

THEMATIC AUDIT

# ASSESSMENT OF QUANTUM CONTROLS: UN WOMEN RELATED AUDIT RESULTS



INTERNAL AUDIT REPORT

ASSESSMENT OF QUANTUM  
CONTROLS: UN WOMEN  
RELATED AUDIT RESULTS



**INDEPENDENT EVALUATION, AUDIT AND INVESTIGATION  
SERVICES (IEAIS)**

Internal Audit Service (IAS)

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# EXECUTIVE SUMMARY

## Audit objective, scope and background

Together with other United Nations specialized agencies, UN Women uses the Oracle Fusion Cloud Enterprise Resource Planning (ERP) system, “Quantum”, provided by the United Nations Development Programme (UNDP). The UN Women Internal Audit Service (IAS) of the Independent Evaluation, Audit and Investigation Services (IEAIS), the UNFPA Office of Audit and Investigation Services (OAIS) and the UNDP Office of Audit and Investigations contracted an external specialized service provider, KPMG, to conduct an audit of Quantum. UNDP led the procurement process for the service provider on behalf of the consortium, to which UN Women provided input and was reliant. UN Women is also reliant on UNDP for provision of the Quantum ERP system and therefore there are information and actions over which UN Women has no control.

This joint audit was in addition to two previous engagements conducted by IAS on UN Women’s implementation of the ERP system, including a pre-launch assessment and a post-launch implementation assessment. The recommendations from these reviews are under implementation.

The objectives of this audit were to assess the system’s alignment to key areas of UNDP, UNFPA and UN Women’s control environment and business processes, including data privacy. Through the audit, it was expected that deviations between UNDP, UNFPA and UN Women’s control framework and system design, and other potential risks and/or opportunities for improvement, would be identified along with actionable recommendations to address them in UNDP, UNFPA and UN Women’s respective contexts. In particular, the audit aimed to:

- Identify control gaps and recommend improvements in the following Quantum product families: (i) Oracle Fusion financials; (ii) Oracle Fusion Procurement; (iii) Oracle Fusion Human Capital Management; and (iv) Oracle Fusion Projects.
- Recommend control/system modifications to improve Quantum’s alignment with UNDP, UNFPA and UN Women’s business processes and delivery of programmes.

- Recommend policy and/or business process modifications to ensure the most effective use of Quantum.

The audit aimed to assess the adequacy and effectiveness of the governance, risk management and control processes relating to the following areas and sub-areas: finance, procurement, projects, supply chain, human resources management, security and system governance.

The audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing* of The Institute of Internal Auditors.

## Audit opinion and overall audit rating

The joint audit observed the following good practices:

- Quantum performed relatively satisfactory given the complexity of the ERP, with some teething problems during the first year of implementation.
- Robust privileged access management and change request processes were developed and configured directly in Quantum.
- Standard identity profiles were designed so that users of Quantum only have one identity profile at a time. Changes to a user’s access will result in a replacement identity profile.
- The reporting strategy provided in Quantum is consistently applied across agencies.

Based on the report provided by KPMG, IAS issued the following opinion. The joint audit assessed the state of governance, risk management and controls for Quantum as Some Improvement Needed meaning that *“The assessed governance arrangements, risk management practices and controls were generally established and functioning but need some improvement. Issues identified by the audit do not significantly affect the achievement of the objectives of the audited entity/area.”*

At the time of the audit, IAS assessed that major improvement was needed with regard to separation of duties controls in Quantum (see Observation 3), and for issues that require joint action from UN Women and UNDP, for example reconciling inter-agency transactions (see Observation 9).

UNDP and the partner agencies migrated to the Quantum ERP solution from the ATLAS platform (a PeopleSoft ERP). Several significant changes to the process architecture, in addition to the challenges inherent to moving to a Software as a Service solution, were realized as part of this migration, such as:

- Partner agencies were separated from a common ledger into their own separate ledger.
- UNDP’s complex decentralized business model affected the effectiveness of its role as a service provider to the partner agencies.
- FIS Trax (a third-party payment hub) was introduced as a new aspect to the procurement process.

These changes had an impact on the way partner agencies perform business transactions. The introduction of a new security model also contributed to internal control challenges. Cloud ERP roles are complex and can provide unintended access to users when security is not designed with the “principle of least privilege”. While guidance was developed (such as Internal Control Frameworks for the respective agencies) and used as a high-level, principle-based reference, several application and process-related control challenges remain which will become building blocks for the practical implementation of the internal controls.

The audit rating was mainly due to the observations outlined below.

#### UN Women-controlled observations at the time of the audit:

- [REDACTED]
- Training – Confusion remained about end-user activities and how to better perform these activities in Quantum

- [REDACTED]
- [REDACTED]
- Automation – Account reconciliations [REDACTED]
- Change management – Change management monitoring relied on users to review audit logs for changes that may be of concern. Not all items in Quantum were tracked by the audit policies for monitoring changes.

#### Consortium-wide observations at the time of the audit

- Supply chain – [REDACTED]
- Integrations – Challenges with inter-agency posting included: lack of agreement between partner agency ledgers and the UNDP ledger; the way in which reports on payments were provided did not support efficient reconciliation; and payroll journals created by UNDP on behalf of partners did not agree with transactions in the UNDP ledger.
- Receiving controls – [REDACTED]
- Talent acquisition – Data protection statements were not included in notifications to prospective personnel and other individuals involved in the recruitment process.
- Security and governance – The privileged access management process did not include validation procedures to help ensure activities performed with temporary elevated access were aligned with original issue.

