Delivering public services in a connected world
How Cisco can help shape your digital strategy
The transition to ‘digital services’ in local and central government is accelerating rapidly. There is now a growing awareness that digital technology can:

- Substantially reduce service costs;
- Better serve the expectations of citizens;
- Help citizens to take direct control of how they use and access public services.

The latter is of paramount importance to public sector organisations that have to reduce service portfolios to meet ever-tighter financial constraints.

Cisco is increasingly being asked for business and technology advice on how best to plan for, and adopt, digital services. This is in response to the establishment of the Government Digital Service (GDS) and publication of the Government Digital Strategy in November 2012, which placed digital services high on the list of strategic priorities.

Cisco is in an excellent position to provide this trusted advice as, for many years, we have maximised the use of digital technology to communicate with customers, business partners and staff. We now also use digital services for sales and marketing, and as a means of gauging the market’s opinion of our company and our products. We believe this extensive use of digital technology has helped to drive efficiency and cost saving, and has provided excellent service to all our stakeholder groups.

This paper sets out our recommendations on how to create and implement a digital strategy. But, of course, every public sector body is different and local requirements, priorities and challenges must be addressed. So, if you would like to find out more, please contact us. We would be delighted to meet with you, and review the applicability of these recommendations to your organisation.

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Public sector information and transactional services are increasingly Internet-based. Change has been driven by government, which has continually stressed the urgency of service reform if cost savings are to be realised, and the quality of public services improved.

For a number of years, that service reform was referred to as ‘channel shift’ and this term is still in wide use. Channel shift is the process whereby services (particularly transactional services) are migrated across delivery channels – from face-to-face, to contact centre, to digital to achieve the desired cost reductions and improved service quality.

However, the most dramatic change has come about in response to the Martha Lane Fox report entitled ‘DirectGov 2010 and Beyond: Revolution not Evolution’. This report recommended that government should aggressively prioritise the use of digital services and appoint a Chief Executive Officer (CEO), at the heart of government, to drive implementation and uptake. It led directly to the formation of the Government Digital Service (GDS) in 2011, and to the publication of the Government Digital Strategy in November 2012.

These steps were landmarks for government, placing digital services high on the list of strategic priorities for the public sector. But the subject is complex, and Cisco is often asked for business and technical advice, for example:

“Where do I start?”

“What does a local digital strategy look like?”

“What new technologies should I deploy?”

“What new skills do I need in my organisation?”

Introduction and Purpose of the Document
Introduction and Purpose of the Document

We believe that Cisco is ideally placed to provide advice and guidance on digital services. As one of the largest global technology suppliers, we’re famous for pioneering the very earliest use of the Internet for commerce. For many years, we have relied on digital services and the Internet to interact with partners and suppliers, and to support our customers. More recently, we’ve made extensive use of social media for sales and marketing, and for gauging the market’s opinion on our company and our products.

We have drawn extensively on this background to produce this paper. It is intended for use by senior managers, across the wider public sector, with responsibility for service reform and creation of local digital strategies. The paper has three main objectives:

- **Explain** – digital services, the Government Digital Strategy, and why they are so important;
- **Advise** – on business and technology strategies that would underpin a successful transition to digital services;
- **Inform** – on the need for enabling technology.

The scope of the paper does not cover every topic associated with the deployment of digital services. In particular, out of scope items include:

- Guidance on the priorities for service reform;
- How best to develop the digital skills of citizens;
- Digital inclusion (what public infrastructure, for example, superfast broadband or public wireless, may be required to deliver full business benefit).

However, links to reference material on these topics can be found in the Appendix.

In our experience, the best approach to digital services must reflect the needs of an organisation’s local environment; for example, what services need to be delivered, the nature of citizen stakeholders, and the current ‘as-is’ technology environment. We have provided advice and a number of recommendations in this paper, but would be delighted to discuss how best you can adapt them to the needs of your organisation. If you would like to contact us, please e-mail us at digital_strategy@cisco.com.

What is a Digital Service?
A digital service may be defined as ‘a public service **delivered electronically** over the Internet that offers a **simple and accessible** way for citizens to **transact** with the Public Sector.’
Digital Services and the Government Digital Strategy

For many years, Cabinet Office has promoted the use of technology for service delivery within government. The responsibility for consolidating and updating that existing body of work, and for promoting change, has transitioned to a specialist unit called the Government Digital Service (GDS). GDS published the Government Digital Strategy in November 2012 to explain digital services, and outline a set of initiatives to assist their development and uptake.

