**PHD420**
**Ward(s): All**

# DRAFT PORTFOLIO HOLDER DECISION NOTICE

**PROPOSED INDIVIDUAL DECISION BY THE PORTFOLIO HOLDER FOR FINANCE AND ADMINISTRATION.**

**TOPIC – IT Technical Strategy (Shared IT Service)**

**PROCEDURAL INFORMATION**

The Access to Information Procedure Rules – Part 4, Section 22 of the Council's Constitution provides for a decision to be made by an individual member of Cabinet.

In accordance with the Procedure Rules, the Corporate Director (Governance), the Chief Executive and the Head of Finance are consulted together with Chairman and Vice Chairman of The Overview and Scrutiny Committee. In addition, all Members are notified.

If five or more Members from those informed so request, the Leader may require the matter to be referred to Cabinet for determination.

**If you wish to make representation on this proposed Decision please contact the relevant Portfolio Holder and the following Committee Administrator by 5.00pm on Friday 13 July 2012.**

**Contact Officers:** Tony Fawcett, Head of IM&T, Tel: 01962 848 262, Email: tfawcett@winchester.gov.uk

**Case Officer:**

**Committee Administrator:** Nancy Graham, Tel: 01962 848 235, Email: ngraham@winchester.gov.uk

**SUMMARY**

Winchester City Council continues to seek opportunities for efficiencies and business improvement through its sharing of its IT department with Test Valley Borough Council.

Currently the Council shares its Head of IMT and IT Service Desk with Test Valley Borough Council that have resulted in significant cashable savings to both councils. The Councils have agreed the principle that costs as well as benefits should be apportioned equitably.

In order to maximise the potential benefits and savings, IMT need to have a clear steer supported by an agreed strategy to which both partners commit. This technical

strategy (which is guided by business need and the partnership principles detailed in the IM Strategy) will direct the Head of IMT to identify opportunities leading to significant operational and financial benefits for both Councils.

In the case of WCC it was agreed that a 3 stage approach be followed:

- Firstly; production and approval of the Information Management (IM) Strategy – This strategy sets out the needs of the Council as a business and the principles that underpin the shared IT partnership with TVBC (approved in Cabinet 15th June, ref: CAB2345).

- Secondly; production and approval of the IT Technical Strategy (the subject of this Decision Notice) – This strategy details the specific IT requirements which should be met to enable delivery of the IM Strategy. It will lay the foundations for building a sustainable and secure environment that will support the business IT requirements for the next three years.

- Finally; production and approval of the IT Technical Specification and Plan – This document will detail the sequencing and timescales of multiple projects (as a mini programme) to achieve the delivery of the IT Technical Strategy. The financial implications will of course be subject to budget approvals in accordance with each Council's Constitution. The publication of the draft IT Technical Specification is expected to be by the end July 2012.

This PHD notice also makes reference to CAB2319 – Development of a Shared and Consolidated IT Infrastructure. That is one element of the Technical Strategy which alys a foundation for further development of the shared IT Partnership.

This notice seeks comment and approval to the IT Technical Strategy.

## PROPOSED DECISION

1. That the IT Technical Strategy be approved noting that the financial implications will be subject to approval in accordance with each Council's Constitution.

2. That the Council approve the development of the IT Technical Specification and Plan to be distributed towards the end of July.

## REASON FOR THE PROPOSED DECISION AND OTHER ALTERNATIVE OPTIONS CONSIDERED AND REJECTED

N/A

## RESOURCE IMPLICATIONS:

There are no resource implications relating to the approval of the IT Technical Strategy; spending arising as a consequence of the Strategy will be in accordance with Financial Procedure Rules. Approval of the IT Technical Strategy does not constitute any budgetary commitments.

**FINANCIAL APPRAISAL:**

n/a

**CONSULTATION UNDERTAKEN ON THE PROPOSED DECISION**

n/a

**FURTHER ALTERNATIVE OPTIONS CONSIDERED AND REJECTED FOLLOWING PUBLICATION OF THE DRAFT PORTFOLIO HOLDER DECISION NOTICE**

n/a

**DECLARATION OF INTERESTS BY THE DECISION MAKER OR A MEMBER OR OFFICER CONSULTED**

n/a

**DISPENSATION GRANTED BY THE STANDARDS COMMITTEE**

n/a

**Approved by: (signatures)** **Date of Decision**

**Councillor Stephen Godfrey – Portfolio Holder for Finance and Administration**

**Copy Number**: 01



# IT Technical Strategy
## 2012-15
## (Shared IT Services)

| | Name | Position | Date |
|---|---|---|---|
| **TVBC Approval** | Carol Moore | Corporate Director | |
| **WCC Approval** | Simon Eden | Chief Executive | |

# 0. DOCUMENT CONTROL

## 0.1 Ownership

The shared Head of IT Services is responsible for the production and maintenance of this document.

This document is issued by the shared Head of IT Services, to whom any change requests or queries should be directed.

## 0.2 Version Control

This document is issued and maintained in accordance with Document Standards & Procedures.

Any change to the document will increase its version number.

