



INTERNAL AUDIT DIVISION

REPORT 2020/059

Audit of demand and source planning in the United Nations Secretariat

While there was enhanced visibility of global requirements for goods and services, the accuracy and effectiveness of the annual demand and source planning process needed to be improved

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Audit of demand and source planning in the United Nations Secretariat

EXECUTIVE SUMMARY

The Office of Internal Oversight Services (OIOS) conducted an audit of demand and source planning in the United Nations Secretariat. The objective of the audit was to assess the adequacy and effectiveness of activities and information management systems used to develop demand and source plans as part of the supply chain management process. The audit covered the period from 1 January 2018 to 31 March 2020 and included, based on an activity-level risk assessment, higher and medium risk areas related to: accuracy of the global demand and source plan and underlying information; efficiency and effectiveness of the demand and source planning; and effectiveness of performance and risk management.

Supply chain planning is still evolving in the Secretariat and the progress to date has enabled the Department of Operational Support (DOS) to gain enhanced visibility of field missions' requirements of goods and services. However, more effort was needed to engender the necessary change for missions to start developing more realistic demand plans based on an appropriate forecasting model and quantitative and qualitative analyses, and to start developing their budget proposals from those plans. The granularity of the plans also needed to be improved so that they can be effectively used for acquisition and delivery planning and category management. This was hampered by insufficient training of field staff and inadequate material master data architecture. High year-end purchases, suboptimal use of internal sourcing options and system contracts impacted the effective implementation of sourcing plans. Other initiatives such as strategic supply chain planning, rolling demand plans, and performance management were yet to be fully implemented.

OIOS made nine recommendations. To address issues identified in the audit, DOS needed to:

- Improve, in consultation with field missions, the granularity of demand plans;
- Strengthen change management initiatives to ensure that annual demand planning by field missions is data-driven;
- Develop suitable methodology to calculate the forecasting accuracy of demand plans;
- Build capacity of staff involved in developing demand plans and updating relevant systems;
- Complete the material master transformation project to improve the granularity and applicability of material master data;
- Improve management of product identification numbers;
- Expand the range of services whose replacement contracts are being monitored by the solicitation schedule;
- Conduct strategic supply chain planning for longer-term requirements and build capacity to implement rolling demand plans that are adjusted based on evolving operational requirements; and
- Establish key performance indicators for the supply chain planning function.

DOS accepted the recommendations and initiated action to implement them.

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Audit of demand and source planning in the United Nations Secretariat

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of demand and source planning in the United Nations Secretariat.

2. The United Nations introduced the supply chain management (SCM) process in 2015, and for it to be effective, it needs to begin with accurate and reliable supply chain planning, which consists of demand, source and delivery planning. Demand planning involves peace operations developing plans/forecasts of their requirements for goods and services for the ensuing fiscal year, based on needs identified to support mandate implementation. Individual mission plans are aggregated into a global demand plan for peace operations by the United Nations Global Service Centre (UNGSC) in Brindisi after preliminary review of accuracy and completeness of data. The proposed modalities for fulfilling the demand requirements are prioritized through source planning, including: (a) redeployment of existing inventory from other missions or reserve holdings (through a clearing house function); (b) placing of orders against existing regional or system contracts; and/or (c) establishment of new contracts by the procurement function at the mission, the Regional Service Centre in Entebbe or the Procurement Division at Headquarters.

3. Since 2018/19, field missions, using a web-based Demand and Acquisition Planning (DAP) tool, have been capturing the necessary data to develop their annual demand plans. The global demand and source plan for 2018/19 included demand requirements for 13 peacekeeping missions for 10,362 individual items of goods and services totaling \$2.34 billion. In 2019/20, the global demand and source plan included 9,066 individual items of goods and services totaling \$2.17 billion for 13 peacekeeping missions, UNGSC and to replenish the strategic deployment stock (SDS).

4. The Supply Chain Planning Service (SCPS) in the Logistics Division (LD) of the Office of Supply Chain Management (OSCM) in the Department of Operational Support (DOS) manages the integrated supply chain planning function. The Service provides guidance to field missions and coordinates cross-functional reviews of the aggregated demand and source plans with various stakeholders including procurement officers and category managers to verify the underlying data and enhance the quality. The guidance includes: (a) SCM Blueprint, (b) provisional Supply Chain Operational Guidance (SCOG), (c) standard operating procedures for global supply chain, and (d) various other related instructions and memoranda issued from time to time.

5. Supply chain planning is still evolving in the Secretariat and is yet to be rolled out to non-peace operations. When fully established and properly implemented, it is expected to result in: (a) more accurate indication of entities' demand requirements to be reflected in their proposed budgets; (b) more effective use of inventories already held throughout the Secretariat including SDS and limit stock obsolescence; (c) aggregation of requirements to achieve economies of scale; and (d) better streamlined procurement actions and limited use of exceptions such as sole sourcing, urgent and ex post facto procurement.

6. While responsibility for the preparation of accurate demand plans, implementation of supply chain initiatives and ownership of risks lie with individual field missions, DOS plays a critical enabling function and second line of defense role by providing guidance, capacity development, risk management and monitoring for successful implementation of supply chain to achieve the intended benefits. The Business Transformation and Accountability Division (BTAD) in the Department of Management Strategy, Policy and Compliance (DMSPC) has an overarching role to monitor and strengthen Organization-wide performance and accountability. Therefore, it works with DOS to develop key performance indicators (KPIs) to measure and manage performance related to demand, source and delivery planning, among others.

