility. The Department of Health have installed 180 kiosks, providing advice on medical conditions and healthy living, but it is unclear whether funding will continue. An initial evaluation found that, although 42 per cent of people in the surrounding area had visited the location, of these, just 7 per cent had used the kiosk[9]. In 2001 and 2002 a separate pilot scheme installed kiosks in 212 Post Offices in Leicestershire and Rutland. These offered a broader service, providing advice and, in some cases, the opportunity to interact with organisations such as the Department for Work and Pensions, the Inland Revenue, local authorities, voluntary bodies and commercial bodies. Although popular, in October 2002 ministers decided not to take forward a publicly funded service on the grounds that it would neither significantly improve government departments' ability to meet their objectives nor generate a viable level of income for Post Office Limited and its branches. However, there is commercial interest in placing kiosks in Post Offices and a service is likely to be piloted in Cornwall in 2003.

14 The Government has sought to encourage wider home access, but this has raised some legal and practical issues. The Department for Education and Skills distributed 24,000 **refurbished computers** to disadvantaged groups in 2000-01, including older people, at a cost of £7.1 million (£296 per machine). These costs reflect delivery, installation, maintenance, software, a printer and an operating system. The project encountered problems in sourcing and distribution, as well as legal problems, and there are currently no plans to continue. However, most participants were satisfied with their computer. Another scheme - Wired Up Communities - which has so far connected 9,000 homes and other locations to the internet, experienced similar problems.

15 The Government sees **digital television** as an additional platform for delivering services to citizens. In May 2002, MORI estimated that 43 per cent of viewers had access to digital television[10], and a significant number are older people. The Government will maintain existing analogue services until everyone who currently receives public service broadcasting channels can receive them digitally and switching over to the digital service is an affordable option. The target timetable for meeting these criteria is 2006-2010. As a measure of affordability, the Department for Culture, Media and Sport consider that 95 per cent of consumers should have access to digital equipment before analogue transmissions can be switched off.

9 University of Plymouth, Evaluation of NHS Kiosks (December 2001).
10 MORI, Digital Television 2002 Final Report (May 2002).

3 Digital television services being developed by government departments

UK online This is the digital television version of the UK online internet portal. The Office of the e-Envoy envisage that the service will provide a single point of access for viewers wanting to obtain information from and interact with government departments.

The Pension Service Information is available on planning for retirement, approaching retirement and being in retirement, including private pensions and related services. Interactive features include ordering leaflets, online survey and state pension age calculator. For those who receive State Pension into their bank accounts, there is a 'change of circumstance' reporting facility.

NHS Direct Four separate services have been tested, including programmes and videos on healthy living and a television version of the NHS Direct website, offering advice on common medical conditions.

16 Two departments - the Department of Health and the Department for Work and Pensions - as well as the Office of the e-Envoy are piloting public digital television services (at a cost of £9 million), and a further 19 departments and agencies plan to do so. The services are at an early stage **(Figure 3)**.

17 Departments and agencies already rely heavily on **call centres** (examined in the NAO report *Using call centres to deliver public services* HC 134 Session 2002-03) to deliver electronic services and they have been successful in attracting older people. We examined three Department for Work and Pensions centres aimed specifically at older people. One of them, the Pensions Direct centre, received 1.1 million calls in 2001-02, and of the estimated 490,000 people due to retire in 2001-02, 63 per cent chose to complete the retirement pension claim form over the telephone. NHS Direct now have a target to increase awareness and usage among older people from 11 to 20 per cent.

18 The success of all these initiatives will depend on how the benefits are promoted. Departments and agencies spent at least £14 million in 2001-02 advertising e-services, but understanding of the **UK online** brand among older people remains low despite a national campaign in 2001. While national advertising may help to raise awareness, local UK online centres need to encourage older people to use their facilities by demonstrating the potential benefits and opportunities for training. A number of public and private initiatives offer IT training for older people, but the closure in 2001 of the Individual Learning Accounts scheme (covered in the NAO report Individual Learning Accounts HC 1235 Session 2001-02) has closed off one avenue for support that had been used by some older people.

19 Older people are more likely to use government websites if the content is perceived as interesting and relevant to them. The governments of the United States of America and Canada, for example, have set up 'portals' specifically for older people. Such an approach provides a focus for marketing of e-services to older people and allows government to consult with users online and provide tailored information and services. There is no general government portal for older people in the United Kingdom, although The Pension Service website, as well as providing information on state and private pensions, does provide links to other services that may be of interest to older people. The Office of the e-Envoy are currently looking at candidates for developing services around different customer groups, one of which is older people. In addition, the UK online website contains a pensions and retirement information portal.

Government is making progress in providing accessible electronic services for older people, but there is room for considerable improvement

20 The impact of the ageing process can prevent older people from accessing e-services. Like other people, older users value interesting and easily found content, and simple navigation. In addition, many with poor vision are looking for larger than normal font size. The Office of the e-Envoy expect departments and agencies to make their websites accessible and usable by everyone. They have issued guidance on the accessibility of websites that incorporates best practice. The Office promote their own website (www.ukonline.gov.uk) as an exemplar, and have begun to review departmental sites and discuss necessary improvements. Many public bodies have voluntarily taken steps to enhance accessibility, and the Disability Discrimination Act 1995 makes it a requirement to provide services for disabled people of the same standard as for other users.

21 The accessibility and usability of government websites is improving, but many of the 65 we examined (considered likely to be of interest to many older people) do not yet meet widely accepted best practice standards. None fully complied, and most met between four and six of the 10 criteria we scored against. Performance was best on physical appearance factors, such as clear navigation and the ability to alter the size of text, but only 25 per cent passed testing using software that checks automatically whether a website complies with important elements of accessibility guidance. Very few public bodies had yet implemented technical guidance from the Office of the e-Envoy on, for example, standard access keys, or have a PICS rating, which would have a bearing on whether people can find and use government websites. Nevertheless, there is evidence that a considerable number of government websites are now being upgraded to make them more accessible.

22 Existing government websites might be more accessible if older people were able to use a third party to act as an intermediary. Such an approach would enable the customer to use a suitably qualified person to complete the details on-line on their behalf. The 'Citizens Connect' project is at the forefront of such initiatives and aims to use Citizens Advice Bureaux to provide wider access to government e-services. Wider roll out of the £20 million project in early 2004 will depend on whether the 2,000 bureaux in England and Wales are convinced of its benefits and are able to support the training and other associated running costs.

23 Delivery of information and interactive services via digital television is still developing, and has considerable potential to provide services for viewers with sensory and physical impairments. The Digital Television Action Plan developed by the Department of Trade and Industry and the Department for Culture, Media and Sport, in partnership with public and private sector stakeholders, includes consideration of the needs of people with disabilities, many of whom are older people. However, the way in which interactive services are delivered currently via on-screen menus makes them largely inaccessible to many older people who are blind and partially sighted.

24 Piloting work by the Department for Work and Pensions and the Department of Health of their digital television services has identified a range of problems, and is allowing these Departments to understand better how they will need to develop the service. The piloting of information kiosks has also identified a range of improvements. In neither case have accessibility standards yet been developed comparable to those for websites.

Recommendations

25 Encouraging greater use of computers and the internet is a major challenge. To try to attract more older people and other low users, we recommend:

The Office of the e-Envoy should:

(i) clearly define and publicise how they intend to measure progress towards the target of universal access by 2005, and the criteria for assessing when the target is achieved, as well as consider setting and monitoring a specific target for usage among older people to focus attention on this group (paragraph 1.13);

(ii) undertake periodic surveys of the public (of which older people would be a key subset) to ensure that they continue to understand the barriers to using e-services (which may change as technology and the characteristics of the population change), and to identify what features and services are attractive to them. Research on client group characteristics should be disseminated widely to departments and agencies likely to provide services used by older people to avoid unnecessary duplication of effort (paragraphs1.15-1.18 and paragraph 3.4);

(iii) encourage organisations - for example, registered social landlords - in regular contact with hard-to-reach groups, such as older people and those on low incomes, to build on existing innovative developments, such as the training and facilities provided through the London and Quadrant Housing Trust, to introduce older people to the benefits of new technology (paragraph 2.34, Figure 17);

(iv) undertake a targeted marketing campaign with specialist voluntary sector organisations, such as Age Concern and Help the Aged, and in media most commonly used by older people, including television, magazines and local newspapers, to highlight the benefits from using e-services and draw attention to the main services available electronically, including NHS Direct, online pensions advice, local government information sites, as well as the availability of training. This should take account of lessons learned from previous e-services campaigns, and evidence of what kind of marketing works with groups of older people (paragraphs 2.31-2.33);

(v) consider the business case for developing an attractive government portal for specific customer groups such as older people, in the light of experience elsewhere, as the focus for a marketing campaign aimed at encouraging use of e-services by older people (paragraph 2.38);

(vi) encourage departments to explore more vigorously the scope for using intermediaries to deliver services on their behalf, for example, voluntary bodies with existing skills and knowledge of the client group (paragraph 3.18);

(vii) develop the monitoring established in 2002 to examine the accessibility of government e-services and websites against accepted best practice (perhaps by following up and developing the NAO's survey for this examination and the work of Age Concern and the RNIB) to ensure minimum standards are achieved and to provide advice where websites are below standard (paragraph 3.15);

(viii) ensure that the requirements of those with disabilities are taken into account in any further development of government digital television and information kiosk services (paragraphs 3.21-3.30).

The Department for Education and Skills should:

(ix) set up quality control arrangements to measure the service provided by UK online centres and take-up amongst hard-to-reach groups, and to arrange periodic unannounced inspections to monitor performance, in order to allow assessments about which UK online centres should continue and help ensure resources are used on target groups. (We note that the Department for Education and Skills are working with UfI to agree quality control and monitoring arrangements when UfI assumes responsibility for support services for UK online centres in April 2003. (paragraph 2.11)).

Local authorities should:

(x) monitor the performance of UK online centres in libraries to help ensure that resources are used on target groups (paragraph 2.11).

The Department for Education and Skills/Local authorities should:

(xi) encourage a more proactive approach towards hard-to-reach groups, to promote awareness and encourage use of UK online centres, based on evidence of what works, for example, visiting older people with lap top computers to demonstrate the benefits of computers, as already undertaken, for example, by Age Concern (paragraphs 2.33-2.34).

All departments and agencies should:

(xii) not develop further major interactive digital television services independently until existing pilots demonstrate a clear business case for the medium, and should encourage close co-ordination across government in order to ensure a common approach to branding, layout, navigation and consideration of the user perspective (paragraph 2.24);

(xiii) continue to review their e-services against best practice in terms of accessibility (paragraph 3.8).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Approaching retirement
In retirement
About The Pension Service

Part 1

The use of e-services by older people

1.1 In 2000, there were some 11 million people of pensionable age in the United Kingdom (18 per cent of the population), and the number is expected to grow to approximately one quarter of the population by 2040[11]. Collectively, they are major users of public services provided by both central and local government. Fifty per cent of social security budgets are spent on those aged 65 or over, while older people consume some 40 per cent of NHS expenditure[12], and make considerable use of public transport and libraries.

1.2 In recent years, the Government has sought to encourage the use of new technology to help improve the delivery of public services. Previous National Audit Office reports[13] have focused on the development and management of electronic services (e-services) in order to meet the target that all government services are available electronically by 2005. This report looks further at e-services from the perspective of users. In particular, it focuses on older people, who, to date, are one of the groups who have shown least interest in e-services. As well as the internet, the report examines the creation of a network of UK online centres and information kiosks, and early progress with the introduction of government services on digital television.

Older people are major users of the developing range of public services

1.3 Although older people's needs are varied, certain characteristics mean many come into contact with a wide range of public services. In general, they:

- **tend to experience health problems**: for example, in 2000, nearly half those over 75 reported having a long standing illness that limited their lifestyle[14]. Visual impairment, arthritis, and some forms of diabetes become more common with age, often requiring regular advice and intervention from medical services;
- **tend to have lower incomes than other age groups**: older people are entitled to a range of benefits, which may lead to an increased likelihood of contact with The Pension Service and local authorities;
- **experience a number of significant life changes**: retirement, moving to sheltered housing, or bereavement all bring contact with public services. For example, bereavement of a spouse may lead to contact with the NHS, Registrar of Births, Deaths and Marriages, and the Inland Revenue;
- **become eligible for certain targeted services**: for example, many GP practices offer preventative 75 year health checks; and
- **have more time available than other age groups**: after retirement, many people tend to have more opportunities to engage in educational or volunteering activities.

Government is developing alternative ways for people to access public services

1.4 There are a number of traditional means of accessing public services. For example, information about benefits has been obtained face-to-face at a local office, or by requesting a home visit. A considerable number of older people prefer to communicate with public bodies by letter. There are also well established routes for public services to offer information to their clients, for example, by placing information leaflets in post offices and community centres, or advertising in local and national newspapers.

1.5 In recent years, the public sector has sought to develop new options for interacting with clients, recognising that no one means will satisfy every circumstance. This has led, for example, to:

- the piloting of one-stop-shops, where visitors can receive advice on a wide range of different services. Many local authorities have set up high street offices which deal with all the services provided through their different departments;

11 *Government Actuary's Department, 2000-based Population Projections for the United Kingdom (2002).*
12 *Department of Health, National Service Framework for Older People (2001).*
13 *Government on the Web II (HC764, Session 2001-02), Better Public Services through e-Government (HC704-1, Session 2001-02).*
14 *National Statistics, Social Trends UK (2001).*

- the establishment of call centres such as NHS Direct (examined in the NAO report NHS Direct in England (HC 505 Session 2001-02)), which can provide services accessed from home; and
- services for those who do not speak English. For instance, the Department for Work and Pensions' Pensions Direct call centre offers access to interpreters who can speak to callers in a variety of languages.

1.6 Many departments and agencies are now also using electronic means to deliver services. By doing so, they aim to increase choice for clients, and offer easier to use, better quality and more innovative provision. To help meet the target of making all government services available electronically by the end of 2005, Government expects to have invested some £6 billion in e-services by March 2006. Central government departments and agencies have identified 581 potential services and, by summer 2002, 304 were available electronically. There are also initiatives to increase use of e-services via public internet facilities.

1.7 Much attention has been focused on the use of computers, but e-services may also be provided in other ways - digital television, electronic information kiosks and via telephone (see below).

- **Digital television**: Digital television (DTV) can be received via satellite, cable, terrestrial (via an aerial) or DSL (via the telephone line). Some services on DTV platforms require a subscription, and the platform operator provides the necessary equipment, such as a set-top decoding box. Some services are available on satellite without a subscription, and digital terrestrial television is all free-to-view. Viewers can use a remote control or keyboard to access services such as banking and home shopping. A small number of departments and local authorities are piloting the delivery of services via digital television.
- **Electronic information kiosks**: Electronic kiosks are being placed in public places such as shopping centres, GP surgeries and pharmacies. A common example is a kiosk providing tourist information. Kiosks tend to employ touch-screen technology to allow users to search for information that is stored in the memory of the kiosk. It is also possible to equip kiosks with keyboards and connect them to the internet, so that users can interact with the organisation that owns the kiosk.
- **Telephone**: Many government departments and agencies operate call centres that allow callers to obtain information, request leaflets, submit claims or make payments.

1.8 Developments in the public sector mirror those in the private sector. Many banks and insurance companies now enable customers to handle their financial affairs via a call centre or website. Retailers have created websites allowing customers to order goods from home at times convenient for them. These also offer opportunities for personalising services. For example, a retailer can record the types of goods commonly bought by a customer, and then offer information on similar products. Increasingly, businesses such as banks see digital television as a new way of providing services.

E-services potentially offer older people a range of valuable services

1.9 The Government recognises that not everyone will want to use e-services. By far the most important reason given[15] for not using the internet is 'lack of interest'. Many do not believe that new technology will make it easier to deal with government. In September 2002, 73 per cent of adults who had never used the internet (representing around one third of all adults) said they were very unlikely to do so in the next year[16].

1.10 However, while it is difficult to generalise, there are a number of characteristics of many older people that make e-services potentially valuable to them. For example, many:

- **experience mobility and health constraints**: although many older people remain healthy, 35 per cent of those between 65 and 74, and 48 per cent of those 75 or more have long-standing illnesses which limit their lifestyle[17]. The availability of easier forms of communication could assist those unable to leave home;
- **need information on a wide range of issues but are unsure of how to find it**: internet portals and electronic kiosks allow older people to gain information on health, consumer rights and benefits from one source, saving time and effort;
- **wish to maintain their independence**: technology already exists for people to consult doctors and monitor their health using telephone and video links, so avoiding the need to move into a home. Social landlords such as the London and Quadrant Housing Association allow tenants to report the need for repairs electronically, helping them handle their affairs more efficiently;
- **want to remain active**: few (7.6 per cent of men over 65 and 8.2 per cent of women over 60)[18] work beyond state retirement age. Many retired people

15 *National Statistics Omnibus Survey (October 2002).*
16 *National Statistics Omnibus Survey (October 2002).*
17 *National Statistics, Social Trends UK (2001).*
18 *National Statistics, Labour Market Trends (July 2001).*

turn to hobbies and interests (family history being a particularly popular example) for which computers and the internet have considerable value;

- **engage in learning activities**: in 2001, 22 per cent of people aged 65-74 and 12 per cent aged 75 or more[19] took part in some kind of adult learning, for which the internet can be a valuable information resource; and
- **live alone or away from relatives**: the likelihood of living alone increases with age. In 2000 50 per cent of those over 75 were living alone[20]. Many people have families abroad. E-mail offers the possibility of easy contact.

1.11 The Government believes there are strong business reasons for wider use of e-services. The Pension Service, for example, aim to conduct much more business in the future via telephone and email. Their current e-business strategy acknowledges they must accommodate the needs of all users, and continue to offer face-to-face contact and home visits if required. In the longer term, however, using e-services to deal with large numbers of older people for routine contacts could lead to major savings.

1.12 Potential benefits will only be realised if large numbers of people can see value in using e-services. Our report on the Inland Revenue[21] stressed the need to offer additional benefits to persuade potential customers, such as a more convenient and easy-to-use service or a cash saving. Given current low levels of take-up among older people (see paragraph 1.16), it is essential that services are developed with content of interest and use to them, which they believe will work effectively.