## 0.3 References

| Ref. No. | Title | Doc. No. |
|---|---|---|
| WCC CAB2345 | WCC Information Management Strategy | CAB2345 |
| V2.5 | Transforming Winchester – Channel Access Strategy 2011 | |

## 0.4 Terms

| Term | Definition |
|---|---|
| AD | Active Directory |
| BC/DR | Business Continuity/Disaster Recovery |
| CAG | Citrix Access Gateway |
| CESG | Communications-Electronics Security Group |
| CRM | Customer Relationship Management |
| EDRMS | Electronic Document Records Management System |
| EHDC | East Hampshire District Council |
| GCSX | Government Connect Secure Extranet |
| HBC | Havant Borough Council |
| HCC | Hampshire County Council |
| HPSN2 | Hampshire Public Services Network 2 |
| ICT | Information, Communications and Technology |
| LGA | Local Government Authority |
| LOB | Line of Business |
| QoS | Quality of Service |
| SAN | Storage Area Network |
| SBC | Server Based Computing |
| SLA | Service Level Agreement |
| SSGB | Shared Service Governance Board |
| SSPB | Shared Service Project Board |
| TVBC | Test Valley Borough Council |
| WCC | Winchester City Council |

## 0.5 Scope

The scope of this document is to detail the IT Technical Strategy which underpins the commitment made by Test Valley Borough Council and Winchester City Council to the sharing of ICT services.

This document may not detail all aspects of the IT Service but instead reference separate documentation and strategies relating to a specific function.

## 0.6 Purpose

The purpose of this document is to set out how the Councils will deliver against the business needs and partnership objectives set out in Winchester's agreed Information Management Strategy. It provides a roadmap – setting out the direction of travel – and helping to deliver the ICT Shared Service between both TVBC and WCC. The Councils' formal agreement of this IT Strategy will align both partners to a consistent IT Strategy.

This IT Technical Strategy details an agreed approach but does not constitute financial agreements or a commitment to allocate funding or increase existing budget by either partner. Funding of this strategy will be on the basis that each significant phase will be supported by a business case which requires formal agreement for each respective Head of Finance and if necessary formal constitutional committees (example: Cabinet).

## 0.7 Contents

# 1. INTRODUCTION

Information & Communications Technology (ICT) is a key enabling component to successfully achieving shared services. Without it there is considerable risk of the partnership either at worst failing, or at best not realising its true potential.

In other words, in the same way that a partnership having different visions, political will, ambitions or cultures create problems, not having a single and coherent IT strategy means that the likelihood of success is greatly reduced. Even if, against all odds, the partnership can overcome the problems posed by incompatible systems, poor access to information and two versions of everything, the costs (financial and management time) and resource wastage can no longer be tolerated in today's challenging financial climate.

Like building a house, there is a logical order in which to proceed, starting with the foundations and working upwards. Thus with ICT, it is important to get the fundamentals agreed, before worrying unduly about the detail, e.g. which departments will do what in which order. This IT Technical Strategy does exactly that – it sets out the framework, without knowing the exact detail; this will be worked out in due course – through departments' own individual and self-standing business cases.

Agreement of this IT Technical Strategy will allow both local authority partners to achieve their shared services ambitions, by enabling the myriad of separate, but highly important initiatives to take place in a timely and cost-effective way.

This document concerns the partnership between TVBC and WCC only, but by design will not exclude any other potential partners from joining the shared service partnership as it matures. It takes its direction from the business drivers, government legislation and agreed principles to which both partners have committed.

In the case of Winchester City Council this strategy follows the guidance documented in the Information Management Strategy (CAB2345) which references both the 'Transforming Winchester' programme and the 5 organisational outcomes which this IT Strategy will support, in particular 'Providing customer service we're proud of', 'Providing services which are flexible and value for money' and 'Being fit for the future'.

## 1.1 Shared Service Vision and Strategy

It is of paramount importance that the IT Technical Strategy meets the business needs and supports the corporate plans of each partner.

This section sets out, at a high level, the overall vision and strategy for the new IT partnership. In particular, it answers the following questions:

- What is the vision?
- What are the success criteria?
- How will it be governed?
- How will it be delivered?
- Can it easily adapt to future business change?

### 1.1.1 Vision

The vision is to provide:

***"A single ICT Shared Service delivering consistent high quality, secure, support services to all the partners committed to the ICT Shared Service framework. As a minimum the ICT Shared Service will be able to cost effectively flex with the business demands to deliver the business ambitions and goals of the partnership, seek and identify efficiencies, maintain high availability systems and uphold service productivity, performance and standards".***

### 1.1.2 Success Criteria

The ICT Shared Service will deliver:

- Significant savings – both Revenue (operational) and Capital cost avoidance through system sharing, reduced infrastructure, procurement, a streamlined staffing structure etc.
- Deliver 'fit for purpose' ICT services and support which meets the business needs of both partners, and which will be at least as good if not better than they are pre-ICT Shared Service.
- Engineer a partnership model that will enable other Local Government organisations to join and contribute to the partnership, while also allowing partners to return to stand alone service should political wishes dictate.

### 1.1.3 Governance

There needs to be a strong governance procedure to underpin the relationship and therefore a clear escalation path to follow should it be necessary.

To ensure these controls an appointed Shared Service Project Board (SSPB) made up from senior managers from each partner will oversee any agreements. In the unlikely event that a disagreement cannot be resolved at the SSPB, issues can be escalated to the Shared Service Governance Board (SSGB) that includes the Chief Executives and Leaders of both partners to make the final decision on any disagreements. This may include formal consultation with their respective Head of Finance and Head of Legal should there be any financial or legal implications.

