Aberdeen City Council

ICT Management Information and Performance Reporting

Internal Audit Report 2014/2015 for Aberdeen City Council

June 2015

Internal Audit KPIs	Target Dates	Actual Dates	Red/Amber/Green	Commentary where applicable
Terms or reference agreed 4 weeks prior to fieldwork	26/03/2015	20/03/2015	**Green**	
Planned fieldwork start date	23/04/2015	23/04/2015	**Green**	
Fieldwork completion date	04/05/0215	04/05/2015	**Green**	
Draft report issued for Management comment	18/05/2015	03/06/2015	**Red**	Internal auditor on study leave.
Management Comments received	12/06/2015	11/06/2015	**Green**	
Report finalised	15/06/2015	11/06/2015	**Green**	
Submitted to Audit and Risk Committee	25/06/2015	25/06/2015	**Green**	

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1. Executive summary

Report classification	Total number of findings ← Section 3 →				
	Critical	**High**	**Medium**	**Low**	**Advisory**
Low Risk					
Control design	-	-	1	2	-
Operating effectiveness	-	-	-	-	-
Total	-	-	**1**	**2**	-

Summary of findings

1.01 Management information and reporting is critical in facilitating robust and well-informed decision making. This is particularly important within ICT since, as a service, it supports many of the Council's activities and will have a direct or indirect effect on many of the organisation's Strategic objectives. In light of the recent restructuring of the ICT department at Aberdeen City Council we have reviewed the current processes and controls in place to ensure relevant information is available to management in order to evaluate the success of its implementation and the ultimate impact on the end-customer's needs. The overall objective of the review was to examine the existing ICT management information requirements, the systems' capabilities to collect and analyse relevant data, and review the design and operating effectiveness of controls in place to ensure the integrity of that data.

1.02 In the course of our review we have made one medium risk finding:

- IT performance reporting is focused on operational metrics but these do not articulate fully how well the IT department is performing, or how efficient and effective ICT is in supporting the Services of the Council to achieve their strategic objectives. There is a risk that the Council therefore does not have oversight of how a significant failure in its IT applications and infrastructure would impact on its ability to support key areas of service delivery.

1.03 We have also made two further low risk findings:

- Reporting lines within IT are informal and unclear, and it was identified that there was a need for a management committee within ICT responsible for monitoring performance and relevant KPIs.
- The data collected for management reporting relies on significant manual intervention and there is a lack of control around how the accuracy and completeness of that data is ensured. It was noted through conversations that this occurs throughout the Council and is not only limited to ICT. The

ability to ensure the data used in management information is complete and accurate is a growing risk that is being considered by other organisations and improving controls in this area would align the Council with good practice in this area.

Management Comments

IT and Transformation have embarked on an IT Service Improvement plan which will use performance measurement and reporting to measure improvements in its delivery of the IT Service to its customers. Feedback from this Internal Audit review, and its suggested measures will be used to help shape the improvement plan.

2. Background and scope

Background

2.01 ICT management have identified the need to better understand the current management information available within the service to enable better decision making and monitoring against strategic targets. High quality management information is critical to enabling effective decision making at a senior management level and to facilitate a strong system of corporate governance. Therefore having strong controls over the management information and reporting process is vital if management are to be able to rely on the completeness, accuracy and relevance of the information available to them when making decisions.

2.02 The main IT reporting requirements can be split into two broad categories: Customer Support and Infrastructure.

Customer Support

2.03 The customer facing role of the ICT department is facilitated through the ICT service desk. This is managed by the Service Desk Co-Ordinator alongside the Account Managers. The Account Managers are responsible for being the link between ICT and the Customer departments to which ICT deliver a service.

2.04 When customers require support from ICT (e.g. to resolve a technical problem or to acquire new ICT assets) their first point of contact is through the ICT helpdesk. Calls are raised either via the telephone or electronically through the helpdesk application (Zeacom). The calls are routed to the appropriate first line analyst who will attempt to resolve their query immediately or log a request with the appropriate technical team. The ICT service desk attempt to resolve all calls in line with the defined prior levels and targets outlined in the service level agreements (SLA's).

2.05 Management are able to track performance of the service desk using the QSM application which facilitates real-time data analysis. This can be used to provide a high-level overview of overall performance at any given point in time, or facilitate more detailed analysis, for instance to determine trends and identify sources of delays in service desk delivery.

