KIRIBATI AUDIT OFFICE

DIGITALIZATION PLAN

2024 - 2026

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Terms & Acronyms

Acronym	**Term**
BCP	Business Continuity Plan
DRP	Disaster Recovery Plan
ICT	Information Communication Technology
IT	Information Technology
ISSAI	The Internal Standards of Supreme Audit Institutions
ISS	Information System Security Audits
KAO	Kiribati Audit Office
SAI	Supreme Audit Institution
SWOT	Strengths, Weaknesses, Opportunities and Threats.
WGITAIDI	Handbook on IT Audit for Supreme Audit Institutions

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1 Brief Background

The Information Technology (IT) department of the Kiribati Audit Office (KAO) provides technical support within the organization and perform IT Audits.

The department has two sections:

1.1 Technical:

The Technical section is responsible for all IT support functions.

1.2 IT Audit

The IT Audit section conducts Information Technology Audits for all of the Government State Owned Enterprises (Companies) and Government Ministries. The IT Audit function is a new line of work that has been introduced in the organization and is depicted in the new Organization Act (Kiribati Audit Act 2017).

IT Audit is currently in the piloting phase and is performed alongside financial auditing from time to time. However, it covers only two domains, which include Information Security, and Business Continuity Plan (BCP) & Disaster Recovery Plan (DRP). The scope of Information Security covers risk assessment, security policy, organization of IT security, communication and operation management, asset management, human resources IT security, physical and environmental security, and Access Control.

The IT department aims to provide highly reliable information system infrastructure solutions that enable the organization to achieve its audit work and generate high-quality audit reports to meet the parliamentary and stakeholders' needs.

To achieve our aims, we established five goals, with each plan having several objectives and strategies:

1. To enhance efficiency in delivering a paperless and reliable security infrastructure.
2. To strengthen the ICT staff capacities.
3. To conduct IT audits thoroughly and produce high quality IT audit reports on time.
4. To improve the organization's relationship with clients and stakeholders.
5. To achieve a cost-effective use of resources.

2 Challenges

The team has an inadequate capacity to conduct an IT audit but has sufficient knowledge and experience with other information security domains.

The guidelines for assessing Information System Security (ISS) are based on the Tier 1 approach (as depicted in the WGITA - IDI Handbook[1]). Tier 1 is for the IT auditors to perform a manual ISS review due to resource and capacity limitations.

Upon trial execution of the audit, it is often found that many government organizations have few IT experts since technology is a new area that is gradually being accepted and adopted in the country. The low number of IT experts have resulted in overloaded segregation of duties for many IT experts, which have severe impacts on the quality of the IT work, and risks to information security.

[1] WGITA - IDI Handbook

2.1 Priorities

The Digitalization priorities for KAO are strategically aligned with identified strengths, weaknesses, opportunities, and threats. High-priority objectives emphasize efficiency improvements through a paperless security infrastructure and AI-driven audit innovations. Medium priorities focus on staff capacity building and ensuring thorough, timely IT audits, while low priorities include cost-effective resource management and stakeholder relationship enhancement. These strategies aim to optimize IT operations, leverage technological advancements, and address organizational needs effectively.

High
To enhance efficiency in delivering a paperless and reliable security infrastructure.
To leverage Artificial Intelligence (AI) innovation that uses Natural Language Processing (NLP) Models in Audit work.
Medium
To strengthen the IT staff capacity.
To conduct IT audits thoroughly and produce high quality IT audit reports on time.
Low
To achieve a cost-effective use of resources.
To improve the relationship with clients and stakeholders.

3 Situational Analysis

The situational analysis for the IT department is based on the SWOT analysis, which is an essential building block for developing a Strategic Plan. This analysis identifies the strengths and weaknesses of the IT division concerning external opportunities and threats.

