Office of Internal Oversight Services

INTERNAL AUDIT DIVISION

REPORT 2025/024

Audit of the Umoja Uniformed Capabilities Management System

Improvements were required in design documentation, change management, segregation of duties and updating of training materials

30 June 2025
Assignment No. AT2024-519-01

Audit of the Umoja Uniformed Capabilities Management System

EXECUTIVE SUMMARY

The Office of Internal Oversight Services (OIOS) conducted an audit of the Umoja Uniformed Capabilities Management System (UCMS). The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes in ensuring secure, effective and efficient implementation of UCMS. The audit covered the period from January 2022 to December 2024 and included a review of: (a) system design; (b) data management; (c) information security; (d) change management; and (e) information and communications technology support systems.

The audit showed that improvements were required in design documentation, change management, segregation of duties and updating of training materials.

OIOS made three recommendations. To address the issues identified in the audit, the Office of Information and Communications Technology (OICT) needed to:

- Document the design documents for the business intelligence reports for user understanding, technical reference and future enhancements; and

- Update the training materials for UCMS in accordance with the decisions of the project board.

The Department of Operational Support (DOS) needed to:

- Establish a formal definition of ‘impact’ for changes proposed in UCMS and strengthen compliance with the standard operating procedure on change management.

OICT and DOS accepted the recommendations and have agreed to implement them. Actions required to close the recommendations are indicated in Annex I.

CONTENTS

Audit of the Umoja Uniformed Capabilities Management System

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the Umoja Uniformed Capabilities Management System (UCMS).

2. UCMS ties together the end-to-end planning and associated processes of uniformed capabilities management such as the definition of unit requirements[1] (SUR), memoranda of understanding (MOU) with Troop/Police Contributing Countries (T/PCCs), field inspections and verifications of contingent-owned equipment (formerly eCOE), uniformed strength reporting (USR), and the calculation of claims and reimbursements to T/PCCs.

3. UCMS was developed by the Office of Information and Communications Technology (OICT) in collaboration with field missions, the Department of Peace Operations (DPO) and the Department of Operational Support (DOS). The system is used across field missions whereby all inspections, verifications and reimbursements to T/PCCs are facilitated through the system.

4. The business and technical owners of the system are DOS' Uniformed Capabilities Services Division (UCSD) and OICT, respectively. OICT, as the technical owner of the system, is responsible for maintenance and enhancements. UCMS comprises several interfaces including with Umoja for payment of claims to Member States. UCMS is supported by the Power Business Intelligence Reporting system (Power BI) which provides reports on the Contingent Owned Equipment (COE) key performance indicators and the USR verifications. A portal has also been developed for the Uniformed Capabilities Support for Member States which provides information on MOUs, reimbursements, claims and COE. UCMS is also supported with a mobile application (UCM mobile) for COE inspections.

5. OIOS selected the United Nations Mission in South Sudan (UNMISS) to assess the user interface of UCMS and UCM mobile application. UNMISS utilizes UCMS to manage the deployment, administration and tracking of uniformed personnel and equipment, while its COE inspectors use the UCM mobile application on the mission-provided tablets to conduct COE inspections. As of 31 March 2024, 35 units (31 military contingents and 4 formed police units) with 14,058 personnel and 11,757 pieces of major equipment were deployed in accordance with the MOUs between the United Nations and the 14 T/PCCs.

6. UCMS had a system maintenance budget of $1.7 million and it facilitated COE reimbursement of $791.5 million for the peacekeeping budget period 2023-24.

7. Comments provided by DOS and OICT are incorporated in italics.

II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

8. The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes in ensuring secure, effective and efficient implementation of UCMS.

9. This audit was included in the 2024 risk-based work plan of OIOS due to the system's critical role in managing COE and reimbursement to T/PCCs.

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[1] SUR - the Statement of Unit Requirement describes the military/ police unit capabilities such as tasks, personnel and equipment in the units of new or ongoing missions. This can be considered as the most important document for T/PCCs in their planning and preparation for a UN field mission deployment and form basis for MOUs.

