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Internal Audit of LESS Functionalities and Application Controls

Office of the Inspector General
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WFP
World Food Programme

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Internal Audit of LESS functionality and application controls

I. Executive Summary

1. As part of its annual work plan, the Office of Internal Audit conducted an audit of the functionality and application controls of WFP's Logistics Execution Support System (LESS). The LESS application is WFP's tool for "real time management" of commodities in the supply chain, from the point of receipt through to the final delivery point, whether it be managed by cooperating partners or WFP distribution teams. The real-time nature of the system means that commodity supply chain transactions can be viewed when and where they take place. The system also provides information regarding the location, availability of commodities (including batch numbers), and details of all planned arrivals and dispatches. LESS integrates logistics with associated functions in procurement, finance, pipeline management and programme.

2. The audit scope included a review of the alignment of user needs to available functionalities in LESS; the application's level of automation; an analysis of the data management and quality controls within LESS to facilitate performance assessment, reporting and integration with other systems; and a review of the IT general and application controls in LESS to determine whether they were designed and operating effectively. A sample of five country offices were selected to evaluate the adequacy, efficiency and effectiveness of LESS in providing technological support and information across WFP's supply chain in the field. The audit focused on the period from 1 October 2019 to 30 September 2020. The audit team, with the assistance of external consultants, conducted the fieldwork from 16 November to 4 December 2020 at WFP headquarters in Rome. The audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing*.

Audit conclusions and key results

3. Based on the results of the audit, the Office of Internal Audit has come to an overall conclusion of **partially satisfactory / some improvement needed.** The assessed governance arrangements, risk management and controls were generally established and functioning well but needed improvement to provide reasonable assurance that the objective of the audited entity/area should be achieved. Issue(s) identified were unlikely to significantly affect the achievement of the objectives of the audited entity/area. Management action is recommended to ensure that identified risks are adequately mitigated.

4. The Supply Chain Division has made significant efforts to address the different commodity accounting scenarios emerging from WFP's unique and diverse operational contexts, standardizing all commodity management processes in LESS. This has brought a consistent and disciplined approach to commodity accounting, allowing for a tighter span of control by management, increased data quality, and improved visibility and reporting of commodities in WFP's custody. Moreover, the Supply Chain Division has pioneered data analytics and reporting advancements in DOTS, WFP's data analysis and visualization tool, and leveraged standard features and customized functionalities in SAP, to provide a robust and coherent system for commodity information management.

5. System functionality gaps identified in the audit were known. They were addressed in country offices through shadow information technology initiatives and/or manual work arounds that compromised the efficiency of commodity information flows and corporately defined internal controls, while introducing new IT vulnerabilities. The Office of Internal Audit noted a comprehensive review of commodity management business processes was last carried out in 2015, just before LESS was implemented. Since then business processes and user needs have continued to evolve, changes which WFP needs to assess and address with another thorough review of LESS capabilities against user needs and system functionality gaps. Such a review could identify opportunities to automate existing manual processes, further increasing the efficiency and reliability of commodity information management workflows.

6. The backlog of documents to be processed continues to limit the reliance that management can place in the commodity figures reported by LESS. The Supply Chain Division launched in 2018 the Last Mile application to

enable real time recording of goods receipt at the Final Delivery Point. Countries piloting this tool have seen the average delay in the entry of goods receipts reduce from 26 to 4 days. However, funding constraints and competing priorities at the CO level led to a low uptake of this tool, with only 19 field operations adopting the solution to date. A clearer mandate and corporate funding support are needed to increase the adoption of this tool, which seems to generate time and staff cost savings that would offset the roll-out investment.

7. There is a direct correlation between high data quality and availability and the business value LESS can provide to its users. In this regard the Supply Chain Division has taken a proactive approach by monitoring and carrying out regular missions to country offices that are facing LESS data quality issues. The audit identified additional measures that could strengthen and formalize the validation and certification of LESS data, and related reporting and data visualization platforms. Furthermore, LESS users interviewed for the audit did highlight the need to augment the available commodity tracking views in LESS, and other complementary platforms, to include more exception reports, extend the processes they cover, and make them more user friendly.

8. Whilst the quality of the LESS data tested by the auditors resulted in a low rate of detectable errors, further opportunities were identified to strengthen the existing automated application controls to minimize further data quality issues and to ensure only authorized, complete and accurate data is entered and processed in LESS.

9. The governance and system change management processes for LESS requires updating. The position of the LESS Enhancement and Support Teams has undergone several changes over the years due to frequent changes to the Supply Chain organization chart. Today, the LESS Enhancement Team has a dual reporting line to the Supply Chain's Business Support Team and the Logistics and Field Support Unit, separate from the business owning the process that the application supports. This creates a risk that system changes and resource utilization decisions may be made by the LESS Enhancement Team as opposed to the business. Whilst the audit did not detect any issues associated with the release of changes and enhancement features to LESS, it was noted that changes had been completed without documented business user requests, approval from the business or acceptance testing. Best practices suggest system enhancements and changes developed without business knowledge/approval can lead to significant risks. These findings point to the need for a comprehensive review of the governance and management of system changes, and formalized policies and procedures to govern changes to LESS.

