ICT Partnership Strategy
2019/20 – 2021/22
(East Herts Council and Stevenage Borough Council)

DRAFT

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Revision History

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Contents

Glossary

ACM **A**doption and **C**hange **M**anagement, a Microsoft service to help the Partnership to prepare for and manage change, therefore help ensure adoption. The service focuses on achieve more value from investments by carrying out plans for communicating changes, readiness and training, and support.

API **A**pplication **P**rogramme **I**nterface is a gateway that allows software to talk to other software and also defines how that conversation takes place.

BDO **B**inder **D**ijker **O**tte a company that provide audit and assurance services

Cloud Cloud computing is storing and accessing data and applications over the Internet instead of your computer's hard drive, Cloud can be used for storing just data but can also be used for run applications sometimes known as SaaS.

Critical Path Longest sequence of activities in a project plan which must be completed on time for the project to complete on due date. An activity on the critical path cannot be started until its predecessor activity is complete; if it is delayed for a day, the entire project will be delayed for a day unless the activity following the delayed activity is completed a day earlier.

CRM **C**ustomer **R**elationship **M**anagement is a technology for managing all Partnership's relationships and interactions with citizens and businesses. It provides a history of previous engagements with citizens and business making interactions much easier.

DPA **D**ata **P**rotection **A**ct

Firewall A Firewall is a network security device that establishes a barrier between a trusted internal network and an untrusted external network such as the internet. The Firewall acts as a filter and therefore is crucial to the security of the internal network it protects. The general life span of a Firewall is 5 years, out of date firewalls risk being "hacked" and the network becoming vulnerable to attack.

GDPR **G**eneral **D**ata **P**rotection **R**egulation

Hosted Desktop Technology that hosts a desktop operating system and its applications/data on a centralized server which is then accessed remotely, also known as a Virtual Desktop.

Hybrid Infrastructure Is composed of a combination of on-premises data centers, private clouds and/or public clouds. Enterprise systems and

applications can be deployed on any of these environments, depending on the strategic business need, the tactical requirements and the required outcome

ICT   **I**nformation and **C**ommunications **T**echnology is a term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage, and audiovisual systems, that enable users to access, store, transmit, and manipulate information.

Latency   Network Latency is either "one-way", the time from source to destination, or more commonly "round-trip delay time", the time it takes between a requests and a response (excluding destination processing time). From a user's perspective, for example on a VDI device, if I start typing, what the delay from when a key is pressed to when I see it appears on the screen.

Malware   Short for "Malicious Software", it is code specifically designed to gain access to or damage IT systems. There are various types of malware, including spyware, ransomware, viruses, worms, Trojan horses and adware.

MSM   **M**odern **S**ervice **M**anagement is designed around ITIL practices, but with the additional speed, agility and automation required to support rapidly changing business needs. Through the use of data-driven analytics and advanced algorithms, modern service management seeks to systematically remove waste, improve efficiencies, cut costs and delight end users.

On Premises   Technology (including Software and hardware) that is located within the physical confines of the Partnerships offices / data center – as opposed to running remotely on hosted servers or in the cloud.

OSS   **O**pen **S**ource **S**oftware is software with its source code made available with a license in which the copyright holder provides the rights to study, change, and distribute the software to anyone and for any purpose. Open-source software may be developed in a collaborative public manner.

PSN   **P**ublic **S**ervices **N**etwork compliance enables access to Internet content and shared services to be controlled.

SaaS   **S**oftware **a**s **a S**ervice is a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted. It is sometimes referred to as "on-demand software". SaaS is typically accessed by users using a thin client, e.g. via a web browser

SOA   **Service Oriented Architecture** is an architectural methodology/ best practice around specifying separation of responsibility from a business oriented view into independent services which is communicated by an API. This applications to be less isolated and fosters service re-use.

Socitm   Is the operating name of the Society of Information Technology Management, a professional body based in the United Kingdom representing people involved in the leadership and management of IT and digitally enabled services delivered for public benefit.

Softphones   A softphone (software telephone) is an application program that enables voice over Internet Protocol (VoIP) telephone calls from computing devices. Most softphone applications work in conjunction with a headset and microphone, a specialized VoIP phone. Although softphones are most often associated with mobile or home users, office workers are also choosing to use softphones as a convenient replacement for traditional desk phones.

Switch   A Switch is a key hardware component of the network; it has a number of ports, normally 50 for a large network, which Ethernet cables are plugged into. The switch links devices together, everything from Servers, printers, laptops, desktops to IP Phones. Switches, you will normally find a "rack" of switches together, manage the flow of data across the network, transmitting data only to the one or more devices for which the data is intended. Each networked device (such as a laptop) can be identified by its network address, allowing the switch to direct the flow of data maximizing the security and efficiency of the network. Therefore it is critical for the stability, reliability, security and speed of the network, that switches are keep up to date, maintained and within their lifespan, normally 6 years. Older switches are vulnerable to hardware failures and

VDI   **V**irtual **D**esktop **I**nfrastructure is a technology that hosts a desktop operating system and its applications/data on a centralized server which is then accessed remotely.

WEEE   **W**aste **E**lectrical and **E**lectronic **E**quipment recycling European Community Directive 2012/19 become European Law in February 2003

Zero Client   Zero Client is a small device that serves to connect a keyboard, mouse, monitor and Ethernet connection to a remote server. The Partnership use these devices on "Hot Desks" to give access to the VDI environment, therefore any Partnership users can go to any "Hot Desk" or work from a remote location and log on to their desktop and access their applications/data. The Benefits over a traditional desktop PC or laptop include, 1/50th power usage,

much cheaper to purchase / support and secure way of delivering applications/data

Foreword

The next three years will witness significant changes across the public sector. The shape and size of councils are likely to change but the need to provide high levels of service to residents will remain and be set against a backdrop of further reduced budgets.

With these challenges will come new opportunities; using ICT to enable both councils to achieve efficiencies, providing the infrastructure to front line and   shared services and most importantly, keeping pace with customers' changing needs and expectations.

Throughout the period of this strategy, ICT will underpin and support the strategic objectives of both East Herts Council and Stevenage Borough Council. ICT is no longer just a support service; it has become a critical service. If it is unavailable, organisations cannot operate. It has the ability to transform the way services are organised and delivered. It has a fundamental role to play in improving efficiency, reducing cost across the organisation and underpinning the organisational change programme. This strategy sets out how we will ensure that ICT will support services in responding to these challenges.

We will begin the process of standardisation and simplification of our ICT systems and applications based on the premise of a common resilient and secure infrastructure and a new Enterprise Architecture designed to enable local service delivery suited to local needs.

Demand for public services and expectations of levels of service are ever increasing. Residents and businesses expect the same levels of access and personalisation that they see online from large private sector organisations such as Amazon. They expect to be able to access their services from multiple locations and in ways that suit them. Our strategy will place a strong emphasis on providing choice in the way people access services, by utilising digital platforms and applications. This will ensure maximum choice to respond to individuals' circumstances and preferences, and the provision of quick and effective responses.

We will use ICT to allow each council to embrace modern working practices, rationalising office accommodation, eliminating unnecessary bureaucracy and administration, and supporting community based service delivery.

Investing in our people is a high priority. We will continue to improve the ICT skills of our workforces and our communities, equipping them with the skills they need to enhance their lives and their neighbourhoods. At the same time we will continually review the replacement and upgrading of ICT hardware and systems to ensure that our workforces have the right solutions for their work.

Where possible, the use of ICT will contribute to the economic success of both districts, and facilitate the delivery of key service initiatives.

Information security is a critical focal point within the strategy given the increase in the amount of malware and the diverse ways that information can be shared. We

place great emphasis on protecting our systems against threats and maintain constant vigilance to protect against any new threat. We will continue to invest in training and education for our users, to raise awareness of security risks and to promote good data security practice both at work and at home in their private lives.

Images of ICT Portfolio Holders to be inserted at design stage

Introduction

The term "ICT Partnership" used throughout the document, refers to both East Herts Council and Stevenage Borough Council.

ICT Policies and statements are universal to both councils. The Partnership was established in July 2013 with the purpose of; determining the strategic direction, overseeing the preparation / implementation of this ICT Strategy, monitoring service performance, review customer feedback and setting ICT budgets.

This document sets out the Partnership's joint strategy for Information, Communication, Technology and Digital (ICT) over the period 2019-2022. The ICT strategy reflects the corporate plans of both councils in promoting cost effectiveness and high quality front line service delivery.

This strategy has been developed in consultation with ICT, Business Transformation Teams, Leadership Teams and with Members. A number of external partners including BDO, Microsoft and Socitm were also engaged to help inform and validate the Partnerships approach to deliver a resilient and secure ICT offer that meets the future requirements of both councils.

Some of the key features in developing this ICT Strategy for the Partnership have included:

- **Business interviews**: the ICT Team, Socitm and Microsoft conducted a number of interviews with senior stakeholders from across the Partnership to understand the perspectives on technology provision and to understand business strategy and technology requirements;
- **Collaborative workshops** – several current state assessment and target stated development workshops were held to challenge and shape the specific focus areas for the strategy;
- **Technology review** – the ICT team with Microsoft assistance have undertaken a high level review of core business applications to understand key challenges that will help influence a new Enterprise Architecture;
- **IT and Service Capability Assessments** – to improve the quality of analysis, and accelerate delivery, an assessment of the ICT Service and capability was carried out; and
- **Desktop and research analysis –** Socitm and Microsoft along with the ICT Team reviewed a wide range of documentation, including current business and past IT strategies and the emerging digital transformation programmes of both councils, alongside broader research into technology solutions and leading practice.
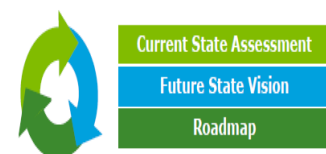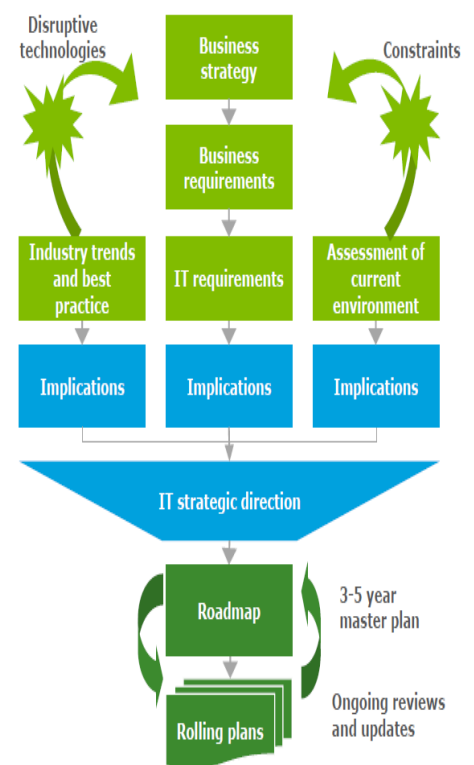
The diagram above illustrates the approach used to develop the ICT Strategy.

In seeking to define how best to develop a new approach to ICT it was identified that the focus should not be on technology, but on the customer and other business drivers. Enabling and innovative ICT will provide the Partnership with an effective, efficient and reliable set of services, in support of the business plans of both councils.

