



**NORTH HERTFORDSHIRE DISTRICT
COUNCIL**

INFORMATION TECHNOLOGY STRATEGY

2015 - 2020

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1 INTRODUCTION

1.1 **The aim of this Information Technology (IT) Strategy is to establish priorities for the future development of, and investment in, an information technology-based environment which will support the Priorities for the District, the business needs of the Council, its Members and Officers and provide access for the public to on-line services.**

1.2 The IT Strategy will create an environment that provides the means to:

- create effective and efficient business systems and processes
- communicate and collaborate with colleagues at anytime and anywhere
- support colleagues to meet their business objectives
- operate in a well-supported and secure environment

2 BACKGROUND

2.1 In the last ten years, the Council as a whole has reduced its revenue expenditure by some £11.5M and the implementation of new technology to streamline processes and reduce the number of staff required to deliver services has contributed towards this total. This has been achieved through a combination of implementing propriety software solutions and writing in-house software solutions and Applications, which work on Android and Smart Phone devices.

2.2 There is little sign that this trend will stop and the list of major projects for the Authority for 2015/2016 already shows that IT involvement will be required in 10 out of 22 projects listed.

2.3 In addition, the Team is at the forefront of seeking new solutions to further reduce costs and improve productivity, for example in enabling Members to access and annotate Committee papers using tablet technology rather than printed documents and the Council's stated aim to bring about channel migration and promote more self help and use of on-line forms by customers freeing up more staff time and increasing output.

2.4 The Team does this against the background of stringent security requirements from the Cabinet Office, which are often at variance with the stated aims of the Department for Communities and Local Government around more flexible working. These requirements, which also show little sign of abating, represent a considerable challenge.

2.5 In setting out the strategy for the IT Service for the next five years it has to be recognised that this is a rapidly changing environment and priorities have to be regularly reassessed as new requirements are imposed on user departments and technological advances are made. This is therefore a document that will need to be kept under review and updated at appropriate times.

3 THE TEAM

3.1 The structure is shown at Appendix 1.

3.2 The Cabinet Member with responsibility for Information Technology is the Finance & IT Portfolio Holder, Councillor T.W. Hone.

3.3 Direct line management responsibility rests with the Corporate Director for Finance, Policy & Governance, Norma Atlay and the Head of Revenues, Benefits & IT, Howard Crompton.

- 3.4 Overall operational management of the Team rests with the Information Technology Manager, Vic Godfrey who keeps in touch with IT industry developments, considers their value to the Council and liaises with customers and acts as the Authority's software licence controller to ensure that all software loaded on to the Council's network is properly and adequately licenced.
- 3.5 The Council is fortunate that it has highly skilled and experienced IT staff, which work in two Teams; the Technical Services and Business Teams.
- 3.6 **Technical Services Team**
- 3.6.1 The IT Technical Services Manager is responsible for the day-to-day operational development and support of the Infrastructure and Corporate Applications. This role liaises with Business Managers across the authority to develop efficient ways of working with technology.
- 3.6.2 The Technical Services Team has in-depth knowledge of the network infrastructure and the applications, which form the backbone of the Council's services.
- 3.6.3 The team possesses specialist networking and infrastructure skills, and has been responsible for many application development projects and database administration work, which enhance and maintain the Council's many application systems, which over the last three years has saved over £220,000 by writing in-house solutions.
- 3.6.4 The Team will continue to seek to develop in-house solutions where appropriate. This will depend on the availability of proprietary solutions, how long a solution will take to develop and whether it is likely to require constant upgrades depending on the volatility of on-going legislation relating to it.
- 3.7 **Business Team**
- 3.7.1 The IT Business Manager's role is to advise and ensure information management is complied with in line with Data Protection, Freedom of Information and Environmental Information legislation. The role has responsibility for the Help Desk Team, oversees the Asset Management and controls for all the IT hardware and works with Service Managers to develop Data Sharing Protocols for the sharing of personal and/or confidential data with external organisations.
- 3.7.2 The Business Team takes the lead on first and second line support on the Help Desk, Information Management, including the Council's document management system, Freedom of Information requests and Data Protection compliance, Data Sharing Protocols and Asset Management.
- 3.7.3 The Team also specialises in application of the National Land and Property Gazetteer, Local Land and Property Gazetteer and the Council's GIS system.
- 3.7.4 The Business Team will also play a key role in delivery of the Mission Statement by working with Heads of Service, Corporate Managers and Senior Managers to advise on possible solutions for their business needs.
- 3.8 The Business Team attend regular Data Protection and FOI training events to ensure their skills and knowledge are up-to-date with legislation changes. The team are also all Portable Appliance Testing (PAT) qualified so they carry out a support function to ensure that all new hardware is tested and labelled accordingly to show the equipment has passed

the Electrical Test and the Team is also responsible for ensuring that all home working hardware is audited and recalled for PAT testing within the legislation timescales.

3.9 As part of the Microsoft Enterprise Agreement the Council receives a number of Microsoft Training Vouchers each year which is used by the Technical Team to attend Microsoft Technical Courses.

3.10 The skills and experience within the Team make it well placed to deliver the work programme envisaged for the next five years.

4 TEAM ETHOS

4.1 The IT Mission Statement enforces the commitment to support the Council's strategic priorities of:

- Promoting sustainable growth
- Working with our Communities
- Living within our means

4.2 The Team's Mission Statement is:

To work with customers to implement, develop and maintain technology solutions that will help them to achieve their service aims and objectives and the Council's strategic priorities.