7. SCPS is headed by the Chief of Service at the D-1 level who reports to the Director of LD. The Service comprises the Demand, Source, and Delivery Planning units, each of which is headed by a staff at P-4 level. As at 31 March 2020, SCPS had 17 budgeted posts, 14 of which were encumbered.

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 activities and information management systems used to develop demand and source plans as part of the supply chain management process. The audit focused on demand and source planning for peace operations and addressed three main audit questions:

- (a) How accurate are the demand plans and the information used for demand planning purposes?
- (b) How efficient and effective are the demand and source planning processes and clearing house function?
- (c) How effective is the performance and risk management of the supply chain planning function?

10. This audit was included in the 2020 risk-based work plan of OIOS due to the financial and operational risks related to the demand and source planning function of the United Nations Secretariat. The General Assembly in its resolution 72/266 B of 5 July 2018 requested the Secretary-General to entrust OIOS with continuing to monitor United Nations procurement and report thereon biennially. The Secretary-General's latest report on the procurement activities in the United Nations Secretariat (A/73/704) was issued on 10 January 2019. The Advisory Committee on Administrative and Budgetary Questions indicated that the report on procurement activities lacked an adequate level of detail and analysis in terms of acquisition planning and demand analysis (past and present) to serve as the basis on which a procurement strategy would be established. In the light of above, an audit on demand and source planning was selected for reporting to the General Assembly.

11. OIOS conducted this audit from December 2019 to August 2020. The audit covered the period from 1 January 2018 to 31 March 2020.

12. The audit methodology included: (a) interviews of key officials in SCPS and LD, Umoja Coordination Services, Procurement Division and UNGSC; (b) review of procedures, records and data in LD and UNGSC; and (c) reconciliation of relevant data across data sources including Umoja, DAP tool, online catalogue, and Power BI dashboards.

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

III. AUDIT RESULTS

A. Accuracy of demand and source plans

There was enhanced visibility of global annual demand and source plans

14. DOS implemented several initiatives to improve visibility of global requirements of goods and services by peace operations. The introduction of the DAP tool to capture demand data has facilitated collection and consolidation of field missions' annual requirements of goods and services in a structured manner. Since its introduction, the tool has been enhanced to improve the quality of data captured and to

better identify and analyze requirements that can be fulfilled through a new procurement exercise or from an existing contract. The global annual demand and source plans were also segmented into major categories of products, which allows for cross-functional reviews by various stakeholders including supply chain planners and category managers specialized in their respective product categories¹. The online catalogue of system contracts provides users with full visibility of available global and regional contracts. Integrated business planning (IBP) meetings provide a forum for supply chain stakeholders in field missions and at Headquarters to better coordinate and address various issues related to demand and supply. DOS also created a dashboard using Microsoft Power BI to further enhance the visibility of the global demand plan. Despite these achievements, the audit indicated a need to further improve the accuracy and effectiveness of global annual demand and source planning as discussed in this report.

Granularity and forecasting accuracy of global annual demand plans needed improvement

15. The accuracy of global annual demand plans is critical to properly identify, prioritize, and aggregate Secretariat-wide requirements of goods and services to achieve economies of scale and optimize sourcing options. Accuracy is dependent on having an appropriate forecasting model and conducting adequate quantitative and qualitative analyses. DOS was yet to develop a methodology to measure the accuracy of the global annual demand plan, which limited its ability to identify any deficiencies in the planning process and to take corrective actions to achieve the anticipated benefits.

16. A comparison of the requirements in the global annual demand plan for 2018/19 and actual procurement during that year indicated that purchases of \$539 million were made for goods and services that were not forecasted in the demand plan. Conversely, goods and services totaling about \$200 million were not purchased because they were not needed although forecasted. Since SCPS had not adopted and documented an acceptable variance between the annual demand plan and corresponding purchases, OIOS allowed a 20 per cent variance considering the volatility of demand and purchases due to evolving circumstances in peace operations. Despite this allowance, most purchases were in excess of or below the requirements specified in the global demand plan for 2018/19 as shown in Table 1.

Table 1: Comparison of 2018/19 global demand plan and actual purchases (amounts in millions of dollars)

Purchases that were:	Total amount in DAP tool	Number of line items	Line items as a percentage of the total
Below the demand plan	957	5,994	58
Over the demand plan	248	1,242	12
More than double of the demand plan	63	1,717	17
Not purchased although forecasted	2	1,100	10
Accepted under 20 per cent variance	1,071	309	3
Total	2,341	10,362	100

Source: DAP tool and Umoja data

17. Similarly, in 2019/20, purchases amounting to \$166 million were made for goods and services that were not forecasted, while purchases of more than double the planned requirements were made for 2,482 individual items totaling \$328 million.

¹ Through the category management approach, a range of similar or related goods and services that an entity acquires are grouped and managed with greater understanding of both the needs of the clients and the dynamics of the supply markets.

18. These differences indicate that the demand plans did not accurately reflect the requirements of missions and therefore, the resulting source plans may not be useful in facilitating timely procurement of goods and services. The major reasons for such differences are attributable to the following:

(a) Inadequate analyses

19. Field missions did not forecast their requirements based on adequate quantitative and qualitative analyses that included historical demand and consumption patterns, and evolving circumstances in the mission environment including changes in mandates or operational areas; specific planned activities such as elections; or increase or decrease in the number of troops or civilian staff.

