Scotland's Digital Future: Delivery of Public Services

ACCESS APPROACH BUSINESS COLLABORATION DATA DELIVER DEVELOPMENT DIGITAL EFFICIENCY FRAMEWORK ICT DIGITAL LOCAL NATIONAL OPEN OPPORTUNITIES IMPROVE INFORMATION EFFECTIVE PUBLIC SCOTLAND PROCUREMENT SERVICES SHARING STANDARDS SERVICES STRATEGY SUPPORT TECHNOLOGIES WORKFORCE USERS



Foreword



Introduction from John Swinney, MSP, Cabinet Secretary for Finance, Employment and Sustainable Growth

COSLA

David O'Neill
President COSLA

Introduction from David O'Neill,
President COSLA

http://www.youtube.com/watch?v=9kR5N3itloQ

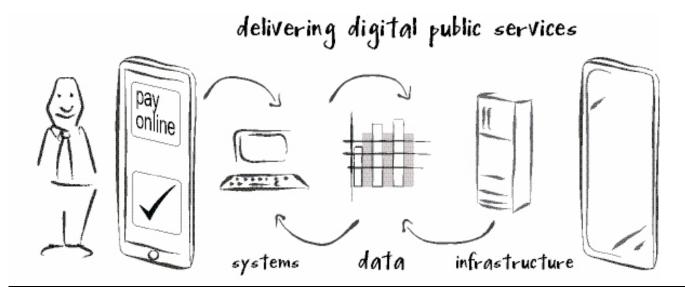
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Our vision for Scotland is a country in which:

digital technology provides a foundation for innovative, integrated public services that cross organisational boundaries and deliver to those in most need, and for services for business that promote growth

digital technology captures patterns of service use and feedback, so that users of public service are more directly involved in service design and improvement

this use of digital technologies provides a firm basis for a shared commitment to, and responsibility for, public services



Section One: Introduction

The Scottish Government is working with the wider public sector to achieve:

public services that are high quality, continually improving, efficient and responsive to local needs (National Outcome 16).

We do so in a context of unprecedented growth in demand for services and of constrained resources. A future that is both more sustainable and more equal will require the public sector to work with their user communities to redesign services and different parts of the public sector to work better together. The effective, innovative and imaginative deployment of digital technologies gives us tools to meet these challenges.

We see every day how digital technologies and communication are transforming life experiences at home, in social and community networks and in business. Digital technologies are also impacting on how people in Scotland acquire information about public services and access those services. We are not starting from a blank sheet but we have the opportunity for a much bigger transformation to:



use digital technologies to redesign services and better meet people's needs, including the opportunity for citizens to have more control over when and how they access services

deploy digital technologies in ways that reduce the cost of services to the user and provider

deliver services and manage data in a way that supports businesses and provides new business opportunities and contributes to economic growth

These objectives are wholly compatible and our strategy brings them together. This strategy sets out:

- → our vision what **success** will look like
- → why we are doing this drivers for development of digital public services
- → who will deliver the public sector working with the ICT industry to achieve success
- → what we will do
 - principles that provide a framework for all our investment decisions and actions
 - actions that will be taken at a national level to facilitate the development of digital public services by, and across, different parts of the public sector
- → how we will ensure delivery

In this strategy:

- → 'services' means transactions and information
- → transactional services allow the exchange of information, money, permission, goods and services between citizens/businesses and government
- → informational services cover the publishing of information to assist citizens and businesses engage with government
- → 'digital' means internet-enabled

Section Two: Our vision and what success will look like

When we succeed the people of Scotland will:

find it easy to access digital services and be confident in doing so because

- → services are well designed and useable
- → there is a choice of channels to access them
- → assistance is available to those who need it

experience services which continually improve because providers act on the feedback and performance analysis that digital technologies allow where needs are complex, receive a response that is coordinated and personalised through effective and appropriate use of information and the supporting technology

be confident that services are resilient and that personal information will be kept secure.

CASE STUDY Channel neutral housing services

Glasgow Housing Association tenants with cable or satellite television can now access a new digital channel, through the interactive button, to access a range of housing services. For example: request a repair; find out about moving home; and report anti-social behaviour. Tenants with smartphones can also use the channel, which will soon allow rent payments to be made online.

More at: http://bit.ly/OXveC8

To achieve this the public sector will:

adopt an approach of "digital first" in service design; that means that organisations will deliver online everything that can be delivered online

work collaboratively to simplify and join-up services wherever possible, making full use of the opportunities that technology provides to support collaborative working, and changing systems and business processes to enable this

through common standards and interoperability collaborate locally, nationally and internationally

have a workforce that is motivated and skilled in using digital technologies and gains recognition for doing so collaborate in planning its use and procurement of ICT, with re-use as a first principle to avoid unnecessary duplication and so reduce purchase and running costs

have a public sector network which supports resilient high-volume and high-speed communication

And so our vision for Scotland is a country in which:

digital technology provides a foundation for innovative, integrated public services that cross organisational boundaries and deliver to those in most need, and for services for business that promote growth

digital technology captures patterns of service use and feedback, so that users of public service are more directly involved in service design and improvement

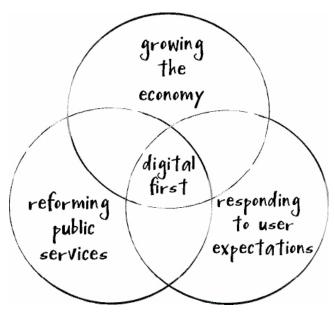
this use of digital technologies provides a firm basis for a shared commitment to, and responsibility for, public services.

Section Three: The drivers of our strategy

There are strong business reasons to invest in digital public services and to achieve more effective use of underlying ICT infrastructure.

Public Service Reform

The strategy and its implementation will support public service reform that focuses on achieving outcomes and doing so with greater efficiency. The four pillars of reform identified in *Renewing Scotland's Public Services*¹ are:



- → a decisive shift towards prevention by helping partners to prioritise and invest in actions that will help prevent problems arising or deal with them early on
- → collaboration and integration supporting greater integration of public services at a local level by enabling better partnership and collaboration around shared outcomes
- → workforce development and effective leadership by enabling new ways of working, which make the best use of the talents, capacities and potential of people at all levels, to better involve people and communities in the design of the services that support them

→ improving performance – by supporting a sharp focus on improving performance through greater transparency, innovation and use of digital technology. The strategy will play a key role in creating a more efficient system of public services (public, third and private sectors) by reducing duplication and sharing services.