Actions agreed

10. The audit report contains one high and four medium priority observations. The Supply Chain Division will be the primary lead for implementation of the agreed actions. Management has agreed to address the reported observations and work to implement the agreed actions by their respective due dates.

11. The Office of Internal Audit would like to thank managers and staff for their assistance and cooperation during the audit.

Kiko Harvey
Inspector General

II. Context and Scope

The Logistics Execution Support System (LESS)

12. LESS was originally part of the corporate WINGSII project in 2009. Its implementation was postponed for an independent rollout at a later stage in order to meet the project deadlines. A previously developed in-house application (Commodity Movement, Processing and Analysis System - COMPAS) provided an interim commodity management solution. In 2011, testing of the LESS solution started in Liberia and Sierra Leone and a conclusive evaluation of this phase recommended the progressive roll out of LESS globally.

13. In the second half of 2012, a comprehensive business case and plan was developed for the rollout of LESS. Several benefits were anticipated from the adoption of LESS including: enhanced strategic comparative advantages in the humanitarian sphere; greater operational efficiencies by reducing commodity losses through more precise tracking and distribution planning; and decommissioning of COMPAS, which was prone to error and risk due to limited integration possibilities and progressively outdated technology.

14. In May 2013, a project steering committee was setup and in August 2013 the Executive Director (ED) approved implementation of LESS in all WFP Country Offices (COs).[1] Rollout of LESS started in November 2014 and was completed in October 2016. To date, all WFP CO operations manage their food commodity information needs using LESS.

Governance and organizational set up

15. Today, the Supply Chain (SCO) Division sets the strategic direction for LESS to further the development and support to LESS users, and to enable the efficient tracking of, and accountability for, WFP commodities. In particular, the Logistics and Field Support Unit (SCOL) through the Logistics Data, Budgets and Systems Execution Unit (DBASE) oversees the LESS platform, commodity accounting policy and support, provides system support to COs, manages master data, certifies data, and develops reporting dashboards that track key performance indicators (KPIs). DBASE also works in collaboration with the Supply Chain Business Unit (SCOB) to identify end user's needs and implement enhancements to LESS.

16. LESS is a component of the WINGS Enterprise Resource Planning (ERP), therefore it also complies with all corporately defined WINGS procedures and policies. The Technology Division (TEC) is the general custodian of WINGS, and facilitates the development of required system changes and functionalities, carrying out maintenance and providing fixes to system issues. TEC also carries out all user access support, network connectivity and IT security administration. LESS is considered one of WFP's crown jewel applications with corresponding high availability requirements.

Objective and scope of the audit

17. The overall objective of this audit was to provide assurance on the adequacy, efficiency and effectiveness of LESS in providing technological support and information across WFP's supply chain. Such audits are part of the process of providing an annual and overall assurance statement to the ED on governance, risk-management and internal control processes.

18. The audit examined the alignment of user needs to the available functionalities in LESS to determine whether they were adequate and met the evolving needs of the user. The audit also reviewed the level of automation within the system to identify opportunities to further automate existing commodity information management processes and achieve greater efficiencies.

19. A vast quantity of data is generated by LESS, which is used for monitoring and decision-making purposes. Data management, quality controls and mechanisms within LESS, as well as reporting and integration of the application with other systems, were analysed to determine if they were functioning as required to facilitate

[1] OED Log 1680 – Implementation of LESS in WFP.

performance and risk management. Finally, the audit, reviewed the IT general and application controls in LESS to determine whether they were designed and operating effectively to mitigate potential risks that could hinder business operations. SCO, TEC, and five sample COs (Chad, Libya, Syria, Tanzania and Uganda) were consulted during the audit.

20. Based on the engagement specific risk assessment, the audit scope covered the following three lines of enquiry:

Line of enquiry 1: Is LESS aligned to the evolving business and user needs and to what extent has automation of offline and manual processes been achieved?

Line of enquiry 2: Are data quality controls and mechanisms in place? How is LESS data managed to facilitate performance assessment, reporting and integration with other WFP systems?

Line of enquiry 3: Are LESS IT general and automated application controls properly designed and operating effectively to mitigate potential risks?

21. The audit was carried out in conformance with the *Institute of Internal Auditors' International Standards for the Professional Practice of Internal Auditing*. It was completed according to an approved engagement plan and took into consideration the risk assessment exercise carried out prior to the audit.

22. The scope of the audit covered the period from 1 October 2019 to 30 September 2020. Where necessary, transactions and events pertaining to other periods were reviewed. The audit field work took place from 16 November to 04 December 2020 at WFP headquarters in Rome.

III. Results of the Audit

Audit work and conclusions

23. The audit work was tailored to the LESS application, WFP's commodity management process and the organization's different operating contexts, taking into account the various WFP divisions' risk registers; findings of WFP's second line of defence functions; as well as the independent audit risk assessment.

