Internal Audit of Governance of IT-Enabled Projects in WFP

Office of the Inspector General
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Contents

Governance of Information Technology Enabled Projects in WFP

I. Executive Summary

1.   As part of its annual work plan, the Office of Internal Audit conducted an audit of the governance of information technology (IT) enabled projects within WFP that focused on the period 1 January 2016 to 31 March 2019. The audit team conducted the fieldwork from 10 June to 12 July at the WFP headquarters in Rome. A sample of six projects and initiatives was selected to confirm the functioning of WFP's various project governance mechanisms as applied to centralized IT projects, projects under the Technology Division's decentralized IT Framework (Freedom in a Framework), innovation projects, and projects initiated with no involvement of the Technology division (later referred to as *Shadow IT*). The audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing*.

2.   WFP's IT environment and enterprise architecture is large and complex, serving over 18,000 staff worldwide, and enabling the delivery of humanitarian assistance to over 91.4 million beneficiaries in 83 countries. Effective IT governance is fundamental to ensure that WFP's IT enabled projects and investments are robustly assessed, prioritized, aligned with WFP's objectives, and delivered in a cost-effective manner; and to monitor the performance and compliance of agreed-upon project direction, costs, and objectives.

3.   The Management Information Systems Steering Committee is responsible for setting the strategic direction of WFP's IT investments to enable the achievement of desired business outcomes. It comprises business, including Country Directors as a recent addition, and representatives from the Technology division. The division supports and enables the development of centralized solutions and sets the normative guidance for the development and acquisitions of IT in a decentralized manner by other entities within WFP. IT solutions are acquired and developed by various WFP divisions to serve the data and information needs of internal and external stakeholders, following either centralized or decentralized governance mechanisms.

Audit conclusions and key results

4.   Based on the results of the audit, the Office of Internal Audit has come to an overall conclusion of **partially satisfactory / major improvement needed**. The assessed governance arrangements, risk management and controls were generally established and functioning but needed major improvement to provide reasonable assurance that the objective 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.

5.   Over the past five years, WFP has improved the management of IT enabled investments through the establishment of the MISSC, an IT strategy and a defined IT portfolio management framework. More recently, the Technology division has increased its governance capabilities though:

- The appointment of Business Engagement Managers by the Technology division to support business units and field operations in understanding their technology and data needs and translating them into structured IT projects. The expected outcome is the creation of business technology roadmaps that link digital improvements to business objectives and strategies;

- A Demand Assessment Board was recently established in the Technology division to review and assess requests for IT solutions.

6.   Both technology roadmaps and the Demand Assessment Board are expected to be key drivers in the governance, management and prioritization of WFP's IT investment portfolio. These governance initiatives were ongoing at the time of the audit and the first road maps were presented to the MISSC at the end of November 2019.

7.   While these initiatives represent useful improvement to WFP's IT governance approach, the audit found that, given the decentralized nature of technology in WFP, investments in IT were not always prioritized or aligned with the organization's IT vision and strategic priorities. Elements expected of an IT corporate portfolio management were absent, including complete and accurate identification of information system resources required to support IT projects and initiatives, adequate project cost estimates, performance measurement frameworks, and risk management processes.

8.   Business partnership was still inconsistent. It is worth noting that WFP's Freedom In a Framework approach enables business units to initiate and self-manage IT enabled projects at their discretion and without the direct oversight of the Technology division. Whilst fulfilling the immediate needs of specific user groups, the audit noted that IT projects outside the Technology division could result in inefficient use of resources, poor project delivery and information security risks that potentially compromise the confidentiality, integrity and availability of WFP data. The Freedom In a Framework approach had not been formally approved, was not widely known or understood by business units, and was not accompanied by adequate mechanisms of accountability with business owners.

9.   There was no regular and consistent process to monitor the delivery of projects. Mechanisms were not present to alert the MISSC of deviations in costs, delivery times or functionality changes that could impact the successful completion of IT projects and initiatives. In addition, processes were not followed, and criteria not clearly defined, during the approval of IT investments over USD 150,000 by the MISSC. There was no established corporate governance mechanism in place to oversee the strategic direction of IT projects and initiatives below USD 150,000 (even when they exceeded the threshold over the project cycle) and to ensure these investments achieved the desired business outcomes. All projects reviewed by the audit were either abandoned, delivered late and/or above budget.

10. At the time of the audit an "IT value for money" approach had not been defined to allow for the effective management of resources and WFP's mission statement. There was no full visibility and monitoring of costs and spending on IT capital investment, including development and acquisition costs, as well as maintenance, support, and decommissioning costs, to confirm the cost effectiveness of IT solutions, including changes and later development from the initial project. For the IT projects audited, the total cost of ownership and other significant metrics such as potential risks and value realization gains were not comprehensively captured. Consequently, the MISSC was limited in its capacity to establish that resources allocated were in line with the strategic significance of these investments at the organizational level. As a result, WFP was not able to determine with a reliable degree of accuracy how much money was being spent on IT projects and initiatives, and whether these were effectively aligned to WFP's business strategy and priorities.