2.06 It was noted that there are weekly IT manager meetings that include a discussion of the ICT service desk performance. The service desk co-ordinator reports on the overall performance of the helpdesk in respect to the number of requests currently open and the number of requests fixed during the period. However, it was noted that additional metrics can be reported on an ad-hoc basis in order to facilitate further problem resolution. In response to this meeting, individuals can be assigned action points to investigate and resolve.

Infrastructure

2.07 The ICT department follow an ICT Asset Plan which was last updated in 2013; this is currently in the process of being updated and is due to be published in September 2015. The Council currently outsource their data centre management to a third party supplier, ATOS. It was noted that this arrangement is due to terminate at the end of 2015; therefore plans are being drawn up to bring the data centre facility back in-house under a partnership agreement with

Aberdeenshire Council. Currently the ICT team receive monthly performance reports from ATOS and attend monthly management meetings to discuss performance. Through a review of the monthly performance report it was noted that the key performance indictors reported include metrics on ATOS service punctuality, service usage, server availability and security related incidents.

2.08 It was found that ACC's ICT department proactively monitors server performance in-house, which demonstrates evidence of good practice and limits the dependence on ATOS to identify the risk of business disruption due to poor server performance. This is facilitated through a number of monitoring tools including Statseeker which is used to monitor the performance of the Council's Corporate Servers. This continually monitors the server uptime and capacity performance. Where incidents are logged an automated email is sent to the appropriate individuals within the ICT department to initiate responsive action.

Corporate Reporting – Performance Dashboard

2.09 As part of the Corporate Governance reporting measures, the Council maintain a Performance Dashboard which is accessible by all Council staff through the staff intranet. In respect to ICT it was noted that four performance measures are reported on a monthly basis, this includes; helpdesk call resolution against SLA priority levels; number of helpdesk calls resolved; cost per workstation; and server uptime analysis. Call resolution by SLA priority type is included in the Corporate Governance Performance Reporting presented to the Finance, Policy and Resources Committee.

Scope & Limitation of Scope

2.10 The agreed scope has been agreed in the Terms of Reference attached in Appendix 2. The agreed scope includes the following:

- An assessment of the key management information required for the ICT decision making process which enables the ICT service to meet its strategic targets;
- A high level review of the current system capability, existing tools and mechanisms to understand whether the key management information can be delivered in a timely manner, to the quality required; and
- A review of the design and operating effectiveness of the key controls in place to ensure that high quality, reliable and standardised information is provided to ICT management.

2.11 We have undertaken a review of the design and operating effectiveness of the Council's controls in the areas contained within this Terms of Reference. Our work was undertaken using a sample based approach.

2.12 The limitations of scope are outlined within the Terms of Reference attached in Appendix 2.

3. Detailed findings and recommendations

3.01 IT performance reporting – control design

Findings

Current IT performance reporting is not service delivery focused and has not been mapped to the key applications and servers that support Council services. As a result the information being reported may not be relevant to the actual needs of the organisation or tailored to identify where ICT is underperforming in its service delivery. A review of the various services of the Council and a mapping between the ICT services that support each of these services would be beneficial. This would align the applications, servers and other resources used to support the Council's services.

The current performance reporting in ICT is focused primarily on operational metrics and does not capture all of the key performance indicators (KPIs) we would expect to see within the department. While operational metrics are important to know, they do not articulate how well the ICT department is actually performing in supporting the various Services within the Council. Effective KPIs should provide management with information that provides the basis for making decisions, for example: what is IT's efficiency and effectiveness rate for processing IT changes? Or what is the labour utilisation incurred for reacting to incidents and problems?

At present there is no formal reporting of agent utilisation rate; therefore it would be difficult for the ICT management to justify an increase in the level of staffing resources in response to changing demand for ICT support services. It was also found that there has been no customer satisfaction survey or formal feedback collected from customers. This has been attributed to lack of resources to facilitate this key task. At present, the main link between the customers and the ICT department is through the Account Managers who gather and report back anecdotal feedback. It is recognised that the ICT department is in the progress of piloting a telephone feedback process. A potential option to explore would to be to implement an automated electronic customer feedback survey which is system generated once an IT helpdesk call is closed.

We have noted that operational changes to the service desk support function have attempted to seek closure of a greater number of calls on initial contact with the first level analysts. Previously, their primary role was to log calls and escalate to the appropriate handler for resolution. First time resolution by first level analysts should result in greater cost efficiencies; however, this may be offset by longer call times and waiting times before calls are answered. It was noted that these metrics are available and monitored on an ad-hoc basis by the service desk co-ordinator. Whilst these are considered to be key metrics that are reported to management, there would be benefit communicating a simplified metric to show overall service desk performance over time.