Our ICT Strategy is business driven and action orientated. By defining our approach on the benefit that different customers will gain through the use of ICT and digital services, we will maximise the value that can be delivered by our reducing resources. This will help us to deliver a partnership focus to designing and sourcing ICT and digital platforms/ applications whilst allowing a customer driven delivery; what each council needs in order to deliver services where the customer needs them.

The strategy aims to build on existing technologies and investments, support Partnership wide transformation programmes and initiatives, accelerate self -service digital delivery for our customers and increase staff productivity through opportunities for more agile, flexible and mobile workforces.

The principles within this strategy provide a framework for how ICT services will be designed, sourced and delivered and how ICT and Digital services can support ways of working and ways of doing things where the customer experiences real benefits.

The strategy sets out the necessary detail, the guiding principles and objectives of the ICT Partnership. It contains the key achievements the Partnership will meet, ensuring critically important milestones are managed to completion. These include a more strategic approach – to what we do, the services we provide, who we work with and what technology we will source.

This document also underpins the governance and culture needed to ensure government's legislation / guidance are followed and creating a culture of data security which is essential to protect the Partnership systems and the public's data.

Latter parts of the document provide a plan for 2019/20 to 2021/22, due to the fast moving nature of the ICT environment this is by necessity a front loaded strategy and will be a 'living' document requiring annual adjustment due to priorities, hardware / software "life cycles" and changes either internally or externally. It is critical that ICT investment is not seen as one off or periodic, it has to be a "rolling change programme", refining and replacing as elements of the ICT environment become out of date, non-supportable or just not fit for purpose.

Our ICT Partnership Vision

Our vision is:

To create a modern and transformational ICT service that drives and supports delivery of joined-up services to Customers through the effective use of technology.

Both Councils entered into an ICT Shared Service Agreement in July 2013 and are committed to the ICT Partnership over the lifetime of this strategy. A new 3 Year Partnership Agreement will be entered into during 2019/20.

The ICT Partnership is continually looking to achieve maximum value for money from its ICT investments. Connectivity solutions are key in supporting greater accessibility, flexibility and information provision. The increasing complexity of ICT solutions, their rapid evolution and the need to be agile in responding to organisational and customer needs and to partnership opportunities that reduce cost, increase resilience and improve quality requires a less traditional approach to ICT strategy moving forward.

Reliance on ICT infrastructure and solutions to support an agile and flexible working culture is a significant part of the overall transformation of both councils.

The success of this shared strategy depends on close partnership working. We will look for new partners where there is a business case to do so. We will continue to explore, exploit and promote common software and hardware solutions and consequently deliver platforms that can be utilised across both councils.

Benefits of the Shared ICT Service

Why bother?	What this means …	But it doesn't apply
Economies of Scale /reduce duplication	Buying and caring for one system is cheaper than doing so for two	If you run different systems / applications
Improved quality / breadth of skills	A bigger ICT service offers more career opportunities and affordability for better technology	If you choose to have different objectives
Resilience / risk taking	You have more people, can take more risks and absorb more shocks	If you manage risks and shocks separately
Critical friend / shared ides	You have a wider variety of experiences to draw on and can use each other as a benchmark	If your relationship is not trusted

The Partnership's Vision will be delivered through four Strategic Ambitions

Ambition	What does this mean?	Why is this important for the Partnership?
Empowered Customers	We will investment and deliver new digital customer facing services. In providing this we will improve the responsiveness, availability and usability of services. This will accelerate of take up of online services by customers. We will put user experience and customer focus at the heart of the design and evolution of our services. We will deliver end to end solutions that provide a more responsive and cost effective service offer.	**Customer demand –** Technology has increase the expectations of the customer and therefore business
Consolidation, simplification and standardisation of the ICT and digital estate	We have a real opportunity to consolidate, standardise and simplify our current technology estate. Through the design and adoption of a new Enterprise Architecture we will improve the integration and connectivity between services and more streamlined processes will unlock significant efficiencies and direct funds to frontline service delivery.	**Duplicate functionality** – over time both councils have deployed a large number of line of business solutions across the business to meet demand. **Complexity –** The Partnership has an application landscape with limited integration and automation, which inhibits the ability to gain insight from data.
Working Smarter	The Partnership wishes to build a culture of innovation where we make the best use of the creative talents of our staff, our partners and our customers to improve working practices and processes. We will provide mobile ICT and digital services and tools that allow staff and Members to work anywhere at any time.	**Business Demand –** Appetite from within the Partnership for technology enabled solutions will require Digital Services to deliver innovation within both councils. **Operational efficiency –** By utilising certain emerging technologies the Partnership will be able to make efficiency gains in cost reduction and resource demand. **Corporate approach –** Data should be integrated and shared across the relevant organisation.
Improved ICT governance and security	We will upskill our ICT and digital transformation teams in new technologies and ways of working.	**Organisational governance –** improving the decision making process and transparency around demand and prioritisation will enable the ICT Service and the Partnership to forecast and plan more accurately. **Impact of new technology on ICT Service –** To adapt and flex the ICT resource profile with the emergence of new technology, will become increasingly important in embracing new capabilities such as cloud.

Our Strategic Technology Objectives

The overall strategic technology objectives of the Partnership:

- ✓ Digital services become the primary means of better serving and understanding customer needs
- ✓ The design of an Enterprise Architecture that enables the provision of 24x7 public services, available to customers whenever and wherever
- ✓ To create a secure and resilient infrastructure that enables the Enterprise Architecture to be delivered
- ✓ To position ICT as a key business enabler in delivering the strategic objectives of the Partnership
- ✓ Technology is maximised to meet the commercial needs of the Partnership

Our Commitment to Green ICT

The partnership is committed to ensure that where possible it reduces it carbon footprint.

This will be achieved through:

- ✓ Continuing to optimise our application portfolio. Only those applications that are essential to the running of the organisation will be maintained. We will apply application lifecycle management to ensure that for all systems there are reviews in place to identify future development, replacement or cessation requirements.
- ✓ Maximising the use of existing applications and hardware including the reuse of devices where possible and equipment disposal will meet WEEE requirements. Where possible, third sector organisations will be used for recycling of legacy equipment.
- ✓ We will take into account the total cost of ownership, including energy and disposal costs, over the lifecycle of a device or system, not just the procurement costs.
- ✓ Environmental criteria will be specified for all new devices including energy consumption and robust energy management facilities.
- ✓ Developing and promote 'paper-light' environments in which documents are stored and shared electronically.
- ✓ The introduction of new Hosted Desktops and software such as Office 365 we will deliver targeted benefits include a reduction in travel costs and other environmental benefits including reductions in CO_2 emissions.
- ✓ Improving the efficiency of servers to ensure resilience and performance, deploying desktop and server virtualisation which can extend the life of devices.
- ✓ The development of print strategies that gradually reduce the need for print through the adoption of electronic only media and the use of multi-function networked devices.
- ✓ Integrating the cost of technology into the design of new public buildings to minimise energy consumption and other running costs.

Our Key Technology Outcomes

The following benefits have been identified based on this current strategy, but as the plans of the Partnership develop further more benefits will be identified:

Customers
Digitise online services to enable customers to self-services 24/7

A leaner, better and more unified customer experience

Create opportunities to interface with the Partnership with new technologies such as smart devices (IoT)

Single identities and authentication management

Members / Staff
Increase productivity by improving the reliability of the infrastructure to reduce downtime from aging equipment failures

Enabling staff to work flexibly and increase productivity through effective use of technology, allowing more flexible working with secure access to corporate systems from a choice of device and locations

Increase productivity through improved collaboration and "paperless office" through screen sharing, real time document sharing, instant messaging and desktop video conferencing

Improved access to information, enabling better and faster decision making for all

Significant reduction in the use of email through the use of new modern messaging and collaboration applications

An organisation wide strategic technology awareness programme

Partnership
An enhanced, resilient and secure infrastructure

Improved financial planning and control by understanding the "Technology Life Cycle" and introducing rolling change programme

Reduction of annual cost by reducing duplication of systems through rationalisation and consolidation of software products

A reduction in the number of 'suppliers' and an increase in partners

Practising strategic partner management and recruiting the staff it requires

Retiring the use of ageing server operating systems and the introduction of a new Active Directory

Reduced risk of litigation by introducing standardised policy framework

Improved governance and benefit realisation

Guiding Principles

Our ICTD guiding principles underpin our three 'Simplify, Standardise and Share' design principles and are used as the framework that governs the development of the strategy and the subsequent Design, Build and Running of ICT.

Principle 1 – secure by design
The security of our systems and data is of overriding importance. Information security will be designed in to all our systems, changes and processes right from the start.

Principle 2 – cloud where appropriate
We will reduce our local infrastructure through a preference that systems will be vendor or cloud hosted where it is cost effective to do so.

Principle 3 – information-led design
We will better use the data we hold to allow us to design and provide more tailored services.

Principle 4 – share and reuse
We will seek to join up with others and share services, capacity and capability. We will learn from others and reuse existing software, processes and ideas.

Principle 5 – using open data
Wherever it is possible we will publish our data openly and online, for reuse by citizens, our partners, researchers and investors.

Principle 6 – using open source software
We will always consider the use of open source software.

Principle 7 – any device, anywhere, anytime computing
Our staff and citizens will be able securely use our platform and services at any time and from any location using appropriate devices.

Principle 8 – integration
Regardless of where our systems are hosted we will always work to ensure that the systems can talk to each other and are integrated with our partners where necessary.

Principle 9 – a digitally capable workforce
To realise maximum benefit from new technology we will create a skilled and technology confident workforce through investing in learning and development

Strategic Ambition 1: Empowered Customers

Responding flexibly and with agility to customer needs

IMPACT	BENEFITS	DELIVERABLES
Improving responsiveness to ensure that customers experience consistent service through appropriate and modern service channels	Improve customer experience with greater first line resolution and provide a consistent customer experience across services. Making services more accessible and offering the customer greater choice in how they contact us at what time and on what device.	• Expand access channels through new websites and customer facing digital platforms allow for 24/7 access to key services • Citizens Identification to encourage service take up • Promote and encourage community engagement through modern technologies • Digital East Herts and Digital Stevenage Strategies and supporting roadmaps • Provide an assisted digital offer that helps address the issue of digital exclusion.

ICT is key to the transformation of both councils and developing a smart approach will enhance the quality and performance of services, encourage innovation and increase customer participation.

Ensuring residents and businesses can access and use digital services has the potential to transform the way both council's work – increasing productivity, connecting individuals and communities and reshaping how services are provided.

The Partnership is committed to doing this in a fair and equitable way that puts customers at the heart of how we design and deliver public services working in collaboration with partners and communities to do things differently and revitalise how local services are delivered.

The current digital aspirations of the Partnership can deliver significant benefits to both councils and stakeholders through enhancing capabilities to:

✓ Co-design services based on customer need and to deliver better outcomes
✓ Develop end to end digital services that enable citizens to take control of how and when they consume services (24/7)
✓ Provide customers and businesses with the confidence and skills to assess their needs and determine the right solutions for themselves
✓ Deliver better 'Value for Money' services and increase efficiencies and provide easier ways
✓ Stimulate service transformation, through innovation and new ways of working
✓ Create and release data that enables both councils to have business insight to drive forward service improvements

In order to leverage these benefits, the Partnership in conjunction with its Technology Advisory Partner(s) (page 28) will be reviewing existing digital programmes that have already started and will be aligning them going forward to get the optimal benefits, cost and efficiencies for its stakeholders.