11. Finally, the audit noted that business units and project sponsors were not always held accountable in driving the projects towards timely, cost-efficient and successful realization of expected benefits. Better coordination was needed between TEC and business process owners to drive improvements in the governance of these projects.

Actions agreed

12.   The audit report contains four high and four medium priority observations. The Technology division will be the primary lead for the implementation of most agreed actions and will coordinate with the Management Information Systems Steering Committee as well as all relevant business process owners for the implementation of actions directed at the governance level. Management has agreed to address the reported observations and work to implement the agreed actions by their respective due dates.

13.   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

Information Technology Enabled Projects in WFP

14. WFP's information technology and communications (ICT) environment and its enterprise architecture is large and complex. In the period from 1 January 2016 to 30 May 2019 WFP's expenditures in ICT totalled USD 171.2 million, of which USD 110.8 million were spent by field operations. Over the same period a total of 467 assets were registered in WFP's corporate IT asset registry, consisting of both acquired or developed IT solutions in headquarters and field locations.

15. As a principle, and although WFP does not officially follow the COBIT framework, to effectively govern IT projects and initiatives "*stakeholders' needs, conditions and options [should be] evaluated to determine balanced, agreed-on enterprise objectives, direction [should be] set through prioritization and decision making, and performance and compliance [should be] monitored against agreed-on direction and objectives*"[1]. In this context, WFP's investments in IT-enabled projects are governed through several mechanisms and bodies.

16. The Management Information Systems Steering Committee (MISSC), and the Technology division (TEC), under the leadership of the Chief Information Officer, set the strategic direction of WFP's IT investments, to enable the achievement of strategic goals. In 2014, the MISSC advocated for the establishment of a specific IT governance structure to establish coherent priorities at an organisation-wide level, ensuring only projects of the highest interest in the IT portfolio be considered for implementation.

17. Further, some ICT-enabled projects developed by operations in the field and in headquarters did not fall under the oversight of the MISSC or were developed outside the visibility of TEC. WFP's Freedom in a Framework guidelines were planned to establish minimum principles for these non-TEC projects.

18. At the operational level, TEC's recently established Business Engagement Managers (BEMS) contribute to the execution and evolution of strategic and technical joint roadmaps for business units throughout the organization, supporting project owners and Managers of IT related projects. The Demand Assessment Board (DAB) was recently established within TEC to also assist with the review and prioritization of projects.

19. The Innovation and Knowledge Management Division (INK) plays a complementary role by identifying and facilitating the development and scale up of innovative solutions that support WFP's mission objectives, including technology driven innovations.

Objective and scope of the audit

20. The objective of the audit was to provide assurance on the presence, design and operating effectiveness of mechanisms to govern and manage IT-enabled projects in WFP. The audit scope included: (1) reviewing the overall project management framework at WFP and the different controls for managing projects at both division and project level; and (2) reviewing governance and compliance with procedures and guidelines on project management. The audit sample included projects falling under WFP's various governance framework: TEC, Non- TEC, INCA and shadow IT.

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

- Line of inquiry 1: Are WFP's strategy, policies, governance mechanism, organizational structures, and resourcing models present and facilitating the effective evaluation of IT-enabled projects across the organization?

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[1] 2019 COBIT framework for governance and management objectives, Information Systems Auditor and Control Association.

- Line of inquiry 2: Are governance and project management structures in place to prioritize investments, ensure risks are managed, and to monitor the achievement of IT-enabled project objectives and value for money from these investments?

- Line of inquiry 3: Are project management and planning processes, and controls and tools in place and operating effectively during the acquisition, development, delivery, and post-implementation of IT-enabled projects?

22. 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.

23. The scope of the audit covered the period 1 January 2016 to 31 March 2019. Where necessary, transactions and events pertaining to other periods were reviewed.

24. The audit fieldwork was carried out at WFP's headquarters in Rome and took place from 10 June to 12 July 2019. Additional information was obtained from selected Regional Bureaux (RBx), Country Offices (COs), WFP's Innovation Accelerator (INCA) and other relevant sources as needed.

III. Results of the Audit

Audit work and conclusions

25. The audit work was tailored to WFP's projects management context and the governance objectives set by the MISSC, 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.

26. Based on the results of the audit, the Office of Internal Audit has come to an overall conclusion of **partially satisfactory/major improvement needed**[2]. The assessed governance arrangements, risk management and controls were generally established and functioning but needed major improvement to provide reasonable assurance that the objective of the audited entity/area should be achieved. Issue(s) 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.

Gender Maturity

27. The Office of Internal Audit, in supporting WFP's management's efforts in the areas of gender, separately reports its assessments or gaps identified in both areas. This audit raised no gender related observations.

Assurance Statement

28. WFP uses first-line management certifications whereby all directors, including country and regional directors, must confirm through annual assurance statements whether the system of internal controls for the entity they are responsible for is operating effectively. At a consolidated level the assurance statements are intended to provide a transparent and accountable report on the effectiveness of WFP's internal controls. The audit reviewed the annual assurance statement for 2018 completed by the audited divisions and compared the assertions in the statement with the findings of the audit.