#### Recommendations

The KPMG report (included as part of this document in Section IV below) contains 12 recommendations. Of these, 7 are addressed to UN Women specifically, often requiring support from UNDP to resolve (numbers 1 to 7). The remaining 5 are consortium wide-recommendations, of which 3 are solely for UNDP to address and 2 are for UN Women to initiate with heavy support needed from UNDP. Two recommendations were ranked

as High priority and 10 as Medium priority. One recommendation for UN Women was addressed during the fieldwork process.

The High priority recommendations mean that *“prompt action is required to ensure that UN Women is not exposed to high risks. Failure to take action could result in major negative consequences for UN Women.”* The recommendations are:

**Recommendation 1 (High):** UN Women should collaborate with UNDP to address the risk of a data breach in Quantum by implementing the following measures:

- Perform a data inventory across Quantum for sensitive and Personally Identifiable Information data.
- Evaluate reporting security controls within Reports and Analytics to potentially:
  - limit who can access sensitive reports; and
  - for reports related to human capital management that contain sensitive and Personally Identifiable Information data, limit who can export the reports to Excel.
- Evaluate and consider the use of additional data controls in non-production environments, such as masking and redaction. Masking and redaction are technology solutions to help protect data during testing and development activities.

**Recommendation 8 (High):** To enhance the integrity of supplier information, UN Women should request UNDP’s Bureau for Management Services through Information Technology Management to enhance the use of additional supplier and supplier site information within the approvals process to further restrict who can approve any changes. UN Women should work with UNDP to define an agreed mechanism for routing second-level approvals of shared suppliers that UNDP can implement.

#### **Other UN Women-controlled (medium priority) recommendations**

- a) Coordinate with Business Process Owner development and administration and update the training programme for end users of Quantum on the most cost-effective basis.
- b) [REDACTED]
- c) To improve management of journal entries, the UN Women Division of Management and Administration (DMA)/Finance to request UNDP’s Bureau for

Management Services through Information Technology Management to: (i) ensure all Oracle journal sources that support system-created journals are frozen and do not allow journal modification; and (ii) ensure all journal sources supporting manually entered journals require approval or are disabled if not in use (Recommendation was resolved during fieldwork).

- d) To improve management of zero-dollar invoices, DMA/Finance to request a process change from UNDP to enhance the zero-dollar invoice approval process to allow only the charged entity to approve the invoice.
- e) The UN Women Project Management Office to (i) request that UNDP implement use of automation tools such as ARCS to help increase the efficiency and effectiveness of reconciliation activities or document the reasons for not choosing to implement the tools; and (ii) subsequently improve the process with these tools to support more frequent reconciliation activities.
- f) To improve Quantum-based second-line oversight, UN Women should (i) consult with UNDPs’ Bureau for Management Services on implementing the Risk Management Cloud to proactively inform management of risks and changes to key application configurations; and (ii) perform a risk-based review of key configurations and features in Quantum and enable effective ways of monitoring these features.

#### **Recommendations addressed to the Quantum Consortium for joint action**

Some observations and recommendations which impact UN Women as a partner of the Quantum Consortium have actions that are shared between UN Women and UNDP. UN Women, as a client of UNDP (as the service provider), does not have full control over the Quantum system in terms of accommodating all of UN Women’s business needs and requesting timely fixes to the system. As a service provider, UNDP drives its decisions for updates without always considering UN Women’s requests (also due to value for money considerations). At the time of the audit, it appears that significant changes to operating modalities from Atlas to Quantum, e.g. creating separate ledgers, new payment application, etc. were not fully designed and tested in areas such as inter-agency transactions, which led to weakened or absent controls for clients such as UN Women. As a service provider and leading agency for Oracle, UNDP needs to include the concept of effective service provision to its clients in its business model and work on reducing the existing inefficiencies, gaps in controls and reports, and manual

workarounds currently experienced by UN Women. This section was rated as Major Improvement Needed but implementation of this audit recommendation is heavily dependent on UNDP's willingness and ability to address the issues raised, for example:

- a) UNDP to work with UN Women to (i) set timelines and measurable outcomes to streamline the inter-agency posting process and reduce the value and volume of transactions to be investigated; and (ii) ensure the process is implemented within a defined timeline.
- b) UNDP to work with Oracle to resolve [REDACTED]
- c) To enhance the perceived safety of Quantum, data protection statements should be configured as part of recruitment notifications.
- d) UN Women to work with UNDP to implement validation procedures to support the use of highly privileged roles.

### Management comments and action plan

Management comments have been considered in this report, where appropriate. *Management generally agrees to the recommendations and has provided action plans in the table in Section V below.*

*Lisa Sutton*  
Lisa Sutton, Director  
**Independent Evaluation, Audit  
and Investigation Services**

# ACRONYMS AND ABBREVIATIONS

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<b>DMA</b>	Division of Management and Administration
<b>ERP</b>	Enterprise Resource Planning
<b>IAS</b>	Internal Audit Service
<b>IDAM</b>	Identity and Access Management System
<b>IEAIS</b>	Independent Evaluation, Audit and Investigation Services
<b>UNDP</b>	United Nations Development Programme
<b>UNFPA</b>	United Nations Population Fund
<b>UN Women</b>	United Nations Entity for Gender Equality and the Empowerment of Women

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## I. INTRODUCTION

The Internal Audit Services of the United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA) and UN Women contracted KPMG as a specialized external service provider to conduct an audit of Quantum between January and June 2024. Quantum is the ERP system provided (and used) by UNDP for use by UN Women and other UN entities. The other agencies use UNDP's standard configuration for the Quantum modules that have been rolled out so far. Therefore, through separate audits of UNDP, it is envisaged that other agencies will receive comparable assurance.