4.3 The Team's objective is to enable customers to develop and implement solutions and work with customers to seek solutions that meet their needs, with the final decisions being taken by the customer. The Team will provide help and advice for customers to make informed choices on the best solutions available to them, which could include in-house developments as well as proprietary products and which can be supported on the Council's network and meet all security requirements.

4.4 Service Departments will be responsible for ensuring that a fully costed Business Case is produced, which meets corporate and/or business needs and for ensuring that any benefit realisation is monitored and met.

4.5 The intention will always be whenever possible to find solutions to business needs, not obstacles to prevent those solutions.

4.6 Customers are responsible for appointing system controllers for application systems run by them to maintain the systems, create users, create passwords, produce output etc. that can be managed from the user interface.

4.7 IT will be responsible for database administration and any output that requires programming or system development skills.

Help Desk

4.8 Help Desk support for customers has been greatly enhanced by the implementation of Spiceworks, which is an application that enables the Help Desk to track the progress of calls and which also automatically advises customers of any change in status of their calls. This has reduced the number of "progress chasing" calls to the Help Desk, freeing up time to actually deal with the content of the calls.

- 4.9 Help Desk hours have been extended to 8.00 a.m. to 6.00 p.m. and are complemented by the “Out of Hours” service for any major problems that may occur outside of the hours covered by the Help Desk.
- 4.10 The service intends to continue to promote reporting of Help Desk calls directly by customers through Spiceworks, so that the customers are able to track the progress of their calls without recourse to IT staff directly.
- 4.11 The table below shows how the number of Help Desk calls is increasing and therefore how the Team is dealing with these more efficiently.

<u>Type</u>	<u>2013/2014</u>	<u>2014/2015 to 26/02/2015</u>
Incidents	4,008	6,739
Service Requests	642	996
Feature Requests	56	66
<u>Totals</u>	<u>4,706</u>	<u>7,801</u>

- 4.12 For clarity definitions of the above are:
- **Incidents** – A request to fix something that is not working for whatever reason
 - **Service Requests** – A request for a service, product or feature that is available to other NHDC customers
 - **Features** - Projects, upgrades, products or features that are not yet provided but have a business need and/or would enhance business capability if they were researched, developed and provided
- 4.13 The significant increase in Incidents being reported is a reflection of the increased use of IT in general day-to-day work and will include problems with passwords and access rather than just applications that are not working as expected.
- 4.14 One factor which can often cause a spike in Incidents being reported is when new applications or upgrades are rolled out throughout the Council. This supports the view that such applications should be thoroughly tested on a smaller sample of the work force before being released universally and this should be part of any testing plan.
- 4.15 The Team will develop and publish a survey, which will ask customers of the Help Desk for their feedback in order to improve future service delivery. A latest survey was carried out in July 2015, which provided very positive feedback and can be seen at Appendix 2.

Prioritisation of Project Work

- 4.16 At its meeting on 15 October 2013, the Council’s Senior Management Team approved a scheme to prioritise project work for the IT Team based on the project’s support for one of the three strategic priorities, requirements from legislative changes, invest to save projects, audit requirements etc. and the amount of effort required by the Team compared with the expected impact.
- 4.17 This has helped the Team to give more realistic feedback to customers on when resources for any particular project are likely to be available and how long it is likely to take to bring the project to a conclusion.

- 4.18 Statistics on the number of customer-led projects are only available since Spiceworks was implemented in October 2013. These are:

October 2013 to March 2014

Total projects	62
Total completed	57
Total still open	5

April 2014 to February 2015

Total projects	96
Total completed	76
Total still open	20

- 4.19 These figures do not include the IT led projects, which form part of the IT Service Plan each year and typically number more than 30 such projects each year.
- 4.20 Often these projects, whether customer-led or initiated by IT will take up to many months to complete and require a substantial amount of pre-planning and research.

5 WHERE THE SERVICE IS NOW

- 5.1 The Team currently manages and maintains:

- Over 300 different applications from large Corporate Solutions like IWorld, Idox down to SID in-house written application.
- Dell Network Switches and WatchGuard XTM 535 Firewalls
- Servers and Types:
 - There are 10 Physical Dell PowerEdge R710 Servers running within the Live Service hosting 120 Virtual Servers
 - There are 8 Physical Dell PowerEdge R710 Servers installed for the DR Service which host 118 Virtual Servers
- SAN:
 - There are two dual Equal Logic PS 6510 SANS running within the Live Service
 - There is a single Equal Logic E02J SAN running within the DR Service
- Desktops – Currently there are 248 Dell Workstations
- Laptops - There are currently 76 Laptops in operation comprising:
 - Latitude E5500
 - Latitude D520
 - Latitude D610
 - XPS M1530
- Tablets – At February 2015, the Council has a very limited stock of Tablets, however there is a Pilot scheme in place to promote their use with Members and further demand is expected from Officers
 - Dell Venue 8 – Android Tablets
 - HP TC1100 Tablets
 - Motorola MC9596 Handheld Devices – Car Parks

- 5.2 The replacement value for all the hardware above is £942K

- 5.3 In recent years the Team has successfully managed the move from 87 large individual Servers to 10 virtual servers and the relocation of the server farm from Town Lodge to a new facility in the DCO.