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[2] See Annex B for definitions of audit terms.

29. The review indicated that WFP divisions did not report any significant gaps in the design, implementation and operating effectiveness of internal controls. In general, the findings of the audit did not highlight any material deviation from management's assertions in the assurance statement.

Observations and agreed actions

30. 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 inquiry 1: Are WFP's strategy, policies, governance mechanism, organizational structures, and resourcing models present and facilitating the effective evaluation of IT-enabled projects across the organization?	
1. IT enabled projects alignment with WFP business objectives and governance architecture	*High*
2. Governance of innovation projects under WFP's Innovation Accelerator	*Medium*
3. IT projects portfolio management	*High*
Line of inquiry 2: Are governance and project management structures in place to prioritize investments, ensure risks are managed, and to monitor the achievement of project objectives and value for money from these investments?	
4. Monitoring and oversight of projects by the MISSC	*High*
5. IT projects' value for money framework	*High*
Line of inquiry 3: Are project management and planning processes, and controls and tools in place and operating effectively during the acquisition, development, delivery, and post-implementation of IT-enabled projects?	
6. Project management framework	*Medium*
7. Stakeholders engagement and users' management	*Medium*
8. Application management	*Medium*

31. The eight observations of this audit are presented in detail below.

32. 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.

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[3] Implementation will be verified through the Office of Internal Audit's standard system for monitoring agreed actions.

A: Line of inquiry 1 - Are WFP's strategy, policies, governance mechanism, organizational structures, and resourcing models present and facilitating the effective evaluation of IT-enabled projects across the organization?

33. According to the Information Security Audit Control Association (ISACA), alignment between business and IT means that the vision and objectives of both are understood, are aligned with each other, and with the strategy of the organization. All projects should be interdependent with the various levels and functions of the organization. Project Governance ensures the organization invests in the right projects, controls the project portfolio, establishes priorities, correctly assigns authority, and has appropriate decision-making processes in place.

34. The audit reviewed WFP's corporate IT project governance and management policies and guidelines including: IT projects prioritization and alignment with corporate and business strategies; existence and operational effectiveness of current WFP policies, guidelines and tools; roles and responsibilities of stakeholders involved in project management; and support and oversight mechanisms by the MISSC.

35. At the time of the audit TEC's IT governance team was working to establish a project management framework, and to enhance decision making processes and information reporting.

> **Observation 1: IT-enabled project alignment with WFP business objectives and governance architecture**

36. The MISSC and TEC have developed an IT vision and strategic priorities to guide IT planning efforts. In view of the decentralized structure of IT enabled projects, the audit found that the investments in corporate wide IT projects and initiatives were not always assessed and prioritized to ensure IT initiative and resources were aligned with WFP's strategic goals.

37. The following issues were identified as part of the review of the IT projects' strategic alignment:

38. *Corporate IT strategy 2016-2020* - WFP's 2016-2020 IT Strategy had not been reviewed since its inception, to assess the continued relevance of strategic goals, reconfirm business priorities, and identify gaps or lessons learnt to inform the remaining implementation period. Initiatives to monitor the alignment of the strategy with corporate goals were yet to be implemented, including tools to monitor projects performance, benefits realized, benefits delivered, and a value for money (VfM) framework.

39. *IT-enabled project governance mechanisms and articulation between the business and TEC* – the governance process to translate critical corporate objectives and initiatives into prioritized project portfolios was not effectively implemented at the time of the audit. Following WFP's decentralized model, IT projects and initiatives were initiated by business functions and field entities without robust and structured corporate scrutiny or guidance from the MISSC or other coordination committees such as the DAB, created by TEC as an internal governance body to make recommendation on proposed projects. The DAB was composed solely of TEC staff and its recommendations to the business units were non-binding. Therefore, nothing prevented these business units from pursuing their IT project proposals, by-passing controls designed to ensure good governance or establish minimum security. Other initiatives were taken to reinforce coordination with the business including the creation of the BEM roles and joint development of roadmaps with WFP's business units.

40. *Criteria for decisions by the MISSC and IT investment strategy* – Approved metrics such as cost benefit analyses, funding projections, return on investment indicators, and potential for scalability were not consistently used by the MISSC to ensure efforts were directed towards high-value projects. WFP's IT Applications Management Policy defined some criteria for the selection of IT projects, however, these criteria were not consistently applied by the MISSC or the DAB. The lack of a disciplined application of WFP's decision-making criteria resulted in various IT projects being approved and scattered implementation without scale up, with significant cost and time overruns, and low perceived end-user value and adoption.

41. In May 2015, the MISSC recognized and acknowledged the need to align the review of investment cases with the Strategic Resources Allocation Committee (SRAC). At the time of the audit, this alignment was not enforced: in some cases, the MISSC discussed the relevance of projects and initiatives when funding for these projects had already been approved by the SRAC, with bearing on the project. It is worth noting that SRAC members are also members of the MISSC. Decisions by either committee could be interpreted as *de facto* final funding decisions, lessening the effectiveness of the governance process if not coordinated and aligned.