The diagram below sets out the Governance Escalation Process:

| **Escalation Level** | | |
|---|---|---|
| ↑ | **4** | **Shared Services Governance Board** |
| | **3** | **Shared Services Project Board** |
| | **2** | **Head of IT Shared Service** |
| | **1** | **IT Management Team** |

### 1.1.4 Delivery

Both TVBC and WCC have strengths where investment has been concentrated over the last few years and this approach aims to leverage these strengths across the wider partnership to maximise the benefit to the partners' business.

A 'Centre of Excellence' approach has been adopted as the ICT Shared Service model with competency centres being established within both IT teams.

By design each partner will have responsibility for delivering key services to the partnership and it is recognised that:

- WCC have achieved good standards of business support including; Programme Office, GIS, Application Development and Web Site Development
- TVBC have a committed infrastructure investment programme (supported and funded by a robust Asset Management Plan) that supports 'good practice' and achieves high availability, stable and secure platforms together with a proven support with regards Service Desk, Desktop, Server, Storage, Networks, etc.

Therefore it makes sense to enhance the ICT Shared Service where WCC deliver and develop the business and TVBC focus on the operational support and infrastructure transformation to ensure the best fit for the ICT Shared Service.

Both partners have existing IT policies and procedures that will need to be aligned in the ICT Shared Service to form a common platform on which to operate.

It is recognised that not all of the policies and procedures will be aligned in the short term as operational change will have to be carefully managed so as not to cause any negative impact to either Council's business. However it is recognised that it may not always be appropriate to align all policies and procedures - as it will need to take account of the needs of individual authorities where these are different.

### 1.1.5 Standards

Service delivery will be aligned with that of the ITIL (Information Technology Information Library) methodology (currently using version 2).

Information Security Policies comply with the government led data security Code of Connection to level 4.1 and will be reviewed and maintained within CESG 'good practice' guidelines (see section 3.9 - Security Standards).

Business Transformation programmes and Project Management will be delivered using PRINCE 2 'good practice' methodology.

### 1.1.6 Ability to Adapt

It is essential that the partnership must be sustainable and not undermine the sovereignty or autonomy of either party, and be sufficiently flexible to meet the ambitions of the each partner.

By aligning the technical strategies of both councils significant savings can be achieved and a wider range of business options can be considered.

The design of the technical strategy should also ensure that all its elements will allow for a move back to a 'stand-alone' infrastructure should the partners ever wish.

In-house development and the production and support of bespoke applications are generally unsustainable in the long term unless considerable additional investment is made to increase the development teams to meet the business requirement.

Therefore the route to procure cost effective 'out-of-the-box' solutions and applications is a favoured approach. This means internal resources will move towards a supporting role and do not become a single point of failure through human resource (HR) attrition.

All projects and new requirements will be subject to detailed business analysis that will highlight the ability to use systems across business areas and not just in isolation to one service. Members have agreed that the costs and benefits of the partnership will be apportioned equitably, and that will form the basis for each business case.

The creation of a technical roadmap document is paramount in understanding timescales and lifecycles of applications and systems. Also Council teams and services will regularly communicate their business strategies in a timely fashion so that IT Services can ensure the IT Strategy remains effective and fit for purpose.

## 2. KEY THEMES

As mentioned earlier, the purpose of this document is to communicate and agree a high-level vision and strategy, which will be used as a roadmap – setting out the direction of travel – and helping to deliver the ICT Shared Service between TVBC and WCC. It does not, and indeed cannot, detail every project, initiative or product that may be required: that is for the IT Technical Specification & Plan. The purpose of this section however is to set out some guiding principles, or what we have termed key themes, which will allow these lower level decisions to be taken as the partnership develops whilst staying true to the strategy.

Four key themes are set out below, which demonstrate how in real business terms this IT Technical Strategy will effectively enable shared services.

### 2.1 Joining Up

In the same way that most organisations would struggle to operate efficiently or effectively if they were unable to communicate electronically, e.g. via electronic diaries, shared folders, access to information (databases, documents, statistics and reports), it is vital that the partnership can continue to provide these same fundamental facilities for its entire staff (from both partners). In fact, given the additional challenge of geographical separation – the distance between the two partners – it is even more important that technology assists in reducing the barriers to true partnership working.

Failure to address these issues will lead to obvious problems in communication, whereby staff are unable to undertake basic tasks, e.g. access a document, communicate easily with colleagues in the partnership, and less obvious issues, which may actually have more significant side-effects, e.g. staff find it necessary to travel to meetings (i.e. increasing travel costs, taking more time, reducing productive working time).

## 2.2 Economies of Scale

There is little doubt that economies of scale can produce significant benefits, financial savings and lead to greater resilience. Whilst joining up two partners' infrastructures is generally at best cost neutral, the bulk of any savings will generally come from rationalising to a single line of business application. Furthermore, many licensing arrangements, both desktop via Microsoft and line-of-business application rationalisation (services moving to a common system), can offer significant benefits to the partnership.

## 2.3 Resilience

With a single council, resilience is generally provided internally, whereby secondary offices are used to store backup servers, data and other critical services. However, within shared services, reciprocal arrangements can be exploited to the benefit of both partners where data replication and delivery can be implemented.

Once systems are merged, rationalised and slack taken out of the infrastructure, the impact of system failure can be even greater. It is therefore vital that all potential points of failure, wherever possible and practical, are removed.

