

Aberdeen City Council

ICT service review

2014/15 Audit



Prepared for Aberdeen City Council
June 2015

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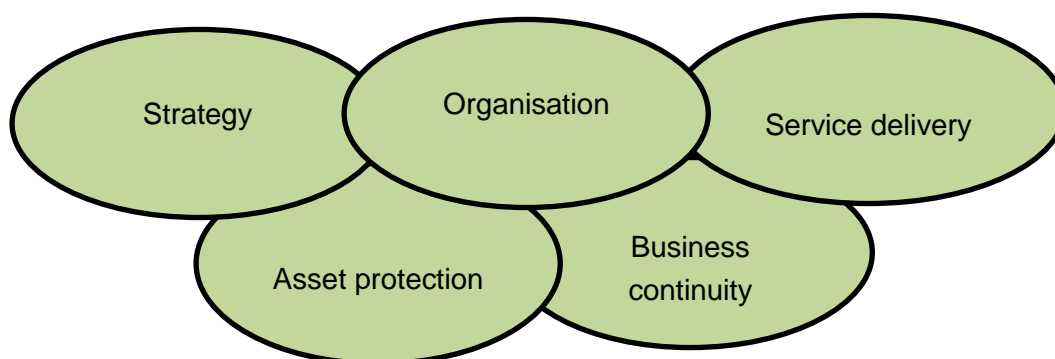
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Summary

Introduction and audit approach

1. In our 2014/15 Annual Audit Plan, we acknowledged that the ICT function was currently being restructured as part of the ICT Improvement Plan. We noted that the council's external contract for hosting servers is due to end in around 6 months and that options for future delivery of many ICT services such as a shared service desk and data centre are currently being developed. We therefore included a review of ICT arrangements as part of our routine work for the 2014/15 audit.
2. The Head of Service for ICT, Customer Service and Performance left the council in December 2014 and the chief executive with the Acting Director for Corporate Governance was prompt in taking the opportunity to review service roles in Corporate Governance and establishing interim arrangements. A new post of Head of Information Technology and Transformation was approved and subsequently filled with effect from May 2015.
3. The audit work took place during the interim period and was based on an established computer services review methodology developed by Audit Scotland. It provides a high-level risk based assessment of the management of ICT services in five key areas as outlined below.



4. Our audit was completed in consultation with ICT management and from supporting documentation, as appropriate.

Key findings

5. Overall, the council has sound controls over the delivery of its ICT services. Governance and organisational arrangements underpin a service that is configured to support business needs.
6. This year brings a number of challenges and opportunities:
 - appointment of a new Head of Information Technology and Transformation
 - re-organisation of ICT teams into new structures, intended to improve service delivery
 - changes to the arrangements for hosting the council's central computers

- the development of a new ICT strategy
- ICT service support required to deliver a portfolio of change and development projects across the council.

Risk exposure and planned management action

7. This report summarises the findings from our review and identifies areas where the council may be exposed to significant risk. Although this report identifies certain risk areas, it is the responsibility of management to decide the extent of the internal control system appropriate to the council. We would stress, however, that an effective control system is an essential part of the efficient management of any organisation. Also, it should be noted that risk areas highlighted in this report are only those that have come to our attention during our normal audit work in accordance with our Code of Audit Practice and therefore are not necessarily all of the risk areas that may exist.
8. The action plan included as Appendix A of this report details the areas where continued risk exposure exists. Officers have considered the issues and are taking the specific steps in the column headed 'management action'. The Audit, Risk and Scrutiny Committee should ensure it is satisfied with the proposed management action and that there is a mechanism in place to monitor progress.

Acknowledgements

9. The contents of this report have been agreed with senior officers within the ICT service to confirm factual accuracy. The assistance and co-operation we received during the course of our audit is gratefully acknowledged.

Main Findings

Introduction

10. In 2013, the Society of Local Authority Chief Executives (SOLACE) published a new Local Government ICT strategy which aims to increase access to digital services, reduce costs and enable public sector reform through the use of IT. The Scottish Government has also developed a strategy for data hosting and data centre management for the public sector. This strategy promotes different ways of working to achieve efficiencies with a focus on the use of cloud computing, virtualisation and co-location.
11. Aberdeen's ICT service is responsible for advising on investment decisions as well as delivering stable and secure computer systems within the council.
12. Over the last couple of years, the council's internal auditor has undertaken a number of reviews across the IT service which, on the whole, have produced positive findings. We have considered the outcome of these audits as part of our review.

