



## INTERNAL AUDIT DIVISION

### REPORT 2019/026

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Audit of the Galileo Decommissioning  
Project in the Department of  
Operational Support

Controls over data management and ongoing  
processes related to the Galileo  
Decommissioning Project needed to be  
strengthened

25 April 2019  
Assignment No. AT2018/615/02

# **Audit of the Galileo Decommissioning Project in the Department of Operational Support**

## **EXECUTIVE SUMMARY**

The Office of Internal Oversight Services (OIOS) conducted an audit of the Galileo Decommissioning Project (GDP) in the Department of Operational Support (DOS). The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes in ensuring that GDP was implemented efficiently and effectively. The audit covered the period from January 2017 to June 2018 and included a review of project management and information and communications technology (ICT) support systems.

The audit showed that controls over data management and ongoing processes related to GDP needed to be strengthened.

OIOS made six recommendations. To address the issues identified in the audit, the Logistics Division of DOS needed to:

- In collaboration with missions with blocked material master records, unblock access to material master records as required;
- In coordination with the Umoja Office: (a) analyze user requirements for supply chain business intelligence reports; (b) design and deploy the required data cubes and complete the semantic layer in Umoja for downstream supply chain processes; and (c) develop appropriate business intelligence reports on supply chain management for end users in the areas of assets, inventory and equipment;
- Ensure that all missions complete post go-live Galileo decommissioning cleanup activities for asset, inventory, and procurement data in Umoja;
- Review all product identity numbers (PIDs) that were added during the GDP and remove those that are no longer needed; and
- Review the blackout transactions for the GDP to confirm that missions have entered all the data in Umoja.

The Procurement Division of DOS needed to:

- Formalize and establish a long-term policy regarding PIDs and the use of generic PIDs.

DOS accepted the recommendations and has initiated action to implement them.

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# **Audit of the Galileo Decommissioning Project in the Department of Operational Support**

## **I. BACKGROUND**

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the Galileo Decommissioning Project (GDP) in the Department of Operational Support (DOS).
2. The audit was conducted prior to the implementation of management reform in the United Nations Secretariat in January 2019. At the time of audit, the former Department of Field Support (DFS) provided administrative and logistical support services to peacekeeping and special political missions which included services in the areas of human resources, finance and budget, conduct and discipline, logistics, and information and communications technology (ICT).
3. The Galileo inventory management system was an in-house application hosted in the United Nations Global Service Centre (UNGSC), Brindisi. It was used by peacekeeping and special political missions for inventory, warehouse, asset, equipment and fleet management prior to the implementation of Umoja, which is the enterprise resource planning solution of the United Nations Secretariat.
4. Delays in deployment of the asset management functionality in Umoja required the implementation of a transitional measure to calculate the opening balances of assets under the International Public Sector Accounting Standards (IPSAS). Accordingly, Galileo was used as an interim system of record for peacekeeping assets, inventory and equipment. This included an interim interface between Galileo and Umoja until the full functionality became available in Umoja.
5. GDP started in December 2015 with DFS establishing a project team in New York and a data factory team in UNGSC, Brindisi to manage the project and coordinate the data clean-up processes in field missions in preparation for data conversion to Umoja. Missions were provided instructions and were responsible for their own data clean-up activities. The decommissioning of the Galileo system was to be completed by 1 September 2017.
6. Galileo also provided essential data for the Umoja supply chain management functionality which was essential for providing the foundational data and base functionality for the Organization to pursue advanced end-to-end supply chain planning.
7. Decommissioning the Galileo system in the field and introducing the Umoja supply chain management functionality involved substantial change management. It affected nearly 5,000 users across peacekeeping and special political missions supporting critical functions. As of September 2017, the total expenditure on GDP was \$7.7 million.
8. Comments provided by DOS are incorporated in italics.

## **II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY**

9. The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes in ensuring that GDP was implemented efficiently and effectively.

