INTERNAL AUDIT DIVISION

REPORT 2018/072

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Internal controls over the management and disposal of information and communications technology assets needed to be strengthened

24 July 2018
Assignment No. AT2017/517/01

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

EXECUTIVE SUMMARY

The Office of Internal Oversight Services (OIOS) conducted an audit of acquisition and management of information and communications technology (ICT) assets in the Office of Information and Communications Technology (OICT). The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes over the acquisition and management of ICT assets in OICT. The audit covered the period from January 2013 to December 2017 and included a review of: strategic planning and risk management; and regulatory framework.

The audit showed that there is need to strengthen internal controls over the management and disposal of ICT assets. OIOS made 13 recommendations. To address the issues identified in the audit:

OICT needed to:

- Develop policies and monitoring mechanisms to maximize the benefits of global sourcing;
- Document an annual ICT acquisition plan and procedures for managing ICT acquisition globally;
- Deploy a central software license library and ensure that intangible assets are identified and capitalized;
- Strengthen procedures to monitor non-compliance with the Architecture Review Board standards and ensure that the standards are subject to periodic review;
- Document a policy for obsolescence and replacement of ICT assets that is reflected in proposals for capital and operating budgets;
- Review and clean up incorrect data on OICT equipment and assets in Umoja;
- Review all ICT assets in its purview and implement procedures to ensure compliance with applicable regulations and rules on property, plant and equipment; enrich Umoja with all necessary data; deploy technology to verify assets that are part of the building structure; and track the movement and assignment of all ICT related assets; and
- In collaboration with the Office of Central Support Services (OCSS), expedite the timely disposal of written off assets and resolve the issues regarding storage of ICT equipment.

The Procurement Division needed to:

- In collaboration with OICT, use acquisition plans to capture volume purchase agreements, undertake trend analysis to capture ICT goods subject to system contracts, and minimize the creation of multiple contracts for recurring products; and

- In collaboration with OICT, strengthen controls over the purchase of software globally and enforce controls over the use of low value procurement for software acquisition;

OCSS needed to:

- Drive the review and streamlining of the taxonomy and product mix of ICT-related material masters and align line items on ICT-related contracts to the updated product mix to support Umoja users in selecting the appropriate material masters for ICT products.

The Department of Management (DM) needed to:

- Document a policy for standardizing, assigning, managing and disposing of mobile devices across the United Nations Secretariat; and

- Institute a mechanism for consistent recovery of phone charges from staff members and ensure that the cost of staff members' private calls is not charged to the Organization due to their failure to certify their phone bills in a timely manner.

DM accepted the recommendations and has initiated action to implement them.

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Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of acquisition and management of information and communications technology (ICT) assets in the Office of Information and Communications Technology (OICT).

2. The Secretary-General's bulletin ST/SGB/2016/11 on the organization of OICT establishes the organizational structure and scope of activities for the Office. As the central authority for matters pertaining to ICT, OICT provides central leadership for the establishment and implementation of Organization-wide ICT standards and activities in support of programmes and mandates, modernization of information systems, and improvement in the ICT services available to the Organization.

3. The United Nations Secretariat's ICT strategy (Secretary-General's report A/69/517, which was endorsed by General Assembly resolution 69/262) defines the ICT roadmap for the global Secretariat for five years. It provides a common vision for ICT service delivery through modernization, transformation and innovation, and establishes a framework for improved governance, strong leadership and optimal use of ICT resources to support effective decision-making.

4. The Global Operations Division within OICT oversees the Secretariat's ICT operations to ensure compliance with policies and standards and the ICT strategy by: (a) coordinating Secretariat-wide central ICT resource planning and budget formulation, workforce planning and performance reporting; (b) coordinating global ICT requisitioning and contract management and developing global rate cards; (c) developing guidance for management, disposal and reporting of ICT assets in coordination with the Office of Central Support Services (OCSS) and the Office of Programme Planning, Budget and Accounts (OPPBA); (d) coordinating, in consultation with the Office of Human Resources Management (OHRM), human resources management programmes and activities, including training and staff development; and (e) developing ICT investment plans.

5. The Facilities and Commercial Services Division of OCSS has the responsibility to, amongst others: (a) allocate and manage all office, storage and public spaces in the Secretariat-owned and leased premises at Headquarters, ensuring that operational requirements are being met; (b) establish policy, guidelines and procedures for property management and overseeing the recording and disposal of non-expendable property at Headquarters, Offices away from Headquarters, field missions and other offices of the Secretariat; and (c) control the receipt of all goods and materials at Headquarters.

6. The Procurement Division (PD) of OCSS has the responsibility to, amongst others: (a) conduct efficient, effective and timely procurement of goods and services for all entities of the Secretariat, including Headquarters, the Offices away from Headquarters, regional commissions, field missions and other offices of the Secretariat; (b) provide procurement support services, including technical advice on local procurement and acquisition issues; (c) ensure implementation of the United Nations Financial Regulations and Rules (FRR) and policies during the full acquisition cycle from requisition, tendering, contract award process, contract negotiation, and contract administration with due regard to good industry practices; and (d) conduct compliance and peer review programmes in the Secretariat.

7. The 2016-2017 biennial programme budget (A/70/6/Add.1) approved by the General Assembly for OICT was $98.46 million. According to the major commodity statistics for ICT goods and services published by PD for 2016, procurement of ICT goods and services was ranked as second highest in expenditure in 2016 at $488.10 million.

8. Comments provided by DM are incorporated in italics.

II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

9. The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes over the acquisition and management of ICT assets in OICT.

10. This audit was included in the 2017 risk-based work plan of OIOS due to the risks associated with acquisition and management of ICT assets which could potentially affect the achievement of business objectives.

