Digitising Local Government
For Smarter Businesses, Smarter Services and Smarter Cities
Introduction

Right now, a lot is being asked of local authorities. They must make substantial business efficiencies while, at the same time, having to take on new challenges, such as driving economic prosperity and integrating health and care.

In order to achieve this, local authorities have been facing the need to transform, cut or even remove services in order to present balanced budgets. And also to adopt profound business and cultural changes.

But it is now widely recognised that profound change can only be achieved if modern digital technology is exploited to the full. Cisco, as a major worldwide information technology (IT) supplier, is working right now with local and regional government organisations across the world to harness the many benefits that technology can deliver to their businesses. We believe that technology can provide that genuinely transformational impact, and so help deliver business process and cultural change.

Within its Public Sector business in the UK, Cisco has a highly experienced, dedicated Local Government Team. This team works alongside our partners to help local authorities develop and deliver digital strategies in order to meet their obligations and achieve their desired business outcomes.
Cisco believes strongly that every local authority should have a digital strategy. Moreover, it believes that such a strategy should be fully integrated into existing business plans to signpost how to maximise the use, and realise the benefits, of digital technology. This approach follows the lead taken by the private sector, and aligns local authorities to central government, where all departments are mandated to have a digital strategy. While still early days, there is ample evidence that a broad and deep digital strategy can deliver real business benefits.

But any digital strategy adopted by a local authority must be broader in scope than the UK Government Digital Strategy advanced by the Government Digital Service (GDS). It should explain how a local authority can become a digital authority, how it should exploit digital technology across all citizen and business engagement channels, and how that same technology can transform towns, cities and regions into digital communities.

This paper has been created by Cisco to explain the importance of digital strategy to a local authority. It explains the main components of such a strategy and outlines where Cisco and our partners are delivering digital technology that offers real business value to our customers.

Case studies are provided in each section of the paper. They show how and where a digital approach is delivering that business value. The final section summarises these case study references and provides links to other Cisco resources.

Cisco and our partners can explain the value of a digital strategy, help you to develop your own strategy and, of course, help you to execute it. Please see the final section of this paper, which covers the ways in which Cisco and our partners can help you. We look forward to that opportunity. To find out more, please contact your local Cisco account manager or email us at lgovuk@cisco.com.
Local Government Climate

For some time local authorities have been challenged by reductions in Government funding. The July 2015 Budget suggests that settlements will become even tighter in the coming years.

Local authorities have already made the majority of easy-to-implement efficiencies and cost savings. They are now looking to transform, cut or, indeed, remove services in ever-more radical plans to present balanced budgets.

Government has signalled the recommendations of the UK Government Digital Strategy as one route that will help to make the necessary cost savings – primarily by digitising the delivery of citizen services. However, while this approach will deliver savings on transactional services, it can only be part of the answer for the complex mix of services offered by local authorities.

To make the challenge even greater, local authorities have been assigned a number of new legal obligations. In particular, the need to integrate health and care, and meet the requirements of the Care Act 2014. Sometimes that challenge is very direct, as is the case in Greater Manchester, and it may be that we see this type of re-organisation repeated in other city regions. In addition, the financial downturn has placed local authorities at the vanguard of strategies to achieve the economic prosperity of towns, cities and regions. This has necessitated investment – in the environment, in travel, in information services, and in capabilities that attract retailers and businesses, in particular businesses in the knowledge economy. We expect the generation of economic activity to become even more important as local authorities take control of business rates.

Cisco has been able to provide trusted advice to local authority customers on these new missions, as well as on those areas where technology has more traditionally been exploited. That advice has been based on Cisco’s substantial worldwide investment in health and care, in ‘smart city’ solutions, and in public administration reform where we have helped local and regional councils worldwide to meet new obligations.

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The Importance of a Digital Strategy

There is an increasing understanding that organisations, whatever their shape and size, need a digital strategy to explain how modern digital technology can be exploited to meet statutory and legislative obligations, as well as realise other desired business outcomes.