CASE STUDY

Helping people go digital, Danish Government

The Danish Government's goal is for entirely paperless interactions between citizens/businesses and the public sector by 2015. Citizens and businesses will be provided with a 'digital mailbox' to communicate with the public sector. Those who are not proficient users of IT will receive help from local service centres or over the phone. Alternatively, users may choose to provide a digital power of attorney to their relatives, so that their family can assist them remotely.

More at http://bit.ly/NcN8lS

Digital public services and cost effective use of ICT will play a crucial role in all four pillars. For example, good data and sharing of data are vital for a preventative approach, while effective use of digital delivery can also free up resource for face-to-face delivery where that is required. Initiatives such as Welfare Reform and Health and Social Care Integration will require ICT systems that enable partnership and collaboration. Some services and users require quick access to very large and complex data sets to deliver their business.

¹ Renewing Scotland's Public Services is available at http://www.scotland.gov.uk/Publications/2011/09/21104740.

3 The drivers of our strategy

Effective Use of Resources

The Scottish Government's Response to the McClelland Review of ICT Infrastructure in the Public Sector in Scotland² committed to achieve better value through collaboration and sharing of ICT infrastructure and digital connectivity, and budgets were adjusted to reflect the identified savings. This strategy sets out how savings will be made and tracked. John McClelland's report also illustrated the benefits to be gained from using ICT in making services more effective and easier to access. His report set out the landscape in 2011 which already included a range of important initiatives but from which the public sector must continue to move forward.

We will also ensure that our ICT infrastructure is deployed in an energy-efficient manner and, by delivering services digitally, reduce carbon impact e.g. by reducing travel requirements and having fewer, and more energy-efficient, data centres. In this way we will contribute to National Outcome 12: 'We reduce the local and global environmental impact of our consumption and production' and to the requirements of the Climate Change (Scotland) Act 2009.

Scotland's Digital Future

The Scottish Economic Recovery Plan: Update February 2011³, identified the opportunity to use ICT more innovatively to improve productivity and help increase economic growth. The public sector will contribute by ensuring that business can deal digitally with the public sector in an effective and efficient manner and by open data providing a basis for new products and services. In this way we will support National Outcome 1: 'We live in a Scotland that is the most attractive place for doing business in Europe'.

In delivering against this strategy we will contribute to achieving the bigger picture set out in *Scotland's Digital Future: A Strategy for Scotland*, published in March 2011. This set out ambitions for digital connectivity, a digital economy, digital participation and digital public services, which are interdependent strands of an overall vision.

² Scottish Government Response to the McClelland Review of ICT Infrastructure in the Public Sector in Scotland is available at http://www.scotland.gov.uk/Publications/2011/09/21103403.

The Scottish Economic Recovery Plan: Update February 2011 is available at http://www.scotland.gov.uk/Publications/2011/02/24095442

Section Four: Who will deliver?

This is a strategy for the Scottish public sector, working with industry and those who use services. It has been developed with, and will guide the future actions of:

- → the Scottish Government, its agencies and nondepartmental bodies accountable to Ministers
- → NHS Scotland
- → local government
- → the police and fire services
- → universities and colleges

The strategy is the framework into which sector strategies will align – an eHealth Strategy⁴ has been developed and sector strategies are being prepared by the partners listed above. We recognise that each sector must have the flexibility to meet its own customers' needs, while recognising that, in many cases, those customers are shared with other organisations.

The strategy also identifies early actions that will be taken at national level to facilitate action within sectors and organisations. The basic approach here is to focus on those areas where a cross-sectoral approach provides the most effective way of either or both delivering services effectively or achieving value for money.

This strategy and our action plan will be refreshed and refined as we move forward. Our aim is transformational change though our approach will be incremental and pragmatic in making best use of existing public finance investment. We state our ambition but not a finite end point: our objective is an agility to respond to technological and societal change that will provide the foundation for continuous improvement in delivery of public services.

⁴ eHealth Strategy 2011-2017 is available at http://www.scotland.gov.uk/Publications/2011/09/09103110.

Section Five: What we will do

The public sector is committing to deliver digital public services and to work with industry and users to adopt the following four principles in doing so.

Citizen/Customer Focus

Our ambition is to use digital technology to redesign services, or find alternatives to such services, so that they focus on user needs and experience, and achieve the outcomes to which we aspire as a nation⁵.

Our "digital first" approach will mean that the public sector will deliver online all services that can be delivered online. The public increasingly expects to be able to access services quickly and conveniently at times and in ways that suit them. Our ambition is for citizens and businesses to access public information and services in the same seamless and effortless way that they access services from the highest rated online commercial offerings. Service users will, therefore, use digital channels because they meet their needs.

CASE STUDY Report It app

Harnessing mobile technology and using maps, photographs and GPS, the Android and iOS apps enable residents of North Ayrshire to report issues like potholes, graffiti and fly-tipping anywhere, at any time. Residents raised almost 400 service requests from the apps in the first four months, around a fifth of the total service requests raised with the council in that period.

More at: http://bit.ly/0mP8Ff

There are of course services, e.g. sensitive advice and counselling, where personal, face-to-face interaction will continue to be necessary and appropriate. Also, assistance must be provided in using digital channels where that is required.

Public services will be:

→ available online wherever they can be so



- → accessible through a wide range of devices from, for example, computers, smartphones and televisions
- → accessible through a single, though not exclusive, point of entry to public services to help navigate through the public sector landscape
- → available with assisted access to take into account the differing capacities of users, including by telephone or face-to-face
- → secure, reliable, resilient, high quality and high performing and will
- → use systems of assuring identity that are secure and give access to all public services
- → be shaped by the needs of users and involve service users directly in their design
- → use ICT to enable personalisation of services and self management
- → be designed to take account of the methods and capabilities already provided by the private sector that are used extensively and intuitively by citizens
- → be joined up through the use of common technology applications

⁵ In designing and redesigning services for digital delivery we will meet our equality duty. The duty came into force on 5 April 2011 under the Equality Act 2010.