(b) Absence of gross demand plan

20. Field missions directly prepared the net demand plan instead of first developing the gross demand plan by identifying requirements for the relevant period and subtracting the projected inventory holdings to derive the net demand plan. The absence of gross demand plans limited useful analytical insights that could be gained by comparing forecasted requirements of similar missions to provide an indication of the reasonableness, accuracy, and efficacy of demand planning.

(c) Inadequate granularity of the demand plan

21. The plans were largely based on dollar amounts and generic descriptions of items. Quantities and subcategories of the goods and services required were not always specified, and field missions were entering various categories of services and turnkey² contracts in the DAP tool as single line items with a quantity of one unit. For example, as shown in Table 2, entries in the DAP tool for services did not specify the units of measurement (in these cases, in terms of number of security guards, number of flight hours or gallons of fuel) to enable more detailed analysis of forecasting accuracy and for other decision-making purposes.

Table 2: Examples of entries in the DAP tool for services (amount in dollars)

Mission	Product description	Product ID	Quantity	Unit Price	Total Cost
UNSOS	Security and personal safety	3000884	1	40,090,000	40,090,000
UNAMID	Helicopter services	3001071	1	8,284,625	8,284,625
MINUSCA	Diesel fuel	3000422	1	7,182,864	7,182,864

Source: 2019/20 DAP tool

Abbreviations: UNSOS, United Nations Support Office in Somalia; UNAMID, African Union - United Nations Hybrid Operation in Darfur; MINUSCA, United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic

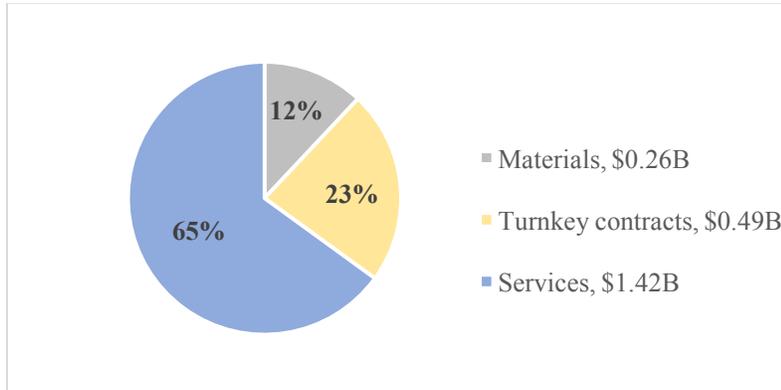
22. In addition, UNSOS included their requirement for fuel totaling \$53 million as a one-line item under a generic product identification (PID), without specifying the subcategory levels of aviation fuel, gasoline, diesel or lubricants, which was used to issue purchase orders. The United Nations Multidimensional Integrated Stabilization Mission in Mali entered their requirement for telephone equipment as one item costing \$2.45 million.

23. Considering that the global demand plan for 2019/20 was composed of 65 per cent services, 23 per cent turnkey contracts and 12 per cent goods as shown in Figure 1, the comparison between the forecasted

² Hybrid of goods and services like fuel and rations, where the contractors are responsible for the supply, storage, and distribution of goods to end users.

requirements and purchases led to significant variances between the demand plan and actual purchases at product category levels and impeded the development of optimal sourcing solutions.

Figure 1: Breakdown of 2019/20 global demand plan (amounts in billions of dollars)



24. Overall, OIOS estimated the forecasting accuracy by missions at the product category level to be about 13 per cent against the target of 80 per cent, after allowing for a 20 per cent deviation.

25. SCPS stated that if the forecasting deviations had been calculated across missions and weighted based on purchases of seven categories of high value commodities that comprised 80 per cent of the demand requirements, then the forecasting accuracy would have been 83 per cent. While confirming the accuracy of the calculation, OIOS is of the opinion that this method of forecasting accuracy lacked specificity and would not allow SCPS to monitor the accuracy of forecasting by mission at product category level, analyze the causes of deviations, and leverage the benefits of the global annual demand, source and delivery plan.

26. There was still a need for a fundamental change of business processes at the entity-level to develop accurate and data-driven demand plans that would accurately forecast requirements based on clearly defined criteria, drive budget formulation and guide the acquisition of required goods and services. This called for additional change management initiatives by DOS as part of its mandate to implement integrated supply chain management in the Secretariat.

(1) DOS should, in consultation with field missions, take measures to improve the granularity of the demand plan and ensure units of measurement for each category of goods and services are recorded, wherever feasible.

DOS accepted recommendation 1 and stated that the issue would be addressed upon technical completion and roll out of the Umoja Extension 2 (UE2) solution for demand and supply network planning (DP/SNP) in 2021 and the introduction of related supply chain processes. Meanwhile, OSCM business guidance for the 2021/22 planning cycle had incorporated instructions to all entities regarding optimal granularity of demand to be developed in DAP tool. Recommendation 1 remains open pending receipt of evidence of improvements in the granularity of demand plans.

(2) DOS should strengthen its change management initiatives to ensure that global annual demand planning by field missions is data-driven and based on adequate quantitative and qualitative analyses.

DOS accepted recommendation 2 and stated that it would strengthen its change management initiatives, including the major change associated with the Umoja DP/SNP solution despite having to

cope with the challenges of the Organization's financial situation and COVID-19 response. Recommendation 2 remains open pending receipt of an action plan to strengthen the change management initiatives.

(3) DOS should develop a suitable methodology to calculate the forecasting accuracy of mission demand plans and analyze variances at the end of the planned period to identify improvements needed and develop corrective actions based on lessons learned.