In the forefront of this development have been private sector companies, many of which have invested heavily in Chief Digital Officers (CDOs) and digital strategies. They have made this investment to ensure they do not suffer ‘digital disruption’ from smaller, more nimble organisations using the technology to enable new ‘go-to-market’ strategies. But also, in order to exploit digital technology to deliver the profound business and cultural change essential for driving efficiency and effectiveness. Digital disruption will potentially become a factor for local authorities as they compete for new start-up businesses and fight to retain larger, established businesses.

And in the public sector, Central Government has taken the lead, enacting the Government Digital Strategy by appointing CDOs, developing local digital strategies, and taking a ‘digital by default’ or ‘digital first’ approach to delivering public services.

But for local authorities, Cisco advocates a much broader and deeper approach to digital technology and digital strategy. A digital strategy is not just about putting services on the web. It is about the widespread adoption of digitisation in support of all aspects of a local authority’s business plans, including:

- How an authority can use technology to become a more efficient and more cost-effective digital authority;

- How technology can help to deliver higher quality, more accessible digital services across all citizen engagement channels;

- How technology can be used to create physical and virtual digital communities.
The Digital Authority

Cisco is helping organisations worldwide to digitise their businesses. We are providing that same support to local authorities to enable them to become digital authorities.

But what do we mean by a digital authority?

Simply, a digital authority is one that realises all the benefits of digital technology to achieve financial stability and operational readiness. And it is one that further exploits that technology to the full to deliver its portfolio of citizen and business services, meet its statutory and legislative obligations, and transform all aspects of its borough, city, county or region.

Some authorities are actively taking steps to reduce the costs of IT which, unfortunately, positions IT as a cost centre rather than a value centre for the business. However, digital authorities recognise that IT only accounts for around 3% of overall budgets. And that it is far better to view IT as a value centre, with the ability to drive efficiencies and cost-savings in the remaining 97% of the budget.

This remaining 97% of the budget includes the major costs of the workforce, the workplace, and energy and resources. A digital authority, therefore, should focus on how technology can help through four main programmes of work:

**The workforce** – enable a location-independent workforce and develop collaboration-enabled business processes – by implementing end-to-end IT infrastructure (Cisco calls this the ‘IT service delivery platform’) and providing a suite of unified communications and collaboration services;

**The workplace** – create an estates portfolio that supports the work styles of location-independent workers – by reducing the number and location of buildings, by adapting their physical design, and by providing technology support for new work settings and work styles;

**Energy and resources** – reduce the usage, hence cost, of utility services – by exploiting the energy-saving benefits of IT consolidation, and using IT to monitor and control the use of energy;

**IT** – reduce capital and operational costs – by consolidation and virtualisation of infrastructure and services, and by adoption of new sourcing models including cloud, managed and shared services.

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Cisco on Cisco – IT Changing our Business

“A key competitive advantage for Cisco is how we use our own technology to drive productivity”

John Chambers, Executive Chairman

Cisco has always shared our IT experience and IT business success stories.

The Cisco website, for many years, has included ‘Cisco on Cisco’ content that takes a look inside Cisco IT. The aim is to help you find out how Cisco addresses many of the same technology challenges that you face every day.

Cisco on Cisco allows you to benefit from our practical experience and the lessons learned deploying Cisco products and technologies. And also to see how these solutions help to implement business strategies that get real results.

For Glasgow City Council to continue to improve its carbon reduction credentials, reining in IT energy usage was vital. Cisco technology helped make this happen.

“The Cisco Energy Management Suite is a key project in reducing energy costs across our 700-plus buildings, aiding our evolution into a smart city and making savings for reinvestment.”

Andrew Mouat,
Principal Officer, Carbon Management, Glasgow City Council


However, if these objectives are to be achieved, a digital authority must also instigate a robust programme of cultural and business process change. It is that combination of change and technology investment that delivers desired business outcomes.