There are wider benefits in ensuring that everyone who wants it can have access to the internet

1.13 As well as the goal of making all government services available electronically by the end of 2005, the Prime Minister set the target that everyone who wants it should have access to the internet by the same point. Meeting this will also contribute to broader Government goals and key elements of Government policy for older people. For example, it would help to:

- **promote equity**: Government e-services offer the prospect of a faster service, greater convenience, a simplified process, or even a cost saving. People without access to e-services may be left with a second class service or potentially none at all;
- **avoid discrimination**: The Disability Discrimination Act 1995 states that those who provide goods and services to the public must take reasonable measures to ensure they are not discriminating against disabled people. It is against the law to offer a disabled person a service inferior to that offered to others. In the United States of America, legislation specifically requires federal agencies to ensure that their e-services are accessible to all citizens[22];
- **develop innovative services**: e-services provide opportunities to deliver services in new or better ways, for example, by completing forms with data already held by government in order to avoid duplication of effort;
- **involve citizens**: In 2002, an online consultation (Seniorspeak) was organised by the Hansard Society to convey the views of older people, their families and carers to the Westminster and Edinburgh Parliaments on the subject of long-term care and health. More than 170 people, including Members of Parliament, contributed; and
- **encourage independent living**: It is Government policy to enable older people to live independently as long as possible. Technology such as personal alarm services and tele-medicine can help.

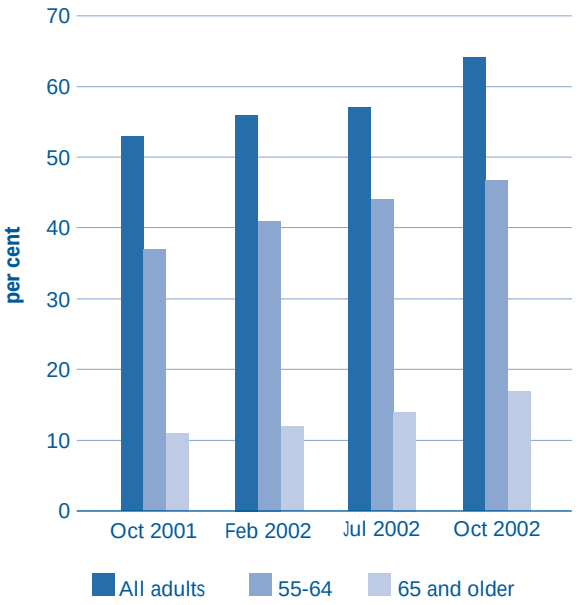
A range of barriers have deterred many older people from using e-services

1.14 Access to new technology is taken for granted by millions of people. Many have learned to use a computer at school or at work, and have acquired one for home use. As a result, the use of the internet has grown rapidly over recent years. The number of households with access trebled between 1999 and 2002, and in September 2002 an estimated 62 per cent of adults in Great Britain had access at some time[23].

1.15 Concern has been expressed in this country and abroad about a 'digital divide' between those who are computer-literate and have access to information technology and those who, for a variety of reasons, do not. Commonly, these are considered to include older people, the disabled, those on low incomes, and other

19 *NIACE, Winners and losers in an expanding system: The NIACE survey on adult population learning, (2001).*
20 *National Statistics, Living in Britain: Results from the 2000-01 General Household Survey (2001).*
21 *e-Revenue (HC492, Session 2001-02).*
22 *Section 508 of the 1973 Rehabilitation Act, as amended by Congress in 1998.*
23 *(October 2002) National Statistics Omnibus Survey.*

4 Internet usage by adults in the UK



Source: National Statistics

groups such as those with literacy and numeracy difficulties. Differences between particular groups can be significant. For example, 80 per cent of those in the highest income level have access at home compared with 10 per cent in the lowest.

1.16 Evidence from a range of surveys[24] over a number of years shows that older people are much less likely to use electronic services than other age groups. In September 2002, only 17 per cent of those 65 or over had used the internet, compared with 94 per cent of those aged 16-24 and 47 per cent of those aged 55-64[25] **(Figure 4)**. Where older people do use it, it is for e-mail or to access information for learning and education, fact-finding (for example, about benefits, pensions and health issues, or via newspaper web pages, on world events), and for information on travel and hobbies. In general, older people have been reluctant to shop or bank on-line due to concerns about security.

1.17 Other countries show a similar pattern of lower usage by older people, although direct comparisons are difficult as surveys in other countries use different age ranges. In the United States of America, 37 per cent of people over 50 had used the internet by September 2001, compared with 64 per cent of people aged between 25 and 49[26]. Similarly, 19 per cent of Australians aged 55 and over had used the internet in the 12 months to November 2000, compared with 64 per cent of those aged between 25 and 39[27].

1.18 Research has shown that a range of factors deter particular groups of people from making use of e-services. Among all age groups, the most common reason given was 'lack of interest'[28]. Some 37 per cent of adults who had not used it, gave this as the reason. Drawing on our focus groups, as well as published research, we identified eight key factors that specifically deter older people **(Figure 5)**.

1.19 However, there are also encouraging signs. In our discussions with groups of older people - both with and without experience of IT - there is clear evidence that they were not technophobes. Indeed, their feelings about computers tended in principle to be positive. Moreover, older people increasingly do not see the internet and new technology as solely for the young. There is considerable evidence that, when shown the benefits and uses that can be made of the internet, many older people are interested in learning more. And those who had used computers felt it had made a positive difference to their lives and had been easier to master than expected.

1.20 There are other grounds for assuming that the figure will rise naturally. While the oldest generations have the least interest, around three times as many of the 55-64 cohort have used the internet[29]. Many of this group have acquired IT skills in the workplace. Word of mouth is also likely to extend take-up. At the same time, other factors, in particular health barriers, are likely to persist and may place a natural limit on take-up, unless there are technological developments to overcome these problems. However, even this may be more about perceptions, since technical solutions are available to help those, for example, with poor sight.

1.21 In Part 2 we look at what government is doing to extend opportunities for older people to access a range of electronic media and in Part 3 at what the Office of the e-Envoy and other departments and agencies **(Figure 6)** are doing to ensure government e-services are accessible to all. Details of our methodology are at Appendix A.

24 Including National Statistics, Internet Access: households and individuals (2002); KPMG Consulting, Is Britain on Course for 2005? (2002); Age Concern IT, The Internet & Older People (2002).
25 (October 2002) National Statistics Omnibus Survey.
26 US Department of Commerce, A Nation Online; How Americans are expanding their use of the internet (February 2002).
27 Australian Bureau of Statistics, Use of the Internet by Householders, Australia (Final Issue) (February 2001).
28 National Statistics Omnibus Survey (October 2002).
29 National Statistics Omnibus Survey (October 2002).

5 Factors that need to be addressed when encouraging older people to use e-services

- **The physiological effects of ageing**: Effects include diminished vision and hearing, plus hand-eye co-ordination and psycho-motor impairments. Some of these effects are accelerated by the onset of degenerative diseases and conditions such as arthritis, diabetes and cataracts. While glasses or surgery can correct many eyesight problems, age causes the eye lens to yellow, making it more difficult to distinguish colours. The Royal National Institute of the Blind estimate that 75 per cent of the 1.1 million visually impaired people in Britain are aged 75 and over. Restricted hand movement, whether due to arthritis or osteoporosis, makes it difficult to use a computer mouse or keyboard.

- **A lack of confidence or familiarity with new technologies**: Many older people and disadvantaged groups have not had the opportunity to learn how to use computers at work. Our focus groups suggested that the lack of opportunity to become familiar with the technology can create fear, including concern that they would break the computer or become addicted to the internet. In a KPMG Consulting survey in 2000[30], 36 per cent of older people who did not use the internet said that the main reason was that they did not understand it. Training or taster events are effective means of overcoming this obstacle. Our focus group research found that even limited exposure to government websites whetted the appetites of participants to explore them further. Similarly, interest increases the more people use the internet, suggesting that exposure to it could well increase people's willingness to use government e-services.

- **Costs**: Average annual income is lower for older people than other age groups, and state benefits are the main source of income for many pensioners. As a consequence, not having the financial means to buy a computer, software, training and meet the telephone expenses prevents many people from accessing the internet. Many are concerned at the potential costs; for example, of being online. Having easy access to the internet is essential if people are going to use government e-services. Providing good public provision of such facilities is one solution. However, market research indicates that people with internet access at home tend to use it more frequently than those who access it outside of home or work[31].

- **Language**: If e-services contain too much jargon and technical information, the content will not be accessible. Moreover, older people who do not speak English as their first language will find it difficult to use computers to access the internet. Keyboards are mostly in English and are not usable for those languages that use a different character set. Solutions can include providing information in more than one language, offering interpretation services, and offering services via intermediaries such as community groups.

- **Learning and skills**: Some user groups can be disadvantaged because they lack the educational skills to use new technologies. For example, some 20 per cent of the population have some literacy difficulty[32]. General education varies greatly among older people, and current mainstream technologies assume literacy skills and require the user to sift through large amounts of often complicated information. BMRB found that interest from pensioners was higher among those with academic qualifications[33]. Pensioners were more likely than other groups to say that they have difficulty filling in forms.

- **Lack of perceived value**: Using government e-services is unlikely to be the main reason for older people to want to use the internet. E-mail, leisure activities, education and hobbies are the most popular uses of the internet among older people. When dealing with public services, they have a strong preference for face-to-face discussion. A MORI survey commissioned in support of the National Audit Office report on Tackling Pensioner Poverty (HC37 Session 2002-03) established that 50 per cent of pensioners seeking information and advice on benefits would prefer staff to visit them at home, and 38 per cent would prefer to talk to someone in person. Similarly, KPMG Consulting found that only 24 per cent of pensioners wanted to use government electronic transactional services[34]. Participants in our focus groups tended to be more interested in learning about computers in order to 'keep up with the times' rather than to use any particular electronic service. The participants, especially those who had not used computers, often felt that the internet was of no relevance to them.

- **Location**: Older people tend to use publicly available e-services more if they are located in places that they would normally visit. For example, they are less likely than younger people to visit internet cafés, but may feel more comfortable using services in community centres or libraries.

- **Inaccessible design:** Inaccessible web designs can mean that they cannot be read by the access technology, such as screen readers, that many people with disabilities rely on.

30 *KPMG Consulting, Silver Surfers: The power of older people online (November 2000).*
31 *BMRB, Attitudes to electronic methods of conducting benefit business (2002).*
32 *Department for Education & Skills, Fresh Start: Basic Skills for adults (March 2000).*
33 *BMRB, Attitudes to electronic methods of conducting benefit business (2002).*
34 *KPMG Consulting, E-Government for all (2001).*

6 Role of the Office of the e-Envoy in encouraging take-up

The Office of the e-Envoy, part of the Cabinet Office, have overall responsibility for meeting the objective of ensuring that everyone who wants it has access to the internet by 2005. As part of this commitment, the Government aims to:

- work to integrate all government internet access initiatives into one branded programme called UK online;
- complete a network of 6,000 UK online internet access centres by the end of 2002 and work to sustain and improve the range and quality of services they offer;
- support a local and national advertising and marketing campaign, both to raise awareness of the benefits of the internet, and to direct non-users to UK online services;
- recognise information and communication technology (ICT) as a basic skill and continue working to embed it in the education system and throughout lifelong learning; and
- continue working with industry to help people trust the internet.

The Office of the e-Envoy have been concerned to ensure that departments are providing e-services that are useful and used by the public, including older people. They have co-ordinated activities to improve physical access to the internet, encouraged departments to analyse the types of customer they serve and to tailor their services accordingly, and provided guidance to ensure departments develop e-services accessible to all.

The role of government departments and agencies

While the Office of the e-Envoy can provide advice to departments and monitor developments, they have no direct control over progress. Departments and agencies are responsible for delivering services to the public, and for developing initiatives to widen access to e-services. Many departments are investing in e-services so as to increase the reach and quality of their services, in part driven by the need to achieve a return on this investment.

All the main central government departments submitted e-business strategies to the Office of the e-Envoy in summer 2001, showing their commitment to making their services available electronically by 2005. The e-Envoy expects them to focus on improving their understanding of the pattern of service provision that will be most useful for different groups of customers, filling any significant gaps in their strategies and delivering the services promised in them. Departments must comply both with guidelines issued by the Office of the e-Envoy on website design and with the Disability Discrimination Act's statutory Code of Practice on rights of access to goods, facilities, services and premises for disabled people.

Part 2

Extending opportunities for older people to access e-services

2.1 Part 1 highlighted barriers to greater use of e-services among older people. This part examines what government is doing to improve access to e-services from public places and from home. We examined four types of initiative:

- **community access** - to overcome the problem that many people do not have a computer at home and, in many cases, are unable to afford one. Access in public places also enables those unfamiliar with technology to seek advice;
- **home access** - to overcome reluctance to using new technology in front of others;
- **advertising** - to overcome lack of interest due to lack of knowledge of the benefits or existence of services; and
- **training** - to overcome lack of familiarity with information technology, either by providing training courses directly, or by offering funding to find suitable training.

2.2 The Government is investing in a number of different projects of particular relevance to older people. The National Audit Office examined a number of these which together will cost more than £450 million over a period of several years **(Figure 7)**.

7 Projects to improve access to e-services

Project	Estimated cost 1999-2003
Community access	
UK online centres. Setting up local places for people to meet, learn how to use computers and have easy access to the internet for free or a nominal charge.	£370 million
Wireless Outreach Network. Providing wireless laptop computers to adult learning and community groups to promote access to IT for socially and economically disadvantaged adults.	£7.9 million
Electronic Kiosks. A means of providing access to parts of the internet in public places. Such kiosks tend to be vandal proof machines that rely on information downloaded regularly from the internet for people to access using touch-screen technology.	£26.5 million on pilots
Home access	
Providing refurbished equipment. Giving computers or digital television set top boxes to targeted groups of people. Initiatives include Wired Up Communities and Computers within Reach.	£13.5 million
Digital television. The technology allows the user to receive a much larger range of broadcast channels and information than the traditional analogue service and to send information back to the broadcaster via a telephone link or cable.	£9 million on pilots
Telephone call centres. Providing a call centre that people can telephone for government services and advice. Department for Work and Pensions centres relevant to older people include Pensions Direct, the retirement pension teleclaims centre and the Minimum Income Guarantee teleclaims centre.	£6.2 million a year on Pensions Direct, the retirement pensions teleclaims centre and the Minimum Income Guarantee teleclaims centre
Training	
The Government is developing a range of initiatives that have helped to provide computer training for older people. The NAO examined a number of these: ■ the Cybrarian Project, managed by the Department for Education and Skills; ■ Individual Learning Accounts (which concluded in 2001); and ■ a variety of pathfinder projects, through which the Office of the Deputy Prime Minister is supporting local authority initiatives to increase access to computers.	Cybrarian Project- £22.5 million ILAs (spending on IT not separately identifiable)

Source: National Audit Office

The Government is promoting community access to e-services

2.3 Providing computer equipment in public places, such as a library, an internet café or a shopping centre, has been the Government's main method of improving access to the internet for older people and the disadvantaged. Similar approaches are under way elsewhere **(Figure 8)**. They offer a number of benefits - a computer in a public place can be used by many people - and make better use of existing resources, for example, by providing another reason for people to use libraries and colleges.

2.4 There are two major initiatives to provide public access to the internet: UK online centres and electronic information kiosks.

(a) UK online centres

2.5 These are computer facilities in a range of locations, including high street premises or public libraries, community centres, colleges and local authority buildings, with staff available to help people access the internet (Case study A on page 22). The development of UK online centres is founded on three initiatives **(Figure 9)**.

2.6 In September 2000, the Prime Minister stated that there would be over 6,000 centres by the end of 2002. The Office of the e-Envoy were responsible for meeting the target, while the Department for Education and Skills and the Department for Culture, Media and Sport were responsible for establishing the centres. The departments were to do this by setting up Information and Communication Technology centres, putting UK online centres into libraries, and by inviting existing internet centres to be rebranded as UK online centres. The Prime Minister announced at the e-Summit in November 2002 that the target had been met six weeks ahead of schedule **(Figure 10)**.

2.7 The People's Network programme (see Figure 9) to create Information and Communication Technology centres in all public libraries has made good progress, with 1,951 public libraries having taken UK online branding by the end of December 2002. Resource, who are managing the project, estimate that up to a further 1,150 libraries in England offered internet access facilities by the end of December 2002, but had not yet received UK online accreditation.

8 Other countries are seeking to provide community access to the internet

Australia. The Networking the Nation programme allocated A$421 million to fund the development of IT infrastructure, community access facilities and training. In addition, the Department of Transport and Regional Services had a A$70 million programme to provide places for people in rural communities to access the internet.

Canada. Industry Canada aims to provide Canadians with affordable public access to the internet through the Canadian Access Program. There will be 10,000 centres in schools, libraries and community centres offering public access to the internet.

European Union. Many member states have developed their own programmes:

- **Finland.** The Government has a target that there should be one public access terminal per 1,000 people. This has been achieved in 30 per cent of municipalities. Some 180 Government Citizens Offices and over 900 libraries provide internet access.
- **The Netherlands.** In 2001 there were 1,050 public internet access points in the Netherlands, equivalent to one for every 15,000 people[35].
- **Sweden.** In 2001 there were some 3,400 public internet access points equivalent to one for every 2,600 people.

35 *Commission of the European Communities, e-Inclusion: The Information Society's potential for social inclusion in Europe (2001).*

9 There are three initiatives to provide UK online centres

- **Information and Communication Technology learning centres.** The scheme aims to provide centres in the most deprived local authority wards in England, or rural areas with significant transport problems, to give internet access to disadvantaged groups. The project was allocated £199 million of capital funding from the Capital Modernisation Fund and £77.5 million from the New Opportunities Fund to support running costs. Local groups interested in setting up such a centre seek advice from their local Government Office for the Region to apply for funding. The Department for Education and Skills and the New Opportunities Fund Board took the final decision on whether to provide capital and revenue funding respectively.
- **The People's Network**. Resource (the Council for Museums, Archives and Libraries), in collaboration with the New Opportunities Fund, set out to provide computers and internet access in over 3,000 libraries in England by the end of 2002. In England the network received £77.5 million funding from the New Opportunities Fund to provide libraries with ICT equipment and connectivity and a further £16.2 million to train library staff in information communication technology skills and learner support.
- **Internet cafés and community schemes.** The Department for Education and Skills have also invited existing centres, such as internet cafés and community-based projects to apply for the UK online centre brand. Although no funding is available, they benefit from the national marketing and communication campaigns and from practical support.