- 5.4 This period has also seen a large move towards Officers using their own personal devices for home working. This is not possible where staff access sensitive Department for Works and Pensions data, in which case only Council provided equipment can be used. There has been a major review of Laptop devices in the last 18 months which has seen the requirements for this type of technology drop from 149 down to the current level of 76. With Android Tablet technology coming to the forefront of the business world, the IT Service has started to pilot this technology, which also includes Tablet Mobile Device Management (MDM) which controls the device, sets profiles, restricts customers loading any Application they choose and allows for the Tablet to be remotely monitored or wiped if lost or stolen.
- 5.5 In the last three years the Team has had several notable achievements including the following:

2012/2013

- Review of Shared Working Arrangements – SBC/East Herts
- Soft market test of possible outsourced solution – Serco
- IT Restructure
- Data Links/Broadband
 - Move NTL Broadband from Town Lodge – DCO
 - Installation of 6 remote site Data Links
- Active Navigation – Data Compliance review
- Building Control – On-Line
- Implementation of Cookies Policy
- GIS – Your Nearest
- Introduction of Data Sharing Protocols
- GIS Acolaid Upgrade
- Web Site refresh following Redesign in 2009/2010
- Websense Email and Web Filter
- Upgrade of Citrix App Centre
- PSN CoCo Compliance

2013/14

- Setting of Email Quotas
- Joint project to roll out the replacement of Blackberry Technology with Good App
- Windows 7 Roll-out – Upgrade from XP
- Desktop Refresh Programme
- PSN CoCo Compliance
- Firewall Upgrades
- Disaster Recover – Rehearsal and Procedures documented
- Full Hardware Asset Audit
- Web Accessibility Audit

2014/15

- Full Citrix Upgrade
- Email Encryption – Egress
- PSN CoCo Compliance
- Upgrade of MS Exchange to 2010
- Upgrade MS Office Products to Office 2010
- MS SQL Upgrade – from 2003 – 2008/12

- North Herts Museum and Hitchin Town Hall Redevelopment – IT Consultancy, WIFI, Data Infrastructure, Telephony
- IT Restructure
- Supporting the Implementation of replacement CRM Application
- Implementation of replacement Content Management System
- Implementation of GovTech on-line updating of Revenues data for customers

5.6 The work on potential shared services in 2013 helped to show the following:

- The Council's IT Team was highly skilled and cost effective
- The Council's IT Infrastructure was advanced and did not need substantial further investment
- The projected five and ten year spend for the Council was predicted to be less than if it did enter into a Shared Service
- The flexibility of the in-house Team was seen as a benefit.
- The in-house skills available to develop Android and Software Applications was advanced
- Since 2013/14, in-house developments have saved the Council over £220k by writing new solutions in-house compared to buying propriety solutions.

5.7 In recent years the IT Service has been subject to soft market testing for outsourcing and has been through an extensive review to business case stage to test whether it should enter into a Shared Service arrangement with East Hertfordshire District Council and Stevenage Borough Council. In both instances, it was not considered cost effective to go down either of these two routes.

5.8 In line with the Council's Medium Term Financial Strategy, the Council will explore options for Outsourcing and Shared Services where these can show financial benefits to the Council with no reduction in quality.

5.9 Aligned to this, the IT Service has undertaken work on behalf of other Councils, which has generated around £90K in income in the last four years. The service will continue to offer its services externally provided this does not affect service delivery to in-house customers.

5.10 The IT Service will also look to utilise the extra capacity of the server room at the DCO with a view to "renting" rack space to other external organisations.

5.11 In summary, the service is now in a position where it has established its new virtual server farm at the DCO, restructured the Team to be better focussed on its primary objectives, established a stable infrastructure, re-organised its Help Desk function, established a process to prioritise projects, complied with the latest Government Security standards and is now ready to move the service forward to the next stages of its development.

6 PRIORITIES MOVING FORWARD

6.1 Key areas that need addressing in the next five years in no order of priority include but are not restricted to the following:

- Infrastructure, software and equipment
- Green implications
- Disaster Recovery
- Project Management
- The Council's Strategic Priorities
- Channel Shift

- Office Accommodation
- Supporting Flexible Working and Accessibility for Members
- Assessing emerging technology
- Information Management

6.2 In establishing its priorities for the next five years, the following has to be taken into consideration where appropriate:

- Does the solution meet customer requirements?
- Can the solution be accommodated on the Council's network?
- Does the solution meet the Cabinet Office security requirements both current and future?
- Does the solution meet legislative requirements particularly around data retention and management?
- Is it more cost effective to devise the solution in-house, through a propriety application or outsource the solution?

6.3 **Infrastructure, Software and Equipment**

6.3.1 The current Infrastructure was procured over four years ago and there is a Capital investment to upgrade the Servers, SAN and Storage Blades within the 2015/16 budgets.

6.3.2 The Council has a Microsoft Enterprise Agreement (EA) which runs until March 2016, which allows the Council to upgrade to all the latest Microsoft Solutions that are currently within our EA. The intention is to migrate to Exchange 2013 and then carry out a further review of all the software Applications that use Microsoft Office Products with a view to utilising the latest versions of Microsoft Office.

6.3.3 As part of the PSA09 Framework Agreement, in March 2011 the Council entered into a fixed price contract for various Microsoft Solutions, e.g. Office, Exchange, Windows Operating System etc. under a 3 year contract with the option to extend each year for a further two years. The contract was extended protecting the prices of licences fixed under the PSA09 Framework until March 2016.

6.3.4 The latest Framework (PSA012) has been withdrawn, so there is currently no Framework agreement between Government and Microsoft to replace Government Businesses who come out of contract during the 2015/16 financial year. The ICT Manager represents the Council at various meetings to track the future of any new Framework and changes to any future costs. The Cabinet Office Procurement Team is currently in discussions with Microsoft to determine a way forward for this.

6.3.5 During 2015/16, the Council will take the opportunity to review the number of licences it requires, bearing in mind the reduction in the Council's workforce and within any new contract will be looking to further reduce licences and costs by using Open Source solutions.