DOS accepted recommendation 3 and stated that options for a new methodology to calculate forecasting accuracy would be considered as part of the development and deployment of the Umoja DP/SNP functionality. In the interim, OSCM had developed and deployed, in July 2020, the DAP Delta dashboard to support supply chain planners in monitoring the implementation of their supply chain plans monthly and identifying potential issues to be discussed at IBP meetings for coordination and decision-making purposes. Recommendation 3 remains open pending receipt of the methodology to calculate forecasting accuracy.

Additional training needed to reduce data entry errors in demand plans

27. There were several errors in the 2019/20 annual demand plans submitted by missions that required seven iterations of data validation checks by UNGSC before they could be finalized. The major categories of data entry errors included incomplete or incorrect purchase order approval date or project details, missing information, incorrect contract status, and incorrect calculations. These impacted around 32 per cent of the demand line items totaling \$1.2 billion. In addition, SCPS identified 23 per cent of demand line items that had been classified by missions as requiring new procurement although they could be fulfilled through existing contracts. Such incorrect information could lead to inappropriate sourcing decisions. Also, no PIDs were indicated for 10 per cent of demand line items as shown in Table 3.

Table 3: Data entry errors in 2019/20 global annual demand plans (amounts in millions of dollars)

Type of errors	Demand plan amount	Percentage of line items
Miscellaneous data entry errors in DAP tool (identified by UNGSC)	1,214	32
Misclassification of items as requiring new procurement despite existing system contracts (identified by SCPS)	151	23
Absence of PID	766	10

Source: 2019/20 DAP tool

28. Similar errors were identified in the approved demand plan of 2018/19 including missing PIDs for 24 per cent of individual items totaling \$1 billion and absence of delivery timeframe for 30 per cent of individual line items totaling \$1.9 billion. Missing PIDs prevented items from being uniquely identified.

29. The DAP tool was being used as an interim solution for demand planning until the deployment of the DP/SNP solution in UE2. The tool was burdensome to use as it required detailed information of approximately 10,000 items to be entered from scratch at the beginning of every year to develop the annual demand plan. It was also being continuously enhanced with added functionalities that required training and time for adaptability. OIOS noted that 37 and 43 per cent of mission staff who entered data were local and field staff respectively, who may require training and capacity building. Data entry errors at mission level increased administrative burden on UNGSC and SCPS to manually rectify erroneous data consuming scarce resources.

30. Another cause for erroneous data entry was attributed to insufficient time given to missions to develop their annual demand plans. For example, the business guidance issued on 25 November 2019 required missions to develop their plans by 30 December 2019. UNGSC was required to consolidate and send the plan to SCPS by the same date. The limited time allowed for development of the plan at the end of the year when many staff were away from the missions impacted the quality of the initial submissions. This resulted in reopening of the DAP tool for around three weeks at the end of January 2020 to allow field missions to improve their plans, which led to a 53.5 per cent increase in demand line items. The aggregate demand plan was however not approved until June 2020 after completion of the cross-functional review. Thus, while the field missions and UNGSC were initially allowed a timeframe of one month to prepare, validate, and aggregate the global annual demand plan, the cross-functional review and final approval of the global annual demand plan took around six months. To address this, DOS launched the 2021/22 demand planning cycle on 21 September 2020. Therefore, OIOS did not make a recommendation on this issue.

(4) DOS should, in consultation with field missions, identify the training needs of users responsible for determining and entering data related to demand requirements and build capacity of staff to ensure accuracy and completeness of data related to the global annual demand plan.

DOS accepted recommendation 4 and stated that it would provide DAP training to clients in accordance with their training needs. Recommendation 4 remains open pending receipt of the action plan developed to train and build the capacity of staff responsible for demand and acquisition planning.

The material master transformation project needed to be expedited to improve accuracy of inventory data

31. Effective and accurate supply chain planning is dependent on a robust material master data architecture comprising a variety of data elements including PID, product description and technical specifications. A well-defined material master data enables easy retrieval and use of correct material information and better identifies materials to enable more accurate planning. However, the current material master functionality in Umoja does not allow materials to be defined based on their attributes to facilitate implementation of the category management approach. As a result, the process of segmenting demand requirements into their respective categories could not be automated and needed to be done through Excel spreadsheets. Moreover, the 40-character description limitation for materials in the Umoja Material Master impeded users from describing materials in sufficient detail to allow for them to be uniquely identified (for example by distinguishing features such as size, capacity, weight, colour, etc.).

32. The United Nations Standard Products and Services Code (UNSPSC) used for material master classification was composed of four levels: segment, family, class, and commodity. Only around 9 per cent of the material numbers are currently classified up to the commodity level as shown in the Table 4:

Table 4: Classification of materials per UNSPSC

Classification Level	Material classification	Number of materials	Percentage of total PID
Segment	56	582	1
Family	258	69,376	63
Class	381	29,712	27
Commodity	82	9,626	9
Total	777	109,296	100

Source: Umoja Material Master

33. Without classifying materials at the commodity level, missions would not be able to define their requirements with the granularity required for effective and accurate demand and source planning. For example, surgical gloves were classified up to the family classification level as medical apparel and textiles, but their classification up to the lowest granular level of commodity as gloves was not done preventing unique identification of material for planning purpose.

34. A material master transformation project was launched in October 2018 to enrich the material master architecture, with a planned completion date of 30 June 2019. However, the Umoja Coordination Services responsible for its implementation indicated that the project was delayed because of competing priorities, its complexity, inadequate stakeholder engagement, and challenges to attain consensus on the revised master data architecture. The project plan had not been formally revised and approved to facilitate monitoring of its progress.