10. OIOS conducted this audit from April 2024 to January 2025. The audit covered the period from January 2022 to December 2024. Based on an activity-level risk assessment, the audit covered risk areas in the management of the UCMS which included: (a) system design; (b) data management; (c) information security; (d) change management; and (e) information and communications technology (ICT) support systems.

11. The audit methodology included: (a) interviews with key personnel; (b) review of relevant documentation; (c) analytical review of data; (d) walkthroughs; and (e) ICT security tests.

12. To assess the reliability of data pertaining to the audit areas, OIOS: (a) tested data accuracy and completeness in UCMS; (b) reviewed related documentation including Power BI reports; and (c) collaborated with OICT and DOS to identify and address any data-related issues. Discrepancies such as missing data and errors were brought to the attention of OICT and DOS during the audit.

13. The audit was conducted in accordance with the Global Internal Audit Standards.

III. AUDIT RESULTS

A. System design

Need to update reference documents in UCMS

14. System reference documents should be periodically updated for users' reference and use. These documents explain features and functionalities of the system, inform users on how to use the system, and allow the Organization to reduce onboarding time and costs.

15. OIOS' review showed that 236 reference documents were available in UCMS related to system description, manuals, procedures, system release notes and templates which were not periodically updated. Most of these reference documents were last updated in 2018. Lack of updated system reference documents could result in incomplete user knowledge of the system, errors, and extended onboarding time and costs for new users. *DOS stated that the process to update the system documents in UCM is well established. All important documents relevant to the UCM users are regularly uploaded to the system documents. The reference documents that relate to the business documents, e.g., COE Manual, Field Guidelines, COE Working Group recommendations, etc., are already available in the 'System Documents' module. Reference documents are available for 2019, 2022, 2023, and 2025. In addition, the latest COE Manual and Field Verification, and control of COE and Management of MOU Guidelines, considered as essential to field missions, are already available in the system documents.*

B. Data management

Action was being taken to improve data quality

16. ICT systems should be supported with proper data management procedures to ensure that the data in the system is reliable, valid, auditable and verifiable. All changes to the master data in the system should be controlled and made by only the users with authorized access to data. Any inactive or redundant data in the system should be appropriately tagged to prevent any erroneous use of such data.

17. There were master data elements such as Missions, Mission Units, and their activation and deactivation, signed MOUs, Permanent Missions, and Units, which could only be modified by the OICT

UCMS Administrator(s). USCD users were provided with business data administration roles, which allowed them to perform only certain update capabilities. OIOS noted the following:

(a) UCMS contained 51 field mission IDs, all of which were marked in the active status in the system despite the fact that 30 out of 51 field missions had already completed their mandate. This indicated that the mechanism to periodically review the active/inactive status of field missions in UCMS was not in place. UCSD stated that most of the missions which had completed their mandate were kept active for any death and disability claims.

(b) Data validation tests showed that 24 unexpired and signed MOUs (out of 112) were present in the system without a corresponding SUR reference. The absence of SUR could lead to incompleteness in the system's data. *DOS stated that it has taken action to remedy this situation with the system updates implemented on 29 March 2025. A new 'status' field has been introduced to show the mission as active or inactive. UCM will continue to show all missions, even if inactive, to ensure that historical data is always available to the users.*

(c) Analysis of MOUs in the system showed that there were mission units that were marked as active, but the corresponding MOU had expired, and the mission had completed its mandate. This anomaly could impact the data quality in the system. UCSD stated that this was due to unpaid claims and a ticket will be raised for deactivation of these units by OICT upon internal review and payment of all pending claims.

<u>Design documents for BI reporting need to be developed</u>

18. Business intelligence reports used for data analysis, decision making, and performance monitoring should be supported with technical and end-user documentation. Absence of such documentation would limit understanding of the reports and impact their future development. DOS utilized a business intelligence report (COE-KPI) to analyze and present the KPIs required as per Annex F of the Field Verification and Control of Contingent-Owned Equipment and Management, in accordance with the Memorandum of Understanding guidelines. Similarly, DPO used a business intelligence report (BI-USR) to provide information on the Police/Military contributions to the missions by parameters such as personnel type, gender, largest contributing countries, and largest missions.