6.3.6 For example, at February 2015 the Council has 20 Microsoft Project Licences at a cost of £10k p.a. In line with the intention to utilise Open Source solutions wherever possible, the Team has been evaluating a free product called ProjectLibre. A survey has been carried out of those customers who have a Microsoft Project Licence and several have been identified who no longer require this solution, supporting the need to review the number of licences the Council has for all its software solutions. A corporate wide evaluation of ProjectLibre will identify if the £10k licence costs can be saved

6.3.7 The table below shows the projected IT spend for the next five years to refresh equipment in line with the intention to sweat assets for the longest possible period and the aim to decrease the number of laptops in favour of desktop and Tablet devices where appropriate.

NHDC FUTURE ICT INVESTMENT COSTS 2015-16 TO 2019-20

		2015/16	2016/17	2017/18	2018/19	2019/20	Total £
		£	£	£	£	£	
Infrastructure	Dell Servers	53,000				64,500	117,500
	New Blade Enclosure	24,000				32,000	56,000
	Replacement SAN	110,000				110,000	220,000
	Core Backbone Switch	20,000	16,000		17,200	20,000	73,200
	Data Switch Upgrade	1,700					1,700
	Cabinet Switches - 4 Floors		15,000		18,000		33,000
	Security - Firewalls		10,000		13,500		23,500
	Back-up Diesel 40 KVA Generator (DCO)	15,000				20,000	35,000
	40 KVA UPS Device or Battery Replacement	7,000		20,000		7,000	34,000
Total: Infrastructure	230,700	41,000	20,000	48,700	253,500	593,900	
PC's, Laptops, Thin Clients	PC's - Refresh Programme	26,000	17,250	17,250	17,250	17,250	95,000
	Additional PC's - Support Home Working/OAP	13,000		12,937		12,937	38,875
	Laptops - Refresh Programme	6,000			5,500		11,500
	Tablets - Android Devices		7,500	7,500	7,500	7,500	30,000
	Other						0
	Total: PC's, Laptops, Thin Clients	45,000	24,750	37,687	30,250	37,687	175,375
Storage	Additional Storage	13,000		12,500		12,500	38,000
	Back-up Storage						0
	DR Set-up		89,500			25,000	89,500
	Total: Storage	13,000	89,500	12,500	0	37,500	152,500
Software	SQL Licence Costs		25,000	25,000	25,000	25,000	100,000
	Total: Software	0	25,000	25,000	25,000	25,000	100,000
Other	Virtualisation						0
	Crystal Reports						0
	Software Asset Management (SNOW)	13,000					13,000
	Security - Tokens, Encryption		8,000		12,000		20,000
	Total: Other	13,000	8,000	0	12,000	0	33,000
		301,700	188,250	95,187	115,950	353,687	1,054,775

6.3.8 The costs in the table above represent direct I.T. costs. In addition to these, in the 2015/2016 Capital Programme there is also a total of £173,800 of new and upgraded hardware and software costs for service related projects, including £64,000 for the provision of Audio Visual facilities in the Council Chamber.

6.3.9 The Council supplies its Officers with a mixture of desktop PC's, laptops and tablets. Requirements differ from Officer to Officer depending on the nature of their work, whether they are home workers and whether they supply any of their own equipment.

- 6.3.10 The Council encourages home working staff to use their own equipment where possible. This is in accordance with the Department for Communities and Local Government's strategy "Bring Your Own Device" (BYOD). Under existing rules this is not possible for staff in Revenues & Benefits who access Department for Works and Pensions (DWP) data as there is a requirement for this to be accessed only on Council owned equipment.
- 6.3.11 The Council will continue to provide equipment to those working at home who do not have or choose not to use their own equipment or who are affected by the DWP requirements; however this is restricted in terms of its accessibility to certain web sites, the use of personal email and the ability to download data or applications. The Council provides equipment to 24 staff for homeworking purposes.
- 6.3.12 There is a clear cost saving for the Council in promoting BYOD as there is no requirement to provide equipment and many Officers welcome the fact that they do not have to have two sets of equipment in their houses.
- 6.3.13 Laptops are provided to staff who generally work in several locations, however these are more expensive than desktop PC's, have a shorter shelf-life and are not recommended for prolonged daily use. For those reasons, the preference is to supply desktop PC's both in the District Council Offices and for those staff requiring Council equipment at home. The implementation of Citrix allows any Officer to access their network account from any desktop PC linked to the network or any home based desktop PC loaded with the Citrix client software, which generally negates the need for laptops unless there is a specific need to work in multiple locations.
- 6.3.14 IT will work with and discuss the individual requirements of Officers when it comes to the provision of equipment, including specialist equipment recommended by the Health & Safety Officer or Occupational Health Advisors. The intention would not be to prevent the allocation of a laptop, where this would be the difference between an Officer being able to work at home or not.
- 6.3.15 As part of the strategy to move to more "paperless" meetings, it is recognised that there may be an increasing need to supply Members and some Officers with tablets. It is difficult to assess what this need may ultimately be as the BYOD provisions also apply here and some Members and Officers may opt to use their own tablet devices.
- 6.3.16 To encourage Officers and Members to adopt the "paperless meetings" objective, IT will aim to develop and implement solutions, which will enable Officers and Members to manage their documents through the tablet interface and to be able to annotate and mark documents in real time.
- 6.3.17 IT will work closely with colleagues in Democratic Services and with Members directly to ensure that they have equipment which is suitable for their needs and to encourage the development of Paperless Meetings, which could result in considerable future cost savings. The budget for the printing of Committee documents is presently £40K per annum.
- 6.3.18 The provision of Citrix and its thin client technology has allowed the Council to "sweat" its desktop PC and laptop assets considerably longer than before Citrix was introduced. Typically now a desktop PC will last around eight or nine years before replacement, rather than three years previously. Laptops generally require replacement after 3 years. The intention would be to carry on with these refresh periods