UNFPA and UN Women outsource elements of their human resource management processing, payroll and treasury functions to UNDP and therefore use UNDP's specific configuration of Quantum for these business processes. Some business processes are unique to each of the three agencies and some are standard inclusions in configuration of the ERP system which are common to all agencies. The unique configurations are covered in this assessment alongside the common configurations. Both the unique and common configurations are reported in individual organization's reports.

Each year, Oracle provides UNDP with a copy of its SSAE16 (SOC2) report (an audit report that assesses an organization's ability to handle data security, privacy, confidentiality and processing). Quantum has not been audited during or after its implementation, but the underlying system by Oracle has. IAS also conducted two snapshot assessments of Quantum in February 2021 and June 2023 to identify risks and challenges and to assess the project's progress. These reports were advisory in nature and were not published; however, a high-level summary is available in IAS' annual reports to the UN Women Executive Board.

## II. BACKGROUND

Together with other United Nations specialized agencies, UNDP uses the Oracle Fusion Cloud Enterprise Resource Planning (ERP) system, "Quantum". Quantum was implemented in January 2023 by a consortium made up of United Nations partner agencies including UNDP, UN Women, UNFPA, United Nations Capital Development Fund, United Nations Volunteers, United Nations System Staff College, United Nations

University and United Nations Institute for Training and Research.

Quantum was deployed as a "Software as a Service" model using Oracle's public cloud. UNDP has entered into an agreement with the Oracle Corporation for the delivery of these services and is responsible for monitoring and overseeing the contract. In turn, UNDP has entered into agreement with other partner UN agencies (such as UN Women) which governs their use of Quantum.

Oracle cloud is updated on a quarterly basis. At the time of contracting KPMG, the version in production is 23A.

UNDP has implemented an Identity and Access Management (IDAM) system to provide a centralized model for organizational user access management for all agencies. Access to Quantum is provided through IDAM, based on pre-defined procedures, standards and processes. IDAM is a third-party module of ServiceNow provided by a firm called Advance Solution. UNDP's implementation of the ServiceNow platform, commonly referred to as UNALL, includes this IDAM module which was configured to meet partner agency requirements and is integrated with Quantum. The foundational element of Quantum access roles is each partner agency's internal control framework.

## III. AUDIT OBJECTIVES, SCOPE AND METHODOLOGY

As the lead in this joint audit, UNDP's Office of Audit and Investigations signed a contract with KPMG to conduct an audit of Quantum. The objectives of the audit were jointly developed by the internal audit services of the three agencies concerned and aimed to assess the system's alignment with key areas of UNDP, UNFPA and UN Women's control environment and business processes, including data privacy. Through the audit, it was expected that deviations between UNDP, UNFPA and UN Women's control framework and system design, and other potential risks and/or opportunities for improvement, would be identified along with actionable recommendations to address them in UNDP, UNFPA and UN Women's respective contexts.

In particular, the audit aimed to:

- Identify control gaps and recommend improvements in the following Quantum product families (i) Oracle Fusion financials; (ii) Oracle Fusion Procurement; (iii) Oracle Fusion Human Capital Management; and (iv) Oracle Fusion Projects.
- Recommend control/system modifications to improve Quantum's alignment with UNDP, UNFPA and UN Women's business processes and delivery of programmes.
- Recommend policy and/or business process modifications to ensure the most effective use of Quantum.

The proposed recommendations draw on the good practices of other organizations of similar size and operations.

#### Scope

The audit covered all Quantum modules/processes/practices relevant to all partner agencies, including the customized configuration of the modules rolled out so far.

UNDP has certain responsibilities and accountabilities in the management of Quantum for which it has signed a legally binding contract with the Oracle Corporation. These aspects must be audited directly by UNDP.

This joint audit covered the following areas:

- Finance
- Procurement
- Projects
- Supply chain
- Human capital management
- Security
- System governance.

To meet the audit's objectives, KPMG focused on the following elements:

- Quantum business module application controls
- Reporting integrity and reliability of the data (excluding the data warehouse)
- Data security (fully with UNDP)

- Change management (shared responsibility depending on information sharing between partner agencies and UNDP)
- Quantum interfaces (shared responsibility depending on information sharing between partner agencies and UNDP)
- Audit and monitoring (part of the Governance Risk and Controls module which is being developed)
- Software as a Service provider compliance (fully with UNDP).

#### Methodology

The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing. The audit work consisted of reviews of documents and systems; and interviews and discussions with UNDP, UNFPA and UN Women staff at headquarters, and regional and country levels. Information from Quantum was obtained via Oracle-delivered reporting; online query and review of the system; and custom reporting developed by KPMG to extract key Quantum configurations.

## IV. QUANTUM CONTROLS ASSESSMENT BY KPMG

This section includes the final report on the UN Women Quantum Controls Assessment provided by KPMG

KPMG was contracted by the UNDP Office of Audit and Investigations, the UNFPA Independent and Evaluation and Audit Services, and the UN Women Internal Audit Service to conduct a controls assessment of Quantum – the UNDP’s designation of Oracle Cloud ERP.



# UN Women

## Quantum Controls Assessment

KPMG LLP  
June 7, 2024

UN Women Quantum Controls Assessment Draft.docx



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Quantum Controls Assessment  
Advisory  
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# 1 Executive Summary

KPMG was contracted by the UNDP Office of Audit and Investigations, the UNFPA Independent and Evaluation and Audit Services, and the UN Women Internal Audit Services to conduct a controls assessment of Quantum – the UNDP’s designation of Oracle Cloud ERP. The UNDP and its partner agencies migrated from ATLAS (a PeopleSoft ERP) to Quantum in 2023. Several significant changes to the process architecture, in addition to the challenges inherent to moving to a Software as a Service (“SaaS”) solution, were realized as part of this migration, such as:

Partner agencies were separated from a common ledger into their own separate ledger.