35. Furthermore, different types of materials had the same generic PID in Umoja, affecting their correct identification. This happened because at the time of Galileo decommissioning, various materials amounting to around \$170 million were migrated from Galileo stock cards to a single PID. Although around 53 per cent of them had been rectified by the time the Physical Inventory Reconciliation and Optimization project closed, an action plan was not established and monitored to resolve the remaining items. As a result, as at 31 March 2020, 26,615 individual stock items totaling \$45.1 million in 13 peacekeeping missions were mapped to the same PID.

36. Additionally, OSCM did not establish adequate data governance over PIDs. For example, the Office had not identified and retired PIDs for old and obsolete items. Out of 109,296 PIDs, only around 4,000 PIDs were used for demand requirements during the audit period. This made it difficult for users to scan, identify and assign the correct PID to a specific material included in the demand plan. Moreover, PIDs were system generated and not smart numbers. The first two digits of the 10-digit product ID for goods signified specific product attributes but the remaining digits had no significance. As a result, the classification and characteristics of products were not uniquely identifiable by the digits forming the PID. However, DOS stated that the Umoja team had advised that smart numbering for PIDs is not technically and practicably feasible. Therefore, OIOS did not make a recommendation but strongly encourages ongoing review of this issue.

37. In addition, it took OSCM an average 44 days during 2017 to 2019 to issue new PIDs requested by field missions, with the longest being 530 days. This was due to missions not providing sufficient information such as material description and product specifications, and the backlog of requests. Out of 67,291 mission requests for new PIDs during the audit period, 3,409 were duplicated and 5,540 were cancelled. Delays in processing requests for new PIDs impacted the demand plan as the mission planners were not able to enter the PIDs for new items required.

(5) DOS should revise the plan for the material master transformation project with updated milestones and prioritize resources to complete the project to improve the granularity and applicability of material master data.

DOS accepted recommendation 5 and stated that it updated the project plan regularly in line with progress achieved. The actual completion of the project would be determined by the continued appropriation of resources in the budget and the level of engagement and decision making by category managers involved in project implementation. DOS remained committed to revise the project plan with updated milestones and prioritize resources and commitments from category managers to complete the project. Recommendation 5 remains open pending receipt of the revised project plan for the material transformation project.

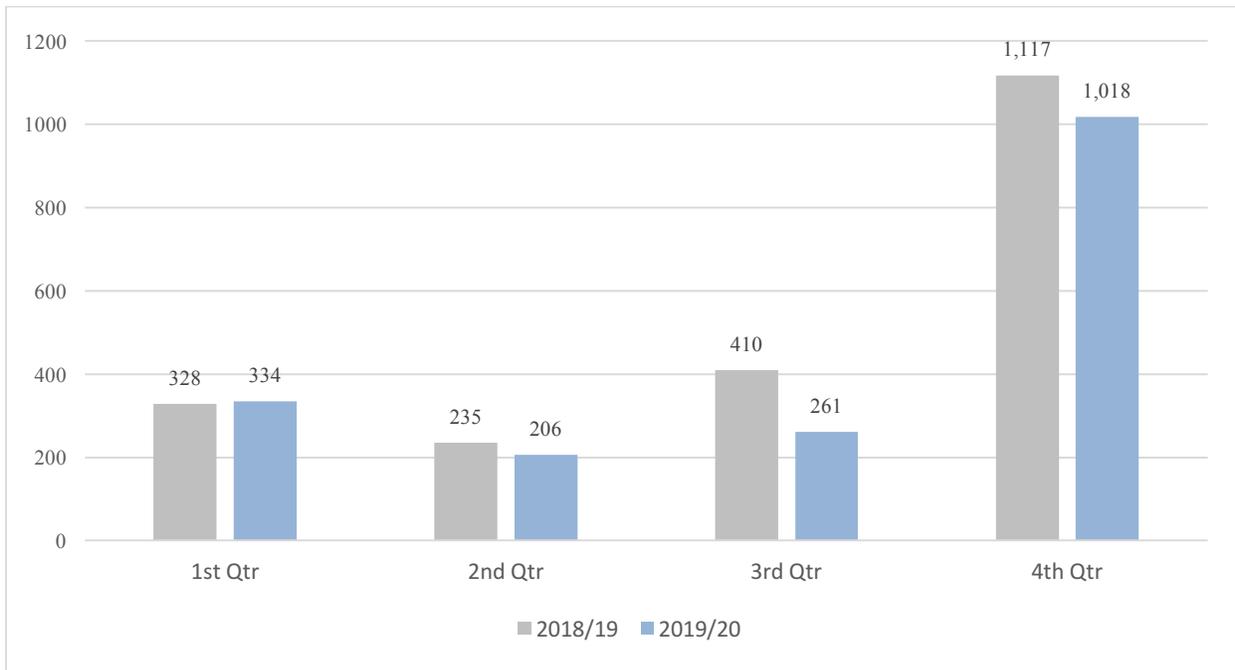
(6) DOS should improve management of product identification numbers (PIDs), including: (a) clarifying to field missions the level of details required for requesting new PIDs; (b) retiring PIDs of obsolete items; and (c) providing additional guidance to resolve use of generic PIDs.

DOS accepted recommendation 6 and stated that the Material Master Data Management Team provided guidance to users regarding the level of details required for requesting new PIDs and had a process in place for blocking obsolete PIDs as part of regular master data maintenance. DOS would issue guidance on the use of non-generic PIDs during the procurement process, such as when creating a shopping cart or contract within Umoja. Recommendation 6 remains open pending receipt of guidelines developed to improve the management of PIDs.