6.3.19 Nevertheless, with 248 Workstations and 76 laptops plus the expected increase in tablet provision, a refresh programme is necessary and the following replacement costs are expected in the next five years:

Year	Desktop PC's	Laptops	Tablets
2015/2016	£8,625	£5,500	£12,500
2016/2017	£17,250		£7,500
2017/2018	£17,250		£7,500
2018/2019	£17,250	£5,500	£7,500
2019/2020	£17,250		£7,500
Totals	£77,625	£11,00	£42,500

6.3.20 The Council uses the following Government Frameworks and various Lots for procuring Hardware and Software:

- Pro 5
- Crown Commercial Services
- ESPO

6.3.21 The intention is to continue using Framework Agreements where possible to ensure that the Council is obtaining best value for money with its IT procurements.

6.3.22 Any specialist software, not available through a Framework Agreement will continue to be procured in line with the Council's Financial Regulations.

6.3.23 To further ensure value for money, the Council will continue to use Open Source software, where this meets the requirements of customers. Examples of Open Source software already used or about to be implemented include:

- AutoIT – A tool to screen scrape, enabling integration of applications
- Spiceworks – IT Helpdesk reporting and monitoring. A small fee is paid to remove advertising
- Project Libre – Microsoft Project replacement
- LZArc – Data compression / encryption
- 7Zip – Data compression / encryption
- bioPDF - Open Source / free to home users – we have purchased a licence at minimal cost for the whole authority. This allows the creation of PDF files, security, watermarking, keyword.
- UltraVNC - Remote access
- Paint . NET – Image manipulation software
- Notepad ++ - XML / text file manipulation
- .DIA – Visio diagram
- Toad for Oracle – Database IDE tool for manipulation of data
- PDF Info Editor – Manipulation of PDF files
- Various Open Source – Toolkits used to provide enhanced capabilities to in-house developments e.g. TIFPDF library, PDFSharp, Zip library, calendar control in use on room bookings – these are tools which are Open Source and provide RAD (rapid application delivery) so that the Technical Team does not have to create these controls/functions from scratch

6.4 **Green Implications**

- 6.4.1 The Council has always taken the green implications of its on-going IT Strategy seriously. In recent years the virtualisation and reduction in the number of servers has resulted in potential energy savings of £5,791 per annum. The savings in Co2 used amounts to:
- **Non Virtual** – 163,986 kWh = 88,139 kg CO2 = 88 Tonnes Co2
 - **Virtual Server Estate** – 84,096 kWh = 45,200 kg CO2 = 45 Tonnes Co2
- 6.4.2 This is almost a 50% reduction in CO2. The average CO2 emissions per household is 5.5 Tonnes.
- 6.4.3 Whilst the new server room at the DCO is too small to come under the provisions of the Eco Design and Energy Saving Products Directive, it was designed to maximise the most efficient use of the air conditioning units.
- 6.4.4 Halogen gas is no longer used in the server room and there are no hazardous substances present.
- 6.4.5 In addition, policies such as promoting BYOD and paperless meetings also have considerable green implications.
- 6.4.6 The technology adopted by the Council to facilitate home and remote working adds considerably to the reduction in the Council's carbon footprint by reducing the amount of travel that Officers have to complete in getting to and from the Council Offices.
- 6.4.7 The Council purchases energy saving devices when procuring equipment and will continue to do so.
- 6.4.8 The Council uses a specialist IT Disposal Company called Ecosystems I.T who are ADISA ISO9001, ISO14001 and ISO27001 accredited in accordance with the UK & EU WEEE Directive.
- ## 6.5 **Disaster Recovery**
- 6.5.1 The Council's Disaster Recovery strategy to date has been to utilise off-site facilities provided as an outsourced contract at premises close to Kings Cross Station in London. There was an annual revenue cost of £40,000 associated with this provision.
- 6.5.2 This required IT staff to spend one week each year testing the capability to bring back priority systems in the event of a disaster at the Council Offices.
- 6.5.3 Typically, it would take three to four days to recover the priority systems and the same time to restore them to the network following resolution of the disaster. Consequently, unless the network was likely to be out of commission for more than eight days, it was not worth invoking any Disaster Recovery provision.
- 6.5.4 In 2015/2016 the Council will cease to use the outsourced provision and instead build its own Disaster Recovery Centre initially based in Town Lodge, which will use mirror technology to synchronise the Disaster Recovery servers every hour with those in the Council Offices. The time to restore priority systems can be reduced from three to four days to around four hours.
- 6.5.5 All services will be restored within that time and as the processing power of the Disaster Recovery servers will initially be less than those at the Council Offices, a decision will be

taken in conjunction with the Strategic Emergency Plan on how many and which services should be made available depending on the nature of the disaster.

- 6.5.6 The Disaster Recovery Centre will be supported by a six hour stand-by Uninterrupted Power Supply to deal with spikes in power and a diesel generator to allow for a total loss of power.
- 6.5.7 The Council's longer term vision is to dispose of Town Lodge and to acquire premises within Letchworth Garden City for storage of documents, which are required to be retained but which do not require access on a regular basis. The intention is that documents that do require frequent access should be scanned and stored within the Council's Document Management System.
- 6.5.8 The acquisition of any such building also needs to be capable of housing the Disaster Recovery Server Room requiring the necessary air conditioning plant and fire retarding systems and be situated in a place which will minimise the communications costs between that building and the Council Offices. For these reasons, IT will work closely with other colleagues involved in the acquisition of any such building.