This section of our paper provides an explanation of digital services and their benefits, an overview of the Government Digital Strategy and how it is being implemented, and further information on channel shift. The Appendix provides links to key reference documents, so readers can gain a deeper understanding.

Digital Services

Digital services is the term applied to public services that are delivered electronically over the Internet. Such services are typically extremely cost effective, as they have no substantive dependence on staff or real estate.

So, for the purposes of this paper, our definition of a digital service is ‘a public service delivered electronically over the Internet that offers a simple and accessible way for citizens to transact with the Public Sector’.

Delivered electronically: digital services are delivered over the Internet, and easy to access from web browsers or smartphone applications.

Simple and accessible: digital services should be easy to use, accessible from a range of end-user devices (PCs, tablets, smartphones), and available to be consumed at times and locations that suit citizen preferences. GDS refers to this need for simplicity and accessibility in its central mission statements as “building services that are simpler, clearer and faster to use” and “providing digital services so good that people prefer to use them.”

Transactional: digital services are typically more than just informational and offer new, or improved, transactional capability.

Digital services also provide a second, very important benefit to provider organisations. They allow citizens to take personal responsibility for the services they need, and how best to consume them. This holds the potential for reducing the demand for services. Digital services may also be used for education purposes, for example an alcohol dependency application could allow a citizen to take better control of their lives and so be less dependent on public services.

This fundamental shift of responsibility for service use, away from the provider to the citizen, is of great importance. It will increase the opportunity for organisations to streamline, or possibly withdraw, services in financially constrained environments.
Government Digital Service and the Government Digital Strategy

The Government Digital Service was established in 2011 as a direct result of the Martha Lane Fox report entitled ‘DirectGov 2010 and Beyond: Revolution not Evolution’.

GDS published and is responsible for the Government Digital Strategy. The strategy has become synonymous with two important initiatives – ‘Digital by Default’ and ‘Digital First’. These initiatives are intended to promote the use of digital services within service reform programmes, and to signal their primacy for implementation of new, or re–designed, public services.

Digital by Default and Digital First

Digital by Default refers to the presumption that all new, or re–designed, services should be digital. However, it also refers to a set of implementation, service and usability standards – the Digital by Default Service Standards – that are mandated for all new central government digital services.

Digital First refers to this same presumption, but has also been used for specific initiatives in the wider public sector. For example, in the Department of Health, it is a programme to reduce unnecessary face-to-face contact between patients and healthcare professionals through the use of technology. And, in Wales, it is the programme, established by the Welsh Assembly Government, to prioritise the development of online digital services.
The Government Digital Strategy was published in November 2012, and later updated in December 2013. It was developed by GDS to promote, accelerate and expand the use of digital services for citizen engagement. However, that objective was set within a broader context that seeks to reform the civil service and the business of government:

- **Digital capability within the civil service**: appointment of digital champions, development of departmental digital strategies, advice on skills and capability, and regular updates on progress;

- **Gov.uk**: migration of all department, agency and arms-length bodies to gov.uk;

- **Procurement of digital services and capability**: creation of a Digital Services Framework (Crown Commercial Service Framework RM1043) containing a list of pre-authorised suppliers able to offer digital services and capability, and creation of a digital services store portal to access that supplier base;

- **Removing barriers to digital service participation**: creation of an ‘assisted digital’ programme to tackle the lack of digital access and skills, which currently prevent 18% of UK citizens from going online.

The Digital Strategy is mandated for central government. It contains details on adoption and on metrics that must be gathered by departments to signal progress. Examples of specific central government mandates include the publication of departmental digital strategies and the appointment of departmental Chief Digital Officers (CDOs) to oversee implementation. No such mandate exists for local government or the wider public sector. However cost saving and efficiency, alongside the wider benefits of service reform, are ensuring that the strategy is being widely discussed, that elements are already being adopted, and that most organisations are engaged in planning.

**Channel Shift**

For a number of years before it published its Digital Strategy, government advocated service reform through what is referred to as channel shift. Channel shift is the process of migrating public services, over time, away from face-to-face channels towards contact centre and digital channels. It was advocated in order to drive cost savings, primarily through continuous reduction in the percentage of citizen transactions conducted via the higher cost channels.