19. OIOS' review indicated that the technical and user documents were not developed for the COE-KPI and BI-USR business intelligence reports, which could impact users' and developers' understanding and enhancement of these reports and their intended use. UCSD stated that the reports were developed long back and the documentation was not available. For instance, the dataset used by the reports is refreshed every six hours, but this aspect was not documented or generally known. Additionally, two KPIs, specifically KPIs 1 and 2 in Annex F, were not included in the COE-KPI dashboard. Non-inclusion of these KPIs would result in the incompleteness of the COE-KPI report. *DOS clarified that a work order has been raised to check the feasibility of including KPI 1 and 2 in Power-BI. Until it is deployed, tested and confirmed for production, field missions will continue to report through the existing process, as it addresses the established business processes of DOS and field missions*.

(1) OICT, in coordination with DOS and DPO, should document the design documents for the business intelligence reports for user understanding, technical reference and future enhancements.

OICT accepted recommendation 1 and stated that it will produce design documents for the BI reports.

C. Information security

20. [redacted]

21. [redacted]

[redacted]

(a) [redacted]

[redacted]

(b) [redacted]

[redacted]

(c) [redacted]

(d) [redacted]

[redacted]

(e) [redacted].

[redacted]

(f) [redacted].

[redacted]

(g) [redacted]

D. Change management

Need to strengthen the change management procedures

22. Changes to information systems shall be subject to change management procedures including oversight by the Change Management Board. Changes should be prioritized for implementation based on their impact ratings which should be well documented. Additionally, the standard operating procedures (SOP) of the Change Management Board should be fully complied with. OIOS noted the following:

(a) Documents presented at the Board meetings did not explain as to what would constitute a change with high/significant impact, which was not in accordance with the SOP of the UCM board.

(b) Criteria for the impact rating of changes as critical or high was not defined (one critical and 12 high out of 90 changes).

(c) Approvals for the work plan for quarterly releases or major enhancements to UCM were not available, as also the approved or rejected list of changes or other action items with appropriate justification.

(2) DOS, in coordination with OICT, should: (a) establish a formal definition of 'impact' for changes proposed in the Uniformed Capabilities Management System; and (b) strengthen compliance with the SOP on change management. *DOS accepted recommendation 2 and stated that the process is already well-established. UCSD and OICT jointly assess the impact and significance of proposed changes during requirement reviews. These assessments are reflected in iNeed through the business-assigned priority and the OICT-estimated implementation effort. Nevertheless, DOS and OICT will collaborate on developing a SOP for change management.*

E. ICT support systems

23. Users of the ICT systems should undergo periodic training in the existing and new functionalities to keep pace with system changes, enhancements, new features, functionalities, and security practices to fully utilize the system effectively, reduce errors and improve system use and user productivity in the system. OIOS noted the following:

UCMS ICT support was effective

(a) UCMS ICT support catalogue was well-developed with more 45 different areas under which the support tickets could be lodged by the UCM system users. Additionally, users of UCM were able to also approach the OICT UCM contacts directly in case of any urgent requirements. Analysis of support tickets in the system from January 2022 to December 2024 showed that OICT addressed a total of 479 work orders across eight select categories, out of which only 11 work orders were in open state as of December 2024.

UCMS training materials need to be updated, and periodic user training should be undertaken

(b) Comprehensive updates to the UCMS training have not made since 2019. Additionally, the training material on UCM available on the Secretariat's intranet (iSeek) was outdated, and there were several broken links. Comprehensive updates to the UCM training material should be made for proper user understanding and use of the system.

(c) There was no process to conduct periodic user training for UCMS users. Only one classroom training was conducted in 2024 for new DPO staff on the SUR module of UCMS. Lack of periodic user training could result in errors, non-standardized processes and workarounds reducing the effectiveness of the system. *OICT stated that quarterly release notes describe all functionality changes. Moreover, no stakeholders have requested periodic training. In addition, OICT provides training on an as-needed basis. This model has been effective in providing users with the requisite knowledge of the system while optimizing OICT resource requirements. Considering the financial situation of the Organization, OICT cannot afford to provide periodic training that has not been requested.*

(3) OICT, in coordination with DOS and DPO, should update the training materials for the Uniformed Capabilities Management System in accordance with the decisions of the project board.