10. This audit was included in the 2018 risk-based work plan of OIOS due to the risk that potential weaknesses in implementing GDP may have an adverse impact on the deployment of the supply chain module of Umoja.

11. OIOS conducted this audit from September to December 2018. The audit covered the period from January 2017 to June 2018. Based on an activity-level risk assessment, the audit covered risk areas which included project management and ICT support systems. OIOS selected the United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA) as the field mission for detailed review in the context of GDP. MINUSCA operates in a remote and logistically challenging location with \$29.4 million worth of expendable items and \$25.6 million worth of assets and equipment in stock as of June 2018.

12. The audit methodology included: (a) interviews with key personnel at Headquarters in New York, the GDP team in UNGSC, Brindisi, and MINUSCA in Bangui; (b) review of relevant documentation; (c) analytical review of data; and (d) tests of controls.

13. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

### **III. AUDIT RESULTS**

#### **A. Project management**

##### Material master records that were blocked from use need to be reviewed and unblocked

14. Best practices for go-live of a system entail the identification of acceptable thresholds for the project to be successful and for accurate data to be moved into the production environment (this is known as the Go/No-Go criteria which is evaluated as part of execution cutover). All parties involved should agree that acceptable thresholds have been met prior to go-live.

15. Galileo decommissioning go-live was scheduled for September 2017. The GDP team had issued various instructions to all missions in order to accomplish the go-live date, which included the requirement that the inventory holdings recorded in Galileo be extracted, cleansed, enriched and prepared for loading into Umoja accurately to ensure a smooth transition, and for full IPSAS reporting capabilities by the scheduled date.

16. The decision to go-live considered that most missions had completed the required data conversion tasks and were prepared to go-live, even though 14 out of 29 missions still required additional cleanup. However, the GDP team decided not to jeopardize the go-live date of 1 September 2017 because the date had been specified in the Eighth Progress Report on Umoja and was therefore a deadline that could not be moved. The GDP team implemented mitigating measures to temporarily block certain material master records (i.e. Product IDs) from being used in Umoja if adequate cleanup had not been performed. This block was instituted to preserve data integrity in Umoja, and missions were expected to complete the clean up after go-live. A total of 58,792 'non-standardized' material master records were blocked from future procurement activity.

17. OIOS noted that there were inaccurate, missing or blocked records related to inventory items in Umoja that still existed more than a year after going live. Therefore, the decision to go live, being mindful of the risks in data quality for inventory and procurement in some missions, caused delays in inventory management and requisitioning tasks including the inability to: (a) record inventory items received by the

mission warehouse into Umoja; (b) track and verify inventory items; and (c) raise new requisitions with the blocked material master records. This issue needs to be addressed to avoid possible errors and omissions in inventory verification, and inaccurate supply and demand planning.

**(1) The Logistics Division of DOS, in collaboration with missions with blocked material master records, should complete data clean up and unblock access to material master records as required.**

*DOS accepted recommendation 1 and stated that the use of temporary material master records, blocked for future procurement, was among the strategies for data migration from Galileo to Umoja for expendable property. The intention was to eventually phase these temporary material masters out of Umoja through consumption and replacement. The pace for phasing out these materials would depend on the rate of inventory turnover in the missions. DOS further stated that it had initiated a “Physical Inventory Reconciliation and Optimization project” which will provide better visibility of the status by the second quarter of 2019. Recommendation 1 remains open pending receipt of evidence that temporarily blocked material master records have been cleaned and unblocked as required.*

Gaps in business intelligence reporting need to be addressed

18. To facilitate effective decision making, business intelligence (BI) reports must be available to users who must be trained in how to use the reports, and the BI reports should be developed from a data source in which hierarchies and aggregations have been created in advance to be able to extract data.

19. The Umoja project had previously implemented a semantic layer (a component of business intelligence architecture that provides a translation of the underlying database structures into business user-oriented terms and constructs) for finance and human resources. However, a semantic layer for supply chain management was only completed for procurement data and did not include data for all of the supply chain downstream processes, and there were no plans to implement such a layer.