As UNDP has a complex decentralized business model, this affected the effectiveness of its role as a service provider to the partner agencies.

FIS Trax (a 3rd party payment hub) was introduced as a new aspect to the procurement process.

These changes have had an impact on the way business transactions are performed by partner agencies. The introduction of a new security model also has contributed to internal control challenges. Cloud ERP roles are complex and can provide unintended access to users when security is not designed with the Principle of Least Privilege. While guidance such as the Agency’s Internal Controls Framework were developed and used as high-level principle-based reference, several application and process related controls challenges remain which will be building blocks for practical implementation of the internal controls.

The controls assessment was conducted from 25 January to 7 June 2024 with the objectives of:

- **Identifying control gaps and recommending improvements:** Several recommendations were made to strengthen internal controls including the UN Women develop its own process-level separation of duties risks and documenting mitigating controls, having the UNDP consider implementing additional data controls for non-production environments, and updating journal configurations to better control the approvals process over journal entries.
- **Recommending control/system modifications to improve its alignments with UNDP business processes and delivery of its programmes:** Transactions that crossed agencies leverage complex workflow rules. For optimal use of the approval workflows, impacted parties should be responding to the workflow requests. In two areas, the workflow was not precise enough to ensure that the impacted users were the only ones responding to the workflow requests. In both cases, the transaction would be approved but the approver may not be the correct individual to approve. This lack of preciseness in the workflow could cause confusion on the transaction.



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- **Recommending policy and/or business process modifications to make the most effective use of Quantum:** A few recommendations were made to improve the efficiency of the process including technology enabling the account reconciliation process, adding Risk Management Cloud as an aid to security role and change management, and providing additional training.

### Good Practices Identified

Several good practices were identified during the engagement including:

- **Access and change request:** A robust privileged access request and change request process and been designed and configured directly in Quantum.
- **Identity profiles for Quantum Users:** Standard identity profiles have been developed and provisioned to users. Quantum users can be provisioned only one identity profile at a time. Changes to user's access will result in provisioning a different identity profile replacing the existing one.
- **The reporting strategy (the approach of having standard agency-wide reporting vs custom and redundant reporting) provided in Quantum is consistently applied across agencies.**

## 2 UN Women-Controlled Observations and Recommendations

UN Women-Controlled Observations and Recommendations are those that the UN Women can generally action with little or no assistance from the UNDP. These observations include application settings that may impact other agencies as well but are relatively low effort to resolve. Actions should be initiated by the UN Women.

### 2.1 Cyber and Data Security

**Observation 1: The** Data controls in non-production environments were not enabled. Users with access to non-production environment can access sensitive employee or agency data.

**Recommendation 1 (High):** The UN Women should collaborate with the UNDP to address the risk of a data breach in Quantum by implementing the following measures:

- Perform a data inventory across Quantum for sensitive data and Personal Identifiable Information (PII) data.
- Evaluate reporting security controls within Reports and Analytics to potentially:
  - Limit who can access sensitive reports.
  - For reports related to HCM that will contain sensitive and PII data, limit who can export those reports to Excel.
- Evaluate and consider the use of additional data controls in the non-production environments, such as masking and redaction. Masking and redaction are technology solutions to help protect data during testing and development activities.

**Initiation:** This is a UN Women initiated action as this observation relates to UN Women data. The UN Women will be dependent on the UNDP for assistance with the data inventory and implementation of other controls.

**Detailed Observations:** The UNDP was subject to a data breach in a non-Oracle environment. Other systems (both production and non-production) may be impacted by this data breach. In Quantum, sensitive data will exist in both production and non-production environments. Unlike the production environment, users will have elevated capabilities in the non-production environments to support development and testing activities. The risk of exposure to sensitive data is elevated for the users who can access the non-production environments.





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When masking is used as a data control, sensitive data such as supplier bank account numbers would be nullified, and email addresses would revert to a generic oracle.com address. Sensitive data can also be encrypted in the source system.

These characteristics were not observed in Quantum. Bank accounts and email addresses were displayed in the Quantum screens during our walkthrough of the system. Additionally, there were no restrictions observed within Oracle Reports and Analytics to restrict downloading of reports with sensitive data. Notwithstanding, KPMG observed the following controls to mitigate the risk of unauthorized access to sensitive data:

- Audit policies were enabled for key Quantum modules in the non-production environments except for Payables.
- Security profiles and processes in the Identity Management (IDEM) solution were designed for end user access provisioning; and
- Multi-factor authentication to access the Oracle environment.

Personally Identifiable information (PII) and other Sensitive data including supplier bank account numbers, social security numbers, and email addresses may be compromised if adequate controls are not implemented.

## 2.2 Training

**Observation 2:** Confusion remains on end user activities and how to better perform them in Quantum

**Recommendation 2 (Medium):** The Project Management Office (PMO) should coordinate with the BPO development and administration and update the training program for end-users of Quantum on the most cost-effective basis. The training should also cover HQ users who were not involved during initial roll-out.

**Initiation:** This is an UN-Women initiated action.

**Detailed Observations:** Confusion remains among the end users on transactional activities and how to better perform them in Quantum. Quantum, being a dynamic system, has undergone several improvements to enhance its usability for agencies. As a next step to the previous observations, UN Women needs to conduct further end-user training based on the updated documentation and controls that have been established.

This training should primarily concentrate on clarifying any changes or updates incorporated in the formal documentation. Additionally, it should emphasize the proper execution of control procedures and the acquisition of supporting evidence.