11. OIOS conducted this audit from July 2017 to January 2018. The audit covered the period from January 2013 to December 2017. Based on an activity-level risk assessment, the audit covered risk areas relating to: strategic planning and risk management; and regulatory framework.

12. The audit methodology included: (a) interviews with key personnel; (b) reviews of relevant records, documentation and processes; (c) random testing of procured and retired assets; and (d) physical verification visits to the North Lawn Data Centre, New Jersey Data Centre, OICT logistics rooms, and the storage facility in the DC2 building for mobile devices.

13. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

III. AUDIT RESULTS

A. Strategic planning and risk management

Mechanisms to implement the global sourcing strategy needed to be defined

14. The ICT strategy outlined how the increasing costs and efficiency gains in global purchasing and management of ICT goods and services acquired through systems contracts should be controlled by strengthening visibility and control of ICT expenditures through: the establishment of standard processes; a centralized contract management capacity; a repository of contracts and a management tool for software licenses and hardware purchases; and global sourcing that will be implemented using Umoja to support process integrity and visibility, in compliance with the requirements of the International Public Sector Accounting Standards (IPSAS).

15. The ICT strategy defined OICT's role as the central authority for ICT decisions and policies. However, there was no documented plan to implement the global sourcing strategy, and no policy or procedure had been established to ensure value for money from global sourcing and contracting arrangements. This was evident from the following:

(a) There was no formal collaboration mechanism between OICT and PD for review and monitoring of ICT goods and services, and to determine/identify ICT acquisitions that may be procured through a systems contract. Consequently, the Organization was unable to fully leverage the benefits of global

sourcing. For example, there were multiple contracts for the same products across the Secretariat, such as 10 different contracts for hard drives. Also, there were multiple purchases of the same product that were not linked to any systems or local contract even though in general, purchases were supposed to be linked to contracts. PD explained that in some cases the Organization had not been able to negotiate a contract with related vendors and in other cases, the gap was caused because some requisitioners/buyers did not follow the established procedures.

(b) The Procurement Manual states that unless a requisitioner provides valid reasons as to why a systems contract should be restricted, it should be made available to the entire United Nations. Some requisitioners stated that they were at times restricted from utilizing systems contracts due to the contract owner guarding the "not to exceed" amount in the contract and were therefore forced to procure ICT goods and services through other means.

16. OICT did not have in place a tool to capture the global cost of ICT assets and historical data across the Organization for making informed decisions on ICT investments globally. This may prevent the Organization from realizing full value for the money it invests in ICT assets.

(1) OICT should develop policies and monitoring mechanisms to maximize the benefits of investment in ICT through global sourcing and contracting arrangements.

DM accepted recommendation 1 and stated that there are two major Requests for Proposals in process which address the issues of global sourcing and procurement from multiple vendors. There are also system contracts which go to PD for approval to ensure the best rates and services are provided from vendors. Recommendation 1 remains open pending receipt of evidence that policies and monitoring mechanisms have been developed to maximize the benefits of investment in ICT through global sourcing and contracting arrangements.

(2) PD, in collaboration with OICT, should: (a) use acquisition plans to capture the requirements for volume purchase agreements; (b) undertake trend analysis to capture ICT goods and services that should be subject to systems contracts; and (c) minimize the creation of multiple contracts for recurring products.

DM accepted recommendation 2 and stated that OICT will work on developing acquisition plans. A Request for Proposal is currently being prepared on ICT services and applications which will consolidate contracts to maximize benefits. PD is of the view that implementing this recommendation would improve the current acquisition plans and could lead to the reduction in the number of contracts for recurring products. Recommendation 2 remains open pending receipt of evidence that: (a) acquisition plans are being used to capture the requirements for volume purchase agreements; (b) trend analysis is being undertaken to capture ICT goods and services that should be subject to systems contracts; and (c) the creation of multiple contracts for recurring products has been minimized.

Controls over acquisition planning and procurement of ICT goods and services need to be enhanced

17. The Procurement Manual states that acquisition planning, including other planning functions such as logistics, finance and resource management, are essential to effective and timely solicitation of bids and proposals, award of contracts, and delivery of goods and services. Requisitioners are responsible for developing acquisition plans in a timely manner, in cooperation with PD at Headquarters or other Procurement Offices at field missions and Offices away from Headquarters. The Manual also states that requisitioners should perform short-term and long-term planning.

18. OICT did not develop an acquisition plan for ICT procurement for 2017 which limited its ability to economically and efficiently procure ICT goods and services. The ICT acquisition planning process was further restricted by the lack of a defined approach to acquisition planning and procurement that incorporated the reuse and transfer of excess stock globally. OICT explained that stock management mechanisms had only been deployed for the Office for the Coordination of Humanitarian Affairs (OCHA). Therefore, stock was not adequately monitored for inventory turnover, replacement and returned inventory.

(3) OICT should document an annual ICT acquisition plan and appropriate procedures for managing ICT acquisition and stocks globally.

DM accepted recommendation 3 and stated that OICT will develop an acquisition plan as recommended. Recommendation 3 remains open pending receipt of an ICT annual acquisition plan and appropriate procedures for management of ICT acquisition and stocks globally.

Need for controls over the acquisition and management of intangible assets

19. ICT best practices recommends that Organizations should have procedures for measuring and accounting for the cost of intangible assets (i.e., software, licenses and rights, and ICT projects), so that its value added is known and reliable statistics to inform policy making can be generated. In addition, installed software should be monitored and tracked to leverage economies of scale by managing duplication of software across the Organization.

20. There was no process within OICT for evaluating and recording intangible assets related to ICT into the Umoja system. The following gaps were noted:

(a) Not all intangibles were captured and capitalized.

