

Information Age Government in Scotland

**A common
framework**

Foreword



I am delighted to have the opportunity to contribute a foreword to the revised IAG Framework which is now being published following consultation.

I believe that our success in meeting our stated target of delivering better public services and in particular of implementing our modernising government agenda depends on the adoption of consistent standards and guidelines across the public sector. We need closer working across all public bodies in Scotland and to achieve that we all need to be working to the same standards. I hope that by using these standards we take a further step towards the goal of better public services.

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Annex A Framework for Delivering Interoperability through Common Standards across the Scottish Public Sector

1. CONTEXT

Digital change

1.1 Information and communication technologies (ICTs) are offering new ways of doing many things – work, shopping, use of leisure time, keeping in touch with family and friends, and looking after money. The scale of the changes taking place is revolutionary. The pace of change is fast, and increasing. As with other waves of change in the past, we have begun by applying technology to doing existing things better. But already there is scope for doing new things altogether, opened up by technology that was simply not available a few years ago.

1.2 Change is being led by the private sector. Companies are using technology to transform processes, their dealings with other businesses, and their dealings with customers. Companies' aims include greater internal efficiency; better, more convenient services to customers; and a more competitive market position. These are powerful competitive motivations. However they are not available to drive forward the application of ICTs to public services. But convenience and efficiency are just as important to the consumers of public services as to customers for commercial services. We must ensure that users of public services in Scotland are able to enjoy the same level of convenience and efficiency as they would experience in using high quality commercial services. People's expectations are rising, and rightly so, as they experience what electronic service delivery can offer in the private sector. People are also becoming aware of the availability of online public services elsewhere.

Scottish Executive commitments

1.3 The Scottish Executive is committed to ensuring that technology is used innovatively to support high quality, efficient public services in Scotland. ["Making it Work Together"](#) the first Programme for Government, published in August 1999, made clear that the Scottish Executive would promote modern government in Scotland. This is being taken forward under the 21st century government banner, which recognises ICTs as a critical tool for pushing forward modern government in Scotland. A key objective, announced by the Executive at the end of March 2000, is that all government services in Scotland which can feasibly be delivered electronically will be available online by 2005. The Executive's commitment to these objectives has been reaffirmed in ["Working Together for Scotland"](#) the second Programme for Government. More importantly, the Executive is committed to delivering better public services which are designed round the needs of the customer not the provider. The Executive recognises that this will require a major change of culture within public sector organisations.

Digital Scotland Task Force recommendation

1.4 Digital technologies are vital to Scotland's future – they create opportunities to improve the efficiency and delivery of business services, increase individual opportunities, and provide opportunities for better delivery of public services. The Executive continues to build on the recommendations of the Digital Scotland task force (published May 2000) which made proposals to maximise the beneficial impact of digital technologies. The Executive's broadband strategy ["Connecting Scotland"](#) (published August 2001) sets out how the Executive aims to achieve affordable and pervasive access to broadband services. The Executive's digital inclusion strategy [Connecting Scotland's People](#) published in September

2001, sets out how the Executive aims to achieve universal access to the web, bridge the digital divide and help people achieve real benefits from the web in their day-to-day lives.

1.5 One of the recommendations on e-public services was that the Executive should publish an information age government (IAG) strategy, complementary to the UK Government's "[e-government: a strategic framework for public services in the information age](#)". This framework document was published in draft at the end of 2000 in deliverance of that recommendation. Following consultation, we are now publishing this revised version.

UK strategy

1.6 The UK government's [e-government strategic framework](#) was published on 3 April 2000. It provides a UK framework for guidance and standards on a wide range of ICT-related issues. The framework is designed to promote coherence in planning e-services by public sector bodies, and covers security, authentication and privacy; technical and data standards to help achieve interoperability and best use of information resources; and projects to develop infrastructure services.

2. WHY WE NEED A COMMON FRAMEWORK

Public services in Scotland

2.1 The public sector in Scotland covers a wide range of players.

- **Scottish Executive and its Agencies.** The Scottish Executive delivers comparatively few public services at its own hand. It provides for example a range of agricultural grants and also business support. Agencies and associated Departments provide other services eg student grants, land registration, conservation of historic buildings. The Executive has decided that, where its services can feasibly be delivered electronically, they will be available online by the end of 2005.
- **Non-departmental public bodies. (NDPBs)** Many executive non-departmental public bodies answerable to the Scottish Executive deliver public services. There is a wide range of such bodies, including Scottish Enterprise, the Scottish Legal Aid Board and the various arts bodies. The Scottish Executive will also ensure that non-departmental bodies responsible for delivering services to the public and to business have the 2005 target built into their forward plans and objectives.
- **NHS in Scotland.** The NHS in Scotland is a major deliverer of public services in Scotland. It is not just a matter of hospital in-patient and out-patient services, but covers also all primary care and community health services. The Scottish Executive Department of Health will ensure that NHS service providers in Scotland work towards the 2005 target.
- **Local authorities.** Local authorities in Scotland are also major deliverers of public services in Scotland. Education, libraries, housing, cleansing et cetera are all widely used services from local authorities. They are also committed to the 2005 target and 23 have developed action plans to show how they will meet the 2005 target.
- **UK Departments in Scotland.** A further tranche of public services that are important to people living in Scotland are delivered by UK Departments and agencies and are not the responsibility of the Scottish Executive. For example, the Department of Work and Pensions is a very important service deliverer in Scotland, as elsewhere in the UK. The Executive is working closely with reserved Departments that operate in Scotland to ensure maximum linkages between reserved and devolved services.