2.8 Progress in setting up Information and Communication Technology centres in more deprived areas, funded by the Capital Modernisation Fund and New Opportunities Fund, was slower than planned. Only 750 were open by the end of August 2002, against a plan of 2,000. However, 2,840 such centres had been opened by the end of 2002.The Department for Education and Skills agreed a joint application process with the New Opportunities Fund to prevent applicants from needing to complete two forms. An evaluation by the Department for Education and Skills found that the majority of applications were processed within six months. Applicants had to wait until signed contracts were in place before receiving capital and revenue funding, and in practice they often had to wait several weeks between receiving approval for the capital funding and the revenue funding.

2.9 Applicants also faced funding difficulties. Most of the monies available (72 per cent) were ring-fenced for capital expenditure, with only £77.5 million for running costs. New Opportunities Fund officials and staff at the Government Offices for the Regions have worked closely with applicants to find alternative sources of funding and to trim anticipated running costs so projects can proceed.

2.10 The Office of the e-Envoy estimated that 98.6 per cent of the population in England would live within 5 miles of a UK online centre when the network was rolled out, giving almost full national coverage. However, the Department for Education and Skills have had difficulties in determining how many people have used the existing centres funded by the Capital Modernisation Fund because around 60 per cent are not submitting regular management information each quarter, despite a requirement to do so. Data from 576 centres that did so for the quarter ending September 2002 showed around 66,300 new users - equivalent to nine per centre each day. Of these, nearly 15,300 were aged over 55, 5,900 people were disabled, 3,500 had been unemployed for over 6 months and 13,200 were from ethnic minorities.

2.11 An interim evaluation report[36] on the UK online centres (March 2002) found that 80 per cent of users had access to the internet elsewhere (although over half had never sent an email or used the internet and so needed support and guidance), and there are significant variations in the performance of centres in attracting target groups **(Figure 11)**. The New Opportunities Fund consider it is not unusual at an early stage of a funding programme for the most disadvantaged groups to remain wary of computer training opportunities. The New Opportunities Fund staff visited approximately 15 per cent of centres through launches and pre-arranged meetings in 2002 to discuss good practice and the challenges centres might face. To date, there are no arrangements by the Department for Education and Skills or the New Opportunities Fund to visit centres unannounced in order to assess quality, although this may form part of a revised monitoring process in future.

10 Progress in establishing UK online centres

Type of centre	Number of centres by end of 2002
Information and Communication Technology learning centres	2,840
Centres in libraries	1,951[1]
Existing centres that applied for UK online centres brand	1,550
Total	**6,341**

NOTE

1. The figure may be understated as the accreditation process for libraries to acquire UK online centre branding takes place at six monthly intervals. By June 2002, 2,356 public libraries offered internet access facilities.

36 *Hall Aitken, UK online centres (CMF Funded) - initial report (September 2002).*

CASE STUDY A: UK online centres

Introduction

UK online centres are provided in many accessible places and provide an introduction to the internet. In September 2000 the Prime Minister announced a commitment to develop a network of over 6,000 UK online centres in England by the end of 2002. The overall objective of UK online centres is to provide access to the internet and email for those who would not otherwise have access near to where they live. Centres are aimed at those with no or low Information and Communication Technology skills, including people who need help with basic skills, people from ethnic minorities, those over 60 not involved in learning activities, and people with disabilities. They are also designed to provide an affordable service for those on low incomes. The centres aim to help people to develop the skills to use the internet to access information and to explore the opportunities that new technologies offer such as for further learning and updating skills.

Centres may be publicly or privately run. The criteria for becoming a UK online centre include: supporting the government strategy for e-Government by helping people to learn how to use computers; and demonstrating clear links to other facilities such as learndirect training courses, library facilities and local colleges.

The original policy team was established in the (former) Department for Education and Employment, with a steering board which included representatives from the Department, HM Treasury, the Department for Trade and Industry, the (former) Department for Environment, Transport and the Regions, Number 10 Policy Unit, Cabinet Office, the Department for Culture, Media and Sport, UfI and the New Opportunities Fund.

How do you use the service?

Each centre is different, but they typically offer computers with staff on hand to whom people can go for advice. Details about the nearest centre and its opening hours are available by calling the freephone number 0800 77 1234 or by using the website at www.dfes.gov.uk/ukonlinecentres. Centres either charge a nominal fee or offer free training. For example, library authorities were asked to provide internet access free of charge or have policies in place to ensure that groups at risk of social exclusion can have their needs met. In the majority of libraries, access will be available at no cost to the user.

Achievements

By June 2002, 2,356 public libraries in England offered public internet access, and by December 2002 1,951 had taken UK online centre branding. An additional 1,550 existing internet centres have successfully applied for the UK online centre brand, and the Department for Education and Skills have approved a further 2,840 centres for funding in deprived areas.

The Government believes that the initiative has reached many small community organisations and disadvantaged areas, and has strengthened and created many local partnerships. The target of 6,000 UK online centres was achieved in November 2002. Regional and national awards have been held to recognise and celebrate successes of users, support staff and centres. A dedicated online resource is available for centres, along with a marketing toolkit.

Overcoming barriers

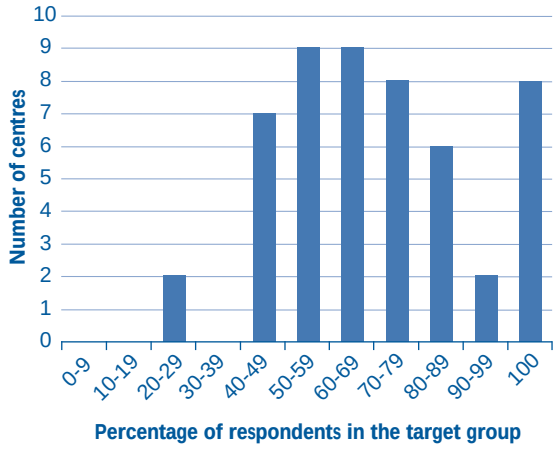
Confidence and familiarity: The centres provide support to help users learn how to use the internet, and send emails. Satisfaction rates among users with centre staff and learning materials are high, and a majority of respondents believe attending a UK online centre has increased their confidence with technology.

Awareness: Placing UK online centres in community locations has increased the visibility of e-services. However, there is little evidence that centres are actively encouraging users to try government e-services.

Social Exclusion: The centres that receive public funding are targeted at deprived areas and excluded groups. An evaluation in 2002 by Hall Aitken found that centres varied in their performance in attracting users from target groups. They found that at eight centres all the users were from target groups, while at two centres fewer than 30 per cent were from such groups.

11 The success of a sample of UK online centres in attracting people from socially excluded groups to attend

Some centres have been more successful in attracting people from socially excluded groups than others. While every user at 8 centres was from a socially excluded group, at two centres fewer than 30 per cent were.



Source: Hall Aitken 2002

2.12 The sustainability of UK online centres is a key issue. The New Opportunities Fund provision of running costs for Capital Modernisation Fund-supported UK online centres is for a maximum of three years, and only 5 per cent of revenue funds can be used for capital replacement. Although the New Opportunities Fund asked applicants to show how they intended to continue beyond the period of funding as part of the assessment process, difficulties in attracting funding from elsewhere mean that many remain dependent on public funding to cover running costs. Moreover, some of those centres best placed to reach disadvantaged target groups are likely to be least able to find funds from elsewhere. For public libraries, funding for equipment will cease in March 2003 and for training in March 2004. All revenue costs will be met by local authorities. The New Opportunities Fund stated that the Lottery is unlikely to be a source of future revenue funding for UK online centres, given that one of its principles, as made clear by Government policy directions, is that Lottery funds are for specific, one-off interventions that are time-limited.

2.13 Some Capital Modernisation Fund-funded centres face closure without further support. The funding for the first tranche finished in January 2003 and some of the more recent centres were given revenue funding for only one year. If UK online centres are forced to close, it is not clear whether there will be sufficient resources available to set up a replacement in the vicinity.

2.14 As well as UK online centres, the Department for Education and Skills have also launched an initiative to provide wireless laptop computer networks for adult learning institutions and community groups. The Wireless Outreach Network will provide £7.9 million by March 2003 to organisations which will purchase up to 25 laptops each for use in training economically and socially disadvantaged adults. The organisations are expected to satisfy the criteria used to select UK online centres.

(b) Information Kiosks

2.15 **Information kiosks** (see Case Study B on pages 24-25 for an example) are stand-alone terminals placed in public buildings, such as shopping centres, railway stations or GP surgeries. People can access information by touching the screen and using simple menus. Some provide the option to print out information to read later. We examined three separate trials **(Figure 12)**. **Figure 13** illustrates a typical kiosk.

2.16 Early evidence on the benefits of the kiosks has been patchy. Evaluation of the Post Office kiosks trial in Leicestershire and Rutland[37] found an estimated 150,000 people had used them, of whom 92 per cent rated them as 'very useful' or 'fairly useful'. The evaluation of the StartHere pilots in Scotland also established that a large majority found the kiosks easy to use, thought they contained valuable information, and

12 The development of kiosks by departments

- **Department of Health kiosks.** In April 1999, the Prime Minister announced the intention to extend NHS Direct through information points. Representatives from Age Concern, the Royal National Institute of the Blind and wheelchair users were invited to test prototypes to ensure the chosen model would be accessible and user friendly. The information on the kiosks is a downloaded version of the NHS Direct Online website, rewritten in a format suitable for touch-screen application. The Department of Health aimed to have 120 kiosks in place by the end of 2000, and over 500 by 2004. Progress has been slower than planned. The Department of Health let the contract to purchase the first 150 kiosks in September 2000, at a cost of just under £1 million. There are currently 180 such kiosks in operation.
- **Kiosks in Post Offices.** A six-month pilot was undertaken to provide kiosks in 212 Post Offices in Leicestershire and Rutland. These provided advice on how to get the best out of retirement, information on how to find work and community facilities. Additionally, four outlets provided practical opportunities to learn how to use the internet. The pilot cost £25 million, but in October 2002 ministers decided not to roll out a publicly funded service.
- **StartHere kiosks.** The Scottish Office provided £0.5 million to the charity StartHere to provide kiosks in Dumfries and Galloway. The kiosks give access to information on health, carers' concerns, children, transport, education, citizens' rights, and on money and benefits. Installation began in April 2002, primarily in police stations, hospitals and community schools.

37 *Department of Trade & Industry, Evaluation of the 'Your Guide' service of Post Offices as Government General Practitioners (2002).*

would be keen to use them again. By contrast, an initial evaluation of the Department of Health kiosks[38], in December 2001, found few people had used them. Forty-two per cent of the surrounding population had visited the building in which their health kiosk was sited in the past 12 months. Of these, 36 per cent had seen it, but only 7 per cent had used it. People over 65 were the lowest users. More than one quarter of the people who had seen it but not used the kiosk had not recognised what it was.

13 An electronic information kiosk

A kiosk in a medical centre. Kiosks cost around £6,000. Typically they have been sited in convenient, trusted locations such as pharmacies, Post Offices and health centres. Evidence to date suggests they are easy to use for most people.

2.17 Doubts remain over whether kiosks offer cost-effective services to the public. The evaluation of Post Office kiosks reported that only 15 per cent of users said that they could not have found the information elsewhere. On the basis of the pilot findings departments were unable to identify the potential for significant efficiency savings likely to result from a national scheme.

2.18 Consequently, the future of kiosks remains uncertain. The Department of Health contract for maintenance of its existing 180 kiosks terminated at the end of 2002, and they have not earmarked any funds for a further contract to run the existing kiosks or the installation of the remaining 320 required by 2004. In October 2002, ministers decided not to take forward the publicly funded kiosk service in Post Offices on the grounds that it would neither significantly improve government departments' ability to meet their objectives nor generate a viable level of income for Post Office Limited and its branches. There is a commercial interest in placing kiosks in Post Offices, but the Post Office does not currently have any plans to have them in branches. A business consortium is currently developing a scheme for commercial kiosks in Cornwall, due to be piloted in 2003. The Post Office stated that they will view the outcome with interest.

CASE STUDY B: NHS DIRECT INFORMATION POINTS

Introduction

The introduction of Information Points was announced by the Prime Minister in April 1999. These touch-screen kiosks are intended to improve access to healthcare information and facilitate better use of healthcare resources. The specific objectives of the kiosks are:

- extending public access to NHS Direct Online;
- providing access to information in supported environments;
- complementing local plans for improving access to good quality health information; and
- further raising the profile of NHS Direct.

The kiosks are specifically aimed at those members of the public who do not have access to a personal computer or who are not comfortable using standard technology, such as older people, low earners and the homeless. They contain information from NHS Direct Online (www.nhsdirect.nhs.uk) which was adapted for use on touch screens. Information on the kiosks is updated regularly via an ISDN telephone connection, which also allows monitoring of usage records.

The kiosks were positioned in a variety of locations, some of which had already been identified as 'high usage' locations by previous evaluators of other health information kiosks projects. These included: supermarkets, pharmacies, walk-in centres, A&E departments in hospitals and libraries. Less tested locations included Dover ferry terminal, cafés, job centres and leisure centres.

Each kiosk costs £6,000, delivered and installed. This does not include call charges, installation of phone lines, line rental (£99 per kiosk per year), or maintenance (estimated at £1000 per kiosk per year). The host organisation is required to meet the costs of power supply to the kiosk. The contract for supply and maintenance of kiosks was worth just under £1m in the first year (for 150 kiosks). The contract ended at the end of 2002 with as yet no plans for ongoing maintenance.

38 *University of Plymouth, Evaluation of NHS Kiosks (December 2001).*

CASE STUDY B: NHS DIRECT INFORMATION POINTS (continued)

How do you use the service?

There is no cost for using the kiosks. Touching the screen on the appropriate icons via a series of menu screens allows the user to access information on a wide range of health information including a healthcare guide, conditions and treatment look up facility, information on healthy living, and answers to frequently asked questions.

Kiosks are installed with printers, allowing users to print off the required information to be read or re-read at a later date. Some of the kiosks are also installed with a telephone to allow users to use the NHS Direct telephone helpline free of charge.

Host organisations' staff are trained in how to help users, although support is more likely in healthcare environments such as pharmacies, health and walk-in centres and hospitals, than in shopping centres or ferry terminals.

Achievements

The programme was evaluated by Dr Ray Jones of Glasgow University (now of University of Plymouth) between September 2000 and October 2001[39], using routine statistics for all kiosks, an exit poll of a sample of sites and a postal survey of people living within a 5 kilometre radius of the sample sites. Because of the early stage of the programme, problems with siting and lack of visibility, results proved inconclusive on the kiosks' role in achieving equitable access to e-services and reducing the digital divide.

Usage of the kiosks was low in comparison with earlier research of kiosk usage in Scotland in the early 1990s. This may reflect greater availability of health information or a need for better siting and visibility of the NHS Direct kiosks. Not knowing the kiosk existed or where it was sited was the second most common reason for non-use, given by 28 per cent of respondents to the postal survey. The most common reason was that people preferred to ask a health professional. Thirty-one per cent of those interviewed at the site said they did not know what it was.

Some kiosks recorded very high usage and this has continued to grow. For example, the kiosk situated at Dover ferry terminal had more than 4,000 users in February and April 2002, with average monthly usage at just over 1600 for the period since June 2001. Other kiosks recorded very low usage, such as Cornwall College with only 14 average monthly users since June 2001. Leisure centres, tourist sites and supermarkets recorded highest usage and education sites the least.

Overcoming barriers

Usability: Representatives of target user groups were invited to test and comment on kiosk prototypes, to ensure that universal usability was achieved. Touch-screen technology meant that users did not have to negotiate their way around a keyboard or mouse and a printer facility enables users to re-read information. The evaluation found that users generally found the kiosks easy or very easy to use.

Awareness: Awareness of the kiosks appears to have been low, with some kiosks positioned in less visible locations, often to ensure privacy for users. Local NHS Direct offices were responsible for awareness raising and advertising campaigns and the Department provided guidance and suggestions on how and where this might be done, although the budget for such work was limited. The Department have not evaluated the effectiveness of marketing initiatives.

39 *University of Plymouth, Evaluation of NHS Kiosks (December 2001).*

The Government is testing several ways of developing access from home but this has raised a number of legal and practical issues

2.19 While the Government has sought to promote public access, research suggests many older people prefer to access e-services from home. This may partly reflect a lack of awareness of public access points, but also a conviction that using the internet is a private activity. We examined three main developments: providing refurbished computers to those unable to afford them; developing digital television services; and the use of call centres for older people.

(a) refurbished computers have succeeded in reaching many disadvantaged groups

2.20 The rapid pace of technological development means many organisations regularly replace computers after only a few years. Recycled computers could provide access to internet services for people who do not own a personal computer, making good use of existing resources. However, there are drawbacks. Old computer equipment is likely to be unreliable and prone to break down, and there are issues about continuing legal liability. It is also difficult to eradicate existing data from a computer without physically breaking its hard disk drive, and unless IT equipment has sufficient processing capacity it will not be suitable to support specialist access technology needed by people with impaired sight. The Department for Education and Skills have run two projects, both of which have included older people **(Figure 14)**.

14 Projects to provide refurbished computers to overcome the digital divide

- **Computers Within Reach**. An initiative to purchase refurbished computers and distribute them to targeted people at a nominal price. It was originally funded with £15 million and ran from October 2000 to October 2001. There were 22 pilots in Birmingham, Hull, Leeds, Liverpool, London, Manchester, Portsmouth, Plymouth and South Yorkshire. The Department for Education and Skills let contracts with computer refurbishers and consortia to provide and distribute the computers. Recipients paid a nominal £60 for each computer and some basic training which - where applicable - was paid in instalments over several weeks.
- **Wired Up Communities**. A pilot to encourage deprived communities to use IT, including the provision of discounted computers and digital television decoding boxes. Designed to improve education, social cohesion and employment in a small number of communities, the pilot scheme provided £10 million in March 2000 to launch seven initiatives run by local partnerships.

