ICT Asset Management Plan 2013

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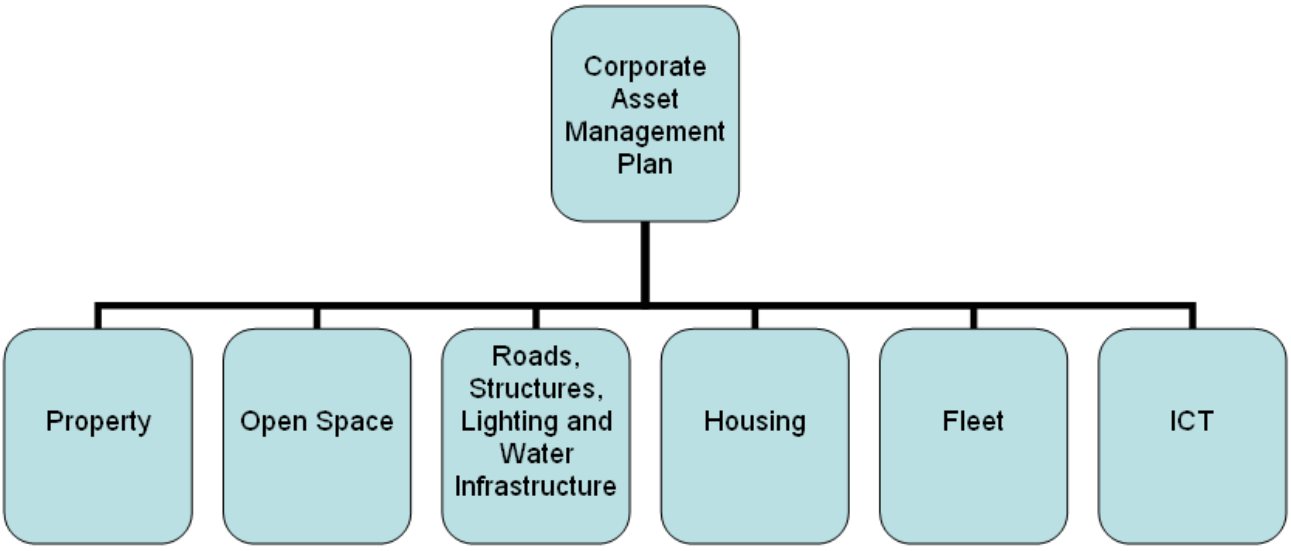
1. Background

1.1 Role of Asset Management

1.1.1 The Council recognises that its assets are a significant and valuable resource to delivering efficient and effective services and in achieving the vision, aims and objectives of the Council. In order to maximise the potential from its assets they must be aligned with the organisation's strategic corporate goals and objectives and managed in an active, effective and efficient manner.

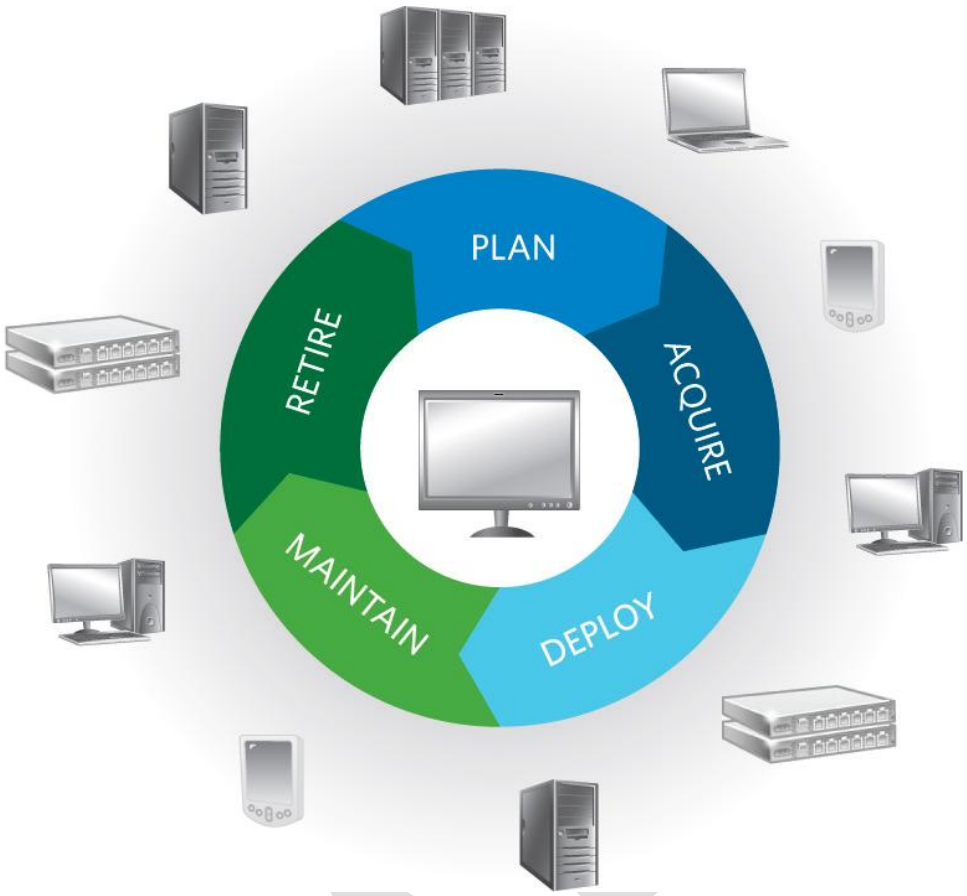
1.1.2 The Council's first ICT Asset Management Plan (AMP) was approved in December 2012. This is the first annual update of the plan and reflects changes in structures, systems and processes. This ICT AMP along with the Council's other AMPs feeds into the overarching Corporate AMP.



1.2 ICT Background

1.2.1 The ICT section, within Corporate Governance, Customer Service and Performance is committed to working within the Council and with its partner organisations to deliver a value for money, secure, quality service which enables business innovation through its use of ICT.

1.2.2 The following diagram identifies the main components that make up the related ICT Asset Management Process Life Cycle model. It serves as the basis for the methodology which underpins the implementation of the ICT Process Life Cycle model and, ultimately, the ICT AMP. The detailed methodology is described in Appendix A hereto.



1.2.3 The ICT AMP covers the following key ICT Assets:

- Data Centre and network communication facilities incorporating Server Racks, Uninterrupted Power Supplies (UPS), Generators and Air Conditioning;
- Communication Lines and network equipment including cabling, wireless access points, controllers, switches, routers and hubs;
- Telephone Systems and handsets, including mobile phones, Blackberry and other smart phone devices;
- Mobile devices – tablet and netbook computers;
- Desktop computers, laptops and thin client devices;
- Servers;
- Shared network and local storage and backup facilities;
- Shared network and peripheral devices (printers and scanners);
- Local peripheral devices (USB memory sticks, printers, scanners);
- Enterprise Applications (Internet/Intranet presence, E-mail, Content Management, Firewall, Security);
- Enterprise Database Systems (Oracle and SQL Server);
- Enterprise Agreements, Contracts and Certificates;
- Data and Information

1.2.4 The following table provides a summary of the types, numbers and value of ICT assets across Aberdeen City Council.

Table 1: ICT Asset Types

Type	**Number**	**Replacement Cost/ Investment Made (£)**
Desktop Computers including monitors	10568 @ £350	£3,698,800
Laptop Computers	3512 @ £500	£1,756,000
Thin Client devices (Wyse terminals)	300 @ £200	£60,000
Interactive Whiteboards/Data Projectors	Circa1250 @ £2000	£2,500,000
Network Switches	Circa 750	£450,000
Telephone Switches	220	Approx. £2,500,000
Wireless Access Points	Circa 2050	£550,000 – significant increase since 2012
Intersite Network Connection	350	Approx £500,000 initial installation investment.
Business Application Software	140	Approx £4,800,000
Mobile Handheld Devices, including smartphones	3663	£457,750 – significant investment in iPads and tablet devices since 2012
Physical Servers	226	£2,910,000
Virtual Servers	249	£500,000
Oracle Database Instances	31	£120,000
SQL Database Instances	157	£80,000
Security	Various protection methods deployed	£250,000
No of e-mail accounts	8000 employee including teachers	n/a
No of user accounts	12000 including pupil accounts	n/a
No of incidents and change requests per annum (2012/13)	39,344	n/a
ICT Goods and Services purchased on behalf of the Authority in 2012/13	£3,608,204	n/a

2. Corporate Objectives and Priorities

2.1 Council's Vision and Asset Objectives

2.1.1 This ICT AMP follows the vision and objectives stated in the 2013 Corporate AMP, with some appropriate amendments, including the need for all property and ICT reviews to consider the implications of the Priority Based Budget exercise.