A common framework for Scotland

2.2 Traditionally most public sector organisations have tended to organise service delivery from the point of view of their own organisational structures and functional responsibilities. As a consequence a single life event (eg the birth of a child; starting work; or starting higher education) can result in a citizen or business needing to deal with many different organisations, and perhaps supplying very similar information to all of them. This can be a slow and frustrating process for the customer. It is also an unnecessary expense for different parts of the public sector to capture essentially the same information several times

over. To make joined-up services that are focused on the customer a reality, organisations will need increasingly to work together. They will also need to identify and agree the priorities and opportunities for action.

2.3 To be joined-up in service delivery, individual computer systems need to fully embraced interoperable standards. Significant efficiency gains may be achieved from the sharing of the underlying back-office systems and infrastructure that will support the delivery of electronic services.

2.4 As public sector and other organisations drive forward their plans for providing Information Age Government services, many of the issues that they encounter are common. And if services are to be increasingly joined-up, it makes sense to adopt a common approach to tackling such issues.

2.5 Some issues (eg technical and data standards) require a common approach if they are to be resolved at all, and to avoid separate “islands” of activity which will be difficult to join up later. Even where not essential a common approach is desirable and likely to bring savings from economies of scale.

2.6 Issues such as access, authentication and data protection will be cheaper to resolve if a common approach is taken, through avoiding duplicate expenditure on investigating issues, developing solutions, and installing and operating facilities.

2.7 A third set of issues (eg data sharing, management and skills development) will benefit from exchanging information and developing and sharing good practice.

2.8 In addition there continue to be real opportunities for the public sector to use digital technologies to improve the efficiency of internal processes, and apply electronic service delivery to internal customers, where good practice can be shared.

2.9 There is therefore a need for a common framework for action across the public sector in Scotland to help ensure that new technologies are harnessed to deliver more convenient, joined-up, responsive and efficient public services in Scotland. All parties accept this; and this draft document aims to set out what that framework should comprise.

A common framework for the UK

2.10 It is important that citizens are able to switch easily between devolved services and those provided at UK and European level. To achieve this, the same technical and data standards and related guidelines need to be widely adopted by service providers. Consequently this framework document goes on the basis that the technical and data standards developed in respect of UK services will be applied also to devolved services.

2.11 The Cabinet Office has developed an [e-government interoperability framework](#) that provides policies and standards for achieving interoperability and information systems coherence across the public sector. It is a cornerstone framework policy for the UK e-government strategy, and as such adherence to these policies and standards by UK government bodies is mandatory. The E-government Interoperability Framework has adopted internet and worldwide web standards for all government systems. The aim is to adopt

common usable standards which are well supported by the marketplace. The framework's standards will of course need to keep pace with market developments and new technology.

2.12 Examples of key standards in the interoperability framework are:

- Information systems are to be designed so that as much information as possible is accessible via common commercial web browsers
- All appropriate government information systems should be capable of being connected to the internet
- Data schemas will be defined using XML (Extensible Markup Language)
- Email products will support SMTP/MIME (Simple Mail Transfer Protocol/Multi Purpose Internet Mail Extension)
- Computer networks will use TCP/IP (Transmission Control Protocol/Internet Protocol)
- Hypertext transfer will use HTTP. (Hyper Text Transfer Protocol)

2.13 These and other standards are defined in greater detail in the interoperability framework.

2.14 The rapid expansion of the Internet has led to huge volumes of information being available and Metadata, which is used to tag documents with descriptive information, can help to simplify searching and organising this information. The Office of the e-Envoy has published and continues to update the [Government Metadata Framework \(e-GMF\)](#) which sets the standards for the metadata to be used, these being based upon the well established Dublin Core standards. The Scottish Executive supports the use of this approach as part of the establishment of common data standards for the Scottish Public Sector.

2.15 The Scottish Executive is involved in consultations about all these technical standards and strongly advocates their adoption across the public sector in Scotland.

2.16 This will be better for people living in Scotland. And it will enable more rapid progress to be made in Scotland than if separate solutions were to be adopted, and should also mean more efficient use of resources here.

3. REMOVING BARRIERS

Removing legislative barriers

3.1 Many items of legislation include provisions, which act inadvertently as barriers to electronic service delivery. These include legal requirements for transactions to be conducted on paper, in writing, by post, at a physical location, signed etc. For example local council meetings cannot be held electronically; planning applications must be in writing; votes in elections must be cast on ballot papers; bankruptcies must be declared in writing; and medical prescriptions must be written on a prescription pad. However it is also true that for some services current legislation will continue to be entirely appropriate, and the removal of such legal barriers needs to be carefully considered on a case-by-case basis.

3.2 The UK Electronic Communications Act passed in 2000 includes provisions that will enable many legal barriers to be removed through use of subordinate legislation, though others will require primary legislation.

3.3 The Scottish Executive will promote and co-ordinate work to progressively remove unnecessary legal barriers to electronic service delivery in Scotland. The Scottish Executive will welcome feedback whenever legislation hinders rather than helps public services being joined-up and being available electronically by 2005.