Glasgow City Council - Reducing Carbon and Lowering Energy Costs

More detail on these programmes can be found in our ‘Operational Efficiency Paper’:
UK Government placed Digital Services high on the list of strategic priorities for the public sector when it published its ‘Government Digital Strategy’ in 2012.

But, despite much available guidance, the subject is complex and Cisco is often asked to provide business and technical advice on implementing a digital services strategy. We believe Cisco is ideally placed to provide this advice and guidance as we pioneered the very earliest use of the Internet for e-commerce.

Also, for many years, Cisco has relied on digital services and the Internet to interact with partners and suppliers, and to support our customers. More recently, we have made extensive use of social media for digital sales and marketing, and for assessing market opinion of our company and our products.

We recommend that a digital authority should exploit technology across all its citizen and business engagement channels, and not focus solely on the web channel and moving services to the Internet. In our experience, the detail of any channel strategy must be sensitive to the needs and priorities of the local environment; for example, what priority services need to be delivered or re-designed, the demographics of its citizen stakeholders, and also the current ‘as-is’ technology environment.

Cisco advocates that technology be incorporated into an overall “channel shift” approach to public services. Clearly, over time, face-to-face and contact centre channels must be migrated towards digital. We believe it is essential that all citizen engagement channels be maintained at least in the short term. But, that each channel must be made to deliver cost and quality benefits through the use of technology.

The focus on channel shift, and the incorporation of technology into all channels, will help authorities to respond to key questions such as "What is the future of face-to-face services?" “How will the role of the contact centre change in a digital world?” and “Can contact centre services embrace social media?”

Where entirely new services are to be provided, they may well be delivered electronically over the Internet from day one. But, in the majority of cases, the requirement will be for existing services to be re-designed and migrated. Of course, existing engagement channels may need to be maintained to serve citizens who are unable, or simply refuse, to use digital. But authorities must balance this with mitigating strategies - including ‘digital assist,’ programmes of digital skills development, and other incentives - in order to drive uptake.

London Borough of Harrow - Connecting Citizens to Local Government

Like many local authorities, Harrow Council is facing steep financial challenges. By 2019/20 it will need to reduce net expenditure by £83 million. The impact of this is a very real threat of reduction in the number of frontline services provided by the council for its local residents.

Harrow has adopted an Internet of Everything (IoE) / Smart and Connected Community (S+CC) strategy to stay connected with local residents. That strategy provides online access to over 760 public services and enables the council to deliver better, more efficient services in the face of ever reducing budgets.


The service re-design programme should focus on three linked strategic steps, each fully exploiting digital technology to deliver cost and quality benefits:

**Face-to-Face Services** - virtualise face-to-face services and provide greater flexibility around access to back-office and specialist functions; by exploring the power of point-to-point video and video conferencing for citizen access to council service centres;

**Voice and Contact Centre** - re-purpose the role of the contact centre to maximise its strategic value - by making it omni-channel, by providing virtual, video-based face-to-face contact; and by expanding it to provide social media access and data mining, and digital assist capabilities;

**Web Services Strategy** - deliver robust, secure 24 x 7 web services – by delivering a scalable digital infrastructure platform and defence-in-depth security.

More detail on implementation of these programmes can be found in our ‘Digital Services Paper’: http://www.cisco.com/cisco/web/UK/public_sector/digital-public-services/index.html

And, once again, cultural and skills issues must be addressed. Senior management teams must be at the very heart of channel shift and digital services programmes, because of their fundamental impact on organisations and citizens. To support this, senior managers should be exposed to programmes that will develop new digital skills and awareness.

Digital Cities and Communities

Digital (smart or future) cities and communities are extremely important to local authorities focusing on the economic prosperity of their town, city or region, and on the wellbeing of their citizens. To successfully realise a digital city or community, an authority must identify the needs of all key stakeholder groups and meet them through technology exploitation. Key stakeholder groups include citizens, small businesses, large businesses, retailers and visitors.