5 What we will do

- → work because they rest on common standards that comply with appropriate local, national, UK, European and international requirements
- → be supported by delivery of the Scottish Government's digital participation ambitions set out in Scotland's Digital Future

CASE STUDY

Developing Skills through 'MyWorldOfWork'

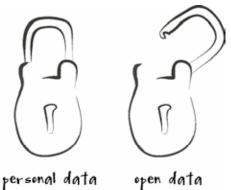
My WoW helps individuals find out what kind of job they would be suited to and how they can go about getting it, 24/7 and in any location. My WoW complements Skills Development Scotland's vital face-to-face and telephone services, as well as those provided by partners. It empowers those who are comfortable with the web to self-help to enable careers advisers to target their efforts at those who need a bit more help.

More at: http://bit.ly/OPcQej

Watch a video at: http://bit.ly/REA8WM

Privacy and Openness: using data appropriately

Our ambition is to deliver digital public services in which the people of Scotland have trust and confidence. This means that we must ensure that personal privacy is protected in line with the law and good practice while using data in order to get service benefits from it. So we must have agreed standards and principles underpinning the way we collect, store and manage data.



The benefits of information sharing between public bodies are that the citizen or business only need to provide data once instead of giving the same data multiple times to different agencies, and needs and requirements for services can be assessed in the round, irrespective of agency boundaries. But other than where statutory provisions permit data sharing, the citizen should determine when data about him or her is shared.

In handling personal data we will:

- → protect identity and privacy in line with legal requirements, e.g. the Human Rights Act and the Data Protection Act, and good practice as set out in the Scottish Government's Identity Management and Privacy Principles⁶
- → create, use and encourage the use of systems that allow self management of data by citizens and businesses
- → share data, in line with legal requirements, such as the EU Directive on the Re-use of Public Sector Information and good practice, in order to improve the quality and efficiency of our services and enable personalisation to ensure that services are appropriate to needs

CASE STUDY E-government in Estonia

Estonia's 1.3 million residents can use electronic identity to vote, pay taxes, and access more than 160 services online, from unemployment benefits to property registration. Private-sector entities, such as banks and telecommunications companies, also offer services through the state portal, and thus have an incentive to invest in maintaining the infrastructure backbone.

More at: http://bit.ly/R8Dt0Z

We will also:

→ re-use data from our systems, safely anonymised, to support the research and analysis which can itself contribute to the development of approaches which better meet desired outcomes

⁶ The Scottish Government Identity Management and Privacy Principles are available at http://www.scotland.gov.uk/Publications/2010/12/PrivacyPrinciples.

5 What we will do

- → publish as much information as possible concerning the data we hold, and how and when we will make that data available in re-usable form
- → open up access to data created and held by the public sector to make our services more transparent and accountable
- → open up access to data created and held by the public sector to provide businesses with the opportunities to develop new products and services and therefore grow the economy
- → agree with users and suppliers of ICT systems the most effective common standards to use for publishing and sharing data, to support the linking of data between datasets regardless of source
- → make data accessible in formats that allow and encourage re-use, with re-use possible under licence terms that are clear, fair, transparent and where possible free

A Skilled and Empowered Workforce

Our ambition is to have a skilled and empowered workforce that delivers high-quality digital public services and the ICT systems that support these.

We will ensure that our public sector employees generally have access to appropriate development opportunities that support digital access, including for providing assisted access to digital services.

We will build on the existing skills within our ICT workforce to support public sector organisations, deliver our digital vision, and adopt new and flexible ways of working that will increase efficiency and effectiveness. Increased collaboration between public sector organisations in deployment of ICT will allow and require changing approaches to the deployment and skilling of this workforce.

CASE STUDY First ScotRail – Improving service quality

The Service Quality Incentive Regime (SQUIRE) ensures that First ScotRail maintains and ultimately improves the services and facilities it provides for rail passengers. The SQUIRE Inspection System lets Transport Scotland's remote workforce capture service quality failure information using Android tablets and to upload it wirelessly to the back office. The tablet devices also provide a rich user interface and graphics capability allowing the workforce to annotate maps of stations and trains with location of service failures.

More at: http://bit.ly/0b7Vri

As we move further away from individual organisations developing and operating self-sufficient systems there will be increased opportunities to use resources efficiently by sharing capabilities, capacity and development opportunities across organisations. Such sharing may be more easily achieved within sectors, but where benefits would be gained from sharing across sectors, we will identify and seek to address any barriers to doing so.

We will:

- → collaborate in the development of the wider public sector workforce to support digital public service delivery to ensure that employees can be confident and assured in delivering services anywhere through any device this will form part of our overall approach to public service workforce development
- → collaborate in the deployment of our ICT staff in order to maximise the impact of their skills and use resources efficiently
- → develop shared approaches to enhancing the skills of the ICT workforce, and using those skills where most useful, to support the delivery of digital public services

5 What we will do

Collaboration and Value for Money

Our ambition is to ensure that we get value for money in our investments in ICT through re-use as the first priority, then buy and lastly build. We will deploy leadership and organisational capability across sectors to allow us to maximise the impact of, and reduce spend on, purchase and delivery. Crucially, we will look to how developing digital services, or other ways of delivering the relevant outcome, can reduce costs.



Collaboration will be the default choice in design and delivery of services and in the deployment of ICT infrastructure to support this. There will be a presumption against each organisation separately pursuing investment in and ownership of ICT assets or seeking its own capability for systems development. There will be a presumption in favour of investment avoidance and transaction/usage-based payment.

Each sector will ensure that business cases for investment are examined so as to ensure that these principles are adhered to. In central government, for example, the existing remits of the Strategic Corporate Services Board and Information Services Investment Board will be enhanced to include a scrutiny role. In health, current scrutiny mechanism are well developed with a clear programme structure in place.

We will measure the benefits gained from pursuing these principles.