6.6 **Project Management**

- 6.6.1 The IT Team has a number of Prince2 Foundation and Practitioner qualified staff, who can manage projects of various sizes and complexity. Prince2 criteria will generally be used to manage projects but a common sense approach is adopted to determine the degree of compliance depending on the complexity, cost and potential risk associated with any project.
- 6.6.2 IT Project Managers will be allocated to projects based on an assessment of the complexity, associated risk and likely duration of the project based on an initial business case submitted by the customer.
- 6.6.3 Priority for implementation of projects will be determined by the criteria adopted by the Senior Management Team on 15 October 2013.
- 6.6.4 In accordance with the Project Management criteria adopted as part of the service@north-herts implementation, projects valued at over £50,000 will require authorisation by the Corporate Board and all acquisitions will be subject to the Council's Procurement Rules.
- 6.6.5 IT hardware and software must be purchased through the IT Manager or his designated deputy to ensure compliance with licencing requirements and to ensure that the Council's asset register, which contains costs of items and Insurance values is kept up-to-date.

6.7 **The Council's Strategic Priorities**

- 6.7.1 As previously stated, the IT Mission Statement enforces the commitment to support the Council's strategic priorities of:
- Promoting sustainable growth
 - Working with our Communities
 - Living within our means
- 6.7.2 Significant numbers of customer-led projects intended to meet these priorities require IT involvement and this is a major consideration when prioritising projects.

- 6.7.3 Customers have a role to play in ensuring that IT is involved at the earliest possible stage to evaluate any possible IT solution to ensure that it can be supported on the Council's network and meets all security requirements.
- 6.7.4 The final decision on any implementation will be that of the user department provided the criteria around network compatibility and security are met. IT will support customers in making that decision.
- 6.7.5 IT itself will contribute to the strategic priorities by ensuring that optimum value for money is achieved by maximising the life of assets, developing solutions in-house when this is the most cost effective option and supporting applications which promote channel shift and self-help through the Council's web site.
- 6.7.6 IT can also be used to contribute towards the Council's strategic objectives in the following ways:
- By continuing to use technology to reduce costs with the continuing support of customers
 - By exploring emerging technology to reduce costs and improve customer service
 - By continuing to work with the Communications and Customer Services Teams to develop the web site and implement more on-line forms to promote self-help by customers and on-line services
 - By continuing to work with customers to deliver technological solutions that deliver what customers want
 - By continuing to support flexible and remote working to provide staff with the solutions that work best for them
 - By continuing to develop solutions for Members that best meet their needs

6.8 **Channel Shift**

- 6.8.1 Channel Shift is a specific project being led by the Chief Executive through the Senior Managers Group. Considerable work has been done to promote this in particular by the provision of on-line forms and on-line payments. There is much work still to do.
- 6.8.2 IT will work with user departments and through the Chief Executive's Group to:
- develop with customers on-line forms for both the capture of data and updating of back office systems
 - find solutions where possible for data captured by existing on-line forms to update back office systems
 - Support the on-going enhanced functionality of the on-line payment system, e.g. to implement basket technology, order and pay facilities etc.
 - Support the implementation for the automatic capture of data and automatic updating of the back office system through on-line forms for the Revenues and Benefits service
 - Support the implementation of on-line reporting applications along the "My Council" model
 - Support the implementation of an e-Billing solution for Council Tax bills
 - Write App's for Android Tablet Usage, which support better access to services for customers. Examples are an App to enable dictated text to be transmitted over a secure line directly into the Council and an App to allow internal customers to report Help Desk calls from their mobile phones
 - Implement propriety App's for example to report noise nuisance

6.8.3 There are clear benefits for the Council and customers by taking this approach:

- Reductions in the number of customer contacts with Officers can result in either cashable efficiencies through a reduction in staff levels or non-cashable efficiencies by better use of the resources.
- Updating of back office systems from information supplied directly by customers will reduce the risk of inputting errors
- It will result in faster processing times benefitting customers in having their queries dealt with faster and the Council by updating systems and producing bills, invoices etc. in quicker time
- It will give customers the flexibility to report changes at a time that suits them

6.9 **Office Accommodation**

6.9.1 IT played an important part in the office accommodation project in 2010/2011, which resulted in the closure of Town Lodge and relocation of staff to the Council Offices.

6.9.2 This included both the promotion and provision of home working achieved largely through the implementation of Citrix and the physical IT requirements needed to the core infrastructure to accommodate the additional staff in a flexible working environment at the Council Offices.

6.9.3 This project also included the implementation of virtual servers, provision of Wi-Fi within the DCO and the relocation of other equipment in a newly commissioned server farm in the Council Offices.

6.9.4 Phase two of the office accommodation project will now require the further temporary relocation of staff from the Council Offices to Town Lodge and the Museum building for a period of around six months in the summer of 2016, whilst the Council Offices are being renovated. The migration of staff to Town Lodge is expected to begin in February/March 2016.