But this can be a very complex task. Wellbeing and economic prosperity depend on very many different factors including the physical environment, communications, transport, education and skills, health and care services, and availability of business and residential accommodation.

Clearly, a local authority is not responsible for all these activity areas. But it should have the lead responsibility for strategic planning and the digital authority will use its digital strategy to explain the role of technology in each of the above areas. This will provide community leadership, and help deliver the desired business outcomes for each named stakeholder group.

But a local authority does need to prioritise. Cisco works with local authorities on a global basis, and we see three main areas where technology can aid city and community development, namely:

**Economic development and prosperity** – how technology can meet the needs of both small and larger, established businesses for physical and communications resources, for access to markets, for an attractive recruitment environment, and for staff with good education and skills;

**Health and social care** – how technology can help health and care organisations tackle the financial and organisational challenges posed by the ever-increasing numbers of chronically sick and frail elderly citizens;

**Thriving and vibrant cities, towns and regions** – how technology can create environments that attract new retailers, and encourage visitors and tourists who contribute directly to the prospects of those retailers and, indirectly, to overall economic success.

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**Derby City Council – ‘One Derby’ City Infrastructure**

Derby City Council has enabled their people to work effectively from anywhere with savings on space, power, and shared IT infrastructure.

The council, working with the Cisco provider partner, designed a new high-performance network and communications system. The solution supports a number of locations ranging from primary offices with large numbers of people, to libraries and drop-in centres.

Miles Peters, technical architect at Derby City Council, sums up: “It’s become the template for flexible office space across the city. We can better manage demand and just as easily work from home or from partner offices. The solution doesn’t just make us one council, it makes us ‘One Derby’.”


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**Portsmouth City Council – Connecting residents, visitors and public sector employees across the city**

Portsmouth City Council has embarked on an Internet of Everything / Smart and Connected Community programme to provide everyone who visits the city with access to a free, city-wide wireless network. Initially delivering this service from within 77 public buildings, the council will eventually provide ubiquitous access for all residents, visitors and public sector employees.


Each of these areas is important, but the first will receive growing attention with the announcement that local authorities will be able to retain business rates.

Cisco has many reference case studies worldwide that explain how cities are implementing all of the above and more. Individual city plans are usually based on the provision of city or community infrastructure – wired and wireless networking – that supports direct use by the council, by businesses, by citizens and by visitors. And, more importantly, through the use of Internet of Everything (IoE) applications that allow sensors to generate new types of data that are processed and analyzed centrally to create positive business or personal outcomes.

One good example of an IoE application connects traffic lights, traffic sensors and video cameras. Once the sensor and camera information is collected centrally over the city infrastructure, it can be processed to control traffic flows and provide information to public transport users. Cisco is already working with cities in the UK to develop city infrastructure and to roll out a range of IoE applications.
Digitising Health and Care

Successive Governments have sought to dismantle the historic boundaries between healthcare and social care in order to reduce costs and deliver superior care.

The Care Act 2014 has placed new obligations on local authorities, covering the consistency, quality and accessibility of social care services. And, in one very significant manifestation of these policies, it was announced that Greater Manchester authorities would have sole responsibility for all health and care services across the region.

Cisco has worked very actively with the NHS on integrated care, and with local authorities to help understand and meet the obligations of the Care Act 2014. The Care Act placed new obligations on councils to provide citizens with better access to health and care information, and to assessments of need. Cisco has provided voice, video and contact centre solutions to support these new types of citizen engagement. And, as part of broader digital service’s needs, has advised local authorities on the IT requirements for creating health and care information portals signposting local resources.