24. Based on the results of the audit, the Office of Internal Audit (OIGA) has come to an overall conclusion of **partially satisfactory/some improvement needed**.[2] The assessed governance arrangements, risk management and controls were generally established and functioning but needed improvement to provide reasonable assurance that the objective of the audited entity/area should be achieved. Issue(s) identified were unlikely to significantly affect the achievement of the objectives of the audited entity/area. Management action is recommended to ensure that identified risks are adequately mitigated.

Observations and actions agreed

25. Table 1 outlines the extent to which audit work resulted in observations and agreed actions. These are classified according to the lines of enquiry established for the audit and are rated as medium or high priority; observations that resulted in low priority actions are not included in this report.

Table 1: Overview of lines of enquiry, observations and priority of agreed actions	**Priority of issues/agreed actions**
Line of enquiry 1: Is LESS aligned to the evolving business and user needs and to what extent has automation of offline and manual processes been achieved?	
1. LESS functionality alignment to business needs	*High*
2. Automation and digitization of manual processes	*Medium*
3. The Last Mile Mobile application	*Medium*
Line of enquiry 2: Are data quality controls and mechanisms in place? How is LESS data managed to facilitate performance assessment, reporting and integration with other WFP systems?	
4. Data quality controls, reporting capabilities and monitoring	*Medium*
Line of enquiry 3: Are LESS IT general and automated application controls designed appropriately and operating effectively to mitigate potential risks?	
5. IT general and application controls	*Medium*

26. The five observations of this audit are presented in detail below.

27. Management has agreed to take measures to address the reported observations.[3] An overview of the actions to be tracked by internal audit for implementation, their due dates and their categorization by WFP's risk and control frameworks can be found in Annex A.

[2] See Annex B for definitions of audit terms.
[3] Implementation will be verified through the Office of Internal Audit's standard system for monitoring agreed actions.

A: Line of Enquiry 1 - Is LESS aligned to the evolving business and user needs and to what extent has automation of offline and manual processes been achieved?

28. Different commodity management scenarios, including in-country versus corridor landside transport, bulk commodities versus pre-packaged food parcels, air transport and others, call for different system functionalities.

29. The audit reviewed LESS functionalities and consulted with end users at the CO-level to determine whether LESS met their requirements as users and was fit to respond to different operational contexts. In addition, the audit reviewed manual and offline work arounds to identify opportunities to further automate process workflows, digitize manual processes and fill functionality gaps. The rollout of the Last Mile project was also assessed to determine whether it was effectively meeting its objectives of tracking commodities up to their handover to cooperating partners (CPs), and to assess the status of commodity tracking downstream from CPs' Final Delivery Points (FDPs).

30. Currently, commodities are not tracked by Supply Chain after they are handed over to CPs, at which point Programme takes over the tracing and accounting for commodities with CPs, resulting in limited visibility and impairing WFP's ability to monitor the proper use and state of these commodities. At the time of the audit, SCO was conceptualizing the *Traceability Project,* spearheaded by SCOL, to address the lack of visibility of commodities in the custody of CPs, up to the final recipient of assistance, whilst recommending appropriate technology solutions.

Observation 1: LESS functionality alignment to business needs

31. The audit reviewed the use of the LESS application in commodity management, identifying the following opportunities to further augment its functionalities, strengthen control over the end-to-end process and generate efficiencies.

32. **Commodity tracking downstream from CPs' FDPs:** LESS does not track commodities after delivery to the CPs' FDPs. This limits WFP's visibility of commodities in the custody of CPs, and the organization's ability to effectively and accurately carry out distribution planning, trace commodities, monitor food quality and safety, and address issues of accountability for commodities under the custody of CPs. The absence of commodity tracking capabilities down to CPs increases the risk of undetected food diversion and commodity losses and impairs WFP's ability to manage food safety and quality issues and potential commodity recalls.

33. The audit noted that some COs have taken a proactive approach and developed interim in-house solutions and manual workarounds to meet this functionality gap. However, this has introduced risks to the data and integrity of information produced by these systems, as well as inefficiencies due to lack of integration/automation. At the time of the audit, SCOL had initiated the *Traceability Project* to explore the possibility of addressing this functionality gap.

34. **Integration with other WFP systems:** LESS is not integrated with other core systems such as COMET. Manual reconciliation, which is prone to errors and inefficiencies, has to be carried out to track delivery of commodities from WFP to CPs, and from CPs to beneficiaries. Documents related to CP delivery generated in COMET, such as Food Release Notes and Distribution Plans, were not automatically transferred to LESS allocation plans, increasing the risk of end computer errors and duplication of processes. To mitigate the lack of integration between LESS and COMET, SCOL was developing post factum reconciliations through DOTS.

35. **Offline functionality:** LESS does not have an offline functionality to enable commodity management processes and operations in places where connectivity is weak or inexistent. This has led to commodity processing backlog issues and offline tracking in some operations.

