



INTERNAL AUDIT DIVISION

REPORT 2015/105

Audit of the migration of Lotus Notes applications and electronic mail system in the United Nations Interim Force in Lebanon

Overall results relating to the migration of Lotus Notes and electronic mail system were initially assessed as partially satisfactory. Implementation of two important recommendations remains in progress.

FINAL OVERALL RATING: PARTIALLY SATISFACTORY

25 September 2015
Assignment No. AT2015/615/03

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AUDIT REPORT

Audit of the migration of Lotus Notes applications and electronic mail system in the United Nations Interim Force in Lebanon

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the migration of Lotus Notes applications and electronic mail (email) system in the United Nations Interim Force in Lebanon (UNIFIL).
2. In accordance with its mandate, OIOS provides assurance and advice on the adequacy and effectiveness of the United Nations internal control system, the primary objectives of which are to ensure: (a) efficient and effective operations; (b) accurate financial and operational reporting; (c) safeguarding of assets; and (d) compliance with mandates, regulations and rules.
3. UNIFIL was originally established by Security Council resolutions 425 and 426 in March 1978 to confirm Israeli withdrawal from southern Lebanon, restore international peace and security, and assist the Lebanese Government in restoring its effective authority in the area. The concept of UNIFIL operations had to be adjusted twice and as a result, its original mandate had greatly expanded to other activities (i.e., accompanying and supporting the Lebanese Armed Forces, extending its assistance to help ensure humanitarian access to civilian populations, helping ensure the voluntary and safe return of displaced persons, etc.).
4. The 2014/2015 budget of UNIFIL included funding for \$509.5 million, with approximately 10,395 troops, 284 international civilian personnel, and 603 local civilian staff.
5. Lotus Notes is a collaborative software platform that provides a broad range of functionalities (i.e., business applications, databases, email, etc.). Over the years, field missions developed Lotus Notes databases to meet a variety of local operational requirements. As a result, a large number of applications were implemented throughout field missions, some of which were hosted locally. In addition, there were approximately 45,000 email accounts in the Lotus Notes messaging infrastructure.
6. The Information and Communications Technology Division (ICTD) of the Department of Field Support (DFS) is responsible for the provision of information systems designed to automate administrative and logistics support procedures in field missions. ICTD had embarked on several initiatives to automate, unify and centralize business processes in the field, leading to the migration of the pre-existing Lotus Notes applications and email system to a new technological platform.
7. The Lotus Notes application migration initiative was intended to decommission all field Lotus Notes applications. This initiative began in April 2014 and was expected to continue until September 2015. Some of the applications were to be moved to other centralized systems that were part of the current ICTD strategy (i.e., Umoja, iNeed, etc.), and others were to be migrated to a new web application platform (SharePoint). ICTD assigned the name 'Cosmos' to its internal SharePoint system. UNIFIL was a pilot site for the migration of applications from Lotus Notes to SharePoint/Cosmos.
8. The DFS messaging initiative was implemented during the period July 2014 to February 2015 and included the migration of 45,000 email users, of which 1,961 were in UNIFIL, to Microsoft Exchange 2013 (a mail server developed by Microsoft that runs on the Windows platform).

9. The United Nations International Computing Centre (UNICC) provided migration services, a project team, and third party hosting services for the email portion of the migration. The United Nations Office for Project Services (UNOPS) provided a project manager for the Lotus Notes applications migration initiative under an existing third party agreement.

10. Comments provided by UNIFIL and DFS are incorporated in italics.

II. OBJECTIVE AND SCOPE

11. The audit was conducted to assess the adequacy and effectiveness of governance, risk management and control processes put in place by UNIFIL and DFS to provide reasonable assurance regarding the **effective migration of Lotus Notes applications and email system in UNIFIL**.

12. This audit was included in the 2015 internal audit work plan for UNIFIL due to the high risks associated with the migration of Lotus Notes applications and email system to new platforms and its potential impact on the planned global deployment in other field locations.