2.1.2 To deliver our vision of 'Aberdeen – The Smarter City' we are focusing on key priorities that we have shaped around:

- The national priorities set by the Scottish Government.
- The national outcomes set out in the Single Outcome Agreement
- The constant desire to provide efficient, effective and joined up public resources
- Required assets being fit for purpose, in the right place(s), at the right time(s)

2.1.3 Within the Council's Single Outcome Agreement we have an aspiration that people who live and work in Aberdeen will:

- be well informed and actively supported to achieve their full potential
- acknowledge, and act on, their shared responsibility to shape the City's future
- support and celebrate cultural diversity, and share a commitment to social justice
- have access to services of a high quality that meet their needs

so that Aberdeen will be an ambitious, achieving, smart city that:

- Develops an economy based on knowledge and innovation;
- Encourages more efficient use of greener resource which generates a competitive economy;
- Uses technology and data to enable informed decisions to be taken;
- Enables citizens to interact in a city where there is a sense of place; and
- Encourages a form of governance which engages its citizens

Our citizens will recognize this and play their part in taking it forward. We will ensure all citizens are encouraged and appropriately supported to make their full contribution.

2.1.4 In effectively managing the Council's financial resources and assets it has further been identified that the aim is to produce a coherent balanced budget which is realistic and reflects the Council's priorities and encourages the efficient and effective use of the Council's resources, by:

Budget Monitoring

- Rigorous monitoring of spend income against budget (revenue; capital; headcount; savings programme)
- Ensure rigorous challenge of monitoring by Officers and Members
- Rigorous monitoring and review of income/charging

Budget Planning

- Develop and observe a budget timetable for planning, consulting and deciding on options necessary to produce a balanced budget

Financial Planning

- Develop and continuously review Medium Term Financial Plan

Use of Resources

- Develop a rigorous programme of change aimed at improving the efficiency of the Council; and ensure that the programme is properly resourced and performance managed for complete and timely delivery
- Asset management strategy to be developed and implemented for the effective management of the property portfolio
- Benchmarking information used to improve decisions on effective planning and budget choices

2.1.5 In order to do this we need to:

- Identify areas where robust asset management can help support the delivery against these priorities
- Develop alignment between asset management and our strategic priorities into property strategies, plans and programmes
- Ensure that our approach to performance management is appropriately focused on priority areas

2.1.6 The above approach is being progressed as part of a Priority Based Budget project which has identified that the City Council's six key strategic priorities are:-

- Smarter Governance – Participation, acknowledging the role that citizens can play in the evolution of the city;
- Smarter Living – Quality of Life, challenging inequality and positively promoting wellbeing building cultural and physical activity;
- Smarter People – Social and Human Capital, focusing on education including lifelong learning and nurturing city of learning with a city-wide workforce which can grow and diversify the economy;
- Smarter Environment – Natural Resources, sustaining the environment by maximising the use of low carbon technology in our infrastructure and housing, and managing our waste and promoting our streetscape and green space;
- Smarter Economy – Competitiveness, recognising the importance of sustaining a competitive economy with clear financial parameters which attracts people to invest, work and export from;
- Smarter mobility – Transport and ICT, promoting the transport links to and from the city which are sustainable, and maximising digital connectivity for the benefit of all people and the development of business in the city.

Vision and Priorities

Over the next five years we plan to deliver our services in a different way with a greater focus on income generation and delivering what we do in partnership with

other organisations and/or businesses. In particular we will be re-examining how we best use and manage the council's assets to both reduce costs and create income.

Outputs/Outcomes

This plan will help the Council contribute with its partners to deliver outcomes grouped within the agreed key thematic priorities:

- Safer Communities
- Learning and Workforce
- Economic Growth
- Health and Wellbeing Older People
- Children & Young People
- Priority Families
- Integrated Transport
- Digital City
- City of Culture

2.2 ICT Asset Management Objectives

2.2.1 In designing our approach to ICT asset management we have identified the following 5 overarching aims and objectives that will seek to ensure that the Council's ICT assets are fit for purpose within the current budgetary restraints:

- ICT Assets should meet the needs of those that use them. This includes staff, members, pupils, visitors, customers and the general public through the different access channels (face to face, telephone and online). ICT Asset access needs to consider access for those with disabilities and or special needs, such as additional language support.
- ICT Assets should be economically sustainable with minimal operating costs on a whole life costing model. This means keeping running costs down, maximising existing asset use, reducing duplication and waste while planning for future capacity requirements, prioritising capital and revenue spending, proper option appraisal incorporating whole life costing and assessing opportunity costs. ICT Asset acquisition will follow evaluation and consideration of full life cycle costs and benefits appraisal.
- ICT Assets should be environmentally sustainable. This means considering local and global environmental factors, monitoring and reducing energy consumption and CO2 emissions through the whole ICT life cycle from manufacture, packaging, utilisation and disposal.
- ICT Assets must be safe, secure and comply with current legal and regulatory requirements and known future requirements. This means ensuring regular audits for DSE requirements and PAT testing of all ICT Assets, regular preventative maintenance and testing of critical ICT assets such as UPS and Air Conditioning within Data Centre and communications room facilities, compliance with WEEE regulations for electrical disposals, compliance with software licensing terms and conditions, compliance with Data Protection Act (DPA) and Disability Discriminations Act (DDA) when designing new ICT systems.

- ICT Assets should link to the Council's strategic business objectives. This means that governance and decision making around ICT Assets are integral to the strategic planning process and managed to deliver its strategic priorities and service in line with risk, providing value for money services for the benefit of the local community.

2.2.2 Capital and Revenue spend on ICT Investment will be governed by the Corporate Asset Management Group and Enterprise Architecture Board.

To achieve objectives, the ICT Service will hold and maintain a comprehensive ICT Asset Register which will record all its ICT Assets including details of their age to enable life cycle management of its infrastructure and enable trend analysis. Minimum details which will be recorded will be:

- Type of Asset
- Unique Asset Identifier
- Specification Description of the Asset
- Serviceability status (i.e. asset is serviceable or requires repair/disposal and/or replacement).
- Date the ICT Asset came into effect
- The initial cost of the ICT Asset
- The ongoing annual cost of the ICT Asset
- Who uses the ICT Asset
- The location of the Asset
- Details of what other ICT Assets are linked to the Asset
- How effectively the ICT Asset is supporting the business (fitness for purpose assessment)

In addition, ICT will maintain a service catalogue outlining all ICT services provided and have in place robust reporting processes to assist Council to make prompt asset related decisions regarding new or changed use of ICT Assets through the Enterprise Architecture Board.

3. Current Asset Management Performance

3.1 Section 1 - General

3.1.1 Historically, the ICT Infrastructure which is currently in use has grown on an ad-hoc basis through investment by individual services or through discrete projects. A rolling programme of ICT Repairs and Renewals was established in 2005 followed by a separate Curriculum PC replacement budget in 2007 through the council's non Housing Capital Programme. These programmes were combined to a single ICT Investment Programme in 2011/12, which was transferred to revenue expenditure from financial year 12/13. Priorities for investment in both new and replacement projects are prioritised against Corporate and known Service priorities. There is a funding gap to maintain a sustained program of ICT Investment.

3.1.2 ICT Service is a centralised service covering all services, including support of educational establishments. The current ICT service has a head count of 83 fte, after significant head reduction in 2010. Corporate Data Centre services, including server and storage management, were transferred to a Managed Service Provider in January 2011. Education server and storage management services is provided and supported in-house by ICT services. The service is heavily biased towards delivering support services including ICT purchasing and is under-resourced for delivery of transformational services and helping services use technology to deliver efficiencies. Options for additional resourcing to support delivery of transformational services are being explored.

3.1.3 The ICT Service supports a wide variety of individual departmental applications (departmental applications, local spreadsheets and databases). System administration of some of the Council's business applications is carried out within services. There is opportunity to review and consolidate business and desktop applications

3.1.4 The ICT Service regularly reviews ICT training needs through trend analysis of calls raised through the ICT Service Desk (also commonly known as the ICT Helpdesk). The objective of this is to help move ICT support mechanism from ICT demand to self-support. Since the appointment of an analyst within ICT responsible for ICT traning development, over 140 calls have been processed and as a result, ICT have produced training materials for major projects such as MS Outlook, Office 2010 and VDE as well as documentation on topics such as, 'How to use equipment in the Marischal College meeting rooms'. Furthermore ICT have provided face to face Blackberry and laptop training for Elected Members and continue to deliver face to face ICT training as and when required across all Services.

3.1.5 The ICT Service has Service Level Agreements for ICT Service Delivery with a number of services including details of all ICT Assets for that Service being supported and delivered by ICT.

3.1.6 The ICT Service operates an ICT Account Manager function as single point of contact for departmental liaison.

3.1.7 The ICT Service operates a centralised ICT Service Desk between 08.30am to 5pm Monday to Friday to record and workflow all requests for incident and problem

management, and changes to ICT services. An out of hours Service Desk operates through our Managed Data Centre provider to record all incidents and resolve server related incidents within their control.