Removing policy barriers

3.4 Government policies can unintentionally create barriers to Information Age Government and electronic service delivery. This can include requiring excessive amounts of information from the citizen and businesses; and creating overly complex policies which lead to frequent and cumbersome transactions. It is also true that policies are sometimes developed in ways which are not sufficiently 'joined-up' or focussed on the citizen in the way that the life episode approach set out above would suggest.

3.5 The Scottish Executive will promote and co-ordinate work to progressively remove unnecessary policy barriers to electronic service delivery in Scotland. This will be achieved in part through policy proofing initiatives as they are developed, to ensure compatibility with the Executive's policy on Information Age Government. The Scottish Executive will also welcome feedback whenever existing or new policy hinders rather than helps public services being joined-up and being available electronically by 2005.

4. A COMMON APPROACH TO PROVIDING ACCESS

Access technologies

4.1 Citizens require means of access to online services if they are to use them. The conventional telephone will provide access to more and more public services in future. So will the Internet. In the next three to five years, many more people will also be able to access electronic services through channels offering internet-type services. Interactive Digital TV and web-enabled mobile phones are the two most discussed channels, and others may emerge. The task of making online public services available in multiple forms (internet, interactive digital TV, and other mobile methods including phones) is important.

4.2 The UK Government's e-government strategy says that:

“Services will be accessed by multiple technologies, including web sites accessible from PCs, kiosks, mobile phone and digital TV, and call and contact centres. CITU will establish and continually revise framework policies for each major delivery mechanism. Those on [web sites](#), [call centres](#) and [digital TV](#) have already been published. In developing services using these technologies for access, public sector bodies should comply with the guidelines. The content of the guidelines will be revised as technologies develop, and will correspondingly vary in the extent to which they establish mandated standards. The underlying principle will be to promote collective approaches to the use of these media across the public sector in the interests of accessibility, quality, familiarity and ease of use and establishment of coherent branding.”

4.3 The Scottish Executive accepts the technical standards that Whitehall has developed for [web sites](#), [call centres](#) and [digital TV](#) should apply to devolved services. The Executive will track development of these standards and will seek to influence that development where issues of particular importance to Scotland are under consideration. Unless there are clear reasons for doing otherwise, the Executive expects to keep Scottish technical standards in line with those in the rest of the UK.

Government portal

4.4 Already there are a number of public service online portals for individual citizens across the UK, and for businesses. The portals aim to offer services that are relevant to particular life episodes, centred on the citizen and bringing together related services without reference to varying responsibility for delivering these services. Portals allow related services provided by different parts of the public service to be delivered in a joined-up way. They may also provide a framework for providers of commercial products to offer complementary services, where appropriate. There are likely to be opportunities for partnerships between private and public sector providers. Portals also offer common services such as authentication and personalisation that can be made available to a number of individual services. This means that once a customer has identified herself or himself to the portal, different online services may not need to request further personal identification.

4.5 A Scottish Government Portal will be created that brings together, under the Open Scotland brand, the key web based information sites and web enabled services already in existence across the wider Scottish Public Sector. The portal will be closely linked to the UK

Government Portal www.ukonline.gov.uk which already contains a great deal of Scottish specific information, and the Executive's existing website www.scotland.gov.uk

Preserving and enhancing choice

4.7 There is a need to preserve customer choice – some customers may be reluctant to accept certain services electronically. Others may be unable to receive services electronically due to disability, or lack of access to the necessary equipment (eg telephone, computer, digital TV). It is vital that these customers do not find that they are also disadvantaged by electronic delivery worsening their access to government services. The Executive therefore supports the delivery of services through multiple methods which are appropriate to the customers of that service, and that meet the needs of excluded groups.

4.8 The Executive is committed to achieving universal access to the web by 2005. A study mapping every public internet access point in Scotland shows that there are approximately 750 internet access points situated in a wide variety of different venues throughout the whole of Scotland. This information is available to the public through a call-centre (0800 771234) and the Digital Scotland website www.scotland.gov.uk/digitalscotland/webaccess/default.asp. In response to the results of the study, the Executive is launching a nation-wide scheme designed to tackle the digital divide. The Public Internet Access Points Initiative will create over 1000 new access points all over Scotland – primarily in areas where public Internet access is currently poor. These access points will be located within businesses and organisations throughout Scotland and will provide cheap, local facilities where the public can go to get online.

4.9 The Cabinet Office is developing policies on the delivery of services through third party intermediaries (known as “channels”). There is potential for real improvements in public services if they are delivered through third parties with the infrastructure and skills to deliver services which are available nearer to where people live and work, in public places that they already use, and outside of normal office hours.

4.10 Organisations in the public, private and voluntary sectors can all form effective delivery channels. Examples include Post Offices, Banks, Libraries, and Citizens Advice Bureaux. Public sector bodies will need to consider the channels most appropriate for delivering each service. Factors such as these need to be taken into consideration:

- The target customer/demographic group
- The locations where it is desired to make the service available
- The intended hours of availability of the service
- The level of security required for the service
- How the service is to be promoted
- Whether the third party can add value to the service
- Financing and payment arrangements.

4.11 The Scottish Executive supports the development of channels and is actively involved in the development of the [Channels policy](#). And the Scottish public sector will preserve the choice of the customer to receive services delivered through traditional means (eg face-to-face or paper-based services) for as long as necessary in parallel with developing electronic service delivery.