2.21 The Computers Within Reach initiative was targeted at those receiving Job Seekers Allowance, Income Support, Incapacity Benefit, or the state pension with Minimum Income Guarantee. An evaluation[40] found the pilots were broadly successful in targeting people who did not have access to a computer, with 84 per cent of respondents reporting this was the first time their household had owned one. Most (83 per cent) were satisfied with their machine, and research concluded that the computers appeared to have had a significant positive effect on recipients.

2.22 However, there have been problems. Just under half of respondents encountered difficulties with their computer. As a consequence, many ceased to use them. The project was terminated after suppliers had distributed 24,000 machines at a cost of £7.1 million - equivalent to £296 per machine. These costs reflect delivery, installation, maintenance, software, a printer and an operating system. The scheme encountered a number of problems in sourcing and distribution. In particular:

- delays in letting the contracts and the need to replace some organisations meant suppliers had only six months, instead of the planned 12, to find the machines;
- the scheme influenced the second-hand market for computers of the required specification and, as a consequence, prices rose;
- there were legal difficulties with insuring the computers and with the responsibility for repairing defective units; and
- it proved difficult for organisations to determine if someone was eligible to receive a machine and some providers commented that the training had initially put some people off.

2.23 The Wired Up Communities initiative, launched in March 2000, aims to test whether IT could be used to improve education, social cohesion and employment in a small number of rural and inner-city areas. By December 2002, some 9,000 homes and other community locations had been connected to the internet, and set up their own online communities. An interim evaluation[41] suggested the scheme was having a positive impact. Take-up has been highest among the unemployed , those not working through ill-health, and retired people. However, the initiative has been subject to some slippage. As with the Computers Within Reach scheme, there have been problems in meeting insurance costs and attracting private sector sponsorship.

40 SQW Limited, Evaluation of Computers Within Reach: A final report to the Department for Education and Skills (2002).
41 Leeds Metropolitan University Policy Research Institute, Evaluation of Wired-Up Communities Interim Report (2002).

(b) Digital TV and call centres build on older people's existing knowledge and experience

2.24 **Digital television** (Case studies C and D on pages 29-32) offers an increased choice of channels, improved picture and sound quality, and the opportunity to interact with the broadcaster. It could provide the opportunity, for example, to shop, pay bills, talk to a care worker, or contact a relative easily. The Office of the e-Envoy are seeking to act as an exemplar for other public bodies in how to use digital television to deliver government services. In April 2002 they launched UK online Interactive, and published a draft policy framework on the use of digital television for the delivery of e-government services in October 2002. Two other departments - the Department of Health and the Department for Work and Pensions - have begun pilot services **(Figure 15)**, and we identified a further 19 departments and agencies that planned to develop them.

2.25 One advantage of this medium is that many people (including significant numbers of older people) are already familiar with the technology. Using a remote control may, for many, be more intuitive than internet services accessed via a personal computer. Multimedia content such as audio and video presentation can be used as well as text. Unlike the internet, those with one telephone line can call for assistance while using the service. However, there are risks. Interactive services are expensive to develop and the market remains volatile - as evidenced by the collapse in 2002 of both ITV Digital and DKTV (which had been involved with the NHS scheme).

2.26 Public interest in digital television suggests it has the potential to overcome the 'digital divide', although there will be need for sustained education and marketing for some groups. Forty three per cent of people are now digital viewers, with many more expected to switch within the next five years[42]. A Department for Work and Pensions survey in 2002[43] found that 16 per cent of pensioners had used digital TV, although older people are heavily represented among those who know nothing about it. The Government intends to maintain terrestrial analogue television until everyone who currently receives the main public service broadcasting channels can receive them digitally and switching to the digital service is an affordable option for 95 per cent of users. The target timetable for meeting these criteria, so that analogue signals can be switched off, is 2006-2010.

2.27 The Government has taken a careful approach to digital TV. Pilot schemes were launched with minimal publicity, and thus, early figures on take-up were low. On average, some 1,200 people per day contacted the UK online Interactive service between April and June 2002. The Department for Work and Pensions received 300 emails and telephone calls from viewers requesting a leaflet or further information in September 2002, and the typical number of callers to the NHS pilots ranged from under 10 for one pilot to around 500 a week for the Living Health project.

15 Trialling digital television services

UK online: The digital television version of the UK online portal became available on BSkyB in April 2002 and is likely to be extended to ntl and Telewest. The Office of the e-Envoy expect the pilots to cost £750,000. The aim is to provide a launch point for government services on digital TV so that all local authority and departmental websites are accessed this way.

The Pension Service: The service has been available via cable (ntl and Telewest) since May 2002 and on satellite (Sky Active) since October 2002. The pilot will end in June 2003 at a total cost of £2.5 million, of which £1.9 million is funded by HM Treasury through the Invest to Save Fund. The service provides information to people making decisions about their financial future, for example, details about the state pension and ways in which they may be able to supplement it. It also provides information about how people can review their retirement income. Viewers are able to request pension-related leaflets and report certain changes in circumstance. A telephone support service is available if viewers have any questions.

NHS Direct: The Department of Health launched four pilots to promote health issues, at a total cost of £6.3 million. These were: **Living Health** (featuring a range of TV applications including NHS Direct InVision, which allowed people to talk to and see a nurse, a system for booking an appointment with a GP through the television, and over 20,000 pages of information on local NHS services and health advice); **Communicopia** (which enabled viewers to access key sets of data from the NHS Direct website, as well as video clips and a text-messaging reminder service for vaccinations); **Channel Health** (piloted a series of broadcast programmes dealing with health and financial issues relevant to pregnant woman); **DKTV** (provided interactive television and allowed users to access local service providers and national government information via television).

42 *MORI, Digital Television 2002 Final Report (May 2002).*
43 *BMRB, Attitudes to electronic methods of conducting benefit business (2002).*

2.28 **Call centres** provide mediated access to e-services. To assess their suitability for improving access to e-services, we examined three call centres operated by the Department for Work and Pensions and used by many older people **(Figure 16)**. We also examined progress in increasing use of NHS Direct amongst older people.

16 Department for Work and Pensions call centres

- **The National Pensions teleclaims service,** introduced in 2000, is for people approaching pensionable age to complete their claim forms with the help of operators.
- **Pensions Direct** is a telephone service, available nationally since 1994, that allows people who receive their state retirement pension direct into their bank account to notify the department of any changes of circumstances and to raise any general enquiries about the service.
- **The Minimum Income Guarantee call centre,** introduced in 2000, enables older people to complete Minimum Income Guarantee claim forms over the telephone.

2.29 Compared with other methods of delivering e-services, call centres have been successful in attracting older people. In 2001-02 Pensions Direct (Case study E, pages 33-34) received 1.1 million calls, the Minimum Income Guarantee call centre received 165,000 calls, and the National Pensions teleclaims centre received 430,000 calls. Of the estimated 490,000 people due to retire in 2001-02, 310,000 (63 per cent) chose to complete their retirement pension claim form over the telephone. The services also appear to have had a positive impact on the take-up of benefits (covered in our report on *Tackling Pensioner Poverty: encouraging take-up of entitlements* (HC 37, Session 2002-03)). An evaluation[44] in 2001 of the Minimum Income Guarantee teleclaims service found that 53 per cent of callers would not have completed a claim form if they had not been able to do so over the telephone.

2.30 The success of call centres might be due, in part, to a greater awareness among the public. The telephone number for Pensions Direct is advertised on annual statements and newsletters sent to those who receive their pensions via their bank accounts, and can also be found on departmental leaflets. Everyone approaching retirement receives a letter inviting them to call the National Pensions teleclaims centre to claim their retirement pension. And the Minimum Income Guarantee centre telephones people three months after they have contacted the National Pensions teleclaims service. Further information on the performance of government call centres is available in our report *Using call centres to deliver public services* (HC 134 Session 2002-03).

44 *IFF Research Limited, Evaluation of the Minimum Income Guarantee Claim Line (2001).*

CASE STUDY C: NHS DIRECT INTERACTIVE DIGITAL TELEVISION

Introduction

The Department of Health ran four pilot projects exploring the health applications of digital interactive television:

Living Health transmitted a largely text-based health information service to Telewest cable television subscribers in Birmingham, together with an experimental GP appointments booking service and InVision - a video nurse from an NHS Direct call centre who appeared on the caller's screen as they spoke to each other over the telephone. The pilot was launched in June 2001 and ran until November 2001 (although Telewest ran the service for another 6 months at their own expense). The service was transmitted to 35-40,000 Telewest subscribers. The contract was worth £4 million.

Communicopia provided a digital TV version of the NHS Direct service, a mixture of text-based and video-on-demand. Users were also provided with interactive options such as health quizzes and a text messaging reminder service for immunisation dates. The service was launched in November 2001 to an audience of 10,000 in Kingston upon Hull and the East Riding of Yorkshire and ended in May 2002. The service was also launched on Video Network's HomeChoice platform in February 2002 as a pilot to viewers in London. Contract value was £1.2 million.

Channel Health presented a series of broadcast TV programmes to a national audience of over 5.7 million, with linked interactive services via the Sky satellite system. The programmes dealt with health issues relating to pregnancy and provided, on a local basis, the ability to interact with health professionals via email support links. The programmes ran from October 2001, with interactivity possible from January 2002. The pilot ended in March 2002. Value of the contract was £1.2 million.

DKTV delivered a service, initially to residents of the London Borough of Newham, via the HomeChoice platform. The service offered interactive links to local and national government information together with video-on-demand, allowing users to find out more about services on offer to them. Available only on broadband, services were transmitted to around 500 potential users. The service was available from August 2001 until June 2002. NHS Direct was one of a number of investors in this pilot project and the contract value was therefore considerably less than the other pilots at £250,000.

The Department did not develop a business case for piloting digital interactive TV, since the pilots were not aimed at developing specific services. The Department of Health is currently formulating a 'lessons learned' paper for submission to ministers with recommendations for future use. The paper will include costed business cases for future options.

How do you use the service?

The four pilot projects used different technologies and digital television providers. Subscribers to the relevant digital television providers could find each service via a series of menus on the television screen, using the remote control and/or keyboard.

Levels of interactivity differed between the services. **Channel Health** provided a maternity guide as an enhancement to their broadcast television series and users were prompted to press the red button on their Sky remote control to view it. The only cost for the user was in sending emails using their Sky remote control. On the NHS Direct Digital service provided by **Communicopia**, users were able to select and receive video and audio content by using their remote control or keyboard. Because the platform used to deliver the service in Hull was broadband, no dial-up was required in order to interact.

DKTV's services were not broadcast but cached on servers, allowing users to start and stop the video clips at any time. The service was added free of charge to all subscribers to the HomeChoice platform in the Newham area. **Living Health** used a cable platform to deliver its services, which meant there was no extra cost if users wanted to interact. The service offered significant levels of interactivity, some of it very innovative. As well as being able to view 21,000 pages of health information text, users could book an appointment with the GP or see and speak to a nurse.

CASE STUDY C: NHS DIRECT INTERACTIVE DIGITAL TELEVISION (continued)

Achievements

The four pilots were evaluated by a team from City University and University of Sheffield. The Department also commissioned usability testing by Serco. The pilots offered very distinctive services, including the type of platform, the amount and nature of content, the presentational formats, degree of interactivity and potential audiences. The research has not been able to identify clearly what types of interactive digital TV services are most appropriate for what types of audience and delivered through what type of medium.

The main findings were:

- An audience of over 200,000 are thought to have used one or other of the pilot services.
- The pilots attracted larger numbers of men than other forms of health information, particularly older men.
- Digital interactive TV attracts low-income users, therefore supporting the argument that it can help to combat the digital divide, reaching the less well-off and socially excluded.
- Older users were more likely to experience difficulties in using the services, although the learning curve tends to be lower than, say, for the NHS kiosks, particularly in households where the television plays a greater role.
- Satisfaction levels varied but some services did very well. 100 per cent of the users of the InVision service (which allowed users to see and speak to a nurse) said they would use the service again and/or recommend it to friends.
- In comparison with NHS Direct information kiosks and the website, digital interactive TV attracted more repeat visits (although there were was no competition during the pilots), users took longer to view a screen, viewed more pages, and spent the most time viewing, suggesting that viewing a health information system at home has significant benefits.
- The concept of delivering health information via digital interactive TV was popular with respondents, but identifying user needs and designing services around those needs was crucial if such services were to deliver on their potential.

Overcoming barriers

Social Exclusion: The pilots were run in order to test and explore new technology. The Department had identified digital interactive television as a means of supporting those people at home who do not have easy access to a health professional. It is also seen as a more appropriate means to reach lower socio-economic groups who are unfamiliar or uncomfortable with using the internet.

Accessible design: The evaluation found that ease of use varied with the individual user and the nature of the service being used. Users of the interactive maternity guide on Channel Health found it almost universally easy to use. In contrast, only 28 per cent of Living Health respondents found it very easy to find information. Visibility and menu position of services was found to be crucial. The number of clicks required to reach content is a critical feature with digital interactive TV services.

Awareness: Usage of the video-on-demand service offered by Living Health increased significantly when the service was advertised locally.

Cost: The pilot services were free to users (except the cost of sending emails on the Channel Health service).

CASE STUDY D: THE PENSION SERVICE'S INTERACTIVE DIGITAL TELEVISION PILOT

Introduction

The Pension Service are piloting the use of digital TV to provide information and services to the public. In May 2002, they launched an interactive service for pensions, known as The Pension Service's interactive digital television pilot. The aim is to identify and evaluate the potential for using this channel to deliver services to a wider range of customers. The project has a budget of £2.5 million over two years.

The pilot service is aimed at people planning for and approaching retirement and those who have already retired. It is accessible via a range of satellite and cable TV services.

How do you use the service?

To access The Pension Service's interactive digital television pilot, the viewer must select it from the range of interactive services available via digital television. Other services that are available in this way include banking and shopping. To navigate around the service and to enter data, users employ the remote control and/or keyboard that is provided by the digital television supplier.

The service consists principally of information on state and private pensions, but also includes information on pension-related benefits and information on a range of supporting services and organisations. Interactive features include ordering leaflets and a state pension age calculator, while people who receive their pensions via automated credit transfer can also inform the Department for Work and Pensions of a change in their circumstances.

The Pension Service's interactive digital television pilot is available to subscribers of ntl, Telewest and Sky Digital. There is no additional charge for accessing information using The Pension Service's interactive digital television pilot. However, interactive options on Sky Digital will incur phone charges at local rates.

Achievements

It is too early to assess the impact of The Pension Service's interactive digital television pilot although the Department for Work and Pensions have engaged MORI Social Research to evaluate the pilot by Spring 2003. The Department for Work and Pensions are using the pilot to gain information about customers, so they did not attempt to estimate usage prior to launch and have no targets for take-up of the service. However, the Department report that early data is encouraging, with an online survey generating very positive feedback and usage figures increasing considerably in response to banner and button advertising.

While the Department for Work and Pensions hope that the service will reduce the number of nugatory claims for pensions and lead to administrative savings, they have not quantified as yet how much resource could be saved.

There are technical limits on the data that can be collected on the usage of satellite TV services. Unlike cable services, satellite services will only record the number of visits made to interactive services. If users browse the information available at The Pension Service's interactive digital television pilot but do not use interactive services, this will not be recorded in usage statistics.

CASE STUDY D: THE PENSION SERVICE'S INTERACTIVE DIGITAL TELEVISION PILOT

Overcoming barriers

Appropriate content: The Department for Work and Pensions identified stakeholders and held workshops with them to discuss content, interactivity and marketing strategies. The stakeholders were mainly drawn from departmental personnel who had a lot of experience of working either with electronic communications or with communications aimed at older people. They also held a concept testing meeting, in which potential customers were asked about their expectations of The Pension Service's interactive digital television pilot. This research highlighted some important barriers to take-up by older people, including:

- not being convinced of the benefits of the service
- feeling that interactive television is slow and liable to crash
- perceptions that the service is aimed at younger people
- reluctance to provide personal information in case it was used for other purposes by the Government.

The strong points of the design were that it was simple to use and that it can employ videos effectively to communicate with users.

Usability: A key limitation of digital television is that it is not possible to have more than 30-40 words of text on each page. One solution to this has been to use video to pass information to the viewer. The Sky Digital version of The Pension Service's interactive digital television pilot includes short videos that explain what the service offers. The Department for Work and Pensions found that it was a challenge to restrict the length of interactive forms. The form regarding 'loss of a loved one' ran to 32 pages. It was decided to exclude this form from the pilot service.

Awareness: The service will be publicised via a combination of regional publicity exercises and advertising via providers of digital TV subscription services. There will also be an internal marketing strategy to ensure that Department for Work and Pensions staff are aware of the service. During concept testing, users commented that they would not use the service unless they had been directed to it by other channels such as the Post Office, websites and newspaper, magazine and television advertisements. Live running suggests that this is not necessarily the case in practice, as users are accessing the service and ordering leaflets following the appearance of banner adverts and by browsing.

Accessibility: The text is available in English, and a Welsh service is being developed. In the next phase of development, the Department for Work and Pensions will be reviewing how to provide information contained in the video presentations to people with hearing difficulties.

User behaviour and expectations: Producers of digital TV services find that users tend to browse for shorter periods of time than they might browse websites. For this reason, and due to restrictions on the amount of text information that can be provided on-screen, the Department for Work and Pensions see The Pension Service's interactive digital television pilot as a signposting service. They want to use it to raise awareness of issues relevant to current and future pensioners, and to encourage them to take further action once they have viewed the information. A specialist team has been set up to handle phone calls and emails arising from use of The Pension Service's interactive digital television pilot. During concept testing, users had anticipated that the service would provide different services from those offered by the Department for Work and Pensions. In particular, they expected that it would offer information on different pension providers and might include a pension calculator.

CASE STUDY E: PENSIONS DIRECT

Introduction

Pensions Direct is a telephone service for people who receive their retirement pensions via their bank accounts. Pensioners can use the service to report changes of circumstances, such as altering bank details, or to get help with more general enquiries. The annual cost of running the Pensions Direct service is £2.1million.