20. OIOS noted that there were a few BI reports developed for users following the GDP project. The GDP team stated that it was unable to build adequate BI reports for the end users due to the lack of BI data cubes and the lack of a semantic layer for supply chain data. OIOS also noted the following:

- (a) Some users were unable to generate BI reports due to lack of job aids and training, and some were not aware the reports existed.
- (b) The users who did know how to use the BI reports stated that the reports did not suit their needs, as user requirements for BI reports were not adequately assessed and captured.

21. The lack of adequate BI reports for users, and lack of job aids and training on supply chain BI reports prevented the availability and effective use of reports for management and decision making.

**(2) The Logistics Division of DOS, in coordination with the Umoja Office, should: (a) analyze user requirements for supply chain business intelligence reports; (b) design and deploy the required data cubes and complete the semantic layer in Umoja for downstream supply chain processes; and (c) develop appropriate business intelligence reports on supply chain management for end users in the areas of assets, inventory and equipment.**

*DOS accepted recommendation 2 and stated that it is preparing to release a complete set of Umoja BI reports supporting the Supply Chain Performance Management Framework, which comprises of*

*19 BI reports and analysis workspaces, as well as three additional analysis workspaces with data to support supply chain management of downstream supply chain processes, such as equipment holdings, inventory holdings, write-off activity, IPSAS fixed asset valuation and operational valuation of inventory, and non-fixed assets. Recommendation 2 remains open pending receipt of evidence that: (a) user requirements for supply chain BI reports have been analyzed; (b) the required data cubes and complete the semantic layer in Umoja for downstream supply chain processes have been designed and deployed; and (c) appropriate BI reports for supply chain management for end users in the areas of assets, inventory and equipment have been developed.*

## **B. ICT support systems**

### Controls over data management need to be strengthened

22. The accuracy and completeness of data converted from one system to another is critical in preventing errors and omissions in operational processes and financial reporting.

23. Missions were provided a data mapping tool to clean, collect and map data in preparation for the Galileo to Umoja conversion. A data factory team was established in UNGSC Brindisi to coordinate the data clean-up process with the various missions. There were three mock conversions and a dress rehearsal between February and July 2017. The data to be cleaned included items such as functional location mapping, business partners, product identity numbers (PID), moving average prices, and units of measure. In addition, missions were required to verify procurement data (purchase orders) to be converted and the associated clean-up of those purchase orders.

24. Although the Galileo project teams at Headquarters and Brindisi data factory had provided data clean up tools and guidance for data clean up, some mission teams did not effectively use the data clean-up tool. Consequently, not all purchase orders in Galileo were verified, which resulted in data conversion gaps. OIOS also noted the following with regard to post-converted data in Umoja:

- (a) Master data and material master post-facto GDP data conversion issues (which can affect accurate inventory valuation and therefore, financial reporting), such as:
- Inaccurate moving average prices for inventory (e.g., various dimensions of timber with wide variance in price categorized as the same PID).
  - Inaccurate units of measure (e.g., nails show Each (EA) as a baseline unit of measure whereas kilogram (KG) or packet/box would be most appropriate; wires have EA as a unit of measure whereas meter or roll would be most appropriate; some items were exactly the same but had different units of measure assigned).
- (b) Some existing data issues in Galileo were not addressed and were migrated into Umoja and caused data integrity issues. The following examples of data integrity issues in Umoja were noted:
- Equipment valued over the capitalization threshold not classified as assets (missing asset IDs)
  - Useful life data in asset records showing 999
  - Missing cost centers in asset records
  - Generic PIDs being used for specific categories that cause significant problems (e.g. timber, spare parts, medical supplies, engineering supplies)
  - Asset records that reflect incorrect corresponding materials
  - Purchase orders that needed generic PID cleanup.