Promoting public take up of services

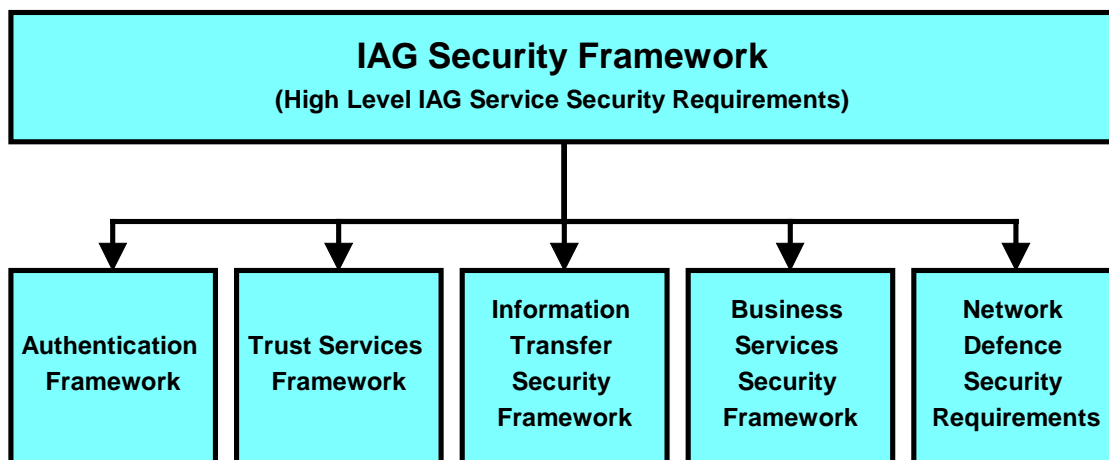
4.12 Creating electronic services which are of real value to the customer must be the main step in promoting take up of those services. Customers will want to use electronic services where these represent a real improvement, in terms of quality and accessibility, over traditional methods of accessing that service. However there will also be benefit in branding and promoting services in ways that raise the customer's awareness that the electronic service is available, reliable, and can be trusted. A new brand, [openscotland.gov.uk](https://www.openscotland.gov.uk), has been developed with these aims in mind. Openscotland.gov.uk is an overarching brand which aims to present both electronic and non-electronic 21st Century Government initiatives in a clear and coherent way.

5. A COMMON APPROACH TO SECURITY

Security framework

5.1 Implementation of clearly articulated, consistent, workable and effective security procedures is seen as key to securing public confidence in information age government services. [Authentication](#) is likely to be a key issue both for service providers and users of these services. Common standards on other issues including trust services, information transfer and network security, while relatively technical and largely invisible to most citizens, are also important components of a credible approach to security.

5.2 The Cabinet Office's [Central IT Unit](#) (supported by a working group which includes representatives of devolved administrations) have developed a [framework](#) setting out security requirements for such services, which includes requirements for delivery of internal services which will be needed in support of IAG service provision. The security requirements expressed in the framework document represent a call for general alignment with best e-commerce practice. The requirements set out in the framework, and others derived from it, are intended to be vendor independent. Constraints are limited to only those which are necessary to meet government security and national policy requirements. Suppliers are free to propose differing implementations, constrained only by interoperability requirements which may be necessary for operational reasons. The high level security framework is therefore supported by a number of more detailed technical frameworks, as shown below.



5.3 The Scottish Executive will adopt the frameworks for those areas for which Scottish Ministers are directly responsible, and will promote them across the wider public sector.

Smartcards

5.4 Smartcards are a potentially important enabler of electronic public service delivery. Smartcards are a portable technology that can act as the key for access or proof of entitlement to many services. A number of frameworks have been developed to advance the technical standardisation in this area. The Scottish Executive has been involved in Cabinet Office groups on strong authentication for both business and citizens, data standards and the more wide ranging Smartcard Policy Framework. The results of these working groups are, or will

soon be, available on the Office of the e-envoy website. The Executive is also represented on the Transport Smartcard Forum.

5.5 It is essential that technical standardisation in the design and use of Smartcards is achieved, and our active promotion of the technical and policy frameworks will assist with this. One of the four key themes of the Modernising Government Fund 2 is to promote projects aimed at introducing Smartcard schemes supporting the citizens account concept.

6. A COMMON APPROACH TO DATA PROTECTION

Privacy for users

6.1 The Data Protection Act 1998 protects the rights of citizens to privacy with respect to the processing of personal data whether stored in computerised systems or in conventional manual records. The Act requires any body that processes personal data to comply with the rules of good information handling known as the data protection principles. These 8 principles require that personal data shall be:

- Fairly and lawfully processed
- Processed for limited purposes and not in any manner incompatible with those purposes
- Adequate, relevant and not excessive
- Accurate
- Not kept longer than necessary
- Processed in accordance with data subject's rights (a data subject is an individual who is the subject of personal data)
- Secure
- Not transferred to countries outside the European Economic Area without adequate protection.

6.2 The Act provides citizens with certain rights in respect of personal data held about them. These include the right of access to such data, a right to prevent processing likely to cause damage or distress and a right to take action to correct or destroy inaccurate data held about them. The Act also requires public bodies who share information about individual citizens to comply with the data protection principles when processing such information.