We will:

- → participate in the development of a High-Level ICT Operating Framework to support re-use and sharing of existing assets as a priority, ensure any investment in ICT is bought with sharing in mind and to support investment avoidance
- → agree common network and connectivity requirements which will support a catalogue of services that make communication, sharing and service provision more cost-effective
- → demonstrate savings on ICT spend that are delivered through our new approach to ICT procurement, building on the Procurement Reform Bill
- → encourage convergence and consolidation of applications in the deployment of technology and ensure interoperability where convergence is not feasible
- → where cost-effective, use transaction/usage-based payment by exploiting new ways of working including cloud computing and an 'any device anywhere' approach
- → further consolidate data centres to reduce investment and energy use costs
- → utilise management information and benchmarking to identify excellence and support such performance nationally and sectorally

Section Six: How we will do it

The previous section set out the principles to which the public sector partners to this strategy will adhere and summarised the actions that we will pursue.

This section sets out in more detail the considerations and actions that will be taken at national level in order to support and deliver on those principles. The detailed project arrangements, timelines and milestones for delivery of these actions are set out in the form of an Action Plan at Annex B.

Citizen Focus

Identity Assurance and Authentication

To deliver digital public services providers, in many cases, need to be sure of users' identity. This is the case where, for example, services with a monetary value are being provided, where a transaction is taking place or before any information is shared. It helps users if this can occur as simply as possible with a user having their identity verified once and using one system of authentication (e.g. password access) to access multiple services from different public service providers. Users also need to be sure that personal information provided for identity assurance is no more than is necessary for this purpose and is handled in a secure manner. The Scottish Government will therefore develop, with public sector partners, a Scottish Public Sector Identity Strategy that takes account of existing approaches in Scotland, approaches being developed in the UK and USA, and private sector practice.

The Scottish Government has funded, as part of the Customer First Programme, the Citizen Account. A range of information is used to verify identity and set up an account, that can then provide access to a range of services, but without sharing information on service use between providers unless with consent. This Citizen Account system messages between existing data sets, it consciously avoids the creation of a large single integrated data set. Furthermore, it allows account holders to inspect and correct their own data. The Citizen Account supports the National Entitlement Card that is used for concessionary travel in all local authority areas, and which also provides



Thoughts from the ICT industry

http://www.youtube.com/watch?v=8NCxG4_YfFY

access to other services in some local authority areas. Customer First also supports the Young Scot card.

There will be many new needs for identity assurance as digital services increase. In developing our Identity Strategy we will have regard to Customer First's assets of process and data and the particular needs of different sectors and services. For example, the further and higher education sector has well established systems for authentication (e.g. enabling access to research and study resources), which is based on the UK Access Management Federation for Learning and Research. We will also consider how far a link with authentication under Glow is desirable.

We will also have regard to the approach of the UK and USA governments who are seeking to stimulate and set a framework for a competitive market in this area where market players would be accredited to provide ID assurance. In addition, the EU is seeking to provide for cross border authentication through regulations that would repeal the existing E-Signatures Directive.

Our priorities will be to support the requirements of providers who use models currently in place, to meet new needs, to provide a seamless transition to any new approach and to go forward in a way that is both trusted by users and cost-effective.

Single point of entry to services and service design for digital delivery

The Scottish Government will work with partners to deliver in 2013 a single – but not exclusive – point of entry to all digital public services at national and local level, giving people in Scotland a clear view of the services available to them, no matter which organisation provides them. We want to simplify the experience of public services and ensure that citizens who do not know where to go to find information or transact with a public service can do so confidently. This will also be relevant for those who use internet search to find services, because a single point of entry will often appear more prominently within search engine results, particularly in the case of smaller public sector websites.

This single point of entry must be a trusted route to public services and it will be developed with public sector partners. As well as a point of entry it offers the opportunity for:

CASE STUDY DirectScot Prototype

The Scottish Government has already developed a prototype, DirectScot (directscot.org), that makes use of powerful search technology and adopts a 'device neutral' approach, meaning users can access services in a way that they choose, be that a computer, smartphone, tablet or other device.

The prototype was launched in December 2011, followed by a consultation exercise in the first part of 2012 which received 87% support.

More at: www.directscot.org

- → a simpler user experience through common design standards for digital services
- → greater and more consistent application of accessibility standards
- → greater consistency in how the public sector presents public service information

- → efficiency savings for central government through the rationalisation of large numbers of government run websites
- → opportunities for greater collaboration across the Scottish public sector, and cost savings, through the development of common technologies and standards to support service redesign

CASE STUDY

Councils using data to cut fraud and raise revenue

Councils across Scotland are making better use of the information they hold to identify households with a true entitlement to council tax single person discount (SPD). By cross-referencing applications for the discount with its commercial partner's range of up-to-date data sources, used in combination to create a picture of the residency make-up at each address, City of Edinburgh Council was able to collect an additional £1.25m in 2007/2008

More at: http://ex.pn/Q0wVAp

The Scottish Government is developing plans to take this prototype to a full web service. Scottish Government will engage widely with users and the Scottish public sector to ensure this development meets needs – including alignment with the Scottish Business Portal. The business portal, managed by Scottish Enterprise with local government, is being redesigned for launch in November 2012 and we therefore have the opportunity for a co-ordinated approach to user experience and content.

Privacy and Openness: using data appropriately

We will continue to review and adopt information principles and standards drawn up at UK, European and international levels, taking account of the needs of service providers and businesses to operate within these wider environments.

The Scottish Government will:

- → consult on and review our *Data Sharing: Legal Guidance* for the Scottish Public Sector⁷ to ensure that it is current and serves our ambitions
- → establish a collaborative Data Linkage Framework to ensure that research and statistical analysis can be conducted safely, securely, legally, ethically and efficiently using identifying and operational data that is appropriately anonymised and protected
- → publish a programme of how we plan to increase transparency through the availability of reusable public data
- → ensure that our public sector single point of entry directs those who are interested to Scottish public sector data that is available for re-use

A Skilled and Empowered Workforce

Our workforce is a vital part of our ambitions for Digital Public Services and we will collaborate to identify the key skills and capabilities required within our public sector workforce to deliver on the national and sectoral strategies. In addition to collaboration within sectors this will identify any additional opportunities for cross sectoral training and development to support common needs. This will be a part of wider approach to development of the public sector workforce.