Strength	Weakness	Opportunities	Threats
• Experienced and dedicated IT Staff. • Strong Work Ethics. • Resourceful within the context of a limited budget. • Remote accessibility. • Equipment is readily available. (laptops for each staff member). • Audit Act to conduct an IT Audit.	• Lack of scalability and strategic planning. • Inconsistent IT audit procedures. Needs to align with standards such as ISSAI 5310 • ISSAI 10 and guidelines such as the WGITA - IDI Handbook. • Lack of documentation on IT policies from audited entity. • Quality of and delay in the completion of the IT audit report. • Lack of IT audit training and capacity. • Inconsistent cooperation with audited entities. • Funding model for IT. • Environmental control (Fire extinguisher, and KAO site location)	• The current IT audit process involves 4 phases: Planning, Conducting, Reporting, and Follow-up. • Innovation for automated audit tools. • Development of IT Audit framework and guidelines. • Expand IT audit scope to all government entities in remote islands. • IT audit and Security Awareness Training.	• Access constraints to the client's systems and data. • Increased expectation vs. capacity. • Budget limitations and priorities. • Natural disaster recovery plan. • Confidentiality and integrity of data.

Table 1: Swot Analysis for the IT Department of the Kiribati Audit Office

3.1 IT Department Strengths

The IT department has several notable strengths that contribute to its effectiveness and reliability. The department is supported by a team of experienced and dedicated IT professionals who contribute valuable expertise and knowledge. Their commitment to excellence and strong work ethics supports the department's operations, creating a culture of productivity and professionalism.

Despite working with budget constraints, the IT department has demonstrated resourcefulness by efficiently utilizing available resources to achieve its goals. Additionally, the department has embraced remote accessibility, allowing staff members to work efficiently from any location, thus enhancing productivity and adaptability.

Furthermore, the department benefits from readily available equipment, including laptops for each staff member, ensuring that essential tools are accessible to support their daily responsibilities. Additionally, the Kiribati Audit Act 2017 which mandates the department’s responsibility for conducting IT audits, adds legitimacy and authority to its operations, thereby enhancing both credibility and effectiveness.

3.2 IT Department Weaknesses

The IT department also encounters several weaknesses that hinder its optimal performance. One significant challenge is the lack of scalability and strategic planning, which may limit the department's ability to adapt to changing needs and demands effectively. Inconsistent IT audit procedures pose another challenge, highlighting a need for standardization and alignment with industry best practices such as ISSAI 5310 [2] and guidelines like the WGITA - IDI Handbook.

The lack of comprehensive documentation on IT policies from audited entities adds complexity to the audit process and may result in inefficiencies. Delays and quality concerns in finalising IT audit reports further undermine the department's effectiveness and credibility. Additionally, insufficient IT audit training and capacity among staff members hinder the department's optimal performance.

Furthermore, the lack of consistent cooperation with audited entities creates challenges to the audit process, potentially affecting the accuracy and reliability of findings. The current funding model for the IT department presents another weakness, as financial constraints may limit the department's capabilities and hinder its ability to invest in essential resources and initiatives. Lastly, -environmental control concerns such as fire extinguisher availability and site location pose risks to infrastructure and operations that require urgent attention.

3.3 IT Department Opportunities

The IT department can introduce new functionality to create opportunities to enhance its operations and effectiveness. Automation presents a significant opportunity for streamlining audit processes and enhancing efficiency. By investing in automated audit tools, the department can improve audit accuracy and effectiveness, while minimising manual effort and time.

Additionally, developing an IT Audit framework and guidelines provides an opportunity to standardize procedures and ensure consistency and quality across all audits. Expanding the IT audit scope to include all government entities in remote islands allows the department to improve and widen its impact and coverage, thereby enhancing accountability and transparency in governance.

Investing in ICT audit training provides an opportunity to enhance staff skills and capabilities. This ensures that staff stay up to date with the latest developments and best practices in the industry. By empowering staff with the necessary

[2] ISSAI 5310

knowledge and expertise, the department can improve the quality and effectiveness of its audits, ultimately delivering greater value to stakeholders.

3.4 ICT Department Threats

Despite these opportunities, the IT department faces various challenges that may impact its operations and effectiveness. Limited Access to client systems and data poses a significant threat, hindering the department's ability to effectively conduct comprehensive audits and investigations. Increased expectations versus capacity present another challenge, as stakeholders may demand more than the department can deliver within existing resource constraints.

Budget constraints and priorities represent a persistent threat, potentially leading to insufficient funding for critical IT initiatives and projects. The lack of a comprehensive natural disaster recovery plan poses a threat to business continuity and resilience, leaving the department vulnerable to disruptions caused by unforeseen events.

Furthermore, data confidentiality and integrity concerns pose significant cybersecurity risks. Breaches or compromises could result in reputational damage and legal repercussions. Addressing these threats requires proactive measures to enhance security, resilience, and preparedness, ensuring that the IT department can continue to fulfil its mission effectively despite external challenges.