In reference to the scope of this review, provided below are some examples of KPIs we have observed at other organisations:

- Change efficiency rate – how efficient are we at handling changes?
- Change labour workforce utilisation – how much available labour capacity was used to handle and coordinate changes?
- Request fulfilment on-time delivery rate – how successful are we at fulfilling requests on time?
- Request fulfilment first call rate – how successful are we at fulfilling requests on time?

- Incident customer impact ratio – how many incidents do we resolve before they impact customers?
- Security access incident rate – how many security incidents did we experience within our infrastructure?
- Overall customer satisfaction rate – how do customers perceive the quality of the service we are delivering?
- SLA coverage ratio – what percent of the services we deliver have formally been agreed to?
- Availability resilience index – how resilient is our infrastructure towards protecting services?
- Call agent utilisation – do we have enough Resources to handle calls?

These KPIs are provided as just some examples of good practice we have observed at other organisations for monitoring IT performance. In developing any suite of KPIs, ICT management should work with stakeholders across the Council to determine those KPIs most relevant to the organisation and its objectives.

Risks

There is a risk that management are not utilising the most relevant information to facilitate strategic decision making.

Action plan

Finding rating	Agreed action	Responsible person / title
Medium	• ICT management will engage with stakeholders across the organisation to identify the key applications and servers that support Council services. • Working with stakeholders ICT management will develop a suite of key performance indicators (KPIs) designed to provide relevant management information that is tailored to the needs of the Council. These metrics will be focused on evaluating performance and aligned to the strategic objectives of the organisation.	Head of IT and Transformation **Target date:** March 2016

3.02 Data quality and utilisation – control design

Finding

The key reporting mechanism for Corporate Governance and strategic level decision making is through the Performance Dashboard, which is presented to the Finance, Policy and Resources Committee. This is the main source of management information, which is reviewed by senior management, including the Chief Executive of the Council.

The data is currently collated into the Covalent tool through a manual process. With any manual process there is a greater risk of incomplete or inaccurate data being input and as a consequence being relied upon for management information and decision-making purposes. We have identified that there is a lack of control around how management get comfort that the data being input into Covalent is complete and accurate. It was identified that the Council does not maintain a data dictionary or code book, therefore there is a lack of ability to identify gaps in the data collected, or to conversely determine whether data being stored is required.

It has been acknowledged that the Council has recently explored the potential of creating a centralised data warehouse, which could be used alongside a data analysis and reporting tool such as SharePoint to automate the performance reporting process. This will remove the need to manually transpose data into the reporting tool and provide a greater level of data insight which can be reported in a user-friendly manner.

Risks

There is a heightened risk that data used for ICT corporate reporting purposes is incomplete and/or inaccurate due to the manual nature of reporting and lack of control.

Action plan

Finding rating	Agreed action	Responsible person / title	Target date:
Low	A Master Data Management strategy will be developed on behalf of the Council which incorporates all aspects of good practice in data management.	Head of IT and Transformation	March 2016

3.03 Creation of a ICT management group – control design

Finding

During the course of our review it was found that there were numerous ICT group meetings that collected and analysed various detailed performance measures specific to their area of responsibility. Nevertheless, it was considered that reporting upwards through lines of management was often on an ad-hoc basis lacking the formality required to provide a higher-level picture of the performance of the ICT department over time.

Establishing an ICT management group with overall responsibility for monitoring KPIs relevant to the performance of ICT (see finding 3.01) would align Aberdeen City Council with good practice in other organisations.

Risks

There is a risk that information reported to senior manager does not provide a true representation of the ICT department's performance.

Action plan

Finding rating	Agreed action	Responsible person / title
Low	An ICT management group will be established led by the Head of IT and Transformation. The group will be responsible for monitoring KPIs established for measuring the performance of ICT at the Council.	Head of IT and Transformation
		Target date:
		June 2015