## 2.3

[REDACTED]

**Observation 3:** [REDACTED] were not developed.

**Recommendation 3: (Medium):** BPOs should [REDACTED]

Additionally, the PMO should request from the UNDP a role catalogue of Quantum roles that describe the purpose and capability of each role in use for the UN Women.

**Initiation:** This is a UN Women initiated action with assistance from UNDP.

**Detailed Observations:** [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]

UN Women should review the risks of each key business process with regards to access. The UN Women should then evaluate those rules in Quantum to determine alignment with the ICF rules. This evaluation will require coordination with the UNDP.

KPMG performed [REDACTED] on the UN Women Quantum roles using its library of rules and identified the following:

- Finance & Procurement: [REDACTED]

- **Human Capital Management:** [REDACTED]

The result of this analysis was provided to management during the controls assessment.

The risk of not having a process-based set of rules for the UN Women can have several implications, including:

- **Inadequate Internal Controls:** [REDACTED]
- **Inconsistent Practices:** [REDACTED]
- **Lack of Accountability and Responsibility:** [REDACTED]

[REDACTED]

Moreover, during the engagement, uncertainty regarding roles and their capabilities were identified during the Recruiting process. While not limited to Recruiting, good practice regarding security documentation is to provide a role catalogue to the users of the system that will identify the roles being used and what they can do. Having this role catalogue available to end users will help provide knowledge of the system and answer questions on security as they arise.

## 2.4 Application Configuration

**Observation 4:** The Quantum configurations related to journal entries allows for some types of financial journal entries to be created and posted without approval.

**Recommendation 4 (Medium):** To improve management of journal entries, The UN Women should request of UNDP's BMS through ITM to:

- Ensure that all Oracle journal sources that support system-created journals are frozen and won't allow journal modification; and
- Ensure that all journal sources supporting manually entered journals require approval or are disabled if not in use.

Oracle documentation states that requiring approval establishes control over the accuracy and materiality of the journal entries in your ledgers.

**Note: This issue was resolved during field work.**

**Detailed Observations:** Quantum was configured to allow some types of financial journal entries (if they were to be made) to be made or altered in the general ledger without needing approval. Those types of journals were related to journal sources that were represented to be not used in by Quantum. The manual and spreadsheet sources which are indeed used by UN Women for manual journals did require approvals prior to posting. Additionally, some journal sources that control system-created journals in the subledger were not frozen. This configuration could potentially allow journals that were submitted through certain journal sources to be submitted to the general ledger without approval.

**Observation 5:** AP Invoice approvals process permits users who should not have authorization to approve transactions involving the transfer of costs between participating agencies.

**Recommendation 5 (Medium):** To Improve management of zero-dollar invoices, the UN Women use its own approval process and with assistance of UNDP's BMS through ITM to enhance the zero-dollar Invoice approval process to allow only the charged entity to approve the invoice.

**Initiation:** This is a UN Women-initiated action to reach out to the UNDP for changes to the approvals process.

Accountability principles dictate that managers of entities incurring expenditure directly authorize such expenditures. Expenditures in Quantum be incurred using zero-dollar invoices (former journal vouchers or internal adjustments); zero-dollar invoices result in transfer of funds from one chart of account to another without transfer of funds from UNDP bank accounts.



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Quantum allows either the agency being charged, or the agency receiving funds to approve cost transfers on \$0 invoices. This approach may not provide proper oversight, as the agency or unit receiving funds may not have the necessary insight to assess the appropriateness of the cost transfer.

This issue is significant because while \$0 invoices don't impact the financial statement's value, they can result in unauthorized transfers that an accounting manager is not aware of. If costs charged to projects or contracts are not approved by the budget holders, it could result in contractual breaches where donor funds are contractually restricted.

## 2.5 Automation

### Observation 6:

**Recommendation 6 (Medium):** UN Women PMO to request UNDP to implement the use of automation tools such as ARCS to help increase the efficiency and effectiveness of reconciliation activities or document the reasons for not choosing to implement the tools. Improve the process with these tools to support more frequent reconciliation activities.

**Initiation:** This is a UN Women-initiated action to work with the UNDP on reconciliations.

**Detailed Observations:** UNDP is paying for a subscription to Oracle's Enterprise Performance Management (EPM) suite of applications. One of these applications, ARCS, is designed to automate account reconciliations.

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During the engagement, management represented that it had just finished a reconciliation of Quantum for 2023. The reconciliation time was represented to require over 3 months of effort. This extended is a symptom of several challenges:

- Agencies have represented that instead of streamlining processes in Quantum, they have had to hire additional long-term resources to support reconciliation efforts.
- One agency has represented they have still not signed the interfund reconciliation for 2023.
- The increased complexity in reconciliation inhibits performing these activities on a more frequent basis such as monthly.

## 2.6 Change Management

**Observation 7:** Change management monitoring relies on users to review audit logs for changes that may be of concern. Not all items in Quantum are tracked by the audit policies for monitoring changes.

**Recommendation 7 (Medium):** To improve Quantum based Second Line oversight, UN Women should consult with UNDPs' BMS to implement RMC to proactively inform management of risks and changes to key application configurations; and perform a risk-based review of key configurations and features in Quantum and enable effective ways of monitoring them. UNDP should work across partner agencies and determine the key configurations and Quantum elements that must be tracked and how they will be tracked.

**Initiation:** This is a UN Women-initiated action. If the agency requires technology-enabled controls to augment its internal control environment, the UN women should reach out to the UNDP to request an enhancement to the Quantum platform such as enabling RMC.

**Detailed Observations:** UN Women has adapted the three lines model in its implementation of its Enterprise Risk Management (ERM) policy. The second line of defense of this model oversees risks, controls, and compliance. Oracle Risk Management Cloud (RMC) provides capability for this oversight when deployed alongside other Oracle Fusion Cloud modules.