4 Mission

The mission of the IT department is to provide highly reliable information system infrastructure solutions to enable the organization to achieve its audit work and provide its outputs to meet the parliamentary and stakeholder needs.

5 Our Vision

The IT department’s vision is to establish a safe and efficient work environment with access to optimum and reliable technology resources and tools that would help achieve the organization's goals and objectives. The IT department envisions itself to be a trusted department, enabling the KAO to deliver high-quality, efficient, and secure services to its clients and stakeholders.

6 Kiribati Audit Office Mission

To become an independent and professional national audit institution making positive impacts for the benefits of Kiribati and its people. To provide quality and professional auditing and assurance services to all public entities and Parliament for enhanced transparency, accountability, governance, and economic use of public resources.

7 Operational Plan

7.1. Scope:

The IT department's responsibilities cover various tasks, processes, systems, and resources essential for supporting the KAO. This includes but is not limited to:

- Managing and maintaining IT infrastructure, including hardware, software, and networking components.
- Providing technical support and assistance to KAO staff for IT-related issues.
- Developing and implementing IT policies, procedures, and best practices to ensure security, efficiency, and compliance.
- Facilitating the procurement, deployment, and management of technology resources and tools.
- Supporting business continuity and disaster recovery planning to minimize downtime and data loss.

7.2. Strategy:

The IT department's strategy is aligned with KAO's vision, mission, and values, aiming to support and enhance organizational goals and objectives. Key components of our strategy include:

- Understanding and prioritizing KAO's business objectives, needs, and priorities to effectively allocate resources and prioritize initiatives.
- Leveraging technology to streamline processes, enhance productivity, and improve service delivery.
- Cultivating partnerships and collaborations across departments to foster a culture of innovation, teamwork, and continuous improvement.
- Aligning IT initiatives with KAO's strategic plans and operational requirements, ensuring that our activities contribute to the organization's success.

7.3. Action Plan:

The action plan outlines specific tasks, activities, and potential projects that the IT department will undertake to implement our strategy. This includes:

- Upgrading and enhancing IT infrastructure to improve reliability, performance, and security.
- Implementing new software solutions and technologies to support KAO's operations and meet evolving business needs.
- Providing ongoing training and development opportunities for IT staff to enhance their skills and expertise.
- Developing and implementing IT policies and procedures to ensure compliance with regulatory requirements and industry standards.
- Developing an IT Audit framework to guide IT Auditors at KAO
- Collaborating with stakeholders to gather feedback, assess needs, and prioritize projects based on business impact and strategic alignment.

7.4. Monitoring and Evaluation:

To monitor and evaluate the progress and performance of our operations plan, the IT department will utilize various methods and tools, including:

- Regular performance reviews and assessments to measure key performance indicators (KPIs) and track progress towards goals and objectives.
- Surveys, feedback mechanisms, and stakeholder consultations to gather input and identify areas for improvement.
- Incident tracking and resolution processes to address issues and mitigate risks in a timely manner.
- Utilization of project management methodologies and tools to ensure projects are delivered on time, within budget, and according to specifications.
- Continuous review and refinement of the operations plan based on monitoring and evaluation results, with adjustments made as needed to optimize outcomes and align with organizational priorities.

8 Purpose, Goals, and Objectives

The purpose of the IT Strategic plan is to enable the achievement of our goals that will contribute towards achieving our mission and vision within the next four years. KAO aims to achieve this in a cost-effective, efficient, and effective manner. Additionally, the IT goals are closely aligned with the KAO 2023-2026 strategic plan.

8.1 Goal 1:

To enhance efficiency in delivering a paperless and reliable security infrastructure.

8.1.1 Objective 1:

To maintain and ensure that KAO servers, firewalls, switches, access points, routers, databases are operational, efficient, reliable, and secure from emerging computer threats, natural disasters, and unforeseen computer malfunctions.

8.1.2 Objective 2:

Digital Documentation and Record-Keeping. To leverage technology and best practices to streamline security processes while reducing the use of physical documents.