36. **Access for Third Parties***:* Third-party access to LESS remains a challenge. Partners and commercial service providers usually maintain parallel systems to LESS where they are required to manage processes such as the receipt of commodities and warehousing. Therefore, data has to be manually transferred from partners' systems

to LESS. In some instances, transfer of this data is either delayed or not carried out, impairing WFP's visibility of commodities in the supply chain pipeline.

37. **Warehouse Capacity Management:** LESS has some warehousing capabilities configured to support business operations. However, these capabilities were not actively explored and leveraged in 2014 due to funding and timing issues resulting in COs with significant information management needs maintaining parallel systems and using work arounds, such as excel spreadsheets, to compensate for these deficiencies.

38. **Quantity and Quality checks of received commodities:** Quality and Quantity checks for received commodities are currently carried out and maintained offline. An opportunity exists to add this functionality to LESS to extend visibility and reliability over this process.

Underlying cause(s): No comprehensive review of business processes to identify gaps subsequent to the implementation of LESS in 2015; rigidity and complexity of SAP making it hard to customize LESS to WFP's operational contexts; ad hoc enhancements without in-depth process reviews.

Agreed Actions [High priority]

SCOL will:

(a) Carry out a comprehensive business process and user needs review, to identify LESS functionality gaps and implement changes to address these gaps; minimize the need for shadow IT systems and manual workarounds; extend LESS capabilities to third parties; and explore the possibility of offline functionality to address backlog issues in COs;
(b) Allocate resources to the *Traceability Project* in order to address the functionality gap regarding commodity tracking downstream from CPs' FDPs;
(c) In collaboration with Programme, analyse opportunities for further integration between LESS and COMET, and plan actions that will extend commodity tracking capabilities after delivery to the CP, complementing and linking to the *Traceability Project*.

Timeline for implementation

30 June 2022

Observation 2 : Automation and digitization of manual processes

39. The audit reviewed the use of the LESS application for commodity information management, identifying the following opportunities to further automate manual and offline activities.

40. **Dispatch prioritization:** Currently, dispatch prioritization for commodities leaving the warehouse is conducted manually by the logistics assistant. The process could be automated based on system defined logic and criteria aligned to guidelines for First Expiry First Out, with due consideration of programming and FRN issuance processes. Furthermore, the management of handover/dispatch to CPs could be improved by an automated functionality in LESS that checks and suggest the choice of a specific batch for dispatch predefined according to criteria, such as donor requirements or batches related to specific grants that are linked to specific projects. OIGA noted that SCOL was already providing assistance to COs in DOTS in the absence of automated reporting solutions for decision making.

41. **Automated linking of LESS documents:** During the creation of different commodity accounting documents in the system, data is copied manually from different documents and reports that already exist in LESS and WINGS. For example, when creating a new inbound delivery (in most cases automatically generated by LESS), the logistics assistant in some instances (e.g. when there is a missing container) has to manually copy data elements that

already exist in the Stock Transport Order in LESS. Opportunities exist to link different LESS documents to enable automated inheritance/ population of relevant data during document creation to reduce data entry errors.

42. **Physical inventory compliance checks:** LESS is not configured to flag non-compliance with monthly physical inventory checks at warehouses. This process is currently conducted manually; however, with this key control the process could be automated to increase the level of compliance by field personnel.

Underlying cause(s): No comprehensive review of business processes to identify opportunities for automation and digitization; rigidity and complexity of SAP making it difficult to customize LESS to WFP's operational contexts.

Agreed Actions [Medium priority]

SCOL will carry out a comprehensive review of LESS to identify opportunities to automate and digitize manual processes and will develop a plan to implement system changes designed to systematically address the opportunities identified in this report.

Timeline for implementation

30 June 2022

Observation 3: The Last Mile Mobile Application

43. In 2018, the Supply Chain Division launched the Last Mile mobile application project to augment LESS capabilities for real time recording of goods receipt at the FDPs, whether managed by CPs or WFP. While the aim of the solution is to reduce delayed entry of goods receipts by digitizing waybills, the audit noted organisational misconceptions that the solution would fill the gaps in LESS relating to commodity tracking downstream from CPs' FDPs.

44. In 2019, the Supply Chain Director sent a memorandum[4] authorizing the use of the Last Mile application yet leaving its adoption to the discretion of the COs, despite clear noted benefits.[5] The uptake of the solution has been slow, with only 19 WFP COs having adopted the solution at the time of the audit. Further, for some of the COs where the solution has been implemented utilization by the CPs remains low.[6]

45. The audit also noted that LESS had yet to fully digitize the waybill process. At the time of the audit, manual paper waybills were still utilized, resulting in paper-heavy and intensive document handling and data entry processes, resulting in backlogs and delays in data entry. The introduction of electronic waybills would reduce data entry backlog and enhance real-time commodity tracking. The implementation of electronic waybills together with the Last Mile application, would speed up the process of confirmation of receipt of commodities. When a CP confirms receipt using the Last Mile application or electronic waybills, goods receipt notes could automatically be generated and parked in LESS, ready to be posted upon completion of the standard delivery confirmation checks.