But, in addition, Cisco has been very active in promoting the role of technology across the broader health and care continuum. Figure 1 shows how we structure Cisco activity across the four stages of that continuum – namely aging well, independent living, social care and healthcare, plus chronic care – and indicates those areas where Cisco has technology solutions. In each case, digital technology is used to reduce costs, create efficiencies, and improve the lives of the chronically sick and frail elderly.

There are many examples of Cisco innovation in health care. We have always sought to pioneer, so some date back several years:

- The use of Cisco TelePresence video to provide patients in more rural areas of Scotland with easier and more timely access to healthcare;
- The use of collaboration technologies in the North West of England to help GPs deal with the monitoring and control of hypertension and other chronic conditions;
- The use of set-top box technology to support ageing well and independent living for the elderly.

![Figure 1: The Health and Care Continuum](image)
One of the most recent, and most interesting, projects has been the use of video to connect care homes in Airedale, Yorkshire to the local acute hospital. This project has been widely reported on the BBC and referenced by NHS England as an exemplar of best practise. It is now run by Immedicare (http://immedicare.co.uk).

**This has resulted in impressive benefits – including very significant reductions in GP and ambulance call outs, and in hospital admissions.**

The project has provided video links into care homes, so that staff can pro-actively consult skilled nurses and doctors regarding a resident’s condition before having to call out a GP or ambulance. This has resulted in impressive benefits – including very significant reductions in GP and ambulance call outs, and in hospital admissions. And, where hospital admissions have been necessary, they have been for shorter durations. The solution has now been extended to around 280 care homes, serves a number of prisons, and offers a stroke service to several other acute hospitals.

**Airedale NHS Foundation Trust - Airedale TeleHealth Hub**

Airedale NHS Foundation Trust is a rural trust providing high quality, personalised healthcare for its patients. Like all NHS trusts, it is facing increasing demand (particularly for acute emergency care), an increasing cost base and limited revenue growth. To help address some of the challenges faced by and aging population in nursing and care homes within the region, and to give support to staff during out-of-hours periods, Airedale has implemented a solution that connects both groups to medical professionals in a Telehealth Hub.

The metrics surrounding the project – for GP and ambulance call-outs, and for hospital admissions – have been amazing. The TeleHealth Hub has expanded and now supports 280 care homes, 13 prisons and provides stroke monitoring for 18 acute hospitals.

The Cisco Architectural Approach to IT

A digital strategy requires a companion IT strategy to explain what enabling digital technology needs to be provided, and how it can best be consumed.

IT consumption models are extremely important to a digital authority. Cisco believes a digital authority should adopt a ‘hybrid cloud’ strategy, exploiting a combination of local, remote and shared services to best suit business needs. The IT strategy is the place to analyse and advocate different approaches such as cloud and managed services adoption.

Our experience has shown that an IT strategy should take an architectural approach, linking business priorities directly to IT investments. The methodology employed should make that linkage very clearly, in order that technology investment can deliver its full business value. Cisco refers to ‘Plan-Down’ from business requirements and ‘Build-Up’ starting with IT infrastructure.

An IT strategy also depends upon ‘architectural blueprints’ to describe individual IT components and their relationships. These blueprints can be shared with, and agreed, between all project stakeholders. Architectural blueprints also, inherently, provide roadmaps to explain how IT can deliver incremental performance and functionality to meet new and changing business needs.

We recommend a review of the four Cisco technology architectures, namely:

- Enterprise Networks;
- Security;
- Collaboration;
- Data Centre Virtualisation.

Each architecture offers a blueprint, along with a roadmap to increased performance and function. And each architecture is complemented by a set of Cisco Verified Designs (CVDs); ‘how-to guides’ that support technology implementation.

Technology Architectures and Digital Technologies from Cisco

An authority’s digital strategy must clearly identify the role, and highlight the value, of two essential components of digital technology.

The first component is foundation infrastructure (what Cisco refers to as the IT service delivery platform) that provides support for all the applications and services necessary to run an authority’s business.