Digital Services

We want to make it easier for customers to access more services online, and to meet the growing demand. Our aim is to enhance the user experience through improving the range of services offered through a variety of digital channels. This will mean building our technology platforms to deliver intuitive end to ensure public services that enable simple, swift, personalised and secure access using single sign on and authentication solutions that remember and relate to users intelligently, so each council interact as a single organisation. Both partners will enable the sharing of data across their organisations and those of providers to track service requests and deliver an enhanced service that over time will remove administrative inefficiencies that don't add value to customers or staff.

The Partnership is committed to delivering all services in a fair and equitable manner so as to ensure individuals and/or groups are not unfairly disadvantaged by the 'Digital Divide' created by technology. Through the development of new digital strategies each council will look to address this challenge through the creation of digital platforms that will simplify and connect people to the services and support they need, far more effectively. This will include an assisted digital service offer to help people who are digitally excluded to access our online services.

Customer Experience Platforms

A "Customer Experience Platform" is fundamental for each councils connection to the wider community; it forms a central point of information, services and their relationships to our customers. The term platform in this context means a range of software solutions, which will be evaluated by the IT Partnership and integrated with the assistance of technology and transformation partners.

Alongside connectivity to backend systems, this platform will provide the ability to offer services via the web to enable 24/7 self-service for customers. The platform value is enabled by the ability of all systems to work seamlessly together, ease of access, ease of use and continuous improvement.

Efforts will be focused on the ever present need to automate business processes.

Future platform(s) will span entire organisations and will have the potential to be extended to partners where necessary.

Citizen Identity

Allowing citizens to have one log-in to all web based Partnership's services is vital to encourage take-up and provide a smooth and simple service. This will also allow us to make sure the user data we keep on our citizens is correct across our many systems.

Strategic Ambition 2: Consolidation, Simplification and Standardisation of the ICT and Digital Estate

Ongoing sustainability of the ICT infrastructure and systems to support the use technology solutions which improve efficiency and effectiveness.

IMPACT	BENEFITS	DELIVERABLES
Enabling the greater flexibility and agility of both employees and Members through a resilient and secure infrastructure and the deployment of appropriate technology including effective collaboration systems and tools. Support decision making through business intelligence by utilising the Partnership's information asset	Ensures a modern workplace that is flexible and agile to enable the Partnership to be responsive to organisational and customer needs. Provides relevant communications and collaboration tools to enable an efficient work place and one that is attractive to employees and partner organisations. Reduces the Partnership's environmental impact.	• Complete a hardware and software audit • A new Enterprise Architecture that enables the Partnership to make the best use of existing and new technology • The introduction of new hosted desktops and Microsoft Office 365 • A resilient and secure 'hybrid' infrastructure that support both on premise and cloud based applications and systems • A Cloud Strategy for software as a service • Enhance systems to design in agility and flexibility • Applications and Hardware Asset Register • Execution of an Application Rationalisation Roadmap that creates a smaller ICT estate that may deliver efficiencies

The future of the Partnerships' ICT Operating Model is at a critical point of evolution. Major changes need to be implemented to enable both councils to take control of the design, build and operational aspects of software applications.

Since the Partnership was established there has been limited investment based on tactical business decisions. The net effect is that opportunities to leverage the potential of the digital revolution have started to be missed and a significant proportion of the software and hardware is now in need of refreshing and enhanced to meet the current and future needs of the Partnership.

The ICT Strategy has created the opportunity to radically reinvent the ICT Operating Model and landscape. Based on current developments, professional advice from Socitm, BDO and Microsoft the Partnership will appoint a Technology Advisory Partner(s) to help develop the Enterprise Architecture required across the Partnership.

Enterprise Architecture

At the heart of the Partnership's future ICT and digital strategies will be an Enterprise Architecture that will lay out the fundamental design of the Partnership's ICT and digital services going forward.

The Enterprise Architecture will have a number of layers, each designed to play their own unique role in supporting the Partnership's key customers:

- **Core Components** – the core components of the architecture that are designed to underpin multiple business processes. They will be implemented once and used often. Examples include citizen authentication, master citizen record, document management, geographical information systems and single payment engine.

- **Business Solutions –** Business solutions are the solutions designed to drive operational efficiency. These solutions are normally designed for the professional user and therefore require a high level of knowledge to use effectively. Examples include finance system, council tax system and asset management systems.

- **Engagement –** This layer ensures that causal users can interact with the Council in an easy-to-use and preferably personalised way. This layer must remove the complexities of underlying core components and business solutions and present required parts of both these in a simple and appealing way. Examples include websites, mobile applications and performance dashboards.

Each of the three layers is vitally important to the Partnership achieving an accessible, scalable, flexible and functional architecture at a minimised cost of ownership.

It is not thought practical to source one solution that meets all the needs of the Partnership, therefore 'best of breed' business solutions will be sourced and interfaced as required.
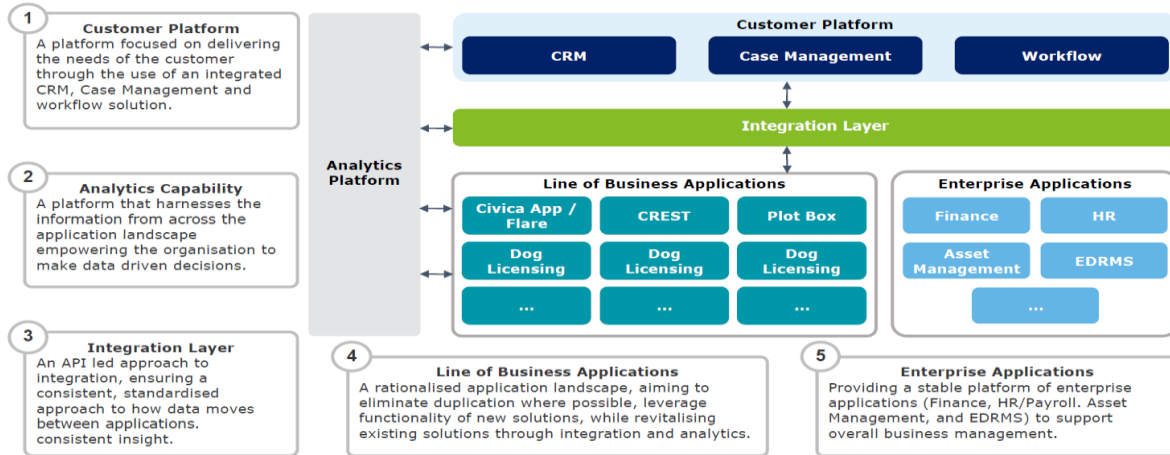
An investment plan and associated programme of work will be developed with the assistance of an Enterprise Architect to implement the agreed 'to-be' Enterprise Architecture.

High Level Solution Architecture
An indicative view of an application landscape

Evolving the application landscape can support the Council to reduce costs alongside improving data quality and operational efficiency. The proposed customer platform can be a key component and enabler of a streamlined application landscape.

The following diagram provides a high level overview of a potential solution architecture for the Council, with a summary of its key components.

1. **Customer Platform**
A platform focused on delivering the needs of the customer through the use of an integrated CRM, Case Management and workflow solution.

2. **Analytics Capability**
A platform that harnesses the information from across the application landscape empowering the organisation to make data driven decisions.

3. **Integration Layer**
An API led approach to integration, ensuring a consistent, standardised approach to how data moves between applications. consistent insight.

4. **Line of Business Applications**
A rationalised application landscape, aiming to eliminate duplication where possible, leverage functionality of new solutions, while revitalising existing solutions through integration and analytics.

5. **Enterprise Applications**
Providing a stable platform of enterprise applications (Finance, HR/Payroll. Asset Management, and EDRMS) to support overall business management.

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Enterprise Architecture Principles

In developing the required Enterprise Architecture the Partnership will apply the following principles:

Enterprise Principles
Improve the customer experience   Use the organisation's collective knowledge of individual stakeholders to ensure that all engagements are as personalised and customer-centric as possible.
Fit for Purpose Core Components   Invest in delivering fit-for-purpose core components, and then ensure 100% use wherever the function they perform is required. For example, the Partnership will aim to have one solution to authenticating a customer and will always use this where a customer is required to prove their identity to complete a transaction.
Proactively share core components and business solutions   Proactively seek to share its core components and business solution with other local authorities or wider parts of the public sector. Ideally, the Partnership would not own or manage any of these; instead it would consume the services from across public sector shared services or directly from a commercial source. The Partnership acknowledges that to achieve this it may be necessary to adjust its business processes to comply with the standard processes provided.
Minimise the number of business solutions   Strive to minimise the number of business solutions used with the aim of delivering best-in-class, joined up, efficient processes, whilst minimising the requirement to interface between business solutions.
Interface/Integrate   Where interfacing/integration is required between any elements of the architecture, the Council will require the solution provider to support an SOA/API approach therefore minimising the Council's total cost of ownership.
Business Solution will have vendor supported APIs   Ensure that, where required, the business solutions or core components will make their processes available to the engagement layer via a fully supported presentation layer and

independent APIs.

Invest in Engagement Layer Invest to make the engagement layer robust, responsive, scalable, flexible and channel independent. This will allow the Partnership to react quickly to the changing behaviours and needs of our customers, local businesses and other key stakeholders. The objective will be to attract people to use on-line channels wherever possible, striving for 'digital by desire'.
Consistent user experience through engagement layer Use the engagement layer to ensure that our stakeholders receive a consistent and high quality service regardless of their channel of choice, including face-to-face, phone, email, and on-line.
Make our services available on other channels Make its high volume services available to authorised non-council channels and work with these channels to ensure that these services are available where our citizens and local businesses find most useful. Such an approach will maximise the adoption of our on-line services by targeted stakeholders.

Business Applications

Business Functions – Solution Requirements

The core component and business solution elements of the Enterprise Architecture are vital to the smooth running of ICT and Digital Services. In order to understand our ICT estate a full audit of software and licences is being undertaken.

A 'Current State' analysis will identify how up-to-date our systems are, what improvements in functionality service areas would like, and how the systems are being supported to enable the proactive management of systems towards the future Enterprise Architecture.

Information on core components and business solutions across the Partnership will be maintained in an Information Asset Register. This will enable the Partnership to have a clear view of the cost incurred by each service area or individual member of staff, enabling us to ensure we are only purchasing the licenses required and stop paying for any software which is not required.

We will use this information to wherever possible replace legacy and/or consolidate applications.

We will utilise existing systems wherever possible rather than buying and developing new service specific solutions and this will offer clear savings by reduced licence costs, utilising existing support skills and cover, as well as reducing the requirement for underlying hardware, hosting and database management resources.

To achieve this the Partnership will maintain and publicise an applications register outlining modules and capabilities of existing systems. This systems portfolio will support the rationalisation of systems in use across the two councils and support improved systems integration.

