

Internal Audit of WFP's Information Architecture

Office of the Inspector General
Internal Audit Report AR/13/05



World Food Programme

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Internal Audit of WFP's Information Architecture

I. Executive Summary

Introduction

1. As part of the annual work plan for 2012 the Office of Internal Audit conducted an audit of WFP's Information Architecture. The audit covered the activities from 1 October 2011 to 30 September 2012.
2. In WFP, information architecture is a key component of the Information Technology (IT) governance processes and is a crucial part of IT management. One of the main objectives of information architecture is to develop and create a unified IT environment, based on standardizing software and hardware systems throughout the organization.
3. The audit was carried out in accordance with the International Standards for the Professional Practice of Internal Auditing promulgated by the Institute of Internal Auditors.

Audit Conclusions

4. No high-risk observations arose from this audit. The audit report contains five medium-risk observations.
5. Based on the results of the audit, the Office of Internal Audit has come to an overall conclusion of **partially satisfactory**¹. Conclusions are summarized in Table 1 by internal control component:

Table 1: Summary of conclusions by Internal Control Component

Internal Control Component	Conclusion
1. Internal environment	Medium

Key Results of the Audit

Positive practices and initiatives

6. A number of positive practices and initiatives were noted including the Management Information Systems Steering Committee approves new IT projects and reviews the implementation status of approved IT projects, and the Information Technology Division is in the process of formulating an Information Governance Policy.

Audit recommendations

7. No high-risk recommendations arose from the audit. The audit report contains five medium-risk recommendations.

¹ See Annex A for definitions of audit terms.

Management response

8. Management accepted all the recommendations and has reported that they are in the process of implementing them.
9. The Office of Internal Audit would like to thank managers and staff for the assistance and cooperation accorded during the audit.

David Johnson
Inspector General



II. Context and Scope

Information Architecture

10. Architecture standards embrace the concept of standardization and integration of various information technology elements, which helps reduce the variability inherent in any large IT set-up.

11. The standardization and integration process unifies existing business services, technology, application and data references allowing greater flexibility and scalability to support new and existing functions. It also helps create a strong, open, and well-organized technological infrastructure to serve as a baseline foundation for operational excellence.

WFP's Information Architecture

12. The current state of WFP's information architecture, as recognized and documented in the IT operations manual, encompasses limited access/interaction paths across IT Operations; process duplication and multiplication; batch processing environment; difficult development and release environment; long architecture cycles and limited automation of workflow and decision making.

13. The IT operations manual describes the vision for the future of WFP's information architecture. This vision encompasses desirable elements such as:

- build a scalable organization;
- reduce complexity in processing business;
- maximize common processes, reduce duplication of effort and overlap of resources;
- link IT initiatives to business process requirements;
- bridge technology gaps (maximise interoperability, and re-use of technology);
- standardize web services content and protocols; and
- centralize identity authentication within applications and appliances.

Objective and scope of the audit

14. The objective of the audit was to evaluate and test the adequacy and effectiveness of the processes associated with WFP's information architecture, as part of the process of providing an annual and overall assurance statement to the Executive Director on governance, risk management and internal control processes.

15. The audit was carried out in accordance with the International Standards for the Professional Practice of Internal Auditing promulgated by the Institute of Internal Auditors. It was completed according to the approved planning memorandum and took into consideration the risk assessment exercise carried out prior to the audit.

16. The Office of Internal Audit carried out fieldwork in WFP's Information Technology Division from 5 to 30 November 2012.