Underlying cause(s): Need for clearer mandate to ensure roll out to COs globally; infrastructure challenges including connectivity affecting operation of the application; funding issues at the CO level for implementation of the application due to competing priorities, staffing and CP capacity gaps.

[4] Global Implementation of LESS "last mile" solution for WFP offices – 28 February 2019.

[5] Last Mile application has significantly reduced the delayed entry of good receipts in piloted countries from 26 days to 4 days. Source: Last mile solution 2019 update.

[6] DOTS statistics on coverage of the last mile solution.

Agreed Actions [Medium priority]

SCOL will:

(a) Re-evaluate the discretionary nature of the Last Mile application and explore the feasibility and funding mechanisms to roll it out to all COs.

(b) In collaboration with COs, provide additional training of CP staff, and their designated alternates, to address capability gaps and ensure consistent use of the LESS Last Mile solution.

(c) Explore opportunities to extend the capabilities of the Last Mile application, and the LESS application in general, to facilitate new technology advancements such as electronic waybills that would bring added value to business operations.

Timeline for implementation

31 December 2021

B: Line of Enquiry 2 - Are data quality controls and mechanisms in place and how is LESS data managed to facilitate performance assessment, reporting and integration with other WFP systems?

46. WFP's supply chain comprises an estimated 700 storage locations, including 450 warehouses directly managed by WFP, to deliver food to nearly 7,000 FDPs, using more than 5,000 trucks every day.[7] Globally, a diverse network of staff supports the tracking of commodities, capturing and generating a vast quantity of data. LESS has digitized the commodity accounting process and centralized all data. However, the effectiveness of the LESS application is highly dependent on the availability and quality of commodity accounting data. Commodity data directly and indirectly serves the information needs of multiple audiences including Programme, Finance and Resource Management staff.

47. SCOL has proactively managed data quality issues in LESS by carrying out regular missions to COs to address data quality issues. SCO has pioneered the adoption of DOTS, advancing CO users' ability to extract, analyse and visualize data whether it be in DOTS or other platforms such as InfoHub. Moreover, SCOL is in the final phases of implementation of the Supply Chain KPI project, making KPI reporting and analysis platforms (InfoHub and DOTs) accessible to all WFP staff.

48. SCOL has made efforts to improve data quality through the rollout of monitoring dashboards and the KPI project. Tests carried out by OIGA did not reveal systemic data quality issues: error rates were below 1 percent of the total population of transactions and records tested. Anomalies were detected in batch numbers processing, management of losses, stock reports and commodity document postings. The audit noted that these issues could be easily addressed by strengthening application controls, requiring minimal efforts and time, as highlighted under observation 5 of this report.

49. The audit tested the existing commodity accounting data management controls; assessed the level of data quality and integration with other systems; analysed the reporting capabilities available in LESS; and reviewed the process of monitoring defined in the Supply Chain KPIs.

Observation 4: Data quality controls, reporting capabilities and monitoring

50. The following opportunities were noted to further strengthen the data validation and certification activities and the reporting tools in place for LESS.

51. **Data Validation and Certification:** The LESS team carries out ad hoc data validation and certification support for COs. Best practices dictate that there should be a formally documented policy/procedure to govern all data validation and certification activities. At the time of the audit, SCOL had not defined a framework or procedures. There is an opportunity to define and roll out data validation and certification procedures to COs to standardize data quality processes and checks.

52. **Reporting Capabilities:** The commodity tracking view in LESS did not allow CO users to easily obtain the information required for end to end commodity tracking. As a result, COs developed their own processes by joining multiple LESS reports and data sets together manually, leading to errors in analysis, and inconsistent reporting across operations. The audit also noted opportunities to implement more exception reporting and dashboards, tailored to CO needs, including reports flagging document date exceptions, food safety and quality issues among others.

53. It should be noted that at the time of the audit TEC was in the process of finalizing a Master Data and Open Data strategy to provide direction and support to decision making on reporting and information platforms. OIGA noted that SCOL was providing interim reporting support to COs through DOTS.

[7] Source: WFP Logistics fact sheet.

Underlying cause(s): Lack of a formalized data validation and certification process both corporately and in SCOL; rigidity and complexity of SAP making it difficult to customize LESS to meet WFP's data and reporting needs; gaps in LESS application controls; need for periodic and targeted training of users on LESS, data analysis and reporting platforms; and differences in methodology used to interpret reporting objectives.

Agreed Actions [Medium priority]

SCOL will:

(a) Define, formalize and document procedures to govern the data certification and validation process for commodity management data in LESS, DOTs and other systems and subsequently roll it out to COs.

(b) Identify opportunities to implementing user-friendly, end-to-end, commodity tracking reports using the available platforms, and in conformance with WFP's Master Data and Open Data Strategies; increase the frequency of targeted training activities directed at key users of LESS, data supply chain analytics and reporting platforms.