Over a period, channel shift programmes focused on two areas that were indicators of reducing costs:
Digital Services and the Government Digital Strategy

We believe that channel shift concepts are still of great importance, in particular to local authorities. Channel shift should form part of the broad-based approach, essential to the reform of large and diverse portfolios of established services.

The Benefits of Digital Services

The Digital Strategy highlights the key benefits of digital services:

- **Cost saving**: the public sector could save between £1.7 and £1.8 billion each year;

- **Service quality and consistency**: citizens can expect a consistent, dependable service that is easy to audit by provider organisations;

- **Citizen expectations**: the government can meet citizen expectations for accessing services quickly and conveniently, and at times and in ways that suit them.

**Cost saving**: The strategy itemises transaction costs, using analysis of the local government sector by SOCITM. Quoted costs per transaction are £8.62 for face-to-face, £2.83 for contact centre, and £0.15 for digital (web) services. These cost metrics allow for easy calculation of the cost savings associated with new, or re-designed, services. The Digital Efficiency Report, published by Cabinet Office in late 2012, estimated overall annual cost savings at £1.7 – 1.8 billion.

**Service quality and consistency**: Digital services exploit technology, and so guarantee consistent and repeatable transactions. They are also easy to audit because each transaction automatically provides a digital record; either demonstrating a high quality citizen experience, else providing an indication of why not. Also, these same digital records provide comprehensive service performance data that can be used for reporting, planning and quality improvement.

**Citizen expectations**: Digital services, if designed correctly and provided over robust and secure infrastructure, should be available 24 x 7 with easy access from PCs, tablets or smartphones. This suits the preference of an increasing number of citizens who are already shopping, banking and being entertained over the Internet. Over time, the digital channel will be the preferred channel for citizens, but this will depend on high standards of service delivery being maintained and on citizens developing good levels of digital skills and access.

- Reducing transaction volumes: initiatives, such as ‘Tell us Once’ and ‘National Indicator 14 – Avoidable Contact’ (now withdrawn), that sought to eradicate duplicate and unnecessary interactions between citizens and the public sector;

- Changing transaction channels: initiatives to develop channel strategy, such as Digital by Default and Digital First, which sought to reduce the number of face-to-face and contact centre transactions.

Some would say that channel shift is broader than, and encompasses, digital strategy. Others would strongly debate that view. Two things are clear, however. Firstly, that any digital strategy must explain the process of reform for existing face-to-face and contact centre channels. And secondly, that digital strategy is an extremely broad topic comprising demand reduction, service re-design, skills, digital inclusion and knowledge management.
The Transition to Digital Services

All public sector organisations should consider the business-led approach already taken by central government departments, namely to:

• develop a local digital strategy that sets out plans for service reform;

• ensure there is a digital champion within the senior management team to oversee development and implementation of the strategy;

• ensure there is an updated ICT Strategy that defines the need for enabling technology.

Senior management teams must be at the very heart of strategy preparation. And, in order to do this effectively, need to be exposed to programmes that will develop their digital skills and awareness.

Digital strategy should develop alongside a broader channel shift approach, rather than just focus on the digitising of services. Such an approach will help organisations respond to key questions from citizens and staff, including:

‘What is the future of face-to-face services?’

‘How will the role of the contact centre change in a digital world’?

Of course, where entirely new services are to be provided, they may be delivered electronically from day one over the Internet. But, in the majority of cases, the requirement will be for existing services to be re-designed and migrated to the digital channel. For the foreseeable future, however, it will prove necessary to maintain existing channels to serve citizens who are unable, or refuse, to use digital.

Service re-design should be based on step-by-step transitions to digital. Our recommended approach is based on execution of three linked strategic steps, each of which fully exploits digital technology to deliver cost and service benefits:

**Step 1: Face-to-Face Services Strategy** – virtualise face-to-face services and provide more flexible access to back-office functions;

**Step 2: Voice and Contact Centre Strategy** – re-purpose the role of the contact centre to include virtual face-to-face, social media data mining and ‘digital assist’ capabilities;

**Step 3: Web Services Strategy** – deliver a secure digital infrastructure platform, sufficiently robust to support 24 x 7 transactional web services.
The Transition to Digital Services

Face-to-Face Services Strategy

The face-to-face channel is the most resource-intensive and expensive, with an estimated cost of £8.62 per transaction. Some citizen transactions do require the richness afforded by the face-to-face channel, but many do not.