The second is a suite of communications and collaboration services that provides the building blocks for transforming business processes and citizen engagement.

Cisco’s core business is to supply these two key components of digital technology.

Foundation Infrastructure – The IT Service Delivery Platform

Cisco uses the term ‘service delivery platform’ for end-to-end foundation IT infrastructure. Such a platform should be considered a business critical asset by any digital authority, and should be designed to support the functionality and availability required by all business applications and services.

Physically the platform should comprise three main components:

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

Virtualisation capability within the network, data centre and security components of a Cisco-based service delivery platform make it ideal for multi-tenant, shared services operation.
Logically, the end-to-end platform should provide a rich set of software capabilities to support converged data, voice and video applications and services. The increasing importance of video means that the platform should be designed with rich prioritisation capabilities, such as Cisco Application Visibility and Control (AVC), to allow concurrent video streams to be managed and controlled successfully. In addition, the network should offer unified access – policy-based secure mobility support – to ensure that only authorised users and devices can connect to and use the Infrastructure. This is essential if the platform needs to support users and devices from multiple authorities when shared services environments have been created.

Authorities can construct the platform using Cisco’s three infrastructure architectures, namely:

- Cisco Enterprise Network Architecture;
- Cisco Data Centre Virtualisation Architecture;
- Cisco Security Architecture.

These three architectures, in combination, can provide everything to support the authority and its face-to-face, voice and contact centre, and web services’ needs.

Unified Access Network

A Cisco Unified Access Network provides essential borderless connectivity and includes functions that enable secure mobility. Such a network offers consistent, policy-based access across all network types (wired, wireless and remote-access), helping to meet security and compliance requirements without placing unnecessary restrictions on staff.

The unified access network comprises three integrated technology components:

- **One Unified Network**: a borderless network of interconnected wired, wireless and remote access VPN components based on Cisco’s comprehensive portfolio of switch, router, wireless and remote-access products;

- **One Policy**: a single security-policy platform, the Cisco Identity Services Engine (ISE), which provides consistent access to wired, wireless and remote-access networks. Allowing staff, guests and shared services users on authorised devices to gain access to network-based resources;

- **One Management**: refers to Cisco Prime Infrastructure, the central management application suite for managing users and connectivity on the unified access network.


Unified Data Centre

Data centres are critical assets for local authorities as they deliver all the applications and services required to run the business, and to deliver citizen services. To deliver financial and sustainability benefits, data centres should operate at very high utilisation levels and use technology with low carbon footprints. They need to be scalable, and may need to be assured so that citizen information can be held securely.

To meet these requirements, Cisco has developed its Data Centre Virtualisation Architecture. At the heart of the architecture is the Cisco Unified Data Centre, a fabric-based, virtualised platform that integrates computing, networking, security and management. It has been designed specifically to meet the requirements for scalability, sustainability, security and flexibility. It exploits all the advantages of virtualisation to achieve these objectives.

The Unified Data Centre is based on two key components:

- **Unified Computing**: The Cisco Unified Computing System (UCS) integrates industry-standard x86-architecture servers, networking, and enterprise-class management into a single ‘pod’ system for low cost, simplicity and easy scalability. It uses unified fabric to provide a ‘wire-once’ platform that virtualises computer resources and reduces the number of interfaces, cables and switches needed to support servers.

Cisco UCS is massively scalable to hundreds of blades and thousands of virtual machines. Despite this, a single point for management and configuration, using automated rules and policies, can orchestrate physical, virtualised or cloud computing environments.

- **Unified Management (Fast IT)**: Unified management provides the only self-service, open platform for centrally managing all data centre resources across physical, virtualised and cloud environments.

Unified management promotes fast, flexible, and cost effective deployment of infrastructure. Automation capability reduces the time and cost of setting up and provisioning infrastructure, operating environments and applications.