Our ICT workforce has responded to a range of new technology opportunities across the public sector. Our ambitions for digital public services will provide new challenges. We are examining in more detail the baseline of existing skills and capacity. We will undertake a future proofing exercise with the ICT industry so that we can put in place a plan for our staff to develop the skills of the future.

We will work initially within sectors to identify opportunities both for sharing ICT workforce capacity and for training and development of ICT staff. We will also explore cross-sector collaboration for specialist and expert skills required to deliver on major transformation, and seek to address any barriers to collaboration. We will explore the option of a

Centre of Expertise to share approaches to developing the key skills that can be deployed to support and accelerate our Digital Public Services ambitions.

Collaboration and Value For Money

Our principles confirm that the public sector should re-use first, then buy, and build only as a last resort – with collaboration being the first option in all that we do. Our actions will deliver on this.

High-Level ICT Operating Framework

Our cross-public sector Technical and Design Board, supported by the ICT Industry Board, will develop a High-Level ICT Operating Framework which supports this strategy taking account of needs where organisations operate within a UK context. This national framework will support transformation through:

- > providing a set of architecture and design principles
- → promoting and supporting the use of commonly agreed standards and specifications
- → an information assurance approach

The collaboration and integration that this will support, with a focus on re-use before buy, will help to eliminate duplication and avoidable spend. The development and adoption of this framework will be led through our national and sectoral governance arrangements.

Scottish Wide-Area Network

We will secure a Scottish Wide-Area network (SWAN) by May 2014 that will deliver, amongst other things, a single, holistic telecommunications network service open for the use of any, and potentially, all public sector organisations within Scotland.

SWAN will replace the existing approach where each public sector organisation designs, develops, delivers and maintains their individual network. As well as reducing procurement and operational costs, SWAN will open opportunities for information sharing and local and national participation and collaboration. A new partnership of vanguard organisations has been established to aggregate

⁷ Data Sharing: Legal Guidance for the Scottish Public Sector was published in October 2004 and is available at http://www.scotland.gov.uk/Publications/2004/10/20158/45768.

demand for shared services and will procure the initial services. Individual organisations will then be expected to utilise the resulting network services as and when their existing contracts run out, unless the service cannot meet their needs.

The SWAN will be delivered as a single network for the whole of the Scottish public sector – an 'Internet for Government'. This single network will allow individual, shared and 'cloud' services to be offered. The approach will provide the logical segregation of each organisation's data based upon technical standards approved for this type of use by CESG – the UK national authority on information assurance and security.

SWAN services will fall into two main categories: network Services – including network connectivity services, security, hosting and gateway services and Application Services – such as voice, video, collaboration, messaging and email. The range of services and minimum set of standards will be defined as part of the SWAN programme.

New Approach to Procurement

We launched Public Contracts Scotland (PCS) in July 2008 to provide businesses with easy access to contract opportunities. Over 400 public bodies are placing their contract opportunities on PCS in a standard format and over 60,000 users are registered. Three-quarters of all firms that win contracts advertised on Public Contracts Scotland are small-medium enterprises (SMEs), and over 60% are both Scottish and SMEs. Our procurement information hub shows that whilst SMEs account for only 37% of Scotland's turnover, 45%, or over £4bn, of Scotland's £9bn procurement spend goes directly to SMEs, with around £2bn of that going directly to firms with fewer than 50 employees. This is the third highest level of spending with SMEs, relative to their contribution to the economy, in Europe.

Building on this, and utilising the introduction of the Procurement Reform Bill, we will work in partnership with sectoral centres of procurement expertise to:

- → maximise value from existing national procurement frameworks and explore opportunities for new national frameworks and contracts
- → measure the savings achieved across the public sector through the use of procurement frameworks and contracts
- support the development of a joined-up approach to buying technology, where it supports public service delivery
- → encourage sustainability, innovation and growth and make better use of public procurement to promote jobs and training opportunities
- → make it easier for Scottish SMEs to access public sector contracts by improving and standardising procurement process, whilst encouraging public bodies to consider the economic impact of their procurement activities

This will deliver the right balance between cost, quality and sustainability to ensure value for money. We will utilise the introduction of the Procurement Reform Bill to encourage sustainability, innovation and growth and make better use of public procurement to promote jobs and training opportunities. We will make it easier for Scottish SME's to access public sector contracts by improving and standardising procurement process, while encouraging public bodies to consider the economic impact of their procurement activities. This will build on progress to date.

National Approach to Data Storage

We will develop a national plan by March 2013 to consolidate and re-use the world-class data centres available in the public and private sectors across Scotland at national and sectoral level. We will build upon existing⁸ levels of capacity sharing across public sector data centres and exploit opportunities for further sharing including learning from approaches such as the JANET brokerage service. This plan will ensure that our storage, use and sharing of data meets world-class standards and supports tackling climate change by reducing the amount of energy used.

In early 2011 the Scottish Government conducted a survey of data centre use in the public sector to gather a more detailed understanding of the landscape, identify opportunities for sharing and to provide a baseline to support policy development. The survey received a 48% response rate and covered central government, local government, health, police, and universities and colleges. It found that: 43% of organisations shared facilities with other public bodies; 71% of public sector data centres have spare capacity; and 51% of organisations were willing to share spare capacity with other public bodies.

CASE STUDY Making Justice Work

The 'Justice Data Hub', intelligently matches information from the Scottish Prison Service (about people who are in prison) and the Scottish Court Service (about people who are due at each court). Before the system was introduced around 10% of cases where the accused was in prison, they failed to appear in court, as prison staff were not alerted. The Hub cost around £0.25m and has the potential to save between £3.5m and £6m per year.

More at: http://bit.ly/0Xx3Px

Open Source

Open source software is computer software where the underlying source code is made available under an open source licence. This can allow individuals and organisations to reuse the software created by others therefore promoting collaboration.

We will explore the benefits of providing and using open source solutions with a view to refreshing the open source strategy for the Scottish public sector. We will set out a clear set of principles to ensure the public sector has an understanding of the advantages of open source material and, through common standards, the ability to share innovative solutions.

