

Information and Communications Technology Strategy

Report of the Chief Fire Officer

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1 Purpose of Report

This report sets out proposals and recommendations to enter into negotiations with Shropshire Council to review options to enter into a shared services arrangement to secure improvements to the Service's Information and Communications Technology (ICT) infrastructure. The shared services arrangement, if approved at a later date, will make effective use of the proposed ICT reserve to support migration to the Council's new wide area network to underpin the Service's ICT Strategy for the next 3 to 5 year period.

The issues discussed are complex. This report endeavours, therefore, to act as a summary overview, with more detailed information available on request.

2 Recommendations

To address ICT deficiencies, and to optimise opportunities to do so as an integral element of the Shrewsbury Fire Station/Headquarters refurbishment programme, it is recommended that the Fire Authority:

- a) Authorise officers to enter into formal discussions with Shropshire Council for the purposes of:
 - i Developing a detailed business case, which sets out the benefits, full costs and budget implications, arising through the potential option to migrate to the Council's ICT network; and
 - ii Ensure the business case adheres to Government shared services guidance.¹
- b) Note the observations set out at exempt agenda item 15a;

¹ <http://www.communities.gov.uk/publications/localgovernment/rethinkingservicedelivery3>

- c) Request that officers present the business case to the next meeting of the Fire Authority on 15 June 2011 for full consideration;
- d) Agree a special exemption, under D1 of the Fire Authority's Standing Orders relating to Contracts, from the requirement to obtain tenders on the grounds of urgency (details of which are set out at section 6 of this report); and, if agreed
- e) Authorise the placement of an order to Shropshire Council for the provision of a dedicated 1Gb circuit between Shirehall and the new Headquarters building; and
- f) Approve, as a one-off payment, the use of £31k set-up costs from monies to be allocated to the ICT reserve to support recommendation e) above, with additional revenue costs of £8k to be met from existing ICT budgets.

3 Background

The Fire Authority's Strategy and Resources Committee, at its meeting on 17 March, agreed to:

- a) Recommend to the Fire Authority that officers move some £300,000 from other related budgets into a new Information and Communications Technology (ICT) improvements reserve budget, on closing the 2010/11 accounts; and
- b) Task the Chief Fire Officer to report back to the Committee at each meeting on improvements to the ICT infrastructure.

The recommendation a) will have been considered at item 6 on the agenda for this meeting.

The current ICT infrastructure, comprising of local and wide area networks (LAN and WAN) has grown in response to Service demands over the last thirteen years. During this time, there has been continual investment, but, such is the emergent and dynamic nature of ICT, that there has not, unfortunately, been a coherent, overarching strategy, driving each development. Consequently, the networks have developed into a number of disparate systems, which has started to compromise their overall effectiveness. A major contributory factor to this stymied approach is, in part, due to the earlier expectation that the national FiReControl and Firelink projects would remove a significant ICT burden from the Fire Authority. With the recent cancellation of the FiReControl project this burden has now fallen back onto the Authority.

The FiReControl project was originally scheduled to equip all of the Service's 23 fire stations with new 'station end mobilising equipment' and supporting networks this summer. With the demise of the national project the responsibility now falls to the Authority to provide and maintain a robust and resilient network (something that cannot be achieved effectively with the current legacy network). Officers have recently made a formal submission for central government funding to address this burden, with a decision not expected from Government for a further 6 to 9 months.

The management and support of the networks has become cumbersome and time-consuming, as it involves trying to patch together disparate systems. The user experience is also affected in terms of trying to work through the complexities of the different systems, an extremely time-consuming and inefficient use of time.

The constraints of the current arrangements manifested themselves most significantly in 2010, when the Service endeavoured to locate staff off-site to temporary accommodation at Hafren House and the TA Centre, Shrewsbury. The relocation has led to severe voice and data network limitations, impacting on the Service's ability to deliver an efficient and effective service. In addition, the recent integration of the new interim command and control system (with its superior functionality) has been problematic due to the reliance placed upon an aged, low-speed WAN to carry high-speed data. The current network setup also exposes the Service to a high degree of risk associated with complex system interdependences, something a new network conforming to modern generation industry standard technology would mitigate.

In brief, the point has now arrived where the Service's ICT infrastructure requires a radical overhaul. A modern, fully-integrated network infrastructure will reduce increasing levels of risk and deliver benefits, including direct cost savings associated with integrating the command and control system (such as the reduction in the number of communication bearers). Indirect savings will also be realised with increased productivity, whereby processes are more efficient and streamlined as a result of integrating data, information systems and reporting.

