



ORGANISATION DE L'AVIATION
CIVILE INTERNATIONALE

INTERNATIONAL CIVIL
AVIATION ORGANIZATION

Internal Audit Report on Management of Mobile Devices

IA/2022/2

Office of Internal Oversight

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EXECUTIVE SUMMARY

1. As part of its annual work plan for 2021 (C-WP/15114), the Office of Internal Oversight (OIO) carried out an audit of the management of mobile devices. The audit was conducted in conformance with the International Standards for the Professional Practice of Internal Auditing¹.
2. The objectives of the audit were to (i) assess whether the allocation of mobile phones and other portable devices to staff members is processed and approved in accordance with the Administrative Instructions on the Allocation and Use of Official Cellular Devices, (ii) review whether the expenses on mobile phones are reimbursed according to prescribed scales and within expected levels depending on the need and exigencies of duties assigned, and (iii) assess whether the inventory of mobile phones and tablets are managed effectively.
3. OIO identified major internal control weaknesses that impair the effectiveness and efficiency of mobile devices management.
4. The lack of a comprehensive IT inventory and asset management procedures and robust processes to record, monitor, account for and report on the mobile devices resulted in an unreliable and inaccurately populated inventory.
5. In addition, absence of procedural guidance or actual evidence of the effective data scrubbing and destruction of obsolete mobile devices increased the risk of compromise of sensitive/confidential information from used devices.
6. Whilst billings for telephone services were found accurate and reasonable, OIO noted significant delays in processing cellular communications invoices, and a lack of process oversight by management. OIO issued an Inter-Office Memorandum to the Secretary General on 31 January 2022 recommending that appropriate and immediate administrative measures are taken to expeditiously process the related invoices.
7. Based on the results of the audit, OIO has given an audit rating of **major improvement needed**. In particular, management's attention is drawn to recommendations made in respect of (i) inventory management and (ii) data scrubbing and destruction of obsolete and unused devices.
8. OIO wishes to thank management and staff for their assistance and cooperation during the audit.

¹ IIA Standard 1321

RESULTS OF THE AUDIT

Background

9. Official cellular devices are for communication with personnel who, by the nature of their functions, may need to be reached when away from their office telephone or computer in the case of: an emergency; issues requiring timely or urgent actions (e.g. Conference Services, ICT support, Security); or any other circumstances requiring a specific response in a limited time.
10. ICAO Administrative Instructions (AI) on the Allocation and Use of Official Cellular Devices, last revised in November 2019, provide the basis for allocation of mobile devices and payment of monthly subscription charges. Eligibility for official cellular devices is approved by D/ADB based on criteria provided in the AI on allocation and use of official cellular devices.
11. ICT is responsible for telecommunication services and the provision of smartphones and tablets to eligible staff members. ICAO had two wireless providers: Vendor A and Vendor B and has moved to Vendor A in 2019 as the sole provider to achieve efficiency gains and reduce administrative efforts. It is estimated that the new Vendor A plan will cost approximately CAD 53K annually which represents a projected saving of 20% over the 2019 actual costs.
12. Over 100 mobile devices are used by ICAO; the breakdown of cell phones by category of personnel and location is as follows:

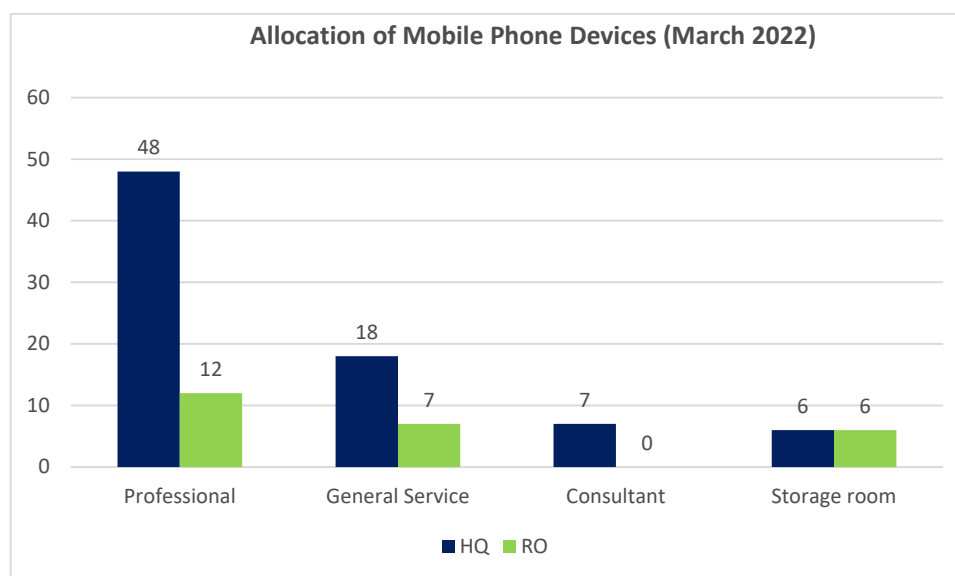


Figure 1. Allocation of mobile phone devices as at March 2022

13. Vendor payments related to monthly subscriptions in 2020 and 2021 were as follows:

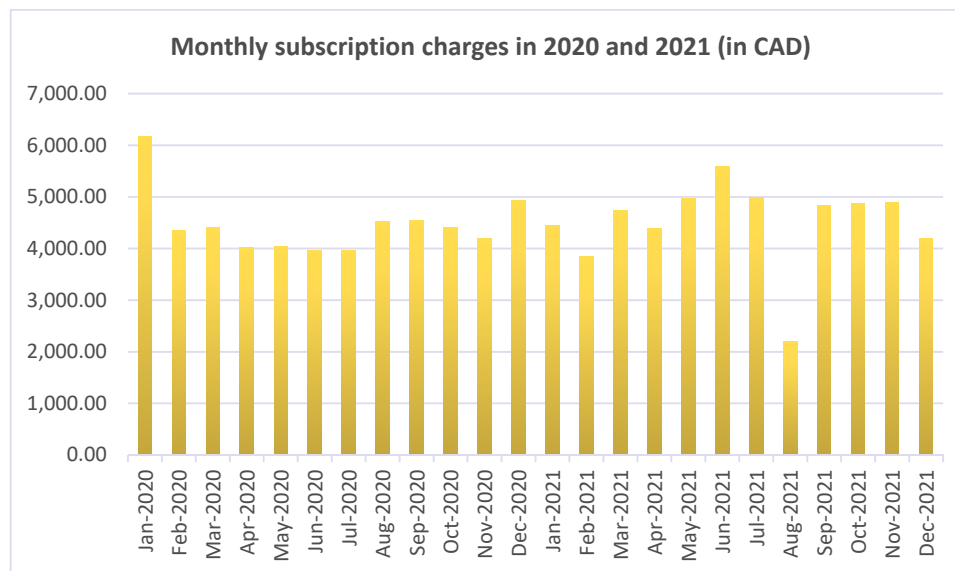


Figure 2. Monthly subscription charges in 2020 and 2021

14. In the period 2016-2022, the annual expenditure on procurement of new mobile phones and tablets is as follows:

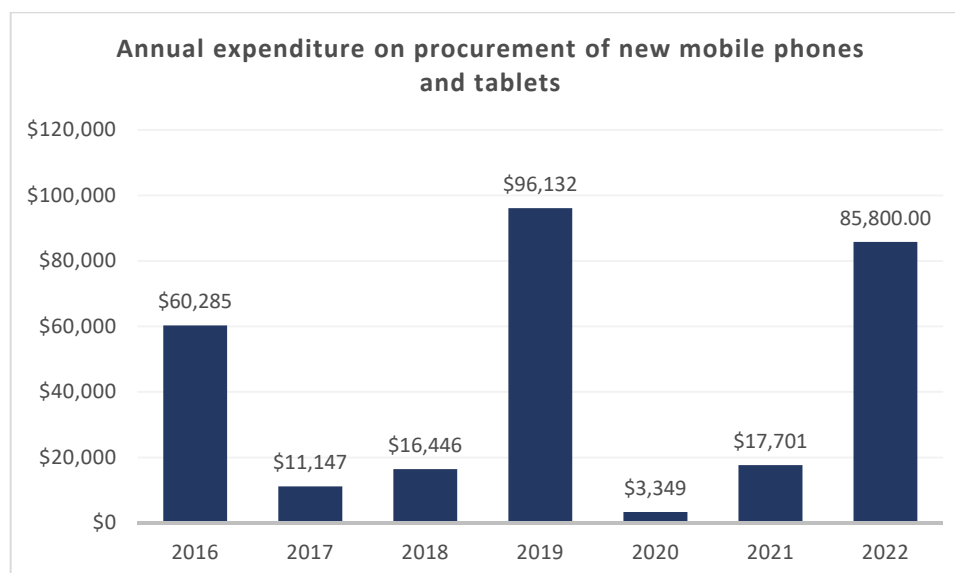


Figure 3. Annual expenditure on procurement of mobile phones and tablets

15. The expenditure in the years 2016, 2019 and 2022 were disproportionately high on account of purchase of tablets required for e-voting in the 39th, 40th and 41st Sessions of the Assembly.
16. ICT uses and maintains the Configuration Management Data Base (CMDB) to manage IT assets. The CMDB is a comprehensive 'map' of the entire IT assets and services, helping IT keep track of the state of endpoint devices, software and data.

Audit Objectives and Scope

17. The objectives of the audit were to:
 - a. assess whether the allocation of mobile phones and other portable devices to staff members is processed and approved in accordance with the Administrative Instructions on the Allocation and Use of Official Cellular Devices;
 - b. review whether the expenses on mobile phones are reimbursed according to prescribed scales and within expected levels depending on the need and exigencies of duties assigned; and
 - c. assess whether the inventory of mobile phones and tablets are managed effectively.
18. The scope of the audit was limited to the provisions of the Administrative Instructions on cellular devices, available data and documentation relating to procurement and inventory of tablets for the period starting in 2016 to 2021, inventory of mobile phones, and subscription charges for the years 2019 to 2021.
19. The audit methodology included (i) reviews of relevant documentation, (ii) analytical reviews of financial and inventory data, and (iii) compliance testing of a sample of requests and payments.