3.1.8 The ICT Service is working towards implementing ITIL Best Practice Framework. All job descriptions and processes are created using this. Overview training on the Framework was carried out in 2008 but has not been extended due to limited budget. A comprehensive programme of staff training needs to be completed.

3.1.9 To date, ICT Assets have been recorded in a number of different spreadsheets and systems. Work has been progressing during 2012/13 to consolidate this information from within the spreadsheets to a central system. This central system is not yet integrated to other ICT management systems, including the ICT Service Desk but would benefit from being so. Automated tools are used to gather information on installed desktop computer software for compliance.

3.2 Section 2 - Condition Survey info

3.2.1 **Desktop Computers, Laptops and Thin Client Devices**. There are a large number of ageing desktop and laptop computers across both corporate and educational establishments. Introduction of Virtual Desktop Environment (VDE) can extend the lifespan of desktop computers and laptops computers working wholly in a VDE environment. For those devices which require to operate in a non-VDE environment, the devices need to be replaced every 4 years or as and when any new application or operating system requirement requires additional memory and/or processing power.

Desktop and laptop computer operating system standard is currently Microsoft Windows 7 EnterpriseProfessional. A program of work is ongoing to upgrade desktop PCs from Windows XP to Windows 7, and where this is not possible to convert the desktop to a VDE Windows 7 thin client. Windows XP operating system ceases to be supported in April 2014. To refresh all PCs that are currently over 4 years old would require a one-off investment of £2.14M. Ongoing refresh of desktops, laptops and thin clients on a four year cycle would require investment at a level of around £1M per annum.

Table 2 below shows desktop and laptop estate by age to show level of ICT investment required to refresh the estate to be fully supported in a Microsoft Windows 7 EnterpriseProfessional environment. Information is continuing to be gathered and evaluated to determine how many of these will be able to continue to operate in a VDE environment. In this case, the devices will be replaced by thin clients if there is any hardware malfunction. VDE is currently not viable in the curriculum environment. Based on current ICT Service Desk call analysis, there are on average 200 PC hardware failures per annum. Desktop and laptop computers are purchased through Procurement Scotland agreement, which is auctioned every 12 – 18 months. This provides stability of build at component level thus reducing installation and support costs over the life of the device.

Table 2: Summary of Client Device Estate (PC and Laptop)

Type of device	Age	No of devices	Suitable for Windows 7
Corporate Desktop computers	> 4 years	2992	No
Corporate Desktop computers	2 – 4 years	355	Some
Corporate Desktop computers	1 – 2 years	450	Yes
Corporate Desktop computers	0 – 1 years	271	Yes
Corporate Laptop computers	> 4 years	76	No
Corporate Laptop computers	2 – 4 years	187	Some
Corporate Laptop computers	1 – 2 years	409	Yes
Corporate Laptop computers	0 – 1 years	349	Yes
Curriculum Desktop computers	> 4 years	2681	No
Curriculum Desktop computers	2 – 4 years	2442	No
Curriculum Desktop computers	1 – 2 years	923	Yes *
Curriculum Desktop computers	0 – 1 years	454	Yes *
Curriculum Laptop computers	> 4 years	<80	No
Curriculum Laptop computers	2 – 4 years	1296	Some
Curriculum Laptop computers	1 – 2 years	123	Yes *
Curriculum Laptop computers	0 – 1 years	992	Yes *

* while these models are suitable for using Windows 7 operating system, curriculum server and storage environment currently primarily uses RM CC3 curriculum network software which does not support Windows 7 clients. (See section 3.2.9 Server)

3.2.2 **Network switches, hubs and routers**. Through investment in previous financial years, these ICT Assets are generally fit for purpose, with equipment on lifetime warranty basis. A continued investment to retain a small stock of spares to allow for faulty equipment to be swapped out and returned for repair is required. Within corporate environment these are standardised to HP range of equipment, while within the curriculum environment this is standardised to CISCO range. Equipment is re-utilised through property and schools estates review projects and

significant ICT investment is generally only required where additional buildings are added to the Council's property portfolio.

In order to maximise the use of VDE across the organisation, it has been identified that routers at VPN sites will require to be replaced at an estimated cost of approximately £100K. It is intended that these will be programmed in over a two year period under the Corporate Governance Improvement, City Wide Networks project.

Through analysis of ongoing corporate accommodation rationalisation, the potential to replace core switches in the Town House Basement has been identified. Options for replacement are being undertaken and will be progressed to align with accommodation move requirements.

Core backplane infrastructure at Crown House, Central Library, Tullos Primary and Art Gallery sites is being reviewed to determine feasibility and cost of upgrading to 10Gb in future years.

3.2.3 **Telephone Switches**. ICT investment through the ICT rolling programme, 3Rs schools estate building programme and Marischal College works means that the majority of the Council's telephone switches in major office accommodation and a proportion of those within educational establishments are fit for purpose and enabled for VOIP. The exceptions to this are Central Library and telephone switches within the Mastrick area of the city. These will require replacing or upgrading within the next 2 years to allow the Council to take advantages in voice communications technology to meet business efficiencies through the use of unified communications.

In addition, various smaller telephone switches will be required over a rolling programme of replacements. Where possible, locations with a small number of extensions will be decommissioned, and telephony provided from larger switches at central sites. Table 3 identifies those sites that have been identified as priorities for either replacement of decommission next financial year. These will be funded from ICT Investment Rolling Programme.

The current voicemail system is reaching capacity. Additional licences will be purchased to meet the growing demands placed on this telephony service.

Table 3: Telephone Switch Replacements

Site	Size of Telephone Switch	Proposed approach	Estimated cost
Central Library and Art Gallery	Up to 150 users	*VOIP from Marischal*	*£20K*
Branch Libraries	30 extensions across all branch libraries	BT Versatilty switches have been announced as EOL with no	To be determined

		maintenance from November 2014. Identify appropriate ongoing telephony for these site with a view to having desk to desk dialling from corporate WAN.	
Woodside Customer Access Point	20 extensions	Reconfigure to corporate WAN to allow desk to desk dialling	£5K
Quarry Centre	60 extensions	Refresh with VOIP Switch	£60K
Deeside Family Centre	23 extensions	VOIP via Tullos Telephone switch	£8K
Old Tullos Nursery	21 extensions	VOIP via Tullos Telephone switch	£8K
West Tullos Roads Depot	80 extensions	Refresh with VOIP Switch – intersite network connection would also need to be upgraded.	£40K
Sheltered Housing Sites	Varies	Agree with Bon Accord Care what their ongoing telephony requriements are at Sheltered Housing sites.	Vary from £5K to £25K depending on site
Beach Ballroom	10 extensions	Review telephony arrangements depending on outcome of Sport Aberdeen IT Provision tender.	£1K
Mastrick sites	Up to 150 users	Re-use SV8500 telephone switch when Balgownie One is decommissioned	£20K
Individual sites,	Vary from 15		Vary from £5K to £25K

including schools – as and when maintenance no longer available	– 200 users		depending on site

3.2.4 **Interactive Whiteboard and Data Projectors**. The Council has invested significantly through Capital funding in 2009/10 and 2010/11 in the installation of interactive whiteboards (IWB) with associated data projectors to support its learning and teaching environments and to facilitate sharing of information through electronic presentation. Whiteboard assets are purchased with a 3 year warranty and it is anticipated that the lifespan of this equipment is around 7 years. A high proportion of whiteboards and projectors fell out of warranty from October 2012, and any repairs or replacements require to be funded from revenue. This is revenue budget which is not currently provisioned. Indicative quotes have been provided for a support contract to cover all Whiteboards and Data Projectors at a cost of around £80K per annum. Between 20 and 25 calls a month are raised with the ICT Service desk relating to use of IWBs. Common causes of issue relate to calibration, projector lamps, IWB software configuration and connectivity to the laptop and are not generally related to hardware faults on the IWB itself. The situation will continue to be closely monitored and a business case for funding will be developed if it is seen that a support contract is becoming essential.

Table 4 provides information on the age profile of interactive whiteboards since 2009. Those installed prior to 2009 would be due refresh in year 7 (i.e. 2014). Investment to refresh these boards is estimated at £0.99M. Any refresh programme would involve a survey for asbestos and would need to be co-ordinated with the Council's asbestos officer.

To support an Education, Culture & Sport funded service improvement to maximise the use of Interactive Whiteboards in a learning environment, the aging RM Classboards in Cults and Muirfield Primary schools will need replaced at a cost of approx £100K. Work is ongoing with Central Procurement Unit to assess most cost efficient routes for forward procurement of interactive whiteboards.