(c) Through a process of consultation with end-users, identify COs' common needs for exception reporting and dashboard, including those that address data quality checks and operational exception flagging.

Timeline for implementation

31 December 2021

C: Line of Enquiry 3 - Are LESS IT general and automated application controls designed appropriately and operating effectively to mitigate all potential risks?

54. In order to ensure adequate protection and efficient operation of computer systems, best practice recommends that a well-designed and articulated combination of IT general and application controls should be in place. IT general controls govern the design, security, and use of computer systems and include software controls, physical hardware controls, computer operations controls, data security controls, controls over the systems implementation process, and administrative controls. Application controls are specific inbuilt system safeguards unique to each computer system that ensure only authorized data are completely and accurately processed and include input, processing, and output controls.

55. LESS relies on both inbuilt SAP and WFP customized application controls. The audit reviewed the key application controls that facilitate commodity management at the key phases of receipt, transport, storage, handling and delivery. With regards to IT general controls, the audit reviewed the system change management process and segregation of duties in LESS. Due to limitations in OIGA's ability to travel to field locations, exceptions noted through testing were not tested further or followed up with COs. The detail exception results were provided to Supply Chain for subsequent follow up.

Observation 5: IT General and Application Controls

56. The audit assessed the LESS IT general and application controls in place and noted opportunities to address the following gaps.

57. **Batch Numbers:** LESS automatically generates a batch number when commodities are received. However, there are no application controls in place to ensure standardization of length and characters, or to block manual input of batch numbers. For commodities returned by the CPs, application controls have not been implemented to ensure linkage to the original batch numbers in the Goods Issue. Data inconsistencies, including non-numeric batch numbers, batch numbers of varying lengths and duplicate batch numbers, were noted as a result.

58. **Management of commodities that are Unfit for Human Consumption (UHC):** LESS does not block the dispatch of commodities that have been deemed UHC in the system. Controls were also absent to check the Best Before Date (BBD) against the commodity type, and the shelf life defined at the master data level, to automatically block entries of BBDs beyond the defined shelf life of the commodities.

59. System checks were needed to ensure that during the process of converting commodities to the UHC status, all converted batch numbers started with ''U'' in order to appear in the UHC Losses report. Opportunities exist to automate the process of generation of batch numbers for UHC commodities and prevent the inadvertent distribution of UHC commodities.

60. **Document Dates in LESS:** Logical checks on key document dates in the commodity management process have only been implemented for waybills and outbound deliveries. Logical checks for dates of other document types such as the Goods Receipt Notes, Dispatch notes etc. are yet to be implemented, posing a risk of data integrity issues. The audit noted data inconsistencies including commodities with delivery dates before the dispatch date, and losses posted with dates that occur before the document date.

61. **Certification of Losses:** There is no defined loss certification workflow in LESS. This is needed to speed up the process and ensure there is an electronic record of the processes whereby commodity losses entered by logistics personnel are reviewed and approved. OIGA recently reported long-outstanding issues regarding food loss data quality and reporting in LESS and has issues recommendation that are in the process of being implemented.[8]

62. **Waybills with Quick Response (QR) Codes***:* At present, LESS has multiple waybill formats. For COs where the Last Mile application has been implemented there is no system check to ensure the waybill format is the same

[8] Internal Audit of WFP Non-Medical Insurance, Office of the Inspector General, Internal Audit Report AR/20/14, September 2020.

as that in the QR code, facilitating efficient utilization of the Last Mile application. There is an opportunity to standardize all waybills to one format with integrated QR codes to improve and facilitate the use of the Last Mile application.

63. **Allocation planning:** During commodity allocation and planning for dispatch, LESS was noted to have no automated warnings or controls to alert users that stocks were not available in the warehouse, potentially leading to the allocation of non-existent stock for dispatch.

64. **System Change Management**: There is no clearly defined process to approve and release LESS system changes, or formally established policies governing decisions on potential enhancements to LESS. Procedures need to be defined to cover aspects such as classification of changes; development and release approval processes; prioritization etc. For a sample of system changes the audit noted: business requirements that were missing or not updated; undocumented change request approvals; missing approvals from business to release changes into production; and missing user acceptance testing documentation. Best practices suggest that system change management processes should be clearly defined, effectively governed, classifies and prioritizes request for changes, establishes procedures for gathering requirements, and require approval and testing before the implementation of changes.

Underlying cause(s): No comprehensive review of business processes and workflows to identify automated control gaps subsequent to the implementation of LESS in 2015; rigidity and complexity of SAP making it difficult to customize LESS to WFP's operational contexts; and organizational changes within SCO during the life cycle of the system, reallocating and splitting ownership for LESS related processes, including the system enhancements.

Agreed Actions [Medium priority]

1. SCO will:

(a) Review the governance structure in place for the management of LESS system changes, and based on best practice guidelines and technical advice from corporate experts like Technology Governance (TECG), realigning practices to ensure appropriate governance principles and mechanisms are applied.

2. SCOL will:

(a) Carry out a comprehensive review of LESS to identify automated control gaps and implement robust application controls addressing the risks identified in this report, and subsequently to SCOL's review.