III. Results of the audit

17. In performing our audit, we noted the following positive practices and initiatives:

Table 2: Positive practices and initiatives

1. Internal environment

- The Management Information Systems Steering Committee approves new IT projects, and reviews the implementation status of approved IT projects, above a threshold value.
 - The technology standards for information architecture have been defined corporately and incorporated in the WFP Information and Technology Operations Manual.
 - Information Technology Division architecture committee conducts weekly meetings to coordinate and implement changes to IT projects.
 - An IT Application Management Policy and Solution Development Life Cycle process information note has been issued.
 - Glossaries for structured models are available on the WFP Intranet and Wiki websites.
 - The Information Technology Division is in the process of formulating an Information Governance Policy.
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18. Having evaluated and tested the controls in place, the Office of Internal Audit has rated the internal control components – as follows:

Table 3: Conclusions – categorization of risk by internal control component and business process

Internal Control Component/ Business Process	Risk (Corporate)
1. Internal environment IS/IT plan and organize	Medium

19. Based on the results of the audit, the Office of Internal audit has come to an overall conclusion of **partially satisfactory**².

20. No high-risk recommendations arose from the Audit. Five medium-risk recommendations are presented in Table 4.

Management response

21. Management has agreed with all recommendations and has reported that implementation is in progress.

² See Annex A for definitions of audit terms.

Table 4: Summary of medium-risk recommendations

Observation	Recommendation	Risk categories ³	Underlying cause category	Owner	Due date
Internal Environment:					
1 IS/IT plan and organize: Enterprise Architecture Standards and IT Governance Framework – Business units do not always comply with corporate architecture guidelines, and the current control processes do not identify and address all such non-compliance.	Re-enforce corporate compliance with IT governance requirements.	Compliance Stewardship Institutional	Compliance	Chief Operating Officer as Chair of the Management Information Steering Committee	31 December 2013
2 IS/IT plan and organize: Controls over inventory of applications – Information on the applications listed is not complete and there are applications unknown to the Information Technology Division.	Complete deployment of a real time inventory of information assets.	Operational Stewardship Institutional	Guidelines	Information Technology Division	31 December 2013
3 IS/IT plan and organize: Data governance – Owners of data and data stewards still had to be defined and there are no corporate data dictionary and syntax guidelines.	Take the lead in drafting the policy framework for information governance for submission to executive management.	Operational Stewardship Institutional	Guidelines	Information Technology Division	31 December 2013
4 IS/IT plan and organize: Master data management and data quality – The structuring rules for Master Data Management are not clearly defined and sampled master data did not meet the established quality criteria.	Take the lead in the formulation of master data management policies for submission to executive management.	Operational Stewardship Institutional	Guidelines	Information Technology Division	31 December 2013

³ See Annex A for definition of audit terms.



Observation	Recommendation	Risk categories ³	Underlying cause category	Owner	Due date
5 Business process: Information model and classification framework – WFP does not have a complete holistic enterprise information model and data classification is not strongly linked to such a model.	Complete the data classification policy and framework.	Operational Stewardship Institutional	Guidelines	Information Technology Division	31 December 2013

Annex A – Audit definitions

1. Risk categories

A 1. The Office of Internal Audit evaluates WFP's internal controls, governance and risk management processes in order to reach an annual and overall assurance on these processes in the following categories:

Table A.1:
Categories of risk – based on COSO⁴ frameworks and the Standards of the Institute of Internal Auditors

1	Strategic:	Achievement of the organization's strategic objectives.
2	Operational:	Effectiveness and efficiency of operations and programmes including safeguarding of assets.
3	Compliance:	Compliance with laws, regulations, policies, procedures and contracts.
4	Reporting:	Reliability and integrity of financial and operational information.

A 2. In order to facilitate linkages with WFP's performance and risk management frameworks, the Office of Internal Audit maps assurance to the following two frameworks:

Table A.2.1:
Categories of risk – WFP's Management Results Dimensions

1	Securing resources:	Efficiency and effectiveness in acquiring the resources necessary to discharge WFP's strategy – this includes money, food, non-food items, people and partners.
2	Stewardship:	Management of the resources acquired – this includes minimising resource losses, ensuring the safety and wellbeing of employees, facilities management, and the management of WFP's brand and reputation.
3	Learning and innovation:	Building a culture of learning and innovation to underpin WFP's other activities – this includes knowledge management, staff development and research capabilities.
4	Internal business processes:	Efficiency of provision and delivery of the support services necessary for the continuity of WFP's operations – this includes procurement, accounting, information sharing both internally and externally, IT support and travel management.
5	Operational efficiency:	Efficiency of WFP's beneficiary-facing programmes and projects delivery – this includes project design (partnership/stakeholder involvement and situation analysis) and project implementation (fund management, monitoring and reporting, transport delivery, distribution, pipeline management).