(b) There were weak controls over purchased software due to lack of global tracking of software licenses to leverage economies of scale and prevent duplication of software purchases across the Organization.

(c) Although OICT used auto discovery to capture the portfolio of software on servers, there was no equivalent tool to capture software on standalone desktops and laptops. In addition, there was no central software license library for capturing actual usage and tracking software for non-licensed software and the use of rogue software on the network.

(d) Low value acquisitions (LVAs) were not permitted for software purchases due to concerns over the generic nature of legal contracts associated with online software purchases. However, LVAs were used for software purchases; OIOS identified 200 such LVAs used between January and August 2017.

21. Insufficient procedures for accounting for the cost of all intangible assets in the Umoja system, and the lack of tools to discover and aggregate global requirements may result in poor decision making, inappropriate use of the Organization's resources and non-achievement of economies of scale.

(4) OICT should: (a) deploy a central software license library for capturing actual usage, identifying non-licensed software, and leveraging economies of scale; and (b) ensure that intangible assets are identified and capitalized.

DM accepted recommendation 4 and stated that OICT is currently preparing a project brief which will include options for the creation of a software license library to track the acquisition and proper

usage according to software vendors' policies and tracking license renewal/decommissioning. OICT is also shifting from perpetual to subscription software license model by the adoption of cloud computing and 'software as a service' solutions. Recommendation 4 remains open pending receipt of evidence that: (a) a central software license library has been deployed for capturing actual usage, identifying non-licensed software, and leveraging economies of scale; and (b) intangible assets are being identified and capitalized.

(5) PD, in collaboration with OICT, should: (a) strengthen controls over the purchase of software globally; and (b) enforce controls over the use of low value procurement for the purchase of software.

DM accepted recommendation 5 and stated that in December 2017, OICT implemented a simplified process to acquire approved software and hardware as well as how to request additions to these standards. Recognizing there are unique operational requirements, OICT established a separate process for these requests to provide business continuity using LVAs to accelerate the technical clearance process. Recommendation 5 remains open pending receipt of evidence that: (a) controls over the global purchase of software have been strengthened; and (b) controls over the use of LVAs for the purchase of software has been enforced.

Standardization procedures needed to be enhanced and enforced

22. OICT established an Organization-wide, service-oriented architecture and technical standards to enable the consolidation of ICT assets, systems and services on a global scale, reduce unit costs, lower maintenance costs, reduce deployment time and enable a high level of business process integration among systems. Also, the architecture and standards were to facilitate reduction of complexity, and achieve improved service and economies of scale.

23. The Architecture Review Board (ARB), which is an advisory board within OICT, was responsible for reviewing, formulating and recommending enterprise architecture and associated standards to assure alignment of the enterprise architecture with the Organization's overall strategy. However, current processes did not adequately prevent and identify non-compliance with established standards. OIOS identified the following gaps:

(a) Several purchases of ICT goods and services were not in compliance with the ARB standards because OICT did not have adequate visibility and control over ICT procurement activities globally, such as computer appliance, server blade rack system, scanner and software.

(b) OICT, in some instances had negotiated global licenses for some standard software that it also managed and assigned to users, who requisitioned OICT directly to use the standard software. However, in some cases users bypassed OICT and procured the software services directly from vendors.

24. Inadequate mechanisms to detect and monitor non-compliance with standards may negate the standardization goals and prevent the achievement of economies of scale.

(6) OICT should strengthen procedures to monitor non-compliance with the Architecture Review Board standards and ensure that the standards list is subject to periodic review.

DM accepted recommendation 6 and stated that the ARB is already reviewing the standards list. DM provided evidence that the process has been strengthened. Based on the evidence provided, recommendation 6 has been closed.

Need for a global policy for managing obsolescence

25. Organizations should create obsolescence plans for identifying and quantifying the risks posed by continual use of obsolete technologies and whether it makes most business sense to mitigate through maintenance and support, or eliminate it by migrating systems. Ultimately, the risks of obsolescence should not outweigh the costs of replacing equipment.

26. OIOS noted that there were no ICT-specific policies or frameworks to effectively manage and monitor the lifecycle stages of ICT equipment and manage the end-of-life stage of aged technologies across the Secretariat and globally. There were no funding models to address the rapid technological advancement and obsolescence to ensure effective service delivery. For example, there was no alignment between acquisition plans, the budget process, and replacement of obsolete assets. The lack of direction and/or guidance on obsolescence caused the following:

(a) Although OICT entered into a maintenance agreement for some of the assets no longer supported by the equipment supplier, and isolated some high-risk systems that could potentially pose a risk to the ICT environment, there were still some equipment in use past their useful life, some of which posed a risk to the Organization. For example, 314 equipment were still in use, 10 to 26 years past their useful life.

(b) Equipment replacement was not aligned with capital and operating budgets. OICT stated that the requirements for the replacement of assets/equipment was higher than available funds. There were assets bought for broadcasting and conferencing in 2009 which were due for replacement, but could not be replaced due to lack of funds.

27. Inadequate planning and management of obsolescence of ICT assets could lead to poor or degraded service delivery and cause equipment failure, outage of critical services and security breaches.

(7) OICT should document a policy for obsolescence and replacement of ICT assets that is reflected in proposals for capital and operating budgets.

DM accepted recommendation 7 and stated that OICT is currently developing a policy for obsolescence to complement the existing policies and IPSAS guidelines. A capital investment plan for five years that has been consolidated and cross referenced with OCSS's capital plan for all duty stations will be reviewed and adjusted accordingly. OICT will develop a proposal for OPPBA's review. Upon approval, this document will be distributed as an annex to the budget instructions for 2020-2021. Recommendation 7 remains open pending receipt of a policy for obsolescence and replacement of ICT assets duly reflected in the capital and operating budgets.