Quantum Consortium has enabled auditing for many key areas in Quantum. As an example, payables and related configurations such as matching tolerances and payables application options are enabled for audit tracking. However, not all features, e.g., reports, are available for change tracking. Where available, UNDP manually reviews the audit reports on a best effort basis to find if something had changed. This can be an inefficient



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and provide an incomplete review that misses key risks such as SOD breaches, fraudulent changes to vendors among others.

While UNDP owns licenses to RMC, it has not been enabled to help entities to monitor risks and changes efficiently and comprehensively to configurations in Quantum. RMC can consume the audit information and proactively inform UN Women resources of these changes. This would allow the system to help monitor itself and provide the UN Women with the exceptions to act on. RMC will also provide a formal history of management's oversight and actions thereby strengthening the ERM second line of defense.

### 3 Consortium-Wide Observations and Recommendations

Consortium-wide observations and recommendations are those recommendations that have more complexity to resolve and may require extensive planning and coordination among the UNDP and participating agencies. Actions should be taken initially by the UNDP.

#### 3.1

[Redacted]

**Observation 8:** Any agency can [Redacted]

**Recommendation 8 (High):** [Redacted]

**Initiation:** This is a UNDP-initiated activity. The [Redacted] is common for all participating agencies. The UNDP should coordinate with the participating agencies to develop and [Redacted]

**Detailed Observations:** [Redacted]

[Redacted]



## 3.2 Integrations

**Observation 9:** Challenges with the Inter Agency posting

**Recommendation 9 (Medium):** To enhance integrity of inter-agency postings, the BMS through the CFO and the CTO should work with partner agencies to:

- Set timelines and measurable outcomes to streamline the inter-agency posting process and reduce the value and volume of transactions to be investigated; and
- Ensure the process is implemented within defined timeline.

**Initiation:** This is a UNDP-initiated action.

**Detailed Observations:** The change from Atlas to Quantum separated the ledgers of agencies participating in the Quantum Consortium. Post change to Quantum, the inter-agency funding mechanism remained in force with UNDP posting summarized inter fund accounting journals to account for inter fund transactions. This change has created several inefficiencies in the workflows and workarounds in the partner agencies with respect to reconciliation of the inter fund accounts. The way UNDP integrations update partner agency data and is reported is causing reconciliation challenges at the partner agencies. These challenges include:

- Interfund payment reported back to the partner agencies ledgers do not agree with numbers in UNDP ledger. In some instances, invoices are posted on the UNDP ledger but not on the partner agency ledgers. These issues are mainly rooted from manual payments: credit memos for deposits coming through UNDP, where UN Women does not have the visibility and does not include a mirrored transaction (so far it is around US\$1.7 million); common service payments where the interfund accounts are debited manually.
- Moreover, the way in which the reports on the payments is provided does not support an efficient reconciliation, e.g. UNDP reports by individual office while one of the agencies' reports consolidates all the payments into one amount without ability to link two reports. For example, in April the unreconciled payments for one of the Agencies amounted to around US\$60 million, where only UNDP can run the reconciliation, so due to the lack of such timely, formal reconciliation process, it is impossible for agencies to reconcile the interfund.
- Payroll journals created by UNDP on behalf of the partner do not agree with transactions on UNDP ledger. In some cases, such as salary advances, payments are made in local currency but posting is only done in United States dollars (USD).



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Posting to ledgers is done by UNDP for payroll, treasury, Accounts Receivables and payment cancellation. Some manual ledger entries are posted by either UNDP or partner agencies such as in the case of payroll adjustments or year-end transactions. These challenges arise from the fact that UNDP posts summarized accounts into the partner agencies whereas reconciliation must be done manually on each individual transaction by partner agencies. In certain instances, it was observed that the journal postings did not agree across agency ledgers as depicted below for one of the agencies in the consortium.

Given that the UNDP is making the journal postings, there is an expectation that the numbers in the UNDP ledger would agree with those in partner agencies ledger. During the controls assessment, the UN Women were not in agreement with the UNDP on the automated postings from the custom integrations.

For year 2023, these issues have contributed to a finding by the Board of Auditors for one of the partner agencies due to unreconciled amounts totalling US\$ 632,000 that are nearly its materiality threshold and outside the full control of that agency. Since UNDP is the lead agency in the Quantum consortium, it is imperative that a joint UNDP and agency team develop an actionable process that is documented and understand to monitor and resolve inter-agency posting issues.

### 3.3 Receiving Controls

**Observation 10:** [REDACTED]

**Recommendation 10 (Medium):** The UNDP has already raised this issue with Oracle.

**Initiation:** This is a UNDP-initiated action.

**Detailed Observations:** Currently, Quantum permits the value of goods received to exceed the funded amount specified on the purchase order. [REDACTED]

[REDACTED]

### 3.4 Talent Acquisition

**Observation 11:** Data protection statements are not included in notifications to prospective employees and other individuals involved in the recruiting process.

**Recommendation 11 (Medium):** To enhance the perceived safety of Quantum, data protection statements should be configured as part of recruiting notifications.

Personal data privacy is an important issue with implications for personnel, and other citizens engaged in recruitment processes managed using Quantum.

**Initiation:** This is a UNDP-initiated action.

**Detailed Observations:** Data protection statements are not included in notifications sent during the recruiting process. A data privacy statement outlines the measures in place to protect data and assures recipients that their information will be handled confidentially and with due care. This statement can help build trust and confidence among the agencies and individuals involved in the recruitment process. Participating agencies have requested that such a statement be included in recruiting notifications.