There were high year-end purchases

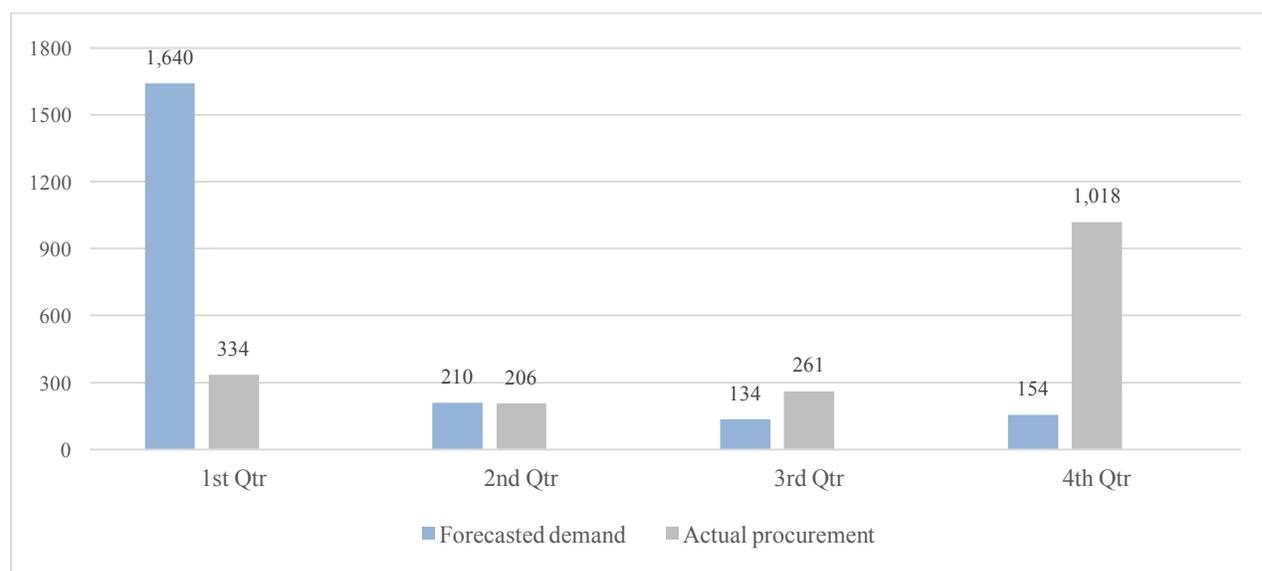
38. Procurement expenditures in the last quarter of the year were significantly higher than the quarters in the rest of the year combined. In 2018/19 and 2019/20 for example, expenditures were 3.4 and 3.8 times higher respectively, than the average quarterly spending in first three quarters of the year for the 13 peacekeeping missions as shown in Figure 2.

Figure 2: Procurement values per quarter for 2018/19 and 2019/20 (in millions of dollars)



39. The quarterly purchases of 2018/19 could not be properly matched with the corresponding quarterly demand requirements in the global annual demand plan as the delivery dates were not indicated for about 30 per cent of total demand requirements. However, a comparison between demand requirements and actual purchases for 2019/20 indicated wide deviations as shown in the Figure 3.

Figure 3: Comparison between demand requirements and actual purchases for 2019/20 (in millions of dollars)



40. Limitations already identified in this report, such as inadequate granularity of demand plans in terms of quantity and product category and missing or incorrect PIDs, prevented further analysis of when items were actually purchased against the envisioned delivery period in the demand plan. OIOS review indicated that the spike in purchases in the last quarter could not be fully attributed to delayed establishment of contracts as 58 per cent of demand requirements could be met from existing contracts, while 42 per cent required new procurement actions. There was therefore a high risk that demand requirements could have been overstated, as missions were able to operate for nine or more months without requirements that had been assessed as needed in the first quarter.

41. This mismatch was mainly attributed to missions developing demand plans based on the previous year's budget without due consideration of forecasted requirements based on updated needs to support mandate implementation. There was also no evidence that missions reassessed their needs before raising purchase orders later in the year, increasing the risk of accumulating items that may not be needed. Consequently, the targeted benefits of supply chain planning of reduction of surplus inventory and assets, and reduction of inventory that expire in stock may not be achieved.

42. Local and global IBP meetings were held periodically to discuss issues and risks related to supply chain management, including deviations between the quarterly demand plan and actual purchases. However, there remained a need to identify and address the causes of high year-end purchases and implement measures to ensure that when incurred, such expenditures are justified.

43. BTAD advised that it was in the process of developing a KPI to monitor the timely implementation of the demand plan by product category. DMSPC was reviewing whether relevant data is available in Umoja and will consult with DOS before implementation. Furthermore, the Global Asset Management Policy Service (GAMPS) in the Office of Programme Planning, Finance and Budget, DMSPC monitors property management performance and prepares quarterly reports for peacekeeping missions. As part of their review, GAMPS monitors serialized assets held in stock for less than 6 months, between 7 and 12 months and more than 12 months. The aggregated stock ageing data of 13 peacekeeping missions, Regional Service Centre Entebbe, SDS, United Nations reserve, and United Nations Logistics Base as at 30 June 2020 indicated that out of 94,381 serialized equipment totaling \$413 million that were in stock, 52,074 items of equipment (55 per cent) totaling \$220 million (53 per cent) remained in stock for more than 12 months. Seventy per cent

of equipment was in stock for over 6 months against the 50 per cent KPI. This KPI was established by GAMP to reduce waste, deterioration and loss of items while in stock. Since DMSPC is already monitoring ageing of assets in stock, OIOS did not make a recommendation but strongly encourages DMSPC and DOS to monitor high year-end purchases and coordinate efforts to reduce the risk of overstocking and obsolescence of assets and inventory.