Table A.2.2: Categories of risk – WFP's Risk Management Framework

1	Contextual:	External to WFP: political, economic, environmental, state failure, conflict and humanitarian crisis.
2	Programmatic:	Failure to meet programme objectives and/or potential harm caused to others through interventions.
3	Institutional:	Internal to WFP: fiduciary failure, reputational loss and financial loss through corruption.

⁴ Committee of Sponsoring Organizations of the Treadway Commission.

2. Causes or sources of audit observations

A 3. The observations were broken down into categories based on causes or sources:

Table A.3: Categories of causes or sources

1	Compliance	Requirement for complying with prescribed WFP regulations, rules and procedures.
2	Guidelines	Need for improvement in written policies, procedures or tools for guiding staff in the performance of their functions.
3	Guidance	Need for better supervision and management oversight.
4	Resources	Need for more resources (funds, skills, staff, etc.) to carry out an activity or function.
5	Human error	Mistakes made by staff entrusted to perform assigned functions.
6	Best practice	Opportunity for improvement to achieve recognized best practice.

3. Risk categorization of audit observations

A 4. The audit observations were categorized by impact or importance (high, medium or low risk) as shown in Table A.4 below. 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

Table A.4: Categorization of observations by impact or importance

High risk	Issues or areas arising relating to important matters that are material to the system of internal control. The matters observed might be the cause of non-achievement of a corporate objective, or result in exposure to unmitigated risk that could highly impact corporate objectives.
Medium risk	Issues or areas arising related to issues that significantly effect controls but may not require immediate action. The matters observed may cause the non-achievement of a business objective, or result in exposure to unmitigated risk that could have an impact on the objectives of the business unit.
Low risk	Issues or areas arising that would, if corrected, improve internal controls in general. The recommendations made are for best practices as opposed to weaknesses that prevent the meeting of systems and business objectives.

A 5. Low risk recommendations, if any, are communicated by the audit team directly to management, and are not included in this report.

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.

4. Recommendation tracking

A 6. The Office of Internal Audit tracks all medium and high-risk recommendations. Implementation of recommendations will be verified through the Office of Internal Audit's system for the monitoring of the implementation of audit recommendations. The purpose of this monitoring system is to ensure management actions are effectively implemented within the agreed timeframe so as to manage and mitigate the associated risks identified, thereby contributing to the improvement of WFP's operations.

5. Rating system

A 7. Internal control components and processes are rated according to the severity of their risk. These ratings are part of the system of evaluating the adequacy of WFP's risk management, control and governance processes. A rating of satisfactory, partially satisfactory and unsatisfactory is reported in each audit. These categories are defined as follows:

Table A.5: Rating system

Engagement rating	Definition	Assurance level
Satisfactory	Internal controls, governance and risk management practices are adequately established and functioning well. No issues were identified that would significantly affect the achievement of the objectives of the audited entity.	Reasonable assurance can be provided.
Partially Satisfactory	Internal controls, governance and risk management practices are generally established and functioning, but need improvement. One or several issues were identified that may negatively affect the achievement of the objectives of the audited entity.	Reasonable assurance is at risk.
Unsatisfactory	Internal controls, governance and risk management practices are either not established or not functioning well. The issues identified were such that the achievement of the overall objectives of the audited entity could be seriously compromised.	Reasonable assurance cannot be provided.

Annex B – Acronyms

IS/IT	Information Systems/Information Technology
WFP	World Food Programme