These will be addressed through providing Disaster Recovery on alternative sites, resilience and fail-over through improved networking and server virtualisation.

Subject to the partnership growing to include a third partner it would be sensible to consider building a private 'Cloud' whose definition is that users can access data and services from multiple points throughout the secure network, providing instant business continuity and removing the need/requirement for IT System disaster recovery systems.

## 2.4 ICT enabling (leading the way)

One of the challenges of any shared services initiative is the question of how you break into the circle and actually start planning – putting pen to paper on what needs to happen, when and how. Recognising that we would only look to share similar systems where appropriate to the individual councils business needs can be appropriate to minimise the costs of ICT infrastructure irrespective of whether individual services are shared or not.

However if for example the authorities were to consider closer integration of services then IT quickly becomes crucial to successful integration, providing connectivity, access to shared data and common systems. Once these services are provided, then the only other dependencies are the timing of regulatory and/or legislative changes, and co-ordinating migration to common systems when licensing agreements allow and resources are available. Of the two, it is generally the IT resources that are most scarce and potentially costly.

It therefore makes sense for IT to provide this basic infrastructure early in any shared services programme, as is recommended in this IT Strategy, and then to earmark IT project resources for specific departmental work, according to availability and wider organisational need. The 'IT Technical Specification and Plan' will then allow the whole organisation, department by department, to test its own plans and prioritisation against a wide timetable. If any anomalies are identified, e.g. something must

happen by a given date, these can be fed back into the shared services programme office (which is responsible for creating and maintaining the programme plan, resource plan etc.).

## 3. TECHNICAL STRATEGY

This section outlines the principles of the technical design, within the context of the 'Key Themes' and highlights the projects that will need to be delivered to develop the shared service during the life of this strategy.

Projects identified at the initial Technical Architectural Board workshop of March 2011 have been included within the high level programme plan contained within the 'IT Technical Specification and Plan'.

The initial Technical Architecture Board included both TVBC and WCC infrastructure expertise and the approach detailed below has been agreed by both parties.

This section of the strategy will help shape the detailed 3 year roadmap & strategy document building on the high level principles laid out below.

### 3.1 Asset Management Plan

It is an essential duty of the IT Service to ensure that all ICT assets are recorded and registered in conjunction with the chronological lifecycle to ensure that assets remain 'fit for purpose' and feed into the Capital requirements process.

As a rule and following 'good practice' the main infrastructure core assets (e.g. SAN, servers, network switches) are managed through a 5 year replacement lifecycle with desktop devices having a 4 year replacement lifecycle. These lifecycles are within the manufacturers' supported terms and maximises the value of the assets whilst in service.

### 3.2 Inter-site Connectivity

Connectivity between the two main sites is fundamental to the shared service design. Lack of bandwidth or reliability will have a negative impact on the user experience and determine what can be achieved in respect of data replication and business continuity. Early investment in improving both resilience and bandwidth between partners will be necessary before advances in application sharing and joint infrastructure leverage can be made.

Connectivity between the two sites will be achieved using the HPSN2 infrastructure framework. This private cloud network offers the scalability, security and cost model required to enhance the delivery of the shared service.

Initial preparation work has been identified to ensure that basic connectivity and data interchange between the two sites is possible. One aspect of this work is to eradicate the IP address overlap to ensure one schema exists for the two organisations.

It is necessary to plan bandwidth in accordance with project and development requirements; however it will be important over the next few years to ensure that this capacity planning exercise is proactive.

Within 2 years, SAN replication and inter-site hosting is planned. At this stage sufficient bandwidth will be required to support the full Disaster Recovery (DR) model

with 100% access to systems served from the primary data centre able to support all users with fail-over services to meet the required service levels.

Once voice and video projects have been launched Quality of Service (QoS) requirements will need to be determined to ensure these time critical applications get priority across the network.

**Strategy:**

Utilise the HPSN network as the basis for long-term shared service connectivity

Upgrade current HPSN links for both partners and provide the required resilience

Provide the required bandwidth to support phased project delivery

New shared services partners will be required to ensure their IP schema meets the requirements of the shared service prior to acceptance

**Projects:**

Upgrade primary site connections to 100Mbps and provide a level of resilience

Resolve IP address overlap issues

Plan to migrate to Gigabit HPSN connections with resilience to coincide with SAN mirroring and the hosting of mission critical systems in the primary data centre

### 3.3 Storage Infrastructure

WCC currently utilise a Dell EMC CX320 storage infrastructure. This equipment becomes end of life in December 2012, has little available spare storage capacity and would have been replaced during 2011 had the shared service not been established.

TVBC has an enterprise Storage Area Network (SAN) based on Compellent hardware with storage distributed across two sites, Beech Hurst (Andover) and Dutton's Road (Romsey). The long-term strategy is to re-locate the Dutton's Road SAN infrastructure to Winchester offering replication between the two main sites and a route to Disaster Recovery (DR) at alternate sites. However, it is unlikely that this move can be planned during 2012 due to the pre-requisite projects such as network enhancements and IP address schema work as these need to be completed before the SAN relocation.

A WCC Cabinet report (CAB2319) has detailed a potential saving removing the requirement for a 3rd party DR supplier.

As part of the move to a strategic solution for storage the current and future requirements for storage will need to be assessed. Currently WCC storage medium-term will need to be incorporated onto the TVBC disk provision. Once full resilience and replication are in place, all new applications and services will be primarily installed and run from the primary data centre at Beech Hurst.