Table 4: IWB Age Profile

Year	Quantity	Type of Board
Pre-2009	495	Predominantly RM Classboard, Smartboard 660
2009	616	Smartboard 660/680
2010	74	Smartboard 660/680
2011	15	Smartboard 660/680
2012	24	Smartboard 660/680
2013	11	Smartboard 660/680

A number of the IWBs noted above are within meeting rooms in Marischal College and the Town House. There is an ongoing programme of ICT upgrade and replacement to meet evolving business requirements through smarter working.

3.2.5 Internal **Wireless LAN Connectivity.** To meet Council's objective for more mobile and flexible working and learning, and to support the anticipated demand of mobile

devices such as tablets and Smartphones, and to keep open the possibility of Bring Your Own Device (BYOD), the Council has invested in the implementation of internal wireless technologies within major Council office accommodation and educational establishments. Significant investment is required to complete installation in all educational establishments. Table 5 below shows those sites where Wireless connectivity is already available for connection and whether the sites allow public access, primarily to Council services, as well as connection for Council approved devices. Table 6 shows those sites where wireless connectivity is progressing during financial year 13/14 and Table 7 those sites has been identified as a future requirement and the level of ICT investment required to achieve this. In addition the council has an arrangement with NHS which allows council employees to use Wifi within NHS buildings in the city to access Council services.

The Council is considering its responsibilities to meet Digital inclusion and response to Welfare Reform, and is reviewing the provision of WiFi throughout key public buildings in general, i.e. not just access to Council services. Initial funding of £300K is available from DCMS to extend and further implement Public Wifi at Libraries, Community Centres, Customer reception/access points and Art Galleries and Museums. A business case is being generated to support ongoing operational revenue costs to support this venture.

It has been identified that there is opportunity to reduce maintenance costs by £8K on internal wireless by the consolidation of Wireless MX200 Wifi controllers across corporate locations at an estimated cost of £5K.

Table 5: Sites with managed wireless access available

Site	Access for ACC Owned Devices and approved guest access	Public Access
Marischal College	Y	N
New Town House	Y	N
Old Town House	Partial – selected meeting rooms only	N
Kittybrewster Depot	Y	N
Crown House	Y	N
Spring Garden	Y	N
Balgownie One	Y	N
Frederick Street	Y	N
Central Library	Y	Y*
Cults Academy	Y	Y *– only in library
Bucksburn Academy	Y	Y *– only in library
Oldmachar Academy	Y	N
Heatheryburn Primary	Y	Y *– only in community wing
Torry Academy	Y	N
Northfield Academy	Y	N
Riverbank Primary	Y	N
Hazlehead Primary	Y	Y* – only in community wing
Mile End Primary	Y	Y* – only in community wing
Seaton Primary	Y	Y* – only in community wing
Manor Park Primary	Y	Y* – only in community wing
Braehead Primary	Y	Y* – only in community wing
Hanover Street Primary	Y	N
Kaimhill Primary	Y	Y* – only in community wing
Airyhall Primary	Y	Y* – only in community wing
Walker Road Primary (partial)	Y	N
Gilcomston Primary	Y	N
Kingswells Primary	Y	N
Woodside Primary	Y	N
Cults Primary	Y	N
Dyce Academy	Y	N
Kincorth Academy	Y	N
Harlaw Academy	Y	N
Bridge of Don Academy	Y	N
Airyhall Library	Y	Y*
Cove Library	Y	Y*
Dyce Library	Y	Y*
Mastrick Library	Y	Y*
Tillydrone Library	Y	Y*
Torry Library	Y	Y*
Kaimhill library	Y	Y*

Bridge of Don Library	Y	Y*
Cornhill Library	Y	Y*
Northfield Library	Y	Y*
Kincorth Library	Y	Y*
Culter Library	Y	Y*
Cults Library	Y	Y*
Woodside library	Y	Y*
Kittybrewster Store	Y	N
Whytemyres OT Store	Y	N
Beach Ballroom	Y	N
Woodside Customer Access Point	Y	N
Kincorth Customer Access Point	Y	N
West Tullos Roads Depot	Y	N
Hilton Depot	Y	N
Torry Depot	Y	N
Kincorth Depot	Y	N
Northfield Depot	Y	N
Mastrick Depot	Y	N
Art Gallery store (Crombie Road)	Y	N
Mastrick Social Work	Y	N
Quarry Centre Social Work	Y	N

* Public Wifi access at these sites requires to be segregated from Council use to satisfy PSN compliance. While capital investment for this project is available through DCMS funding to implement a new solution, a business case is being prepared to identify ongoing operational revenue implications.

Table 6: Sites with no managed wireless availability but funding approved and in progress

Site	Scheduled Month
Aberdeen Grammar School	December 2013
St Machar Academy	January 2014 - Pending Asbestos Survey Results
Greenbrae Primary	February 2014
Scotstown Primary	April 2014
Middleton Park Primary	February 2014**
Forehill Primary	February 2014
Danestone Primary	February 2014
Stoneywood Primary	April 2014
St Peters RC Primary	April 2014
Bramble Brae Primary	January 2014**
Holy Family Primary	January 2014
Dyce Primary	April 2014
Fernielea Primary	April 2014
St Josephs Primary	March 2014
Hazlewood Special	April 2014
Abbotswell Primary	December 2013
Ashley Road Primary	March 2014
Charleston Primary	December 2013
Cornhill Primary	April 2014
Culter Primary	April 2014
Ferryhill Primary	March 2014
Glashieburn Primary	February 2014
Kingsford Primary	April 2014
Kirkhill Primary	December 2013
Kittybrewster Primary	April 2014
Loirston Primary	December 2013
Muirfield Primary	January 2014
Quarryhill Primary	January 2014
Skene Square Primary	March 2014
Tullos Primary	March 2014
Westpark Primary	January 2014

** These sites are currently under review as part of schools estates review. Wireless access points installed in these schools will be re-used in other locations if these sites are closed but will enable the schools to fully utilise technology within their learning environments until that time.

Table 7: Sites with no managed wireless availability

Site	Funding Required	Anticipated Costs (K)
Brimmond Primary	N – to be done in conjunction with new school	15K
Woodlands School	Y	£15K

Tillydrone Housing Office	Y	£5K
Mastrick Housing Office	Y	£5K
Mastrick Social Work Office	Y	£5K
Kincorth Social Work Office (Faulds Row)	Y	£5K

3.2.6 **Intersite Network Connections.** A register of leased lines is maintained with annual recurring costs over a number of suppliers (BT, Vodafone (formerly Cable & Wireless), O2, Capita and IFB). Significant investment has been made to implement a core meshed wireless network for educational establishments. The design was created to reduce resilience on single links and reduce annual running costs from traditional leased line circuits. This has worked for the majority of educational establishments and reduced annual recurring costs by £100K in financial year 2012/13 but a number were not suitable for this technology. Until a prolonged period of operation has been in place and any lessons learnt, this technology will not be extended for corporate sites.

Nationally, the Interconnect Network connecting Aberdeen City Council to internet services, including GLOW, is scheduled to be replaced by SWAN from Spring 2014.

A number of key city network links which have been identified as single points of critical ICT service delivery for which additional resilient links should be considered. In order to increase the resilience of the city wide network it is recommended to provide an outer network ring between West Tullos Roads Depot, Tullos Primary School and Woodhill house and between Woodhill House and Kittybrewster using either fibre or radio at an estimated cost of £50K.

Further improvements to intersite network connections have been identified as follows:

- Current fibre connections between sites have no formalised support and maintenance. There is a risk that if a fault develops then it could be some days before a fault is isolated and rectified. It is recommended that a support and maintenance contract is acquired for all fibre connections in order to reduce the risk of network outage.. Fibre connections are:
    - Town House – Woodhill House
    - Town House – Tullos Primary
    - Town House – Frederick Street
    - Town House – Marischal College
    - Town House – Spring Garden
    - Town House – Willowdale
    - Town House – Exchequer House

  Revenue costs for this support and maintenance are estimated to be approximately £15K

- Fibre link to Woodhill House is old. Woodhill House, although not an ACC asset, is used as a network hub site for connectivity of ACC sites in the North

of the city , due to its close proximity to Telecomms providers exchange sites (Ashgrove Road). It is recommended that the existing fibre is refreshed at a cost of approx. £20K.

- A single point of failure has been identified within the Town House Panther room and a configuration change is recommended to implement dual core gateway. Estimated cost of this is £10K.

- DSL is currently used to connect 55 sites. An options appraisal is currently being undertaken to investigate cost and feasibility of replacing with BT Ethernet Connect to reduce annual costs and improve network performance. It is anticipated that initial capital outlay to replace these connections is around £100K. A number of these sites are used by Sport Aberdeen and discussions are ongoing regarding the future network requirements provided by the Council to these locations.

- Network connectivity to the Crematorium (currently Broadband) is very poor and does not meet ongoing business requirements at this site. It is recommended to upgrade this link as a priority at a cost of £30K.

- A number of fibre connected sites cannot generate gigabit bandwidth performance. It is recommended to upgrade multimode fibre links at Spring Garden and Willowdale to achieve faster performance at these sites at a cost of £8K.