Strategy

13. A strategy document or service plan for ICT is commonly used to give an ICT service and its governing committee an agreed direction of travel and objectives for a specified period of time. It should also outline corporate policy and preference in relation to procurement, service delivery and new technology in order to inform future decision making. The most recent ICT strategy for Aberdeen City Council covered 2010 to 2015 and with the main objectives now implemented, the strategy is coming to an end. In particular, the strategy enabled flexible working following the council's relocation of its headquarters to Marischal College and at other sites. It also underpinned the council's growing capability to deliver services on-line.
14. There has been significant change within public sector IT over this period and Aberdeen in particular has been progressing a change programme over the last couple of years. The impact of these changes will need to be reflected in any new strategy. More detail on recent changes in the service is reflected throughout this report.
15. With the recent appointment of a new head of service, it is appropriate that he has the opportunity to influence and communicate to the vision and plans for setting a revised strategy for the council. In addition, the council has approved the development of tender exercises to take forward future hosting arrangements for a data centre and a model for IT service desk management. These initiatives will contribute in shaping the future delivery of Aberdeen's IT services. In the interim, the IT service continues to manage the following priorities:
 - existing contracts
 - a range of priority IT projects
 - contributing to the digital service projects which form part of the council's strategic infrastructure plan.

16. The governing committee for ICT is the Finance, Policy and Resources Committee. Progress with strategic projects is reported to the Corporate Management Team in the first instance and subsequently to committee. The council has a strategic infrastructure plan (SIP) which sets out a number of infrastructure projects for the city and this includes several projects under the banner of Digital Aberdeen. IT staff contribute to the delivery of these projects which are formally monitored through the SIP performance dashboard. There are also a range of other capital and service related projects which require IT input that are monitored as part of the council's overall programme management arrangements. The SIP was approved by the council in 2012 and while the programme management office (PMO) has existed for several years, it is only recently that all projects have come within the PMO arrangements. We would suggest that the new ICT strategy also forms part of these arrangements in order that plans are monitored as part of the existing governance arrangements rather than becoming a separate process.

Refer risk no. 1

Organisation

17. Until December 2014, ICT was within the remit of the Head of ICT, Customer Service and Performance. With his departure in December 2014, the chief executive took the opportunity to review service roles in Corporate Governance. A revised head of service role covering Information Technology and Transformation was approved and subsequently filled with effect from May 2015. The customer service aspects which had been included in the former role were transferred into the renamed Human Resources, Organisational Development and Customer Services team. Interim arrangements were promptly put in place and reflected the intention to reorganise services as different managers were given interim responsibilities for ICT and Customer Services.
18. Around a year ago, the chief executive in her former role as Director of Corporate Governance initiated a structure review of the ICT team through a series of workshops. Job roles are now more closely aligned with service delivery arrangements so that responsibilities for key controls are clearly held by different teams and staff. The new structure should help the council to strengthen change management arrangements so that less time is spent on reactive work, and more resources are available for transformation projects.

Service delivery

Installation management

19. Significant elements of installation management are currently outsourced to the provider of the council's data-centre. The council is still responsible for physical access to its premises and networks and for logical access to its computer systems.
20. Physical access security to council premises was reviewed in 2013 by the Information Commissioner's Office and various improvements were made. Internal audit included network and perimeter security in their 2014/15 plan and identified three risks which have been addressed. The council has a policy of requiring users of computer systems to have

passwords and be individually identifiable, and although there are generic accounts, their use is restricted.

21. The contract for providing data centre services reaches the end of its initial term in January 2016 and the council began planning for the future arrangement in 2013.
22. The national ICT strategy for Local Government and Scottish Government digital policy promotes shared hosting arrangements for data centres. An efficient data centre is at the heart of the council's ability to deliver services and outsourcing gives access to scale and facilities which the council would be unable to achieve on its own. Data centres are often a significant contributor to carbon footprint and this can be reduced by the use of modern facilities and the ability to access storage on demand. With that context, a range of options were considered and working closely with Aberdeenshire Council, the council agreed in April 2015 to enter into a joint procurement arrangement for the provision of data centre services from a third party. Although the time-scale for moving to the new arrangements is challenging, the risk is reduced by the option to extend the existing contract by one year to January 2017.
23. While the joint procurement potentially increases the council's buying power and the control it has over its infrastructure, it is also complex to deliver, with dependencies on third parties, including Aberdeenshire Council and Scottish Government agencies.