A statement regarding data protection in the notification sent to long listers, short-listers, and interview panellists can help address concerns about the security and privacy of their personal information during the recruitment process.

This observation must be addressed by UNDP and does not require input from UN Women. UN Women can follow up with UNDP's BMS through ITM to include data protection/data privacy disclaimer in Quantum recruitment processes.

### 3.5 Security and Governance

**Observation 12:** [REDACTED]

**Recommendation 12 (Medium):** [REDACTED]



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**Initiation:** This is a UN Women-initiated action with heavy dependency on the UNDP for providing the tools, technology, and associated procedures to perform validation.

**Detailed Observations:** [Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]



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## V. UN WOMEN RECOMMENDATIONS AND MANAGEMENT ACTION PLAN

Issue	Recommendation	Responsible Unit	Priority	Action Plan	Suggested Implementation date
Observation 1 – Cyber and data security	<p>Recommendation 1: UN Women should collaborate with UNDP to address the risk of a data breach in Quantum by implementing the following measures:</p> <ul style="list-style-type: none"> <li>• Perform a data inventory across Quantum for sensitive and Personally Identifiable Information data.</li> <li>• Evaluate reporting security controls within Reports and Analytics to potentially:               <ul style="list-style-type: none"> <li>○ limit who can access sensitive reports; and</li> <li>○ for reports related to human capital management that contain sensitive and Personally Identifiable Information data, limit who can export the reports to Excel.</li> </ul> </li> <li>• Evaluate and consider use of additional data controls in non-production environments, such as masking and redaction. Masking and redaction are technology solutions to help protect data during testing and development activities.</li> </ul>	Quantum Project Management Office in coordination with DMA Directorate, IST and Data Privacy Specialist	High	<p>Partially agreed: UN Women management agrees with the importance of data security and will perform a data inventory; UN Women reports are already segregated to prevent unauthorized data access. Masking, however, must be a joint Interagency effort and cannot be implemented by UN Women alone.</p> <p>Subject to the resourcing and availability of data privacy specialist in DMA, UN Women will carry out inventory of its sensitive data, with DMA Directorate D1 leading (Chief IST and Data Privacy Specialist to be part of core team) and all BPOs identifying subject-specific sensitive data.</p> <p>Regarding the implementation of masking in production and non-production, this requires a decision from the business across Partner Agencies to agree on activating this feature. UN Women supports masking in the non-production environment.</p> <p>UN Women will continue to collaborate with UNDP and other Partner Agencies in jointly addressing known risks in the Quantum Production and Test environments.</p>	Q3 2025 (data inventory)
Observation 2 – Training	Recommendation 2: The Project Management Office should coordinate with the Business Process Owner development and administration and update the training programme for end users of Quantum on the most cost-effective basis. The training should also cover headquarters users who were not involved during initial roll-out.	Quantum Project Management Office in coordination	Medium	<p>Agreed.</p> <p>Management agrees with the recommendation, and we will arrive at a</p>	Q3 2025

Issue	Recommendation	Responsible Unit	Priority	Action Plan	Suggested Implementation date
		with BPOs		<p>solution to sustainably manage training going forward.</p> <p>The Quantum team has delivered thousands of hours of training. Approximately 800 users have been trained in-person during seven regional onsite trainings conducted (incl. Geneva office), covering PPM, FMS, Budget, Procurement, Planning &amp; Results, Assets Management. We are in the process of completing the HQ training. In addition, 150 virtual (remote) training have been delivered. Furthermore, individual streams have delivered refresher Quantum trainings as part of their functional training and continue to do so.</p>	
Observation 3 – Separation of duties	<p>Recommendation 3: [REDACTED]</p>	Quantum Project Management Office in coordination with DMA Directorate and IST	Medium	<p>Agreed: [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Q2 2025

Issue	Recommendation	Responsible Unit	Priority	Action Plan	Suggested Implementation date
				<div style="background-color: black; width: 100%; height: 100%; min-height: 100px;"></div>	
<p>Observation 4 – Application configuration</p>	<p>Recommendation 4: To improve management of journal entries, UN Women should request that UNDP’s Bureau for Management Services through Information Technology Management ensure:</p> <ul style="list-style-type: none"> <li>all Oracle journal sources that support system-created journals are frozen and won’t allow journal modification; and</li> <li>all journal sources supporting manually entered journals require approval or are disabled if not in use.</li> </ul> <p>Oracle documentation states that requiring approval establishes control over the accuracy and materiality of the journal entries in an organization’s ledgers.</p>	<p>Financial Management Department</p>	<p>Medium</p>	<p>This recommendation has already been implemented, effective March 2024.</p>	<p>Implemented.</p>
<p>Observation 5 – Application configuration</p>	<p>Recommendation 5: To improve management of zero-dollar invoices, UN Women should use its own approval process and, with the assistance of UNDP’s Bureau for Management Services through Information Technology Management, enhance the zero-dollar invoice approval process by allowing only the charged entity to approve the invoice.</p>	<p>Quantum Project Management Office in coordination with FMS</p>	<p>Medium</p>	<p>Agreed, UN Women will seek a solution from UNDP to address inter-agency transactions.</p> <div style="background-color: black; width: 100%; height: 100%; min-height: 100px;"></div>	<p>Q4 2025</p>
<p>Observation 6 – Automation</p>	<p>Recommendation 6: The UN Women Project Management Office to (a) request that UNDP implement the use of automation tools such as ARCS to help increase the efficiency and effectiveness of reconciliation activities, or document the reasons for not choosing to implement</p>	<p>Quantum Project Management</p>	<p>Medium</p>	<p>Agreed: UN Women will explore the different tools available and whether the implementation is beneficial and cost effective for</p>	<p>Dependent on UNDP</p>