6.3 The Act sets out measures that regulate the way information about citizens can be used. This protects citizens by requiring their consent to the way that information can be used – and prevents public bodies from sharing information about individual citizens without their consent. The Act applies to the United Kingdom and Scottish public bodies are bound by its provisions.

Security for government data and systems

6.4 Society is becoming increasingly dependent on accurate and timely sharing and distribution of information. The importance of being seen to address the essential aspects of security - confidentiality, integrity and availability - will increase as more direct communication with citizens and the private sector evolve. Citizens will expect that their communications with government will be private, based on accurate information, and will be available when they need them.

6.5 Until recently, there were no international standards for data and systems security, although codes of practice have been issued by CESG (for classified information) and CCTA (for non-classified information). However, ISO/IEC 17799 Information Security Management (formerly British Standard 7799) is now the accepted international standard for information security.

6.6 The Scottish Executive information security processes are based on the standards contained in ISO/IEC 17799, with the aim of achieving full compliance by the end of 2003. Other public bodies are also expected to ensure compliance with this international standard.

7. A COMMON APPROACH TO DATA SHARING

Government Secure Intranet

7.1 The Government Secure Intranet (GSI) links UK Government bodies to each other and to a range of useful electronic information services (such as government, travel, news, business and procurement). The Scottish Executive's computer network is connected to the internet through the GSI, with most staff having access to the Web through this link. The GSI also enables transmission of emails classified up to "Restricted" to any recipient who is connected to the GSI. To help in this process the website also provides a directory of those civil servants connected to the GSI. It is important that the public sector develops a culture in which sharing and re-using data is encouraged and departments routinely make a wide range of information available to each other (where this is compatible with the protection of personal data). The GSI is assisting in this process. Audit Scotland's publication "Common Data, Common Sense", published in August 2000 sets out a useful approach to improving data sharing and data management.

Proposed developments

7.2 A programme of work to develop the GSI content and services such as a 'community Intranet' has been proposed by the Cabinet Office's Central IT Unit (CITU) and the Central Computer and Telecommunications Agency (CCTA). The intentions of this "GSI2" programme is to support joined-up government, provide easy access to information and research, reduce duplication of information on Departmental intranets and add value at corporate level.

7.3 In addition, work is currently underway to strengthen GSI resilience and contingency measures. Once these are in place, the Scottish Executive will encourage all Agencies within the Scottish Administration to ensure their security (both physical and IT) is adequate to allow them to obtain GSI accreditation. The Executive will also encourage Scottish local authorities to investigate the potential business benefits of joining the GSI based extranet - the GSX which provides a network infrastructure capable of supporting electronic service delivery.

8. A COMMON APPROACH TO DATA STANDARDS

Common definitions

8.1 Using common data standards makes it easier to share information, making it easier to join up services, minimising the burden on those who provide information, and reducing the risk of information being misunderstood.

8.2 The Cabinet Office is developing corporate standards for data entities that are common across the public sector – for example a citizen's name and address. The Scottish Executive supports the development of common data standards, and the adoption of such standards across the Scottish public sector as new computer systems are introduced, or existing systems are replaced or redeveloped. In addition to this a key part of the [E-government Interoperability Framework](#) is the development of XML schemas to allow data to be exchanged between different public sector computer systems (where this is compatible with the protection of personal data). The Scottish Executive is also working with councils to produce a National Address Database.

8.3 In addition the UK wide Government Statistical Service promotes the use of harmonised questions and outputs in its surveys. The Scottish Executive has also promoted the development of a data model for the education sector, which allows schools, local authorities and the Executive to share the same information for different uses. The Executive will work with appropriate partners in other sectors to extend this model.

Geographic Information Systems (GIS)

8.4 Much of the information that Government creates and uses is geographically referenced - related to a particular place. Citizens want to know about their neighbourhood, and how it compares with other areas. So standards for geography are particularly important for sharing data.

8.5 The National Geospatial Data Framework aims to extend the use of geographic data by improving knowledge of and access to information: the Web-based AskGIraffe gateway was launched in July 2000. The establishment of the UK Standard Geographic Base provides a standard and consistent approach to commonly used units in the administrative and postal geographies. The Interdepartmental Group on Geographic Information promotes the use and good management of geographic data through the Geographic Information Charter Standard Statement, to which the Scottish Executive is a signatory..

8.6 The Scottish Executive and other Scottish bodies are active in all the UK initiatives. GIS is now well established in many organisations, and the Scottish Executive is preparing a GIS Strategy to improve the effectiveness of its use of spatial data and information. Access to Ordnance Survey digital mapping through a consortium of government sector organisations provides significant cost and efficiency gains. Through the work of the Scottish government sector GIS user group, we are improving our ability to share spatial information between central and local government. Spatial information is now being disseminated to a wider audience through Internet based GIS initiatives such as the Scottish Enterprise K-Map initiative, and GIS will be an important support tool in the Executive's Neighbourhood Statistics initiative.

9. A COMMON APPROACH TO ELECTRONIC RECORD MANAGEMENT

9.1 Electronic record management is a key technology underpinning electronic government. The electronic delivery of services to business and the citizen will produce electronic records as evidence of individual transactions; these records will need to be retained and maintained in a controlled manner over the medium to long term:

- To ensure that government is accountable
- To support evidence based policy making and decision taking
- To maintain a reliable record of government activity and decisions
- To provide a source of reliable evidence in the event of legal action
- To ensure compliance with Data Protection and future Freedom of Information legislation.