B. Efficiency and effectiveness of demand and source planning

The utilization of system contracts was not optimal

44. Demand and source plans indicate those requirements that can be fulfilled by existing system contracts or for which new procurement actions were needed. System contracts are available for use by entities throughout the Secretariat (and potentially the United Nations System under the mutual recognition agreement) to reduce the burden of repetitive solicitation exercises and help to achieve faster procurement and economies of scale. However, they were not being used optimally. Out of 310 system contracts that were in force during the audit period, less than 50 per cent of 110 contracts with aggregate not-to-exceed (NTE) amount of \$1.3 billion had been utilized. Additionally, there were more than half of the contract terms that had elapsed, and these included 27 contracts, with an aggregate NTE amount of \$257 million, that were not utilized at all.

45. Discussions during IBP meetings attributed suboptimal utilization of system contracts to: (a) higher costs of goods under system contracts than local contracts when freight costs are factored in; (b) system contracts not meeting specific local requirements of field missions; and (c) excessive NTE amounts due to overstated demand requirements. Procurement officers and category managers needed to take this into consideration when establishing system contracts in order to optimize their use and derive the intended benefits. OIOS, in its report 2019/111, recommended that DOS analyze and prepare an action plan to address low utilization rates of system contracts. Therefore, no recommendation is made in this report.

Replacement contracts for goods and services with continuing demand were not established timely

46. Demand planning helps to timely initiate the solicitation process to establish new contracts and/or extend the validity or NTE amounts of existing contracts based on aggregate net demand. SCPS maintains a solicitation schedule that indicates the status of ongoing solicitation processes and facilitates monitoring and follow-up. However, as at 31 March 2020, 30 contracts totaling \$391 million out of the 62 contracts on the solicitation schedule had expired for an average 18 months but new contracts were not yet established to replace them. The 2019/20 demand plan included commodities totaling \$43 million that were associated with these expired contracts.

47. Additionally, 20 contracts totaling \$298 million had expired but were not included in the solicitation schedule. These were related to information and communication technology, aviation, and corporate support services that were omitted because some technical details had not yet been finalized. Also, eight contracts totaling \$214 million relating to other categories including fuel, rations, and engineering were omitted from the schedule.

48. OSCM advised that it was continuously reviewing and scheduling solicitations for replacement contracts based on analyses of demand planning data and coordination with main requisitioners. However, economies of scale would not materialize when missions' requirements were for ad-hoc purchases and they had not committed to utilize system contracts. A close assessment of the long-term needs of the missions was therefore necessary, rather than the automatic replacement of expired contracts. In light of these comments, OIOS did not make a recommendation on this issue but encourages DOS to keep it under review.

DOS also needed to ensure solicitation schedules include all commodities to have a consolidated view of expired contracts and to initiate the procurement process timely, based on needs assessment.

(7) DOS should expand the solicitation schedule to include solicitations related to information and communication technology, aviation and corporate support services.

DOS accepted recommendation 7 and stated that the work to include such solicitations was expected to be completed by the first quarter of 2021. Recommendation 7 remains open pending receipt of the expanded solicitation schedule.

The improved visibility of global requirements should be leveraged to implement strategic supply chain planning and rolling demand plans

49. The SCM Blueprint envisioned the establishment of a global, long-term strategic plan as one of the core supply chain planning processes. The operational SCOG also required strategic supply chain planning with a two to five years horizon to meet the long-term objectives of SCM strategy. The main outputs of the process would include a global outlook regarding the scope, scale and geographic locations of entities; an annually updated strategic supply chain network design; and a strategic demand plan, identifying long-term requirements for the Organization. However, current planning processes and practices were limited to the development of global annual demand plans, which are driven by the field missions' forecasted requirements. The lack of global historical data with sufficient granularity of demand requirements previously deterred the development of strategic supply chain plan. Demand data and improved visibility of global requirements obtained from the annual demand plans developed with the help of DAP tool for the last three budget cycles have begun to provide opportunities for strategic supply chain planning.

50. The provisional SCOG also introduced the concept of the rolling demand process and envisaged a revision and updating of demand forecasting monthly. The rolling demand plan allows flexibility when requirements for relatively longer periods cannot be forecasted accurately due to changing circumstances. However, the rolling demand plan was not implemented in field missions to facilitate timely response to evolving operational requirements. The Organization was therefore not able to adjust initial plans flexibly to avoid overstocking and/or stockouts. For example, the rolling demand plan would have allowed flexibility to adjust the 2019/20 demand plan to respond to the change in requirements and/or sudden surge in some requirements of field missions due to the onset of the COVID-19 pandemic.

(8) DOS should conduct strategic supply chain planning to identify and prepare to meet the longer-term requirements and sourcing solutions of the Organization, and to build capacity to implement rolling demand plans that provide flexibility for adjustment based on evolving operational requirements.

DOS accepted recommendation 8 and stated that strategic supply chain planning had changed in 2019 with the establishment of OSCM. SCPS had been providing long-term demand forecasts to category managers to establish system contracts, as well as multi-year demand trend analysis to support the development of category management strategies and action plans. Recommendation 8 remains open pending receipt of the strategic plan for longer-term requirements and sourcing solutions, and an action plan to build capacity to implement rolling demand plans.