For the foreseeable future face-to-face capability must be maintained, but that capability must develop. An updated face-to-face services strategy must explain this process; how to reduce transaction volumes, handle essential transactions in different ways, and provide more effective access to back-office skills. We recommend examination of the following approaches:

- **Shared services delivery**: defray costs through a partnership approach;

- **Video for citizen contact**: virtualise face-to-face contact;

- **Video and collaboration for back-office access**: change business processes for more effective engagement between citizens, front-office staff and skilled back-office staff.

Shared Services Delivery

This first approach has already seen wide adoption, particularly across tiers of local government, and between local government and the NHS. The benefits include:

- Costs for staff and buildings are shared;

- Individual organisations can contribute their own particular areas of expertise to the partnership;

- Citizens enjoy the convenience of a single contact point for all services within a city or region.

Video for Citizen Contact

This approach has been widely piloted, but has yet to be adopted in large-scale production. In the past, there have been two main barriers to adoption:

- The lack of cheap, easy-to-use video technology;

- The reluctance of citizens to use video technology.

But the world is changing rapidly. Video technology is now pervasive in society and it has been seamlessly integrated into applications on PCs, tablets and smartphones. Also, confidence and skills barriers are fast diminishing as ever-increasing numbers of citizens are experiencing the use of video in their everyday lives.

Video and Collaboration for Back-Office Access

This approach has suffered from the same adoption barriers as the second approach. It has only been piloted to a more limited extent, but has gained considerable traction within the NHS where patients in GP surgeries have been linked by video to clinical specialists providing expert tele-medicine and tele-care services.
Case Study

Nationwide

Video Collaboration Increases Sales for UK Financial Firm

Challenge

Today’s customer expects to be able to do business with a building society or bank when it’s convenient for them, rather than when the institution can ‘fit them in’. If the building society or bank fails to meet that expectation, the customer is most likely to leave and go to the nearest competitor.

As the world’s largest building society, Nationwide prides itself on being easy to do business with, and putting the needs of its members at the heart of what it does. Its mutual status means it’s always looking to do the right thing for its 15 million members, and it has around 700 branches being served by around 400 specialist mortgage advisors.

Andrew Nation, senior manager, future customer outcomes at Nationwide, says: “We tried to maximise the use of consultants by allocating a greater part of their time to busier branches, and arranging appointments in less busy branches around this. However, meeting member expectation of an appointment when it was convenient to them can be difficult.”

If the organisation could provide more efficient access to its experts, it would not only resolve customer service challenges, but also capture market share from competitors.

Solution

The recently introduced Cisco® Remote Expert Smart Solution for Retail Banking, which enables virtual face-to-face customer meetings using high-definition video, provided a unique solution to Nationwide’s dilemma. “Cisco was very keen to explore this solution with us in the U.K. market”, says Nation, “and a Cisco Services supported pilot was proposed across six branches in Wales and the north of England.”

In the six pilot branches, Nationwide set up a private space with a video screen, providing a link to four contact centre-based mortgage consultants.

Attention to detail was critical: the remote advisors were uniformed and occupied pods looking like branch offices. Branch staff used Instant Messaging (IM) to check on consultant availability whenever a customer had a mortgage query. With a member of the four-person advisory team alerted, the customer was connected. Once connected, the customer saw and talked with the advisor in real time, was able to review documents and mortgage choices with the expert, and received printed documentation for review or signature. After that initial video-enabled meeting, subsequent consultations were scheduled using the same medium.
Underpinning the Smart Solution is a number of Cisco technologies such as Cisco Unified Contact Center and Cisco TelePresence® System EX Series videoconferencing units. Cisco Unified Border Element Enterprise Edition supports SIP (session initiation protocol) connectivity, and the systems are hosted on Cisco UCS C-Series Rack Servers.

Cisco Services was involved in high-level and low-level designs, and worked on deployment aspects including software configuration and acceptance testing. “The support of Cisco Services was essential in bringing the pilot to fruition,” says Nation. “There’s nobody else with that level of knowledge. We couldn’t have done it without them.”

