

CORPORATE ICT STRATEGY UPDATE

DATA CENTRE MRU RELOCATION AND CORPORATE ICT STRATEGY UPDATE

1 INTRODUCTION

This brief update document is designed to inform Cabinet on the progress of key areas of Herefordshire Council's Corporate ICT Strategy. It covers the following initiatives:

- Community Network Upgrade (CNU)
- Virtualisation Project
- Standardisation Project

2 COMMUNITY NETWORK UPGRADE (CNU)

2.1 Background

The Community Network Upgrade (CNU) project was initiated in response to a failing and limited Council network infrastructure. The contract was awarded to Siemens to provide a partially managed network consisting of the replacement of existing connections and equipment, a monitoring service to ensure operational running and sub-contractor management of network connections.

The contract was split into two parts:

1. A replacement of the existing network involving a complete ground-up redesign to build in resilience and performance. This would involve linking all schools and Council corporate properties across the County in a single voice and data network.
2. The operational running of the network including monitoring post-completion of the replacement programme.

The project entered closure in 2007 with most sites (excluding Moore House and Bath Street) being transferred onto the new county wide infrastructure.

The current operational contract with Siemens expires in March 2010.

As part of the Crookhall Report into Herefordshire Council's ICT financial and contractual governance arrangements an action was raised as follows:

10 - "Consideration be given to the suggested action in respect of establishing value for money in relation to the community network, and an action plan taken to CMB."¹

¹ Source: "Independent Review of Herefordshire Council's ICT Financial and Contractual Governance Arrangements" (Crookhall Report) by Ian Crookhall, 09/11/2007, page 42, action item vii.

Further information on the subject of this report is available from
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SOCITM Consulting (SOCITM) were subsequently engaged to independently review and benchmark the contract between Siemens and Herefordshire Council for what is known as the Community Network Update (CNU) which was awarded to Siemens following the European Procurement procedures, in 2005.

The SOCITM report concluded that:

“The current contract with Siemens is reasonable value for money in terms of the costs and charges. However, we believe that there is scope to improve the value for money if the Council is prepared to involve Siemens at a more strategic level, and to more fully exploit services the Council has paid to have installed.”²

The current contract with Siemens expires in March 2010. Socitm recommended that scoping and procurement for a re-tendering of the contract begin in October or December 2008 at the latest.

2.2 Actions Agreed

Progress on these actions was addressed at Cabinet through the Supporting Governance Improvement report (27th March 2008) whereby a report was requested once the actions in response to the SOCITM recommendations had been agreed by Joint Management Team (JMT). These actions were agreed 10th July 2008.

Key actions and progress are summarised below. Further detail on the actions can be found in the background paper CNU Follow-on Actions.pdf.

Ref	Name	Actions	Status
A00	Strategic Engagement	<ul style="list-style-type: none"> ▪ Engage Siemens in a more strategic manner. <ul style="list-style-type: none"> ○ Review meetings with Deputy Chief Executive. ○ Share draft roadmap of upcoming projects with Siemens. ○ Work with Siemens to identify quick wins for Herefordshire Public Services. 	In Process
A01- A03	Select New Supplier	<ul style="list-style-type: none"> ▪ Engage independent consultancy to <ul style="list-style-type: none"> ○ Gather requirements across the Council and PCT ○ Operate OJEU compliant tender process 	In Process
A04	Exit Strategy	<ul style="list-style-type: none"> ▪ Work with Siemens and the selected independent consultancy to formulate an exit strategy from the current Siemens contract. ▪ This is required to ensure any existing risks identified by Socitm in their independent report are mitigated. 	Awaiting Start

2.3 Risk Management

The following risks on the Council’s corporate risk register will be partly mitigated by this project:

² Source: “Community Network Update - Review and Benchmarking – Executive Summary”, by Socitm Consulting’s Terry Street, 18/12/07, page 6 point 2.3.1.