9.2 Large quantities of electronic records already exist across the public sector. These need to be managed and controlled more formally, as well as planning for those that will be generated by new service delivery and policy-making systems. Records represent an explicit corporate memory for the organisation. Electronic records can unlock content that was previously difficult to access in paper form, enable more effective sharing of information and contribute to knowledge networks.

9.3 Greater commonality between record-keeping systems, including metadata standards, standardised logical and physical formats, and compatible procedural control, will support interoperability and joint working between departments and agencies, and enable the managed sharing and exchange of records.

9.4 The longer term requirements of public records will require public sector organisations to plan for migration of records, as hardware and software platforms change, to ensure continued access and authenticity. This maintenance of records in electronic form will make feasible the transfer of records to archives, and enable public access in electronic form.

9.5 Cabinet Office has developed a [framework for electronic records management](#) to assist the development of departmental e-business strategies, and to assist planning for the implementation of the Modernising Government target that by 2004 all newly created public records will be electronically stored and retrieved. It also provides guidelines to support greater inter-departmental working.

9.6 The National Archives of Scotland (NAS) supports the development of UK standards for electronic records management. NAS is participating, along with the Scottish Executive and the Scottish Parliament, in a project sponsored by the Public Record Office under the government's *Invest to Save* initiative, to develop common standards and procedures for electronic records management systems in public bodies. NAS is also developing systems to provide public access to paper records in its custody in the form of digital images. The Scottish Executive has a project in hand to develop and roll out an electronic records management system.

10. A COMMON APPROACH TO PROCUREMENT

General procurement

10.1 There are a number of factors supporting the case for e-procurement. These include:

- Reduced acquisition costs by the removal of paper and associated labour
- Benefits through the aggregation of common items
- Facilitates benchmarking of prices and processes
- Better management information
- A clearer and more effective audit trail
- Cutting the cost of doing business with government
- Platform for effective collaboration across the public sector.

10.2 The increasing importance of public sector procurement in supporting the delivery of government objectives was reflected in UK Ministers' positive response to two major reports: the Comprehensive Spending Review Study "[Efficiency in Civil Government Procurement](#)" (the PX report); and "[Review of Civil Procurement in Central Government](#)" in April 1999.

10.3 The PX report recommended the use of e-commerce tools and techniques in Government procurement, collaborative working practices and the development of qualified staff. These initiatives particularly support the modernisation government and competitiveness agendas of which e-procurement is an integral part.

10.4 As part of its response to the above two reports and its drive towards 21st century government, the Scottish Executive established the Procurement Supervisory Board in January 2000. Part of the Board's remit was to advise on priorities and opportunities for improvement in the light of Ministers' wider objectives on efficiency, modernisation and competitiveness in the public sector in Scotland. The Board reported its preliminary recommendations to the Minister for Finance in 2000. A key recommendation was that the Executive should pursue the introduction of a common e-procurement facility for the Scottish public sector. Following an international competition, and with the support of the Modernising Government Fund, a contract was awarded in late 2001. Work on implementation is currently underway, in partnership with health, local government and other public sector bodies.

11. A COMMON APPROACH TO E-SKILLS FOR PUBLIC SECTOR STAFF

11.1 The public sector will need to ensure that it has the right skills in place throughout organisations to deliver the goods.

- All public sector managers: need to be able to see beyond the bounds of existing organisational structures to achieve a greater degree of linkage with other organisations; and be able to see the potential for new or transformed services delivered in new ways.
- All public sector staff: need to be able to take the customer's point of view of how services could be delivered; and be comfortable with using new technology.
- All ICT specialist managers: need to be aware of common ICT standards; able to explain to non-specialists how new ICT can be applied to business delivery; able to plan and manage major change projects.
- All ICT specialist staff: need to be aware of common ICT standards; need to be able to work closely with non-specialist colleagues in the delivery of change.

11.2 The Cabinet Office has set up a team to analyse the skills implications of Information Age Government for the Civil Service. The aim is to ensure that the necessary awareness, policies and actions are initiated to address all the skills needs identified. UK departments will conduct skills audits as a part of developing their e-business strategies. The Cabinet Office has produced a [policy paper](#) and an [e-business skills assessment toolkit](#) to help Departments analyse the skills implications of e-business for themselves.

11.3 The Scottish Executive, its agencies, NDPBs and health boards will review, as a part of their regular business planning processes, the skills required to deliver Information Age Government; the current availability of those skills within their organisations; and set in train action to remedy any skills gap. Local authorities are asked to do likewise as part of their own overall business planning arrangements.

12. MAKING IT HAPPEN

Leadership

12.1 It will be crucial for public sector organisations to ensure that the leadership is in place to effect these changes. This is not primarily about having technical expertise, and indeed effective leadership is most likely to be associated with seeing the big picture of what the organisation is there for, how things can be improved for the benefit of users, and identification of the main priorities for action. That said, it is important for the leadership also to be able to appreciate and communicate how ICT can help deliver that better. Leadership needs to be at senior level within the organisation. To solve the difficulties that will inevitably arise, support at board/elected member level is desirable, as well as top management.