6.9.5 IT's involvement in this will be:

- Ensuring that full IT infrastructure is restored at Town Lodge and the Museum building to accommodate staff to include Wi-Fi provisions
- To support the Office Accommodation Strategy ensuring that as part of the refurbishment, access to the Council's network is available from fixed and hot desks, touch down points and through Wi-Fi provision in the newly refurbished Council Offices
- To be in a position to offer a Managed Service to prospective third party occupants of part of the newly refurbished Council Offices, should the Council decide to offer this
- To promote the take up of more flexible and home working through the provision of equipment and applications, which support this
- Subject to approval by Members, supporting the Strategic Priority of "Working with our Communities" by providing large screens in the Council Chamber for easier access to documentation during Meetings and audio files of meetings being available
- Subject to approval viable business case being established, supporting the Strategic Priority for "Living within our means" by providing more video conferencing equipment to help reduce the need to travel to meetings and facilitate face-to-face meetings with home workers.

6.9.6 The refurbishment of the Council Offices and recent changes in legislation has given an ideal opportunity to provide an audio visual facility for the recording of meetings, which can be made available on the web site to promote more openness in the decision making process and help with any matters of doubt over what was said at any particular meeting. The Council has agreed to proceed with this along with the provision of large screens in the Council Chamber for the display of maps and documents during meetings, which will be especially helpful to the Planning Committee. Because of the portability of this technology, IT will implement this before the move out of the Council Offices in 2016, will then remove it for use at a temporary site and will re-install the facility as soon as the Council Offices are reoccupied.

6.9.7 Two portable audio devices will also be available for the recording of meetings, which take place away from the Council Chamber.

6.10 **Supporting Flexible Working and Accessibility for Members**

6.10.1 Flexible Working including home working is now well established within the Council.

6.10.2 There are currently 336 staff employed by the Council and 289 of these have a home working capability.

6.10.3 Utilisation of this is consistent with an average of 79 staff logged in from home at any one time

6.10.4 To support the Office Accommodation Strategy and in particular the wish to free up space within the Council Offices to enable this to be let to third parties, further provision of flexible and home working needs to be encouraged, whilst not deviating from the Council's stated position that this is entirely optional for staff that qualify, and provided that the needs of the business are met.

6.10.5 There are a number of staff who have a home working capability but do not use this on an "as able" basis but more a "fixed" date basis. Rather than work at home when diaries allow, there is a tendency to work at home at a fixed time, say every Wednesday. At the same time, they retain a desk within the Council Offices.

6.10.6 There is a need for the Council to be clearer in its policy intention in this regard, but more home working could be encouraged by IT investigating the possibility of better conference calling functionality.

6.10.7 Following the recommendations of the Overview & Scrutiny Task and Finish Group on the use of Citrix, IT will continue to work with Members to identify IT solutions, which meet their individual requirements.

6.10.8 The practice of auto-forwarding emails used by a number of Members causes additional difficulties:

- Failure in some regards to comply with Data Protection requirements, particularly around the retention of personal data
- Difficulties in complying with Freedom of Information requests
- Requirement for Members to reply from their own personal email accounts

6.10.9 IT will provide the option for Members to access their Council email accounts directly from a mobile device such as a mobile phone or tablet without the need to go through the dual authentication process using GOOD Technology. This will remove the need to auto-forward

emails. The ability to auto-forward emails will then be withdrawn requiring Members to use their Council email account only to avoid the difficulties detailed at 6.10.8 above.

6.10.10 IT will work with GOOD Technology to further enhance the capability of Members to access Committee papers through a tablet device and have the ability to annotate and save these in their own network drives with a single sign on facility. This will support the intention to reduce printing costs, whilst still enabling Members to annotate and make notes as appropriate.

6.10.11 The same capability will also be available for Officers should they wish.

6.11 **Assessing Emerging Technology**

6.11.1 Keeping up-to-date with emerging technology is a key skill of IT professionals and this Council is well advanced in terms of identifying and implementing technology that will support and improve the services that the Council delivers.

6.11.2 It is essential that this continues and that the Council has the flexibility to approve expenditure where this can be used on an “invest to save” basis to implement technology, which will in the short, medium or longer term realise cash savings.

6.11.3 Primary responsibility for this rests with the IT Manager and other members of the Team will support this by recognising opportunities when they arise.

6.11.4 The use of Cloud technology is an area that will need careful consideration. Whilst this is commonly now used by many businesses, there are restrictions as far as Local Authorities are concerned in terms of security requirements and cost.

6.11.5 Current Cabinet Office security requirements make it difficult for Councils to utilise Cloud Technology for the storage of personal or sensitive data. However, this does not preclude using this for data that is not-personal or sensitive

6.11.6 The cost implications also need careful consideration. In addition to any storage fees for using a Cloud facility, there are the additional communication costs of sending and retrieving the data, which have to be weighed up against the cost of storage on-site.

6.11.7 The majority of uptake for Cloud storage for data that is not sensitive, personal or confidential to date has been adopted by larger Authorities, where volumes make it more cost effective as part of their Document Management and Business Continuity of storage of data.

6.11.8 The cost to have a Live Streaming 1G Data Link from the Hosts Cloud back to a physical building will be in the region £45k p.a. at today’s prices. It will also require an additional link for resilience which again is in the region of £45k p.a. based on a 3 year contract. Total estimated costs for 3 years will be around £270k. Unless these costs come down considerably, this is unlikely to be a workable solution for this Council.

6.11.9 IT is progressing a Web Map Layers project to enhance the Corporate Web services and various App’s which are being written by the in-house ICT Team. This will allow pictures and coordinates to be available if required to support calls and enquiries from the public.

6.11.10 The GIS system will be used to provide digital mapping not only to Services within NHDC, but also to partners and to customers.