OICT accepted recommendation 3 and stated that considering the financial situation of the Organization, the project board will decide which works are required, including which parts of the user documentation needs updating.

IV. ACKNOWLEDGEMENT

24. OIOS wishes to express its appreciation to the management and staff of OICT, DOS, DPO and UNMISS for the assistance and cooperation extended to the auditors during this assignment.

Internal Audit Division
Office of Internal Oversight Services

ANNEX I

STATUS OF AUDIT RECOMMENDATIONS

Audit of the Umoja Uniformed Capabilities Management System

Rec. no.	Recommendation	Critical[2]/ Important[3]	C/ O[4]	Actions needed to close recommendation	Implementation date[5]
1	OICT in coordination with DOS and DPO should document the design documents for the business intelligence reports for user understanding, technical reference and future enhancements.	Important	O	Receipt of evidence that the design documents for the business intelligence reports have been produced.	30 June 2026
2	DOS, in coordination with OICT, should: (a) establish a formal definition of 'impact' for changes proposed in the Uniformed Capabilities Management System; and (b) strengthen compliance with the SOP on change management.	Important	O	Receipt of evidence that: (a) a formal definition of 'impact' for changes proposed in the Uniformed Capabilities Management System has been established; and (b) compliance with the SOP on change management has been strengthened.	31 March 2026
3	OICT, in coordination with DOS and DPO, should update the training materials for the Uniformed Capabilities Management System in accordance with the decisions of the project board.	Important	O	Receipt of evidence that the training materials for the Uniformed Capabilities Management System have been updated in accordance with the decisions of the project board.	31 March 2026

[2] Critical recommendations address those risk issues that require immediate management attention. Failure to take action could have a critical or significant adverse impact on the Organization.
[3] Important recommendations address those risk issues that require timely management attention. Failure to take action could have a high or moderate adverse impact on the Organization.
[4] Please note the value C denotes closed recommendations whereas O refers to open recommendations.
[5] Date provided by OICT and DOS in response to recommendations.

APPENDIX I

Management Response

United Nations | Nations Unies

INTEROFFICE MEMORANDUM | MEMORANDUM INTERNE

TO: / A: Mr. Byung-Kun Min, Director
Internal Audit Division
Office of Internal Oversight Services

DATE: 25 June 2025

REFERENCE: DOS-2025-01746

THROUGH: / S/C DE:

FROM: / DE: Atul Khare, Under-Secretary-General
for Operational Support

SUBJECT: / OBJET: **Draft report on an audit of Umoja Uniformed Capabilities Management System (Assignment No. AT2024-519-01)**

1. Thank you for the opportunity to comment on the subject draft report. Please find attached our comments on the findings and recommendations as Appendices I and II.

2. We appreciate the excellent cooperation between the Office of Internal Oversight Services and the Administration and stand ready to provide any additional clarification that may be required.

CC: Fatoumata Ndiaye
Gurpur Kumar
David Nyskohus

APPENDIX I

Management Response

Audit of Umoja Uniformed Capabilities Management System

III. AUDIT RESULTS

B. Data Management

<u>Design documents for BI reporting need to be developed (OIOS comment following recommendation 1)</u>

> Recommendation 1 remains open pending receipt of evidence that a process has been established to periodically update system documents in UCMS.

1. The OIOS comment following recommendation 1 appears unrelated to the recommendation. OICT requests that the comment be revised, as follows:

> Recommendation 1 remains open pending receipt of evidence that ~~a process~~ **design documents for the business intelligence reports** ~~has~~ **have** been ~~established to periodically update system documents in UCMS~~ **produced**.

C. Information Security

<u>Need to establish guidelines for tablet use and their periodic replacement/update (paragraph 21(e))</u>

> COE inspectors faced numerous challenges in utilizing tablets. The tablets were old and prone to frequent shutdowns due to poor battery life, and they were out of warranty. Due to this, COE inspectors printed and carried paper-based inspections sheets as a backup for tablet failure, defeating the very purpose of the UCM mobile application. There was a need to establish a policy for the periodic replacement of official tablets supporting the UCM mobile application.