We will make use of training to make more efficient use of applications that we already use and to create a deeper understanding of the applications to promote ideas to improve the systems and processes.

Standardise and Consolidate

Where new business processes require support from information systems the capabilities and sustainability of existing systems will be examined prior to the consideration of new software.

It is important that core components and business solutions remain up-to-date, reliable and fit for purpose. Where practical, any duplication in solutions will be removed and where gaps are identified, suitable solutions will be implemented.

We will seek through the new Enterprise Architecture to standardise and consolidate our existing applications to achieve cost savings, simplify support and aid cross-organisational working. Where practical the ICT Service will seek to work with service teams to standardise similar business processes, simplifying the requirements for supporting information systems.

We will develop and execute an application rationalisation roadmap that allows us to achieve the Enterprise Architecture. Also we will replace key systems as they approach end of life with systems that provide the functionality required and that exploit digital technologies to support the ICT Partnership's future Digital Strategies.

It is not thought practical to source one solution that meets the needs of the Partnership therefore the best of breed business solutions will be sourced and interfaced as required.

Business Solutions will be sourced in logical groupings designed to minimise their number and interfaces whilst not compromising the desire to deliver best in breed solutions.

Cloud Strategy

The Partnership has agreed a strategy to look at cloud-based solutions when applications and systems come up for replacement or during the implementation of new solutions.

This is not to be confused with the governments suggested 'Cloud First Strategy', which states:

"When procuring new or existing services, public sector organisations should consider and fully evaluate potential cloud solutions first before considering any other option. This approach is mandatory for central government and strongly recommended to the wider public sector."

This fails to accept the increase in cost that most clouds solutions bring. If a cloud solution is the only available solution, is cost neutral or brings considerable other benefits then it should be considered but to ignore self-hosted solutions in the initial evaluation is not a feasible solution for our restricted finances.

Applications Programme Interfaces (APIs)

The interface between systems is essential to support current and future digital transformation ambitions. To enable this we will make sure that Application Programme Interfaces are open and accessible.

Geographic Information Systems

The use of geographically referenced information is changing the face of the internet and the way we interpret and view data. For our services to deliver insight capability we must start to exploit the use of GIS more effectively. The procurement of new GIS service software will provide geographical insight through the use of digitally mapped information, based on location and demographics. For example: planning and licensing applications and fly-tipping incident analysis can all be enhanced by mapping the transactions and relationships between the incidents and services. A business case for new GIS Software is to be produced during 2019/20.

Corporate Applications

Microsoft Office 365

We currently use Microsoft Office 2007 but the Partnership is planning to move to a Microsoft Windows 10 Operating System and Office 365 which will move its email, word, excel and unstructured data into the cloud during 2019-20. Office 365 will empower all users of the ICT systems, now and into the future. Outside of the 'basic' offers of past Office versions such as Word, Excel, PowerPoint and Outlook, there is new an increasing offering included at no extra cost. These include Intune, Teams (originally Skype) and many others.

The continued use of Microsoft tools carries considerable advantages including:

- Local Authority line-of-business applications are heavily integrated with Microsoft tools as standard.
- Financial applications have export routines to Microsoft Excel where the information is modelled for the purposes of making key financial decisions.
- Key business systems such housing systems and revenue and benefit systems are integrated with Microsoft Word for the purpose of producing written letters.

If we were to use open source software as an alternative, the integration would have to be re-written from scratch, and may not even be possible.

The benefit of Microsoft Office 365 is that it is a cloud hosted solution that brings improved system resilience and performance. As an evergreen product the Partnership will benefit from timely upgrades and patching as this will be automatically delivered by Microsoft.

Hosted Desktops

The ICT Partnership's aim is to provide a high performance network connectivity that supports mobile working, enables system interfaces, electronic communication, access to the internet and the support of digital services.

In future new and legacy applications will be presented to users via new hosted (VMWare) desktops.

The Partnership at present uses a Virtual Desktop Infrastructure (VDI) called VMWare Horizon 5 which is becoming end of life. VDI enables the provision of the same desktop to HP Zero Clients installed on all desks in every building allowing for great flexibility for staff as well as ease of hot-desking. VDI also allows for the same desktop on any windows-based hardware be it a tablet or laptop.

There is a limitation on Apple operating system which at present fails to work with Horizon version 5. A project is in place to upgrade to VMWare Horizon 7, which will increase speed and stability and is a legislative compliance requirement.

VDI will continue to be a core component with the following benefits;

▪ Flexible working	Users can work from the office, at home or in the community. For example, a user can use Zero Client devices in the office, then go home and continue to access the same applications with the same data on their own laptops or Tablets at home
▪ Reduce bandwidth	All the processing and file sharing is done on the Server, only information to update the screen is transmitted across the network to the user's device and only mouse and keyboard inputs are transmitted back.
▪ Improved Security	Data is only kept on the server therefore isn't lost or taken if a laptop is lost.

▪ **Centralised Backup**   Data is on the server not on the user's devices so data can easily be backed up

▪ **Reduced Cost**   VDI is much easier to support and maintain

A Secure and Resilient Infrastructure

Up to date infrastructure is at the heart of any good ICT Strategy providing secure, stable, reliable platform for both virtual and physical systems that provide storage, data flow, analysis and processing of data.

It is important that the lifespan for each element of the infrastructure is planned in to ensure future investment is available to keep the benefits and systems running effectively.

It is important to understand the relationship between the different layers of technology; security or reliability issues in one area will effective the resilient, speed, security and stability of the whole system.
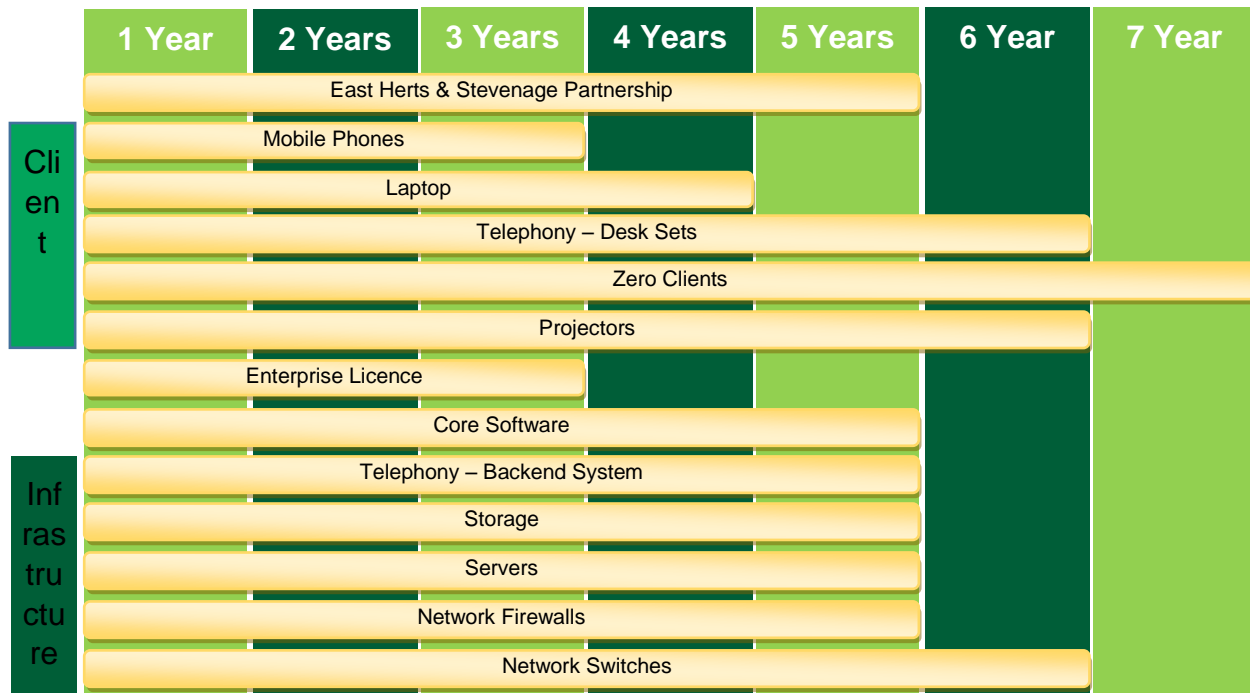
Lack of investment in one area means other investments aren't fully realised or worse put at risk.
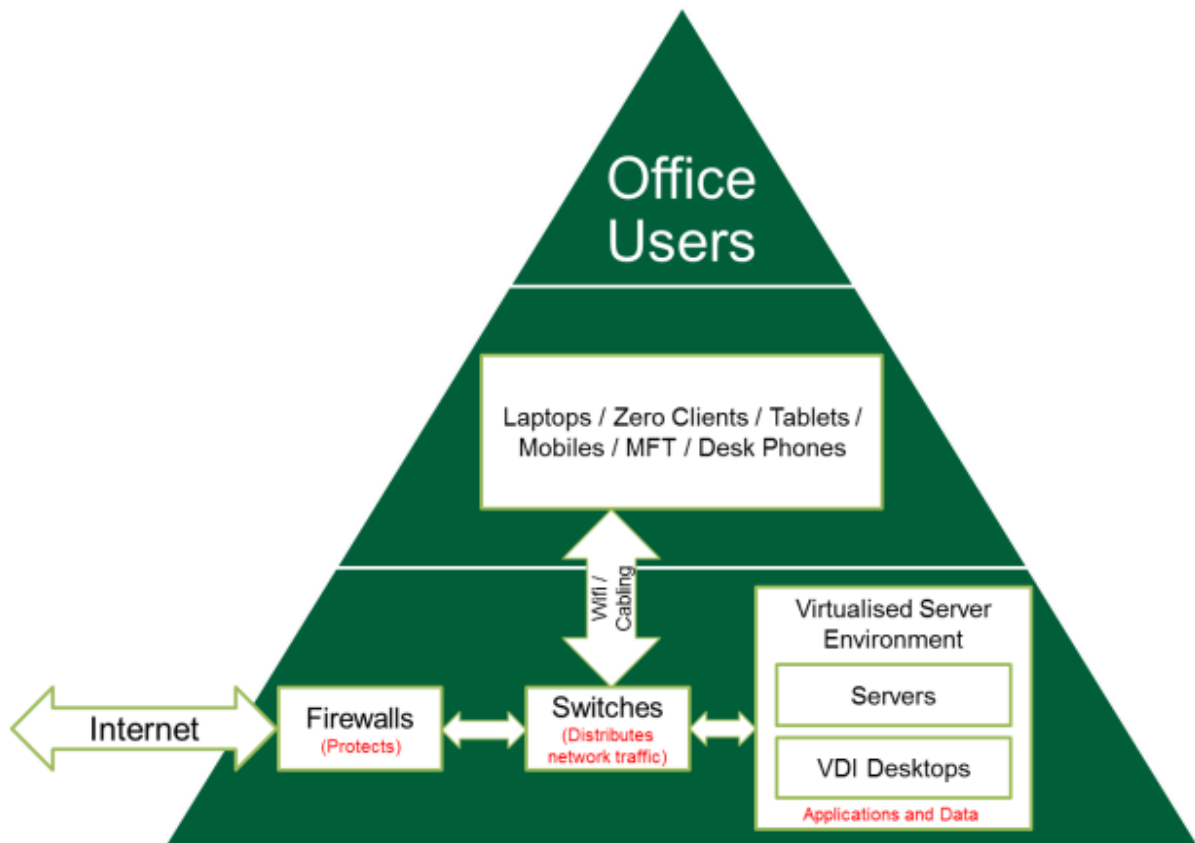
Technology Life Cycle / Rolling Change Programme

Every component of the ICT platform has usable life span; some are determined by the support a supplier is willing to provide, the speed at which it runs, supportability, reliability, compatibility with new systems and many more.