12.2 At UK level, leadership is by the E-Envoy, supported by the [Office of the E-envoy](#) within the Cabinet Office in Whitehall. The Scottish Executive keeps in close touch with this work, so that relevant aspects can be taken forward in the Scottish context.

12.3 Within the Scottish Executive, overall leadership on 21st century government rests with Andy Kerr, Minister for Finance and Public Services, and with Peter Peacock, Deputy Minister for Finance and Public Services. But all Ministers are committed to a leadership role for their respective portfolios. At official level, overall leadership is with John Elvidge, Head of the Finance and Central Services Department, supported by the 21st Century Government Group. Named officials throughout all the Departments take leadership roles for their respective responsibilities. In the local government sector, every Council has appointed both a Councillor and senior official to be 21st century government advocates within the Council, and a Central/Local Government Forum has been set up to oversee developments.

Planning

12.4 Objectives for electronic service delivery need to be built into the overall business objectives for all public sector organisations. Electronic service delivery targets clearly need to be considered relative to other organisational objectives, and overall business strategies need to reflect this. These plans will need to include:

- Analysis of business requirements and benefits of applying e-business methods
- Examination of information and transaction flows between the organisation and its customers (B2C), the organisation and other organisations (B2B), and transactions with internal customers
- Plans for progressively increasing the proportion of services delivered electronically
- Plans for converging with common technical standards
- Analysis of relationships with customers and application of customer relationship management techniques
- Identification of opportunities for working with partners to deliver services, and for achieving customer focused services
- Identification of opportunities to deliver early results, and achieving benefits for customers
- Plans for tackling any skills gap.
- Plans for culture change within the organisation

- A robust communication strategy

Prioritising services for delivery

12.5 Some services will be better candidates for electronic service delivery than others. As a part of the e-business planning process public sector bodies should aim to identify those services where electronic delivery is expected to achieve the greatest benefits for the customer and be most successfully delivered. These services should be prioritised for early electronic delivery ahead of services where electronic delivery is expected to be less beneficial or successful. Such “quick wins” will help to promote the take up of electronic services by all groups of customers, and help achieve earlier benefits from electronic service delivery. The UK is also committed to prioritising the electronic delivery of the list of basic services identified as part of the European action plan [e Europe 2002: Impacts and Priorities](#).

12.6 The Cabinet Office asked UK Departments to complete e-business strategies by October 2000, and provided [guidelines for completing these strategies](#). The Office of the E-Envoy takes the lead in planning at UK level. This is then translated into individual Departmental and other plans.

12.7 In Scotland, the Scottish Executive has developed an overall [21st century government action plan](#), covering the whole of the public sector in Scotland. Individual public sector agencies are developing specific plans for their own businesses. In particular, all local authorities are developing plans in consultation with the Convention of Scottish Local Authorities (COSLA).

Monitoring

12.8 Once the plans are in place, further developments need to be monitored so that overall progress can be known and action can be taken as necessary to ensure success. The key measures will be:

- Proportion of all Scottish public services available electronically, with milestones (aiming towards 100% availability in 2005)
- Proportion of service users accessing services electronically (take-up measure)
- Customer satisfaction ratings relating to electronic service delivery.

12.9 At UK level, the E-Envoy publishes regular reports on overall progress.

12.10 In Scotland, the Scottish Executive monitors progress across the whole of the Scottish public sector. The Electronic Service Delivery Progress Report uses a 4 stage process to measure progress towards the 2005 target. The report is published on the [21st Century Government website](#) and is updated quarterly. The Central/Local Government Forum will monitor developments across local government.

Sharing good practice

12.11 Much good work is already under way, and successful roll out across the whole public sector will be helped by easy access to good ideas already being implemented elsewhere and to general guidance on specialist subjects.

12.12 At UK level, a wide range of studies is produced by the [Performance and Innovation Unit](#), which is part of the E-Envoy's Office. Scottish Executive officials contribute to this development process, and ensure that relevant aspects are taken into account in the Scottish context.

12.13 The main focus in Scotland is the development of the 21st century government website, which holds:

- Useful reference material on relevant issues, prepared by a range of sources
- Drafts in development and a discussion forum to comment on these
- Details of good projects in development around Scotland and beyond, and contact details so that you can get in touch direct to find out more.

12.14 The 21st Century Government Unit has also organised a range of events including conferences, seminars and workshops to promote the 21st Century Government agenda and examples of good practice around Scotland and to provide guidance on specific issues such as authentication and data protection. This work will continue.

Conclusion

12.15 The goal is convenient, responsive and efficient public services within a Scotland that takes full advantage of the economic and social opportunities that digital technologies offer. Information and communication technologies are a key enabler of better public services. To achieve this, we need to push ahead as quickly as possible with actions across the public sector to ensure that the target of all public services online by 2005 is achieved.

12.16 This framework document aims to assist in that by promoting joined-up service delivery, coherent actions, and the use of common technical and data standards which are essential to making information age government work.

Framework for Delivering Interoperability through Common Standards across the Scottish Public Sector

Coverage

1. The Scottish Executive its Agencies, NDPBs and the NHSiS, Local Government and the wider public sector as voluntary partners.