ICT has revolutionised the way services are delivered that were unimaginable even ten years ago when the network was first being developed (reflect for one moment on the developments in mobile phone technology since 2001). The imminent move to the newly refurbished Shrewsbury Fire Station / Headquarters building provides the perfect opportunity to overhaul and rebuild the ICT infrastructure, so that it delivers significant corporate value for future years. The draft ICT strategy outlines how this can be achieved, but there are now some key decisions required in order to develop a plan that aligns with the current building programme time scales.

4 Wide Area Network (WAN)

The existing managed WAN service is currently provided by an external (private sector) provider and utilises public internet based architecture with an overlay to provide privacy and data segregation. Whilst previously suitable, this service no longer provides good levels of support, visibility or value for money and offers (by today's standards) limited bandwidth.

A strategic review of the network was undertaken in 2010 and identified a number of issues that required urgent attention to modernise the network. This included a range of options for consideration, including purchasing services direct, for example, from British Telecom (BT) or solutions from other third party providers. All of the options considered use digital subscriber line (DSL) technology, as it is the most cost-effective network access for homes and small businesses. The problem with DSL technology is that the speed varies depending on a number of factors, causing bandwidth fluctuations, which in turn result in supply failing to meet demand. This is most notable in the evenings, impacting upon the ability of retained duty fire stations to make effective use of the network.

An alternative option considered involves entering into a shared services arrangement with Shropshire Council to share their recently deployed WAN. The Council has invested in a multi-protocol label switching network with unbundled exchanges to provide 27 points of presence (POP) around the County. This option would enable, via the Council's network, 10Mb connectivity to each of the Service's 23 fire stations. In addition, there would be a primary 1Gb circuit into Headquarters (with a secondary 100Mb circuit for resilience), and a 100Mb connection to Telford or Wem for disaster recovery.

Shropshire Council's network is a shared services initiative specifically intended for use by other public sector organisations and was recently procured through an exercise under the Office for Government Commerce (OGC) Buying Solutions Frameworks.

The Council WAN, as a shared service, is used by other public services (including West Mercia Police) and offers a number of significant benefits to this Service. The proposal presented by the Council would involve the Council managing the network service with a dedicated service desk number for reporting faults, escalation routes, performance reporting and network monitoring. There are similar arrangements in place with schools, where there is demarcation between their core network. This will be set out in a Service Level Agreement to detail all areas of the service and clearly stating responsibilities of all interested parties.

The medium to long-term benefits from this collaboration with the Council are anticipated to be:

- Voice services using IP telephony for free calls between all sites.
- The network meets the requirements of the Public Sector Network (PSN)² to be a single, more secure telecommunications infrastructure for the whole of the public sector. The aim of the PSN Programme is to enable the delivery of shared services.
- PSN opens up new opportunities for information sharing and increasing local and national participation, including Police, Ambulance and National Health Service.
- A higher level of security for the Service, achieving greater compliance with the Government's Security Policy Framework.³
- Increased ICT capability at all fire stations, enabling greater flexibility for mobile workers to reduce travel time and removing frustrations with the current slow network, leading to a more efficient use of staff time.
- As Shropshire is a rural county with 'not spots' where homes and businesses cannot access high-speed internet services there is potential for generating income (in part, through utilising the Service's fire station drill towers to improve wifi⁴ coverage).
- The Council's network provides hot-spots for wifi coverage in many parts of the County, as well as Herefordshire and Worcestershire. This offers the operational capability for the Service's fire engines to receive live updates to their on-board mobile data terminals (MDTs), whilst deployed almost anywhere within Shropshire, Herefordshire and Worcestershire. Currently MDTs are only updated when fire engines are parked within their host fire stations. The capability this offers through the proposed new shared fire control room infrastructure⁵ is that Shropshire Fire and Rescue Service (FRS) (and Hereford and Worcester FRS) could respond to incidents anywhere within the West Mercia area and receive live data on route. For example, if Shropshire FRS fire engines were deployed to a major incident in Kidderminster, it would be possible for Hereford and Worcester FRS to email risk information and building plans etc direct to the vehicle's MDT.

² <http://www.cabinetoffice.gov.uk/resource-library/public-sector-network>

³ <http://www.cabinetoffice.gov.uk/resource-library/security-policy-framework>

⁴ <http://en.wikipedia.org/wiki/Wi-Fi>

⁵ <http://www.shropshirefire.gov.uk/sites/alpha.shropshirefire.gov.uk/files/fra/2011-02-09-12-fire-control-project-update.pdf>

5 Local Area Network (LAN)

The Service's existing LAN is at the core of a 'hub and spoke' WAN topology and relocating it from the current to the new headquarters building is a significant operation that will affect all users within the organisation. The LAN in effect comprises of a number of hardware and software components with inter-dependencies that form the core basis of the ICT infrastructure.