**Strategy:**

Use Compellent SANs for all data storage

Deploy a two site model (Beech Hurst & Winchester) with data replication

Offer Disaster Recovery at alternate sites (Servers & Users) removing the current TVBC provisions at Dutton's Road and externally

**Projects:**

Audit current disk usage to establish total capacity requirements through to 2013.

Upgrade and relocate the Compellent SAN from Dutton's Road to Winchester, set-up data replication and migrate servers

Full Disaster Recovery and Business Continuity testing to take place

### 3.4 Data Centres

Both data centres (WCC & TVBC) are of sufficient size to support the future requirements of the shared service. With a server virtualisation strategy and centralised storage the footprint has been decreased over recent years and this trend is likely to continue with further virtualisation.

Increasingly the Beech Hurst data centre will become the primary hosting centre for shared service provision with the Winchester facility acting as a data replication and recovery facility. This transition will take several years but the fundamental infrastructure will be put in place in the medium term to facilitate it.

With the relocation of storage from Dutton's Road to Winchester the future of the Dutton's Road data centre will need addressing. Currently there is a significant user presence at Dutton's Road but this may reduce over the next couple of years with users moving back into Beech Hurst. Even if users do remain at Dutton's Road the strategy will be to delivery their services from Beech Hurst over the network link rather than providing local servers.

Investment in the Winchester Data Centre may be required as it has an ageing Uninterruptible Power Supply (UPS) facility that is 8 years old. Also the Air Conditioning facility needs further investigation. Consideration will be given to the reuse of any equipment displaced by the Dutton's Road data centre closure as this may reduce the need for expenditure in Winchester.

**Strategy:**

Transition to a Primary / Secondary data centre model for the shared service

Investigate the business continuity and disaster recovery requirements of the business and develop an SLA driven service recovery plan

Deliver all applications from the Beech Hurst data centre with the Winchester data centre used for data replication and recovery

**Projects:**

Project to build the resilient Storage capability commences

Dutton's Road data centre closure completed

WCC migrate all servers to the Compellent SAN with the Dell EMC CX320 being decommissioned

Primary/Secondary data centre model in-place

### 3.5 Servers

Both TVBC and WCC have adopted a server virtualisation strategy based on the use of VMware products. This strategy will remain for the long term and further server virtualisation will be carried out in the short term at both data centres. Currently TVBC has a 25% physical server estate and WCC 20%. Ultimately close to 100% of services will run on the VMware infrastructure.

Both TVBC and WCC will upgrade their server virtualisation to the current v-Sphere product in the short term. The licensing and subscription for VMware products does need immediate planning due to the expiry of the WCC subscription in early 2013.

Server backup strategy will need further investigation with the intention of moving towards a more SAN-centric solution once the new SAN infrastructure is in place. In the short term both sites will continue to run on a Symantec server based backup solution with agents. Further evaluation of products and designs is required in this area.

Storage of tape media will move to the alternate site model in the short-term.

With the Microsoft Server 2003 Operating System becoming end of life in 2014, it is important that Server 2008 quickly becomes the standard for the shared service. The strategy will be to maintain legacy servers at WCC on 2003 whilst new, strategic servers are being built at TVBC on Server 2008 with fail-over to WCC. The move to 2008 will therefore be gradual and staged over the next 3 years.

**Strategy:**

Utilise VMware Server virtualisation for all new servers built and continue to migrate existing servers to this platform

Upgrade to v-Sphere (current version of VMware server virtualisation)

Streamline backup solution utilising a common product set

Store backup media at alternate sites

Adopt a Microsoft Server 2008 implementation policy and plan the removal of Server 2003

| **Projects:** |
|---|
| Upgrade to v-Sphere |
| Maximise use of Server Virtualisation |
| Full commitment and deployment of strategic backup solution |
| Move from Server 2003 to 2008 |

## 3.6 Infrastructure Services

### 3.6.1 Authentication and Directory Services

A Security Domain Structure is required to enable the delivery and management of shared applications and services. It is necessary to connect both TVBC and WCC to a single security Parent Domain using the Forest Trust methodology. This means that TVBC and WCC will be individual child domains under this parent domain. This method will enable support of systems centrally and de-duplicate systems and hardware. Using the Forest Trust method will retain the technical sovereignty of each partner and also allow the separation (return to a 'stand-alone' state) of partners from the partnership without the need to rebuild the Network Domain AD schemas (Active Directory schemas).

This model will be secure and easy to administer.

The Parent/Child domain model will also:

- Reduce costs through a streamlined staffing structure, centralised support, single help desk and economies of scale on major purchases
- Reduce power consumption through fewer data centres and greater use of virtualisation
- Reduce the number of systems and types of software in place
- Simplify licensing administration

### 3.6.2 Email

Both organisations have an ageing mail service running on Exchange 2003. The strategy is to align mail systems through exchange 2010 upgrade. This upgrade would need to be linked to the Office 2010 upgrade to gain the full benefits of the latest version of Outlook.

Hosted/Cloud email services are well established and benefits of a fully or partially hosted email service needs to be assessed. Provided the network is fully resilient and Outlook clients are available on the desktop build, this type of service can improve the delivery of mail services including filtering and archiving whilst offering an improved long-term cost model.

### 3.6.3 File & Print

The strategy requires the creation of shared data stores and cross-site print servers.

