

Cairngorms National Park Authority

INTERNAL AUDIT REPORT - FINAL

ICT Performance and Strategic
Development

August 2018



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David Cameron	Director of Corporate Services
Audit Committee	Members

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CNPA - ICT Performance And Strategic Development

Background and Scope and approach

Background

Internal Audit performed a review of ICT general controls in 2017 which provided a limited level of assurance over the confidentiality, availability and integrity of the CNPA's network, and resulted in recommendations relating to security awareness, network security, patching and disaster recovery. As part of the 2017-18 Internal Audit Plan, it was agreed that Internal Audit would perform an analysis of the current technology infrastructure supporting Cairngorms National Park Authority (CNPA) activities.

Following the 2017 review of ICT general controls, the Authority undertook a staff survey which provided an opportunity for staff to highlight any concerns or issues relating to the IT infrastructure in place. The results highlighted a number of operational issues being experienced by staff. For example, virtual machines not functioning effectively for staff working remotely. The survey also provided an opportunity for IT staff to highlight limitations relating to the infrastructure in place, for example, due to slow broadband speeds available in the area, Cloud systems are not yet feasible.

CNPA's IT strategy was developed in 2015. Management consider that it is no longer fully relevant and appropriate to support the Park during a time of rapid technological growth and innovation. There is therefore a requirement for a refreshed, effective IT Strategy to support innovation and effective use of technology in the way in which the Authority achieves its strategic goals.

CNPA's IT staff resource consists of an Information Systems Manager, who is responsible for the maintenance of the Authority's ICT infrastructure and for providing technical support to staff. The responsibilities of the role include, but are not limited to, addressing issues raised on the IT helpdesk (Spiceworks 3), equipment maintenance, network monitoring, creating and updating the IT related policies and procedures, and providing IT advice to staff when required.

There is also support provided by the Loch Lomond Park Authority's (LLPA's) IT team when required. For example, when the Information Systems Manager is on annual leave the LLPA IT team supports CNPA by responding to IT helpdesk queries, as well as providing system and data backup services to CNPA. Both IT teams also have fortnightly meetings to discuss a number of areas such as service provision, best practice and industry developments.

Scope and approach

The scope of this review was to assess whether:

- CNPA has an appropriate ICT Strategy in place that is aligned to the strategic direction of the Authority.
- Management have sufficient understanding of the capabilities and performance of technology, as well as the future ICT requirements.

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Scope and approach, Good practice and Key findings

- There is sufficient operational management of ICT services, including alignment of processes to good practice and industry standards.
- There is sufficient ICT skills and experience within the Authority.
- There is appropriate physical, virtual and information security controls in place.
- There are functioning and effective helpdesk services in place.
- There is an applications portfolio in place that meets the requirements of the Authority's business processes, providing data and information to staff when required to satisfy reporting requirements.
- The technical infrastructure in place is sufficient to support current service delivery priorities and stakeholder requirements.
- There is a clear technological roadmap in place to guide the Authority's future direction.

Good Practice

A number of areas of good practice were noted during the review including, but not limited to:

- **IT strategy group** - There is an IT strategy group in place that meets a number of times per year which includes representation from key areas of the Authority.
- **Link to Corporate Plan** - Key ICT related actions are clearly articulated within the Authority's 2018-2022 Corporate Plan.
- **IT Survey** - An ICT survey was conducted by staff at the end of 2017 which assisted in identifying the IT needs of the organisation.

Key Findings

Notwithstanding the areas of good practice noted above, we have found areas where further improvement is possible, summarised below:

ICT Strategy - CNPA will require a new ICT strategy, with a clear roadmap in place to guide the organisation on its future technological needs.

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Key findings and Recommendations

The current ICT strategy contains no articulation of a technology roadmap, analysis of the current ICT position, or ICT risk register.

Awareness raising and training - Through review of the IT survey results and discussions with key members of staff, we found that:

1. Staff are experiencing issues with the IT infrastructure but have not been reporting them to IT through the helpdesk.
2. Staff have expectations of the Authority's IT infrastructure which are not feasible, for reasons such as geographic location or resource limitations.

KPIs - There are currently no KPIs being used to measure IT performance in terms of service or against strategic objectives.

Version Control - There are a number of policies and procedures for IT that do not document version control such as approval or review dates, including the ICT Policy.

Asset Register - The asset register could be improved by including key dates in relation to the assets, such as when the asset was received and distributed.

Immediate process and control improvement recommendations

We recommend that CNPA develops a refreshed ICT strategy, with input from staff throughout the organisation, which incorporates the following areas:

1. Executive summary as to why ICT is important to the organisation and how it fits into the overall corporate or national partnership plan of the Authority.
2. ICT Visions and Values, as to what the Authority would like to achieve with its technological capabilities.
3. Technology roadmap detailing the plans the organisation wants for its technological infrastructure.
4. Analysis of current ICT position, including limitations (SWOT analysis could also be conducted here).
5. Drivers for change, aligning to the Authority strategy and outside factors, such as the Scottish Government's digitisation program and cyber essentials.