Following a number of user workshops held by the ICT Manager to assess the organisation's ICT requirements it became apparent that the current infrastructure was not meeting the needs of staff, particularly at the retained fire stations. As an outcome of the workshops a full assessment has been undertaken to establish an ICT vision, with the following recommendations to be addressed to realise the vision and secure a 3 to 5 year ICT strategy:

- Server consolidation of the existing virtual environment and decommissioning of physical servers beyond their product lifecycle
- Storage consolidation to facilitate backup and recovery
- A comprehensive security review, including consistent security updates, firewall arrangements, data backup and recovery
- Upgrade of mail server to Microsoft Exchange 2010 for improved reliability and performance offering the potential for unified communication solutions
- Offsite email scanning and spam detection, so that emails are filtered before entering the network for improved performance and security
- Rebuild of Microsoft Active Directory, the central component of the Windows platform for managing the identities and relationships that make up network environments
- Redesign of core network switching layout for improved performance and implementing patch management and
- Desktop and application standardisation / centralisation to reduce costs and improve business efficiency.

The optimisation level of the current infrastructure is 'basic', which describes an environment that is extremely hard to control with very high desktop and server management costs, which has very little positive impact on the ability of the business to benefit from ICT.

6 Implications for Shrewsbury Fire Station / Headquarters Refurbishment Programme

The Service's legacy WAN and LAN are outdated and, as with most ICT systems older than 10 years, now due (although arguably overdue) for replacement. The imminent relocation to the new headquarters building presents both opportunities and risks. The opportunity to install a new WAN/LAN in parallel to running legacy systems, will maintain business continuity.

The risk will be to relocate aged systems from one building to another, with guaranteed disruption to ICT services, with the concern that some systems, once disturbed, may not be recoverable.

The opportunities to either migrate to a new network (that could, as an option, be hosted at Shirehall) or relocate legacy systems are, of course, time critical and must be carefully planned into the current build programme (Shrewsbury Fire Station/Headquarters Refurbishment Programme). The new build programme presents an ideal opportunity to rebuild and simplify components of both the WAN and the LAN. Doing this as part of the build programme simplifies an already complex activity and negates the need to move links and equipment that will become redundant fairly shortly after the move has taken place.

To maximise opportunities it is imperative to the build programme to upgrade the existing communications link between Shirehall to the existing Headquarters building, and divert the link to the new Headquarters building. This activity is time critical and involves the placement of an order to Shropshire Council for the provision of a dedicated 1Gb circuit between Shirehall and the new Headquarters building. The Council's MPLS network service provider requires a 12-week notification period to complete this task. The consequence of delaying placement of the order (by no later than circa 30 April 2011) may result in slippage of the build programme, which is likely to result in significant weekly penalties being incurred by the Authority. The cost for this link is £31k, with an additional revenue cost of £8k per annum.

The Service utilises an existing, albeit limited, (bandwidth) data link to Shirehall to support the management of payroll and human resource services (Resourcelink and SAMIS). Should the Fire Authority decide not to pursue a shared service arrangement with Shropshire Council, diversion of the existing link would still be required to maintain delivery of existing outsourced services into the new Headquarters. To do nothing is not an option.

The decision to migrate fully to the Council's shared services network is an important consideration, but is not imminently time critical to the same extent as the above discussed 1Gb link.

Taking the opportunity to carry out the above task now in preparation for the move into the new Shrewsbury Fire Station / Headquarters building would offer far greater control of the infrastructure and would enable system interoperability and integration that would, in turn, give a greater return on the ICT investment.

7 Shared Services Agenda

The Communities and Local Government (CLG) Minister responsible for fire and rescue services, Bob Neill MP, has recently been explicit in stating⁶ that, whilst spending decisions will be decided locally by individual Fire and Rescue Authorities (FRAs), he believes that savings should be achievable through, amongst a number of areas, shared services. The Minister's recent comments echo those made in a letter⁷ to FRAs last year, concerning the Spending Review outcome, which indicated that potential savings through shared services / back office functions should be considered.

