

EAST HERTS COUNCIL

THE EXECUTIVE – 23 JULY 2013

REPORT BY EXECUTIVE MEMBER FOR ECONOMIC
DEVELOPMENT

ICT INFRASTRUCTURE INVESTMENT

WARD(S) AFFECTED: ALL

Purpose/Summary of Report

- **To estimate the cost of ICT Infrastructure for East Herts Council over a 7 year period, assuming that a decision to share services is agreed. To identify the saving in projected capital spend compared to the cost of investing in infrastructure as a single authority over the same period. To seek changes to the year on year capital funding currently agreed for ICT in line with the revised, 7 year investment schedule.**

<u>RECOMMENDATIONS FOR EXECUTIVE:</u> that	
(A)	the findings of the ICT Health check and limitations in the current ICT Infrastructure referred to in section 2 of this report, be noted;
(B)	the new investment programme for ICT Infrastructure 2013/14 to 2020/21 of £860,943 as set out in Essential Reference Paper C, be approved; <i>(Note that this investment assumes that a decision to share services with Stevenage Borough Council is agreed and represents a saving of £37,000 on the investment costs for East Herts as a single authority)</i>
(C)	that £400,000 of the £630,000 estimated saving on ICT Infrastructure over 7 years be set aside to fund new line of business applications in 2013/14 and 2014/15.

1.0 Background

- 1.1 A business case, proposing that East Herts Council and Stevenage Borough Council share ICT (and other) services is recommended to Executive in the Shared Services Business Case report on this Executive agenda. A core part of the proposal is to implement a shared data centre with Stevenage Borough Council which will house the majority of the ICT infrastructure required by the two authorities.
- 1.2 This report sets out the estimated cost of ICT Infrastructure for East Herts Council should a decision to share services be agreed and compares that estimate to the cost of investing in infrastructure as a single authority over the same seven year period. A seven year period has been selected because the estimated asset life for ICT hardware varies between five and seven years and projecting costs over a seven year period, therefore, allows the costs over a whole investment cycle to be assessed.
- 1.3 This report does not attempt to identify the future need to invest in ICT business applications. A programme of work to review the Council's key line of business applications will be undertaken as a separate exercise. If shared services for ICT go ahead it is envisaged that there will be financial benefits to both partners where there is a case for joint investment in applications. However, the shared services business case does not rely upon these savings which are currently assumed to be part of a second phase of shared services work.

2.0 The Current Infrastructure

- 2.1 The Council has experienced problems with the resilience of ICT systems over the past eighteen months. On occasion users have experienced prolonged periods, sometimes lasting more than a working day, when core systems such as the network itself or e-mail have been unavailable. A health check report was commissioned by the Head of People, ICT and Property Services to try and understand the root cause of the resilience issues. The report was produced in October 2012 and the conclusions from an infrastructure investment perspective are summarised as follows:

- ▶ A lack of standardisation around the server estate in terms of types of server and server architecture
- ▶ Two thirds of servers are beyond the manufacturer's recommended end of life
- ▶ Some good storage solutions have been purchased. However, a tiered storage solution, building upon some of the equipment currently in use would deliver more efficiency and improved end user experience
- ▶ Firewalls, switches and other hardware supporting the network are fit for purpose
- ▶ Strong software products to support the core infrastructure are in place. However, due to the large number of different products in use there is evidence of under utilisation and a need to rationalise products moving forward, thus reducing cost and also providing ICT staff the opportunity to increase their knowledge across a smaller range of technologies and products

2.2 The health check report also drew attention to issues related to the Council's MPLS (Multiprotocol Label Switching) system managed under contract. This is the system that manages the Council's multi-site data network and connection to the internet. A series of major incidents associated with the MPLS has been the major cause of systems downtime in the Council over the past year impacting upon the availability of IT systems in all Council offices and upon telephony services. Although the MPLS has been robust lately there are nonetheless remaining underlying risks associated with the system that have been reported to the Information Technology Steering Group.

2.3 The scope of the health check report did not include client devices such as PCs, thin clients and lap tops. In this regard, there is a mixed picture. A number of recently purchased thin client devices should continue to serve the Council well for another three to five years. However, the majority of PCs and some laptops are old and may not be suitable once new technology has been rolled out.