Defence-in-Depth Security

The increased dependence of local authorities on digital technology must be matched by a focus on the robustness and security of infrastructure, applications and data. Security is particularly important as the increased use of digital services makes an authority more visible on the web, so creating a greater surface for malicious attacks.

An authority’s security policy, and its IT 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 policy and strategy focus on the three key stages of electronic attacks; we refer to these as monitor, mitigate and remediate. Cisco products provide a rich set of security features which, if fully enabled, allow the network to operate ‘as a sensor’ to help monitor and detect attacks, mitigate them and provide remediation. Cisco Intelligent Services, built into our security appliances, exploit the reputational information of individual web and email domains. This allows deep packet inspection and associated processing that focuses on traffic from potentially damaging email and web domains.

Cisco provides these rich security features, and our range of security appliances, within our Cisco Security Architecture. Cisco also has a wealth of expertise to help you to deploy and operate defence-in-depth security solutions. We provide global customer security services and alerts from our Cisco Security Intelligence Operations (SIO) Centre in Raleigh, NC.

Communications and Collaboration Services

A digital authority should provision a suite of communications and collaboration services for use by all stakeholder groups. The suite should be used, and then re-used, to transform business processes and citizen engagement. It should be considered as a set of re-usable building blocks that can be used in different settings to meet the different needs of staff and citizens. For example, a video conferencing service used by staff to reduce travel costs and increase productive time can be re-used by contact centre staff for citizen engagement.

All core services within the suite can be provided by the Cisco Collaboration Architecture. These services are voice and contact centre, unified communications and collaboration, and business video.

You can find out more about Cisco’s capability in each of these areas at: http://www.cisco.com/c/en/us/solutions/collaboration/product-listing.html

Voice and Contact Centre

Cisco was the very first technology supplier to provide products, such as the Cisco Unified Communications Manager (CUCM), that use the Internet Protocol (IP) to carry voice calls. Cisco is now the market leader. Such an approach provides location-independent voice capability, allowing users (including contact centre agents) to make and receive calls from any location served by the authority’s unified access network.

Ideally, voice and contact centre technologies should be very closely integrated, and designed using a common architecture. Nowadays, contact centres, like the Cisco Unified Contact Centre, should also be IP-based, so capable of supporting distributed configurations, skills-based routing and omni-channel operation. This ensures that agents no longer need to be located at a single fixed location, permitting resources to be managed in real-time and adapted to meet fluctuating business demand.

In the past, citizen interaction with contact centres has been mainly via telephone, sometimes supplemented by email. While this requirement remains, modern contact centres must become omni-channel and gather citizen information in different ways, in particular by mining social media data on the Internet.

In the future, a problem may be logged either as a result of a citizen call, or as a result of social media data mining. To meet this need, modern contact centres must offer social media data mining capability, for example Cisco Unified Contact Centre Social Miner, as well as being able to accept citizen contact via Twitter and Facebook.

Authorities can deliver essential voice and contact centre capability using the Cisco Unified Communications Manager and Cisco Unified Contact Centre products. These form two core components of the Cisco Collaboration Architecture. They are available for on-site enterprise deployment, or may be sourced as cloud services from Cisco-powered service providers to suit preferred consumption policies.

In addition, the contact centre should provide full unified communications capability, for example, instant messaging, presence and single number reach. Unified communications enhances the reachability of skilled staff – essential for good citizen care – and affords additional communications options for citizens, including for digital assist.
Unified Communications and Collaboration

The Cisco Collaboration Architecture also provides the blueprint for integrating unified communications, video and collaboration technologies into a single services suite.

The portfolio of Cisco products and solutions that implement the architecture are described in the following sections:

- **Unified Communications:** Unified communications is the term used for a suite of applications – presence, instant messaging and reachability services – that enhance entry-level voice systems.

  The key solutions within the Collaboration Architecture – in addition to the Unified Communications Manager – are the Cisco Presence Server, Cisco Single-Number-Reach Server, and the Cisco Jabber Client.