B. Regulatory framework

Data management procedures need improvement

28. The Umoja deployment instructions required the preparation of clean and complete global and local data in Umoja for each cluster to ensure that the Organization can efficiently operate in the new system immediately following the go-live.

29. There were instances of data incompleteness in the Umoja system that indicated data was not adequately cleansed before its migration into the system. In addition, OIOS also noted instances of

inadequate input controls. Both of these issues impacted the integrity of data within the system. The following data integrity issues were noted:

(a) Some aspects of data maintenance by property custodians in Umoja involved manual input. For instance, since the bar code on the equipment did not capture sufficient data (serial number and model number), ICT asset data in Umoja was not enriched in a timely manner, requiring manual input.

(b) There were several instances of wrong descriptions, duplicate asset tags, and wrong tags which resulted in the wrong valuation of assets/equipment.

(c) There was inconsistently applied user status and system status applied to equipment in Umoja that required data clean up.

30. Inadequate data maintenance procedures could cause data integrity issues which may impact decision making and visibility over the Organization's ICT assets.

(8) OICT should review and clean up incorrect data on OICT equipment and assets in Umoja.

DM accepted recommendation 8 and stated that OICT is in the process of cleaning up the data transferred from the legacy system (Procure Plus) to Umoja. Recommendation 8 remains open pending receipt of evidence that the incorrect data on OICT equipment and assets in Umoja has been reviewed and cleaned-up.

Material master needs improvement

31. The Umoja material master information is used as referential data for procurement, asset and supply chain management for all the goods and services the Organization acquires, and is key to optimal procurement, asset and supply chain management practices.

32. OCSS was in the process of improving policies and procedures related to the material master and had made progress in this area since the initial implementation of Umoja. However, there were gaps in development and application of the material master resulting in users selecting inappropriate product IDs in many different scenarios. Inadequate controls over material master data could result in errors in procurement of goods/services and incorrect financial reporting.

(9) OCSS should: (a) drive the review and streamlining of the taxonomy and product mix of ICT-related material masters; and (b) align line items on ICT-related contracts to the updated product mix to support Umoja users in selecting the appropriate material masters for ICT products.

DM accepted recommendation 9 and stated that OCSS confirms commitment to driving the streamlining of material master data. Effectively maintaining a global material master depends on an operating model with global standards for specification of items; therefore, creation and management of an effective material master is a distributed responsibility. A RASCI (Responsible, Accountable, Support, Consulted and Informed) chart is under development to show responsibilities across the Organization for content, maintenance and application of material master data. Additionally, OCSS has established a cross-functional working group to address operational issues associated with both material and service masters. Supply chain management and category management activities currently under development by Umoja Process Owner for logistics, in

collaboration with OCSS, present an opportunity for the Organization to undertake the needed steps toward the global standards operating model. These global material standards must then be represented in the related contracts in Umoja. Recommendation 9 remains open pending receipt of evidence that: (a) the material master has been reviewed and streamlined for ICT-related items; and (b) line items on ICT-related contracts have been aligned to the updated material master product mix.

Verification and control of ICT assets should be enhanced

33. The administrative instruction on the management of property (ST/AI/2014/4) states that all property of the United Nations shall be monitored and controlled throughout the life cycle of each item of property, from receipt to disposal. Physical verification of the property of the United Nations shall be conducted regularly and as deemed necessary to ensure adequate control over the property.

34. The physical verification module was not deployed in Umoja at the time of the audit review. Therefore, dates of physical verification were being input into the warranty date field. The use of this field for physical verification meant that expiration of warranty was not captured in Umoja, but was captured in a separate system by OICT.

35. The Property Management and Inventory Control Unit of OCSS (PMICU) explained that the use of the warranty date field to capture the physical verification date was a temporary business decision taken in conjunction with the Umoja Office pending the development of the Umoja based physical verification utility tool, which was awaiting deployment and that when the utility tool is launched, the practice will be discontinued and warranty dates can be uploaded into the Umoja equipment register.

36. Although, PMICU indicated that OICT had made significant efforts in maintaining and updating its records in recent times, periodic verifications of ICT assets performed by PMICU still identified significant discrepancies which were then notified to OICT for action. The same discrepancies were at times reported in consecutive verifications which indicated that corrective action to remedy identified discrepancies were not timely.

37. OIOS attempted to conduct a physical verification of ICT assets in the third basement of the Secretariat building, but abandoned the process after 10 searches and noted that most of the equipment/assets selected for verification were not in the recorded location. This condition was caused because several items of equipment held by OICT belonged to other offices/departments. OICT explained that offices/departments had returned the equipment to OICT, but did not raise the necessary documentation in Umoja to transfer the assets for disposal. PMICU also explained that part of the problem originated from the unclear provisions of the administrative instruction on the disposal of computer equipment at United Nations Headquarters (ST/AI/2001/4), with respect to the disposal of unserviceable and obsolete ICT equipment, and was working with OICT to update the policy for disposal of ICT assets/equipment at Headquarters.

38. OIOS conducted a physical verification of assets located at the New Jersey data centre and the OICT data centre in the Secretariat and identified the following gaps:

(a) OICT did not enrich Umoja on a timely basis with changes to the status of assets. Also, Umoja did not always contain user information, even though data could be enriched at the equipment level and it was possible to add/update assignments to individual users.

(b) The introduction of flexible work arrangements made it more difficult to track equipment such as laptops because of constant movement of the equipment.