**Results**

Nationwide measures success on three parameters: customer experience, new business uplift, and cost. “Our question was about our members’ response,” says Nation. “As delivering a brilliant service is key for Nationwide, it didn’t matter what commercial benefits could be achieved if our members weren’t happy with it. We therefore needed to know if they saw the Nationwide Remote Advisor service as being as good as having a face-to-face consultation.” Applicants took a short survey: 93 percent said it was an excellent or good face-to-face meeting replacement and, including average scores, the level rose to 98 percent.

The remote advisors were offering exactly the same information as an in-person consultation, so the customer satisfaction improvement was likely due to an advisor being immediately available. In a further question in the survey, over a third of respondents said they would have considered going to another provider if they had not been able to get a Nationwide appointment there and then. That seems to indicate that immediate availability helped reduce leakage.

The building society also benchmarked Nationwide Remote Advisor customer satisfaction scores against face-to-face consultations. It found that for the branch mortgage consultant, they achieved net satisfaction of 70 percent from its members, while nearly 90 percent for the Remote Advisor experience: again attributed to instant access. “It seems that meeting the expectation of customers for an appointment on their terms makes for more satisfied customers overall,” Nation says.
Outside the public sector, Cisco is already seeing a huge increase in the exploitation of video for customer contact. The Nationwide case study is an excellent example of the use of this technology. We anticipate a further substantial increase with the advent of the WebRTC standard, which will enable any web browser to be used for rich video communication, eradicating the need to install separate applications such as Microsoft Skype. Cisco believes these drivers will result in more extensive use of remote video pods, PC facilities in libraries and, in the future, WebRTC on end-user devices to provide easy video access to services.

Furthermore, extensions to the use of that same video technology, supported by conferencing and collaboration tools, can provide more flexible access to the back-office. And, stored video solutions, such as provided by Cisco Show and Share, are also an important adjacent capability. Greater use should be made of such capability, both for internal communications, and for providing ‘how to’ videos for citizens over the Internet.

Such a face-to-face services strategy will provide significant benefits to provider organisations and citizens.

Benefits for the provider organisation:

- A reduction in the number of face-to-face centres and staff;
- Reduced staff travel;
- Better use of building assets;
- Better use of skilled resources;
- Potential for better exploitation of contact centre investments.

Benefits for the citizen:

- Easier and more timely access to services;
- Reduced travel;
- Ability to access multiple services in a single session.

Voice and Contact Centre Strategy

Many citizens prefer the voice and contact centre channel as it combines convenience with the offer of rich interaction on complex service matters. It also operates at a significantly lower cost (estimated at £2.83 per transaction) than the face-to-face channel.

The voice and contact centre channel, of course, must be maintained but a new strategy is required if it is to operate in a flexible and affordable manner, and adapt to the new digital world.

In the past, contact centres and their agents operated from a single location, and agents waited to receive voice calls from citizens. In the future, contact centres will exploit technology that will allow agents to be physically located anywhere within an organisation or to work from home. Also, agents will need to be more flexible and be able to adapt to a variety of new job roles; taking virtual face-to-face video calls from citizens, using the Internet to pro-actively mine social media data, and providing multi-channel digital assist services to users of digital services.

The new strategy must be very specific on the changing role of the contact centre. It should itemise the new services to be provided. And, it should explain modern voice and contact centre technology, and how it can best be exploited. We believe the strategy should encompass four distinct operational phases for the contact centre:

1. Consolidation and virtualisation (current phase): exploiting modern Internet Protocol (IP) technology to deliver lower cost, flexible, distributed voice and contact centre capability;
2. Video contact centre: incorporating video technology to provide a virtualised face-to-face contact channel to supplement, or replace, existing capability;
3. Social media data mining: using digital tools that mine social media data to pro-actively uncover citizen service problems;
4. Digital assist: providing multi-channel assist capability to support users of digital services.