1. **CR4 Organisational Improvement and greater efficiency** - The inability to provide critical services due to the failure of the ICT networks: *This project would see the re-letting of the existing managed service contract to take account of the greater levels of reliability and robustness required by the Council by the greater reliance on ICT systems to deliver benefits to Herefordshire.*
2. **CR28 Organisational improvement and greater efficiency** - Deliverable benefits from Herefordshire Connects not realised: *This project would see the re-letting of the existing managed service contract to take account of the greater levels of reliability and robustness required by the Council by the greater reliance on ICT systems to deliver benefits to Herefordshire.*
3. **CR29 Organisational improvement and greater efficiency** - Both Data Centres are in leased accommodation, are near capacity, plus there are environment issues such as power and fire suppression that need to be addressed. Loss of data centres will affect delivery of all services: *The fourth phase of the data centre is inextricably linked to the scope of the new contract moving forward and will be included in the requirements and tender process.*

3 VIRTUALISATION

3.1 Background

The server virtualisation project was created in response to the following emerging situation within ICT Services identified as a critical project under the Corporate ICT Strategy.

- The authority runs approximately 245 computer servers that hold applications and data used across all directorates and departments. The expected life of a server is around five years. Past this age it is more expensive to obtain hardware warranties, more difficult to source replacement parts and the costs of maintenance increase in both monetary terms and staff time.
- Historically, when new applications have been required by Directorates, servers have been bought if required. However, no provision has been made to replace these servers after 5 years. At least 100 of those still in use are past 'end of life' or over five years old.
- To replace these servers with physical computer hardware would represent an enormous cost to the authority. Conversely, not do anything about the situation could lead to further hardware failures putting the council's internal and public services at risk.
- Additionally, if these servers are not within warranty and a failure occurs there is no guarantee that any data can be recovered or services restored.
- Service continuity plans have been developed following approval of the Council's business continuity plan and further actions have been approved by Joint Management Team (JMT) to further refine these taking into account the prioritising of critical services requiring the most rapid system recovery. However, this is a recent initiative and historically this has not been taken into account by relevant

departments. As a result none of the current systems have disaster recovery with the exception of Academy for Revenues and Benefits and the new social care system, Corelogic. This means that in the event of losing a data centre, hardware would have to be ordered, operating systems and applications installed and new storage space procured and configured. This would take a minimum of 10 days.

3.2 What is 'virtualisation'?

Technology has moved on and rather than simply replace computer servers with more hardware every five years, ICT Services have begun to invest in something called server virtualisation on behalf of the authority.

This allows many different virtual servers to be run on a pool of physical computer servers with no loss in functionality or speed. It has the following advantages:

- Hardware requirements are reduced; therefore savings can be made in heat, power consumption, air conditioning bills and data centre space. Indeed, adopting this technology has enabled ICT Services to operate the data centres beyond their anticipated capacity up until now.
- Costs are reduced; there will be a requirement to replace fewer physical servers in the future.
- Disaster recovery; currently only two business applications, Academy and Cedar, have proper disaster recovery procedures and hardware in place. By virtualising servers and splitting the pool of servers across the data centres we can provide disaster recovery in the event of us losing a data centre.
- Provisioning times decreased; current arrangements lead to longer lead in times when Directorates are implementing new systems. With virtualisation, servers can be provisioned very quickly. In addition, servers specification can be changed to accommodate more users or increase performance in real time, rather than having to purchase additional hardware.
- Reduced management and administration - the focus within Technical Services is on maintenance of hardware because of age. With virtualisation, these resources can be used to increase the quality of service to the organisation.
- Environmental impact; power consumption would fall and there would therefore be improvements in the council's carbon footprint in line with GEM standards.
- Data centre relocation costs and disruption to business will be significantly reduced as we will be moving virtual not physical servers. The downtime for all departments will also be significantly decreased.

3.3 Update

The virtualisation project is well underway to complete the migration of 133 servers by April. This includes the provision of full disaster recovery for the applications that run on these servers.

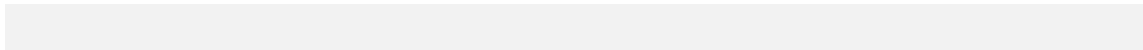
It is estimated that the projected lower power consumption will lead to decreased electricity

bills of around £20k per annum and achieve a carbon reduction of around 160 tons per annum. This will significantly contribute to the authority's target of 180 tons per annum.