2.4 East Herts Council has purchased an enterprise agreement for Microsoft software which enables it to implement the Windows 7 operating system and Office 2010 (Outlook, Word, Excel, Power Point) for all users. Although the Council decided not to

purchase a subscription arrangement or software assurance on these products so can not deploy more recent versions of Microsoft products without incurring further expenditure, there is no obvious business need to do so until at least 2015/16, the date the Council assumed that the enterprise agreement will need to be renewed.

2.5 The exception to the above is that East Herts will need to purchase additional licensing from Microsoft to enable deployment of Virtual Desktop Technology (VDI) in a Microsoft environment at an estimated cost of £7,000 per annum. This additional revenue cost can be absorbed within the 2013/14 ICT revenue budget.

3.0 Proposed Investment

3.1 A detailed estimate of the cost of investing in new technology for East Herts Council is set out in **Essential Reference Paper B**. A total of £466,978 is required during 2013/14 increasing to £898,356 to 2020/21. The unit costs/prices quoted for the purposes of this report are those achieved by Stevenage Borough Council during their recent procurement exercise involving similar technology.

3.2 The key elements of the new infrastructure are as follows:

- ▶ New server hardware based around blade technology
- ▶ Continued investment in virtualisation technology
- ▶ Replacement of “thin client” technology with “Virtual Desk Top (VDI) technology
- ▶ A tiered storage solution
- ▶ An improved more resilient networking solution reducing the risks associated with the Council’s MPLS

3.3 The estimate assumes that certain types of infrastructure asset do not require replacement immediately. Where this is the case, these assets are identified as requiring replacement in future years, in line with their estimated asset lives.

3.4 In some cases, it is recognised that more work will need to be undertaken in due course to understand the corporate need for certain types of equipment, such as laptops or tablet devices. For the purposes of this report, a planning assumption that the

Council will continue to support a broadly similar number of portable devices overall has been made.

3.5 As well as funding for hardware and software, an estimate of project implementation costs has also been made:

- ▶ A technical lead with considerable experience of the new technologies being proposed will be required to support implementation and to transfer knowledge to existing staff. This role is critical to the success of the project
- ▶ A project manager will be required to manage what will be a complex project. The success of the project will be dependent upon good communication and coordination with Council staff and managers as technology is rolled out. There are as many risks associated with deployment, training and business continuity as exist from a technical perspective
- ▶ It is critical that staff participate in implementing the technology to ensure they are able to support the technology once live. Backfilling will be required to ensure that staff are able to focus upon implementation and acquiring new skills

3.6 The costs and savings of investing in infrastructure as part of a shared service are set out in **Essential Reference Paper C**. The key differences are as follows:

- ▶ The cost of investing in and replacing some of the hardware items in the data centre will be shared equally with Stevenage Borough Council
- ▶ The costs of implementing the project will be shared equally with Stevenage Borough Council

There are also many elements of expenditure which remain the same. For example the investment in storage and servers will not change reflecting the unchanging demand for such services from East Herts.

3.7 The overall impact of investing in infrastructure as part of a shared service is that investment will reduce by £47,413 over the seven years of the programme. It should be noted that the

business case for shared services assumes initial additional expenditure on a shared ICT service desk and to fund common infrastructure tools such as anti-virus software that would not be required as a single authority. These costs are absorbed within the saving set out above. A number of the revenue savings assumptions in the shared service business case are reliant upon this investment being made available.

4.0 Implementation

- 4.1 It is likely that a new infrastructure for the Council could be fully implemented within nine months following a decision to proceed, including procurement. No detailed plans have been drawn up at this stage as the decision to shared services is pending. However new infrastructure is to be implemented, a clear project initiation document will need to be produced for thorough discussion with all stakeholders. This will need to cover the upgrade to Windows 7 and Office 2010 which should be undertaken as part of the infrastructure upgrade and move to a virtual desktop.
- 4.2 It is possible that the deployment to a virtual desktop may begin as soon as September or October for some users should a decision to share services be agreed. The extent to which early deployment in East Herts will be possible will depend upon the performance of systems over the network link to the data centre in Stevenage. It is critical that no deployment move forward until this aspect of the solution has been thoroughly tested. Full testing can not take place until the link has been deployed.
- 4.3 Given that investment in new infrastructure is required, irrespective of the decision to share services, work will begin shortly involving all services to inform detailed plans. The following strands of activity need to take place in particular:
- Discussions with Heads of Service to enable a deployment schedule to be put together. Essentially ICT need to understand whether there are particular times in the coming months when services are unable to support the roll out of new technology
 - A training needs survey will be undertaken for all staff to

gauge the level of support they will require once Windows 7, Office 2010 and Exchange 2010 have been implemented. The survey will also seek to understand whether staff would prefer e-learning or more traditional training support