The service has been available nationally since 1994. The call centre, located in Newcastle, employs 124 agents. Two other teleclaims centres at Newcastle, opened in 2000, allow people to complete retirement pension and Minimum Income Guarantee claim forms over the phone with the help of an operator.

How do you use the service?

To contact Pensions Direct, pensioners dial a local rate phone number. Calls are answered directly by an agent, who deals with the enquiry. Callers can ask the agent to note their change of circumstances or answer a general enquiry. The calls are not scripted, but Pensions Direct do provide aide-memoires to agents to help them respond to common questions. For most queries, callers will need to quote their national insurance number so that the agent can access their records on departmental databases. A typical call lasts for three minutes.

The teleclaims centres operate on a similar system. Callers are answered by agents rather than a call handling system. One important difference is that, when the claim forms are completed, they must be sent to the caller in the post to be signed and returned.

The call centres are open between 07:00 and 19:00.

Achievements

Pensions Direct received 1,065,000 calls in 2001-02, while the retirement teleclaims centre received 430,000 calls and the Minimum Income Guarantee teleclaims centre received 165,000 calls. The principal benefits of the teleclaims centres are that they:

- provide assistance at the point of claim
- use data that the department already hold, reducing the need for claimants to supply supporting documentation
- improve the accuracy of claim forms, as the Department for Work and Pensions staff can clarify what is required to fill in the form before it is submitted. Before the call centres were opened, 40 per cent of retirement pensions claim forms contained errors. In 2001-02, the error rate for claims completed using the call centre was 7 per cent.

The three call centres receive a low number of complaints from customers. Between October 2001 and March 2002, customers recorded 155 complaints regarding the teleclaims centres and 300 complaints regarding Pensions Direct. An evaluation of the Minimum Income Guarantee teleclaims service in 2001 found that 81 per cent of customers were fairly or totally satisfied with the service. Fifty three per cent of customers said that they would not have submitted a claim if they had not been able to do so by telephone.[45]

45 *IFF Research Limited, Evaluation of the Minimum Income Guarantee Claim Line (2001).*

CASE STUDY E: PENSIONS DIRECT (continued)

Overcoming barriers

Availability: The busiest period for all three call centres is Monday morning. The department are not able to staff its call centres so that all queries received on Monday mornings can be handled immediately. It has addressed this problem by operating a call-back system, in which an agent answers the call and calls back the customer at an agreed time later in the week to deal with their query. Despite adopting practices such as call-back, the call centres are not able to answer all the calls received. For example, in 2001-02, both Pensions Direct and the pensions teleclaims service did not answer 6 per cent of calls. For Pensions Direct, only 58 per cent of calls were answered within 30 seconds compared with a target of 90 per cent.

Use of appropriate language and tone: Pensions Direct operators receive 13 weeks of initial training. The training includes both information about pensions issues and skills in handling calls. Calls are monitored regularly to ensure that staff are offering clear and accurate information to customers. The Department are seeking to refine their selection procedures and training of operators to focus on qualities such as empathy, patience and clear explanation of sometimes complex matters.

Callers with special needs: Pensions Direct often receives calls from third parties acting for people who do not speak English or with medical conditions that prevent them from using the telephone. The Department do offer facilities for speaking to callers in languages other than English, but this is seldom used. Similarly, the Minicom system for deaf customers receives only around six calls per month.

Cost: In April 2002, Pensions Direct call charges were reduced from the national rate to the local rate.

Customer expectations: Some callers do not realise that Pensions Direct provides a service specifically for the five million pensioners who receive their pensions via their bank accounts. The centre will respond to queries from people who collect their pensions from the Post Office, but may not be able to deal with queries that require them to access detailed records. The centre has also adjusted to customer expectations that Pensions Direct is a general enquiry service. When the centre opened, its principal aim was to offer a quick service for recording changes of circumstances. Only 25 per cent of calls were more general queries. Currently, around 55 per cent of calls are general queries.

Creating awareness: Pensioners who receive their pensions via their bank accounts receive an annual statement and newsletter from the department. These materials quote the telephone number for Pensions Direct. Customers can also find the number at their local departmental office, at the Post Office and at Citizens Advice Bureaux. The Department use awareness campaigns through bodies such as city councils to boost usage of the Minimum Income Guarantee.

The success of all these initiatives depends on how the benefits are promoted and what is being offered

(a) Advertising and promotional activities

2.31 Whether older people decide to make use of e-services will depend to a large extent on how the benefits are promoted. The Office of the e-Envoy and other departments and agencies are actively seeking to raise awareness of the opportunities provided by new technology in general, and of government services in particular, through:

- **departmental advertising:** Departments and agencies spent considerable sums raising awareness of their e-services in 2001-02. Twenty-one out of the 71 departments and agencies surveyed by the National Audit Office confirmed relevant advertising expenditure totalling £13.9 million (with a further 12 being unable to determine what proportion of their advertising was spent on promoting e-services); and
- **advertising and other promotional activities aimed specifically at older people:** The Office of the e-Envoy supplied articles to targeted publications, such as Saga and Woman's Weekly magazines, and also worked jointly with Age Concern and Abbey National in November 2001 to provide free internet 'taster' sessions at 25 centres for the over-50s. Local Age Concerns and Abbey National branches displayed flyers and around 1,500 older people attended open days at the centres to access the internet and receive help and guidance from volunteers and trainers.

2.32 A television and press advertising campaign for UK online took place in November 2001 costing £2.3 million. The campaign involved national television advertising, a printed information pack, a campaign website and setting up a contact centre to handle associated public enquiries. A subsequent evaluation found awareness of the UK online brand had risen. When asked if they had heard of UK online, 40 per cent of respondents confirmed they had, compared to 24 per cent before the campaign. However, few could describe its role, and awareness of UK online was lowest among people over 55. Future marketing activity is planned specifically to target older audiences. In 2003 the government will launch the 'Online Nation' campaign designed to increase awareness of electronic services, particularly among socially excluded groups, and encourage more people to use the internet.

2.33 The Office of the e-Envoy have also sought to raise awareness locally by providing articles for local newspapers, just as The Pension Service has used offline material to promote their website. However, it is up to each UK online centre to encourage older people to use their facilities. This requires effort. For example, a Somerset County Council evaluation on the Wired Wedmore initiative (see **Figure 21** on page 38) designed to provide internet access for older people and other groups, established seven success factors that are more widely applicable.

Success factors for promoting internet access for all

- A local champion with the vision, belief and ability to inspire others.
- Project co-ordinators to manage the centre with good interpersonal skills and an ability to respond to the ever changing needs of the service.
- Volunteers who are willing to be trainers.
- Easily accessible premises, especially for people with disabilities and older people.
- Sufficient computer equipment and technical support.
- Effective and sustained promotion and marketing that promotes awareness.
- Forms of funding that support paying the project co-ordinator(s), training for volunteers, premises and additions to ICT equipment.

Source: Somerset County Council

2.34 These points underline the importance of government being pro-active in encouraging older people and other excluded groups. There are many examples of UK online centres encouraging usage among the target groups **(Figure 17)**, and an initial evaluation in October 2000 found that over 93 per cent of users agreed that staff were helpful and friendly. However, a survey in April 2002[46] found that only 5 per cent of responding managers had shown government e-services to all customers, 25 per cent to quite a few, while 50 per cent had rarely shown them to customers. The remaining 20 per cent had not shown anyone. UK online centres funded through the Capital Modernisation Fund (Figure 9) must submit a marketing plan in their application, outlining how they plan to attract users. However, the Department for Education and Skills do not have information on the progress by centre in implementing these plans.

46 *Unpublished research by Hall Aitken Associates.*

17 Examples of initiatives to promote awareness of UK online centres among older people

- **Adult Learners Week 2002.** A number of UK online centres around the country organised a range of activities to celebrate and encourage Silver Surfers (older people who use the internet) and get them using the internet. For example, Eston Sports Academy held an Open Day for the over-50s in Cyber Valley, offering tasters in basic skills. The Weston centre in Weston-Super-Mare offered free wine, sherry and a raffle to new learners, many of whom signed up for further courses at the centre.
- **The Silwood Cybercentre in Lewisham.** The centre was named the Best UK online centre in London in July 2002 (www.silwoodonline.org.uk). Based on the Silwood Estate, the centre is run by a partnership including London and Quadrant Housing Trust, Lewisham College and the local Silwood Single Regeneration Budget team. London and Quadrant Housing Trust previously provided computer training through its Residents Online project. The Trust believes housing associations are in a unique position to give older people the opportunity to use the internet. The centre has a computer room with full-time staff to help and a range of free, structured courses.
- **Computer Explorer project.** Launched in May 2002, this project aims to provide computer access to older people in rural communities. In conjunction with Age Concern, Barclays Bank and the Department for Education and Skills, four buses have been furnished with internet-ready computers and on-board staff to become mobile UK online centres providing help and training. During 2002 the buses toured day centres, community centres residential homes and other locations in the West Midlands to introduce older people to the benefits of the internet.

2.35 Generating greater interest in information kiosks will depend on being able to place them in visible places in areas with high volumes of people. The Department of Health sought to site 80 per cent of their kiosks in 'safe' locations, such as chemists, shops and health centres. The other 20 per cent were to be in more innovative locations, such as cross-channel ferry terminals, cafés, tourist offices and other places that attract high volumes of people. More than half the kiosks were sited in deprived areas, although it has proved difficult to site the kiosks in innovative locations. Negotiations to site the kiosks in Post Offices and in airports proved unsuccessful because of the potential conflict with the Post Office pilot, and the costs required to cover possible third-party liability claims.

2.36 Our report on NHS Direct (HC610 Session 2001-02) recommended targeting those with lower than average awareness or usage of the service, including older people. NHS Direct has now set an initial target of raising awareness and usage among people over 65 from around 11 per cent to 20 per cent.

2.37 The Department of Health have tackled this low awareness using a targeted marketing campaign in 2002. This included advertising in magazines aimed at older people, and in regional and local newspapers in areas where a high proportion of the population are of pension age. The campaign is expected to have cost £250,000 and will be evaluated by examining the age of callers to NHS Direct and by bi-monthly awareness testing among the target age group.

(b) Making content interesting and usable

2.38 Marketing e-services successfully to older people will also depend on what content is available. Although government websites are updated regularly, in our discussions with older people many said they assumed government websites would be dull, and were for information, rather than pleasure. Older people are more likely to use government websites if the content is perceived as interesting and valuable. In 2002, the Committee of Public Accounts recommended[47] that websites should be designed around specific services that cut across organisational boundaries so that people can access all the information they need on different services. One option could be an older people's portal **(Figure 18)**. The Office of the e-Envoy are currently looking at candidates for developing services around different customer groups, one of which is older people.

18 Making government websites more interesting for older people

Older people's portal: A portal enables the user to access relevant information and services from one location and could be a focus for marketing e-services for older people. There is no government website portal specifically for older people in the United Kingdom, although the UK online portal includes retirement as one of its life episode events and the website www.info4pensioners.gov.uk provides key information from several departments. The Pension Service website (www.thepensionservice.gov.uk) provides key information on pensions and is developing as a gateway to better signpost pensioners to other services.

By contrast, government portals for older people have been established in the United States of America (www.seniors.gov) and Canada (www.seniors.gc.ca). These sites provide a first point of access to all government services and information for older people, designed with their particular needs and interests in mind.

A government portal for older people is an opportunity to provide a more interactive service, as well as joining up existing services.

47 *Improving Public Services through e-Government (PAC 54th Report 2001-02).*

19 Other countries are seeking to provide information technology training for older people

Canada. Veterans Affairs Canada and Industry Canada are working together to provide training courses for older people in how to use the internet and on specific subjects, such as using the internet to seek medical advice.

European Union. There are no specific initiatives at a European level. However, member states can use European Social Fund money to promote initiatives such as internet training. Initiatives by member states include:

- **Finland.** Almost all library staff have attended a network training course since 1996 and since 1999 have regularly held activity days for older people to promote the internet.
- **The Netherlands.** The Ministry of Health, Welfare and Sport subsidises information technology projects for older people, such as training courses in internet cafés and old people's homes. Libraries, community centres and commercial agencies also organise IT courses for older people.
- **Sweden.** The national action plan for the elderly includes IT training activities for older people, such as annual 'senior surfing days' and funding for IT training programmes by non-government organisations.

Training is an essential element in overcoming the 'digital divide' and needs to be provided in ways suitable for older people

2.39 Although providing public access is a significant step towards reducing the 'digital divide', Part 1 also highlighted that lack of training and knowledge of computers was a major barrier. Yet, without some incentive, many older people are reluctant to seek out a suitable training course. Our focus groups identified three main reasons for this: a lack of awareness of the training available, the perceived cost, and a feeling that they would be made to look foolish in front of others. The Office of the e-Envoy and the Department for Education and Skills are addressing these needs by improving the range and availability of suitable courses, and providing funding for people to attend training courses. Similar efforts are under way elsewhere **(Figure 19)**.

2.40 No single style or type of training is suitable for everyone. Courses to meet all needs are now available from private and voluntary-sector providers. Age Concern, for example, has some 70 local branches offering computer/internet 'tasters' and training, and a small number of private providers specialise in training for older people. Our discussions with training providers identified six factors critical to successful training for older people **(Figure 20)**.

2.41 Central and local government have offered a range of training programmes and other initiatives to encourage people to use the internet. The Individual Learning Account scheme, established in September 2000, provided funds for entry-level training. It was open to all over the age of 19. Although older people were not one of the target groups, some 20 per cent of those who booked learning were aged 50 or more. Almost two-thirds of all learning was information and communications technology, on which participants were able to obtain a discount of 80 per cent. The scheme attracted far more applicants than was expected, but was closed in November 2001 following allegations of fraud (see NAO report Individual Learning Accounts (HC1235, Session 2001-02)).

20 Six factors critical to successfully training older people

1. Let people learn at their own speed.
2. Offer one-to-one support.
3. Hold events in familiar surroundings.
4. Provide trainers from the same peer group.
5. Adopt a warm and patient approach.
6. Recognise that reputation through word of mouth is key to recruiting other older people.

2.42 The Committee of Public Accounts examined this report in November 2002. In evidence to the Committee, the Department estimated that fraud may amount to over £60 million. Notwithstanding this, in evidence to the Education and Skills Select Committee, one private IT training provider, Hairnet, praised the impact of Individual Learning Accounts on older people - their client group. They estimated that 70 per cent of their trainees would not have engaged in IT training if it had not been for the scheme. Although the Department remain committed to the principles of the Individual Learning Account, they have decided to consider how best to take matters forward within their National Skills

Strategy review of funding for adult learning. The delivery plan, including any recommendations on a successor scheme, will be published in June 2003.

2.43 The *Cybrarian Project*, managed by the Department for Education and Skills, aims to enable people who lack information technology skills or confidence, or have physical or cognitive disabilities, to use the internet. The project aims to deliver by 2004 an intuitive personalised internet search and support tool that will reformat the content of the internet to provide readable, useful and meaningful results. The main target user groups are older people, the disabled, ethnic minorities, and those with low basic ICT skills. The project has a development budget of £22.5 million to the end of March 2004 and is looking to secure £12.5 million from the private sector in the final year. It aims to attract 400,000 users by the end of the first year of operation and 1.2 million by 2008.

2.44 The Government is also funding local authorities to provide services and training for older people. The Office of the Deputy Prime Minister is supporting twenty-five *pathfinder projects* to deliver improved e-services and better access to all groups of people. Nuneaton and Bedworth Borough Council, for example, received £1.3 million from the Invest to Save Budget for a 'Silver Surfers' project. The project aims to provide technology training and support for older people to access local internet services to promote independent living.

2.45 Other organisations, including Age Concern, are also running schemes designed to encourage older people to use computers and the internet and to overcome barriers **(Figure 21)**. Those people with disabilities who rely on additional access technology to use the computer effectively also require appropriate training to ensure proficient use is made of their computer.

21 Examples of initiatives for older people

Age Concern has developed a range of national initiatives to increase the availability and take-up of computers and the internet as a means of delivering services, conquering isolation, empowering individuals and bringing together those with shared interests. Many local Age Concerns offer computer taster sessions in shops, day centres and offices. In 2001, Age Concern venues around the United Kingdom ran 'open house' training events and internet demonstrations. Age Concern is working with Microsoft and Barclays Bank Plc to provide an outreach service to take computer and internet training out to older people in day centres, residential care homes, and sheltered housing.

Hairnet is a computer and internet training initiative for the over 50s. Hairnet offers home-visit training, especially for older people, who want to learn how IT could be useful, exciting and empowering in their lives. Hairnet also offers high-quality, flexible training and consultancy services to corporate clients and delivers lectures and workshops to a range of non-profit groups. More than 7,000 people have now been trained. Hairnet has also built a community website aimed at and run by the over 50s.

Wired Wedmore and 'IT for the Terrified' are local initiatives in the village of Wedmore in Somerset. 'IT for the Terrified' is a training initiative designed to offer the residents of Wedmore and the surrounding area an introduction to using a computer. The scheme, which focuses on older people, has more than 30 trainers, most of whom are over 50, and many of whom were originally customers.

The British Computer Association of the Blind operates a trainer certification scheme that seeks to accredit those who train visually impaired computer users in proficient use of access technology.

Part 3

Ensuring older people are able to use government e-services

3.1 Part 2 examined progress in increasing opportunities to access a range of e-services and encourage use by older people. However, as Part 1 outlined, even having gained access or overcome fear of new technology, many older people may still experience barriers to using e-services that relate to technical design or how information is presented. For example, those not familiar with the internet may find it difficult to find information if they are unable to navigate easily round the website. And older people with disabilities find it difficult to access some electronic documents if the website does not allow them to use the specialist software they require. For example, blind or partially sighted people rely on a screen reader to read out the text on a page.

3.2 How services are designed is thus of great importance. In this Part, we examine what Government is doing to ensure that its own e-services can be used by older people. In particular:

- what Government is doing to understand user requirements;
- what standards Government is setting itself on the usability and accessibility of its websites;
- how departments' websites match up against best practice; and
- what consideration is being given to issues of accessibility in the development of digital television and electronic information kiosks.