The diagram below gives an indication of the life span of the key components which make up the ICT platform:

	1 Year	2 Years	3 Years	4 Years	5 Years	6 Year	7 Year
Client	East Herts & Stevenage Partnership						
	Mobile Phones						
	Laptop						
	Telephony – Desk Sets						
	Zero Clients						
	Projectors						
	Enterprise Licence						
Infrastructure	Core Software						
	Telephony – Backend System						
	Storage						
	Servers						
	Network Firewalls						
	Network Switches						

Investment in the corporate ICT networks, central servers and storage equipment, mobile computing and desktop device refresh will be phased in accordance with the above lifecycles. This will ensure the ICT infrastructure continues to be "fit for purpose". To support this approach a replacement plan will be established by the PMO to enable good financial planning and effective hardware and software replacement.

Network

The present network devices are aging in most areas, with some elements such as switches being as old as 13 years (at least 8 years beyond its expected life span). This is unsustainable with the average hardware life being 5 years before support from supplier's ends and physical failure start to become regular.

The core cabling will be replaced as part of the Partnership Accommodation Strategy, which is currently under development.

The benefits of a new Network (made up of cabling, switches, Wifi routers and firewalls) include;

▪ **Reduced Latency**   Improve speed of responses

▪ **Increased Reliability**   Improved availability

▪ **Improved Security**   Reduce chance of security breeches

Several projects have been commissioned to replace the existing network hardware across the board.. Alongside this a 5-year hardware replacement plan will be established by the PMO to enable good financial planning but also a structure for known future projects.

The overall network control is in the hands of the Security and Network Team who will rationalise the network and ensure security as a core function.

Dependent on the Enterprise Architecture there may be a future requirement to put in place web acceleration technology that allows the prioritisation of data flow to cloud based services.

Server Provision

At present 95% of our servers are hosted on a virtualised VMWare environment at two locations Daneshill House and Cavendish.

Virtualisation lets us host much of our service on a limited number of physical servers allowing cost savings as wells as supporting our disaster recovery plans and provisioning abilities, not offered by physical servers.

As we gradually move systems to cloud based solutions the requirement may fall. However, our major solution providers are not moving quickly in that direction and is anticipated that with the move to new offices will require a data centre on premise.

Data Centres

The current data centres at Daneshill House and Cavendish will need to be replaced as part of future accommodation strategies being developed by each council the timing of this is still to be determined.

The option of potentially to moving to a single data centre has been considered by the ICT Partnership Board, but due to significant disaster recovery implications it is not recommended at this stage. Currently if one Data Centre stopped working, we have sufficient resilience to continue working from the other.

Multi-Function Devices

The Partnership has recently replaced its' entire Multi-Function Devices (MFD) fleet with devices from Konica Minolta, reducing the number across all sites with fast speed colour machines. The project includes software which monitors all printing allowing controls to limit large print runs and report on which departments are printing and drive down the overall cost of printing. Reduction in machine numbers already brings considerable savings. These machines will be replaced when the contract ends in 2024.

Aligned with the Digital Post project we should see a major reduction in printing within the organisations and the 'appearance' of paper files in the buildings.

Reduction of printing is also part of any data protection strategy, as the move away from any paper-based data to electronic allows greater control and protection. Around 70% of data breaches come from paper documents so any reduction lowers the overall risk vectors.

Strategic Ambition 3: Working Smarter

Enabling Efficiency by ensuring Staff have the digital tools, processes and skills to deliver services effectively

IMPACT	BENEFITS	KEY DELIVERABLES
Enabling the partnership to redesign processes/services to be more accessible and efficient, producing better, quicker and more consistent outcomes for customers. Using Digital by Design principles to automate business processes. Recognising employees as a key organisational resource and ensuring access to appropriate technology and information to promote efficient and effective working. Enabling financial stability and the promotion of environmental good practice.	Operational efficiency through the effective use of existing or new technologies. Reduced waste through automated processing and streamlined manual procedures taking opportunities to remove bureaucracy. Improved service delivery through operational consistency.	• Standardise the mobile devices and operating systems to be supported by the ICT Service to ensure effective support. • Service catalogue that captures the range of hardware on offer to support efficient working • Promote Digital by Design principles throughout the organisations • Develop a new approach to adoption and change management and modern service management to enable services to accelerate the adoption of change • Develop Digital Transformation Strategies and Programmes that review and exploit technology to ensure the greatest operational benefit being gained • Capture efficiencies and lessons learned to avoid cost and effort • Design and Implement ICT profiles, competencies and a supporting ICT learning offer

The Partnership must have workforces that possess the right skills to make sure both organisations can provide customer focused services and deliver improved outcomes through collaboration, innovation and integration.

Therefore staff in future will have access to the devices and software they need to deliver a high level of service and will be equipped to use them.

Mobile ICT (Hardware)

The move to a more flexible and digital workforce where employees will be able to work in the community, at home and via hot desking will be facilitated through the effective provisioning of hardware such as laptops, tablets and smart phones.

The Partnership will be looking to minimise the number of hardware and operating systems we support to enable the ICT Service to offer a higher level of support.

Currently the service is having to support over 2,000 devices which use a range of different operating systems. This is unsustainable in the future therefore we will only supply Partnership owned hardware on the following operating systems:

- Android OS
- Windows 10 Mobile

Due to the flexibility of our VDI solution staff and Members may be able to install and access their hosted desktops on their privately owned devices and with the advent of Office 365 will give them the option to access email via their web browser. Security restrictions will be required and enforced on devices to meet data protection requirements.

During 2019 the Partnership will be moving to a Microsoft Windows 10 Operating System which will mean that a large number of mobile devices such as laptops will need to be replaced as they are compatible with the new operating software.

Currently there are no annual budgets in place for device replacement. In future the Partnership will correct this by allocating capital budgets to ensure the timely provisioning of new devices.

A service catalogue will be created that enables staff and Members to understand the range of hardware on offer and that can be supported by the ICT Service.

Building Digital Capabilities

As technology increasingly supports how the Partnership delivers services, then to engage in, and contribute to tech-driven business environments. To be able to quickly learn the next big emerging technology functions, and to grow professionally, all employees from senior management to apprentices will need to learn much more about the Partnership's critical business systems and applications; their capabilities and adjacencies, their strategic and operational value, and the particular possibilities they enable. This means individuals must become tech fluent.

The three layers of tech fluency are:

- **Basic** – a basic understanding of enterprise technology principles and systems makes it possible for employees to understand technology concepts, enabling them to follow technology trends, differentiate between tech "myth" and fact, and understand how the tools they use each day contribute, directly or indirectly, to business success.
- **Intermediate** – tech fluency becomes more role and business function specific consisting of a detailed working knowledge of how technology capabilities and their adjacencies can drive new revenue and open fresh opportunities in the near term. At this intermediate level, employees may be able to understand the possibilities of technology more broadly and harness system capabilities to create efficiencies and revenue, drive strategy and enhance the customer experience**.**
- **Advanced** – individuals can sense further disruptive opportunities that emerging innovation may make possible three or five years down the line – and use that

foresight to help councils to transform and take full advantage of commercial opportunities.

For most employees across the Partnership the level of tech fluency should move towards the basis and intermediate levels; while the Digital Delivery Teams should be at least at an intermediate or ideally at an advanced level.

As the trusted adviser to the Partnership the ICT Service must build upon its knowledge to possess an advanced level of tech fluency on emerging technologies. In addition to learning programmes, this will require capacity among the team to research, understand and develop use cases to be able to be aware of the possibilities, test viability and to advice the Partnership effectively.

ICT has to be seen as a core competency for staff. The Partnership will undertake workstyle assessments and establish a set of ICT profiles that can be applied to different job roles across both organisations. The profiles will help to determine the ICT competency levels, services and tools required to perform roles in the most cost effective way.

The Partnership will build a culture of continuous learning through learning programmes that help employees to develop technology skills and knowledge quickly. To meet this need the Partnership will adopt the following strategies:

- **Make technology learning programmes self -directed, digital and dynamic.** Traditional learning management programmes are being replaced by new technologies for curation, delivery and mobile use that put learners in the driver's seat. Moreover, a wide variety of low-cost learning opportunities are emerging in various online and video channels and will be used to target improvements in tech fluency.
- **Tie –learning to professional development.** The Partnership will offer a curriculum focused on the baseline learning requirements of given roles. This will help people to develop their knowledge and skills to fulfil their current roles and also to prepare for other jobs within the organisations.
- **Make continuous learning opportunities part of the corporate brand for both councils**. The employment brands of both councils need to be visible and attractive and learning including tech fluency – needs to be part of the brands.

Service Transformation through effective Adoption and Change Management

Change is difficult to achieve and requires input, direction and support from the leadership of both councils to deliver the ICT vision and ambitions set out in this strategy.

Both councils have aspirations to deliver service transformation through ICT and digital enablement. As already stated both councils will be developing digital transformation strategies that will help set out how they will use digital platforms, hosted desktops, Office 365, business applications and innovative technology to redesign their service delivery models and supporting processes. This will potential

include the development of channel shift strategies and new approaches to service redesign that optimise technology and new ways of working.

The Partnership will develop a new approach to adoption and change management (ACM) and modern service management (MSM). This will help enable both councils to drive and accelerate the adoption of change, by engaging and guiding end users and ICT professionals to understand the new ways of working and the impact and benefits of those changes. ACM and MSM will work to enable both workforces to maximise the benefit from new ICT and digital services and tools, facilitating their tasks and increasing their productivity. Empowering ICT staff and end users to deliver and adopt these new tools will help the Partnership to realise business value from its technology investments such as Microsoft Office 365.

The Digital Transformation Teams within both councils are currently sized for delivery of known digital delivery solution demands such as the creation of new websites. As both councils establish their transformation programmes, they must define the resource requirements to provide digital services support.

Both councils will need to review their planned and in-flight digital initiatives as an immediate priority to determine how to meet current commitments against their transformation programmes.

Given the potential volume and complexity of transformation required, the Partnership will look to using a combination of internal and external sourcing strategies to meet future demand. This includes the appointment of a Technology Advisory Partner(s).

Technology Advisory Partner(s)

The ICT Partnership will appoint a Technology Advisory Partner (s) that will initially help to deliver the following three workstreams:

1. Modern Workplace - Office 365 Enablement and Adoption
* To enable Office 365 and on-board SBC/EHC to a new technology platform
* To empower SBC/EHC users with the knowledge and technical tooling to use, manage and extend the Office 365 platform, including Exchange Online, Teams, SharePoint Online, One Drive – and maximise investment through the full suite of Office 365 applications.
* To deliver an agreed compliant platform that meets the needs of the Partnership and users' needs.