13. The key controls tested for the audit were: (a) project management; and (b) information and communications technology (ICT) support system. For the purpose of this audit, OIOS defined these key controls as follows:

- a) **Project management** – controls that provide reasonable assurance that the migration of Lotus Notes applications and email system in UNIFIL was managed efficiently and effectively; and
- b) **ICT support system** – controls that provide reasonable assurance that the migration of Lotus Notes applications and email system effectively meets the business needs of UNIFIL.

14. The key controls were assessed for the control objectives shown in Table 1.

15. OIOS conducted the audit from 16 February to 13 March 2015. The audit covered the period from July 2014 to February 2015 and included a review of the processes in UNIFIL at Naquora, Lebanon and DFS/ICTD at Headquarters, New York. The audit scope included only the applications migrated to SharePoint (excluding those replaced by Umoja and iNeed), and all UNIFIL email accounts.

16. OIOS conducted an activity-level risk assessment to identify and assess specific risk exposures, and to confirm the relevance of the selected key controls in mitigating associated risks. Through interviews, analytical reviews and tests of controls, OIOS assessed the existence and adequacy of internal controls and conducted necessary tests to determine their effectiveness.

III. AUDIT RESULTS

17. The DFS and UNIFIL governance, risk management and control processes examined were initially assessed as **partially satisfactory**¹ in providing reasonable assurance regarding the **effective**

¹ A rating of “**partially satisfactory**” means that important (but not critical and/or pervasive) deficiencies exist 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.

migration of Lotus Notes applications and email system in UNIFIL. OIOS made nine recommendations to address issues identified in the audit.

18. UNIFIL and DFS implemented some good control practices for the migration of Lotus Notes applications, including: adequate resources to execute the migration tasks; network infrastructure management; business continuity and disaster recovery plans; ongoing status reporting and project monitoring; user guides; and controls to ensure completeness of migrated data. However, there were some control weaknesses due to inadequate: (i) logging and monitoring project risks; (ii) communications to users regarding internal policies; and (iii) testing procedures.

19. UNIFIL and DFS implemented some good practices for the DFS email migration project, including: adequate preparation time for the migration; management support; resources to execute the tasks; communication and coordination with stakeholders; and sharing of results, which led to the successful migration of 1,961 email accounts in UNIFIL. However, there were some control weaknesses due to inadequate: (i) project documentation; (ii) archiving policies and procedures; (iii) monitoring of user access; and (iv) management of user expectations.

20. The initial overall rating was based on the assessment of key controls presented in Table 1 below. The final overall rating is **partially satisfactory** as implementation of two important recommendations remains in progress.

Table 1: Assessment of key controls

Business objective	Key controls	Control objectives			
		Efficient and effective operations	Accurate financial and operational reporting	Safeguarding of assets	Compliance with mandates, regulations and rules
Effective migration of Lotus Notes applications and email system in UNIFIL	(a) Project management	Partially satisfactory	Partially satisfactory	Partially satisfactory	Partially satisfactory
	(b) ICT support system	Partially satisfactory	Partially satisfactory	Partially satisfactory	Partially satisfactory
FINAL OVERALL RATING: PARTIALLY SATISFACTORY					

A. Project management

Project closure procedures needed to be completed

21. DFS adopted the project management methodology “Projects in Controlled Environments” (PRINCE2) to implement the initiatives related to the migration of Lotus Notes applications and email. PRINCE2 requires the closure of projects on the basis of evidence confirming that: (i) objectives were met; (ii) deliverables were accepted by stakeholders; and (iii) lessons learned and an end of project report was documented.

22. The project closure for the email migration project did not comply with PRINCE2 requirements because the following components were missing: (i) confirmation or acceptance by stakeholders about the fulfilment of project objectives; (ii) lessons learned report; and (iii) end of project report. The project

closure document was only in the form of an email communication that informed the Project Coordinator of the completed migration of 1,961 Lotus Notes email accounts and some exception cases not migrated or created.

23. This condition was due to weaknesses in the completion of activities related to project closure which could lead to unmet project objectives and deliverables.

(1) DFS should review all of the deliverables required in the email project and complete all of the project closure activities.