### 3.6.4 Remote Access and Flexible Working

A common approach to Remote Access provision will be provided through the deployment of Citrix Access Gateways (CAG) at both main offices. In the short term a pair of CAG appliances will be relocated to WCC to enable the Citrix desktop to be delivered to Home Workers. Additionally TVBC will deploy CAG virtual appliances at Beech Hurst to deliver a similar solution.

It is important for a consistent user experience and reduced costs that the current CAG, SSL VPN, OWA and VPN concentrator environments are consolidated into a single delivery method. A well designed CAG environment can satisfy all user needs and can be scaled to meet the strategy of increasing home working and reducing office space requirements.

In the short term remote access will remain separate and accessed via individual Internet provisions. Once the Internet provision is consolidated, provided via HPSN, and with the primary servers being hosted at Beech Hurst, the delivery model can be developed to provide a single CAG cluster and interface with fail-over into Winchester.

All remote access will be subject to 2-Factor authentication and will need further consideration and standardisation. This will become more important as the number of mobile and home workers increases. Currently TVBC utilise Vasco and WCC Cryptocards, the latter has an agreement end date within 12 months and may therefore be most suitable for replacement.

The use of new corporate client device technology (for example: Tablet (Android, Apple i-Pad)) needs to be carefully considered and how to best to be used securely to maximise business productivity. The approach of both councils is to move toward the use of these devices once they have been accredited by CESG to meet the required FIPS 140-2 security compliance level. It is envisaged that within the next 12 months encryption software will be available to meet the required standard for Android and Apple i-Pad tablet devices.

In addition to corporate devices consideration needs to be taken towards the use of personal devices to enable smarter access to information. A technology called BYOD (Bring Your Own Device) needs to be considered and how it can be introduced without compromising the council's data and security.

### 3.6.5 Telephony, Unified Communications & Collaboration

TVBC have a modern serviceable VoIP solution based on a Mitel 3300 infrastructure. The telephone solution at WCC is over 9 years old and despite having new handsets deployed recently has an ageing and unsupportable back-end infrastructure that is in urgent need of replacement.

Both TVBC and WCC have recently agreed to a shared telephony solution based on a single technology to deliver a solution that can be used across the shared service. This is part of the wider collaboration that encompasses the use of unified

communication solutions to enable remote devices to extend the local telephony across the Internet so flexible and home workers can work effectively away from the office. Currently TVBC and WCC have initiated a joint procurement exercise looking at new hardware solutions that includes (but is not limited to) Mitel, Shoretel and Cisco systems.

The overall strategy for the telephony and collaboration toolset is to achieve a Unified Communications toolset offering Audio and Video Conferencing, presence awareness, instant messaging and a simplified user interface. The strategic solution will including roaming logon facilities to enable users to work from any Internet connected site through 'Hot-Desking'.

SharePoint is also part of the collaboration toolset and is strategic to both Authorities.

**Strategy:**

Build a new security domain for shared services

Review the delivery of mail services including giving consideration to a hosted/cloud based service

Exchange 2010 is the medium-term strategy

Remote Access and Mobile Working will be provided by Citrix Access Gateways

Determine the optimum 2-Factor authentication service

Determine the most suitable telephony & collaboration toolset for the shared service

**Projects:**

Complete the AD redesign and deploy the first shared system

Transition to a single 2-Factor Authentication solution

Decision on VoIP & collaboration toolset

Review Exchange and plan upgrade project

Delivery Exchange 2010

Deployment of unified communications solution and collaboration toolset

Setup shared data stores

Single Remote Access solution

## 3.7 Desktop Services

WCC currently rely primarily on Server Based Computing (SBC) methods to deliver their desktop. Using Terminal Services 2003 and Citrix Presentation Server, a published desktop is delivered to mainly thin client devices. Recently this method of delivery has led to an increased number or servers in an attempt to host more desktops and maintain performance; however the environment is not feature-rich and does not perform well. The software versions that deliver the desktop are due for renewal over the next couple of years making this the right time to consider the future delivery methods at WCC.

TVBC currently use a “thicker” delivery method with a Windows XP operating system and core products such as Microsoft Office installed on the local hard disk. More recently TVBC have moved to a Nettop device reducing both the footprint and the power consumption whilst maintaining a distributed core product set.

Given the requirement for WCC to make a fundamental change to their desktop delivery and that TVBC has a proven, modern desktop estate, the strategy for the short term is to review the feasibility of migrating WCC to the TVBC model.

Citrix will continue to have a role with the delivery of both the Remote Access solution and as a method of application virtualisation.

In the long term there is a requirement to develop a new standard desktop build based on a supportable version of the Windows desktop operating system and Microsoft Office software. This will be rolled out to replace products that will become end of life around 2014, including Terminal Services 2003, Windows XP and Office 2003.

Although the distributed model will be adopted as the medium term strategy, the progress of both desktop and application virtualisation will continue to be monitored as this market matures over the next 2 to 3 years. Application Virtualisation in the form of Citrix XenApp, Xen Desktop or Microsoft App-V will be utilised to deliver applications that are not compatible with deployed version of the Windows operating system by removing the operating system dependency.

Shared Microsoft Enterprise Agreement (EA) will need to be reviewed and extended to encompass all partnership licensing requirements.

Sourcing strategies seeking economies of scale for hardware purchasing with the adoption of current best value arrangements will be undertaken during 2012.