Create an Agreed Measurements and Benefits Framework

In developing this strategy, we have engaged with stakeholders to determine what we currently measure, ensuring that we learn from benchmarking clubs, and map this against priority action. Using this information, we have mapped the business change (outcomes) with the enablers (project outputs and actions) to determine the overall benefits map. This will ensure we establish a common set of quantitative measures that support our overall framework for delivery and develop qualitative measures, as our digital public services priorities develop, to measure improvement in citizen experience and value for money.

Our framework will be in the form of a benefits scorecard which will address the following in terms of digital public services:

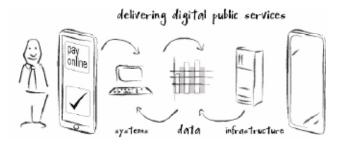
- -> are we meeting the needs of our citizens and business?
- -> are we achieving financial and carbon savings?
- → are we enabling joined-up public services?
- → are we developing the workforce to deliver on our ambitions?

We will publish the framework and provide guidance to sectors on its use so they may report progress on an annual basis.

Section Seven: Opportunities for Digital Public Services

The principles and commitments listed in section 5 and the national-level actions set out in section 6 will allow us to:

- → build on existing developments in digital public services
- → develop new digital public services (or find new ways of meeting needs previously requiring public services)



Digital is a vital resource in delivering the desired outcomes of key reform initiatives. These include:

- → health and social care professionals require a robust digital network that enables data sharing to support integrated health and social care services to the patient
- → education developing a user-centred environment to ensure Scotland's teachers, learners and parents can take full advantage of opportunities offered by digital services
- → police and fire reform protecting and improving local services by stopping duplication of support services and creating more equal access to specialist support and national capacity

We will, in and across sectors, identify further priority areas where digital delivery offers significant opportunities for service reform. We will ensure that where we pursue change programmes and methodologies, e.g. the 3-Step Improvement Framework, we will integrate digital delivery into this improvement.

In taking forward action, the public sector will engage with those from whom we can learn and with whom we can co-operate. We will continue to work with the ICT industry through continued involvement in the governance structures that will support the implementation of this strategy.

In developing our strategy and action plan we will also learn from and align with the actions of other countries and governments. In particular we recognise that citizens and businesses access both UK and Scottish services and, in delivering our ambitions, we will take account of existing digital services and the UK Government's Digital Strategy due to be published by the end of 2012.

CASE STUDY School Online Payments System

The school online payments system, part of the Customer First Channel Shift Programme, offers parents the option of making a variety of school payments – including school trips and lunch money – via a simple and convenient online system linked to the Young Scot National Entitlement Card (NEC). It has many positive features and benefits for parents, pupils, schools and councils.

More at: http://bit.ly/QhXBhP and http://bit.ly/QkhG00

Video at: http://bit.ly/GQLvUH

The Scottish Government will facilitate wider engagement:

with businesses more widely, particularly those who use ICT imaginatively in the development, design and delivery of their own digital products and services with university researchers through, for example, the Scottish Informatics and Computer Science Alliance grouping – this will allow us to be aware of new and anticipated developments in digital technology and to bring service providers together with researchers to devise applications and solutions for service delivery.

In doing so our objective will be to transform how outcomes are achieved through innovative use of ICT.

Section Eight: Governance

We have in place a Digital Public Services National Board to drive, guide and monitor implementation of this strategy. This National Board is supported by sectoral boards and a national Technical and Design Board, as set out in Annex A.

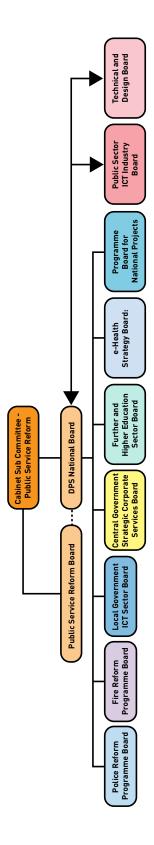
Programme management arrangements will be put in place for the set of national projects, overseen by a programme board. Project boards will be put in place to deliver against major national actions, as is already the case for SWAN. Sector boards will take a similar approach.

The National Board, working with and through the sector boards, will be responsible for driving action to implement this strategy and for reporting on progress. In this it will be informed by data on:

- → the experience of the people of Scotland in engaging with digital public services
- → progress made in more effective use of deploying ICT and the ICT workforce and cost savings made

This National Board will report to the Cabinet Sub Committee for Public Service Reform, which in turn will update the Cabinet Sub Committee for Digital. Governance Annex A

delivery must be driven by effective governance. The governance model used to develop our national and sectoral strategies will be developed publish their own strategies during the remainder of 2012 indicating how they will take forward the vision and principles of this strategy. Our Our ambitions will be delivered through collaboration among public sector partners and with the ICT industry. Sectors identified below will to ensure we can deliver on our ambitions.



A Programme Board will be responsible for delivery of the objectives and actions identified in Section 6, as set out below. Action will be guided by the Industry Board and by the Technical and Design Board which is also empowered to deliver, through collaboration, our High level ICT Operating Framework. Many service areas will require cross-sector collaboration at the national and regional level. Our National Board will promote and support this and we expect regional collaboration to be achieved through existing mechanisms where possible e.g. Community Health Partnership and Joint Committees to support integrated service provision. Action Plan Annex B

Citizen Focus

Priority Objective	Action	Timeline
Identity Assurance and	Project Set Up	
Authentication Develop a Scottish Public	→ Create an Identity Assurance and Authentication Project Board and PID	September 2012
Sector Identity Strategy that takes account of existing	Analysis and Investigation	
approaches in Scotland, approaches being developed in the UK and private sector	→ Establish cross sector requirements for identity assurance having regard to privacy and security (joint consideration with Data Sharing work, see below)	
practice including approaches	Decision Making	
to e-Signatures.	→ Consider existing processes, assets, systems and delivery mechanisms and align with planned requirements	
Single point of entry to	Project Set Up	
services and redesign of services for digital delivery	→ Create project board for delivery of this web service	September 2012
Deliver single point of entry to all digital public services at	→ Agree project plan and its development phases including proposals for putting in place development team	to October 2012
national and local level.	Engagement	
Provide assisted access to digital services for those who	→ Engage with public sector on objectives and standards for web service. Identify priority services/products for digital delivery	October 2012 and continuing
require it.	Development	
	→ Procure services required for development and operation of web service	October 2012
	→ Align with Business Portal	
	→ Work with local government sector and other partners to develop a range of solutions that fit the needs of different groups. Draw on pilots and experience of service providers to agree framework and standards for assisted access	2012-13
	Implementation	
	→ Deliver phase 1.0 of webservice: basic point of entry to public services; Scottish Government service content; and migration of SG information campaign websites. Release of betas leading to launch	2013
	→ Subsequent development phases embracing services designed and redesigned against agreed principles and standards	2014