42. The conclusions of this audit are aligned with OIGA's advisory assignment *AA/19/01 on WFP Corporate Resource Allocation,* issued in June 2019, which highlighted the lack of prioritization and allocation methodology as applied by the SRAC. Initiatives and high-level budgets were agreed by the SRAC prior to the development of detailed investment cases. No processes were in place for the SRAC to ascertain whether allocated resources were used for their intended purpose or outputs achieved through follow-up or monitoring.

43. Corporate guidelines remain unclear on whether IT initiatives with their own secured funding should be presented to the MISSC. Projects initiated with a budget below USD 150,000 regularly exceeded this threshold at later stages of their development (by as much as 100 percent), without being reported to the MISSC for re-evaluation of their strategic alignment or relevance of the investment over the USD 150,000 ceiling.

44. *Mandate and terms of reference* of the DAB - The mandate of the DAB was not clearly defined, and the terms of reference did not outline key functions, delegation of authority, composition, and procedures. The DAB was only composed of TEC personnel with no representation of key business stakeholders. Criteria for the prioritization and approval of projects by the DAB was not clearly defined nor informed by WFP's operational priorities. A review of decisions made by the DAB did not show a clearly documented linkage to business priorities or WFP's strategic objectives. The audit also noted that decisions of the DAB were non-binding. Business units could go ahead with projects even when these were rejected by the DAB, increasing the number of non-TEC IT functions and projects. Consequently, the DAB focused on the prioritization of IT resources rather than setting the strategic direction of IT investments.

45. *Sample projects review:* None of the six sample projects reviewed had undergone a proper prioritization process. Prioritization mechanisms were not efficiently used to provide confidence over the correct allocation of resources. Formal criteria and procedures did not exist to indicate when and how to suspend an IT project, leading to several projects not meeting their expected results and yet not discontinued.

46. Business units and project sponsors were not always held accountable for driving the projects towards timely, cost-efficient and successful realization of expected benefits. For the six projects selected, the audit observed regular cost overruns in one case of a supply chain project increasing from USD 70,000 to USD 250,000, (excluding staff costs) and late delivery timelines (as much as 4 years late). More importantly, several projects were never adopted by operations in the field, to the detriment of the organization.

Underlying cause(s): IT projects governance models remain functionally ineffective to structure prioritization of efforts, guide investment decisions and discipline implementation of projects in a cost effective manner. There was no effective criteria for IT project approval to address the needs of decision-making bodies. Funding models for the successful implementation of WFP's IT strategy do not provide predictable funding and mechanisms to align resources to priorities. Organization-wide enterprise and architecture standards have not been developed and defined. Lack of a coordinated approach to prioritization and management of IT resources and projects. Lack of accountability by the business divisions and projects' sponsors.

Agreed Actions [High priority]

1) The MISSC, with the assistance of TEC, will initiate a review of the MISSC directive OED2014/004 and related guidance including:

(a) Clarify existing governance roles and responsibilities with regards to IT enabled projects, in order to strengthen the existing management framework;
(b) Emphasize clear accountability mechanisms by business divisions and project sponsors in accordance with a governance model that is adaptive to the changing technology environment, WFP's decentralised structure and decision-making, and operational needs, to allow creativity and replication of good practices, instead of duplication, and coherence across IT investments;
(c) Clarify and enforce the articulation with the SRAC for IT investments;
(d) Require monitoring mechanisms for projects be defined upfront in the design submitted to the MISSC, and what deviations would require discussion in the MISSC; and
(e) Consider IT value for money to track costs and measure the creation of business value derived from IT enabled projects from the perspective of WFP's mission, objectives and priorities.

2) TEC will:

(a) Together with the business divisions and Regional Bureaux, expedite the completion of the business roadmaps for their review by the MISSC and to feed into WFP's IT strategy post-2020; and

(b) Review the terms of reference of the DAB, with improvements of existing approval processes.

Timeline for implementation
1.(a-e) 30 September 2020
2.(a) 31 December 2020
2.(b) 31 July 2020

Observation 2: Governance of innovation projects under WFP's Innovation Accelerator

47. The Innovation Accelerator (INCA) supports high-potential ideas and initiatives from both inside and outside the organization, developing them into scalable solutions to achieve zero hunger. As of July 2019, the accelerator had received over 3,000 ideas, was running over 50 projects under the Sprint programme, and was assisting the scale up of eight projects.

48. *Coordination with TEC* – The audit noted duplication of efforts and lack of coordination between TEC and INCA in relation to innovation projects. Projects that were graduated and funded by INCA had to be reassessed by the DAB and the Architecture Board to determine their business relevance, alignment with security and architecture standards, and potential duplication with existing applications. Guidance during the IT innovations process on minimum architectural structure requirements, coding language, information security and other key elements were not followed to ensure INCA projects conformed to corporate IT standards and infrastructure.