25. There were gaps in data reference integration which occurred in Umoja after Galileo data conversion that also caused data inaccuracies, including:

- (a) New Umoja transactions that were processed after go-live that relied on data reference fields to be complete and correct in the system. However, because missions did not always clean-up data prior to migration, it resulted in some missing reference data (i.e. asset records not having correct cost centre data).
- (b) When missions did not complete their data clean-up as required during the data clean-up phase, the data factory in Brindisi had to use institutional knowledge, intuition, and research to make their best guess and decisions regarding certain data elements. The data factory team also had to make extensive use of generic PIDs in order to finish the conversion on time. Thus, the data enriched in such circumstances was not always accurate when migrated to Umoja, even though the data owners signed off on the data to be converted.

26. Inadequate control over data management during data conversion and data migration activities caused incomplete data reference fields and data integrity issues in Umoja. These gaps need to be addressed to assure accurate asset and inventory valuation, visibility over inventory holdings, and accurate demand and budget planning.

**(3) The Logistics Division of DOS should ensure that all missions complete post go-live Galileo decommissioning cleanup activities for asset, inventory, and procurement data in Umoja.**

*DOS accepted recommendation 3 and stated that it undertook an inventory data clean up between December 2017 and July 2018 as part of post-go-live stabilization activity, which corrected 3,879 lines of inventory data with total initial value of \$23,629,323 and as a result of lessons learned and data analysis from the inventory clean up, the Physical Inventory Reconciliation and Optimization project was launched in October 2018 to address similar asset and inventory data quality issues. Recommendation 3 remains open pending receipt of evidence that all missions have completed post go-live Galileo decommissioning cleanup activities for asset, inventory, and procurement data in Umoja.*

Need to address the use of generic PIDs in Umoja

27. Best practices for procurement include having an online catalog of goods and services, and approved lists of products and contracts with preferred vendors to ensure efficient procurement processes and effective economies of scale. PIDs and the ability of end users to properly select the appropriate products is crucial to this process.

28. The Procurement Division (PD) and the Logistics Division (LD) were in the process of establishing a policy for PIDs that included: (a) looking at high priority items and creating product IDs for those items only; (b) using system contracts and local contracts as much as possible; and (c) utilizing generic product IDs for consumption materials that do not go into inventory. LD had proposed material master transformation utilizing other functionalities of Umoja to manage process-related specifics in the use of PIDs.

29. OIOS noted the following with regard to the use and management of PIDs:

- (a) The use of generic PIDs in Umoja continued to be an issue for PD, LD, and missions. GDP identified the need for more than 50,000 new PIDs that had been added to minimize the use of generic PIDs which had caused problems in the shopping cart and procurement fulfilment processes.



(b) The use of generic PIDs caused problems for items where the category of goods and their sizes or components varied greatly within the types of those goods (as in the case of timber, spare parts, medical supplies and engineering items). Also, some new contracts still had old PIDs on them and prior to go-live, some offices had ordered items with the old PID.

(c) Lack of appropriate PIDs caused backlogs and operational delays, which led to the creation of PIDs during the GDP without a PID policy for ensuring structured and consistent use. There is a need to reassess how PIDs are created as a proper structured record and enriched with additional data elements to support both the downstream and upstream processing of supply chain transactions.

30. According to the shopping cart process in Umoja (requisitioning), Umoja role of shopping cart approver (SA.07) is responsible for reviewing all procurement requests and establishing the need for the requested items. Also, critical steps in the shopping cart process must be performed properly to ensure that downstream processes are not negatively impacted. In this regard, OIOS noted the following regarding the shopping cart/requisition process:

(a) Some of the issues related to inaccurate assets and inventory data could be traced to the shopping cart process where users selected the wrong PIDs or inappropriate generic PIDs, which impacted the entire process.

(b) Shopping cart certifying officers and procurement officers did not also check that the appropriate PID has been selected (this drives the accounting entries and ultimately determines proper financial reporting).