Appendix 1 – Basis of our classifications

Individual finding ratings

Finding rating	Assessment rationale
Critical	A finding that could have a: • ***Critical*** impact on operational performance; or • ***Critical*** monetary or financial statement impact; or • ***Critical*** breach in laws and regulations that could result in material fines or consequences***;*** *or* • ***Critical*** impact on the reputation or brand of the organisation which could threaten its future viability.
High	A finding that could have a: • ***Significant*** impact on operational performance; or • ***Significant*** monetary or financial statement impact ; or • ***Significant*** breach in laws and regulations resulting in significant fines and consequences ***;*** *or* • ***Significant*** impact on the reputation or brand of the organisation.
Medium	A finding that could have a: • ***Moderate*** impact on operational performance; or • ***Moderate*** monetary or financial statement impact; or • ***Moderate*** breach in laws and regulations resulting in fines and consequences; or • ***Moderate*** impact on the reputation or brand of the organisation.
Low	A finding that could have a: • ***Minor*** impact on the organisation's operational performance; or • ***Minor*** monetary or financial statement impact; or • ***Minor*** breach in laws and regulations with limited consequences; or • ***Minor*** impact on the reputation of the organisation.
Advisory	A finding that does not have a risk impact but has been raised to highlight areas of inefficiencies or good practice.

Report classifications

Findings rating	Points
Critical	40 points per finding
High	10 points per finding
Medium	3 points per finding
Low	1 point per finding

Report classification	Points
Low risk	6 points or less
Medium risk	7– 15 points
High risk	16– 39 points
Critical risk	40 points and over

Appendix 2 – Agreed Terms of reference

Background

ICT management have identified the need to better understand the current management information available within the service to enable better decision making and monitoring against strategic targets.

High quality management information is critical to enabling effective decision making at a senior management level. Therefore having strong controls over the management information process is vital if management are to be able to rely on the completeness, accuracy and relevance of the information available to them when making decisions.

Scope

The scope of our review will be to obtain an understanding of what gaps management believe exist between the existing reporting available and the reporting required for decision making in ICT. We will work with ICT management to:

- Agree the key management information that management believe are necessary to aid decision making and drive the ICT service to meet its strategic targets;
- Perform a high level review of the current system capability, existing tools and mechanism to understand whether they key management information can be delivered in a timely manner, to the quality required and
- Review the design and operating effectiveness of the key controls in place to ensure that quality, reliable and standardised information is provided to ICT management.

Limitations of scope

The scope of our review is outlined above. This will be undertaken on a sample basis. It should be noted that whilst our work will consider the arrangements Aberdeen City Council has in place; it does not constitute assurance around the accuracy of any data within the systems.

Internal control, no matter how well designed and operated, can provide only reasonable and not absolute assurance regarding achievement of an organisation's objectives. The likelihood of achievement is affected by limitations inherent in all internal control systems. These include the possibility of poor judgment in decision-making, human error, control processes being deliberately circumvented by employees and others, management overriding controls and the occurrence of unforeseeable circumstances.

Audit approach

Our audit approach is as follows:

- Obtain an understanding of the procedures in place through discussion with key personnel, review of documentation and walkthrough tests where appropriate.
- Identify the key risks in respect of management information and performance reporting
- Evaluate the design of the controls in place to address the key risks.
- Test the operating effectiveness of the key controls on a sample basis.

Appendix 3 – Limitations and responsibilities

Limitations inherent to the internal auditor's work

We have undertaken a review of Management Information and Performance Reporting, subject to the limitations outlined below.

Internal control

Internal control, no matter how well designed and operated, can provide only reasonable and not absolute assurance regarding achievement of an organisation's objectives. The likelihood of achievement is affected by limitations inherent in all internal control systems. These include the possibility of poor judgment in decision-making, human error, control processes being deliberately circumvented by employees and others, management overriding controls and the occurrence of unforeseeable circumstances.

Future periods

Our assessment of controls relating to Management Information and Performance Reporting is as at 31 March 2015. Historic evaluation of effectiveness is not relevant to future periods due to the risk that:

- The design of controls may become inadequate because of changes in operating environment, law, regulation or other; or
- The degree of compliance with policies and procedures may deteriorate.

Responsibilities of management and internal auditors

It is management's responsibility to develop and maintain sound systems of risk management, internal control and governance and for the prevention and detection of irregularities and fraud. Internal audit work should not be seen as a substitute for management's responsibilities for the design and operation of these systems.

We endeavour to plan our work so that we have a reasonable expectation of detecting significant control weaknesses and, if detected, we shall carry out additional work directed towards identification of consequent fraud or other irregularities. However, internal audit procedures alone, even when carried out with due professional care, do not guarantee that fraud will be detected.

Accordingly, our examinations as internal auditors should not be relied upon solely to disclose fraud, defalcations or other irregularities which may exist.