49. The rollout of IT-innovation projects such as NutriFami was stopped, after USD 100,000 of development costs had been incurred, when it was assessed by the DAB that the project did not meet corporate IT standards.

50. *Project scale-up strategy* - INCA's operating model focused on sourcing, incubating and testing ideas. These efforts were not supported by a formal process for scaling-up projects that had successfully undergone the pre-scale-up preliminary innovation stages. Projects such as SCOPE CODA were facing funding constraints (about USD 5 million funding shortfall), staffing challenges, and other issues that were

hindering the scale-up of the project. Innovation projects had to rely on investment from the SRAC to scale-up, which did not guarantee adequate levels of funding to facilitate their sustainability. INCA formalised a scale-up strategy in June 2019 and was in the process of rolling it out at the time of the audit. However, the audit noted the strategy did not address the issue of funding.

51. *Hand-over of innovation projects* – A handover process between INCA and TEC had not been established for IT innovation projects. There was no project management structure or cross functional governance body in place to manage handing over development responsibilities and scale-up.

Underlying cause(s): Late introduction of the scale-up strategy. Lack of dedicated funding mechanism to support high-potential projects beyond the incubation stage. Cross functional governance gaps between TEC and INCA.

Agreed Actions [Medium priority]

INCA will:

(a) Enhance its coordination with TEC in the review of projects, including incorporating TEC resources in initial phases to ensure compatibility with existing corporate infrastructure, project governance, and management structures; and

(b) In consultation with TEC, work with business divisions to consider a predictable funding mechanism for the scale up of projects, and incorporate these into its scale up strategy or alternative model to be decided jointly between INCA and TEC.

Timeline for implementation

31 December 2020

Observation 3: IT Projects Portfolio Management

52. In May 2014, the MISSC requested TEC to implement a Corporate IT-enabled project portfolio management process aggregating WFP's IT expenditure, for better visibility of the IT expenditure envelope. The MISSC also called for TEC to maintain IT projects and requirements up-to-date, and to establish review, approval and prioritization processes for the IT-components of business initiatives. This resulted in WFP's Portfolio Management Framework, approved by MISSC in 2016.

53. *Projects' portfolio framework* - The Portfolio Management Framework was not effectively communicated or implemented. IT project managers were not aware of the framework, thus did not apply the policies set therein to ensure IT projects were prioritized and aligned to business goals and other ongoing initiatives.

54. *Decentralized IT project management* - IT project management remains decentralized and misses key internal control elements, including identification of the IT resources required to support projects and activities, adequate project cost estimates, a performance measurement framework and an IT risk management process. Some IT projects were independently governed and managed by functional units such as Supply Chain outside TEC's visibility or control. This approach increased IT-architectural misalignment, IT security risks and the risk to the confidentiality, availability and integrity of the data gathered and processed by these systems.

55. A "Freedom in a Framework" was developed to allow for decentralized IT project management while remaining within a minimum sets of controls. The framework developed in 2016 was not finalized and issued

at the time of the audit. Such framework, with revised governance on all IT projects, should mitigate the waste of resources, and establish risk mitigation in the areas of cybersecurity, data privacy and protection, etc.

56. *Shadow IT enabled projects* - whilst there is some visibility of headquarters non-TEC projects, projects initiated and financed by COs were not consistently visible, let alone monitored or reported, at the corporate level, resulting in multiple duplicate projects and investments to fulfil digital solution gaps for activities such as invoice processing, travel management, and cash-based transfer reconciliations. Licensing and intellectual property issues were also noted. For one of the projects reviewed, the lack of visibility resulted in a USD 300,000 loss for a regional travel management system that duplicated an upcoming corporate project and will thus never be released.

Underlying cause(s): Business units and operations in the field were not constrained from developing shadow IT-projects outside the corporate governance framework. The decentralized model of the organization is inadequate to assess and manage the risk for the organization of shadow IT projects. The Portfolio Management Framework was not effectively disseminated, adopted by IT project managers, or updated to the reflect TEC's new management capabilities, including the appointment of the BEMs and creation of the DAB.

Agreed Actions [High priority]

TEC will:

(a) Operationalize and expedite the review of business Roadmaps and the IT portfolio management process (as per Portfolio management of IT and IT-enabled investments already endorsed by the MISSC); and

(b) Review the Freedom in a Framework to adopt an adaptive governance model for IT investments for endorsement by the MISSC, and disseminate and socialize it with the organization.

Timeline for implementation

31 December 2020

B: Line of Inquiry 2 - Are governance and project management structures in place to prioritize investments, ensure risks are managed, and to monitor the achievement of project objectives and value for money from these investments?

57. IT value for money (VfM) is described by ISACA as a comprehensive and pragmatic framework that enables the creation of business value from IT-enabled investments.

58. The 2014 MISSC directive[4] requires the committee to define a corporate VfM approach to monitor the realization of benefits from IT investments. Further, the 2016-2020 IT Strategy emphasizes the need to maintain and improve IT operational excellence by seeking cost efficiencies and quality improvements through defined metrics.