DFS accepted recommendation 1 and stated that the email migration project was signed-off by the Project Board and officially closed on 29 May 2015. Follow-up activities and lessons learned were part of the closure document. A customer survey assessing user satisfaction with the mail service was also conducted. OIOS reviewed the additional evidence provided by DFS demonstrating that the project was officially closed in accordance with the requirements of PRINCE2. Based on the actions taken and the evidence provided, recommendation 1 has been closed.

A project risk management process needed to be implemented

24. PRINCE2 requires the establishment of a formal project risk management process to identify, analyze, respond, mitigate and monitor the risks of the project. Risks should be logged and monitored on a regular basis and any newly identified threat should be added to the log throughout the project lifecycle. The log should include details that can be tracked (such as dates, descriptions, approach to mitigation, due dates as applicable, person responsible, status, etc.).

25. Although DFS identified risks during the project initiation phase and appeared to be monitoring them during status review meetings, the risks were not documented in a central repository. Some of the risks were addressed during status review meetings and reflected in meeting minutes, while others were addressed through email exchanges among team members.

26. The lack of a formal risk management process could prevent the Organization from completing the project on time and realizing all of the intended objectives.

(2) DFS should establish risk management procedures with the requirement to document project risk activities in sufficient detail to allow for effective monitoring.

DFS accepted recommendation 2 and stated that the risks of the Lotus Notes application migration project were tracked and documented every week. The Project Status reports for 16 to 29 May and 1 to 15 June demonstrate that risks have been managed at the requested level of detail. OIOS reviewed the additional evidence provided by DFS demonstrating that risk management procedures were established. Based on the actions taken and evidence provided by DFS, recommendation 2 has been closed.

Policy guidelines needed to be communicated

27. The professional standards defined in the Control Objectives for Information and Related Technology (COBIT) framework requires that the migration of systems hosting complex data such as SharePoint should be conducted on the basis of guiding principles and policies addressing requirements for design, site content, privacy, confidentiality, security, access, ownership, roles and responsibilities.

28. DFS issued policy guidelines for SharePoint/Cosmos with adequate guiding principles and policies addressing the above mentioned requirements in an internal governance document (i.e., Cosmos Content Management Framework). However, UNIFIL staff was not aware of the guiding principles and policies issued by DFS because this information had not been communicated to the field missions migrating to the new platform.

29. This condition was due to the lack of communication of the established guiding principles and policies and could expose the Organization to potential violation of requirements for security, privacy, and confidentiality.

(3) DFS should disseminate the information contained in the Cosmos Content Management Framework document to all field missions migrating their local applications to SharePoint and ensure that all end-users are aware of the policies.

DFS accepted recommendation 3 and stated the governance document was disseminated to UNIFIL focal points prior to the application migration. The governance document, along with the instructions to share relevant information with end-users, will be provided to other missions in coordination with their migration implementation schedule. OIOS reviewed the additional evidence provided by DFS demonstrating that the governance document: (i) was disseminated to UNIFIL focal points; and (ii) included provisions for further communication to other missions. Based on the actions taken and evidence provided by DFS, recommendation 3 has been closed.

A local decommissioning plan for Lotus Notes applications needed to be established

30. DFS required the complete migration of Lotus Notes applications to SharePoint by June 2015, with the concurrent decommission of old systems. DFS provided technical decommissioning instructions to each mission and monitored their implementation in field locations.

31. In UNIFIL, there were a total of eight Lotus Notes applications to be migrated to SharePoint. Of these, four were in the process of user acceptance testing, and four were in the initial stages of the migration process. UNIFIL agreed with DFS to complete the migrations by 6 June 2015. Although the UNIFIL ICT Unit appeared to be on schedule to complete the migration, there was no formal local decommissioning plan to ensure that the target date set by DFS would be met for all eight applications. In addition, the business owners of the four applications being tested were not fully aware as to when the legacy system would be decommissioned.

32. This condition was due to the absence of a local plan in UNIFIL to supplement the technical plans provided by DFS and could lead to: (i) the risk of not meeting the agreed migration date of 6 June 2015; and (ii) business owners not being prepared to perform functions without the legacy systems once they are decommissioned.