2. Digital Strategy and Roadmap
* To work with SBC and EHC leadership teams to develop a joint digital strategy which :
   o Aligns to the realisation of the councils' business strategies and objectives
   o Provides a realistic roadmap to the delivery of new digital capabilities
   o Shows how new digital services will enable sustained improvements in customer outcomes and employee empowerment

3. New Ways of Working – Adoption and Change Management // Modern Service Management

- To enable SBC and EHC to drive and accelerate adoption of change, by engaging and guiding end users and IT professionals to understand the new ways of working and the impact and benefits of those changes
- Adoption and change management and modern service management will work to enable managers and employees to maximise the benefit from new services and tools, facilitating their tasks and increasing their productivity. Empowering IT staff and end-users to deliver and adopt these new tools will help SBC and EHC to realise business value from its technology investment

Encouraging Innovation

The ICT Partnership will focus on innovative technologies to reduce costs, such as the use of business intelligence to improve decision making and artificial intelligence to manage automated workflows. Business Intelligence (BI) and Artificial Intelligence (AI) require access to information across disparate systems to use this data to continuously improve its processes to be more efficient and effective. New systems capitalising on these extensive data sets, known as Big Data, and designed to reflect the structure of data have entered the software market and the ICT Partnership will look to maximise the potential use of Business Intelligence.

The ICT Partnership will use existing tools such as Business Objects, Excel and specialised open source software to provide business intelligence capabilities. System interfaces, web services and electronic forms will continue to be developed to support the delivery of digital transformation.

A key enabler of innovation is emerging technologies which provide new ways of completing processes or tasks, provide new insight, or deliver services that were not simply not possible before. Both councils as part of their digital transformation strategies will therefore look to utilise innovative technologies such as:

- Chat Bots or Virtual Assistants - There is an increasing take-up of the use of chat-bots, even in the home they are becoming common place in devices such as Google Home and Amazon Echo. Commercial use of "Virtual Agents" powered by Artificial Intelligence (AI) allows a relativity cheap way of responding to customers with simple requests or need of documentation.
- Internet of Things (IoT) / Smart Devices - There are opportunities to use emerging technology that now being built into electronic devices or can be added, such as sensors. This can both help manage office spaces, housing stock and even help in day to day life. Although it still early days for IoT, it is fast becoming an important part of people's lives and integration/interaction between Smart Devices such as Chat Bot's, smart phones/watches can provide all sorts of benefits, one device triggering an action on another device is already common place.

Innovation Board

The Partnership will create an Innovation Board where staff can present ideas on how existing and new technology could be used to improve service delivery and remove inefficiencies in the way that they work.

Innovation Forum

An Innovation Forum to discuss emerging industry trends and technology will promote idea generation across the Partnership. For example the Forum will investigate how to increase the use of cloud services and technology, how the customer and user experience can be enhanced through digital, or how to use emerging technologies such as the Internet of Things and Robotics to improve business processes and service delivery. This will help embed a change culture across the Partnership, limiting duplication of effort and investment and increasing knowledge sharing.

Innovation Governance Framework

Innovation is increasingly important for the Council as it targets improved outcomes for residents. However, risks associated with innovation must be correctly managed. A Partnership wide innovation governance framework will define processes for generating, exploring, prototyping and piloting ideas in a sustainable manner.

This framework will become a common mechanism for governing innovation that is being driven from internal initiatives. The governance framework will be aligned with the transformation programmes of each council.

Business Cases and supporting Digital Transformation Roadmaps will be required where technology is being used to deliver business transformation or improvements in service delivery.

Strategic Ambition 4: Improved ICT Governance and Security

Business continuity, Information Management and Governance and Security

| IMPACT	BENEFITS	DELIVERABLES
Delivering robust and resilient safeguards ensuring ongoing availability of priority services and a means of recovery in the event of a disaster. Safeguarding the Partnership's data by ensuring compliance with all relevant legislation and security standards. Improving the maturity of the management and governance of information assets and delivering appropriate arrangements to ensure compliance with for example General Data Protection Regulations (GDPR). Enhancing security to better address cyber security threat vectors. Ensuring our information assets are effectively managed in line with relevant legislation through the deployment of appropriate technology standards and solutions	Ensures availability and continuity of services to our customers and the management of risk related to the Partnership's ICT assets. Ensure compliance with relevant legislation and good practice standards.	• Maintain compliance with legislative and agreed security standards (e.g. PSN and GDPR) ensuring standards are applied in proportionate way so as not to stifle our ability to deliver effective services. • Enhance arrangements for business continuity utilising mobile devices and remote-working arrangements. • Achieve compliance with Cyber Essential and enhance the Partnership's awareness in relation to the growing cyber threat vectors • Implement appropriate software/procedures to support archiving and retention in support of Information Management Strategies • Establish effective ICT and Digital delivery teams • Creation of a Members Computer Working Group • The appointment of a Technology Advisory Partner(s) • Technology and governance implementation plans

Working in a disjointed and silo manner and without an Enterprise Architecture causes a cacophony of duplicate processes and technologies, architecture in a distributed way. Because of this approach projects have taken longer to deliver and failed to deliver a good return on investment in the form of increased productivity, cost reduction and/or improved user experience.

A lack of effective ICT governance in the past has encouraged a silo mentality to the design and delivery of ICT. If this were to continue without proper co-ordination architectural disorder will continue to occur.

ICT is a key enabler for both councils and therefore in future the Partnership will take a more disciplined approach to commissioning of services, driven by strategic objectives and managed via a strong business and ICT aligned governance framework.

Governance Framework

Recent enhancements include the creation of the ICT Partnership Board (ITPB) and the ICT Steering Group (ITSG), which control and manage the governance of ICT for the Partnership. In addition a Member ICT Working Group that represents all political parties will be created across the Partnership to help ensure the effective governance and delivery of this strategy and ICT services.
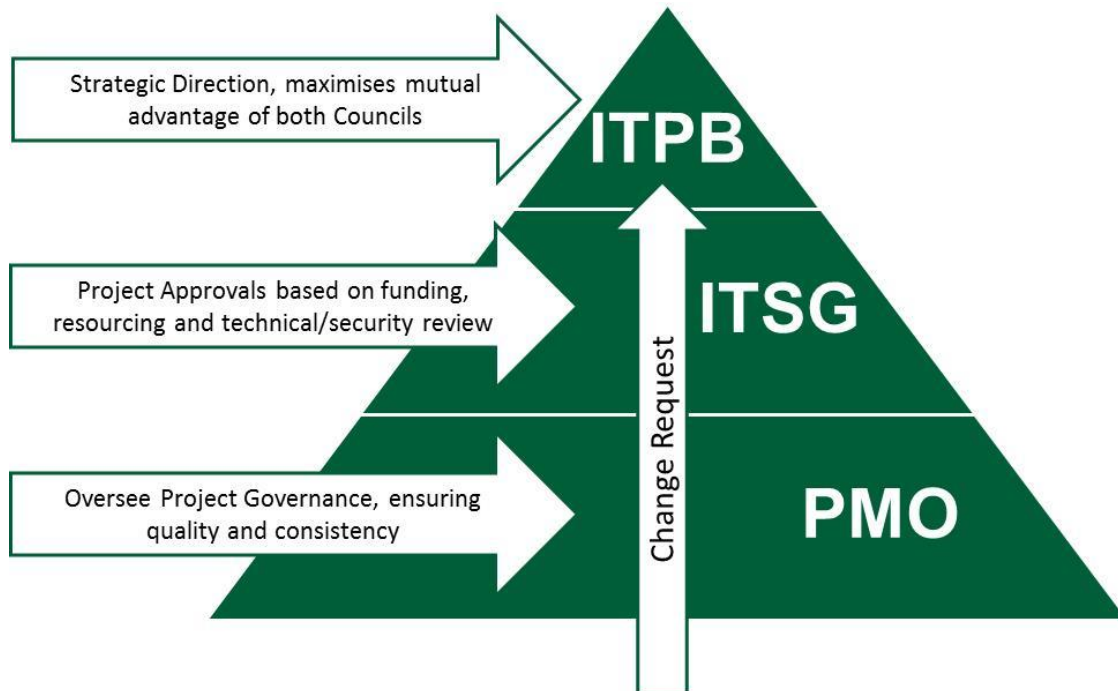
Benefits of good ICT governance include:

- **Benefit Realisation**   Ongoing and future initiatives meet Partnership goals and aspirations

  Partnership benefit from the synergy of merging systems, gaining efficiencies and cost reductions

  Business Cases are well defined with realistic benefits defined and have been approved by appropriate authority

- **Change Management**   Targeted investment on priorities based on available funding, resources, Policies/Legislation/Security, Partnership needs, to increase productivity and deliver efficiency processes

  Change Champions to ensure adoption of new systems across the Partnership and wider community

- **Risk Management**   Ensuring stakeholders are aware of the risks associated with ongoing and future initiatives

ICT Quality and Standards

Digital leadership is needed if we are to nurture a digital culture. To enable the ICT Partnership to do this we are adopting Government Digital Services and Local Government Digital Service Standards, which will ensure we deliver and design high quality end to end digital services that use open standards and make data open by default, accessible and secure.

The ICT Partnership is focused on the outcomes delivered by ICT and Digital Services and therefore has focused on prescribing what standards are required to ensure high quality, scalable and flexible ICT services.

Quality and Standards	Description
Vendor supported APIs	Ensure that, where required, the business solutions will make their processes available via a fully supported presentation layer and independent APIs built to the Representational State Transfer (REST) Standard.
Security Rules	Adopting best practice approaches for security management to protect users, customers, partner organisations and the Council drawing on best practice from the Government Digital Service and other associated bodies.
Information Management	Adopting best practice approaches for information management and working towards information security (ISO 27001 and ISO 27002) and records management standards (ISO 14589).
Identity Access Management	Framework of policies and technologies for ensuring that the approved people have the appropriate access to technology resources.
Website Management	Our preferred approach to websites will be responsive in order ensure that content can be displayed on the customer's choice of device.
Agile	Our preferred approach to manage business change in ICT is through agile project management and delivery techniques.
Cloud computing	To support a more cohesive infrastructure as well as the sharing and re-use of services/solutions, we will explore cloud computing with the aim of increasing our agility and reducing the cost of ICT.
End user device	The Council's aim is that, as much as possible, the workforce will be able to work from any location on any suitable Council or non-Council end-user device through a defined Mobile Device Policy.
Green ICT	ICT will be used to maximise efficiency, minimise environmental impact and support the wider carbon reduction policies, of the Partnership.
Information strategy	To recognise the value of information that it holds, the Council will optimise secure, efficient, open and safe creation and the use and re-use of information assets.
Channel of Choice	The Partnership is committed to providing easy-to-use, trusted and flexible information and transactional services that support our 'digital by desire' approach. For those for whom digital channels are less accessible we will ensure access is maintained through a network of 'assisted digital' service provision.
Social Media	Social media enables greater dialogue and collaboration between the Partnership and its stakeholders. It also provides benefits in terms of its reach, accessibility, immediacy and ease with which content can be disseminated.