(c) The original requestor did not have visibility into what was ordered and whether or not it was correct until they received the item, and many times the item was not what they ordered.

(d) Some of the old Umoja training materials relating to the shopping cart process encouraged users to use generic PIDs, which now is not the preferred process for missions, given that thousands of PIDs have been added since GDP go-live.

31. The efficiency of the shopping cart process and monitoring of shopping carts in Umoja would be enhanced by formalizing a long-term policy regarding the use of accurate PIDs.

**(4) The Procurement Division of DOS should formalize and establish a long-term policy regarding product IDs and the use of generic product IDs.**

*DOS accepted recommendation 4 and stated that the architecture of PID (material master record) is currently being reviewed and redesigned to be optimized for advanced planning functionalities and Umoja Extension 2 processes. DOS further stated that the process to transform the material master architecture, which includes updated policies and governance, will require multiple new releases of enhanced PIDs, with full transformation targeted for completion by December 2023. Recommendation 4 remains open pending receipt of evidence that a long-term policy regarding PIDs and the use of generic PIDs has been formalized and established.*

**(5) The Logistics Division of DOS should review all product IDs that were added during the Galileo Decommissioning Project and remove those that are no longer needed.**

*DOS accepted recommendation 5 and stated that it has already begun a review of PIDs (material master records) with category managers for PIDs that are not needed. A complete review will be*

*completed during the first quarter of 2020 to be followed by corrective actions. DOS further stated that continuous review will be part of good management practice in ongoing material master cleansing and maintenance. Recommendation 5 remains open pending receipt of evidence that all PIDs that were added during the GDP have been reviewed and the ones that are no longer needed have been removed.*

#### Blackout data records needed to be entered into the Umoja system

32. In accordance with the 'Galileo and Umoja Blackout Instructions' sent to all missions from the GDP team on 2 August 2017, missions were required to capture the various business transactions for which the system would not be available during cutover. These transactions included items such as goods receipts, warehouse movement, returns to stock, receipt and inspection, and issuing goods from inventory. Blackout forms were provided to missions to record these transactions and missions were instructed to enter these transactions into Umoja post go-live.

33. OIOS' review of the blackout process established by the GDP and its implementation in MINUSCA indicated that 27 items documented from the blackout period were only entered in Umoja during the audit (over a year since go-live). Although there was an overall management process for blackout data for the GDP project, there was no mechanism at Headquarters to check the completeness and accuracy of blackout data to ensure that all missions had entered their blackout data into Umoja as required. DOS needs to ensure that the blackout data is accurate and complete to assure the accuracy of financial reporting.

**(6) The Logistics Division of DOS should review the blackout transactions for the Galileo Decommissioning Project to confirm that missions have entered all the data in Umoja.**

*DOS accepted recommendation 6 and stated that during the blackout and post-going live period of the GDP, black-out forms were tracked using an online tool to ensure the completion of all blackout transactions in Umoja. DOS further stated that LD will take steps to confirm with missions that there are no unrecorded or off-line transactions. Recommendation 6 remains open pending receipt of evidence that all mission blackout transactions for the GDP have been entered in Umoja and confirmed by DOS.*

#### User role mapping and segregation of duties related to GDP was generally adequate

34. Access to Umoja should be restricted in accordance with users' functional roles and responsibilities. In addition, the Umoja Office developed guidance materials such as an enterprise role guide and Security Liaison Officer (SLO) workbook detailing the process and requirements for assignment of the type and level of access for Umoja users.

35. OIOS reviewed the enterprise role mapping process and documentation that was provided to the missions for the GDP, including instructions and related forms to complete. OIOS also reviewed role mapping at MINUSCA and noted the following:

- (a) MINUSCA completed the steps instructed by the GDP team, and completed the analysis of Galileo user access and provided the requested information on the assignment of user roles in Umoja. However, OIOS noted that there were many incidents related to user access and GDP roles during the first month of post go-live, whereby some users could not access or perform certain functions in Umoja. The review also showed that these incidents were resolved in a timely manner; and

- (b) OIOS' review of user roles and assignments for a sample of five missions in Umoja found no conflicts with the segregation requirements set forth in the Umoja Security Liaison Manual.