(4) UNIFIL should establish: (a) a local decommissioning plan for all the applications migrating to SharePoint; and (b) a mechanism for managing the operational needs of end-users during the decommissioning of old systems.

UNIFIL accepted recommendation 4 and stated that the decommissioning plan for the migration of UNIFIL applications to SharePoint was since provided to the audit team, with a copy to the UNIFIL Compliance Unit. OIOS reviewed the additional evidence provided by UNIFIL demonstrating that the decommissioning plan has been established. Based on the actions taken and evidence provided by UNIFIL, recommendation 4 has been closed.

B. ICT support system

The migration of Lotus Notes applications needed to be tested

33. The COBIT framework requires: (i) developing data integrity testing for migrated data; and (ii) documenting and communicating test plans to end users.

34. The project initiation document prepared by DFS for the Lotus Notes applications migration project stated that: (i) the client (business users in the various field missions) will be performing user acceptance testing of the SharePoint applications to compare features that were available and used in the existing Lotus Notes databases; (ii) bugs, omissions, and functional defects would be analyzed and categorized; and (iii) user acceptance would be documented and signed-off by the authorized mission ICT staff and business users. Field missions were responsible for notifying the Project Board when testing had been completed and accepted. However, the following were noted:

- (i) Test scenarios and test criteria were not provided to the UNIFIL business users;
- (ii) UNIFIL users were not aware of all SharePoint features that should have been tested;
- (iii) There was no documented procedure available to users regarding logging bugs, omissions and functional defects found during testing;
- (iv) There were local SharePoint applications that required specific test scripts and testing procedures; and
- (v) Business owners were required to sign-off on the testing results and confirm whether the system functioned as required. However, some of the business owners were not aware of all the features that should have been tested.

35. This condition was due to weakness in oversight by the Project Board and could result in the system not functioning as expected.

(5) DFS should: (i) establish standard test scripts to be used as guidelines for testing SharePoint applications; (ii) distribute complete testing instructions to all missions involved in the migration of Lotus Notes applications; and (iii) establish control procedures over the testing process.

DFS accepted recommendation 5 and stated that the recommendation has been implemented. Guidelines for testing applications migrated from Lotus Notes, which includes procedures, workflows, controls and templates, were provided to OIOS and distributed to UNIFIL in July 2015. OIOS reviewed the evidence provided by DFS demonstrating that adequate guidelines and procedures for testing have been established and are being distributed to missions in accordance with the migration schedule. Based on the actions taken and evidence provided by DFS, recommendation 6 has been closed.

(6) UNIFIL should establish standard local test scripts and testing procedures for all the SharePoint applications being migrated, including testing criteria, documentation of test results, retesting procedures for exceptions, and sign-off of each test element.

UNIFIL accepted recommendation 6 and stated that the recommendation has been implemented. Examples of two applications which underwent testing in UNIFIL were provided to OIOS. OIOS reviewed the evidence provided demonstrating that applications were tested in UNIFIL. Based on the actions taken and evidence received, recommendation 6 has been closed.

Email archiving procedures needed to be implemented

36. DFS prepared a project migration guide for the Lotus Notes email system which required the users' mailboxes to be archived. The archived mailboxes were supposed to be transformed to Microsoft Exchange files. This requirement was in line with the Secretary-General's Bulletin on "Record-keeping and the management of United Nations archives" (ST/SGB/2007/5), and the standard operating procedures established by the United Nations Field Technology Operations Centre in Valencia.

37. In UNIFIL, the archived Lotus Notes email files were not transformed to Microsoft Outlook files, which was a pre-requisite for initiating the migration process. Only the current mailboxes of the users were migrated to the Microsoft Exchange platform.

38. This condition was due to the lack of a target date and plan for completion of the conversion of Lotus Notes archive files to Microsoft Exchange archive files, which may have negative implications on record-keeping.

(7) UNIFIL should prepare and implement a time bound plan for the conversion of Lotus Notes archives to Microsoft Exchange archives.