The shared services agenda pre-dates the current Coalition Government and was notably set out as a public sector strategy within the Government document: *Rethinking Service Delivery Volume Three: Shared Service and Public/Public Partnerships (2006)*.⁸ The document defines shared services as 'collaboration, partnering or other joint working between local authorities or other public sector bodies to organise the commissioning, provision or delivery of services jointly. A common example is the joint provision or commissioning of 'back office' or support services'.⁹

Acting as a reference point, the document assists local authorities to develop shared services, joint working arrangements and partnerships with others in the public sector. The publication provides a Public / Public Pathway, focussing on the key stages in establishing a partnership, and detailed information on the activities to be undertaken at each step of the way.

Officers from the Service are fully cognisant that developing shared services and working in partnership with others in the public sector is not risk-free and requires a formal development process that is similar in many ways to developing public / private partnerships. The document referred to above provides a pathway for both the Fire Authority and Shropshire Council to achieve a win-win solution, the community being the prime beneficiaries from the partnership. The document sets out detailed steps that are necessary to build an achievable partnership that is sustainable and delivers trust and results.

Last year Government published: *Putting The Frontline First: Meeting The Local Government Challenge (March 2010)*.¹⁰ The report was in response to tightening local authority budgets and intended to develop quickly proposals to identify how councils can be made more efficient without affecting high quality frontline services. Within the report shared services were advocated between local public services, together with the use of OGC Buying Solutions to procure ICT.

⁶ <http://www.communities.gov.uk/newsstories/fire/1862268>

⁷ Letter from Bob Neill MP to Fire and Rescue Authorities, sent 20 October 2010, <http://www.communities.gov.uk/documents/fire/pdf/1746318.pdf>

⁸ <http://www.communities.gov.uk/publications/localgovernment/rethinkingservicedelivery3>

⁹ <http://www.communities.gov.uk/documents/localgovernment/pdf/151096.pdf> (page 12)

¹⁰ <http://www.communities.gov.uk/documents/localgovernment/pdf/1487350.pdf>

8 Procurement Implications

Whilst an unmistakable message from Government exists to operate on a 'shared services' basis between public services, the means to achieve such arrangements requires more detailed consideration.

The procurement implications arising from the shared services proposal are set out in exempt report 15a. Members are requested to consider the contents of report 15a prior to arriving at a decision in respect of the recommendations set out at section 2 of this report.

9 Proposed Strategy

To address ICT deficiencies, and to optimise opportunities to do so as an integral element of the Shrewsbury Fire Station / Headquarters refurbishment programme, it is recommended that the Fire Authority:

- i) Authorises officers to enter into formal discussions with Shropshire Council for the purposes of:
 - a) Developing a detailed business case, which sets out the benefits, full costs and budget implications arising through the potential option to migrate to the Council's ICT network; and
 - b) Ensures that the business case adheres to Government shared services guidance;¹¹
- ii) Consider the observations set out in exempt report 15a;
- iii) Request that officers present the business case to the next meeting of the Fire Authority on 15 June 2011 for full consideration;
- iv) Agree a special exemption, under D1 of the Fire Authority's Standing Orders relating to Contracts, from the requirement to obtain tenders on the grounds of urgency (details of which are set out at section 6 of this report; and, if agreed,
- v) Authorise the placement of an order to Shropshire Council for the provision of a dedicated 1Gb circuit between Shirehall and the new Headquarters building;
- vi) Approve, as a one-off payment, the use of £31k set-up costs from the allocated ICT reserve to support recommendation v) (above), with additional revenue costs of £8k to be met from existing ICT budgets.

¹¹ <http://www.communities.gov.uk/publications/localgovernment/rethinkingservicedelivery3>

10 Financial Implications

Should the Fire Authority wish to do so at a later date, the full cost and budgetary implications to support entering into a shared services agreement with Shropshire Council for the provision ICT network services will be set out in the detailed business case to be brought before Members at the next Authority meeting in June.

The financial implications arising within this report amount to £31k set-up costs to support installation of a 1Gb data link. It is recommended that this cost be taken from monies allocated to the ICT improvements reserve budget, to be formed on closing of the 2010/11 accounts (subject to approval having been given by the Fire Authority to the recommendation from the Strategy and Resources Committee, which will have been considered at item 6 on the agenda for this meeting). Revenue consequences (£8k) arising from this report are containable within existing Service ICT budgets.

11 Legal Comment

Members are requested to consider the observations set out in report 15a, which will be presented in closed session, prior to arriving at a decision in respect of the recommendations set out at section 2 of this report.

12 Equality Impact Assessment

Although an Initial Equality Impact Assessment has not been completed at this stage, one will be completed to supplement the business case, should the Authority decide to proceed as recommended.

13 Appendix

There are no appendices associated with this report.

14 Background Papers

This report should be considered in conjunction with exempt report 15 on the agenda for this meeting.