Production support for GDP was generally adequate

36. An ICT service management framework should define the level of support required for the continuous and reliable functioning of ICT operations. The framework should detail the criteria and processes to document the required service levels. The framework should also specify the roles, tasks, and responsibilities of the service providers.

37. OIOS assessed the effectiveness of the production support process for GDP including: (i) incidents and requests; (ii) escalation process; (iii) resolution; and (iv) closure. The service management framework for GDP followed the same iNeed production support requirements already in place for missions and the UNGSC in Brindisi and Valencia.

38. OIOS reviewed Tier 3 (escalated) incident tickets related to GDP from September 2017 through December 2018 and noted that the number of tickets related to GDP post go-live significantly decreased after the first 2 months of go-live and there were no significant GDP issues being reported in the later months.

39. OIOS noted that the ticket requests for requesting PIDs had its own process, which was still ongoing at the time of the audit. The process required three levels of approval in PD, including category approval, a second review, and a final approval. The GDP team had handled 27,000 PID requests through this process since go-live at the time of the audit.

40. OIOS analysis of the GDP production support process, incident tickets and the PID request process showed the processes were generally adequate, therefore OIOS did not make a recommendation in this area.

#### **IV. ACKNOWLEDGEMENT**

41. OIOS wishes to express its appreciation to the management and staff of DOS and MINUSCA for the assistance and cooperation extended to the auditors during this assignment.

*(Signed)* Eleanor T. Burns  
Director, Internal Audit Division  
Office of Internal Oversight Services

## STATUS OF AUDIT RECOMMENDATIONS

### Audit of the Galileo Decommissioning Project in the Department of Operational Support

Rec. no.	Recommendation	Critical <sup>1</sup> / Important <sup>2</sup>	C/ O <sup>3</sup>	Actions needed to close recommendation	Implementation date <sup>4</sup>
1	The Logistics Division of DOS, in collaboration with missions with blocked material master records, should complete data clean up and unblock access to material master records as required.	Important	O	Receipt of evidence that temporarily blocked material master records have been cleaned and unblocked as required.	30 June 2020
2	The Logistics Division of DOS, in coordination with the Umoja Office, should: (a) analyze user requirements for supply chain business intelligence reports; (b) design and deploy the required data cubes and complete the semantic layer in Umoja for downstream supply chain processes; and (c) develop appropriate business intelligence reports on supply chain management for end users in the areas of assets, inventory and equipment.	Important	O	Receipt of evidence that: (a) user requirements for supply chain BI reports have been analyzed; (b) the required data cubes and complete the semantic layer in Umoja for downstream supply chain processes have been designed and deployed; and (c) appropriate BI reports for supply chain management for end users in the areas of assets, inventory and equipment have been developed.	30 June 2019
3	The Logistics Division of DOS should ensure that all missions complete post go-live Galileo decommissioning cleanup activities for asset, inventory, and procurement data in Umoja.	Important	O	Receipt of evidence that all missions have completed post go-live Galileo decommissioning cleanup activities for asset, inventory, and procurement data in Umoja.	31 December 2019
4	The Procurement Division of DOS should formalize and establish a long-term policy regarding product IDs and the use of generic product IDs.	Important	O	Receipt of evidence that a long-term policy regarding PIDs and the use of generic PIDs has been formalized and established.	31 December 2023
5	The Logistics Division of DOS should review all product IDs that were added during the Galileo Decommissioning Project and remove those that are no longer needed.	Important	O	Receipt of evidence that all PIDs that were added during the GDP have been reviewed and the ones that are no longer needed have been removed.	31 March 2020
6	The Logistics Division of DOS should review the blackout transactions for the Galileo Decommissioning Project to confirm that missions have entered all the data in Umoja.	Important	O	Receipt of evidence that all mission blackout transactions for the GDP have been entered in Umoja and confirmed by DOS.	31 December 2019

<sup>1</sup> Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

<sup>2</sup> Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

<sup>3</sup> C = closed, O = open

<sup>4</sup> Date provided by DOS in response to recommendations.