UNIFIL accepted recommendation 7 and stated that the recommendation has been implemented. A time bound plan for the conversion of Lotus Notes mail archives to Microsoft Exchange archives was provided to the audit team with a copy to the UNIFIL Compliance Unit on 26 March 2015. Also provided was the updated plan with revised target dates. OIOS reviewed the documentation provided by UNIFIL and noted that although a plan had been formulated, the Lotus Notes archive conversion is yet to be implemented. Therefore, recommendation 7 remains open pending receipt of evidence demonstrating that the Lotus Notes archive conversion has been completed satisfactorily.

An archiving policy needed to be implemented

39. DFS developed a messaging-mailbox retention policy which requires UNIFIL to archive messages after attaining 2GB data size or 60 days (whichever comes first). This requirement is in line with the Secretary-General's Bulletin on "Record-keeping and the management of United Nations archives" (ST/SGB/2007/5) and the standard operating procedures of DFS/ICTD.

40. UNIFIL had not implemented the enterprise archiving policy and its Communications and Information Technology Section (CITS) was not aware of it. Also, CITS was unclear about which process should have been implemented to archive messages reaching the size or number of days prescribed in the policy (i.e., whether the messages should have been archived centrally in the servers of United Nations Support Base in Valencia or in the local systems/servers).

41. This condition was due to the failure to implement the enterprise policy for archiving in field missions, which may expose the Organization to potential loss of official emails.

(8) DFS should ensure that the enterprise archiving policy is communicated and implemented in all field missions.

DFS accepted recommendation 8 and stated that the Department of Peacekeeping Operations and DFS are preparing plans for the implementation of information archiving functions within all field missions, including UNIFIL, in line with ST/SGB/2007/5. Recommendation 8 remains open pending receipt of evidence demonstrating that the enterprise archiving policy has been communicated and implemented in all field missions.

Email accounts of users that have separated from the Organization needed to be monitored

42. User access rights to the email system should follow the policy issued by the Office of Information and Communications Technology (OICT) regarding account retention and deletion, which limits users' access to their official email account for a maximum period of 90 days after their separation from the Organization.

43. The check-out procedure established in UNIFIL did not include control mechanisms to inform CITS about the need to de-provision email accounts of staff members being separated from the Mission. As a result, CITS was not always notified in a timely manner when a staff member completed the check-out process and separated from the Mission. Audit tests conducted over a period covering four months (August - November 2014) showed that the email system contained three instances of active access assigned to staff members who had left the Mission for more than 90 days. Upon further review with CITS, it was determined that two of the users had been exceptionally granted access beyond the permissible period. However, reasons and approval for the exception were not available.

44. This condition was due to the lack of coordination between check-out procedures and email management and could potentially lead to unauthorized access to information.

(9) UNIFIL should: (i) establish mechanisms to ensure that relevant information related to the check-out process is communicated to CITS for the de-provisioning of email accounts; (ii) institute controls to ensure compliance with the OICT messaging policy for email account retention and deletion; (iii) document and approve exceptions to the OICT policy of 90 day access for separated staff members; and (iv) conduct a comprehensive review of users separated since the completion of the Microsoft Exchange migration project and deactivate accounts where applicable.

UNIFIL accepted recommendation 9 and stated that the recommendation has been implemented. With the implementation and launch of the Check-In/Check-Out (CICO) module of the Field Support Suite as of 1 July 2015, the following mechanisms have been put in place: (i) UNIFIL Service Desk has been included in the CICO workflow and therefore, the relevant check-out information is communicated to CITS by automatic email alerts; (ii) UNIFIL Service Desk will generate work orders assigned to the email administrators who will ensure compliance with the relevant policies; (iii) exception requests and approvals are being collected for future reference; and (iv) a comprehensive review of users separated since the completion of the Microsoft Exchange migration project was conducted and user accounts have been deactivated where applicable. OIOS reviewed the evidence provided by UNIFIL and found the mechanisms put in place to be adequate. Based on the actions taken and evidence provided by UNIFIL, recommendation 9 has been closed.

IV. ACKNOWLEDGEMENT

45. OIOS wishes to express its appreciation to the Management and staff of UNIFIL and DFS for the assistance and cooperation extended to the auditors during this assignment.