Privacy and Openness

Priority Objective	Action	Timeline
Data Sharing	Project Set Up	
	→ Define scope of workstream	December 2012
	Engagement	
	→ Consult on opportunities for and barriers to sharing of digital data in support of public service reform and digital services and pursue necessary actions. Linked to this review Data Sharing: Legal Guidance for the Public Sector (October 28, 2004)	March 2013
	http://www.scotland.gov.uk/Publications/2004/10/20158/45768	
	→ Include geospatial data in above	
	Implementation	
	→ Pursue necessary actions	
Cyber Security Strategy	Project Set Up	
	→ Creation of Scottish Cyber Security Group	May 2012
	Engagement	
	→ Collaborate with stakeholders across all sectors. Work in partnership with the private sector and education sector to deliver agreed outcomes	
	Development	
	→ Development of a RABS (Resilience Advisory Board for Scotland) Cyber as the National Cyber Security Delivery Group	July 2012
	→ Develop a Cyber Security Action Plan for Scotland covering business, Critical Infrastructure, eCrime, Information Assurance, Digital Inclusion and Enterprise. Introduce a Cyber Security Sectoral Collaborative Framework (Cyber Security SCF). Confirm sectoral delivery governance	August 2012
	Consultation	
	→ Consult on Cyber Security Action Plan and Cyber Security Sectoral Collaborative Framework	
	Implementation	
	→ Deliverables will be dependant on the outcome of the phases above	November 2012

Privacy and Openness

Priority Objective	Action	Timeline
Open Data and Reuse of Public Data	→ Test open data approaches with various pilot exemplars	August 2011
Public Data	→ Develop tellmescotland pilot	November 2012
	→ Develop governance structure for managing open data programme	
	→ Publish programme for availability of re-usable public data	Mid-2013
Data Linkage Framework	Project Set Up	
Establish a collaborative Data	→ Establish working group and terms of reference	May 2011
Linkage Framework for Statistics and Research	Investigation and Analysis	
Statistics and Nesearch	→ Agree draft aims and principles	January 2012
	Engagement	
	→ Consult on draft aims and principles for the framework and test public acceptability	August 2012
	Development	
	→ Develop strategy and programme timeline	Winter 2012
	Consultation	
	→ Consult on detailed proposals for a Data Sharing and Linking Service	2013
	→ Consult on detailed proposals for a Privacy Advisory Service and Committee	2013

A Skilled and Empowered Workforce

Priority Objective	Action	Timeline
Workforce	Project Set Up	
Identify the key skills and	→ Put in place Project Initiation Document and Project resources	September 2012
capabilities required within our ICT and wider public sector	Investigation and Analysis	
workforce to deliver on national and sectoral	→ Undertake qualitative engagement to determine challenges and opportunities	September 2012 to March 2013
strategies and identify capabilities and gaps.	Review data on existing skills and headcount gathered from Measurements and Benefits workstream (see below)	
ICT Workforce	→ Investigate good practice and career path options	
Work collaboratively to identify cross sector opportunities for	→ Analyse options for skills transfer and future proofing on requirements including consideration of legal and HR issues	
sharing ICT workforce capacity and the training and	Engagement	
development of ICT staff and seek to address any barriers to collaboration.	→ Engage with workforce, Heads of Profession and CIOs, Chief Executives, Business leads and Industry on early findings of investigative and analysis stage to develop outline options	March to April 2012
	Developing a Workforce Action Plan	
	→ Outline the priorities and deliverables with input both national and sectoral	June 2013
	→ In line with the measurements and benefits realisation plan outline the deliverables and the resourcing required to implement the action plan	
	→ Submit to the national board for consideration	
	Implementation	
	→ Deliverables will be dependant on the outcome of Phase 3 and 4 above	August/ September 2013 onwards

Priority Objective	Action	Timeline
High Level ICT Operating	Project Set Up	
Framework	→ Establish a core group to support and take forward the project	May 2012
	→ Each sector to identify suitable technical expertise and existing groups and forums that can contribute to the technical and design requirements	
	Investigation and Analysis	
	→ Explore options and agree a methodology to develop a High level ICT architecture that is based on the agreed strategic priorities of the PS ICT National Board and is simple, manageable and meaningful	June 2012
	→ Commission and collate information on existing and future planned technical infrastructure including reusing existing data and information gathered where possible. Analyse information to identify common infrastructure which can be reused and support the principles and strategic priorities	
	Options Appraisal	
	→ Based on the findings and good practice across public and private sector set out options for operating framework going forward	
	→ The options should consider costs and identify the skills and expertise available in public sector resource pool and the gaps in skills and expertise in the public sector	
	→ Develop draft ICT Operating Framework	October 2012
	Decision Making	
	→ Submit draft ICT Operating Framework Public Sector to ICT National Board	November 2012
	→ Refine and publish operating framework, taking account of feedback	

Priority Objective	Action	Timeline
Scottish Wide-Area Network	Project Set Up	
Establish a Scottish Wide-Area Network (SWAN).	→ Identify resources and establish a core group to support and take forward a Scottish Wide-Area Network with each sector; identify suitable technical expertise and existing groups and forums that can contribute to the technical and design requirements	July 2012
	Investigation and Analysis	
	→ The project team will commission and collate information on the existing and future planned Scottish Wide-Area Networks including reusing existing data and information gathered where possible. Options appraisal and recommendation for the preferred delivery of a Scottish Wide-Area Network	Ongoing
	Consider procurement options for the network and award of contract(s)	
	Decision Making	
	→ Recommendation on the way forward for the vanguard project	September 2012
	Implementation	
	→ Take forward initial procurement by and for a vanguard group of organisations, who will aggregate demand for shared infrastructure services and applications	Ongoing