(c) There were problems verifying assets that were parts of the building structure (e.g., equipment under fixed carpets and inside building walls). OICT had not identified and sourced the technology and tool to verify such assets (e.g., IP address tracking tools).

(d) OIOS identified wrongly classified assets, wrongly labelled assets, assets without serial numbers, the manufacturers of assets were rarely documented, and several assets were not located. For instance, 7 out of 37 items randomly selected were not found at the North Lawn data centre (NL2B05) and 7 out of 38 items randomly selected were not found at the New Jersey data centre.

(10) OICT should: (a) review all ICT assets in its purview and implement procedures to ensure compliance with applicable regulations and rules on property, plant and equipment; (b) enrich Umoja with all necessary data; (c) deploy technology to verify assets that are part of the building structure; and (d) track the movement and assignment of all ICT related assets.

DM accepted recommendation 10 and stated that the acquisition of desktop equipment is decentralized. Each department/office is responsible for updating their records in Umoja. As the consolidation of ICT support per the ICT strategy continues, OICT will be compliant across the Headquarters campus. Departments had been returning equipment to OICT without creating notification in Umoja. As of the beginning of 2017, OICT has been enforcing that no returns are accepted unless the items had been processed in Umoja. OICT cannot enrich data in Umoja if other departments do not change the authorization group in Umoja. OICT has also reached out to PMICU to inform departments to conduct training to properly transfer assets for disposal. Recommendation 10 remains open pending receipt of evidence that: (i) all ICT assets in OICT's purview have been reviewed and procedures implemented to ensure compliance with applicable regulations and rules on property, plant and equipment; (ii) Umoja has been enriched with all necessary data; (iii) technology to verify assets that are part of the building structure has been deployed; and (iv) movement and assignment of all ICT related assets is being tracked.

Disposal and storage procedures for ICT assets need to be enhanced

39. The professional standards (i.e., Control Objectives for Information and Related Technology, COBIT) recommend that Organizations should define and implement procedures to ensure that business requirements for the protection of sensitive data and software are met when data and hardware are being disposed of or transferred, and to have in place the necessary physical security and procedures to store and handle the equipment and media before and during disposal.

40. Although, OICT explained that it was considering a new system contract for hardware that will include disposal of ICT assets, OIOS noted that there were inadequate mechanisms in place for the timely disposal of ICT assets, which resulted in written off assets being stored for extended periods of time. Also, a physical verification of assets conducted by OIOS identified the following conditions:

(a) The Property Survey Board took approximately six months to make a decision to write-off obsolete equipment as it met every three months. Therefore, obsolete equipment tagged for write-off in the New Jersey centre were sometimes returned and stored in the Secretariat data centre because of lack of storage space. OICT had no effective plan in place for the storage of obsolete equipment pending write off; and

(b) During Hurricane Sandy, OICT lost a million-dollars' worth of equipment because they were in an inadequate location on the 3rd basement of the Secretariat building. This condition was not mitigated as equipment was still stored in the same location as at the time of the audit review.

41. Inadequate mechanisms for storage and disposal of ICT assets may lead to loss of assets, data security breaches and environmental risks.

(11) OICT, in collaboration with OCSS, should expedite the timely disposal of written off assets and resolve the issues regarding storage of ICT equipment.

DM accepted recommendation 11 and stated that storage space will be ready for OICT by the fourth quarter of 2018. Recommendation 11 remains open pending receipt of evidence that timely disposal of written off assets has been expedited and issues regarding storage have been resolved.

Need to define a policy and procedures for the allocation, management and retrieval of mobile devices

42. The International ICT security management standard (ISO/IEC 27001) recommends the documentation of a mobile device management policy that reduces the risks associated with the use of mobile devices. The policy should define the registration and de-registration of mobile devices, physical security requirements, technical security requirements including remote connections, software control, access control, encryption at rest/in-transit, and it should also define the businesses' requirements for the allocation of mobile devices and when it is appropriate to use it.

43. The total costs of mobile devices (including services and equipment) to the Secretariat at Headquarters was $2.8 million in 2016. There were 2,000 phone numbers in use, 140 iPad and 90 MiFi's assigned. Usage policies existed for use of ICT assets and equipment in general, but were not clearly stated for portable devices such as cell phones, tablets and MiFi's. In this regard, OIOS noted the following:

(a) There was no organizational policy or guidance on the use and issuance of mobile phones to staff members. OICT decided on the standards for mobile phones, but each department had its autonomy on policy, issuance, and replacement. OIOS noted that some departments had implemented polices such as the Departments of Field Support and Peacekeeping Operations that required an assessment of need as compared to OCHA who had no policy.

(b) There was inadequate control over the use of the phones and costs to the Organization, and limited enforcement mechanisms. For instance: (a) in cases of damage or loss, there was no consistent policy across departments for recovery of costs; (b) when staff left the department/office, there was no consistent mechanism for ensuring the return of the phones and payment of outstanding charges; and (c) although OICT regularly sent bills electronically to staff members on telephone usage, the collection or recovery was not monitored. If staff members did not certify/pay their private calls within the year, the calls were treated as official and paid for by the concerned departments/offices.

(c) In general, mobile phones returned before the end of their life were not recycled back into use but kept unused.

(d) There was no mechanism to dispose of old mobile phones which were being stored at various locations in boxes. Also, there was no secure space for storing mobile devices. The OICT office in the DC2 building had suffered theft a few times.

(e) Some departments sold the phones back to users, some returned to OICT, while others kept them in storage as excess stock. There was no evidence that these devices were consistently sanitized to erase sensitive data that may remain in them.