(b) Define, document and implement a change management process for LESS, including processes prioritize and authorize changes before their release into production, and carry out periodic oversight of system changes.

Timeline for implementation

1. 30 June 2021
2. 30 June 2022

Annex A – Summary of observations

The following tables shows the categorisation, ownership and due date agreed with the auditee for all the audit observations raised during the audit. This data is used for macro analysis of audit findings and monitoring the implementation of agreed actions.

High priority observations		Categories for aggregation and analysis: WFP's Internal Audit Universe	WFP's Governance, Risk & Control logic: Risks (ERM)	Processes (GRC)	Implementation lead	Due date(s)
1	LESS functionality alignment to business needs	Commodity management	Business process risks	Technology	SCOL	30 June 2022

Medium priority observations		Categories for aggregation and analysis: WFP's Internal Audit Universe	WFP's Governance, Risk & Control logic: Risks (ERM)	Processes (GRC)	Implementation lead	Due date(s)
2	Automation and digitization of manual processes	Commodity management	Business process risks	Technology	SCOL	30 June 2022
3	The Last Mile Mobile Application	Commodity management	Business process risks	Technology	SCOL	31 December 2021
4	Data quality controls, reporting capabilities and monitoring	Commodity management	Business process risks	Technology	SCOL	31 December 2021
5	IT general and application controls	Commodity management	IT & Communications risks	Technology	SCO SCOL	30 June 2021 30 June 2022

Annex B – Definitions of audit terms: ratings & priority

1 Rating system

The internal audit services of UNDP, UNFPA, UNICEF, UNOPS and WFP adopted harmonized audit rating definitions, as described below:

Table B.1: Rating system

Rating	Definition
Effective / satisfactory	The assessed governance arrangements, risk management and controls were adequately established and functioning well, to provide reasonable assurance that issues identified by the audit were unlikely to affect the achievement of the objectives of the audited entity/area.
Partially satisfactory / some improvement needed	The assessed governance arrangements, risk management and controls were generally established and functioning well but needed improvement to provide reasonable assurance that the objective of the audited entity/area should be achieved. Issue(s) identified by the audit were unlikely to significantly affect the achievement of the objectives of the audited entity/area. Management action is recommended to ensure that identified risks are adequately mitigated.
Partially satisfactory / major improvement needed	The assessed governance arrangements, risk management and controls were generally established and functioning, but need major improvement to provide reasonable assurance that the objectives of the audited entity/area should be achieved. Issues identified by the audit could negatively affect the achievement of the objectives of the audited entity/area. Prompt management action is required to ensure that identified risks are adequately mitigated.
Ineffective / unsatisfactory	The assessed governance arrangements, risk management and controls were not adequately established and not functioning well to provide reasonable assurance that the objectives of the audited entity/area should be achieved. Issues identified by the audit could seriously compromise the achievement of the objectives of the audited entity/area. Urgent management action is required to ensure that the identified risks are adequately mitigated.

2 Priority of agreed actions

Audit observations are categorized according to the priority of agreed actions, which serve as a guide to management in addressing the issues in a timely manner. The following categories of priorities are used:

Table B.2: Priority of agreed actions

High	Prompt action is required to ensure that WFP is not exposed to high/pervasive risks; failure to take action could result in critical or major consequences for the organization or for the audited entity.
Medium	Action is required to ensure that WFP is not exposed to significant risks; failure to take action could result in adverse consequences for the audited entity.
Low	Action is recommended and should result in more effective governance arrangements, risk management or controls, including better value for money.

Low priority recommendations, if any, are dealt with by the audit team directly with management. Therefore, low priority actions are not included in this report.

Typically audit observations can be viewed on two levels: (1) observations that are specific to an office, unit or division; and (2) observations that may relate to a broader policy, process or corporate decision and may have broad impact.[9]

[9] An audit observation of high risk to the audited entity may be of low risk to WFP as a whole; conversely, an observation of critical importance to WFP may have a low impact on a specific entity, but have a high impact globally.

To facilitate analysis and aggregation, observations are mapped to different categories:

3 Categorization by WFP's audit universe

WFP's audit universe[10] covers organizational entities and processes. Mapping audit observations to themes and process areas of WFP's audit universe helps prioritize thematic audits.