# **APPENDIX I**

## **Management Response**



UNCLASSIFIED

Immediate

DATE: **APR 18 2019**

REFERENCE: DOS-2019-02585

TO: Mr. Gurpur Kumar, Deputy Director  
A: Internal Audit Division, Office of Internal Oversight Services

THROUGH:  
S/C DE:

A handwritten signature in black ink, appearing to be 'Atul Khare', written over a horizontal line.

FROM: Atul Khare, Under-Secretary-General  
DE: for Operational Support

SUBJECT: **Audit of the Galileo Decommissioning Project in the Department of Operational Support (Assignment No. AT2018/615/02)**  
OBJET:

1. I refer to your memorandum, dated 4 April 2019, regarding the draft report on the above-mentioned audit.
2. As requested, please find our comments attached herewith as Annex I.
3. Thank you for the opportunity to comment on the draft report. We stand ready to provide any further information that may be required.

cc: Cynthia Avena-Castillo

### Management Response

#### Audit of the Galileo Decommissioning Project in the Department of Operational Support

Rec. no.	Recommendation	Critical <sup>1</sup> / Important <sup>2</sup>	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	The Logistics Division of DOS, in collaboration with missions with blocked material master records, should complete data clean up and unblock access to material master records as required.	Important	Yes	Chief/UCS/ LD/OSCM/DOS	Second quarter of 2020	The Department of Operational Support's (DOS') comments are reflected in the report. The Department, however, requests that the latter part of the ultimate sentence of its earlier comments be deleted from the report.
2	The Logistics Division of DOS, in coordination with the Umoja Office, should: (a) analyze user requirements for supply chain business intelligence reports; (b) design and deploy the required data cubes and complete the semantic layer in Umoja for downstream supply chain processes; and (c) develop appropriate business intelligence reports on supply chain management for end users in the areas of assets, inventory and equipment.	Important	Yes	Chief/UCS/ LD/OSCM/DOS	Second quarter of 2019	DOS' comments are reflected in the report.
3	The Logistics Division of DOS should ensure that all missions complete post go-live Galileo decommissioning cleanup activities for asset, inventory, and procurement data in Umoja.	Important	Yes	Chief/UCS/ LD/OSCM/DOS	Fourth quarter of 2019	DOS' comments are reflected in the report. The Department, however, requests that the ultimate sentence of its earlier comments be deleted from the report.
4	The Procurement Division of DOS should formalize and establish a long-term policy regarding product IDs and the use of generic product IDs.	Important	Yes	Director/PD/OSCM/ DOS and Chief/UCS/ LD/OSCM/DOS	Fourth quarter of 2023	DOS' comments are reflected in the report.

<sup>1</sup> Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

<sup>2</sup> Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

**Management Response**

**Audit of the Galileo Decommissioning Project in the Department of Operational Support**

5	The Logistics Division of DOS should review all product IDs that were added during the Galileo Decommissioning Project and remove those that are no longer needed.	Important	Yes	Chief/UCS/ LD/OSCM/DOS	First quarter of 2020	DOS' comments are reflected in the report.
6	The Logistics Division of DOS should review the blackout transactions for the Galileo Decommissioning Project to confirm that missions have entered all the data in Umoja.	Important	Yes	Chief/UCS/ LD/OSCM/DOS	Fourth quarter of 2019	DOS' comments are reflected in the report. The Department, however, requests that the ultimate sentence of its earlier comments be deleted from the report.