Desktop Antivirus and end-point control is achieved via McAfee at TVBC and Sophos at WCC. If a standard desktop build is to be developed it is in the interests of both parties to have a common desktop security strategy. A review of the capabilities of both products will be carried out but the current commitment (3 years) at WCC may determine the final solution.

**Strategy:**

Review adopting the TVBC desktop delivery model in the short-term to alleviate the pressure on the WCC Terminal Services/Citrix delivery

Replace ageing VMware Host hardware at WCC with latest powerful server equipment

Replace the ageing Server 2003 / XP / Office 2003 desktop with current products

Adopt application virtualisation techniques to delivery legacy applications

Adopt a single desktop security solution

Commitment to Microsoft solutions (where justifiable) across the shared service due to Enterprise Agreement

**Projects:**

Conduct testing based on the TVBC Nettop desktop build with remote management

Commit to Microsoft Enterprise Agreements

Review shared service sourcing arrangements to ensure economies of scale for routine purchases

Develop a new build to upgrade from XP/Office 2003

Review desktop security and deploy a single product in the gold build

Subject to virtual infrastructure capacity, install Thin Clients at both TVBC and WCC based on Citrix Xen Desktop, also consider Hosted and/or Cloud services.

### 3.8 Internet Access and External Services

TVBC and WCC operate their own Internet links with associated AV and Filtering services. TVBC use the HCC HPSN ISP service whilst WCC has ISP services provided by Virgin Media.

The medium term plan is to offer all Internet access and services via the HPSN network saving the cost of separate network bandwidth and duplicated security provision.

The strategy is to externally host the Websites of both organisations along with specific services such as mail filtering, content filtering, externally facing services, external DMZ provision and external firewall management.

Once HPSN links have been upgraded to WCC, planning of the migration of Internet services to a common platform can commence. This is likely to offer significant savings in both bandwidth provision and de-duplication of network access components.

This common platform and the standardisation of the desktop build will prepare the shared service to take advantage of cloud services as they become relevant and available. An early consideration for an Infrastructure as a Service (IaaS) cloud service could be email. Certainly there is a requirement to update Exchange email on both sites by 2013 if not sooner and mail is already one of the more mature cloud offerings currently available.

**Strategy:**

Shared service Internet access will be provided via HPSN in the medium term

Common website and public access server hosting

Externalise all Internet DMZ and Internet Security services

Embrace cloud/hosted services where they are cost effective and can offer greater resilience without impacting the user experience

**Projects:**

Assess the logistics of upgrading Exchange through a cloud/hosted service

Shared Internet delivery service

### 3.9 Security Standards

The shared service will move towards a common set of security policies (Information Security Management Framework, ISMF) in the short to medium term with a common usage and data storage policy.

Inter-site firewalling will be based on Cisco ASA firewalls or equivalent GCSx compliant devices with policies managed by the Infrastructure team. Once the IP schema project has been completed Firewalls will be sufficiently or fully open to allow the exchange of data between each site and access to services on both sites.

Compliance to the GCSx Code of Connection (CoCo) will be streamlined and handled as a single entity. Future Government connections will be planned jointly allowing each partner to make optimum use of PSN, G-Cloud and other Government initiatives.

The network and shared service will adhere to and comply with CESG GPGs (Good Practice Guides) as committed in the CoCo submission and agreed by the inspectors.

All corporate mobile devices and mobile memory storage media (example: USB memory sticks) will meet encryption standards currently FIPS140- 2.

**Strategy:**

Adopt a single GCSx CoCo authority

Deliver a single ISMF and set of security policies

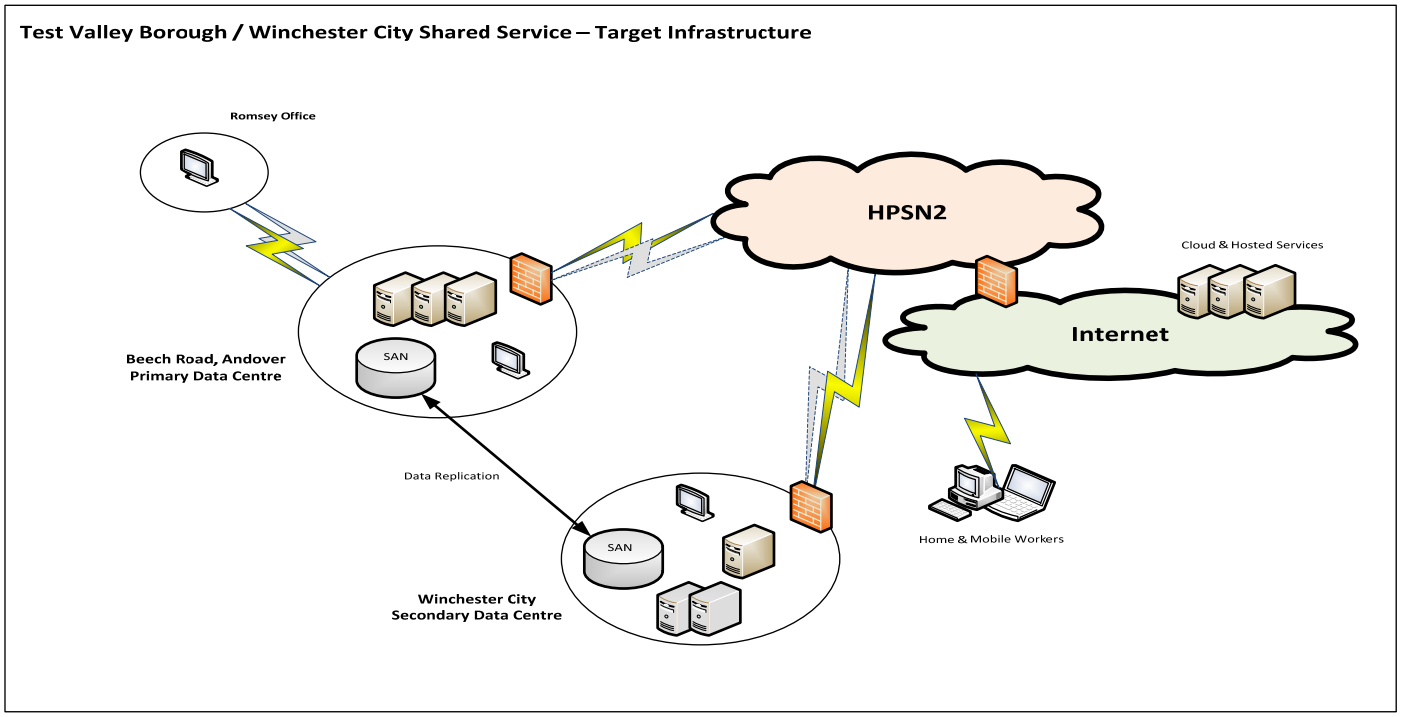
Utilise Cisco ASA firewalls as standard (or GCSx compliant equivalent)