Priority Objective	Action	Timeline
Work in partnership with	Project Set Up	
sectoral centres of procurement expertise to: Maximise value from existing	Identify opportunities to put in place additional, national frameworks and contracts to maximise public sector buying power	December 2012
national procurement frameworks and explore	→ Development of national ICT procurement portfolio plan	December 2012
opportunities for new national	Action Plan	
frameworks and contracts. Measure the savings achieved across the public sector	→ The development of an action plan with the aim of stimulating uptake of national ICT Frameworks, for example; IT Managed Services Framework	December 2012
through the use of	Monitoring and Development	
procurement frameworks and contracts. Support the development of a	Ongoing monitoring of ICT savings and contract uptake, with regular tracking against projected levels and remedial action being taken if necessary	Monthly frequency
joined-up approach to buying	Engagement	
technology, where it supports public service delivery.	→ Ongoing engagement with options considered, at the Collaborative Leads Group	Every 3 Months
Encourage sustainability, innovation and growth and	Legislation	
make better use of public procurement to promote jobs and training opportunities.	→ Embrace and utilise the introduction of the Procurement Reform Bill to encourage sustainability, innovation and growth	Stage 1 of the parliamentary 'Bill' process due March 2013
Make it easier for Scottish SMEs to access public sector	Launch	March 2013
contracts by improving and standardising procurement process, whilst encouraging	→ Standard Pre-Qualification Questionnaire (sPQQ) and sPQQ database to be launched	Q1 2013
public bodies to consider the	Engagement	
economic impact of their	→ Development of a programme of visits to Scottish ICT SMEs	Monthly frequency
procurement activities.	→ Introduction and establishment of a Key Supplier Management initiative which will focus on the full supply chain, including sub-contractors	Initial scoping/ introductory meetings held in August/ September 2012
	→ The second ministerial ICT Industry Procurement 'round table' event to be undertaken	November 2012

Priority Objective	Action	Timeline
National approach to Data	Project Set Up	
Management and storage Develop a national strategy to	→ Identify resources and establish a core group to support and take forward the project	October 2012
consolidate and reuse the	Investigation and Analysis	
world-class data centres available in the public and private sectors across Scotland.	→ Identify sources of evidence and establish the current position across the public sector. Engage with stakeholders to understand their requirements and approach to data management, where they are in the data centre lifecycle and their direction of travel	December 2012
	Options Appraisal	
	→ Based upon the McClelland recommendations and good practice across the public and private sectors, establish fully costed options for rationalising and consolidating the Scottish public sector data centre landscape	February 2013
	Decision Making	
	→ Prepare a paper for consideration by the Public Sector ICT National Board, outlining the recommended approach to deliver efficiency savings, effectiveness improvements and environmental benefits. Upon approval of the recommended approach a full business case will be developed in collaboration with public sector partners	March 2013

Priority Objective	Action	Timeline
Open Source Principles	Project Set Up	
Building on the existing Scottish Open Source Strategy and wider good practice and lessons learned across Europe agree a set of open source principles for use by the	→ Identify resources and establish a core group to support and take forward the project	October 2012
	Investigation and Analysis	
	Undertake qualitative engagement to determine challenges, opportunities and intended outcomes	
Scottish public sector.	→ Review existing principles and guidance, investigate strategic direction, good practice and lessons learned across wider European communities	
	→ Consideration of any legal and procurement issues	
	Engagement and Consultation	
	→ Engage with sectoral boards, CIOs, Chief Executives, business leads and industry on findings of the analysis, and jointly draft principles	
	→ Consult on draft aims and principles and test acceptability	
	Develop timeline for implementation and subsequent reporting	
	Decision Making and Implementation	
	→ Prepare a paper for consideration by the Public Sector ICT National Board. Upon approval of the principles undertake a communications exercise to ensure all public sector are informed	

Priority Objective	Action	Timeline
Measurements and Benefits	Project Set Up	
Create an agreed Measurements and Benefits	→ Agree Project Initiation Document and put in place project resources and advisory group	June 2012 to Complete
Framework by:	Investigation/Analysis	
Determining current measurements undertaken in	→ Undertake an analysis of emerging strategic ambitions	June to August
Scottish public sector.	→ Undertake qualitative engagement to determine challenges and opportunities	2012
Establishing a common set of quantitative measures that support overall framework for delivery. Developing qualitative	→ Identify existing management information and data across the sectors and other sources that might relate to strategic ambitions and McClelland recommendations, including information on existing ICT staff skills and headcount (in support of the workforce workstream)	
measures to measure improvement in citizen experience and value for	→ Revisit McClelland baseline and refresh with updated information	
money.	Identify any additional sources of baseline information necessary to support potential quantitative and qualitative measures	
	→ Develop a communications and engagement plan to test findings	
	Engagement on Findings	
	→ Deliver on the engagement plan consulting decision makers, professional groups, public sector staff and expert bodies amongst others	August to September 2012
	→ Collate feedback and take account of emerging findings in the outline framework	
	→ Agree with programme lead and board any further consultation before sign-off	

Priority Objective	Action	Timeline
Measurements and Benefits	Developing the framework	
Create an agreed Measurements and Benefits Framework by:	 → Test potential measures using existing data (2010/11, or 2011/12 data as a pilot depending on availability) → Draft measurements and benefits framework to determine: 	September to October 2012
Determining current measurements undertaken in Scottish public sector.	What will success look like?How will we deliver efficiencies?	
Establishing a common set of quantitative measures that support overall framework for	- How will we measure success? - How will we engage? Sign off of the from sweet.	
delivery. Developing qualitative measures to measure improvement in citizen experience and value for money.	Sign off of the framework → Present the final framework to the National Board → Present options to ensure buy-in and sign-off at sectoral level → Undertake any final engagement agreed during phase 3 → Complete close down and handover framework to the programme office	November 2012
	Measuring → Develop guidance and work plan with sectors to deliver on the national framework that supports measuring progress annually against national strategic ambitions set out in the Digital Public Services Strategy	March 2013
	Review and Refresh	
	→ Review and refresh against the emerging actions which will flow from each phase of the strategy implementation to ensure measures remain manageable and current	Ongoing



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