(f) Some staff were assigned multiple phones, ranging from 2 to 13 devices. OIOS' analysis of the top 9 users who had been assigned multiple devices (ranging from 5 to 13) showed that in all cases, the

devices assigned to these users incurred charges to the Organization; over a period of six months (January to July 2017) approximately $32,000 was incurred in total. Some phones had no usage, whereas service costs were being incurred.

(12) DM should document a policy for standardizing, assigning, managing and disposing of mobile devices across the United Nations Secretariat.

DM accepted recommendation 12 and stated that two policies on use and management of mobile devices have been finalized and endorsed by the ICT Policy Committee. The Administrative Instruction on "Use of Mobile Communication Devices" is the Organizational policy aimed at end users and heads of departments and offices which defines roles and responsibilities, criteria for issuance of mobile devices, billing and cost recovery, appropriate and inappropriate use, record keeping, re-provisioning and disposal. This Administrative Instruction is now under review. Regarding the disposal of mobile devices, ST/AI/2001/4 on "Disposal of Computer Equipment at United Nations Headquarters" will be revised and strengthened to include mobile communication devices requirements, define roles and responsibilities, formalize procedures for disposal, re-use and record keeping, etc. Recommendation 12 remains open pending receipt of a policy on standardizing, assigning, managing and disposing of mobile devices across the United Nations Secretariat.

(13) DM should institute a mechanism for consistent recovery of phone charges from staff members and ensure that the cost of staff members' private calls is not charged to the Organization due to their failure to certify their phone bills in a timely manner.

DM accepted recommendation 13 and stated that the current system, myUNcalls, was configured defaulting wireless usage charges for all users as 'business'. The new system which the Organization is switching to, eBilling, defaults usage charges for all users as 'private' with administrative rights to change to 'business' if needed. Recommendation 13 remains open pending receipt of evidence that a mechanism for consistent recovery of phone charges from staff members has been established and it is being ensured that the cost of uncertified phone bills is not automatically borne by the Organization.

IV. ACKNOWLEDGEMENT

44. OIOS wishes to express its appreciation to the management and staff of DM for the assistance and cooperation extended to the auditors during this assignment.

(*Signed*) Eleanor T. Burns
Director, Internal Audit Division
Office of Internal Oversight Services

ANNEX I

STATUS OF AUDIT RECOMMENDATIONS

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Rec. no.	Recommendation	Critical[1]/ Important[2]	C/ O[3]	Actions needed to close recommendation	Implementation date[4]
1	OICT should develop policies and monitoring mechanisms to maximize the benefits of investment in ICT through global sourcing and contracting arrangements.	Important	O	Receipt of evidence that policies and monitoring mechanisms have been developed to maximize the benefits of investment in ICT through global sourcing and contracting arrangements.	31 December 2019
2	PD, in collaboration with OICT, should: (a) use acquisition plans to capture the requirements for volume purchase agreements; (b) undertake trend analysis to capture ICT goods and services that should be subject to systems contracts; and (c) minimize the creation of multiple contracts for recurring products.	Important	O	Receipt of evidence that: (a) acquisition plans are being used to capture the requirements for volume purchase agreements; (b) trend analysis is being undertaken to capture ICT goods and services that should be subject to systems contracts; and (c) the creation of multiple contracts for recurring products has been minimized.	31 December 2018
3	OICT should document an annual ICT acquisition plan and appropriate procedures for managing ICT acquisition and stocks globally.	Important	O	Receipt of an ICT annual acquisition plan and appropriate procedures for management of ICT acquisition and stocks globally.	31 December 2018
4	OICT should: (a) deploy a central software license library for capturing actual usage, identifying non-licensed software, and leveraging economies of scale; and (b) ensure that intangible assets are identified and capitalized.	Important	O	Receipt of evidence that: (a) a central software license library has been deployed for capturing actual usage, identifying non-licensed software, and leveraging economies of scale; and (b) intangible assets are being identified and capitalized.	31 December 2019
5	PD, in collaboration with OICT, should: (a) strengthen controls over the purchase of software globally; and (b) enforce controls over the use of low value procurement for the purchase of software.	Important	O	Receipt of evidence that: (a) controls over the global purchase of software have been strengthened; and (b) controls over the use of LVAs for the purchase of software has been enforced.	31 December 2019

[1] Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.
[2] Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.
[3] C = closed, O = open
[4] Date provided by DM in response to recommendations.

ANNEX I

STATUS OF AUDIT RECOMMENDATIONS

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Rec. no.	Recommendation	Critical[1]/ Important[2]	C/ O[3]	Actions needed to close recommendation	Implementation date[4]
6	OICT should strengthen procedures to monitor non-compliance with the Architecture Review Board standards and ensure that the standards list is subject to periodic review.	Important	C	Action taken.	Implemented
7	OICT should document a policy for obsolescence and replacement of ICT assets that is reflected in proposals for capital and operating budgets.	Important	O	Receipt of a policy for obsolescence and replacement of ICT assets duly reflected in the capital and operating budgets.	31 December 2019
8	OICT should review and clean up incorrect data on OICT equipment and assets in Umoja.	Important	O	Receipt of evidence that the incorrect data on OICT equipment and assets in Umoja has been reviewed and cleaned-up.	31 December 2020
9	OCSS should: a) drive review and streamlining of the taxonomy and product mix of ICT-related material masters; and b) align line items on ICT-related contracts to the updated product mix to support Umoja users in selecting the appropriate material masters for ICT products.	Important	O	Receipt of evidence that: a) the material master has been reviewed and streamlined for ICT-related items; and b) Line items on ICT-related contracts have been aligned to the updated material master product mix.	31 December 2019
10	OICT should: (i) review all ICT assets in its purview and implement procedures to ensure compliance with applicable regulations and rules on property, plant and equipment; (ii) enrich Umoja with all necessary data; (iii) deploy technology to verify assets that are part of the building structure; and (iv) track the movement and assignment of all ICT related assets.	Important	O	Receipt of evidence that: (i) all ICT assets in OICT's purview have been reviewed and procedures implemented to ensure compliance with applicable regulations and rules on property, plant and equipment; (ii) Umoja has been enriched with all necessary data; (iii) technology to verify assets that are part of the building structure has been deployed; and (iv) the movement and assignment of all ICT related assets is being tracked.	31 December 2020
11	OICT, in collaboration with OCSS, should expedite the timely disposal of written off assets and resolve the issues regarding storage of ICT equipment.	Important	O	Receipt of evidence that timely disposal of written off assets has been expedited and issues regarding storage have been resolved.	31 July 2019
12	DM should document a policy for standardizing, assigning, managing and disposing of mobile devices across the United Nations Secretariat.	Important	O	Receipt of a policy on standardizing, assigning, managing and disposing of mobile devices across the United Nations Secretariat.	31 July 2019