**Projects:**

Open firewall rules to allow open inter-site data exchange

## 3.10 Target Infrastructure

The schematic below illustrates a high level view of the target infrastructure by the end of the 3 year period of this strategy. It demonstrates a completely rationalised design based on the primary/secondary data centre model discussed above with WAN/Internet connectivity via the HPSN.




## 3.11 Integrating New Partners

The design of the Active Directory will be such that new partners can join the Shared Service and exiting partners can leave without losing their “sovereignty” or having to rebuild their directory.

The following minimum standards will apply and preparation to meet the prerequisites would need to be funded by any future partners. These must include the following:

- Microsoft AD of version 2003 or above (2008 will become the standard in the medium-term)
- The latest standard of GCSx code of compliance
- A commitment to connect to the shared service via the HPSN network with appropriate firewalling
- A commitment to utilise the single Internet gateway and associated tools
- Agree to comply with the various standards and principles detailed within this strategy

### 3.12 Customer Access

This strategy will support the Customer Service ambitions of both TVBC and WCC by meeting the requirements of the business underpinned by a high performance and highly available infrastructure.

The IT Strategy will support the objectives of both partners and as an example that of WCC:
Transforming Winchester – Customer Access Strategy 2011 which aims to provide:-

- Customer choice
- Quality service
- Reduced delivery cost

With the wide range of services provided by the Council customers won't always use the same channels to contact us. This will change depending on the type of enquiry, some things can be reported without the need to speak to someone, and others will need a conversation.

The strategy will help us to be flexible and meet the increasing needs and expectations of our customers across a variety of access channels ranging from the traditional contact methods:

- post
- telephone
- face to face
- email

Through to the developing and emerging channels which include:

- website, information and self service
- mobile technology – SMS text, apps and mobile web
- automated telephone technology
- social media – Twitter, Facebook
- Internet including external interactive websites

**Strategy:**

Adopt a common approach towards both partner ambitions to deliver Customer Excellence

Ensure sustainability of service and effective IT systems to enable Customer Services at both Council's to achieve agreed service level agreements (SLAs)

**Projects:**

Deliver sustainable and effective Customer Service tools and systems

Meet project timescales agreed to deliver corporate transformation

### 3.13 Electronic Documents and Records Management

An effective EDRM system is an essential element to the lifecycle of corporate documentation and information. Using a corporate standard folder structure (also known as the file plan) it is possible to maintain and control storage capacity, document versioning, de-duplication, document retention and security. This also enables business processes by using workflow that is integrated into line of business applications (where supported by a business case to do so). By considering the impact of the aforementioned benefits financial savings can be achieved through higher productivity and resource management.

Based on individual business cases it is preferred to retain the business function data and documentation within the Line of Business (LOB) application where security, business process and lifecycle retention is managed specifically to that functional requirement.

Corporate documentation and information should be retained in a corporate system that manages the information lifecycle.

Where the need exists to integrate multiple systems together it is necessary to use Enterprise Search capability (also known as Federated Search). This would support particular business functions such as Freedom of Information (FOI) searches.

Where a business case exists data and information (e.g. shared policies) can be collaborated across partners that will assist in the de-duplication of data and effort.

**Strategy:**

Ensure that Line of Business document management remains cost effective and fit for purpose

Indentify a shared Enterprise Search facility that will support the partnership

Enable a system(s) that support the Freedom of Information requirement

Deliver supportable and sustainable ERDMS solutions that enable business transformation

Reduce bespoke in-house development to promote supportability and sustainability.

**Projects:**

Maximise the capacity and benefits of the Microsoft Enterprise Agreements by introducing SharePoint EDRMS solutions for both partner

Implement more ‘out-of-the-box’ technology to deliver and enhance business capability and capacity.

End of Document