- **TelePresence:** The Cisco TelePresence system provides video conferencing with CD quality audio and high-definition video. Specially tuned environments deliver the very highest quality user experience, such that TelePresence is often referred to as ‘virtual reality conferencing’.

  TelePresence allows you to meet, collaborate, share content and create high-quality video recordings as though you are in the same room as other participants. It uses standard IP technology and is designed to run over enterprise networks, exploiting advanced architectural features such as quality of service and Cisco AVC.

- **Collaboration applications:** Cisco's collaboration applications provide a comprehensive, contextual, interactive environment that puts people at the centre. They use an industry-leading collaboration platform, web conferencing, and productivity tools to help enhance productivity and improve decision making.

  Users communicate more securely and effectively using integrated tools that connect email, instant messaging, conferencing, presence, voice services, and voicemail. This device-independent approach enables users to take advantage of the same tools whatever their choice of devices – PC, iPhone or iPad, Android smartphone, or some other device.

  The key Cisco collaboration solutions today are Cisco Jabber, Cisco WebEx and Cisco Spark.

Business Video

Business video, including high-definition video, is available at ever decreasing price points. Barriers to its 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 authorities to make fundamental changes to contact strategies.

Cisco advocates the early strategic deployment of video. Video can be used internally for business process change, and re-used externally for citizen contact. A strategy for video within an authority should include the four incremental phases of video deployment:

- Prepare video-ready foundation infrastructure (the IT Service Delivery Platform);
- Deploy video call switching technology (Cisco Unified Communications Manager);
- Select hardware and software video end-points (including the Cisco Jabber client);
- Implement video conferencing and collaboration applications to meet the needs of individual services.

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

Our Cisco Enterprise Network Architecture offers the video-ready network infrastructure, including collaboration-edge capability that provides additional security for voice and video calls external to the authority.

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

And our Cisco Collaboration Architecture offers the widest range of video conferencing and collaboration applications, and video end-points to meet every need. These capabilities are also built into our solutions portfolio – for example, as the Cisco Remote Expert Solution used extensively by Nationwide: [http://www.cisco.com/c/en/us/solutions/collaboration/nationwide.html](http://www.cisco.com/c/en/us/solutions/collaboration/nationwide.html)
How Cisco and our Partners can help

Cisco and our business partners have a wealth of knowledge and expertise, both of the local government sector and of delivering innovative technology solutions.

We can provide trusted advice on how to develop a digital strategy for your local authority; on how to create supporting policies; and on how best to create an IT strategy to define enabling digital technology and how best to source it.

We can also, of course, provide the technology components for the IT service delivery platform; namely networks, data centres, mobility solutions and defence-in-depth security. Additionally, we can supply the rich suite of communications and collaboration services that can be used, and then re-used, to transform business processes and citizen engagement.

We believe Cisco delivers the very best technology in the marketplace. And now you can deploy that technology locally within your authority, or consume it as a cloud or managed service from one of Cisco’s provider partners. Cisco still represents the best technology, but it is now available via a choice of consumption models.

Finally, Cisco and our partners are renowned for the very best service and support. From consultancy services to shape your planning and strategy, through to product support services for your deployed IT.

We would be delighted to review the contents of this paper and its recommendation with you, and discuss how they might apply to your authority. We’d also be happy to provide more details on how we might be able to help you more directly. Please contact your local Cisco account manager or email us at lgovuk@cisco.com.
References and Case Studies

Cisco UK Public Sector Home Page

Cisco UK Local Government Home Page

Cisco on Public Sector Operational Efficiency

Cisco on Digital Public Services

Cisco on Cisco
http://www.cisco.com/web/about/ciscoatwork/index.html

Glasgow City Council Case Study

London Borough of Harrow Case Study

Derby City Council Case Study

Portsmouth City Council Case Study

Airedale NHS Foundation Trust Case Study