ANNEX I

STATUS OF AUDIT RECOMMENDATIONS

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Rec. no.	Recommendation	Critical[1]/ Important[2]	C/ O[3]	Actions needed to close recommendation	Implementation date[4]
13	DM should institute a mechanism for consistent recovery of phone charges from staff members and ensure that the cost of staff members' private calls is not charged to the Organization due to their failure to certify their phone bills in a timely manner.	Important	O	Receipt of evidence that a mechanism for consistent recovery of phone charges from staff members has been established and it is being ensured that the cost of uncertified phone bills is not automatically borne by the Organization.	31 December 2019

APPENDIX I

Management Response

DM/OUSG
Out:19-July-2018
DM-2017-07215

United Nations
INTEROFFICE MEMORANDUM

Nations Unies
MEMORANDUM INTERIEUR

TO: Mr. Gurpur Kumar, Deputy Director, Internal Audit Division
A: Office of Internal Oversight Services

DATE: 18 July 2018

THROUGH: Olga de la Piedra, Director
S/C DE: Office of the Under-Secretary-General for Management

FROM: Mario Baez, Chief, Policy and Oversight Coordination Service
DE: Office of the Under-Secretary-General for Management

SUBJECT: **Draft report on an audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology (Assignment No. AT2017/517/01)**
OBJET:

1. We refer to your memorandum dated 13 June 2018 regarding the above-subject draft report and provide you with comments of the Department of Management in the attached Appendix I.

2. This memorandum supersedes our submission of 3 July 2018.

3. Thank you.

DM-2017-07215
19-July-2018

APPENDIX I

Management Response
Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Rec. no.	Recommendation	Critical[1]/ Important[2]	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	OICT should develop policies and monitoring mechanisms to maximize the benefits of investment in ICT through global sourcing and contracting arrangements.	Important	Yes	Chief, Enterprise Investments and Contracts, OICT	31 December 2019	• There are procurement guidelines in place to establish formal procedures. • There are two major Requests for Proposals in process which address the issues of global sourcing and procurement from multiple vendors. • There are also system contracts in place which go to the Procurement Division (PD) for approval to ensure the best rates and services are provided from vendors.
2	PD, in collaboration with OICT, should: (a) use acquisition plans to capture the requirements for volume purchase agreements; (b) undertake trend analysis to capture ICT goods and services that should be subject to systems contracts; and (c) minimize the creation of multiple contracts for recurring products.	Important	Yes	Chief, Enterprise Investments and Contracts, OICT and Director, Procurement Division, OCSS	31 December 2018	OICT will work on developing acquisition plans. A Request for Proposal is currently being prepared on ICT services and applications which will consolidate contracts to maximize benefits. PD is of the view that implementing this recommendation would improve the current OICT acquisition plans and could lead to the reduction in the number of contracts for recurring products. PD will collaborate with OICT in all ways necessary for implementation.
3	OICT should document an annual ICT acquisition plan and appropriate procedures for managing ICT acquisition and stocks globally.	Important	Yes	Chief, Enterprise Investments and Contracts, OICT	31 December 2018	OICT will develop an acquisition plan as recommended.

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Management Response

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Rec. no.	Recommendation	Critical[1]/ Important[2]	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
4	OICT should: (a) deploy a central software license library for capturing actual usage, identifying non - licensed software, and leveraging economies of scale; and (b) ensure that intangible assets are identified and capitalized.	Important	Yes	Chief, Regional Technology Center of Americas, OICT	31 December 2019	(a) OICT is currently preparing a project brief, which will include options for the creation of a software license library to track acquisition and proper usage according to software vendors' policies and tracking licenses renewal/decommissioning. (b) OICT is also shifting from perpetual to subscription software license model by the adoption of cloud computing and Software as a Service (SaaS) solutions. The subscription model provides nearly real-time software usage, latest application features and multiple device installation as well as minimal upfront risk and minimum capital investment.
5	PD, in collaboration with OICT, should: (a) strengthen controls over the purchase of software globally; and (b) enforce controls over the use of low value procurement for the purchase of software.	Important	Yes	Chief, Enterprise Investments and Contracts, OICT and Director, Procurement Division, OCSS	31 December 2019	In December 2017 OICT implemented a simplified process to acquire approved software and hardware as well as how to request additions to these standards. Recognizing there are unique operational requirements, OICT established a separate process for these requests to provide business continuity using the Low Value Acquisition approach (LVA) to accelerate the technical clearance process. The LVA is a procurement process which allows purchase of items under $10,000 to accelerate delivery of needed equipment and minimize risk to the Organization.