(Signed) David Kanja
Assistant Secretary-General, Acting Head
Office of Internal Oversight Services

STATUS OF AUDIT RECOMMENDATIONS

Audit of the migration of Lotus Notes applications and electronic mail system in the United Nations Interim Force in Lebanon

Recom. no.	Recommendation	Critical ² / Important ³	C/ O ⁴	Actions needed to close recommendation	Implementation date ⁵
1	DFS should review all of the deliverables required in the email project and complete all of the project closure activities.	Important	C	Action completed.	Implemented
2	DFS should establish risk management procedures with the requirement to document project risk activities in sufficient detail to allow for effective monitoring.	Important	C	Action completed.	Implemented
3	DFS should disseminate the information contained in the Cosmos Content Management Framework document to all field missions migrating their local applications to SharePoint and ensure that all end-users are aware of the policies.	Important	C	Action completed.	Implemented
4	UNIFIL should establish: (a) a local decommissioning plan for all the applications migrating to SharePoint; and (b) a mechanism for managing the operational needs of end-users during the decommissioning of old systems.	Important	C	Action completed.	Implemented
5	DFS should: (i) establish standard test scripts to be used as guidelines for testing SharePoint applications; (ii) distribute complete testing instructions to all missions involved in the migration of Lotus Notes applications; and (iii) establish control procedures over the testing process.	Important	C	Action completed.	Implemented
6	UNIFIL should establish standard local test scripts and testing procedures for all the SharePoint applications being migrated, including testing	Important	C	Action completed.	Implemented

² 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.

³ 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.

⁴ C = closed, O = open

⁵ Date provided by DFS and UNIFIL in response to recommendations.

STATUS OF AUDIT RECOMMENDATIONS

Audit of the migration of Lotus Notes applications and electronic mail system in the United Nations Interim Force in Lebanon

Recom. no.	Recommendation	Critical ² / Important ³	C/ O ⁴	Actions needed to close recommendation	Implementation date ⁵
	criteria, documentation of test results, retesting procedures for exceptions, and sign-off of each test element.				
7	UNIFIL should prepare and implement a time bound plan for the conversion of Lotus Notes archives to Microsoft Exchange archives.	Important	O	Receipt of evidence demonstrating that the Lotus Notes archive conversion has been completed satisfactorily.	30 March 2016
8	DFS should ensure that the enterprise archiving policy is communicated and implemented in all field missions.	Important	O	Receipt of evidence demonstrating that the enterprise archiving policy has been communicated and implemented in all field missions.	30 March 2016
9	UNIFIL should: (i) establish mechanisms to ensure that relevant information related to the check-out process is communicated to CITS for the de-provisioning of email accounts; (ii) institute controls to ensure compliance with the OICT messaging policy for email account retention and deletion; (iii) document and approve exceptions to the OICT policy of 90 day access for separated staff members; and (iv) conduct a comprehensive review of users separated since the completion of the Microsoft Exchange migration project and deactivate accounts where applicable.	Important	C	Action completed.	Implemented

APPENDIX I

Management Response



CONFIDENTIAL

Immediate

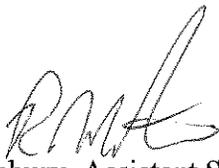
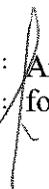
TO: Mr. Gurpur Kumar, Deputy Director
A: Internal Audit Division, OIOS

DATE: **SEP 16 2015**

THROUGH:

S/C DE:

REFERENCE: UNHQ-AR-BOI-Memo-2-
2015-5705

FROM:  Anthony Banbury, Assistant Secretary-General
DE:  for Field Support

SUBJECT: **Audit of the migration of Lotus Notes applications and electronic mail
system in the United Nations Interim Force in Lebanon (Assignment
No. AT2015/615/03)**

1. I refer to your memorandum dated 17 August 2015 regarding the above-mentioned audit. Please find herewith our comments on the recommendations contained in the draft report attached as Appendix I.
2. Thank you for the opportunity to comment on the draft report. We stand ready to provide any further information that may be required.