Government is acting to inform itself about user requirements

3.3 Previous reports by the Comptroller and Auditor General and the Committee of Public Accounts have highlighted the importance of understanding the needs of users of e-services, developing services likely to offer benefits, and removing barriers to take-up (Appendix B). This requires an understanding of specific user groups and their needs and interests. Thirty-eight per cent of the 71 government bodies that we surveyed considered older people to be one of a number of target groups for their e-services, and a further fifty per cent said they sought to take account of their views in developing e-services.

3.4 The Office of the e-Envoy have encouraged departments to use customer-segmentation techniques to identify and characterise the main groups of people they serve. The aim is to understand the preferences of particular groups of users, and then develop strategies for meeting them. In 2001, the Office of the e-Envoy sponsored workshops to identify key steps departments could take to carry out this process **(Figure 22)**. These have proved valuable, although departments have indicated that they would welcome wider dissemination of information about particular customer groups to avoid duplicating research.

22 Key steps in customer segmentation

(a) Identify end customers

(b) Identify customer needs

(c) Segment end customers by identifying common needs and characteristics

(d) Join up within the organisation to deliver appropriate services to each segment

(e) Identify opportunities for joining up with other organisations with similar customers

3.5 Our survey found that 86 per cent of departments had attempted to identify the different groups that use their services. The Department for Work and Pensions, for example, identified three main customer segments among current and future pensioners. They found that many older customers were comfortable dealing with the department by telephone, and this influenced the design of The Pension Service, when it was established in April 2002.

3.6 Departments also seek to understand the views of people once they are using their e-services. Almost all respondents to our survey sought feedback. The most common techniques were online forms (36 bodies), email (20), and surveys/market research (13). Some 19 respondents said that they had modified their services in response to feedback. For example, Ordnance Survey increased the size of the maps they display on their website, the Planning Inspectorate

redesigned the layout and navigation of front pages on their website, and the North West England Regional Development Agency increased the font size of all text on their website.

The e-Envoy expects departments to make their websites accessible and usable

3.7 Older people will only be interested in e-services if they are easy to use **(Figure 23)**. Considerable attention has been given in recent years in the United Kingdom and elsewhere to ensuring websites are accessible and usable by people with particular requirements **(see Figure 24)**. The World Wide Web Consortium (W3C), which comprises over 500 organisations, including governments, private sector companies, and web users, has been at the forefront of this work. In 1999 it issued specific accessibility guidelines. Organisations are not obliged to follow the guidelines, and the Consortium has no authority to enforce them. However, in the United

23 Focus group participants identified their likes and dislikes in terms of style and presentation

Participants in our focus groups discussed their likes and dislikes after examining four major government sites - run by the Department of Health, the Department for Culture, Media and Sport, the Department for Work and Pensions, and the Number 10 Downing Street site. Overall, older users had similar expectations in website design to most other users. In particular:

- the content must be interesting and easily found;
- home pages should be visually attractive;
- the site should be easily navigable, using large headings and informative pictorial icons;
- font size should be at least 14 point;
- sites should include appealing and innovative features (for example, participants liked the opportunity to undertake an electronic tour of Number 10 Downing Street); and
- sites should provide reassurance about security and privacy to offset fears about whether other people can access their personal information.

24 Other countries are adopted web accessibility guidelines

Australia. The Human Rights and Equal Opportunities Commission first issued guidance on making websites accessible in 1997. In August 1999 the Attorney General asked the Commission to conduct an inquiry into accessibility in the area of e-commerce, which included an audit of the accessibility of Australian Government websites. Most Commonwealth websites had significant accessibility barriers, in particular to vision impaired users. The Commission concluded that agencies should adopt the W3C guidelines and routinely test the accessibility of their own sites. In March 2000, the Government agreed that all Commonwealth departments and agencies should evaluate their websites for compliance with the W3C guidelines and that all websites should pass accessibility testing by December 2000. Many States and Territories have developed similar accessibility requirements. In November 2002 the major internet industry associations in Australia committed themselves to assisting their members to achieve W3C compliance.

Canada. In 1998, the Treasury Board Secretariat set up a working group to develop a common look and feel for the internet. The Common Look and Feel standards encapsulate the principles set out by the W3C.

European Union. The European Commission's eEurope Action Plan 2002 is a wide-ranging initiative design to speed up and extend the use of the internet. The action plan emphasises that 'public sector websites and their content in Member States and in European Institutions must be designed to be accessible to ensure that citizens with disabilities can access information and take full advantage of the potential for e-government'. The plan required adoption of the W3C guidelines by the end of 2001. A review of progress in July 2001 established:

- **Denmark.** The W3C guidelines had been included in the national guidelines for accessible web design. All web pages on public websites are being checked over a three-year period. User panels, including people with disabilities, take part in the assessment of the public websites. There is a national prize for exemplary performance.
- **Finland.** The guidelines were incorporated in the Ministry of the Interior guidance in December 2000. The guidelines emphasise equality of access and that there should be alternatives, such as telephone call centres, to web based public services.
- **France.** The Mission pour les Technologies de l'Information et de la Communication published standards of accessibility for public websites in 1999.
- **Netherlands.** The W3C guidelines were recommended by the Ministry of Public Health, Welfare and Sport in February 2001.
- **Sweden.** A government ordnance issued in September 2001 requires government authorities to ensure that their services are accessible to disabled people.

Kingdom the Disability Discrimination Act 1995 requires organisations to ensure that disabled people have access to services others take for granted. Thus, any government service that is not accessible to everyone risks contravening this legislation.

3.8 The Office of the e-Envoy have used the W3C guidance to develop their own principles **(Figure 25)**. The e-Envoy's Guidelines for UK Government Websites (2001) set out the key principles that should underpin all current government websites. Further guidance was issued in May 2002, which now requires government bodies to make all reasonable efforts to comply with the minimum level of the W3C's Web Content Accessibility Initiative. All new sites and the revisions to existing sites should comply, and existing sites should be audited by web managers. The UK online website conforms to this guidance, as well as to guidance issued by the Royal National Institute of the Blind **(Figure 26)**. The Office of the e-Envoy promote their site as an exemplar to other departments and agencies **(Figure 27 overleaf)**.

25 The Office of the e-Envoy's key principles (2001)

The Office of the e-Envoy's guidance sets out ten key principles for departments to follow:

- **Engaging, accessible, usable.** Websites should be user-focused and accessible to all.
- **Working together.** Government websites must work together to join up the government.
- **Services for the citizen.** Government websites must be working together to provide their services online.
- **Effective content.** Users should be able to have a reasonable expectation of the quality, accuracy and uniformity of government content.
- **Building trust.** Government websites must raise citizen confidence by abiding by the law and explaining their terms and conditions to users.
- **Listening.** Government websites should provide opportunities for users to contact officials, express their views or make enquiries.
- **More than just the Web - multiple access channels.** Government websites should operate within a strategy that includes a full range of technology channels.
- **Is it working?** There should be systems for evaluating performance and whether the site meets customer needs.
- **Can the site be found?** Managers should promote the site, develop suitable metadata, and register it with search engines.
- **A well managed service.** Government websites should be well managed.

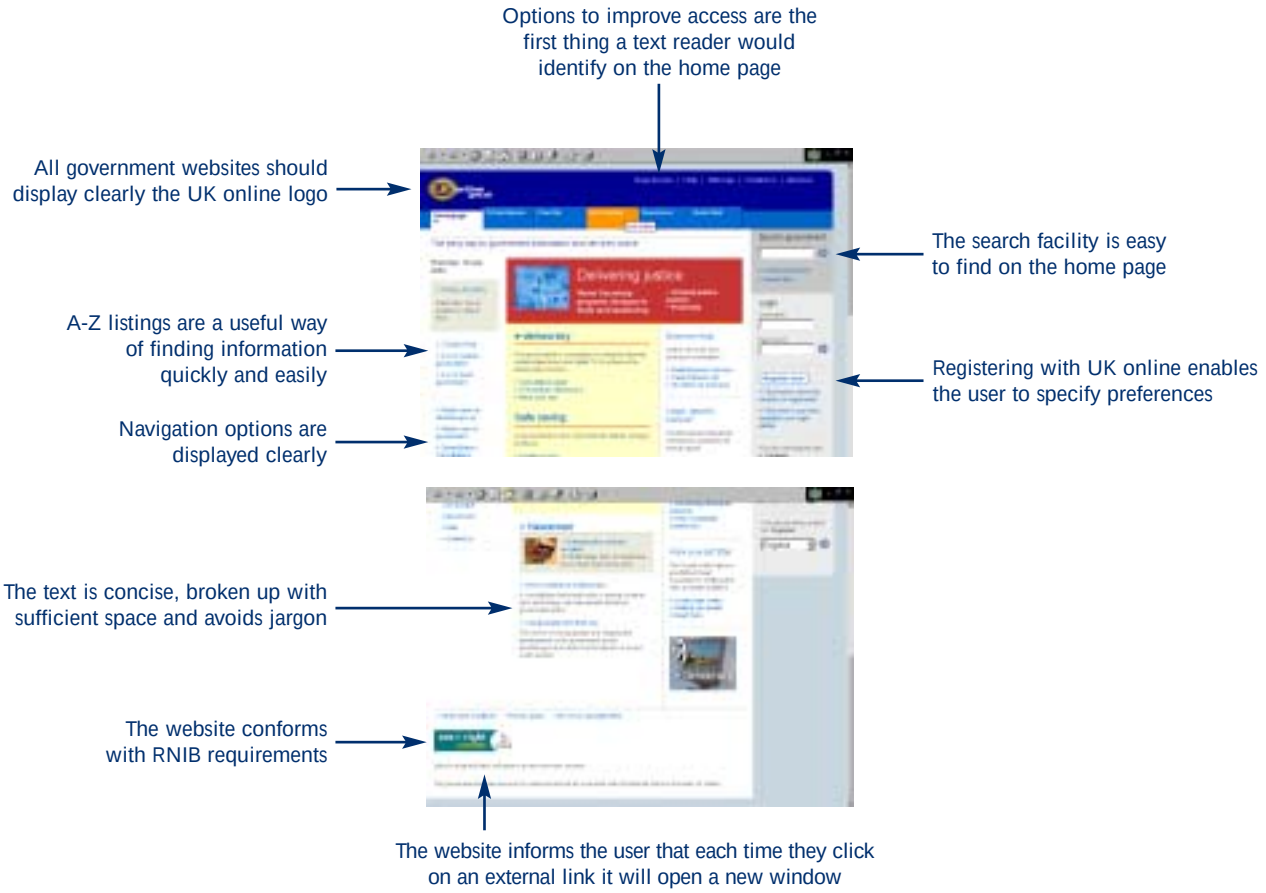
3.9 Departments and agencies are aware of external guidance on accessibility and are making use of it. Many provided us with examples of positive steps they had taken to enhance accessibility. For example, OFTEL and National Savings had consulted with RNIB on website design, and the Department for Work and Pensions are also working with RNIB to improve accessibility for The Pension Service website. Many respondents had used existing software packages to examine the accessibility of their own website, or had used Plain English Standards to help ensure their websites were easy to understand. The Department for Culture, Media and Sport commissioned research from a consultancy, HumanITy, on whether website information could be categorised into no more than nine headings on each web page so that the user could navigate using a numeric keypad.

26 Guidance on usability and accessibility of websites

Key advice from the Royal National Institute of the Blind includes:

- Choose a background that is a single, solid colour.
- Ensure that your chosen colour scheme can be over-ridden by the user's browser settings.
- Avoid, if possible, the use of graphics in place of actual text.
- Ensure that you use relative font sizes in your code, not absolute font sizes, as some browsers cannot over-ride absolute font sizes.
- Links should contain enough useful information about their destination that they make sense on their own, without surrounding text or graphics.
- Moving, blinking and auto-refreshing text is hard to deal with if you have poor sight.
- Don't require users to be able to click on a small or moving target in order to proceed to another page.
- Whenever possible, ask a range of people with various abilities and disabilities to test your pages and give you feedback.

27 The UK online website is promoted as an exemplar of accessibility standards



Source: NAO comments on www.ukonline.gov.uk

The accessibility and usability of government websites is improving, but many do not yet meet best practice standards

3.10 To establish whether government websites are accessible and usable by older people and others with particular needs, we commissioned consultants to examine 65 government websites using a checklist based on existing guidance and on advice from Age Concern. Appendix C lists those we examined, which were chosen as belonging to organisations whose activities are likely to be of interest to many older people. These included departmental main websites and a selection offering specific information (such as www. pensionguide.gov.uk). While the examination was not exhaustive - we scrutinised only a small selection of pages per website - the results are indicative of the general level of accessibility.

3.11 Our audit examined 10 fundamental criteria **(Figure 28)**.

3.12 Overall, we concluded that many government websites have so far achieved reasonable levels of accessibility but there is still more that many bodies can do. **Figure 29** identifies the front-runners. Most websites met between four and six of the 10 criteria, although none complied fully (as at July 2002) with W3C standards. Only 25 per cent could be validated using the 'Bobby' software, which our consultants considered severely limited those government websites accessible to older people with, for example, cognitive difficulties or visual impairment. In addition, users were expected to visit a wide range of sites for different tasks, yet there was considerable inconsistency in the design and appearance of each site.

28 Criteria applied for assessing the accessibility of government websites and significance for older users

Consistency of navigation. Each web page should have consistent navigation to help older people, inexperienced with using the internet, recognise what buttons they need to click to move between pages and for reassurance that they are still in the same website.

PICS rating. The rating refers to a certificate of the suitability of a website. Many public-access computers, such as those in UK online centres, have a filter on their internet browser that prevents anyone from seeing websites that do not have a PICS rating.

Use of metadata. Metadata describes the content of a website. Internet search engines rely on this facility when users search for information. Without metadata, older users could find it difficult to search for information they require.

Availability of search facility. Without a search engine, users would find it difficult to find information within a website.

Do external links open a new browser? When a website offers a link to another website, clicking on this link should cause the new site to open in a separate window. This will emphasise to older people, inexperienced in using the internet, that they have left the original website. However, RNIB advise that this approach can be confusing for people who use screenreaders or screen magnification software to access the internet.

Is there a site map? A site map shows the names of all the pages on a website and how they are organised. The facility is useful to older people using a screen reader or not confident with using a search engine.

Can users alter the font size? Older people might find it difficult to read small text on a screen and so most browsers have a facility to change the font size. However, this facility does not work if the font size is fixed by a website's designer.

Are the web pages accessible using a text-only browser? Older people might use a text-only browser to view a web page as it omits graphics. This speeds up the time taken to open the page and makes it easier for screen readers to read out the text for the visually impaired. If the website is incompatible with a text-only browser, the results are difficult to understand.

Does the site use Government Standard Access Keys? Older users who have difficulty using a computer mouse may prefer to use shortcut keys on their keyboard to move around a website. The access keys should be consistent between government websites for ease of use.

Do all pages pass Bobby validation? Bobby is a software programme that checks a website's compliance with many, but not all, of the World Wide Web Consortium's accessibility guidelines. Although it is not a comprehensive tool, if the website cannot be validated using Bobby, older people are likely to find it difficult to use it.

29 Performance of government websites against accessibility criteria during July 2002

Front-runners : twenty-two websites met seven or more of the ten criteria. In this category were:
The British Library, the Cabinet Office's www.civilservice-pensions.gov.uk, Department for Work and Pensions' www.thepensionservice.gov.uk, www.disability.gov.uk and www.dwp.gov.uk, Department for Education and Skills, Equal Opportunities Commission, Foreign and Commonwealth Office, Highways Agency, HM Customs and Excise, HM Treasury, Independent Television Commission, Land Registry, NHS Pensions Agency, Office of the Deputy Prime Minister, Office of the e-Envoy, Office of Gas and Electricity Markets, Office of Fair Trading, Office of Telecommunications, Planning Inspectorate, Public Record Office and UK online.

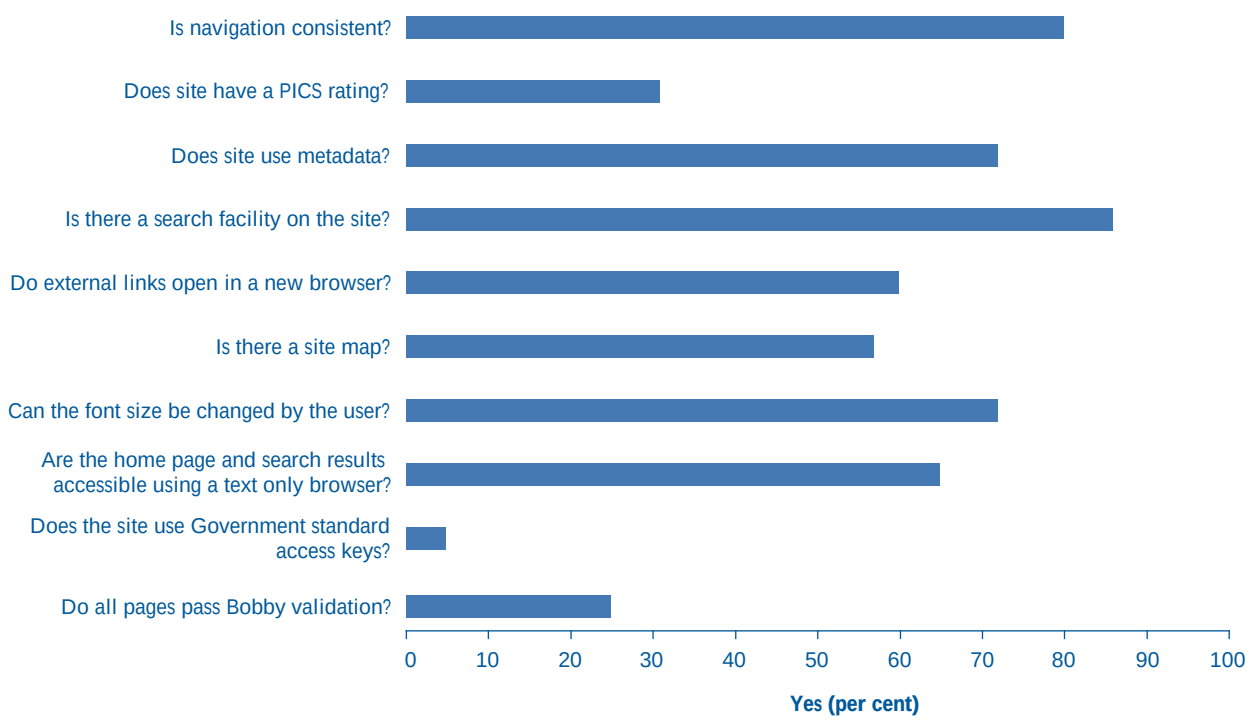
The remaining 43 websites listed at Appendix C met six or fewer of the ten criteria

3.13 The majority of websites reviewed reflect good practice in areas that involve physical appearance, such as clear navigation and the ability to alter the size of the text **(Figure 30)**. However, there is room for improvement in ensuring that websites are compatible with text-only browsers. Only 65 per cent could be viewed in this way, meaning that visually impaired people would have difficulty using the remainder.