Strategies:

- *To develop and maintain security policies.*
- *Enhance security access controls to data centres/rooms.*
- *Transition from paper-based records to digital documentation and record-keeping systems.*
- *Develop offline/web-based databases for the Electronic Asset Register, E-Registry, Audit work monitoring, Administration dashboard, Human Resource, and Knowledge Base.*

8.1.3 Objective 3:

To leverage Artificial Intelligence (AI) innovation that uses Natural Language Processing (NLP) Models in Audit work.

AI refers to the simulation of human intelligence processes by machines, particularly computer systems. In the context of audit work, AI can be applied to automate repetitive tasks, analyze data more efficiently, and even make predictions or recommendations based on patterns identified in the data.

NLP is a branch of AI that focuses on enabling computers to understand, interpret, and generate human language. By employing NLP techniques, auditors can analyze unstructured data, such as text documents, emails, or social media posts, to extract meaningful insights and trends.

Strategies:

- *Identify key areas in the audit process where AI with NLP can enhance efficiency and effectiveness.*
- *Explore and leverage OpenAI NLP Models such as GPT, GPT-2, GPT-3, and GPT-4.*
- *Explore and leverage emerging OpenAI NLP alternatives.*
- *Purchase and implement AI with NLP powered tools for analyzing unstructured data, such as audit reports, documents, standards, other text documents.*
- *Provide training and support to audit staff on utilizing AI with NLP technologies effectively.*
- *Continuously monitor and evaluate the performance of AI-powered tools to ensure accuracy and relevance in audit activities.*
- *Foster a culture of innovation and adaptation to new technologies within the audit department.*

8.2 Goal 2:

Strengthen IT staff capacity building.

8.2.1 Objective:

To maximize technical and audit training opportunities, both internal and external.

Strategies:

- *To conduct regular in-house audit training.*
- *Attending overseas twinning audit training programs or recruiting an expert Technical Adviser (TA) on a contract basis.*

8.3 Goal 3:

Conduct IT audits thoroughly and produce high quality IT audit reports on time.

8.3.1 Objective:

To implement standard IT audit operating procedures in line with the organization's ACT and national laws.

Strategies:

- *To develop a framework for the IT audit team.*
- *Develop documented/electronic IT audit operating procedures.*

8.4 Goal 4:

Cost-Effective Use of resources.

8.4.1 Objective:

Using the available resources will help the audit office to work effectively and efficiently.

Strategies:

- *Ensuring available computer resources are utilized when the budget is low.*

8.5 Goal 5:

Improve the relationship with clients and stakeholders.

8.5.1 Objective:

Improve channels of communication and ensure data transmission is encrypted.

Strategies:

- *Develop a web-based automated system for the organization and audit clients to submit their annual accounts through the online portal. All these accounts (e-copy) will be securely retained at the audit office.*

Appendix A: Key Performance Indicators

Goals	Verifiable Indicators (Progress Status)	Means of Verification
Goal 1: To enhance efficiency in delivering a paperless and reliable security infrastructure.		
Objective 1: To maintain and ensure that the organization systems and resources are operational, efficient, reliable, and secure from emerging computer threats, natural disasters, and unforeseen computer malfunctions.		
Strategies: • *To develop and maintain security policies.* • *Enhance security access controls to data centers/rooms.* • *Ensure a secure, operational, and efficient access to KAO data and software.* • *Ensure a fast, reliable, and uninterruptible internet connectivity.*	ICT Policy completed Workshop to be conducted on the ICT Policy. Data and ICT room door locks needs replacement. The Server cabinet which houses KAO servers, firewalls, needs to be stored in a separate room. Server performance, database stability, are strictly monitored and managed on daily basis. Biometric data, organization data are backed up Daily, and weekly. Replace current Internet VSAT subscription with Taotin Trading. Purchase Starlink Business Plan Kit for KAO. Purchase Starlink Business Plan for KAO. Purchase Network dedicated Firewall devices. Internet traffic and data usage are well managed by the team through the proxy server.	Organization records. Organization records.