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Recommendations

6. Current ICT capacity and capabilities (technical infrastructure), including analysis of resources available.
7. ICT governance and organisational structure.
8. List of support agreements and contracts.
9. Strategic alignment with organisation objectives.
10. Prioritisation of resources and activities.
11. ICT risk register.
12. Identification of resources.
13. Incorporation of wider staff input, including the adoption of information gathered from the survey.
14. Understanding on performance of technology and definition of future requirements.
15. Outline of the applications in place.
16. ICT achievements to date.

We recommend that the following actions are taken to raise the awareness levels of staff understanding of the technological infrastructure and reporting of IT issues:

1. Communication is provided to staff on the requirement to use the helpdesk system to log issues.
2. Communications is provided to staff on the opportunities and limitations in relation to CNPA's IT environment in order to improve their understanding.
3. A forum should be created for the staff from all departments, including IT, to meet and share their IT needs and requirements to support them in achieving their objectives.

We recommend that CNPA develops KPIs in order to measure, monitor and report on ICT performance against the ICT strategy, in addition to KPIs in relation to service provision.

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Recommendations

We recommend that CNPA applies appropriate version control to all policies and procedures in place, and that all policies and procedures are reviewed on a regular basis.

We recommend that the ICT asset register is updated to include the dates as to when the assets were received, distributed and disposed of in order to improve monitoring arrangements.

APPENDIX I - STAFF INTERVIEWED

NAME	JOB TITLE
David Cameron	Director of Corporate Services
Helen Rees	Governance and Corporate Performance Manager
Sandy Allan	Information Systems Manager

BDO LLP appreciates the time provided by all the individuals involved in this review and would like to thank them for their assistance and cooperation.

APPENDIX II - TERMS OF REFERENCE

BACKGROUND

Following an initial ICT general controls review, which sought to provide assurance over the confidentiality, availability and integrity of the Cairngorms National Park Authority's (the Authority's) network, Internal Audit agreed with management, that as part of the 2017-18 Internal Audit Plan, BDO would seek to capitalise on this initial work by carrying out a detailed analysis of the technology infrastructure currently supporting the organisation.

The Authority is reliant on its ICT infrastructure and business systems to deliver services effectively to internal and external stakeholders. This need extends beyond immediate stakeholder business-as-usual priorities. Increasingly organisations are harnessing technology tactically to digitise internal processes, exploit web-enabled opportunities, reduce cost and deliver enhanced value to customers. The Authority must ensure its core information communication and technology infrastructure is sufficiently robust and future-proof to take advantage of market shift and opportunities whilst also achieving its short to medium term corporate strategic aims (set out in the 'Organisational Development Strategy' and 'Information Technology & Communications (ICT) Strategy').

PURPOSE OF REVIEW

The purpose of this advisory review is to perform a more detailed analysis of the current technology infrastructure supporting the Authority. Our work will aim to provide a detailed snapshot of the current technology platform as well as highlighting potential areas of weakness that may adversely impact on business processes or the achievement of longer term strategic objectives outlined in the Organisational Development Strategy and the ICT Strategy. We will also assess the adequacy of current co-sourcing arrangements in place with Loch Lomond & Trossachs National Park to ensure these are fit for purpose and offer maximum value to the Authority. Our work for this advisory review will be informed by top-down and bottom-up feedback through workshops and surveys with key stakeholders and users of ICT services.

KEY RISKS

Based upon the risk assessment undertaken during the development of the internal audit operational plan, through discussions with management, and our collective audit knowledge and understanding, the key risks associated with the area under review are:

- The Authority's ICT Strategy is not aligned to the strategic direction of the Authority;
- The Authority's ICT infrastructure is insufficient in supporting short to medium term tactical and strategic needs;
- A clear direction of travel / technology roadmap has not been developed to support the Authority in achieving its operational and strategic aims; and
- The current technology platform is exposed to multiple single points of failure and has not been designed, configured and implemented optimally i.e. it does not take into account the unique technology challenges facing the Authority, such as geographic location and dispersion.

APPENDIX II - TERMS OF REFERENCE

SCOPE


In order to assess the ICT performance and its strategic alignment, our review will include an assessment of the following:

- The ICT Strategy and its alignment to the strategic direction of the Authority, including:
 - Alignment of the ICT strategy to the Authority's strategy;
 - Management's understanding of the capabilities and performance of technology and management's definition of future ICT requirements; and
 - Approach to communicating and approving the ICT Strategy.

- The operational management of ICT services, including;
 - Alignment of ICT processes to good practice and industry standards;
 - ICT structure, skills and experience;
 - Physical, virtual and information security controls;
 - ICT asset management;
 - Delivery of ICT projects;
 - Helpdesk services, including service levels; and
 - Management of suppliers.

- The applications portfolio and understanding of known issues and opportunities, including:
 - Extent of integration and diversification of applications;
 - Alignment to business processes; and
 - Availability of data and the information to satisfy reporting requirements.

- The technical infrastructure, including:
 - Ability of the infrastructure to support current service delivery priorities and stakeholder requirements;
 - Clarity of the infrastructure roadmap and future direction;
 - Fixed and mobile communications; and
 - Engagement of cloud based systems against on premise systems.



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