Securing the ICT Infrastructure, Systems and Data

The ICT Partnership recognises the increased reliance and dependency on ICT systems to support the redesign of council services, enable the delivery of efficiency savings and meet the needs of our customers means that these systems have to be protected from cyber-attacks.

At its heart the storing, processing and delivery of data is what the ICT systems deliver. As part of that work we need to protect the data under our control and ensure it only gets delivered to the correct parties, internally and externally. Therefore we are required to adhere to legislation and ensure an ICT infrastructure which is designed with security built in.

In accordance with the National Cyber Security Strategy 2016-2021 the ICT Partnership will take the necessary "DEFEND" measures for the protection of information systems (hardware, software and associated infrastructure), the data on them and the services they provide, from unauthorised access, harm or misuse.

Creation of a Security and Network Team has enabled focused work on security requirements. The ageing hardware is not conducive to good security and considerable work is required to get us to an acceptable standard. This will need to be in co-ordination with the Information Governance Team.

Projects have been identified which are high on the security radar such as firewall and switch replacement. There is also the requirement for network and security monitoring tools to enable active protection measures. These areas have been identified in several cyber security audits as areas of high concern.

There is also a continued requirement for all staff and members to be trained on data protection requirements of their position.

In summary the main security activities planned during the lifetime of the strategy will be:

- The deployment of the latest antivirus, malware, email filtering and encryption software to protect the ICT Partnership's systems and data across all networks. The achievement of the Public Services Network (PSN) Code of Compliance will continue to be an annual objective.
- The ICT Partnership will annually achieve Cyber Essentials Accreditation from 2020/21 onwards
- The ICT Service will implement effective defences to the network, data and system and have in place cyber incident reporting measures and be able to respond effectively to cyber-attack, maintain functions and recovering quickly through appropriate service and business continuity arrangements.
- Implement "Security by Design" by carrying out cyber risk assessments when selecting new systems, online services or implementing digital processed.
- Ensure that cyber security skills and awareness within the Council are maintained to mitigate the cyber security threats including the monitoring and reporting of incidents.

ICT Policies

The policies the Partnership create and work to, are the bedrock of any ICT security culture. They must be universal to all staff and members regardless of the seniority of the individuals involved.

A standardised policy framework ensures that a high level of security is met across the entire Partnership's network. To have differing ICT policies applied across both councils is not only technically difficult but will cause problems when it comes to enforcement, so the polices need to be universal.

Policies need to be relevant to the work of the Partnership and should not be used as way to solve a data protection problem that can be prevented by a software solution. The first stance should always be a technical response to any issues and policies should only be used when human interaction needs to be defined and limited in its scope.

All staff must be aware of the policies the Partnership has in place and to aid adherence they need to be written in a concise and plan language template. In the event of a non-adherence of any policy there needs to be a robust response including where the circumstances require disciplinary sanctions to enforce the seriousness of the policy in questions.

Policies required include:

ICT Related Policies	
Policies	**Status**
Acceptable Usage Policy	Written and gone to HR for consultation
Data Protection Policy	Completed and on intranet
Mobile Device Policy	In draft Security Team to approve
ICT Monitoring Policy	Security Team to write
ICT Remote Working Policy	Security Team/MGT Team to write
Social Media Policy	Completed and on intranet
Data sharing Policy (Contractors)	Security Team to write

| Protocols	
Policies	**Status**
Security Breach Response Protocol	Security Team to write
Change Control Protocol	In draft

ICT Service

The ICT department supplies the ICT infrastructure, support, hardware and software for the Partnership.

The Partnership must create ICT and Digital teams, roles and make data driven decisions that reflect the aims of both councils.

The Partnership will gradually reorganise the ICT and Digital delivery teams as related roadmap milestone items are achieved. This has already involved the creation of a dedicated Programme Management Office and the introduction of security and networking capabilities.

Stevenage Borough Council's Assistant Director for Digital and Transformation will oversee the execution of the strategy and will report to the ICT Partnership Board and ICT Portfolio Holders.
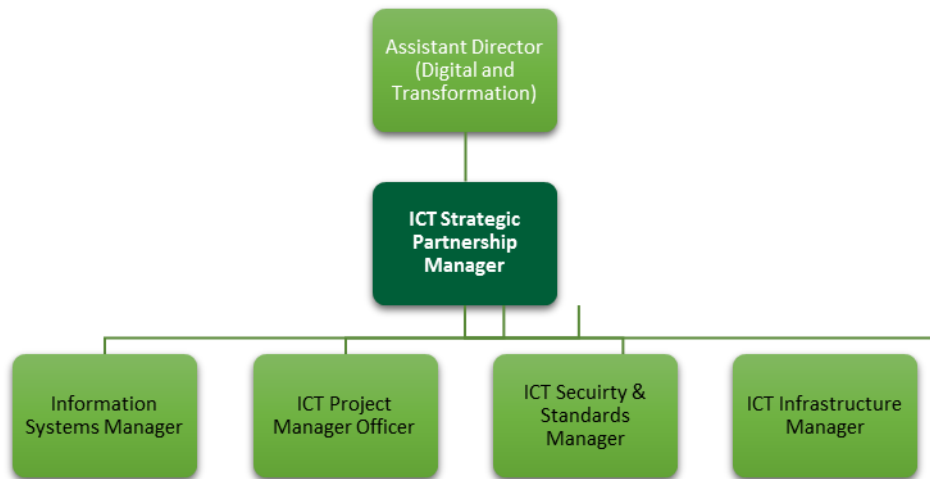
ICT Service Teams

The ICT Service has 8 sub-service teams:
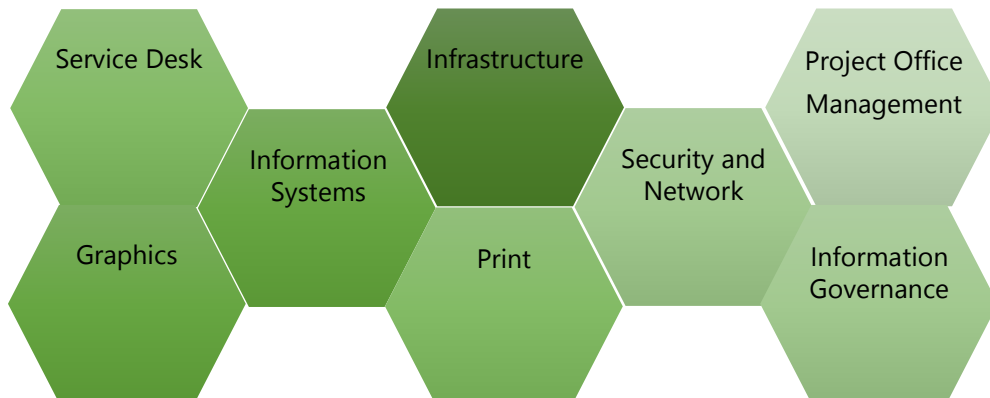
Service Desk

As part of the recent ICT restructure the Service Desk has been increased to 5 staff plus a Team Leader and a Support Manager.

The Service Desk is the portal for all request of the department, which if not resolved are then handed over to the Second Line Support depending on the nature of the work required. Statistics are collected on the volume and resolution of requests and presented to the governance boards for review.

Information Systems

The Information Systems department supports and resolves issues with the software and databases the Partnership requires to run its business, this is separated into three categories:

- **Corporate Software**   Software required for all users of the Partnership such as Office, PDF readers etc.

- **Business Software**   Software specific to a department such as Housing department requiring Northgate Housing to run its operations.

- **Databases**   The Partnership runs several data bases predominantly SQL and one instance of Oracle. It is not envisaged that this will change as focusing on one database type allows for easier support from the departments regardless of the overreaching software.

Infrastructure

The Infrastructure Team is responsible for running the core infrastructure providing a reliable, resilient, secure platform for the networking, telephony and servers.

At present this team deals with all invoices with an ICT component, which creates a large admin overhead for ICT managers. This is to be reviewed to see where those invoices with a single department focus can be dealt with locally to reduce this overhead.

Security & Network Team

As of April 2019, the Partnership has a Security & Network Team consisting of two posts, managed by the ICT Services Security & Standard Manager. These roles ensure the security standards are set and adhered. They also ensure that all ICT provision and planned projects meets or exceed security requirements.

Project Management Office (PMO)

The Partnership has created and ICT Project Management Office (PMO) which will consist of one PMO Manager and two Project Managers.

The purpose of the PMO is to oversee all ICT related projects from inception, guide them through the Governance Boards (ITSG, ITPB) and if approved to final delivery. As part of this work they will engage with the business to identify future projects and help the departments.

Risks associated with the implementation of any programme will be reduced through the use of structure techniques for programme and project management.

Alongside the project work the PMO will oversee the internal auditing for software, hardware and licensing to ensure compliance and control.

In order to maintain a close working relationship between the ICT function and services across the Partnership, regular account management meetings will be organised. These include annual meetings between the ICT Strategic Partnership Manager, the ICT Programme Management Officer and Assistant Directors and Heads of Service.

Information Governance

A proposal is being writing to create an Information Governance Team to cover the Partnership's DPA, GDPR and FOIO requirements. This team will work closely with the Security & Network Team to ensure full legislative compliance.

At present there is a single Data Protection role in the Information & Governance management. A business case is being proposed to create a team of staff to deal with all data protection regarding data process including adherence by the Partnership, departments and staff to required legislations, with a focus on the data protection act (DPA 2018) and general data protection regulation (GDPR 2016). The two acts constitute most requirements that the Partnership must adhere to in the realms of data security.

If a team is not created to adhere to these acts, then the work will have to be undertaken by the individual department's staff.

At present the Partnership is failing to adhere to this legislation, but several projects have been commissioned to address this issue alongside the creation of Information Governance Team.

Print Room

The Print Room Team is currently under review and maybe relocated away from ICT, therefore it outside the scope of this strategy.

Graphics

The Graphics Team is currently under review and may be relocated away from ICT, therefore it outside the scope of this strategy.

Sourcing Strategy

The convergence to a single ICT strategy for the Partnership and associated ICT and Digital Technology roadmaps will enable us to make strategic investment decisions, based on agreed objectives and outcomes as opposed to short term tactical business priorities and decisions.

The Partnerships approach to sourcing ICT products and services is an important aspect of how it will deliver its ICT vision and ensure value for money is achieved.

Based on current ICT market trends such as cloud computing mean that it is not practical to think that a single supplier approach will deliver the best results for the Partnership. Making use of the market will allow the Partnership to take advantage of 'best of breed' services and harness external capabilities and innovation.

The Partnership will commission the most suitable ICT that provides flexibility of service, performance and cost that makes the best of the ICT market.

We will conform to our future Enterprise Architecture and the associated design and guiding principles to deliver clear and measured ICT. We must avoid poor decision making around the choice of new systems, whilst supporting the future consolidation and rationalisation of our existing 'as-is' ICT estate.

As part of the new operating model the partnership will develop a commissioning framework for business as usual and steady state ICT.

Making technology purchases in line with this strategy is an important discipline. Straying from what this strategy defines will have a long term impact on the businesses ability to execute the roadmap in a timely way.