Issue	Recommendation	Responsible Unit	Priority	Action Plan	Suggested Implementation date
	the tools; and (b) subsequently improve the process with these tools to support more frequent reconciliation activities.	Office in coordination with FMS		UN Women. The timelines for this exploration and potential implementation will depend on the UNDP and the support of partner agencies to ensure cost minimization for UN Women.	
Observation 7 – Change Management	<p>Recommendation 7: To improve Quantum based Second Line oversight, UN Women should consult with UNDPs’ BMS to implement RMC to proactively inform management of risks and changes to key application configurations; and perform a risk-based review of key configurations and features in Quantum and enable effective ways of monitoring them. UNDP should work across partner agencies and determine the key configurations and Quantum elements that must be tracked and how they will be tracked.</p>	Quantum Project Management Office with heavy dependency on UNDP	Medium	<p>Agreed: UN Women supports the implementation of the Risk Management function in Quantum (or any alternate solution), preferably jointly with other Partner agencies, and therefore request that the implementation be led by UNDP rather than each Agency individually, to minimize costs for UN Women.</p> <p>UN Women has already expressed interest in the implementation of RMC (Risk Management Cloud), jointly with other Partner Agencies.</p> <p>While we own licenses for this module, it is complex to configure and currently unknown whether it supports UN Women business needs. UN Women will request UNDP to demonstrate the functionality of RMC to all Partner Agencies and if found suitable to implement it. To minimize costs, we suggest a joint implementation with UNDP and other Partner Agencies.</p> <p>Given the complexity of this module, we would not expect an implementation prior to 2026.</p>	Dependent on UNDP
Observation 8 – [REDACTED]	Recommendation 8: [REDACTED]	DMA (FMS and Procurement)	High	[REDACTED]	Q3 2025

Issue	Recommendation	Responsible Unit	Priority	Action Plan	Suggested Implementation date
Observation 9 - Integrations	<p>Recommendation 9: To enhance integrity of inter-agency postings, the BMS through the CFO and the CTO should work with partner agencies to:</p> <ul style="list-style-type: none"> <li>Set timelines and measurable outcomes to streamline the inter-agency posting process and reduce the value and volume of transactions to be investigated; and</li> <li>Ensure the process is implemented within defined timeline.</li> </ul>	UNDP	Medium	This is a UNDP-initiated action.	N/A
Observation 10 – Receiving controls	Recommendation 10: The UNDP has already raised this issue with Oracle.	UNDP	Medium	This is a UNDP-initiated action.	N/A
Observation 11 – Talent Acquisition	<p>Recommendation 11: To enhance the perceived safety of Quantum, data protection statements should be configured as part of recruiting notifications.</p> <p>Personal data privacy is an important issue with implications for personnel, and other citizens engaged in recruitment processes managed using Quantum.</p>	UNDP	Medium	This is a UNDP-initiated action.	N/A
Observation 12 – Security and Governance	<p>Recommendation 12:</p>	DMA, with heavy dependency on UNDP	Medium		N/A

# ANNEX 1: DEFINITIONS OF AUDIT TERMS, RATINGS AND PRIORITIES

## A. AUDIT RATINGS

<b>Satisfactory</b>	The assessed governance arrangements, risk management practices and controls were adequately established and functioning well. Issues identified by the audit, if any, are unlikely to affect the achievement of the objectives of the audited entity/area.
<b>Some Improvement Needed</b>	The assessed governance arrangements, risk management practices and controls were generally established and functioning but need some improvement. Issues identified by the audit do not significantly affect the achievement of the objectives of the audited entity/area.
<b>Major Improvement Needed</b>	The assessed governance arrangements, risk management practices and controls were established and functioning, but need major improvement. Issues identified by the audit could significantly affect the achievement of the objectives of the audited entity/area.
<b>Unsatisfactory</b>	The assessed governance arrangements, risk management practices and controls were either not adequately established or not functioning well. Issues identified by the audit could seriously compromise the achievement of the objectives of the audited entity/area.

## B. PRIORITIES OF AUDIT RECOMMENDATIONS

<b>High (Critical)</b>	Prompt action is required to ensure that UN Women is not exposed to high risks. Failure to take action could result in major negative consequences for UN Women.
<b>Medium (Important)</b>	Action is required to ensure that UN Women is not exposed to risks. Failure to take action could result in negative consequences for UN Women.
<b>Low</b>	Action is desirable and should result in enhanced control or better value for money. Low priority recommendations, if any, are dealt with by the audit team directly with the management, either during the exit meeting or through a separate memo subsequent to the fieldwork. Therefore, low priority recommendations are not included in this report.

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DEDICATED TO GENDER EQUALITY  
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A GLOBAL CHAMPION FOR WOMEN  
AND GIRLS, UN WOMEN WAS  
ESTABLISHED TO ACCELERATE  
PROGRESS ON MEETING THEIR NEEDS  
WORLDWIDE.

UN Women supports UN Member States as they set global standards for achieving gender equality, and works with governments and civil society to design laws, policies, programmes and services needed to ensure that the standards are effectively implemented and truly benefit women and girls worldwide. It works globally to make the vision of the Sustainable Development Goals a reality for women and girls and stands behind women's equal participation in all aspects of life, focusing on four strategic priorities: Women lead, participate in and benefit equally from governance systems; Women have income security, decent work and economic autonomy; All women and girls live a life free from all forms of violence; Women and girls contribute to and have greater influence in building sustainable peace and resilience, and benefit equally from the prevention of natural disasters and conflicts and humanitarian action. UN Women also coordinates and promotes the UN system's work in advancing gender equality.



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