Goals	Verifiable Indicators (Progress Status)	Means of Verification
Objective 2: Digital Documentation and Record-Keeping. To leverage technology and best practices to streamline security processes while reducing the use of physical documents.		
Strategies: • *Develop offline/web-based databases for the Electronic Asset Register, E-Registry, Audit work monitoring, Administration dashboard, and Human Resources.*	Planning Phase has been completed where database models and architecture has been selected. Implementation phase has been conducted. Completed Projects: • Electronic Asset Register. • Electronic-Registry. Ongoing Projects: • Audit work monitoring system. • Audit Recommendation tracking tool. • Administration dashboard. • Human Resource system. • Knowledge Base system.	Offline Organization database.
Objective 3: To leverage Artificial Intelligence (AI) innovation that uses Natural Language Processing (NLP) Models in Audit work.		
Strategies: • *Identify key areas in the audit process where AI with NLP can enhance efficiency and effectiveness.* • *Explore and leverage OpenAI NLP Models such as GPT, GPT-2, GPT-3, and GPT-4.* • *Explore and leverage emerging OpenAI NLP alternatives.* • *Purchase and implement AI with NLP powered tools for analyzing unstructured data, such as audit reports, documents, standards, other text documents.* • *Provide training and support to audit staff on utilizing AI with NLP technologies effectively.*	Key areas in the audit process have been selected. The piloting of the tool will be tested with the Performance Audit team at KAO. The Performance Audit reports, standards and other text-based documents will be analysed and tested. All auditors are familiar with the use of OpenAI NLP Models. To be Confirmed. Identify and purchase an AI with NLP tool/software that will best suit KAO. All auditors are competent to use the AI with NLP tool. IT team should have a thorough understanding of the AI with NLP tool.	Sanctioned AI Web link through the Firefox browser. Verify that information provided is accurate.

Goals	Verifiable Indicators (Progress Status)	Means of Verification
• *Continuously monitor and evaluate the performance of AI-powered tools to ensure accuracy and relevance in audit activities.* • *Foster a culture of innovation and adaptation to new technologies within the audit department.*		
Goal 2: Strengthen ICT staff capacity building.		
Objective: To maximize technical and audit training opportunities, both internal and external.		
Strategies: • *To conduct regular in-house audit training.* • *Attending overseas twinning audit training programs or recruiting an expert technical adviser (TA) on a contract basis.*	All staff have to be trained in working with audit tools. To be advised.	Organization Audit report. Organization database.

Goals	Verifiable Indicators (Progress Status)	Means of Verification
Goal 3: Conduct ICT audits thoroughly and produce high quality ICT audit reports on time.		
Objective: To implement standard IT audit operating procedures in line with the organization's ACT and national laws.		
Strategies: • *To develop a framework for the ICT audit team.* • *Develop /electronic ICT audit operating procedures.*	Currently developing the SAI ICT audit framework using ITIL v3 Need professional assistance to review the draft version.	Organization records.
Goal 4: Cost-Effective Use of resources.		
Objective: Using the available resources will help the audit office to work effectively and efficiently.		
Strategies: • *Ensuring available computer resources are utilized when the budget is low.*	All staff should have reliable operational computer devices and access to data.	Organization database.
Goal 5: Improve the relationship with clients and stakeholders.		
Objective: Improve channels of communication.		
Strategies: • *Develop a web-based automated system for the organization and audit clients to submit their annual accounts through the online portal. All these accounts (e-copy) will be securely retained at the audit office.*	Eradicate stakeholders' mistrust on ICT audit work. Full accessibility of audit reports by clients.	Organization records. Organization database.

Appendix B: 2024 – 2026 Roadmap

Purchase Microsoft Exchange Licenses for 60 users to support KAO official email.	Upgrade KAO Firewalls, Servers, and NVR Cameras.	To achieve a cost-effective use of KAO ICT resources.
Leverage Artificial Intelligence (AI) innovation that uses Natural Language Processing (NLP) Models in Audit work	To develop KAO ICT Audit framework.	Improve the relationship with clients and stakeholders by developing a web-based automated system for KAO and audit clients to submit their annual accounts through the online portal
Develop database systems to enhance efficiency in delivering a paperless solution. Database systems include the following: 1. Electronic Asset Register. 2. Electronic-Registry. 3. Audit work monitoring system. 4. Audit Recommendation tracking tool. 5. Administration dashboard. 6. Human Resource System.	Strengthen ICT staff capacity building by attending trainings overseas.	
Ensure a fast, reliable, and uninterruptible internet connectivity. Upgrade from VSAT to Starlink Business Plan.	Recruitment of Technical Assistance on site to train ICT auditor in carrying out ICT audits professionally.	
Develop and maintain KAO ICT security policy.		
Enhance security access controls to ICT data room.		
January to December, 2024	January to June, 2025	June to December, 2025