- Managed Broadband solution is at the end of its current contract. Options for continuation of services to sites which currently use this service is being undertaken.

- There is continuing demand for additional bandwidth on the core Education Wireless network. Options for increasing capacity on this network are being reviewed. It is estimated that this is likely to cost up to £100K for secondary schools.

- From an analysis of ongoing incidents, it has been identified that a number of network incidents were caused as a direct result of power failure at the local site. It is recommended that an ongoing program to implement UPS at outlying sites is carried out to smooth and protect network equipment from power surge and outages.

- Balgownie One is currently used as a network hub site for locations in the North of the city. The Council has approved the decommission of Balgownie One as standard office accommodation for employees, and it is no longer a requirement to provide alternative resilient connectivity to this site. Options for an alternative network hub location in this area are being reviewed.

- Former Braeside Primary School site is currently used as a network hub site for locations in the South of the city. It is unclear what the long term prospects for this site are and options are being explored for an alternative network hub location in this area are being reviewed. There is the potential

to relocate this to Airyhall Library, subject to the outcome of the ongoing Libraries review.

- Remote access from any internet connection to Council services from Council devices has a single point of failure. As employees take advantage of flexible working arrangements, this single point of failure raises the risk that employees may not be able to access their work information in the event that this device becomes unavailable. It is recommended that a second device be implemented at a separate site at an estimated cost of £20K to provide additional resilience to this solution.

The majority of these improvements will be funded from Corporate Governance Business Plan, City Wide Network improvements project.

Appendix C contains information on all intersite connections, with current bandwidth.

3.2.7 **Application Software.** ICT maintains an ICT Applications Software Register and carried out a fitness for purpose audit in summer of 2011. This audit highlighted a number of applications which were not performing to their maximum potential. A further exercise is to be carried out to identify where applications can be consolidated and rationalised to reduce recurring support costs. This is a priority activity to identify potential level of ICT investment required. The Council currently uses either Oracle or SQL Server database as its preferred underlying database. As part of the application review, a review of the backend database will be undertaken to optimise costs for licensing and support.

During the year 2013/14, a corporate integration and mobile application development tool will be purchased to facilitate access to data from multiple systems to improve customer services and achieve cross-service efficiencies across all services at an approximate cost of £150K.

Through the council's Smarter Working programme, a project is underway to implement Lync application software, which is already available through the Microsoft Enterprise Agreement. Appropriate hardware and resource to implement across the Council is anticipated to be in the region of £75K.

The current Voice Recording application has reached end of life and is no longer supported. This application is used to record telephone calls with the purpose of being able to respond to customer complaints, and improving customer care through specific customer service training. The system does not record any financial transaction details. Replacement voice recording system will cost between £30-£50K.

Appendix D contains information on the council's major business applications and their suppliers.

3.2.8 **Mobile Devices.** The Council approved at its Finance & Resources Committee Meeting in March 2012 to extend its current Vodafone contract for mobile devices, including Blackberry and smart phones until June 2014.

A framework agreement for the procurement of mobile tablet devices (iPads, etc) was implemented from March 2014 by Procurement Scotland. Mobile devices which require access to Council network services, are being enrolled and managed through the Council's Airwatch Mobile Device Management Solution.

Table 8 provides information on mobile devices owned and in use by Aberdeen City Council.

Table 8 : Mobile and Handheld Devices

Type of Device	Quantity
Nokia Standard Mobile	1685
Motorola mobile phone	190
Sony Ericsson mobile phone	33
Vodafone branded mobile phone	30
Nokia Lumia Smartphone	5
HTC Smartphone	18
Samsung Galaxy Smartphone (S3 and S4)	134
Apple iPhone	8
Blackberry	446
iPad 2	708
iPad mini	106
iPod Nano	1 *
iPod Touch	22 *
Samsung Galaxy Tab	48
Samsung Galaxy Note Tablet	224
Samsung Galaxy Mini	2
Dell Latitude 10 Tablet	3

Note: Those items marked * are those ordered by ICT on behalf of Services. There may be others which have been purchased direct by Services which are unknown.

3.2.9. **Servers.** Corporate servers were refreshed or planned to be refreshed through the Council's Managed Data Centre contract with Atos. Prior to the Managed Data Centre, the Council had invested significantly in the use of server virtualisation technologies to reduce the number and environmental impact of server hosting. This has been continued through the Atos contract. There is an ongoing program to upgrade underlying operating systems from Microsoft Windows 2000 and Windows 2003 to Windows 2008 to ensure that these servers remain in support.

Within the educational environment, servers are hosted locally within schools. With the exception of those implemented within the 3Rs programme of works, all are now over 3 years old, are running operating system which is no longer supported by Microsoft, and are constrained in local storage resources. A significant investment to refresh and rationalise schools server estate is required to ensure that these are

fit for purpose for the next 5 years. An options appraisal for this requirement, including an analysis of ongoing storage requirements for schools, was completed in February 2013 and a business case has now been developed to implement a virtualised server and desktop environment across Educational establishments. The business case identifies an investment of £3.045M over a 3 year period. The appraisal recognises synergies between this approach and the corporate environment, and would look to phase this work so that resilience and redundancy elements are factored in at the same time as transition of servicec at the end of the current Managed Data Centre contract.

3.2.10 **Storage.** Prior to the Council's Managed Data Centre contract with Atos, centralised storage and backup facilities had been implemented using EMC SAN technologies and Netbackup backup software. These were due for refresh in 2010/11 and refreshed to Hitachi SAN technology and upgraded Netbackup software as part of the move to the Managed Data Centre. This is a shared storage facility used by a number of Atos clients. During 2013, Atos has further refreshed its core shared storage infrastructure.

As part of its ICT Asset Management plan, Council needs to consider level of investment to increase capacity within the lifetime of this contract for corporate business as storage needs expand as records of video, sound and pictures are captured. This requirement is even greater within the educational environment as pupils use technology for creating their personal e-Portfolios through their learning experience from 3 – 18 and extensive learning and teaching resources are delivered and assessed through video.

During 2013, an additional 16Tbytes of managed corporate storage has been provisioned through the Atos contract and an investment of additional 78Tbytes storage and backup has also been provisioned within ACC premises to host the Council's email system and other ancillary systems. In addition, a further 159Tbytes of unmanaged local storage, predominantly for educational establishments has been purchased. A long term strategy for storage needs to be reviewed and determined. Following a review early in 2013, it is recommended that the Council consider the use of cloud based storage solutions for non-sensitive data. Trials of potential cloud based storage solutions will be progressed during 2014 to determine their suitability in a learning environment.

A sound records management, and information governance model needs to be introduced to ensure that we are capturing, recording and retaining (and disposing) of electronic information to meet business requirements within legislative requirements. This project is being progressed through Corporate Governance Improvements Programme, Knowledge Management.

3.2.11 **Security Systems.** The Council has invested significantly in technology to minimise the threat of electronic attack through the introduction of anti-virus, anti-malware, encryption, intrusion-prevention protection and detection at strategic points within the infrastructure, with different layers of technology. There is a continuing need to review threats and keep subscriptions for appropriate ICT Security Assets in place to minimise threats and ensure compliance with PSN code of connection and

PCI DSS regulations for cash and credit transactions. Table 7 below identifies current security measures that are funded through ICT Revenue budgets. Table 8 identifies security initiatives approved through ICT Investment fund for 2012/13.

Table 7: Current ICT Security Systems

Description	Annual Cost	Notes
Corporate Gateway – anti-virus/anti-mal ware	£12K	
Corporate Gateway – internet filtering	£37K	Saving of £7K from 2012/13 through early annual licence renewal
Corporate Gateway – Intrusion Prevention and Firewalls	£8K	Saving of £4K from 2012/13 through annual renewal process.
Corporate Client – anti-virus/anti-malware	£13K	An increase of £2K from 2012/13 licence. Consideration to be given to replacement with Microsoft tools provided with Microsoft Enterprise Agreement
Corporate Client – endpoint encryption	£6K	Saving of £6K as a result of migration to Bitlocker tools available within the Microsoft Enterprise Agreement.
Education Gateway – Intrusion Protection and Internet Filtering	£0	Replaced with Fortigate Gateway Security. New system implemented March to October 2013 funded through ICT Investment. No additional support costs until 2016, at which point cost will be circa £8K per annum.
Education Gateway – anti-virus	£0	Covered by new Fortigate Gateway Security. No additional support costs.
Education Gateway - Firewall	£3.5K	
Education Client – anti-virus	£17.5K	Consideration to be given to replacement with Microsoft tools provided with Microsoft Education Subscription Agreement.
Mobile Device Management Solution	£9.6K	New system implemented March – August 2013. Rollout continuing to enrol Council owned mobile devices, in both Corporate

		and Education environments. Additional licences may require to be acquired to reflect additional devices purchased on an ongoing basis. While this solution enables control of mobile devices, whether Council or Employee owned (Bring your Own Devices (BYOD) , no decisions have been made to extend usage to BYOD and this will need to be considered along with any PSN compliance requirements.
Active Directory Audit System	£12K	Implemented to track unauthorised changes to Microsoft directory services and Email system.