59. When reviewing its sample of six projects, the audit assessed how resources and costs were allocated and how benefits deriving from these projects were measured.

Observation 4: Monitoring and oversight of projects by the MISSC

60. The 2014 directive on the "Establishment of the MISSC" requires that the committee, with the assistance of the Chief Information Officer (CIO), periodically review WFP's IT Strategic Plan, to make recommendations to the Executive Director regarding ICT, and to identify and approve technical "IT investment criteria".

61. *Monitoring of projects by the MISSC* – the CIO, in providing secretariat functions to the MISSC, monitors the delivery of major IT projects and alerts the MISSC regarding deviations from project objectives, cost, and schedules. The MISSC only met twice a year and held seven meetings during the audit period. It would have been timewise impossible to go through specific project monitoring in the current set up. The review of the MISSC minutes confirmed that there was no specific individual project update and monitoring discussion.

62. *Key performance indicators (KPIs)* – WFP's 2016–2020 IT Strategy established ten quantitative and qualitative key performance indicators to monitor IT projects, to improve organizational accountability over these projects and increase IT project efficiencies, effectiveness and appropriateness. KPIs to measure the success of new IT products included the pass rate from user-acceptance testing and the product's level of compliance with organizational standards. At the time of the audit these KPIs were not in use. OIGA's Advisory Assignment AA/19/01 on WFP Corporate Resource Allocation issued in June 2019 also highlighted the absence of clearly defined accountability and performance monitoring processes for corporate resources.

Underlying cause(s): Inadequate monitoring and infrequent meetings for the MISSC to exercise effective governance over IT projects and initiatives. KPIs have not been effectively operationalized or implemented.

Agreed Actions [High priority]

TEC, with business owners will:

(a) Define clearer criteria for the timely and comprehensive tracking of progress against KPIs and expected costs (including risks) and benefits of business roadmaps; and

(b) Define the process for monitoring and reporting the progress of IT-enabled projects, highlighting project achievement as well as risks that need to be brought to the attention of the MISSC.

Timeline for implementation

31 December 2020

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[4] Refer to the MISSC directive - https://docs.wfp.org/api/documents/WFP-0000011580/download/

Observation 5: IT Projects' Value for Money Framework

63. An "IT value for money" approach fitting to WFP's mission and objectives had not been defined by the MISSC to allow for organization-wide value definitions and tracking of estimated costs, spending on capital projects, as well as ongoing maintenance, support, and decommissioning cost. Issues regarding WFP's VfM framework included:

64. *IT Projects' cost for WFP* - TEC could not completely and accurately track, aggregate and report expenditures on IT projects and initiatives and WFP's IT project pipeline (both TEC and non-TEC). Total cost of ownership (TCO) and significant metrics such as risks and potential value realization gains to the organization were not comprehensively tracked. This resulted in significant visibility gaps by TEC and the MISSC of IT projects and initiatives, impairing WFP's ability to assess and establish the link between the TCO and the strategic direction and alignment of IT investments with business priorities. At the time of the audit, TEC recruited a Project Management Officer consultant to aggregate and report expenditures on IT projects.

65. *Return on investments* - The return on investments (ROI) had not been calculated for the six projects reviewed. Expected project benefits were not tracked using qualitative or quantitative metrics, to objectively and consistently assess whether IT projects effectively and efficiently achieved their objectives. The audit observed that the measurement of project benefits realization was not embedded in WFP's project management practices.

66. *Projects costs management* - The review of six sample projects showed initial estimates were not reliable predictors of the project's final cost and time schedules. Actual project costs were on average 100 percent higher and took twice as long to complete than original estimates. None of the six projects tracked or periodically reviewed actual costs. TEC and projects' sponsors could not provide complete and actual project costs, including staff, travel and rollout cost for half of the project sampled by audit.

67. *Shadow IT projects* - For 2019, TEC's operating budget for ICT was USD 110 million. This figure did not include the resources invested in IT projects and initiatives by operations in the field. The audit noted that COs in RBD and RBC respectively mobilized USD 8 million and 1 million dollars to finance their own IT projects. At the time of the audit, other regional bureaux were not tracking and could provide local IT project expenditures figures upon requests by audit. Outside headquarter, TEC did not track these IT expenditures. TEC recently created regional BEM positions, to systematically identify and track these IT projects' cost.

Underlying cause(s): WFP's Corporate VfM framework and KPIs have not been effectively operationalized or implemented in line with WFP's mission and objectives. Roles, responsibilities and obligations for tracking the ROI and total cost of ownership (TOC) of IT projects and initiatives were not defined. Ongoing efforts to identify and track WFP's IT project pipeline, and related costs, were not complete and had not included shadow IT projects.

Agreed Actions [High priority]

TEC will strenghten the portfolio management function to assist the CIO in tracking and reporting to the MISSC on WFP's IT roadmap and project-portfolio pipeline and costs

Timeline for implementation

31 December 2020

C: Are project management and planning processes, and controls and tools in place and operating effectively during the acquisition, development, delivery, and post-implementation of IT-enabled projects?