Cc: Ms. Cynthia-Avena Castillo

Management Response

Audit of the migration of Lotus Notes applications and electronic mail system in the United Nations Interim Force in Lebanon

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	DFS should review all of the deliverables required in the email project and complete all of the project closure activities.	Important	Yes	N/A	Implemented	DFS comments are reflected in the report.
2	DFS should establish risk management procedures with the requirement to document project risk activities in sufficient detail to allow for effective monitoring.	Important	Yes	N/A	Implemented	DFS comments are reflected in the report.
3	DFS should disseminate the information contained in the Cosmos Content Management Framework document to all field missions migrating their local applications to SharePoint and ensure that all end-users are aware of the policies.	Important	Yes	N/A	Implemented	DFS comments are reflected in the report.
4	UNIFIL should establish: (a) a local decommissioning plan for all the applications migrating to SharePoint; and (b) a mechanism for managing the operational needs of end-users during the decommissioning of old systems.	Important	Yes	N/A	Implemented	UNIFIL comments are reflected in the report.
5	DFS should: (i) establish standard test scripts to be used as guidelines for testing SharePoint applications; (ii) distribute complete testing instructions to all missions involved in the migration of Lotus Notes applications; and (iii) establish control procedures over the testing process.	Important	Yes	N/A	Implemented	The recommendation has been implemented. Guidelines for testing applications migrated from Lotus Notes, which includes procedures, workflows, controls and templates were provided to OIOS. DFS distributed these guidelines to UNIFIL in July 2015.

¹ Critical recommendations address significant and/or pervasive deficiencies or weaknesses in governance, risk management or internal control processes, such that reasonable assurance cannot be provided regarding the achievement of control and/or business objectives under review.

² Important recommendations address important deficiencies or weaknesses in governance, risk management or internal control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

Management Response

Audit of the migration of Lotus Notes applications and electronic mail system in the United Nations Interim Force in Lebanon

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
6	UNIFIL should establish standard local test scripts and testing procedures for all the SharePoint applications being migrated, including testing criteria, documentation of test results, retesting procedures for exceptions, and sign-off of each test element.	Important	Yes	N/A	Implemented	The recommendation has been implemented. Using the guidelines and templates, examples of two applications which underwent testing in UNIFIL were provided to OIOS.
7	UNIFIL should prepare and implement a time bound plan for the conversion of Lotus Notes archives to Microsoft Exchange archives.	Important	Yes	N/A	Implemented	The recommendation has been implemented. A time bound plan for the conversion of Lotus Notes mail archives to Microsoft Exchange archives was provided to the Audit Team with a copy to the UNIFIL Compliance Unit on 26 March 2015,. Also provided was the updated plan with revised target dates.
8	DFS should ensure that the enterprise archiving policy is communicated and implemented in all field missions.	Important	Yes	Chief, Information Management Unit	Second quarter of 2016	DPKO/DFS are preparing plans for the implementation of information archiving functions within all field missions, including UNIFIL, in line with ST/SGB/2007/5.
9	UNIFIL should: (i) establish mechanisms to ensure that relevant information related to the check-out process is communicated to CITS for the de-provisioning of email accounts; (ii) institute controls to ensure compliance with the OICT messaging policy for email account retention and deletion; (iii) document and approve exceptions to the OICT policy of 90 day access for separated staff members; and (iv) conduct a comprehensive review of users separated since the completion of the	Important	Yes	N/A	Implemented	The recommendation has been implemented. With the implementation and launch of the FSS Check-In/Check-out (CICO) module in UNIFIL as of 1 July 2015, the following mechanisms have been put in place: (i) UNIFIL-ServiceDesk has been included in the CICO workflow and therefore, the relevant check-out information is communicated to CITS

Management Response

Audit of the migration of Lotus Notes applications and electronic mail system in the United Nations Interim Force in Lebanon

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
	Microsoft Exchange migration project and deactivate accounts where applicable.					<p>by automatic email alerts.</p> <p>(ii) UNIFIL-ServiceDesk will generate work orders assigned to the email administrators who will ensure compliance with the relevant policies.</p> <p>(iii) Exceptions requests and approvals are being collected for future reference.</p> <p>(iv) A comprehensive review of users separated since the completion of the Microsoft Exchange migration project was conducted and user accounts have been deactivated where applicable.</p>