3.14 More work is needed in areas beyond physical appearance. Very few websites have implemented the guidance from the e-Envoy on using standard access keys (Figure 30) and many did not have a PICS rating. While 70 per cent used metadata to signal their content to search engines, only 10 per cent use the type recommended by the Office of the e-Envoy. These technical matters have an important bearing on whether people can find and use government websites. For example, the absence of a PICS rating may mean someone visiting a UK online centre would be unable to access 70 per cent of the websites included in our examination.

3.15 Since we carried out our accessibility audit in the summer of 2002, a number of departments have made improvements to their websites to make them more accessible, and many others stated that they planned to do so as part of a revision of their site. Six examples of these modifications are shown at **Figure 31**. In 2002, the Office of the e-Envoy have paid increased attention to accessibility issues and began working with departments to review the accessibility of their sites and to discuss actions required to meet existing standards. By August 2002, the Office had examined 19 websites, undertaking spot checks and providing informal feedback. The aim is to provide constructive criticism and to raise awareness and understanding of accessibility issues.

30 Accessibility of government websites



Source: National Audit Office

31 Examples of developments in websites since our July 2002 audit

- The **Police Complaints Authority** are currently seeking a PICS rating , allowing access from public libraries and schools, and are incorporating metadata into the site. Site navigation and links have been improved with the introduction of a site map / contents list with direct connections to each part of the site. Sections of the site will be translated into Welsh.
- The **Veterans Agency** have included a PICS rating, and intended to introduce metadata and a site map by late 2002. They are currently exploring the feasibility of Bobby validation.
- The **Independent Television Commission** have included a PICS rating for the site and are in the process of checking the site for Bobby validation.
- **English Heritage** and the **UK Passport Service** are investigating the introduction of Government Standard Access Keys.
- **The Highways Agency** are developing arrangements so that an automatic page will appear advising people using screen reading software that they are leaving the Agency's site and entering a new one.

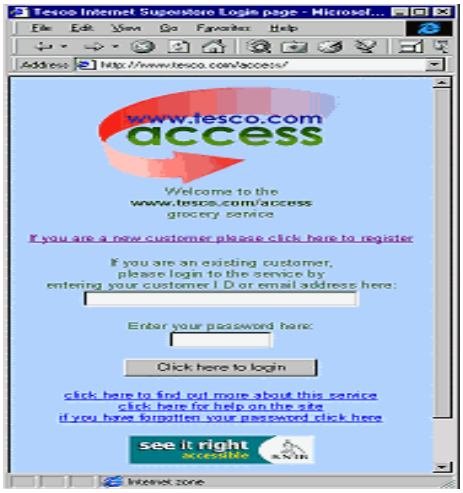
3.16 The varied performance on accessibility of central government websites is matched by those at local government level. In their 2001 report[48], the Society of Information Technology Management (SOCITM) found that standards of accessibility of local government websites had improved significantly since 2000. Seventy per cent of websites provided a reasonable level of accessibility, for example, for the visually impaired, although only one-quarter were rated satisfactory when wider measures of accessibility were applied. In 2002, the Royal National Institute of the Blind - assessing the sites on behalf of SOCITM[49] - rated 40 per cent as very good and demonstrating a sound understanding of the requirements of visitors with special needs. Nevertheless, there was scope for continuing development.

3.17 The private sector has, to date, generally lagged behind the public sector. However, there are notable exceptions. Tesco Plc has recognised the importance of accessibility, and identified a strong business case for developing an alternative online shopping service that could be accessed by people with visual impairment **(Figure 32)**. The British Bankers' Association has also worked with the Royal National Institute of the Blind and banks to develop guidelines for the banking industry, which were published in 2001.

48 *Society of Information Technology Management, Better Connected 2001? (2001).*
49 *Society of Information Technology Management, Better Connected 2002? (2002).*

32 Tesco Plc has developed an online shopping service accessible to disabled people

Figure 32 shows the standard Tesco site and the more accessible site. Following a RNIB assessment of its online shopping service, Tesco plc launched a new Tesco.com Access website in April 2001. Key features included a simple navigation system, compatibility with text browsers, rapid download speeds, and testing to ensure that users can complete transactions quickly. Few graphics are used and there is a very disciplined and functional page structure. Tesco plc were the first recipients of the RNIB's 'See it Right' Accessible Website symbol, which signifies that RNIB have checked the site within the past year and found it to be accessible. Tesco saw a strong business case for the decision to establish the simpler site. An estimated 1.9 million visually-impaired adults can potentially use the site. If every one bought just one average trolley-full (£85) that would mean over £161 million of business. Developing the site cost £35,000.



Initiatives for third parties to access e-services on behalf of older people are still at an early stage of development

3.18 Existing government websites might be more accessible if older people were able to use a third party to act as an intermediary. Such an approach would enable the person to discuss an issue, such as filling in a benefit claim form, with a suitably skilled person who could advise them on their approach and had Government authority to fill in details online on their behalf. The Office of the e-Envoy is encouraging departments to use intermediaries in order to extend the reach of e-services.

3.19 Eleven of the departments and agencies that responded to our survey regard intermediaries as one of the most important means of delivering e-services. Progress has been slow, however, because departments continue to have concerns about security, the quality of advice provided by third parties and whether there are suitable organisations with a national IT network capable of delivering such a service.

3.20 The 'Citizens Connect' project is at the forefront of initiatives to provide third party access to government e-services. The project aims to improve access by using Citizens Advice Bureaux staff to act as intermediaries. The National Association of Citizens Advice Bureaux has received £20 million from the Capital Modernisation Fund to develop a national IT network to enable bureaux staff to access government e-services on behalf of its customers. Nine 'showcase' bureaux will pilot the system in Spring 2003 in order to determine demand for such a service and staff training requirements. Wider roll-out in early 2004 will depend on whether the 2,000 bureaux in England and Wales want to take up the service. The National Association invited all bureaux to commit to the project and by the end of September over 100, representing around 170 separate sites, had enrolled.

The development of digital television raises a number of different issues for Government

3.21 Television is often an essential source of information, entertainment and education for older people, including those with disabilities or those who are less mobile. The Government's Digital Television Action Plan, developed by the Department of Trade and Industry and Department for Culture, Media and Sport, in partnership with public and private sector stakeholders, was agreed in January 2002. It emphasises that the technical and social scale of preparation for digital switchover should not be underestimated. As part of the Plan, the Government is considering the specific equipment needs of disabled people, and their funding, in conjunction with non-governmental organisations, charities, the Department of Trade and Industry, the Department for Culture, Media and Sport, and the Department for Work and Pensions. It is also undertaking research into the human issues raised by digital television, including access for disabled people and examining means to promote inclusive design and usability.

3.22 Delivery of information and interactive services via digital television services is still developing. Technical constraints on some methods of providing digital television, such as band width restrictions on terrestrial

digital broadcasts, limit the range of services that can be provided. While digital television has the capability to provide additional services for viewers with sensory and physical impairments, much remains to be done. For example:

- **enabling people to follow programmes:** many older people with a visual impairment use a television to listen to their favourite programmes. Digital television broadcasters could provide an audio description with each programme to describe events, situations or facial expressions that the visually impaired or those with cognitive difficulties might miss. The Broadcasting Act 1996 set a target that 10 per cent of digital terrestrial programmes should have such an option within ten years. However, receiving the service requires a technical modification to users' existing digital decoders. Some newer products offer an audio description module as an optional extra. The Communications Bill proposes to extend the requirements on digital terrestrial television to digital satellite and cable broadcasters.
- **allowing visually impaired people to follow on - screen instructions:** digital television uses a remote control handset and on-screen instructions for selecting programmes and using internet services. Research by the Royal National Institute of the Blind has established that more than one-third of people with sight problems cannot read television captions, and a further one-third find it very difficult. Digital television broadcasters do not yet provide an option to change the text size or provide a screen reader that reads the text on the screen, although some are beginning to offer on-screen programme guides and subtitles in larger type.
- **providing subtitles for the deaf:** 40 per cent of people registered as deaf are 65 or over. There are 1 million deaf and hard of hearing people who depend on subtitles to watch television and a further 5 million who use them regularly. While sub-titles are already available on teletext for most programmes on analogue television, further progress is needed to increase the number of programmes on digital television offering subtitles. The Communications Bill will extend current requirements for digital terrestrial television broadcasters to provide subtitles on 80 per cent of programmes within ten years to digital satellite and cable broadcasters.

3.23 There are no universally accepted standards on accessibility for digital television that can compare with internet guidelines such as the World Wide Web Consortium's Web Content Accessibility Initiative. The Independent Television Commission have published guidance on access for deaf and partially sighted people[50], but this deals with subtitling and signing to accompany television programmes. The Commission, working in partnership with the Design Council and the Consumers Association, also run the Easy TV initiative, to promote inclusive design and ease of use, to enable more people to enjoy the benefits of digital television and interactive services.

3.24 Some accessibility issues are common to both technologies, and good practices in design and usability are applicable to digital television as well as government websites. For example, both media work best when information is clearly presented, and easy to navigate. However, it is important for service providers to be aware of the particular strengths and weaknesses of the digital television format.

3.25 It is early days for government services via digital television, and consideration is being given, through piloting, to usability and accessibility issues. It may not be financially viable to provide government e-services on every digital television service. The **Department for Work and Pensions** tested the design of The Pension Service digital television service prior to launching the pilot. Users felt that the service was simple to use, but were concerned that it was slow and unreliable. The Department made changes to the design in response to comments. For example, they made the navigation system more consistent and changed the language used to make it easier to understand. They also found it impossible to broadcast certain claim forms because of the limited number of legible words per page. The Department are looking to develop the accessibility of the service by using videos to convey audio as well as visual information, although for technical reasons this is not available via cable.

3.26 Serco Usability Services tested the usability of **NHS Direct** digital television pilots and have learned a number of lessons **(Figure 33)**. Users found the services were generally easy to use, but older users reported more difficulty.

3.27 The Office of the e-Envoy have not yet tested the accessibility of the **UK online** digital television service. The Office have recently sought accessibility advice from RNIB, who are currently preparing an accessibility checklist. The Office of the e-Envoy do solicit feedback from UK online users, but insufficient comments have been received to draw firm conclusions about accessibility. Comments range from praise that the service is easy to use to criticisms that more use could be made of audio and video content. Users also note that in many cases the digital television service directs them to a telephone hotline for further information, and so users feel that it is not, therefore, truly interactive.

50 *For example, ITC Code on Subtitling, Signing and Audio Description.*

33 Best practice in providing accessible digital television services

- Design to the qualities of the medium (e.g. video works better than text on television, but can be distracting)
- Use appropriate colours and text size
- Use plain English
- Adopt consistent navigation (numbers and arrows have their own strengths, but can cause difficulty when combined) and ensure that navigation is where people expect it to be
- Keep the number of menus per screen to a minimum
- Design for the majority who do not have a television keyboard
- If you use numbers in a menu, people will think that you can reach that choice by pressing that number on their remote control
- Avoid using internet terms like 'home' which people might not understand

Source: Serco Usability Services

Information kiosks have generally been seen as accessible by older people

3.28 As described in Part 2, electronic information kiosks offer another alternative that may be suitable for many who are uncomfortable with that computers. Usually seen as simple to use, they are being developed by a range of organisations, although, as with digital television, there are no standards on accessibility to compare with those for websites. However, the Royal National Institute of the Blind and Moorfields Eye Hospital in London have developed their own guidance on:

- **physical location**: where possible, there should be a continuous accessible path of travel for a wheelchair from car parking places to the kiosk. The floor surface around the kiosk should be level, and any labels on the machine should be at a suitable height and in a clear legible font;
- **the touch-screen**: the screen should be easy to see and away from direct sunlight. It should be viewable from the eye level of a person in a wheelchair and people with low access should be able to put their face close to the screen. Text should be in a large font size and icons as large as possible and spaced out to help elderly people with hand tremors to touch the correct part of the screen;
- **using the kiosk**: few people are trained to use kiosks so it is important there are clear instructions and that all text is concise and written in simple sentences. Numeric keypads should be large enough to use. Keys should be marked with text to support colour coding in case the user is colour blind.

3.29 As part of their tendering process, the Department of Health invited leading experts from Age Concern, RNIB, Community Health Councils and wheelchair users to test the different prototypes. Representatives of target groups also provided user testing at prototype stage. As a consequence, the selected model was accessible to wheelchair users and had a large screen size.

3.30 The Post Office touch-screen kiosks were designed to allow members of the public to access over 9,000 pages of government information and to search interactively for jobs and local services. The touch-screen displayed information supplied from a number of government websites redesigned to ensure consistent branding and navigation. The kiosks appealed to a wide customer group, with one-third of users aged over 55. Consumer discussion groups held as part of the evaluation confirmed that touch-screen kiosks did help older people to overcome their fears of the internet. The information was presented in a more user friendly way than websites, although the evaluation report conceded that this required a significant investment of time and resources by designers. Eighty seven per cent of users were satisfied that the service was easy to use, and 83 per cent were satisfied with the way the information was presented.

Appendix A Methodology

1 We adopted a variety of methods to collect evidence to examine government progress in developing e-services for older people and to identify what more needs to be done in future. The methods were chosen in order to:

- identify the barriers to take-up of e-services for older people and other low user groups;
- explore the impacts of the development of e-services for older people and other disadvantaged groups;
- examine how successful government has been in overcoming these barriers to take-up of e-services generally, as well as government e-services; and
- assess the success of Government in ensuring the accessibility of their websites and obtain examples of good practice.

Literature review

2 We reviewed literature on the take-up of e-services for older people; reasons for the digital divide; evaluations of government e-services in the United Kingdom; and guidelines on designing accessible e-services. We also reviewed strategy documents and guidance issued by the Office of the e-Envoy and other government departments, together with literature on e-services in other countries. Direct references to the literature are noted in the text of our report.

Quantitative survey of departments, agencies and non-departmental public bodies

3 We carried out a self-completion survey of 100 central government departments and agencies whose activities we judged could reasonably be expected to be of interest to older people. The survey gathered information on how organisations research customer needs, provide e-services for older people, overcome barriers to accessibility, and promote take-up of e-services. In particular, we asked how organisations:

- provide e-services for older people, including the extent to which existing services meet customer requirements and the methods used to obtain feedback on existing services;
- overcome barriers to accessibility, such as taking account of users with visual and hearing difficulties or low levels of literacy; and
- promote take-up of e-services by encouraging older people to use them.

A total of 71 organisations responded to the survey.

Focus groups of older people

4 We commissioned the consultants BMRB to carry out a series of six focus groups of older people to discover their attitudes to e-services. The focus groups, comprised a combination of regular internet users and people who had limited or no experience of using the internet. All groups were exposed to four typical government websites in order to stimulate discussion of what qualities they would look for in a government website.

5 The six discussion groups were constructed to reflect the following criteria - age (50-65 and 66+); gender; social mix (BC1 and C2DE); PC/IT usage - divided between 'regular users' and infrequent/non-users, according to the answers participants gave to questions presented during the recruitment process. The focus groups were held in Birmingham (city), Doncaster (urban) and Devon (semi-rural).

6 The focus group discussions were held in facilities where internet access was available. Lasting around 90 minutes, the discussion sessions were facilitated using a topic guide and included a half hour 'accompanied surf' of four UK government websites.

7 In addition, we hosted two on-line discussions with older people who use the Age Concern discussion site. We sought their views on barriers to using new technology, how they used their computers and the internet, and what they thought of existing government websites.

Audit of central government websites

8 We commissioned consultants The Team to audit 65 government websites using a checklist designed to assess their accessibility (see Appendix C).The checklist was based on guidance issued by the Office of the e-Envoy, together with advice from Age Concern and The Team.

Case studies

9 We looked in detail at progress with specific departmental and other initiatives that aim to make e-services more accessible. The initiatives comprised:

Training and access to e-services:	UK online centres Hairnet, Wired Wedmore
Reaching older people using the internet:	Department for Work and Pensions websites
Using new media to reach excluded groups:	NHS Direct electronic information kiosks NHS Direct digital TV Department for Work and Pensions digital TV Pensions Direct call centres

For each case study, we examined the aims of the initiative, what has been achieved to date, and how obstacles to accessibility have been addressed.

Consultation with the Office of the e-Envoy, other government departments and other organisations

10 We consulted with the Office of the e-Envoy, the Department for Work and Pensions, the Department for Education and Skills, the Department of Health and the Department for Culture, Media and Sport on a range of issues. This involved meeting with teams responsible for setting policy on accessible e-services and managing specific initiatives.

11 Beyond central government, we consulted with voluntary organisations, local authorities and private companies, both to gain advice on designing accessible e-services and to identify case examples that illustrate how e-services can be used in innovative ways. Organisations that contributed to our knowledge include Tesco, Standard Life, the Welland Partnership, Anite, Hairnet, StartHere, Citizens Online, humanITy, the Society of Information Technology Managers, McCarthy & Stone, Age Concern, Government Offices of the Regions and the Royal National Institute of the Blind. We also visited the Wired Wedmore initiative in Wedmore, Somerset to learn more about community initiatives.

Overseas benchmarking

12 In order to draw on experience in other countries, we reviewed existing research and visited government and voluntary sector organisations in Australia, Canada, the European Commission, Finland, the Netherlands, Sweden and the United States of America.