20. The audit comprised Computer Assisted Audit Techniques conducted in IDEA™, a data analytics tool to analyse Unit4 ERP system relevant information on mobile devices. This audit also included sample testing of mobile phone allocations and expenses to assess compliance with rules and procedures and accuracy and completeness of documentation.

Audit Findings and Recommendations

I. Inventory management of mobile phones and tablets

21. Good asset management practice encompasses the management of the asset during its lifespan. Proper tracking of assets including the custody of a mobile device to an individual, strengthen the overall accountability over these serially trackable items. Good asset management practice also requires effective management of the disposal (through sale or write off) of these obsolete, unused, and deteriorated items. Poor inventory management of serially tracked items exposes the organizations to risks of losses and dilutes the overall accountability of individuals or entities who have the custody of these items.
22. ICAO lacked an established procedure or guidance for inventory and asset management. Some procedure elements of inventory management were found in an Asset Management Information fact sheet related to CMDB recording, including technical guidance to record workstations and monitors, however these elements did not address the need for a comprehensive procedure on inventory management for these assets.
23. To assess the effectiveness and adequacy of inventory management of mobile devices, OIO extracted procurement data from Unit4 ERP system.
24. OIO conducted a reconciliation of the procurement data with the CMDB and identified some discrepancies that were shared with ICT for further analysis. ICT's reconciliation work confirmed the discrepancies identified by OIO.
25. Further, following a review of ICT's reconciliation work, OIO requested from the Property Control, Logistics and Commissariat Unit (PCL) a copy of the asset disposal documents for devices reported as disposed by ICT. PCL confirmed that the number of tablets written off

and provided supporting documents for the same. However, for the remaining missing tablets, there was no record of write off with PCL.