Contact Centre Consolidation and Virtualisation

This is the current phase for many organisations. Consolidate and virtualise voice and contact centre technology using IP solutions to reduce the total cost of ownership (TCO), provide operational flexibility, and enhance service quality. We expect this investment trend to continue, affording the ability to locate contact centres to best suit operational needs and permit agents to work from any location. Organisations will benefit from the cost saving, operational flexibility and agility but agents will also benefit from these changes; through improved work-life balance and through the inclusion it offers to those with disabilities or carer responsibilities.
**Video Contact Centre**
Enhance the capability of the contact centre by adding video services. The selection of flexible and expandable voice switching and contact centre technology, such as Cisco Unified Communications Manager and Cisco Unified Contact Centre, allows easy expansion to include video. Once this expansion has been implemented, contact centre agents will be able to receive video calls from citizens. This will allow provider organisations to virtualise selected face-to-face services and move them to the contact centre; an approach already being adopted in the private sector, as witnessed by the Nationwide case study.

**Social Media Data Mining**
Permit the exploitation of social media for pro-active identification and resolution of service problems. It is well understood that many problems with public services are discussed first on social media, often long before they are formally reported. Modern contact centres should be enhanced to provide social media data mining capability, such as that provided by Cisco SocialMiner, allowing contact centre agents to pro-actively gather digital information. This approach has the potential to identify problems, and resolve them, before they are formally reported by a citizen.

**Digital Assist**
Position the contact centre to provide digital assist for users of digital services. This requires that contact centres develop multi-channel unified communications capability, so that citizens can interact with agents using email, chat, voice and video. Digital services are dependent on digital inclusion and on ICT knowledge and skills, so digital assist services are critical for real-time, or near real-time, support for citizens who experience difficulties.

**Web Services Strategy**
Most public sector organisations already operate digital (web) services. Many such services are still informational, but a fast-increasing number offer transactional capabilities. Digital services offer convenience and ease-of-use for citizens. They also represent the lowest cost channel at an estimated £0.15 per transaction.

It would seem relatively straightforward to expand existing informational web services capability to offer a range of transactional services. However, there have proven to be a number of barriers, including:

- the complexity of deciding service reform priorities;
- the lack of digital access and skills for some citizens;
- implementation challenges.

This paper does not attempt to advise on service reform priorities, and purely notes the need for both local and national access and skills programmes to eradicate digital exclusion. However, implementation challenges have been a consistent barrier to progress and need to be addressed by the web services strategy. In our experience, the barriers fall into two main categories:

1. **The complexity of integrating** internet-facing web servers with existing, transactional ICT systems;
2. **The nature of the infrastructure** necessary to ensure that transactional web servers can offer a secure, flexible and reliable 24 x 7 service.

The first of these challenges can only be addressed through investment in new skills and resources in order to overcome integration complexity and difficulty. Industry skills are improving as more and more new services are delivered. Publication of the Digital Services Framework by GDS provides access to an approved pool of supplier and consultancy skills.

The second challenge can be addressed through enhancement of ICT Strategy to define the foundation technology infrastructure required for digital services. Cisco refers to that infrastructure as the 'ICT Service Delivery Platform', which comprises three main elements:

- a unified access network to provide secure access for staff and citizens;
- unified data centres to host web servers;
- ‘defence-in-depth’ security.

The infrastructure platform should support the standards for operation of real-time voice and video, allowing provision of the full range of voice, video and contact services described in this paper. The Public Services Network (PSN) programme – through its Technology Domain Document (TDD) – has defined agreed network and security standards to achieve this capability for the platform.
This section overviews the essential characteristics of the enabling technology required for digital services – namely the ICT service delivery platform and real-time voice and communications services. This information is provided to assist updates to ICT Strategy, and to support the preparation of budgets for investment.
Foundation Infrastructure – The ICT Service Delivery Platform

Cisco uses the term ICT service delivery platform for end-to-end foundation ICT infrastructure. Such a platform should be considered a business critical asset, and designed for flexibility and expandability in order to support all business applications, including digital services.

Physically, the platform should comprise of three main components:

- a **unified access network** providing ubiquitous wired, wireless and remote-access VPN connectivity for staff and citizens;
- **virtualised, unified data centres** delivering applications and services in a secure, flexible and energy-efficient manner;
- layered, **defence-in-depth security** provision.

Logically, the platform should provide a rich set of software features to support converged data, voice and video applications and mobility services. The importance, in the future, of video means that it should be designed with advanced prioritisation capabilities, such as Cisco MediaNet, to allow concurrent video streams to be managed and controlled successfully. In addition, the network should offer unified access – policy-based secure mobility support – thus ensuring that only authorised users and devices can connect to, and use, the infrastructure.