Consultation with a reference panel

13 We organised a reference panel to comment on both our methodology and our emerging findings. In addition to representatives of the Office of the e-Envoy and the Department of Work and Pensions, the members of the panel were:

John Fisher	Chief Executive, Citizens Online - a charity committed to exploring the impact of the internet and promoting universal access.
Sarah Hamilton-Fairley	Chief Executive, StartHere - a charity that has designed and marketed an information kiosk that is being piloted by the Scottish Executive.
Emma Aldridge	Age Concern - responsible for leading work to improve older people's ability to use e-services, and to develop training and education for them. As part of this, she is involved in working with Microsoft and Barclays Bank Plc to develop Age Concern internet access/learning points.
Julie Howell	Campaigns Officer, RNIB - worked with Tesco to create an accessible interface for the company's online shopping service, which was launched in 2001, and is working with a number of online banks in developing similar sites. Helped draft the Government's web design guidelines.
Emma Solomon	Director, Hairnet - Co-founder of a private-sector training organisation providing one-to-one IT training for older people.
Steve Doughty	IT Director, National Audit Office.

Appendix B

Relevant conclusions and recommendations by the National Audit Office and the Committee of Public Accounts

Reports by the National Audit Office

Government on the Web II (HC764, Session 2001-02)

The Office of the e-Envoy should review their targets regime so as to incorporate explicitly requirements for departments and agencies to grow the usage of their websites and the take-up of their e-services over time. All government sector agencies should put in place appropriate management information to monitor regularly usage of their websites and e-services.

Better public services through e-government (HC704, Session 2001-02)

The Office of the e-Envoy should accelerate the dissemination and adoption of good practice by departments on how to encourage citizens to take-up services available on-line. If sufficient numbers do not do so, the considerable potential improvements in departments' efficiency will not be achieved. Departments should set realistic take-up targets for services supported by action plans to achieve them, marketing key services delivered on-line to specific user groups and developing incentives for them to take-up the services. Departments need to work together more closely to develop more integrated e-services for client groups such as the elderly.

e-Revenue (HC492, Session 2001-02)

Encouraging take-up is not straightforward and persuading the public to use a new service takes time. This means consulting the public and other key customers to identify: what they require from the e-service; what would encourage them to use it; their concerns; and, wherever possible and cost effective, to make sure the product meets them. Each new service needs to offer additional benefits to persuade potential customers to use it. Benefits might include a more convenient and easy to use service, being able to complete a transaction more quickly, being able to rely on the e-service to pass relevant information on to other government organisations, or a cash saving. Building on the research into customer views and needs, each e-service should offer appropriate benefits and these should be highlighted when marketing the service.

NHS Direct in England (HC505, Session 2001-02)

To build on its initial success in take-up and customer service, NHS Direct should target effort at both a national and local level to reach those groups with lower than average awareness and/or usage of NHS Direct - younger people, older people, ethnic minority groups and less advantaged social groups.

Reports by the Committee of Public Accounts

NHS Direct in England (HC610 40th Report 2001- 02)

PAC concern	PAC recommendation
Awareness of NHS Direct remains too low among some groups within the population, including ethnic minorities.	By the end of 2002 all NHS Direct sites should be aware of the patterns of ethnic minority habitation and social deprivation within their catchment areas, and have devised specific initiatives to encourage the use of the service by these groups.

Government on the Web (HC331, 23rd Report 1999-00)

PAC concern	PAC recommendation
Not all citizens will have access to information technology or have the skills to use it, and some citizens will prefer more traditional face to face communications or written correspondence with departments. It is important that, as more government services are delivered electronically, these citizens are not excluded from the benefits which government on the Web makes possible.	The Cabinet Office and departments need to remain alert to this risk so that some citizens do not become disadvantaged in their dealings with Government.
We are surprised that the Cabinet Office, with their lead responsibility for promoting government on the web, did not know how many departments and agencies have a website and whether they meet their good practice guidance, including being easily accessible by members of the public.	We emphasise the importance of the Cabinet Office having more reliable information on the existence and quality of government websites so that they can target their efforts in promoting good practice.
Citizens are unlikely to access services electronically if the process is complex and time consuming.	To avoid this, departments will have to look for ways for simplifying and streamlining their systems and forms where practicable so that citizens see a real advantage in accessing government services online. We expect departments to give sufficient attention to this as they explore ways of making more services available through their websites.

Appendix C Accessibility audit of government websites

1 In December 1999, the UK Government published web accessibility guidelines which were subsequently revised in May 2002. The criteria of the audit that The Team undertook are based on these guidelines to provide a measure of how government websites are meeting accessibility requirements.

2 To test the accessibility of the 65 websites, The Team carried out a range of tasks in a range of different browsers and versions of Internet Explorer and Netscape. Ten key indicators (see below) were selected to give an accessibility ranking for each site. The websites tested generally met an acceptable level of accessibility, but fell short of an ideal standard in that none passed the W3C (paragraph 3.7-3.8) validation. This apart, the study shows which government websites are taking the initiative to develop websites that are accessible to the widest possible audience and highlights those sites in need of improvement.

3 Overall, the Government is meeting a reasonable level of accessibility. However, only a small number of departments have fully implemented all the requirements of the guidelines. Some typical issues identified in the audit are:

- Range of browsers supported
- Government Standard Access Keys
- Platform for Internet Content Selection (PICS) rating
- Bobby validation
- HTML validation

4 The most commonly used web browsers are Internet Explorer and Netscape Navigator. People with disabilities such as sight loss use a browser (such as Internet Explorer) in conjunction with a further piece of software, a 'screen-reader', that transforms text into audible, synthesised speech. The audit identified that not only did sites not work in older versions of Internet Explorer and Netscape Navigator, they also did not function in a text-only browser. Although the audit did not test a further range of browsers, it did identify problems related to those tested.

5 **Government Standard Access Keys**: A common misinterpretation of the W3C Web Accessibility Initiative guidelines is that they are predominantly for the visually impaired. The scope of the guidelines is to ensure that assistive technology techniques are able to interpret web pages just as well as standard technologies such as Internet Explorer, and that users are able to view and interact with a website irrespective of disabilities. Standard 'Access Keys' provide a shortcut to navigation links so that users do not have to depend on a mouse and are able to navigate with a minimum of effort. To ensure that users can depend on a default range of keystrokes for every government website, the guidelines identify a standard allocation of keys for navigating together with access to the web page that provides this information. The audit found that nearly all the sites tested did not implement the Government Standard Access Keys, thereby excluding potential users.

6 A **PICS rating**, which attaches a label to internet content, was developed to assist parents and teachers to control what children access on the internet using filtering software. The importance of placing a PICS rating on a government website is that it enables internet access to be controlled from public-domain computers as well as by families. If a government website does not contain a PICS rating, a public-domain computer, such as those found in UK online centres, schools and libraries, which may have internet filtering software, is unable to view the site because its content is not described and thus access is restricted.

7 **'Bobby validation'** is used to check that a web page will conform to the W3C Web Accessibility Initiative guidelines from a technical perspective. The audit found that very few of the pages tested passed Bobby validation. A typical problem is that alternate descriptions for images are missing. It should be noted that Bobby is an automated accessibility checker, limited in scope. It is capable of producing false positive and false negative results, and is incapable of testing anything other than basic HTML.

8 **W3C HTML validation** is used to ensure that web pages are created appropriately to enable them to work in a wide range of browsers. The audit found that most of the pages tested did not validate. This raises the issue that the pages will not correctly display in all browsers and will take longer to display. Typically, if a web page is created and passes both Bobby and W3C validation then it can be viewed in a wide range of browsers.

The ten criteria we used to categorise the accessibility and usability of government websites	
1. Is navigation consistent?	Navigation is the technical term for features that allow users to find their way around a website. For example, a website may offer a range of options along the top or side of the page that users can select to move to another page. Navigation should be designed consistently so that it appears in the same place on each page, and so that the same phrase is used consistently to refer to any given page in the website. If navigation is not consistent, it will be difficult for new users to find the information they are seeking.
2. Does site have a PICS rating?	A PICS rating is a certificate explaining the suitability of the content of a website for use by children. Internet software can include filters that prevent users from reviewing websites that are rated as being unsuitable for children. These filters may be in use at public IT facilities such as libraries, internet cafés and UK online centres. If a government website does not have a PICS rating, some users will therefore not be able to view the site.
3. Does site use metadata?	Metadata is information that describes the content of a website. Search engines can use metadata to identify whether websites will contain the information that users are seeking. The Office of the e-Envoy recommend that government websites use a particular form of metadata known as Dublin Core. This type of metadata has been developed and propagated by an international community of experts. If metadata is not used, government websites may not be identified when users search for them using search engines.
4. Is there a search facility on the site?	Search facilities help users to find a specific piece of information. The search facility itself should be easy to find, and should return useful results in response to queries. Without good search facilities, users may be unable to find the information they are seeking, which can be off-putting, particularly for new users.
5. Do external links open in a new browser?	Many websites offer links to other websites. The UK online portal, for example, offers users the possibility to move to pages within other departmental websites. It is important that, when users follow these links, the new website appears in a new browser window. This arrangement makes it easy for the user to move back to the initial website when they have finished exploring the new one. It also makes it clearer that, by following the link, the user is now moving to a new website.
6. Is there a site map?	A site map is a diagram that shows the names of all the pages within a website and how they are linked together. The site map acts just like the contents page in a book, allowing users to quickly find the section in which they are interested. As such, maps usually comprise exclusively text, and may be particularly useful to users who are navigating using a screen reader, equipment that reads out the text on a web page.
7. Can the font size be changed by the user?	Users of websites have varied visual abilities. If the text is too small or too large, it may be hard to read. Most browsers have built-in facilities that allow users to change the size of the text on a web page. This is not possible if the website design includes 'hard-coded' font size, where the size of the text is pre-set and cannot be changed.
8. Are the home page and search results accessible using a text-only browser?	People who use screen -readers or older computers may use a text-only browser to view web pages. The text-only browser omits graphics from the display on the screen, making it easier to read the text and allowing pages to download more quickly. It is important that pages such as the home page are compatible with such browsers, otherwise some users will not be able to enter and find their way around the website.
9. Does the site use Government Standard Access Keys?	Users who have difficulty using a computer mouse may prefer to use shortcut keys on their keyboard to move around a website. The Office of the e-Envoy have introduced a set of Government Standard Access Keys that should be adopted by departments. If all departments offer the same set of access keys, users do not need to learn a new set of shortcuts for every new website they view.
10. Do all pages pass Bobby validation?	Bobby is a piece of software that automatically checks whether a website complies with important elements of accessibility guidelines, such as the W3C Web Accessibility Initiative guidelines. If websites cannot be validated using Bobby, they are unlikely to be accessible to a range of users.

Government Websites audited by The Team

Organisation	Website
British Library	www.bl.uk
British Museum	www.thebritishmuseum.ac.uk
Cabinet Office	www.cabinet-office.gov.uk
Cabinet Office	www.civilservice-pensions.gov.uk
Commission for Racial Equality	www.cre.gov.uk
Countryside Agency	www.countryside.gov.uk
Court Service	www.courtservice.gov.uk
Crown Prosecution Service	www.cps.gov.uk
Customs & Excise	www.hmce.gov.uk
Department for Culture, Media and Sport	www.culture.gov.uk
Department for International Development	www.dfid.gov.uk
Department for Transport	www.dft.gov.uk
Department for Work and Pensions	www.dwp.gov.uk
Department for Work and Pensions	www.jobcentreplus.gov.uk
Department for Work and Pensions	www.thepensionservice.gov.uk
Department for Work and Pensions	www.pensionguide.gov.uk
Department for Work and Pensions	www.disability.gov.uk
Department for Education and Skills	www.dfes.gov.uk
Department of Environment, Food and Rural Affairs	www.defra.gov.uk
Department of Health	www.doh.gov.uk
Department of Trade and Industry	www.dti.gov.uk
DVLA	www.dvla.gov.uk
English Heritage	www.english-heritage.org.uk
English Nature	www.english-nature.org.uk
English Tourism Council	www.englishtourism.org.uk
Environment Agency	www.environment-agency.gov.uk
Equal Opportunities Commission	www.eoc.org.uk
Food Standards Agency	www.food.gov.uk
Foreign and Commonwealth Office	www.fco.gov.uk
Highways Agency	www.highways.gov.uk
HM Prison Service	www.hmprisonservice.gov.uk
HM Treasury	www.hm-treasury.gov.uk
Home Office	www.homeoffice.gov.uk
Independent Television Commission	www.itc.org.uk
Inland Revenue	www.inlandrevenue.gov.uk

Land Registry	www.landreg.gov.uk
Learn Direct	www.learndirect.co.uk
Learning and Skills Council	www.lsc.gov.uk
Legal Services Commission	www.legalservices.gov.uk
Lord Chancellor's Department	www.lcd.gov.uk
Met Office	www.met-office.gov.uk
Ministry of Defence	www.mod.uk
National Savings	www.nationalsavings.co.uk
NHS Direct	www.nhsdirect.nhs.uk
NHS Pensions Agency	www.nhspa.gov.uk
Occupational Pensions Regulator Authority	www.opra.co.uk
Office of e-Envoy	www.e-Envoy.gov.uk
Office of Fair Trading	www.oft.gov.uk
Office of Gas and Electricity Markets	www.ofgem.gov.uk
Office of Rail Regulator	www.rail-reg.gov.uk
Office of Telecommunications	www.oftel.gov.uk
Office of the Deputy Prime Minister	www.odpm.gov.uk
Office of Water Services	www.ofwat.gov.uk
Ordnance Survey	www.ordnancesurvey.co.uk
Pensions Ombudsman	www.pensions-ombudsman.org.uk
Planning Inspectorate	www.planning-inspectorate.gov.uk
Police Complaints Authority	www.pca.gov.uk
Public Guardianship Office	www.guardianship.gov.uk
Public Record Office	www.pro.gov.uk
Public Records Office	www.familyrecords.gov.uk
Remploy Ltd	www.remploy.co.uk
UK online	www.ukonline.gov.uk
UK Passport Agency	www.ukpa.gov.uk
Valuation Office Agency	www.voa.gov.uk
Veterans Agency	www.veteransagency.mod.uk

Appendix D Glossary

Accessibility: A measure of the extent to which services can be used by people with special needs, such as people with disabilities.

Bobby: A computer program that reviews web pages to check that they comply with common guidelines on accessibility.

Broadband: A transmission medium that can carry signals from multiple independent network carriers on a single cable, by establishing different bandwidth channels. Broadband technology is used to transmit data, voice and video over long distances. Because many different frequencies can be transmitted simultaneously, more information can be conveyed more quickly than by conventional telephone lines, just as that more traffic can flow on a motorway than a single-lane road.

Digital television: Subscription television services that use digital technology to broadcast programmes with better sound and visual quality than traditional analogue services. The services usually include additional television channels and interactive features such as the ability to send emails using the television set.

Dublin Core: see Metadata overleaf.

Email: A service that enables people to exchange documents or messages in electronic form. Email systems now mainly operate via the internet.

Electronic transactions: In ordinary language, dealings between people and organisations ,such as finding out a piece of information, filling in a form, or making a payment, that take place using the internet and the web. Within British government circles, electronic transactions are still often more broadly defined to include in addition to web dealings, systematic dealings by citizens with web-enabled call centres.

Home page: The first page of a website which users see, and the central page for directing people to different parts of the site.

HTML: HyperText Markup Language, the main language used to create web documents.

Information and communication technology (ICT): The application of computer science to ways of organising and storing information and facilitating its transfer among users.

Interaction: A two-way exchange of information or transaction.

Internet: A world-wide collection of computer networks sharing common standards and protocols of communication, in particular a common addressing scheme. The World Wide Web is now the main internet application, but there are other facilities on it too, such as file-transfer facilities and user groups not operating via the web.

Kiosk: A machine sited in a public place that uses touch-screen technology to enable users to search for information that is stored in its memory. It is also possible to equip kiosks with keyboards and connect them to the internet so that users can interact with the organisation that owns the kiosk.

Link: A graphic or piece of text on a web page which refers to another web page on another website. When a user 'clicks' on the link, that page is retrieved and displayed.

'Look and feel': The general appearance of an organisation's website. A standard 'look and feel' helps users to be aware of which site they are in and gives them assurance that its features will work in a standardised way.

Metadata: Secondary data attached (or 'tagged') to electronic documents stored by an organisation, denoting specific information about the document such as its author, subject, contents and date. When electronic documents are tagged in this way, they can be more easily searched according to specific information categories. There are various metadata standards. The Office of the e-Envoy recommend that departments use the standard known as Dublin Core metadata.

PICS rating: A PICS rating is a certificate explaining the suitability of the content of a website for use by children. Internet software can include filters that can prevent users from receiving websites that are rated as being unsuitable for children. These filters may be in use at public IT facilities. If a government website does not have a PICS rating, some users will therefore not be able to view the site.

Portal: Any well-used gateway to the internet, especially those sites designed to serve as a 'front door' and thus the first page that users see when accessing the web. Portals typically provide large catalogues of other sites, powerful search engines for locating information, and email facilities or other attractive web services.

Search engine: A database of web page extracts that can be queried to find references to a person, subject or topic across the World Wide Web as a whole. Many websites and intranets provide similar but smaller search facilities for finding material on their site alone.

Screen reader: Equipment that reads aloud the contents of a web page and can be used by visually impaired people to review the contents of web pages.

Take-up: The extent to which government e-services available online are currently used by citizens or customers.

Text browser: Software that displays the contents of web page without any graphics. When combined with equipment such as a screen reader, the browser allows visually impaired people to review the contents of web pages.

Transactions: A transaction with an agency is an interaction with it. This interaction may be the receipt or dissemination of information, the completion or submission of a form, the sending of a payment, the inspection of an account, or more complicated sets of dealings.

Visit: Any occasion when a person clicks on to a given website or intranet. 'Unique visits' refers to a distinct person coming to the site: here, first-time users are recorded while repeat users returning to the site for a second or subsequent time are not.

The Web: the World Wide Web, see below.

Web page: A single document on the World Wide Web.

Website: A collection of web pages located on a common server and published on the internet by a single organisation or individual. The pages can be accessed by outside users without any special authorisation.

World Wide Web: The total collection of graphics and text documents published on websites and inter-connected via the internet through clickable links.