26. As for the smart phones reported as disposed, PCL had no record of such write offs. Some of these devices reported as disposed by ICT, are still assigned to current or former staff in PCL's inventory master list.
27. In total, 32 items were missing from the storage room while the CMDDB records were showing them as "In store" and 12 disposed items could not be confirmed by PCL.
28. Due to limitations of the current working arrangement during the COVID-19 pandemic period, OIO was not able to physically verify the status of mobile devices in the storage room.
29. The analysis of the inventory of mobile devices indicated that serious control weaknesses affected the proper inventory management of mobile devices and this inability to effectively account for, monitor, track and dispose these mobile devices exposes ICAO to major risk of losses, theft or intentional misuse of these assets.

Recommendation 1	Inventory management of mobile devices
Priority	High
ADB should:	
<ol style="list-style-type: none"> i. put in place a comprehensive inventory management procedure, from acquisition to disposal, for mobile devices and ensure that all devices are accounted for; and ii. take full stock of all mobile devices organization wide, investigate all the missing devices and present the results in a report indicating any serious control weaknesses and/or individual responsibilities as appropriate. 	
Closing criteria:	
<ol style="list-style-type: none"> i. Issuance of a comprehensive inventory procedure management for mobile devices; and ii. Report on the result of the reconciliation between the status of listed mobile devices in CMDDB and their actual status, showing missing devices, related control weaknesses or absence of control and/or establishing individual responsibilities as appropriate. 	

30. Further to the inventory management review, OIO assessed the risks related to the management of data in case of loss or disposal of a mobile device. While the current form for Inventory Asset Recycling/Donation/Gift (IARDG) specifies that "All IT equipment must be sanitized by ICAO ICT", there was no procedural guidance or actual evidence of the actual data scrubbing and destruction of obsolete, 'out of use' smartphones and tablets. This increases the risk of compromise of sensitive/confidential information from used devices.

Recommendation 2	Data scrubbing and destruction of obsolete and unused cellular devices and tablets
Priority	High
ADB should develop procedural guidance to undertake data scrubbing and destruction of old and unused mobile devices and document such actions.	
Closing criteria:	
Development of procedural guidance and sample evidence of actual data scrubbing and destruction of mobile devices recently declared obsolete or out of use.	

II. Mobile device allocation and monthly billing of communication and subscription

Allocation of mobile devices

31. The Administrative Instruction on the Allocation and Use of Official Cellular Devices requires that proper justification is provided to D/ADB for approval. Requests for Official Cellular Devices should be made by Directors within each Bureau or Chiefs of Office via an IOM addressed to D/ADB through DD/ADB IAS. Each request should state: (i) justification for the requirement of the cellular device (ii) type of cellular device required (iii) budgetary allotment codes of the relevant Bureau or Office against which any costs associated with the use of the official cellular device are to be charged (iv) staff number of intended user against which any costs associated with the personal use of the official cellular device are to be charged.
32. OIO reviewed a sample of mobile phone allocations and observed that all these requests for official cellular phones were duly supported and justified and effectively approved by D/ADB in form of IOM.

Reimbursement of individual phone charges

33. The Administrative Instruction on the Allocation and Use of Official Cellular Devices also requires that the cost for all usage fees incurred for personal usage, including long distance, roaming options, excess data, excess SMS or any other fee, will paid by the user.
34. OIO reviewed a random sample of individual phone charges and did not observe any unreasonable or exorbitant amount for data and/or roaming charges in connection with the use of official cellular phones.

Late payments and collection notices

35. Good business practice would be to pay vendors in a timely manner, in order to avoid contractual late fees and manage reputational risk. Vendors should be paid no later than 30 days after the receipt of goods/services or the receipt of the invoice for the goods/services.
36. During this review, OIO observed that ICAO has not been paying systematically the monthly mobile phone communication invoices in a timely manner, resulting in instances of overdue balance notices and/or collection notices being sent by the service provider (Vendor A).
37. From January 2019 to December 2021, there were 18 overdue balance notices and four collection notices issued by Vendor A.
38. In this regard, OIO issued an IOM to the Secretary General on 31 January 2022 so that the risk be mitigated expeditiously by ensuring that all necessary administrative measures are

taken for timely payment of all communication charges. In that regard, **ICT, in coordination with the Accounts Payable Unit, took action to ensure that all Vendor A invoices are paid in a timely manner and any late payments in the future are avoided.**