1. Purchasing criteria will stipulate minimum levels that each technology purchase should conform to. This criteria is being formulated.
2. All technology purchases will be reviewed by the ICT Steering Group and the technology strategy owner.
3. All existing purchases will be reviewed against this new criteria to help understand our digital landscape and if it is in keeping with this strategy
4. Tracking adherence to this standard (and the gaps, if any) will be the responsibility of the ICT Service

Strategic technology purchases will each be successful when a virtual team is formed, comprising of stakeholders across the Partnership which will include:

- Procurement
- Partner Management
- Data and Architecture
- Project Management
- Information Management and Governance

Purchases will follow the summarised pattern below, as well as the principles set out above.

Business and financial needs being met

- Having a champion who understands the business need
- Pricing model (i.e. a transparent pricing model in keeping with cost visibility)
- Contracts compliant to the new contract clauses relating to data and intellectual property ownership)
- Meets service level minimums (availability, performance, modes of support)

Strategic

- Complies with principles
- Is purchased with our customers in mind
- Can't be done with existing tools
- Enables us to consolidate other tools into it
- Doesn't require tailoring such that the real cost of ownership defeats the bsuiness case

Technical needs being met

- Product is in line with reference architecture and strategic design principles
- Browser based as required
- Use of well documented APIs
- Compatibility of APIs with our digital platforms
- No code or low code, absolute clarity on skill requirements
- Compatibility with out chosen identity and authenication providers
- Assurance level and controls in place proportionate to its use
- General Data Protection Regulation impact

With criteria in place the ICT Partnership can ensure business decisions are made based on data. Even where a system does not meet some of the criteria, it may still be chosen, but it is done so based on the Partnership being aware of and accepting its shortcomings.

This practical process of evaluation being followed ensures record keeping and continuity at important times, such as contract renewal points.

Supporting Capabilities

Each council requires easy access to ICT and Digital resources, with the appropriate capability and experience, which are committed to meeting and exceeding the needs of the Partnership and its customers.

Our Sourcing strategy will enable the Partnership to have access to external expertise to ensure our services continually and sustainably develop and keep up with the constantly changing technology landscape.

The objective is to have the correct skills that the Partnership can access to ensure ICT solutions meet the needs of its customers.

ICT and Digital Implementation Plans

The Partnership is taking a medium to longer term strategic view of the development and deployment of ICT and digital services. To support this we have produced a Strategic ICT Plan which can be seen in Appendix B it captures the known projects associated to each of the four strategic ICT ambitions.

Further roadmaps will be produced to stimulate discussion about the longer term direction of travel. The intention is for iterations of work programmes to be developed, each of which will be published with a corresponding implementation roadmap. The plans will be submitted for approval in line with the governance arrangements of the Partnership, culminating in an evolving ICT Strategy programme being presented to the ICT Partnership Board on annual basis.

The first two of these will be:

- **Enterprise Architecture –** this will be an all domains roadmap, incorporating the Partnership's consolidation, simplification and standardisation of business systems. It will detail the required Architecture building blocks for the creation of our future architecture and ICT operating model. It will ensure projects are aligned strategically, as part of the Enterprise Architecture.
- **Digital Strategy –** following the development of a new digital strategy (ies) a digital transformation roadmap will be produced that sets out how each council is going to enhance its online service offer and use digital solutions to improve staff productivity and achieve process automation.

ICT and Digital Investment

As the Partnership moves more services into Cloud, funding will move away from Capital to Revenue funding.

If we are to become a true 'Intelligence Led' Partnership, then ICT will need to be as flexible as our business functions, utilising capacity on demand methods and delivering 'Utility Based' or 'Pay and Use' ICT – designing our ICT by using our design and guiding principles to balance Value for Money against security and risk compliance.

To do so we will need over the next five years to rebalance capital investment (CAPEX) on bought and paid for ICT technology with an operating expenditures (OPEX or revenue) Pay and Use model removing the inevitable stranded investment in technology that rapidly becomes out-dated – this will need to be factored into the Medium Term Financial Strategies of both councils.

As an example; new servers run faster, use less energy and provide more computing power every year. It doesn't make sense to invest in equipment that's surpassed by the very next model.

The rapid use of Cloud computing, commissioning and managed services shows that many things that were on-premise are now provided by external Cloud based service providers such as Microsoft Azure, Amazon and Google. By utilising Cloud computing in the future it is anticipated that we will reduce long term ICT costs.

SBC's Capital requirements for the project deliverables currently known at the time of writing the strategy can be seen in Appendix C and the Revenue requirements have been captured within the ICT Strategy covering Executive Report date 9 October 2019.

The Software Audit and the Enterprise Architecture once designed will help to determine what software investment is required and where software and hardware can potentially be rationalised which in turn could deliver revenue savings for the Partnership. These additional requirements along with future digital transformation resourcing demands will need to be captured within both council's Medium Term Financial Strategies and Plans.

Value Delivery

Once solutions have been delivered, ensuring the Partnership is realising the improvements and efficiencies that are highlighted within business cases will be essential. Benefits realisation therefore will be reported monthly or quarterly through to the ICT Partnership Board.

Measuring Success

There are four key measures of success for this strategy:

1. Empowered customers through the increased take up of digital services and evidenced through outstanding customer feedback
2. The development and implementation of an agreed Enterprise Architecture that enables the rationalisation and consolidation of business systems
3. Significant improvements in the performance of core ICT services including the adoption and deployment of the likes of Office 365 and new hosted desktop technology
4. A resilient and secure ICT infrastructure that provides the required foundation to build front facing digital services

Other measures include:

✓ Our ability to execute high priority aspects of the published roadmaps
✓ The positive use of data to create and successfully launch new services and measurable improvements to existing services

✓ Presentation of actionable information to internal and external audiences
✓ Increased registrations and voluntary enrolment onto digital services by customers

Performance Management and Progress Reporting

A number of measures are to be put in place as part of an ICT Strategy Scorecard to ensure that the regular performance management and progress monitoring is carried out.

An ICT management KPIs report will be produced monthly for consideration of the ICT Partnership Board. This document will contain details of security incidents, the number of calls received by the service desk, the percentage of responses achieved within the service level targets, the percentage of time the systems are available and customer satisfaction survey results.

In addition a monthly highlight report will be produced by the Programme Management Office that will be used to monitor progress against the ICT roadmaps, giving full transparency to the state of all projects and programmes.

The new Members ICT Group will receive quarterly reports covering performance against the performance indicators in the ICT scorecard and also a progress update against the ICT roadmap and a summary of the benefits realised.

ICT Strategy Scorecard

The ICT Service will report on the following key measures of success throughout the lifetime of the ICT Strategy, targeting performance improvement against the baseline year of 2018/19 where applicable. The scorecard will be reviewed annually to reflect the changes needs of the ICT Partnership and also to take into account the new Enterprise Architecture and Digital Strategy (ies).

Indicators	Baseline Performance 2018/19	Target 2019/20	Target 2020/21	Target 2021/22
Website availability		99.9%	99.9%	99.9%
Maintain Optimum server process capacity		75%	75%	75%
Percentage availability of the data network across the ICT Partnership		99.9%	99.9%	99.9%
Reduction in email storage requirements following introduction of Microsoft Office 365				
Percentage annual Service Continuity Test that support business continuity plans	N/A	N/A	100%	100%
Percentage of cyber risk assessments	N/A	100%	100%	100%
Percentage of cyber protection software deployed on mobile devices e.g. laptops and tablets	N/A	100%	100%	100%
Annual PSN Compliance Certification	100%	100%	100%	100%
Annual Cyber Security Essentials Accreditation	N/A	N/A	100%	100%
Percentage of staff with an email account who have completed the ICT Partnership's mandatory information management and data protection online training	N/A	80%	100%	100%
ICT User satisfaction with ICT Services			80%	90%
Customer satisfaction with ICT Service Desk			80%	90%
Reduction in ICT Service Desk enquiries	N/A	3%	10%	20%
Percentage of customers who rated the overall performance in ICT Project Management as good or excellent	N/A	N/A	80%	80%
Capital to Revenue funding ratio	N/A			
Percentage reduction in internal print costs		5%	10%	30%

Appendix A: Governance Board Terms of References

ICT Partnership Board (ITPB)	
The Partnership Board is responsible for the strategic direction of the Service ensuring that the benefits of partnership are maximised to the mutual advantage of both Councils.	
Members	
Tom Pike Strategic Director and Deputy CEO (SBC)	Helen Standen Deputy Chief Executive (EHDC)
Matthew Partridge Chief Executive (Interim) (SBC)	Simon Russell Strategic ICT & Partnership Manager CTO (Partnership)
Richard Protheroe Interim Strategic Director (SBC)	Katia Cousins Finance Business Partner (SBC)
Mandate (including but not limited to)	
Determining the strategic direction of the Shared Services	
Overseeing the preparation of separate ICT Strategy for each Authority, including ensuring that the benefits of partnership are maximised to the mutual advantage of both Councils	
Resolving conflicts between competing interests amongst the Authorities collectively and individually relating to the shared Services, the Shared Services Board and / or the Service	
Setting, monitoring and reviewing service performance	
Reviewing customer satisfaction and feedback	
Determining the Partnership Budget and contribution from each Authority, on the basis of reasonable information provided by the Head of Shared Services	

ICT Steering Group (ITSG)

The ITSG approves upcoming projects with an ICT element. This is to ensure that there are the correct ICT resources available to the project and that the correct process has been followed to ensure that financial, joint working and data protection elements have been satisfied before project approval. The PMO will work with departments to ensure that the correct processes are being followed.

Members

Helen Standen Deputy Chief Executive (EHDC)	**Benjamin Wood** Head of Communications Strategy & Policy (EHDC)
Craig Miller Assistant Director - Stevenage Direct Services (SBC)	**Hannah Brunt** Digital Transformation Manager (SBC)
Isabel Brittain Head of Strategic Finance & Property (EHDC)	**Jaine Cresser** Assistant Director - Housing and Investment (SBC)
Richard Protheroe Interim Strategic Director (SBC)	**Simon Russell** Strategic ICT & Partnership Manager CTO (Partnership)
Su Tarran Head of Revenues & Benefits Shared Service (Partnership)	**Carol Bulloch** Shared Services Manager, Systems Support & Control (Partnership)

Mandate (including but not limited to)

Develop and sustain the ICT plan for the SCB-EHC Group (referred to as the Partnership Group) and approval Partnership Board. In order to accomplish its activities IT Steering Group will	Collect ICT related information from any business area of the Partnership Group as required;
	Coordinate the ICT components of the ICT plans from all units across the Partnership Group
Coordinate the IT components of the ICT plans from all units across the Partnership Group	
Develop and recommend Partnership Group policy with relation to IT.	
In line with SIAS recommendations, IT Steering Group will perform the function of Solutions Design Authority within the Shared ICT Service, the responsibilities of which should include, but not be limited to:	Identifying appropriate technologies in response to the challenges faced by the Councils
	Identifying appropriate technologies in response to the challenges faced by the Councils
	Promoting the use of common technologies across both Councils
	Assessing the impact of new technologies on the Councils
Review and recommend on IT project development plans within the context of IT plans.	
Create ad hoc Groups to address strategic IT issues, as required.	
Review, coordinate and arbitrate major IT activities across the Partnership Group	
Provide an annual report to Partnership Board that details ICT activities.	

Report to Partnership Board at each necessary