Organisations can construct the platform using Cisco’s three infrastructure architectures: the Cisco Enterprise Network Architecture, Cisco Data Centre Virtualisation Architecture and the Cisco Security Architecture. These three architectures, in combination, will provide everything that is required to support all the face-to-face, voice and contact centre, and web services demanded for channel shift and digital services.

Voice and Contact Centre

Cisco advocates the use of voice technology that exploits the Internet Protocol (IP) to carry voice calls. This approach provides location-independent voice capability, allowing users (including contact centre agents) to make and receive calls from any location with access to the corporate network.

Any selected voice solution, such as Cisco Communications Manager, should support calls to wired phones in offices, over wireless connections to tablets, and to home offices via virtual private network (VPN) connections. In addition, the voice solution should be easily expanded to provide unified communications capability, for example instant messaging, presence and single number reach. Unified communications enhances the reachability of skilled staff – essential for providing good citizen contact – and affords the additional communications options to provide digital assist for citizens.

The contact centre solution should be very closely integrated with the selected voice solution. Ideally, voice and contact centre platforms should be designed using a common architecture. Nowadays, contact centres should also be IP-based, so capable of supporting distributed configurations and skills-based routing. This approach ensures that agents no longer need to be located at a single fixed location, and allows resources to be managed in real-time in order to adapt to fluctuating business demands.

In the past, citizen interaction with contact centres has mainly been via telephone, sometimes supplemented by email. While that traditional requirement will remain, modern contact centres must be multi-channel and gather information in different ways; in particular by mining social media data on the Internet. Modern contact centres should offer social media data mining capability, for example as provided by Cisco Unified Contact Centre SocialMiner. This will allow, in the future, for problems to be logged either as a result of a citizen call, or as a result of social media data mining.

Organisations can deliver all the required voice, contact centre and unified communications capability using Cisco Unified Communications Manager and Cisco Unified Contact Centre products, which form part of Cisco’s Collaboration Architecture. These products are available for deployment within an enterprise; or they may be sourced as cloud services if that approach suits preferred ICT consumption policies.
Business Video

Business video, including high-definition video, is now more affordable and more available than ever. Barriers to use are disappearing. More and more citizens are experiencing video in personal, family and business settings and finding that video-based interactions can genuinely be ‘as good as being there’. These are market-shaping changes, affording the opportunity for organisations to make fundamental changes to contact strategy.

Cisco advocates the early strategic deployment of video. Video can deliver real value - internally for business process change with the potential for re-use externally for citizen contact. A video strategy for an organisation helps to explain the four phases of video deployment:

- prepare the video-ready foundation infrastructure;
- deploy video call switching technology;
- select hardware and software video end-points;
- implement video conferencing and collaboration applications to meet the needs of individual service users.

Cisco is uniquely placed to offer a full video solution for citizen contact, comprising infrastructure, switching, end-points and applications.

The Cisco Enterprise Network Architecture offers video-ready network infrastructure, including ‘collaboration-edge’ capability that enhances security by separating voice and video calls into an organisation.

The Cisco Unified Communications Manager, mentioned earlier, is a re-usable systems building block capable of switching video, as well as voice calls.

Finally, the Cisco Collaboration Architecture offers a wide range of video conferencing and collaboration applications and video end-points to meet every need. These capabilities are also built into our expanding solutions portfolio – for example in the Cisco Remote Expert Solution used by Nationwide.

Security

The increased dependence of businesses on digital technology should be matched by the robustness and security of infrastructure and applications. Security is of paramount importance, as the increased use of digital services over the Internet makes an organisation more visible, so creating a greater surface for malicious attacks.

An organisation’s security policy, and its ICT strategy, must define the process change and technology adoption required to ensure that increased Internet presence does not lead to adverse outcomes. Cisco advocates that process change and technology adoption focus on the three stages of an electronic attack; we refer to these as monitor, mitigate and remediate.

All Cisco products provide a rich set of security features which, if fully enabled, allow the ‘network to operate as a sensor’ to detect attacks, mitigate them and provide remediation. Cisco intelligent services, built into our security appliances, exploit reputational information on individual web and email domains. Domain information allows deep packet inspection and associated processing to provide ‘intelligent threat defence’ by focusing on traffic from potentially damaging sources.