Table B.3: WFP's 2019 audit universe (themes and process areas)

A	Governance	Change, reform and innovation; Governance; Integrity and ethics; Legal support and advice; Management oversight; Performance management; Risk management; Strategic management and objective setting.
B	Delivery	(Agricultural) Market support; Analysis, assessment and monitoring activities; Asset creation and livelihood support; Climate and disaster risk reduction; Emergencies and transitions; Emergency preparedness and support response; Malnutrition prevention; Nutrition treatment; School meals; Service provision and platform activities; Social protection and safety nets; South-south and triangular cooperation; Technical assistance and country capacity strengthening services.
C	Resource Management	Asset management; Budget management; Contributions and donor funding management; Facilities management and services; Financial management; Fundraising strategy; Human resources management; Payroll management; Protocol management; Resources allocation and financing; Staff wellness; Travel management; Treasury management.
D	Support Functions	Beneficiary management; CBT; Commodity management; Common services; Constructions; Food quality and standards management; Insurance; Operational risk; Overseas and landside transport; Procurement – Food; Procurement - Goods and services; Security and continuation of operations; Shipping - sea transport; Warehouse management.
E	External Relations, Partnerships and Advocacy	Board and external relations management; Cluster management; Communications and advocacy; Host government relations; Inter-agency coordination; NGO partnerships; Private sector (donor) relations; Public sector (donor) relations.
F	ICT	Information technology governance and strategic planning; IT Enterprise Architecture; Selection/development and implementation of IT projects; Cybersecurity; Security administration/controls over core application systems; Network and communication infrastructures; Non-expendable ICT assets; IT support services; IT disaster recovery; Support for Business Continuity Management.
G	Cross-cutting	Activity/project management; Knowledge and information management; M&E framework; Gender, Protection, Environmental management.

4 Categorization by WFP's governance, risk & compliance (GRC) logic

As part of WFP's efforts to strengthen risk management and internal control, several corporate initiatives and investments are underway. In 2018, WFP updated it's Enterprise Risk Management Policy[11], and began preparations for the launch of a risk management system (Governance, Risk & Compliance – GRC – system solution).

As a means to facilitate the testing and roll-out of the GRC system, audit observations are mapped to the new risk and process categorisations as introduced[12] by the Chief Risk Officer to define and launch risk matrices, identify thresholds and parameters, and establish escalation/de-escalation protocols across business processes.

[10] A separately existing universe for information technology with 60 entities, processes and applications is currently under review, its content is summarised for categorisation purposes in section F of table B.3.
[11] WFP/EB.2/2018/5-C
[12] As per 1 January 2019, subsequent changes may not be reflected in 2019 audit reports.

Table B.4: WFP's new ERM Policy recognizes 4 risk categories and 15 risk types

1	Strategic	1.1 Programme risks, 1.2 External Relationship risks, 1.3 Contextual risks, 1.4 Business model risks
2	Operational	2.1 Beneficiary health, safety & security risks, 2.3 Partner & vendor risks, 2.3 Asset risks, 2.4 ICT failure/disruption/attack, 2.5 Business process risks, 2.6 Governance & oversight breakdown
3	Fiduciary	3.1 Employee health, safety & security risks, 3.2 Breach of obligations, 3.3 Fraud & corruption
4	Financial	4.1 Price volatility, 4.2 Adverse asset or investment outcomes

Table B.5: The GRC roll-out uses the following process categories to map risk and controls

1	Planning	Preparedness, Assessments, Interventions planning, Resource mobilisation and partnerships
2	Sourcing	Food, Non-food, Services
3	Logistics	Transportation, Warehousing
4	Delivery	Beneficiaries management, Partner management, Service provider management, Capacity strengthening, Service delivery, Engineering
5	Support	Finance, Technology, Administration, Human resources
6	Oversight	Risk management, Performance management, Evaluation, Audit and investigations

5 Monitoring the implementation of agreed actions

The Office of Internal Audit tracks all medium and high-risk observations. Implementation of agreed actions is verified through the Office of Internal Audit's system for the monitoring of the implementation of agreed actions. The purpose of this monitoring system is to ensure management actions are effectively implemented within the agreed timeframe to manage and mitigate the associated risks identified, thereby contributing to the improvement of WFP's operations.

OIGA monitors agreed action from the date of the issuance of the report with regular reporting to senior management, the Audit Committee and the Executive Board. Should action not be initiated within a reasonable timeframe, and in line with the due date as indicated by Management, OIGA will issue a memorandum to Management informing them of the unmitigated risk due to the absence of management action after review. The overdue management action will then be closed in the audit database and such closure confirmed to the entity in charge of the oversight.

When using this option, OIGA continues to ensure that the office in charge of the supervision of the Unit who owns the actions is informed. Transparency on accepting the risk is essential and the Risk Management Division is copied on such communication, with the right to comment and escalate should they consider the risk accepted is outside acceptable corporate levels. OIGA informs senior management, the Audit Committee and the Executive Board of actions closed without mitigating the risk on a regular basis.

Annex C – Acronyms

CO	Country Office
COMET	Country Office Monitoring and Evaluation Tool
CP	Cooperating Partner
DBASE	Logistics Data, Budgets and Systems Execution Unit
ERM	Enterprise Risk Management
FDP	Final Delivery Point
GRC	Governance, Risk and Control
KPI	Key Performance Indicator
LESS	Logistics Executions Support System
OIGA	Office of Internal Audit
QR	Quick Response
SCO	Supply Chain Division
SCOB	Supply Chain Business Unit
SCOL	Supply Chain Logistics Unit
TEC	Technology Division
UHC	Unfit for Human Consumption
WFP	World Food Programme