Refer risk no. 2

Service monitoring

24. Significant elements of service monitoring are outsourced to the data-centre provider and subject to monthly reporting. This includes the number of service desk incidents referred to the data-centre and the time to resolve. Over the last year, these were well within the contractual service level.
25. Operation level agreements between ICT and user services are used to define the service expected from ICT and how it is to be charged. The structure gives clarity over who is responsible for back-ups, capacity management, security and recovery.
26. The use of performance information is an indicator of the maturity of ICT operations, and provides management with a tool to keep service delivery efficient and responsive. Performance and operational statistics are gathered from various sources, including helpdesk and security management software. Summaries are produced and reported as appropriate to the IT management team.
27. Table 1 shows that the council currently has around 60 ICT projects that are monitored and supported by the ICT service. Most of these are run within service groups, with input from ICT staff as required. Nearly half of the projects have a high priority rating of which two thirds are at the implementation stage

Table 1 - Analysis of priority projects	total number	Number to be implemented
Infrastructure - capital project (e.g. museums collection, city digital)	11	6
Operations - capital project	2	-
Operations - service project (e.g. library management system, multi-function devices)	5	4
Operations - In a programme	9	9
	27	19

28. With an expanded team of seven specialists, including the new post of Projects Coordinator, the council is better placed to manage the competing demands of services and internal projects. In setting the new strategy, there is scope for the service to more clearly set out its priorities against available resources to ensure that it has sufficient capacity to deliver agreed projects within the necessary timescales.

Refer risk no. 3

29. In our 2013/14 audit, we reviewed the council's project management arrangements for capital projects and highlighted that the council had recently revised its project management processes. We therefore delayed any detailed coverage of specific projects until the new arrangements settled in. We intend to review the application of these arrangements as part of our 2015/16 audit and will include a sample of IT projects at that time.

Asset protection

30. Information management is a significant issue for all public authorities. There are many regulatory requirements, as well as a level of continuous challenge from malicious parties that seek to exploit the council's systems and information assets. Information management is resourced separately from ICT within Corporate Governance. We consider that the separation of duty helps to ensure that asset protection arrangements within ICT are independently evaluated and challenged.

31. The council recently received the agreement of the Keeper of the Records of Scotland to its Records Management Plan. Preparation of the plan involved the update of security policies as well as the development of a suite of new information management policies and a clear structure of responsibilities. Recognising the importance of this new legislation, the council agreed with internal audit that two compliance audits would be undertaken as part of the 2014/15 internal audit plan. The first was reported to the Audit, Risk and Scrutiny Committee in November 2014 and the second is due to be reported in June 2015. The first compared the proposed Records Management Plan against guidance and offered some improvements prior to its submission to the Keeper. The second report will monitor the policies and procedures in place and seek assurance that the plan is embedded across the council.
32. The Keeper noted two areas as being under improvement, and these were the business classification and the retention schedule. Both of these are dependent on the roll-out of records management to the council's service areas.

Refer risk no. 4

33. The council's arrangements for information security recognise that the human element is at least as important as the technical one. The supporting role of the ICT security team ensures that changes to the council's systems are subject to security risk assessment and mitigation and that the council's systems are actively monitored and protected. The council has an Information Management Governance Group which meets every two months and includes officers from each directorate as well as subject experts from Corporate Services. There are nominated Information Management Liaison Officers in each directorate.
34. A recent security incident involving an email-borne virus was quickly dealt with. It is a long-standing problem of IT security that it is difficult to configure technical measures to protect against threats that have not been seen before and the virus that was at the heart of the incident caused similar problems at other organisations around the same time. Email and web-site borne incidents highlight the importance of effective refresher training to maintain levels of electronic security awareness in all staff.

Refer risk no. 5

35. Over the past year, the Audit, Risk and Scrutiny Committee began to receive a regular report on data protection activity. For example, this includes subject access requests, data breaches and near misses, training and general updates.
36. In common with other public authorities, the council is accredited to be part of the UK Public Services Network, which underpins the secure transfer of data between parts of government. Recent years have brought more stringent requirements and a resulting need to upgrade protection systems. Accreditation is due in August each year and involves both internal and external assessments of security. It is monitored within the IT project portfolio and re-accreditation is expected.