Cisco provides these rich security features and a range of security appliances within our Cisco Security Architecture. Cisco has a wealth of expertise to help you to deploy and operate defence-in-depth security solutions. The Cisco Security Intelligence Operations (SIO) Centre in Raleigh, NC provides global customer security services, including monitoring of current threats and updates to key domain reputation information.
Summary of Cisco Recommendations

This paper sets out a number of recommendations on how best to implement a digital strategy within an overall service reform programme. These recommendations fall into three main categories, summarised opposite:
Organisational

1. Ensure the senior management team are fully engaged with digital strategy development and provided with the necessary digital skills and awareness to discharge this obligation.

2. Appoint a digital champion from the senior management team to oversee development and implementation of the digital strategy.

3. Develop the digital strategy by taking a ‘digital first approach’ within a broad-based (channel shift) view of service reform.

Business Strategies

4. Develop a face-to-face services strategy that assesses opportunities for shared services, and exploits video for citizen contact.

5. Enhance existing voice and contact centre strategy to clearly define the changing operational role of the contact centre. Explain how the contact centre should be virtualised and enhanced to embrace its new virtual face-to-face (video), social media data mining and digital assist roles.

6. Develop a web services strategy highlighting the need for new digital implementation skills, and setting out the importance of robust and secure foundation technology infrastructure.

ICT Strategy

7. Update, or enhance, ICT Strategy to outline the need for enabling technology for digital services. Identify areas for new investment and explain how the technology can best be sourced and implemented.

8. Define how to create the ICT Service Delivery Platform – end-to-end foundation infrastructure – and best deliver the network, data centre, mobility and security components.

9. Enhance voice and contact centre capability to fully support IP and facilitate distributed, multi-channel, location-independent operation. Ensure the ability to make key enhancements such as video, unified communications and social media data mining.

10. Create and implement a business video strategy so that video can support location-independent working and business process change internally, and then be exploited externally for citizen contact.
Cisco is one of the largest global suppliers of information technology products and services. It has been recognised for its substantial annual investment in research and development. Cisco has a dedicated group in the UK supporting our public sector customers. This includes dedicated teams working with local and central government customers to understand their needs, and to provide advice on how best to procure and use technology to meet them. We have produced a number of thought-leadership papers, such as this one, to assist our customers in areas such as PSN, Public Sector Cloud, Operational Efficiency and Green ICT. References to these papers can be found in the Appendix.

We have been at the forefront of technology innovation for a number of years. Our technology powers the Internet and, we believe, can indeed “change the way we work, live, play and learn”. We have deployed an extensive range of digital services that demonstrates this.

At the heart of our success has been the business exploitation of interoperable Internet Protocol (IP) technology by organisations of all shapes and sizes. We invest heavily each year in the development of standards, and in interoperability testing, to ensure that technology can continue to be built with the function, features and performance demanded by new generations of users.

If you would like to contact us to discuss the approach and recommendations set out in this paper, please email us at digital_strategy@cisco.com.

Appendix – Reference Materials

This section provides references to government source material on digital services and digital strategy; also references to related Cisco thought leadership papers.

Government and Digital Strategy

Government Digital Service (Web Site and Blog)
https://www.gov.uk/government/groups/government-digital-service
http://digital.cabinetoffice.gov.uk/

Government Digital Strategy (November 2012 and December 2013)
http://www.publications.cabinetoffice.gov.uk/digital/strategy/

Digital Strategy – March 2013 Update

Digital by Default Service Standards

Digital Services Framework and Digital Services Store
https://ccs.cabinetoffice.gov.uk/contracts/rm1043
https://www.digitalservicesstore.service.gov.uk/
Appendix – Reference Materials

Department of Health Digital First Programme
http://digital.innovation.nhs.uk/pg/dashboard

Welsh Assembly Digital First Programme
http://wales.gov.uk/newsroom/businessandeconomy/2013/7223699/?lang=en

Assisted Digital (Guide and Action Plan)
https://www.gov.uk/service-manual/assisted-digital

Central and Local Government Shared Services
http://www.local.gov.uk/shared-services-map

Cisco and the Public Sector

Cisco UK Public Sector Main Web Site

Cisco in Government

Cisco and the Public Services Network

Cisco and Public Sector Cloud

Cisco and Public Sector Operational Efficiency

Cisco Case Studies

Voice, Video and Contact Centre Services: Nationwide