2. In reference to paragraph 21(e) of the OIOS report, concerning the status of tablet devices issued to the UNMISS COE/MOU Management Unit, UNMISS wishes to clarify that the information presented does not reflect the current situation.

3. In April 2022, the Unit received 12 new Lenovo tablets, replacing approximately half of the original tablets issued to COE inspectors in 2018. In October 2024, an additional 10 Samsung tablets were provided, completing the replacement of the remaining 2018-issued devices. As a result, no outdated or technically compromised tablets are currently in use by COE inspectors.

4. Furthermore, there have been no reported incidents of device shutdowns or operational disruptions due to battery issues. All tablets presently in use are covered by active warranty and their performance continues to be monitored by the UNMISS Field Technology Services (FTS). FTS oversees the lifecycle of all issued devices to ensure timely replacement and avoid any potential impact on operational effectiveness.

5. UNMISS remains fully committed to ensuring that COE inspectors are equipped with up-to-date and functional technology. Considering the above, UNMISS respectfully requests that paragraph 21(e) be deleted from the report.

APPENDIX II

Management Response

Audit of Umoja Uniformed Capabilities Management System

Rec. no.	Recommendation	Critical[1]/ Important[2]	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	OICT in coordination with DOS and DPO should document the design documents for the business intelligence reports for user understanding, technical reference and future enhancements.	Important	Yes	Chief, Enterprise Solutions Service (ESS), OICT	30 June 2026	OICT will produce design documents for the business intelligence reports.
2	DOS should: (a) establish a segregation of duty matrix for user responsibilities in the Uniformed Capabilities Management System; and (b) establish a process, in coordination with DPO and field missions, to ensure that periodic access reviews are undertaken.	Important	No	Chief, Reimbursement Claims Management and Performance Section (RCMPS), Uniformed Capabilities Support Division (UCSD), OSCM	N/A	This process was routinely followed by UCSD and field missions since the deployment of the Uniformed Capabilities Management System in 2019. It was also adapted, as needed, in response to staffing changes. The regular generation of work order requests by DOS in the iNeed system, which are accessible to OIOS, demonstrates that this process is already in place. The latest correspondence confirming that these procedures are being followed on a regular basis is enclosed.

[1] Critical recommendations address those risk issues that require immediate management attention. Failure to take action could have a critical or significant adverse impact on the Organization.

[2] Important recommendations address those risk issues that require timely management attention. Failure to take action could have a high or moderate adverse impact on the Organization.

APPENDIX II

Management Response

Audit of Umoja Uniformed Capabilities Management System

3	DOS, in coordination with OICT, should: (a) establish a formal definition of 'impact' for changes proposed in the Uniformed Capabilities Management System; and (b) strengthen compliance with the SOP on change management.	Important	Yes	Chief, RCMPS, UCSD, OSCM	31 March 2026	This process is already well-established. UCSD and OICT jointly assess the impact and significance of proposed changes during requirement reviews. These assessments are reflected in iNeed through the business-assigned priority and the OICT-estimated implementation effort. Nevertheless, DOS and OICT will collaborate on developing a standard operating procedure for change management.
4	OICT, in coordination with DOS and DPO, should: (a) update the training materials for the Uniformed Capabilities Management System **in accordance with the decisions of the project board**; and (b) arrange periodic training for the users of the system.	Important	(a) Yes, if revised, as requested (b) No	Chief, ESS, OICT	(a) 31 March 2026 (b) N/A	(a) Considering the financial situation of the Organization, the project board will decide which works are required, including which part of the user documentation needs updating. (b) As earlier explained to OIOS, quarterly release notes describe all functionality changes. Moreover, no stakeholders have requested periodic training. In addition, OICT provides training on an as-needed basis. This model has been effective in providing users with the requisite knowledge of the system while optimizing OICT resource requirements. Considering the financial situation of the Organization, OICT cannot afford to provide periodic training that has not been requested.