3.4 Risk Management

The following risks on the Council's corporate risk register will be partly mitigated by this project:

4. **CR4 Organisational Improvement and greater efficiency** - The inability to provide critical services due to the failure of the ICT networks: *The project would reduce the risk of service failure through the provision of a robust and fit-for purpose platform from which to deliver applications including the ability to recover from a serious incident.*
5. **CR28 Organisational improvement and greater efficiency** - Deliverable benefits from Herefordshire Connects not realised: *The project is mitigating this risk by providing quicker, more cost effective and more reliable servers to support the Connects applications. Cost of the programme is planned to be reduced through the utilisation of the virtual server infrastructure.*
6. **CR29 Organisational improvement and greater efficiency** - Both Data Centres are in leased accommodation, are near capacity, plus there are environment issues such as power and fire suppression that need to be addressed. Loss of data centres will affect delivery of all services: *This project will mitigate some of this risk by allowing those applications that are virtualised to recover more quickly from a serious incident meaning decreased loss of productivity for the organisation.*
7. **CR30 Organisational improvement and greater efficiency** - Legacy systems out of support with vendors, and on old hardware. Compounded by CR28 Benefits from Connects e.g. Cedar: *This project will provide a more cost effective and reliable way of ensuring those legacy systems which must be retained can be done so.*



4 STANDARDISATION

4.1 Background

Another critical project identified by the Corporate ICT Strategy was driven by the need to begin to resolve the issues facing the authority around its computer estate:

- There are around 2200 computers in the authority (excluding schools). The age of these ranges from 9 years to 1 month.
- Over half of these machines are below the recommended specification to run the software installed on them. The speed at which applications run means reduced productivity leading to increased support calls and increased cost in upgrading machines.
- Over half these machines use older power supply units (PSU's) and processors. As technology has advanced newer computers consume up to a fifth less power.
- Most Directorates replace PCs in an ad-hoc fashion, meaning that the Council cannot take advantage of economies of scale and bulk purchase.
- Most computers are replaced after a hardware failure, meaning the need for a new machine has become service critical. This places additional pressure not only on the service but on ICT Services.
- There is no consistent refresh policy for computers. For example, some services replace computers every 2 years; whilst other services have computers that are 9 years old. In some cases the service areas that would benefit from the increased productivity are those that cannot afford to replace them.
- There is no common operating system or version of Microsoft Office across the Council due to the decentralised control of replacement.

4.2 What is Standardisation?

Quite simply, standardisation aims to reduce costs, improve the quality and performance of the computers within the authority to enable employees to focus on delivering services by selecting a single supplier of computer hardware.

The project aims over four years to replace the Council's computers, taking advantage of new technology, decreased costs and the purchasing power that only centralised control can bring.

The programme of replacement will concentrate on those areas with the greatest need, i.e. the most out of date hardware or slowest computers.

4.3 Update

At the beginning of the financial year (2008/09), budgets for computer replacement were centralised from Directorates into a single budget under the control of ICT Services and monitored by the Head of Financial Services. This produced a central budget of £500k per annum. Immediately, £200k was removed from this budget and offered up as savings to

contribute towards procurement efficiencies of which Cabinet has already been notified.

The remaining £300k per annum will be used to replace the computers across the Council.

After a process of competitive tender, Dell have been selected as the partner with which we shall work to provide equipment and services to deliver a four year refresh cycle to Council offices. Our commitment to working with Dell as a partner has meant that we have been able to get an even better discount on equipment purchased for the Council and LEA schools in Herefordshire.

We have achieved significant reductions in the cost of a single PC (41%) and in the cost of a single laptop (36%), while maintaining or exceeding current equipment specifications.

The project aims to replace around 300 computers and move to a single operating system and Microsoft Office version by the end of this financial year and has already started a process of identifying and upgrading or replacing computers. The remaining computers in the estate will be scheduled in for replacement over the next four years.

4.4 Risk Management

1. The following risks on the Council's corporate risk register will be partly mitigated by this project:
2. **CR4 Organisational Improvement and greater efficiency** - The inability to provide critical services due to the failure of the ICT networks: *This project will allow the rapid provision of computers in the event of a serious incident involving the loss of a building. Standardisation means staff will find it easier to relocate and start using computers at other sites.*
3. **CR28 Organisational improvement and greater efficiency** - Deliverable benefits from Herefordshire Connects not realised: *This project will allow the new applications delivered by Connects to increase productivity and realise benefits by providing quicker, more reliable computers to the end users.*