Table 8: Proposed Additional Security Measures

Description	Investment and Anticipated annual costs	Notes
Remote access to Council ICT Services through VDE Environment from non Council Devices	Capital £50K Annual Revenue £5K	Subject to PSN Compliance regulations
PSN Compliance – additional measures which may be required: - Weak Password prevention on non AD systems - Network Access Control to protect ports and network - Physically separating Corporate WiFi from rest - Improving weak SSL certificates - Installing an automated Classification system - A Protective Monitoring System sometimes	Capital £300K Annual Revenue £60K	

known as SEIM		
Corporate Firewall – Application Layer Protection	Unknown	

3.3 Section 3 – Maintenance and Key Performance Indicators (KPIs)

3.3.1 Corporate Governance, Customer Service & Performance spends approximately £3.2M per annum on maintenance support and services including line rental charges for corporate voice and data network, security services, software licences and application support. In addition other Council Services spend an additional £2.0M from service budgets on ICT maintenance support and services.

3.3.2 There are no statutory KPIs for ICT Assets. However a number of the standard SOCITM Performance Indicators are measured and monitored through Corporate Policy & Performance Committee. A Benchmarking Service can be purchased from SOCITM to compare these figures with other local authorities but to date this has not been used. Those that are routinely measured and reported through Corporate Governance to Finance, Policy & Resources Committee are:

- Cost per unit Workstation
- % Employees with Remote Access to Council network from non council premises
- % server availability

4. Key Challenges and Achievements

4.1 Key Challenges

4.1.1 There is a continuing requirement to increase efficiencies and deliver more for less. Each ICT Asset must be used to its maximum potential and obtain maximum value and return on investment. We must therefore Maximise use of corporate systems and services and decommission of underused and/or under performing assets, maximise license usage and redeploy or cancel licences and support to recoup savings on licence contracts.

4.1.2 In order to support ICT Asset decisions around business requirements, we need to develop a cross-service Enterprise Architecture Governance framework, incorporating existing PMO processes and ICT Account Managers, also taking cognisance of the Scottish Local Government ICT Strategy, Scottish Public Service Network requirements and Aberdeen City Council's own ICT strategies.

4.1.3 There is a requirement to ensure that ICT Asset records are accurate and up to date to help deliver support and make informed business and financial decisions. This can be resource intensive and there needs to be a cultural shift to ensure that individual users take responsibility for checking status and reporting changes in their use of ICT Assets. Linking and maintaining ICT Assets to employees and pupils is required to enable this.

4.1.4 As the Council seeks to maximise its limited corporate office accommodation, and reduce spend on property assets, the ICT Assets must be able to support mobile and flexible working which is required to facilitate this. This will require an investment in VOIP and Wireless technologies.

4.1.5 Through the consumerisation of ICT and the increasing use of Smartphones, iPads and android tablet equipment, the Council's ICT Assets must embrace this and seek ways to enable staff to make use of such devices, including potentially their own personal equipment, to access Council services in a secure way. This will require investment in additional network security and resource to manage its introduction in a controlled, secure manner.

4.1.6 Having achieved a rationalisation of server and storage ICT Assets in the corporate environment, education establishments individually have servers and storage. There are potential savings if these were rationalised. There are currently 68 separate domains which causes a challenge in implementing any new ICT service to education establishments. A business case has been developed to consolidate these assets and deliver virtualised servers from a dual data centre. A key feature of this project will be to rationalise the underlying authentication services to ICT services.

4.1.7 As the world uses more photo and video within their normal working operating environment, this puts a strain on existing storage. This is particularly relevant in the educational establishments where more and more learning and teaching resources and assessment evidence are delivered and based on video. While short term local storage options can be purchased, this does not address long term

storage requirements of the Council and introduces potential risks associated with loss of control of data. All local external storage requires to be encrypted to minimise this risk. Storage technology is continually changing and cloud storage may be a suitable long term solution for non sensitive data.

4.1.8 There is a continuing challenge to have better governance of and intelligent reporting from Council's electronic records. The Council uses and has access to a number of different document management and reporting tools, and needs to consider how best to maximise usage of these tools.

4.1.9 There is a continued requirement to meet various Government security standards including PCI DSS compliance for credit transactions and PSN compliance for Government secure e-mail and internet services, which places constraints on how ICT Assets can be configured and managed, and from time to time require additional ICT security assets to be purchased.

4.1.10 Risks from electronic threats continue to be high, and there is a continuing need to operate preventative measures on our ICT Assets such as intrusion prevention, internet access controls, operating system and application patching and anti-virus and anti-malware protection, detection and cleansing.

4.1.11 The Council entered into a Microsoft Enterprise Subscription Agreement in April 2012, which has facilitated an upgrade to defacto standard Email and Desktop productivity applications. This coupled with the implementation of Virtual Desktop Environment is intended to provide a more flexible desktop service with standardised software and more efficient application deployment and licence control.

4.1.12 The Council needs to consider how to provide ICT data centre facilities at the end of the existing Managed Data Centre contract in January 2016. Options being considered are continuing and retendering for managed data centre; co-location of facilities within either public or private sector data centre; shared services with other public sector body and building/hosting and managing our own data centre facilities. Regardless of the preferred option, there is likely to be a requirement for significant investment in either Capital or Revenue at this time. Funding of £3M has been approved through the Capital bid process to co-incide with the end of the current contract.

4.1.13 As the Council transforms and moves its transactional services from traditional services to web and telephone services as a way of meeting customer demand, and achieving cross Council efficiencies, this will have an impact on its ICT Assets particularly on requirement for better systems integration.

4.1.14 While there has been an established ICT Rolling Programme (now ICT Investment Fund) for some years, the level of funding constrains what can be achieved within the programme.

4.2 Achievements

4.2.1 Thorough data cleansing of ICT network infrastructure and mobile assets has been processed within ICT spreadsheets and a centralised database has been created to rationalise and report on ICT asset information going forward.

4.2.2 Access to the corporate VDE environment has been rolled out to all corporate devices. The council's updated email and desktop productivity tools was initially rolled out through the VDE environment.

4.2.3 A successful program to encrypt corporate laptops has been completed. Where a laptop was unable to be encrypted, depending on its use the laptop was either refreshed or reconfigured such that it can only access data within the VDE environment and capability of storing information locally on the device was removed. Some of the refreshed laptops, while not suitable for encryption were still fit for use within the curriculum environment for pupil use and were used to refresh the oldest laptops in schools.

4.2.4 A solution to facilitate remote access at any any location with internet access to Council network services from council owned devices has been implemented. To date 610 users have received a physical RAS token in order to use this service.

4.2.5 Internal wireless access has been implemented in a further 5 schools during 2013.

4.2.6 A secure unified threat gateway solution has been implemented for the education environment for improved filtering and monitoring to support learning within schools.

4.2.7 A mobile device management solution has been implemented to enrol and securely manage iPads, Smartphones and other mobile devices.

4.2.8 Following a review of circuit costs for the connection to Kincorth Library/CEC a change of supplier has resulted in reduction of annual costs of £8K/annum with improved network performance.

4.2.9 Following a tender, circuits to remaining branch libraries have been upgraded, resulting in a reduction of annual costs of £21K/annum.

5. Delivery Arrangements

5.1 Customer Service and Performance – ICT Service

ICT Asset Management responsibility is delegated to the ICT Section of Customer Service and Performance. The ICT Service is fronted by an ICT Service Desk as a single point of contact for all ICT queries. In addition there are two ICT Account Managers who act as point of escalation for any ICT queries and who will work with services to ensure that their business requirements are worked through to ICT technical implementation, where required. Where a business requirement requires new ICT Capital investment then this will be put forward to the Corporate Asset Group for funding.

5.2 ICT Service Delivery reports for Asset Management

5.2.1 Service Desk Support Reports – KPI performance and SLA performance reports, including those from external ICT service providers, are regularly produced. This information is used to identify common faults and repeat failures.

5.2.2 New Starts and Leavers Reports – a report from the HR system is distributed to ensure that access to departmental systems is ceased or changed as appropriate, that any licences are redistributed and/or telephone and network connections are cancelled.

5.2.3 Customer Satisfaction Survey – a customer satisfaction reporting mechanism which was in place for random selection of service desk incidents ceased due to limited resources in 2010. ICT services are however included in wider Corporate Governance Customer satisfaction surveys.

5.2.4 Major Incident Reports are produced and shared when a major incident takes place to establish lessons learnt and identify recommendations to prevent incidents recurring through asset replacement, training, procedural change etc.