Business continuity

37. Aberdeen City Council recognises that planning for emergencies and service interruptions is an integral part of good business practice. For the ICT service, the term disaster recovery is used to refer to the ability to resume essential information technology services (data networking, key application systems and email) in the event of a significant outage.
38. We found that the council uses business continuity planning (BCP) and disaster recovery (DR) planning for its information technology services. Plans and policies have existed for a number of years and are updated periodically. There is also a track record of recovery testing at the data centre at least once a year, and this has led to better knowledge and documentation of the council's ICT infrastructure. When the current data centre arrangements end, and during any transitional period, there will be a need to consider carefully the disaster recovery implications and ensure that a regular testing regime is maintained.

Refer risk no. 6

Appendix A

Risk identification and action plan

Action point	Refer para no	Risk identified	Planned management action	Responsible officer	Target date
1	16	<p>A new ICT service strategy needs to be developed and implemented. In due course, delivery should be monitored within the council's PMO arrangements.</p> <p><i>Risk: until a new strategy is published, a perception could develop that the council is not taking a long-term approach to ICT services.</i></p>	<p>Following appointment of new Head of Service, IT and Transformation Service in May, a broader review of all relevant strategies has commenced with revision over the next 3-6 months. Thereafter, actions arising from the strategy will be monitored through appropriate governance arrangements.</p>	Head of Service (IT and Transformation)	March 2016
2	23	<p>The council has opted to enter a joint procurement exercise with Aberdeenshire Council for the provision of data centre services by a third party.</p> <p><i>Risk: delivery of this solution is likely to be complex, with dependency on third parties. This may give rise to delay and the need for an interim data centre and increased costs.</i></p>	<p>Transition of Data Centre Services from existing contractual arrangements to new operating model underway to meet end of contractual arrangements in January 2016, with transitional activities running until the new service has been operating for a full 3 month period.</p>	IT and Technology Services Manager	July 2016

Action point	Refer para no	Risk identified	Planned management action	Responsible officer	Target date
3	28	<p>There is a large portfolio of priority projects which places significant demands on the ICT projects team.</p> <p>Risk: projects could be delayed due to ICT staffing constraints and competing priorities.</p>	<p>The portfolio of projects will be expanded to incorporate resource demands for wider IT and Transformation resources and we will continue to develop our systems, processes and procedures to capture and report on resource demands and capacity.</p>	Head of Service (IT and Transformation)	March 2016
4	32	<p>Two areas of the council's Records Management Plan are under improvement; business classification and the retention schedule. Both of these depend on local adoption by the council's service areas.</p> <p>Risk: as with any change process, it may take time to become embedded.</p>	<p>This theme will be addressed through the "Information and Records Lifecycle" domain of our Information Management Strategy. A pilot is underway with Education and Children's Services, from which lessons learned will be used to develop a plan for other areas across the council.</p>	Records Manager	<p>For initial pilot work: March 2016. Resources and timescales for full roll-out will be calculated on completion of pilot.</p>

Action point	Refer para no	Risk identified	Planned management action	Responsible officer	Target date
5	34	<p>Email and internet borne security incidents highlight the importance of effective refresher training to maintain levels of electronic security awareness in all staff.</p> <p><i>Risk: as people grow increasingly trustful of the performance and convenience of new technology, they may become less cautious in using their electronic equipment.</i></p>	<p>This theme will be addressed through the "Culture, Training & Communications" domain of our Information Management Strategy, which will develop and roll out appropriate information security refresher training as part of a wider information management culture, training and communications programme</p>	Records Manager	March 2016
6	38	<p>When the current data centre arrangements end, and during any transitional period, there will be a need to consider carefully the disaster recovery implications and ensure that a regular testing regime is maintained.</p> <p><i>Risk: during the transitional period between data-centres, there may be a loss of knowledge about configuration and recovery.</i></p>	<p>Disaster Recovery is being considered within transition activities, both to minimise disruption during transition activities and to ensure that end solution is robust and tested at regular intervals after transition.</p>	IT Technology Services Manager	July 2016