68. Project management frameworks define a set of criteria and practices to ensure projects are effectively and efficiently delivered, as well as a methodology that can be tailored to various types of IT projects. In 2010, TEC approved a Framework on Project Management, and accompanying project management templates and documentation requirements, to support project management activities.

69. The audit assessed the effectiveness of the project management framework and controls to support the delivery of projects within WFP. This included a review of documentation, policies, standards, guidelines and frameworks; interviews with key personnel involved in project management; and detailed testing of a sample of six projects for compliance with generally accepted project management best practices.

Observation 6: Project management framework

70. The 2016-2020 IT Strategy envisioned the adoption of a traditional project management approach for established/core systems and agile project management for systems with shorter lifecycles. This was not reflected in the SDLC. Project managers were not clear which project management methodology should apply for the different workstreams, and what project management artefacts were appropriate to each methodology including project planning tools, progress metrics, and collaboration documentation.

71. At the time of the audit, 20 projects were under the agile product journey lifecycle with the rest transitioning towards it.

72. *Projects documentation* - Projects reviewed by the audit did not have key documents enabling project sponsors, managers, teams, and stakeholders to manage required project activities. For the projects reviewed, expectations and deliverables for each gate were not clearly defined, and templates were not provided to guide project managers in the development of key project documents including project and implementation plans, cost benefit analysis, quality plans, project change controls, risks and issues logs, etc. This increases the projects not meeting their intended objectives.

73. *Projects closure* - Only one out of six of the projects reviewed by the audit, the Invoice Tracking System, had a post implementation's review of the benefits of the application and lessons learned. This assessment took two years to be completed. When lessons learned are not captured there is a risk that policy, process and project management issues may remain unresolved, impacting WFP's IT project portfolio.

74. *Risk Management* - The audit also noted that there were no structured risk management framework or capabilities in TEC to mitigate the risks associated to IT projects and initiatives. Although some risk considerations were made for the projects reviewed by audit, these were made at the time of the project inception without first defining roles and responsibilities for risk management. In addition, clear procedures were not present for risk identification, assessment, mitigation and escalation throughout the project lifecycle. TEC had not defined its risk appetite and risk tolerance levels to guide decision making during the project approval, management and monitoring of these IT projects.

75. *Project management tool* - TEC had approved the utilization of "Daptiv" a project management system to enable a real time view into TEC's projects, initiatives and resources management. The system was intended to help project managers and stakeholders during every phase of the SDLC. At the time of the audit Daptive was not consistently used to track or manage projects. Project deliverables and KPIs, including risks and issues logs, were still not used or tracked in Daptive.

Underlying cause(s): TEC had not reviewed the SDLC since its publication in 2012, to account for changes brought by the adoption of agile project management methodologies. Lack of robust project management frameworks and dedicated capabilities to plan, manage risk, track projects and assess the performance of project. Lack of practical guidelines for the implementation of risk management objectives already present in Corporate policies (e.g. SDLC, applications management and MISSC guidance and directives).

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Agreed Actions [Medium priority]

TEC will:

(a) Review and update the SDLC guidelines to account for new project management methodologies and capabilities, and to address gaps in project management and internal control gaps noted herein; and

(b) Strengthen its risk management capabilities at the portfolio and project levels to enable integrated risk management throughout the IT project lifecycle.

Timeline for implementation

31 December 2020

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Observation 7: Stakeholders engagement and user management

76. Corporate initiatives such as the SCOPE Reconciliation Module, Retail Onboarding and Contracting, Travel Management System, and the Invoice Tracking System did not always consider the users as a factor to the project's success. Governance mechanisms and project management practices did not consistently incorporate end user inputs when deciding to approve projects or during the design of project plans. We noted:

77. *Stakeholder management* – At the time of the audit projects did not require stakeholders and sponsors to be provided with regular project progress reports. Therefore, the articulation of project business requirement was often left to the project teams, which did not always understand the business value to be delivered, or the capabilities required by end users.

78. *Project steering committees* - Business project sponsors had limited involvement throughout the project development lifecycle, either through a project steering committee or similar mechanism. Project sponsor engagement was needed to prevent and address significant project issues including funding gaps, project delays, misalignment between product functionalities and end user expectations, project scope creep, etc. Addressing these issues was the responsibility of the BEMs, who did not have the authority to make key decisions or mobilize resources. None of the projects reviewed had established project steering committees.

79. As a result of the issues highlighted above several corporately developed projects including the SCOPE Triangulation Database, System Monitoring and Reviewing Transfer, Retail Onboarding and Contracting systems, etc had low adoption rates or had not been adopted by a single CO, with end users opting to fund similar IT projects to fulfil their needs. This resulted in duplication of systems, waste of resources and new risks.

Underlying cause(s): Lack of adequate project governance process and definition of business requirement. Inadequate guidance on users and stakeholders' management.