5.2.5 Internet Monitoring – bandwidth reports are produced regularly to ensure that business usage not impacted negatively by any personal usage. ICT Acceptable use allows 15 mins per day personal internet usage, and ad-hoc reports to line managers to review individual staff usage are issued on authorised request.

5.2.6 Server capacity reports are produced on a monthly basis to identify under and over utilisation servers and identify corrective action to optimise performance.

5.2.7 Reports from Asset Register are produced for Service Level Agreements with other services and trusts.

5.2.8 Centralised software library where media is stored and recorded.

5.3 ICT Service Management

5.3.1 The ICT Service Management Team meets on a weekly basis. This group reviews and approves operational changes to existing ICT Assets, reviews and approves

major incident reports and takes action on the recommendations arising from these reports. The ICT organisational structure is featured at appendix B.

5.4 Enterprise Architecture Board

5.4.1 The Head of Customer Service & Performance will chair the group with the following officials representing each Service:-

- Head of Procurement, Corporate Governance
- Head of Environment Services, Housing & Environment
- Head of Regeneration and Housing investment
- Head of Planning and Sustainable Development
- Head of Adult Services
- Head of Educational Development, Policy and Performance
- ICT Account Manager, Corporate Governance, Social Care & Wellbeing and Housing & Environment
- ICT Account Manager, Education, Culture & Sport, Enterprise Planning & infrastructure and Office of Chief Executive
- Senior Programme Manager, PMO
- Enterprise Architect
- In addition the IT Manager and Team Leader, Infrastructure represent any relevant Technical Design information to the Board.

5.4.2 The group will meet on a monthly basis with support being coordinated by the Enterprise Architect. When there is a need to make a decision between meetings a pragmatic approach will be taken to facilitate this.

5.5 Corporate Asset Group

5.5.1 The Head of Asset Management & Operations continues to chair the group, with the following officials representing each Service:-

- Head of Finance, Corporate Governance
- Head of Environment Services, Housing & Environment
- Head of Regeneration and Housing Investment
- Head of Service, Office of Chief Executive
- Head of Customer Service and Performance
- Head of Adult Services
- Head of Educational Development, Policy and Performance
- General Manager, Asset Management

5.5.2 The group meets on a monthly basis with support coming from the Asset Management Team.

5.6 Partnership & Collaboration

5.6.1 Where possible, ICT Assets are purchased through Procurement Scotland frameworks. This contributes to maximum buying volumes for all public sector bodies within Scotland.

5.6.2 Where no specific framework exists, ICT will work in collaboration with Central Procurement Unit to ascertain if there are any other public sector with a similar requirement and partner for joint procurement.

5.6.3 Customer Service & Performance Service is a member of SOCITM and actively participates in SOCITM through regular meetings and ICT consultations.

5.7 Communication

5.7.1 The ICT Service Desk uses the Council's intranet pages to communicate maintenance periods. An exercise is being undertaken during 2013/14 linked to Corporate Governance Improvements Plan to review and amend the ICT Service Desk intranet pages to improve customer experience. ICT Account Managers maintain electronic distribution lists of system owners to advise and communicate on ICT maintenance and support.

5.7.2 Frequently asked questions and Advice and Guidance notes on the use of Council's ICT Assets are published on the Zone on an ad-hoc arrangement.

5.7.3 Quarterly security advisories are published on the Zone.

5.7.4 ICT Account Managers meet regularly with Business representatives to review SLA performance, and ongoing changes to ICT Assets.

6. Investment Planning

6.1 Capital

6.1.1 Capital Bid for £3M funding for refresh of corporate server, storage and backup infrastructure within Data Centre facilities, supported by the Corporate Asset Management Group, was approved February 2013 for 2015/16 onwards to continue ICT Service delivery beyond the current Managed Data Centre contract.

6.1.2 Capital bid for £5.7M funding for significant ICT investment to support transformation of Corporate Governance services to the Council was submitted through the Corporate Asset Group. This bid supported the transformation of services to deliver savings identified through PBB which need to be delivered from 2013/14 onwards over a 3 year period. £2.7M of capital funding was approved from 2013/14 onwards in February 2013. Subsequent to this, the Corporate Governance Improvement Business Case process revised the level of funding required to £4.685M and Finance identified that the balance over and above the capital already approved can be met from revenue funding streams already identified and set aside on a one off basis.

6.1.3 Investment for refresh of items included within this ICT AMP have previously been funded through Capital ICT Rolling Programmes. Corporate Asset Management Group agreed that this rolling programme be changed to a revenue budget as from April 2012.

6.2 Revenue

6.2.1 Revenue funding for £1.1M is available for ICT Investment rolling programme. Allocation of spend from this budget in 2013 was approved at the 24th April Finance & Resources Committee.

6.2.2 Investment arising from this ICT AMP has identified projects to the value of £6.5M with recurring investment of £1.5M for standard refresh of common ICT assets; PCs, laptops, interactive whiteboards, servers and telephone switches. There is a continuing challenge to prioritise refresh within the constraints of available £1.1M budget.

6.2.3 There is currently revenue across all services to the value of £1.6M on WAN network connectivity, and fixed and mobile telephony calls and rental.

6.2.4 There is currently £3.2M revenue within ICT to fund annual hardware, software and ICT services arranged on behalf of the Council by ICT.

6.2.5 In addition other Services currently have revenue funding to the value of £2.0M against ICT supplies and services budgets. This funding is generally used for service specific application software licence, support and maintenance, and fixed and mobile telephony calls and rental.

7. Performance Management

7.1 Performance Management

An informed organisation collects high quality information on context, activities and results; analyses it to expose issues or opportunities; and presents informed options to decision-makers internally, and candid assessments of plans and performance externally. Without high quality information, organisations will not be well placed to respond to the immediate challenge of cuts to funding and longer-term challenges of providing sustainable high-quality public services and creating the right climate for economic growth.

Option appraisal is crucial to ensure organisational interventions are fully informed and based on robust evidence. The core method of economic appraisal, cost-benefit analysis, has been designed to inform comparison between options for government interventions, recognising that in the public sector appraisals need to go beyond traditional financial analysis, and pick up broader social, environmental and economic effects which may not have ready market values. Appraisal techniques can be applied at project or programme levels, and have particular value when there is pressure to reduce costs while minimising effects on front line services or the wider economy.

There are no statutory performance indicators relating to ICT Assets. However, there are a number of factors such as cost, usage, availability, sufficiency (demand) and accessibility that can be measured and monitored to assess how the Council's ICT Assets are performing.

7.2 Performance Measures

7.2.1 Costs:

The following cost measures will be considered:

- ICT revenue expenditure as a % of all revenue spend
- Annual Capital expenditure on ICT Assets
- Unit cost for Workstation (whole life cycle cost)
- Unit cost for Network Connection (whole life cycle cost)
- Maintenance costs, including repairs and electrical testing as % of revenue expenditure
- Application licence and support costs as % of revenue expenditure
- Disposal costs as % of revenue expenditure

7.2.2 Usage

The following usage measures will be considered:

- Network Bandwidth usage to determine whether network links are working efficiently, require additional capacity or whether there is potential to reduce connectivity.
- % of PCs and laptops that are in active/inactive use to determine whether equipment can be redistributed to meet business requirements.
- PC performance to determine whether equipment is being utilised effectively.
- Server usage and capacity to determine peaks in usage or where servers are not being effectively utilised.

- Storage usage and capacity to determine where additional capacity is most required.

7.2.3 Availability measures

The following availability measures will be considered:

- % Network Availability – this measure can include availability of individual network links, and the data points, wireless access points, switches, hubs and routers allowing individual client devices to connect to Council applications.
- % Application Availability – this measure can include availability of server and operating systems, underlying database and storage infrastructure as well as the applications themselves.
- % Datacentre Availability – this measure includes power, and datacentre environmental controls affecting datacentre availability,

7.2.4 Accessibility

In order to assess ICT accessibility, the following measures will be considered:

- % of employees with a business e-mail account
- % of employees with access to Internet Services
- % of employees with access to a PC
- % of employees with full access to Council Services from non council premises
- Number and type of special ICT needs functionality provided (e.g. Zoomtext large text viewer)

7.2.5 Demand

In order to assess future demand, measures that will be considered are:

- No of Employees
- School Rolls
- No and type of Property providing Council services

7.3 Grading System

Following best principles of ICT Asset Management, we will be looking to introduce a grading system for suitability and serviceability conditions which will be applied and recorded against ICT assets. The criteria for this will be subject to consultation with users across all services and will take into consideration individual service business requirements.