6.11.11 Other emerging technology that will be assessed includes:

- Additional Shareware Software Solutions
- New emerging Desktop and Tablet Technologies

6.11.12 This is of course an area that is constantly reviewed and will continue to be so.

6.12 **Information Management**

6.12.1 Information Management is a key area for the Council to tackle.

6.12.2 To achieve this, the following needs to be addressed:

- Unnecessary retention of data
- Management of documents to prevent multiple copies of the same document being retained
- Better access to documents using tablets for Officers who require access away from their desktops
- Better enforcement of the use of encrypted emails for sending personal and sensitive data

6.12.3 The Council retains vast amounts of data both within its major application system such as Revenues and Benefits, Planning, Environmental Health & Licencing, etc. and also within network drive folders managed by individual Officers and a small number of Members.

6.12.4 Failure to retain this data in accordance with the Data Protection Principles, can lead the Council open to enforcement action (enforcement notices, audit, penalty notices and prosecution). This also makes complying with Freedom of Information and Subject Access Requests more difficult to manage and puts a strain on the Council's data storage capacity. The unnecessary retention of documents (whether physical or electronic) also has a significant and increasing storage cost implication for the Council.

6.12.5 There is reluctance amongst some Officers to delete obsolete data on a "you never know when it may come in useful" basis or for purposes of possibly justifying a particular action some time in the future, or because the task never gets to the top of their "to do" list. This is a practice that the Council has to reverse.

6.12.6 A start has been made on this with the introduction of quotas within Outlook and on the G: and H: Drives. Work has also taken place using Active Navigation to remove duplicate copies of documents on the network. As Information@Work is used more and more for the storage of information, its built-in Destruction Module can also be utilised to manage the deletion of documents as they pass their retention period.

6.12.7 To improve this still further, it is intended to develop and implement the following:

- Roll out to the remaining service areas of the Council's Document Management System, Information@Work
- The implementation of the Destruction Module within Information@Work
- Continued use of Active Navigation to identify duplicate and obsolete documents within the network drives
- Development of applications to be used as project libraries for project based work
- Continued roll-out of Email Encryption software to all customers

- 6.12.8 The roll out of Information@Work to the entire organisation will also assist should the Council decide to outsource its out-going mail to an external provider. This will ensure that any mail is automatically stored with Information@Work at the point it is sent for printing.
- 6.12.9 The Council needs to work towards a position where duplicate data is removed and retained in a more controlled environment such as project folders using technology such as Basecamp and Information@Work rather than the G: and H: Drives. Pilot schemes are being developed to assess the achievability of these aims.
- 6.12.10 The Council has also to be more robust in its insistence on the use of encrypted emails for the sending of personal and/or sensitive data. The facility exists but is not always used. The potential financial penalties that could be imposed for data protection breaches of this kind make it impossible for the Council not to require its enforcement.
- 6.12.11 There also has to be better management of the requirement to agree Data Sharing Protocols in accordance with the Council's Data Assurance Policy where data is shared with third parties. This should be a requirement built into any business case supporting the exchange of data in any form with third parties.

7 RISKS

7.1 The Council, along with most businesses today is highly dependent on its IT delivery and consequently there are risks associated with the management of any IT Service. These can be divided between risks to the delivery of the service and those linked to the service itself.

7.2 Risks to the delivery of the service

<u>Risk</u>	<u>Probability</u>	<u>Impact</u>	<u>Mitigation</u>
Heavy work loads	2	3	Staff encouraged to work flexibly and work loads are reviewed regularly
Staff retention	2	3	Restructure recently completed. Every effort made to ensure work is shared evenly in terms of complexity and variety
Failure to keep up-to-date with the changing environment	1	3	Senior Managers have access to industry publications. IT Manager attends HertsLink meetings. Staff regularly attend Microsoft training events

7.3 Risks linked to the Service

There are a number of IT related Risks on the Council's Risk Register, which are regularly reviewed and updated. The risks identified are:

- Risks relating to Data Protection
- Compliance with Freedom of Information Act, Environmental Information Regulations and Local Government Transparency Code
- Software Patch Management
- Disaster Recovery
- Security through the Public Service Network (PSN)
- Cyber Risks

7.4 Full details of these risks are identified at Appendix 3

8 CONCLUSIONS

8.1 The IT Service's intention is to deliver benefits through the use of technology for its stakeholders:

8.1.1 For Customers

- By developing on-line self help solutions, available 24 hours per day
- By making it easier to access information through the web site
- By making accessible, safe and secure services available
- By developing Applications promoting services which are scalable for mobile devices
- By supporting Customers to develop solutions, which improve service delivery to customers
- By making it easier to pay for services on-line
- Make the systems more reliable, easier to use, quick and responsive

8.1.2 For the Council

- By using technology to reduce costs and deliver value for money – effective, efficient and economic IT solutions
- By using technology to make Officers more productive
- By managing data to reduce the risks of non-compliance with Data Protection requirements
- By procuring hardware and software solutions at the best prices
- By utilising in-house skills where appropriate
- By promoting green friendly solutions
- By making it easier for customers to pay for services on-line
- By providing profitability i.e. commercialisation, offering rack space to outside organisations etc?

8.1.3 For Members

- By supporting equipment that best meet their individual needs
- By developing solutions that better use technology such as paperless meetings
- By providing support to Members where required

8.1.4 For Officers

- By working with Customers to develop solutions that benefit their services
- By providing equipment that best meets their needs
- By promoting better use of flexible working
- By improving data storage capabilities to make it easier to manage data
- By providing the degree of IT support required to enable other services to become more profitable, changing the ways in which we can seek external partners/deliver services differently
- By increasing the ability of IT to configure and support in-house solutions.