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Agreed Actions [Medium priority]

TEC will:

(a) Review WFP's project governance framework to define thresholds and include user management plans and proposed project steering committees as pre-requisites for the approval of projects, in accordance to the changes to the governance model suggested under agreed action 1, observation 1; and

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(b) Develop guidelines for the development of user management plans and project steering committees, monitoring their implementation for IT projects.

Timeline for implementation

31 December 2020

Observation 8: Application management

80.   The Information Technology Infrastructure Library (ITIL) defines Applications Management as business practice that involves centralizing, managing and optimizing the purchase, deployment, maintenance, utilization, and disposal of software applications within an organization, in order to reduce costs and operational risks.

81.   WFP's IT assets inventory system (GLASS) did not contain complete and relevant information needed to ensure visibility of its software assets. The completeness of GLASS is critically important to provide visibility to existing IT assets, and given WFP's IT projects are decentralized, resulting in many locally developed systems and applications and *shadow IT.*

82.   At the time of the audit, substantial information was missing for the 665 applications listed in GLASS including:

- 279 application (42 percent) had no registered business owner;

- 345 applications (52 percent) had no registered technical focal point;

- 612 applications (92 percent) applications lacked any information regarding implementation costs;

83.   Software documentation including end user manual, architecture/design documents was not systematically provided or sought from third parties before the software was released into production. This impaired the BEMs' ability to properly assess the software landscape and identify existing solutions.

Underlying cause(s):   Lack of compliance with and monitoring of corporate IT asset lifecycle management policies.

Agreed Actions [Medium priority]

TEC will establish processes to ensure the completeness of the software inventory information in GLASS, by socializing corporate expectations and value of the inventory with Divisions and Field Operations; and establishing monitoring procedures to ensure the registry remains current, comprehensive and accurate, in line with corporate policies.

Timeline for implementation

30 April 2020

IV. 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:**			**Implementation lead**	**Due date(s)**
		WFP's Internal Audit Universe	**WFP's Governance, Risk & Control logic:** Risks (ERM) / Processes (GRC)			
1	IT - enabled projects alignment with WFP business objectives and governance architecture	ICT governance and strategic planning	IT & Communications risks	Technology	MISSC TEC	1:31 December 2020 2(a) 31 December 2020 (b) 31 July 2020
3	IT Projects Portfolio Management	Selection/development and implementation of IT projects	IT & Communications risks	Technology	TEC	31 December 2020
4	Monitoring and oversight of projects by the MISSC	ICT governance and strategic planning	IT & Communications risks	Technology	TEC	31 December 2020
5	IT projects' Value for Money Framework	ICT governance and strategic planning	Adverse asset/investment outcome	Technology	TEC	31 December 2020

	Medium priority observations	**Categories for aggregation and analysis:**			**Implementation lead**	**Due date(s)**
		WFP's Internal Audit Universe	**WFP's Governance, Risk & Control logic:** Risks (ERM) / Processes (GRC)			
2	Governance of innovation projects under the WFP's Innovation Accelerator	ICT governance and strategic planning	IT & Communications risks	Technology	INCA	31 December 2020
6	Project management framework	Selection/development and implementation of IT projects	IT & Communications risks	Technology	TEC	31 December 2020

Medium priority observations	Categories for aggregation and analysis:		Implementation lead		Due date(s)
	WFP's Internal Audit Universe	**WFP's Governance, Risk & Control logic:** Risks (ERM) / Processes (GRC)			
7 Stakeholders engagement and user management	Selection/development and implementation of IT projects	IT & Communications risks	Technology	TEC	31 December 2020
8 Application management	Security administration/controls over core application systems	IT & Communications risks	Technology	TEC	30 April 2020

V. 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.[5]

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[5] 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[6] 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[7], 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 rollout of the GRC system, audit observations are mapped to the new risk and process categorisations as introduced[8] by the Chief Risk Officer to define and launch risk matrices, identify thresholds and parameters, and establish escalation/de-escalation protocols across business processes.

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[6] 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.
[7] WFP/EB.2/2018/5-C
[8] 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 rollout 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.

VI.   Annex C – Acronyms

CIO	Chief Information Officer
DAB	Demand Assessment Board
ERM	Enterprise Risk Management
GLASS	IT Asset Inventory System
GRC	Governance, Risk and Control
ICT	Information Communication and Technology
INK	Innovation and Knowledge Management Division
IT	Information Technology
ISACA	Information Security Audit Control Association
KPI	Key Performance Indicators
MISSC	Management Information Systems Steering Committee
RB	Regional Bureau
RBC	Regional Buerau Cairo
RBD	Regional Bureau Dakar
ROI	Return on Investments
SCOPE CODA	Scope Conditional on Demand Assistance
SDLC	System Development Life Cycle
SRAC	Strategic Resources Allocation Committee
TEC	WFP Technology Division
TOC	Total cost of ownership
TOR	Terms of reference
USD	United States Dollars
VfM	Value for Money
WFP	World Food Programme