8. Key Priorities 2013 – 2016

8.1 Key Priorities

8.1.1 The following priority areas have been and will continue to be progressed.

Priority Area	Status	Start Date	Completion Date
Formation of Enterprise Architecture Board, including approval and recruitment of Enterprise Architect post: Update: Enterprise Architect in post since May 2013.	Closed	August 2012	March 2013
Embed Enterprise Architecture to the organisation to Maturity Level 3	Open	May 2013	August 2014
Microsoft Enterprise Subscription – Implementation of software licences Update: Bitlocker Encryption deployed by December 2012. Outlook and Office 2010 Licences deployed through VDE April 2013. Business case to be developed considering use of Lync and Sharepoint licences as Client licences are included within the Microsoft Agreement.	Open	November 2012 October 2013	March 2013 March 2014
Schools Server Replacement – Options appraisal and implementation of replacement strategy Update: Options Appraisal complete and Business Case developed. Implementation subject to procurement.	Closed	November 2012	November 2013
Options Appraisal on Schools Storage Strategy	Closed	November 2012	January 2013

Update: Options appraisal recommended that hybrid solution of shared server storage and cloud based storage as preferred option. Implementation subject to schools server replacement.			
Schools Server Virtualisation – Implementation Single Data Centre	Open	December 2013	August 2014
Achieve PSN Compliance	Annual	Ongoing	April 2014
Network Infrastructure – identification of network connections with little or no resilience and carry out options appraisal for additional resilience Update: As identified, implement recommendations included within this plan at section 3.2.6 through the CG Improvement Plan	Open	January 2013	On-going
Public WiFi Service – segregate from Council network and extend to further sites	Open	October 2013	March 2015
Application Review	Open	October 2012	On-going
Development of Business Intelligence reporting Update: Proof of Concept delivered November 2012. From this Business Intelligence incorporated to wider CG Improvement Plan.	Open	September 2012	On-going
Review current ICT Asset procedures and registers and develop detailed improvement action plan Update: ICT Asset improvement action plan incorporated to wider CG Improvement Plan.	Closed	September 2012	April 2013

Data Centre Options Appraisal and Business Case Update: Initial Options Appraisal presented to Enterprise Architecture Board October 2013.	Open	October 2012	July 2014
Develop ICT Project Portfolio roadmap	Open	October 2013	December 2013
Rollout of Mobile Device Management enrolment for Council owned devices	Open	March 2013	On-going
Implementation of Lync to Support Smarter Working	Open	October 2013	July 2014
Electronic Records Management systems review, incorporating potential implementation of Sharepoint	Open	July 2013	March 2015
ICT Resourcing options to support delivery of Transformational Projects	Open	November 2013	March 2014
Replace RM Classboards at Cults and Muirfield Primary Schools	Open	January 2014	April 2014
Trial of Cloud Storage to assess suitability on Learning Environment as long term strategy	Open	January 2014	October 2014

9. Glossary of Terms

ACROYNM	TITLE	SUMMARY
DCMS	Department for Culture, Media & Sports	UK Government department with responsibility for culture and sport, with emphasis on promoting business and communities to grow by investing in innovation. Involved with helping the roll out next generation of mobile communications (4G) and broadband services across the UK.
GSX	Government Secure Extranet	Government Secure Network Service for wider communications, largely with other Scottish Local Authorities. Superceded by Public Services Network (PSN) from April 2014.
ITIL	IT Infrastructure Library	ITIL is the most widely adopted approach for IT Service Management. It provides a practical, no-nonsense framework for identifying, planning, delivering and supporting IT services to the business.
IWB	Interactive Whiteboard	An interactive whiteboard is a large interactive display that connects to a computer. A projector projects the computer's desktop on to the board's surface where users control the computer using a pen, singer, stylus or other device. The board is typically mounted to a wall, although may be floor standing. They are used in a variety of settings including classrooms at all levels of education and in corporate meeting rooms.
PBB	Priority Based Budgeting	Council's approach to 5 year business budget
PMO	Programme Management Office	Supports the management and implementation of Aberdeen City Council projects identified within PBB and other improvement programmes.
PSN	Public Services Network	Council has for many years been using the GSX (Government Secure eXtranet) for receiving and transferring sensitive information from/to other organisations:

		DVLA; DWP; NHS; GRoS; Police be that via GSX email or connecting to their systems. This has been replaced by the PSN.
VDE	Virtualised Desktop Environment	Desktop computers which in the main have no local processing capability. Sometimes referred to as 'dumb terminals'. They get their programs and data from the main ICT data centre.
WEEE	Waste, Electrical and Electronic Equipment Regulations	This aims to prevent the generation of electrical and electronic waste and to promote re-use, recycling and other forms of recovery in order to reduce the quantity of waste discarded.

Appendix A

Asset Management Methodology

ICT Current Position

ICT Asset Management is carried out by ICT on behalf of the Authority and is done in line with BSi Standard PAS55 and Information Technology Information Library (ITIL) best practice principles and processes.

PAS 55 describes asset management as the systematic and coordinated activities and practices through which an organisation optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their life cycles for the purpose of achieving its organisational strategic plan.

PAS 55 is divided into two parts, viz:

- Part 1 – the Specification for the management of physical infrastructure assets.

- Part 2 - Guidelines for the application of PAS 55 Part 1 requirements. Part 1 specifies the requirements for an asset management system for the management of physical assets and asset systems over their life cycles. The management of physical assets is inextricably linked to the management of other asset types and these other asset types are considered within the asset management system insofar as they have a direct impact on the management of physical assets. The optimal life cycle management of physical assets is heavily dependent upon information and knowledge, human assets and financial resources, and often has a significant impact on reputation and customer satisfaction. Applying PAS 55 enables us to demonstrate a high level of professionalism in whole life cycle management of our physical assets, specifically in respect of achieving the following benefits:

    - The ability to demonstrate best value within a constrained funding situation.

    - Establishing an asset management system to optimally and sustainably manage our physical assets.

    - Implementing, maintaining and improving our asset management system.

    - Demonstrating and proving compliance with corporate asset management strategy and policy (and to others).

    - Having a clear audit trail that serves as a basis for taking decisions and associated risks.

    - The ability to show that sustainable development is actively considered over assets' life cycles.

Specific aspects of the ITIL solution to managing assets builds on the PAS 55 approach by applying the principles of its IT Asset Management Process Life Cycle model approach (as referred to under Section 1.2.2. of the main document).

Establishing management processes, their role in the asset life cycle and the departments that are involved in each process. The following table includes the main processes (as derived from the Asset Management Process Life Cycle model) in an IT Asset Management methodology:

Process Name	**Functions**	**Departments**	**Roles**
Request	• Request to provision a service or an asset • Approval(s) of request • Determine fulfilment type (from inventory or new purchase)	• IT • Finance	• Asset Manager • Department Budget Manager • Service Desk
Procure	• Procure new assets or services when not in inventory • Negotiate and establish contracts with suppliers • Link contracts to catalogue line items	• Finance	• Procurement Manager
Receive	• Receive new assets or services from suppliers • Validate shipment (match received goods to order)	• Finance • Facilities (or IT)	• Asset Manager • Financial Manager
Manage	• Execute IMAC processes	• IT	• Service Desk
Retire	• Retire obsolete assets from operational use • Acquire legal indemnification for disposed assets • Update asset status	• IT • Finance	• Asset Manager • Financial Manager
Plan	• Provide enough stable consistent	• IT • Finance	• Asset Manager • Department Budget

	information for accurate budgeting and forecasting		Manager • Financial Manager

The following table illustrates the phases of an implementation programme and the business benefits delivered at each level. Regardless of which level an organisation is currently in, it is important to prioritise future efforts. Establish a phased approach by targeting areas of the infrastructure that provide the highest business value and enable greater cost control over the IT assets. This strategy delivers business benefits where they are most important to supporting the delivery of IT services.

Level	**Phase**	**Activities**	**Benefits**
1	Asset Discovery	• Identify deployed assets • Know what is in the infra structure at any given point in time to a given level of detail: hardware, software, network, etc. • Know who is using assets, how frequently, how much)	• Understand and manage asset usage
2	Inventory Management	• Identify owned assets • Compare owned with deployed (inventory) • Identify “over” or “under” deployment of assets and reasons (change policies, processes, procedures) and, over time, reduce the gap	• Manage compliance • Reduce over-purchasing • Enforce standards (manage non-standard) • Redeploy assets
3	Contract Management	• Introduce contracts • Link contracts to assets (hardware, software, network, etc.) • Identify and capture critical terms and conditions • Create workflow	• Manage maintenance costs • Manage contract service levels • Automate contract renewal • Improve negotiations and vendor/spend management

		and event notifica - tions, such as lease notifications, re-negotiation windows, cancellations, etc.)	
4	Financial Management	• Planning and budgets • Analyse infrastructure blueprint prior to planning and budgeting • Reconcile with fixed assets • Provide accurate asset data to fixed assets • Invoice reconciliation • Automate invoice reconciliation process • Asset allocation and chargeback • Track asset costs by cost centre and chargeback	• Improve budgeting process • Improve management of fixed assets/depreciation • Improve management of tax payments • Reduce payment of erroneous invoices • Manage IT demand and behaviour by allocating cost to actual consumers