Purpose

2. This paper is concerned with interoperability standards, not with security standards or authentication standards. It does not make any comment on standards relating to the quality of data held or presume to dictate what types of data should be held. These other areas might come under the remit of a standards supervisory body in an advisory mode but may not require the same degree of consistent application through Scotland so do not need to fall into the core set of standards. The primary purpose is to lay out a number of standards that can be agreed upon by all and that are practical and useful to apply to all projects across every part of the public sector in Scotland.

Vision

3. The 21st Century Government vision makes it clear that services should be available to the citizen how they want them, when they want them, and to a consistently high quality. To bring this vision into reality Government of all levels needs to co-ordinate its effort and shift its focus towards the citizen being at the centre of every decision. To help stimulate cultural change and provide direction to the systems re-organisation that will be needed, interoperability standards should be agreed and implemented across the Public sector. A clear set of standards can ensure that interoperability is a key component applied to all new service delivery projects and becomes part of the ongoing transformation of existing services.
4. To give a focus to standards and to create a significant driver for complete acceptance across the government sector a single customer account should be created for every citizen. The citizen account will be created and maintained to standards agreed with service providers. Local authorities in the main but other public bodies on a service by service basis would then need to commit to ensuring their back office systems can interact with the citizens account. The citizen will benefit from more convenient and efficient services and operating efficiencies through data sharing and standardisation will bring cost savings to service providers.
5. This approach is consistent with the lessons learned and the subsequent feedback from the MGF 1 round which has indicated a number of key project areas. These are: the citizen's account backed by a smartcard; data sharing, e.g. to promote a single notification of change of address; data standards to rationalise land and property information; and e-procurement. In particular the rationalisation of land and property data could be a means of providing a common platform for managed services such as in council tax or non-domestic rates collection.

Interoperability Standards for the Scottish Public Sector

6. The following standards should form the first set of standards to underpin all ICT projects in the Public Sector. The standards are designed to achieve UK and European compatibility along with consistency throughout Scotland.

e-Government Interoperability Framework (e-GIF)

7. The **e-GIF** sets out the technical policies and standards for achieving interoperability and information systems coherence across the public sector. The standards are pragmatic aimed at reducing cost and risk and tend to follow the leading market approaches. The adoption of e-GIF standards is mandatory for new projects where any funding comes directly from the Executive. CISD carry out technical evaluation, of each new iteration, of the e-GIF standard before its adoption into Scotland is approved.

<http://www.govtalk.gov.uk/interoperability/interoperability.asp>

e-Government Metadata Framework (e-GMF)

8. This framework which was launched in May 2001 provides the technical standards for the creation of metadata. Metadata is used to 'tag' web pages to clearly identify pages of information and ease the consistent search and retrieval of information within or from outside organisations. The adoption of these standards along with a Government Categories List can help with improving the search facility across government sites.

<http://www.govtalk.gov.uk/interoperability/interoperability.asp>

BS7666 (1994) Land Property and Address data.

9. This standard sets out the address that provides a unique identification and location of a real world object in Great Britain.

Latest information and available for purchase at www.bsi-global.com

Draft XML schemas, for use with the Government Gateway, are available at:

<http://www.govtalk.gov.uk/interoperability/interoperability.asp>

Recommended Standards

10. e-GIF government Data Standards Catalogue Vol 2 Data Types Standards.

Endorsement and promulgation of Standards

11. Ministers support these standards as vital to ensure a wide acceptance across the whole public sector and to make clear that standards underpin key areas of policy. The endorsement of the Central Local forum will also be important in gaining acceptance of the standards.

12. The agreement of the standards follows co-operation with the Office of the e-Envoy and in Scotland with The Data Standards Task Group (Local Authority and Executive membership). CISD support the standards and contribute to and validate each new iteration of e-GIF and e-GMF.
13. Support is also required for the proposition to create the citizens account which would be built in line with the key standards and can lead to efficiency savings through data sharing and consequently reduced overheads. Most importantly it will also improve the service to citizens and offer a new channel for interacting with Government. Bringing out the practical benefits of interoperability standards in this way should act as an incentive to pursue other data sharing and interoperability projects across Scotland. All data sharing and increased interoperability between public bodies will need to take full account of Data Protection legislation and Freedom of Information legislation and give citizens complete choice over which services they wish to access, if any, in this way. Guidance on the latest interpretations of the above and any other directly relevant legislation specifically with regard to data sharing is under consideration within the 21st Century Government Unit, in consultation with the wider Public Sector and the Information Commissioner.
14. All new projects would be required to comply with the interoperability standards if they required Scottish Executive support or funding (including all projects funded or approved by Scottish Executive Information Systems Steering Group, Modernising Government Fund or Capital Modernisation Fund. Additionally adopting standards should simplify industry response to tendering, in that data standards will become a common component not a subject of negotiation.
15. A Standards supervisory group with a wide membership from across the public sector in Scotland should act as the keeper and maintainer of standards, updating the current core set standards and promoting new standards where needed and advertising and making accessible a full set of standards for public sector and public use.

Conclusion

16. Ministers endorse the following as the first group of data standards for the Scottish Public Sector.

e-Government Interoperability Framework (e-GIF)

e-Government Metadata Framework (e-GMF)

BS7666 (1994) Land Property and Address data.

17. Ministers have endorsed the establishment of a standards supervisory group to ensure new standards are brought into the framework and that changes and additions to the framework are suitably publicised.