- Work will be undertaken to ensure there is a thorough understanding of all the key applications used in different parts of the Council

4.4 Detailed plans for deploying the new solutions will be informed by valuable insights that ICT have gained from visiting the London Borough of Ealing who completed a successful roll out of VDI technology approximately twelve months ago.

5.0 Current Funding

5.1 The East Herts Council capital plan sets aside funding to support investment in core ICT equipment each year until 2015/16. If it is assumed that the year on year funding for ICT infrastructure were to be continued until 2020/21 then funding for infrastructure can be summarised in the table below.

ICT Infrastructure Funding

Exp Code	Scheme	Slippage (£s)	Funding per year (£s)	Total Funding To 2020/21 (£s)
71374	Network, Servers & Storage	30,000	30,000	270,000
71414	Hardware Funding	36,400	110,000	916,400
	Total	66,400	140,000	1,186,400
Additional Funding	Infrastructure Integration			63,740
	Shared Services Investment			500,000
TOTAL INFRASTRUCTURE FUNDING				1,750,140
Estimated Total Spend To 2020/21				860,943
Recommended Applications Funding				400,000
Total Surplus Funding 2013/14 - 2020/21				489,197

In addition to the on-going capital funding of £140,000 per annum, a further £500,000 was agreed during 2012/13 to support the implementation of shared ICT services. There is also a further one off budget of £63,740 for hardware integration.

5.2 Based upon the programme for investing in infrastructure over

seven years identified in **Essential Reference Paper C**, the current level of funding over the same period would generate an under spend of £889,197. The year on year impact upon funding is set out in the table below.

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Total (£s)
Current Funding	770,140	140,000	140,000	140,000	140,000	140,000	140,000	140,000	1,750,140
Estimated Spend (Ess Ref Paper C)	454,978	5,000	35,000	35,000	35,000	154,950	67,009	74,007	860,943
Surplus/(Deficit) on Infrastructure	315,162	135,000	105,000	105,000	105,000	-14,950	72,991	65,993	889,197
Proposed Funding for Applications	200,000	200,000							400,000
Cumulative Surplus	115,162	50,162	155,162	260,162	365,162	350,212	423,203	489,197	489,197

5.3 It is, therefore, recommended that capital funding for ICT infrastructure be reduced over the next seven years in line with the revised estimates set out in **Essential Reference Paper C**, but that £400,000 of the estimated under spend be set aside in 2013/14 and 2014/15 to fund additional investment in line of business applications. This would still deliver a saving of £489,197 overall. There is likely to be a need to invest in new applications for the Council if ICT is to be used to support and facilitate change. There may also be opportunities to share line of business applications with Stevenage Borough Council to deliver more resilient and cost effective applications support. Harmonising ICT applications, where appropriate, in this way will require up front investment.

5.4 A review of ICT equipment that will no longer be required has been undertaken should proposals to invest in new equipment be agreed. This has identified that £87,215 of previous expenditure on infrastructure will need to be written off. This relates mainly to expenditure in 2008/09 and 2009/10. £54,806 relates to thin client technology and reflects the fact that the technology was adopted relatively late by the Council, not that it was unsuitable when purchased. In contrast if the proposal in this report to implement Virtual Desktop Interface technology is agreed the Council will be adopting the technology much earlier and will ensure that business benefits

result for many years to come. Every attempt has been made to reuse existing hardware before writing off equipment. All equipment will be disposed of appropriately.

6.0 Implications/Consultations

6.1 Information on any corporate issues and consultation associated with this report can be found within **Essential Reference Paper 'A'**.

Background Papers

None

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