ANNEX 1: DEFINITION OF AUDIT TERMS

Audit Ratings

In providing an overall assessment of the results of the audit, EAO uses the following standardized audit rating definitions:

Audit Assessment	Definition
Effective	Controls evaluated are adequate, appropriate, and effective to provide reasonable assurance that risks are being managed and objectives should be met.
Some Improvement Needed	A few specific control weaknesses or areas for improvement were noted; generally however, controls evaluated are adequate, appropriate, and effective to provide reasonable assurance that risks are being managed and objectives should be met.
Major Improvement Needed	Several key control weaknesses were noted and/or several areas of strategic/high importance were identified where significant improvements can be made to increase efficiency and effectiveness.
Unsatisfactory	Controls evaluated are not adequate, appropriate, or effective to provide reasonable assurance that risks are being managed and objectives should be met.

Internal control is defined as a process effected by senior management and staff, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting and compliance objectives. Whilst internal control provides reasonable (but not absolute) assurance of achieving organizational objectives, limitations may result from:

- suitability of objectives established as a precondition to internal control;
- reality that human judgment in decision making can be faulty and subject to bias;
- breakdowns can occur because of human failures such as simple errors;
- ability of management to override internal control;
- ability of management, other staff, and/or third parties to circumvent controls through collusion;
- external events beyond the organization's control.

Priority of Audit Recommendations

The audit recommendations in this report are categorized according to priority as a guide to management in addressing the issues raised. The following categories are used:

High: recommendations which address significant and/or pervasive deficiencies or control weaknesses, or areas where significant improvements can be made.

Medium: recommendations which address important deficiencies or control weaknesses, or areas where some improvements can be made.

Low: suggestions which represent best practice, or general opportunities for improvement.

ANNEX 2: MANAGEMENT ACTION PLAN

Ref.	Recommendation	Priority Rating	Accepted (Y/N)	Management Comments	Agreed Actions	Office/ Section Responsible	Target Date
1.	<p>ADB should:</p> <p>(a) put in place a comprehensive inventory management procedure, from acquisition to disposal, for mobile devices and ensure that all devices are accounted for; and</p> <p>(b) take full stock of all mobile devices organization wide, investigate all the missing devices and present the results in a report indicating any serious control weaknesses and/or individual responsibilities as appropriate.</p>	High	Y	<p>The recommendation is accepted.</p> <p>We note that this audit took place during the exceptional circumstances of the pandemic, when work from home requirements favoured quick delivery. As a result of the pandemic restrictions, no full physical inventory could take place in 2020 or 2021 (similarly, "Due to limitations of the current working arrangement during the COVID-19 pandemic period, OIO was not able to physically verify the status of mobile devices" [para 28])</p>	<p>ICT will work with PCL to:</p> <p>(a) Enforce the current comprehensive inventory management procedures, including work-from-home requirements, tracking all mobile devices through the full life cycle of acquisition to disposal.</p> <p>(b) Perform a full inventory of mobile devices, investigate missing devices, fully report the results, including steps to reconcile and/or write off devices.</p>	ICT and PCL	31 Dec 2022
2.	ADB should develop procedural guidance to undertake data scrubbing and destruction of old and unused mobile devices and document such actions.	High	Y	Management notes that guidance currently exists for sanitizing all ICT equipment, including mobile devices, including mandatory forms for certifying completion of	ICT will review the current sanitizing requirements with InfoSec, and make any recommended updates. ICT will also refine the technical guidance regarding data scrubbing best practices for secure equipment disposal.	ICT	31 Oct 2022

Ref.	Recommendation	Priority Rating	Accepted (Y/N)	Management Comments	Agreed Actions	Office/ Section Responsible	Target Date
				sanitizing. See the IARGD form on the Intranet. As such, Management notes the recommendation and agrees that pre-disposal sanitation requirements will be fully enforced.			