APPENDIX I

Management Response

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Rec. no.	Recommendation	Critical[1]/ Important[2]	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
6	OICT should strengthen procedures to monitor noncompliance with the Architecture Review Board standards and ensure that the standards list is subject to periodic review.	Important	Yes	Chief, Global Security and Architecture Section, OICT	31 December 2017	The Architecture Review Board is already reviewing the standards list. Relevant supporting documents have been provided to OIOS.
7	OICT should document a policy for obsolescence and replacement of ICT assets that is reflected in proposals for capital and operating budgets.	Important	Yes	Chief, Regional Technology Center of Americas, OICT	31 December 2019	• OICT is currently developing a policy for obsolescence to complement the existing policies and IPSAS guidelines. • A Capital investment plan for five years that has been consolidated and cross-referenced with OCSS capital plan for all duty stations, will be reviewed and adjusted accordingly. OICT will develop a proposal document for OPPBA's review. Upon approval with any additional input, this document will be distributed as an annex to the budget instructions for 2020-2021.
8	OICT should review and clean up incorrect data on OICT equipment and assets in Umoja.	Important	Yes	Chief, Enterprise Investments and Contracts, OICT	31 December 2020	OICT is in the process of cleaning up the data that was transferred from the legacy system (Procure Plus) to Umoja.
9	OCSS should: a) drive review and streamlining of the taxonomy and product mix of ICT-related material masters; and b) align line items on ICT-related contracts to the updated product mix to support Umoja users in selecting the appropriate material masters for ICT products.	Important	Yes	Chief, Communications and IT Section, Procurement Division, OCSS	31 December 2019	OCSS confirms commitment to driving the streamlining of Material Master data. Effectively maintaining a global Material Master depends on an operating model with global standards for specification of items; therefore, creation and management of an effective Material Master is a distributed

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Management Response

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

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	.					responsibility. A RASCI chart is under development to show responsibilities across the Organization for content, maintenance and application of Material Master data. Additionally, OCSS has established a cross-functional working group to address operational issues associated with both Material and Service Masters. OCSS has granted a delegation of authority from OCSS to LSD for operational maintenance of Material Master records to tie resources for the maintenance activity more closely to the technical expertise for specification of items. Supply chain management and category management activities currently under development by Umoja Process Owner for logistics, in collaboration with OCSS, present an opportunity for the Organization to undertake the needed steps toward the global standards operating model. These global material standards must then be represented in the related contracts in Umoja.
10	OICT should: (i) review all ICT assets in its purview and implement procedures to ensure compliance with applicable regulations and rules on property, plant and equipment; (ii) enrich Umoja with all necessary data; (iii) deploy technology to verify assets that are part of the building structure; and (iv) track the movement and assignment of all ICT related assets.	Important	Yes	Chief, Enterprise Investments and Contracts, OICT	31 December 2020	• Acquisition of IT desktop equipment is decentralized. Each Department/ Office is responsible for updating its Umoja records. • As the consolidation of ICT support per the ICT Strategy continues, OICT will be compliant across the United Nations Headquarters campus. However, the transition is not yet complete, thus OICT

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Management Response

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

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						is currently responsible for only a few offices. • Departments had been returning equipment to OICT without creating notification in Umoja. As of the beginning of 2017, OICT has been enforcing that no returns are accepted unless the items have been processed in Umoja. • OICT cannot enrich data in Umoja if other departments do not change the authorization group in Umoja. OICT has reached out to Property Management and Inventory Control Unit (PMICU) to inform departments to conduct training to properly transfer asset for disposal. • Due to the lack of storage, OICT cannot accommodate and update disposals in a timely manner. OICT is working with the HPSB to improve this process. • OICT will complete enriching its own data in Umoja by 31 December 2020. This is an ongoing activity, as new data is being entered in the system daily and needs to be enriched on a continuous basis.

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Management Response

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Rec. no.	Recommendation	Critical[1]/ Important[2]	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
11	OICT, in collaboration with OCSS, should expedite the timely disposal of written off assets and resolve the issues regarding storage of ICT equipment.	Important	Yes	Chief, Enterprise Investments and Contracts, OICT	31 July 2019	Storage space will be ready for OICT by the fourth quarter of 2018.
12	DM should document a policy for standardizing, assigning, managing and disposing of mobile devices across the United Nations Secretariat.	Important	Yes	Chief Regional Technology Center of Americas, OICT Director, Global Services Delivery, OICT	31 July 2019	• Two policies on use and management of mobile devices have been finalized and endorsed by the ICT Policy Committee. • The Administrative Instruction on "Use of Mobile Communication Devices" is the Organizational policy aimed at end users and heads of departments and offices which, defines roles and responsibilities, criteria for issuance of mobile devices, maximum number of issued devices, billing and cost recovery, appropriate and inappropriate use, record keeping, re-provisioning and disposal. This Administrative Instruction is now under review. • Regarding the disposal of mobile devices, ST/AI/2001/4 on disposal of computer equipment at United Nations Headquarters will be revised and strengthened to include mobile communication devices requirements and define roles and responsibilities, procedures for disposal, re-use, record keeping, etc.

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Management Response

Audit of acquisition and management of information and communications technology assets in the Office of Information and Communications Technology

Rec. no.	Recommendation	Critical[1]/ Important[2]	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
13	DM should institute a mechanism for consistent recovery of phone charges from staff members and ensure that the cost of staff members' private calls is not charged to the Organization due to their failure to certify their phone bills in a timely manner.	Important	Yes	Chief, Enterprise Investments and Contracts, OICT	31 December 2019	The current system, myUNcalls, was configured as an 'Honor' system defaulting wireless usage charges for all users as 'business'. The new system which the Organization is switching to, eBilling, defaults usage charges for all users as 'Private' with administrative rights to change to 'business' if needed.