The rotation of stocks from existing reserves was suboptimal

51. The revised concept of operations for SDS (A/72/783) required these stocks to be recognized as one of the internal sources to fulfill demand requirements. The clearing house function at UNGSC checks for available internal sourcing possibilities before exploring external options. The October 2019 guidelines on asset transfer reminded field missions when developing their demand and source plans, to consider existing reserves of SDS, United Nations reserves and other missions' surplus inventory as preferred sourcing options for economical use of Organization's resources.

52. From the aggregate 2019/20 demand plan, the clearing house identified at least 306 items totaling \$35 million that could be met from the existing reserves and recommended to field missions to internally source these requirements. However, the field missions utilized internal sourcing for only \$3.1 million goods (9 per cent) as shown in Table 5:

Table 5: Fulfillment of 2019/20 demand requirements from existing reserves (amounts in millions of dollars)

Existing reserve	Number of products/line items recommended for internal sourcing	Amount	Amount of products/line items supplied to field missions	Percentage
SDS	192	26	3.00	12
United Nations reserves	12	1	0.06	10
Mission surplus	102	8	0.10	1
Total	306	35	3.16	9

Source: Analysis of clearing house internal sourcing implementation

53. This limited the rotation of inventory held in existing reserves. Out of 1,370 products totaling \$67 million in SDS, 435 products (32 per cent) totaling \$13 million were rotated while 612 products (44 per cent) totaling \$49 million were partially rotated and 324 products (24 per cent) totaling \$5 million were not rotated at all during the audit period. Similarly, out of 2,981 products totaling \$1.3 million in United Nations reserve, 328 products totaling around \$300,000 were not rotated during the audit period.

54. This happened because the field missions did not accept the clearing house recommendations to use the internal sourcing options and procured goods externally using their delegation of authority. Some peacekeeping missions attributed this to: (i) the cost of reserves and SDS sometimes being higher than the cost of newer items with the latest technology; and (ii) surplus items previously received from other missions were often not of expected quality and required costly repairs. However, the lack of rotation of stock held in reserves increased the risk of stock obsolescence and waste of resources.

55. OIOS last reviewed the establishment and use of SDS in 2016 (A/71/798). Considering changes in the lifecycle of field missions and the increased delegation of authority to heads of missions, OIOS plans to audit the management of SDS in the near future; therefore, no recommendation is made on this issue at this stage.

Potential opportunities for delivery cost savings were identified, but delivery requirements were not aggregated

56. The Delivery Planning Unit of SCPS analyzed utilization of incoterms and identified potential opportunities for cost savings if the Ex Works or Free Carrier incoterms were used in place of the Delivery at Place incoterm, which was being used more frequently. The Unit also developed a conceptual workflow for consolidating delivery of goods and services by identifying, prioritizing, and aggregating the delivery

requirements; however, effective consolidation could not be achieved. This was because goods and services totaling \$490 million (23 per cent of total value) in the global demand plan of 2019/20 were covered by turnkey contracts and did not require any delivery planning. Services of \$1.42 billion (65 per cent of the total amount) also did not require consolidation of delivery requirements. Out of the remaining goods valued at \$265 million, \$12 million were for low value purchases procured locally. The scope of the delivery planning was therefore restricted to goods valued at \$253 million that accounted for less than 12 per cent of the total requirements of 2019/20 demand plan.

57. There were many impediments to consolidating delivery. For example, information on delivery date, incoterms and incoterm locations, and storage locations were not always available in the shopping carts for goods. Lack of information on quantities for some commodities in the demand plan also deterred consolidation of shipping requirements. Most importantly, there was no mechanism in place for field missions to raise shopping carts and consolidate the purchase orders per contract/supplier simultaneously to improve efficiency of delivery through freight consolidation. The DP/SNP solution of UE2 also did not include tools to facilitate consolidation of delivery. These impediments deterred the Organization from consolidating upstream delivery requirements, achieving economies of scale, and reducing environmental impact of multiple shipments along the same delivery routes.

58. DOS commented that consolidating delivery requirements was beyond its remit. Nevertheless, OSCM was examining the establishment of a mechanism for field missions to consolidate their delivery requirements, which requires among others, a dedicated central/regional hub capacity, including staffing; modification of the existing funding mechanism; and a delegation of authority framework that is acceptable to all concerned heads of entities. Therefore, OIOS did not make a recommendation on this issue, but would review it in future audits.

C. Effectiveness of performance and risk management

Supply chain planning KPIs were not established

59. KPIs help to measure and manage performance. However, while OSCM had established the dimensions on which to measure the benefits of the supply chain planning function, the baseline and targeted performance levels had not yet been determined. This prevented SCPS from assessing how supply chain planning was contributing to a more agile, cost-effective, and timely acquisition of goods and services to enable the field missions to effectively implement their mandated tasks.

(9) DOS should establish key performance indicators to measure and monitor the performance of the supply chain planning function and develop a plan to measure and report on the benefits realized.

DOS accepted recommendation 9 and stated that the Enabling and Outreach Service had drafted KPIs as part of the Supply Chain Performance Management Framework, which were being reviewed. Recommendation 9 remains open pending receipt of established performance indicators for the supply chain planning function.

Need for a risk management programme for supply chain planning at the enterprise and mission levels

60. The Secretariat's risk register identified inadequate planning leading to over- or under-estimation of equipment and supplies as an area of risk. The DOS risk register of August 2019 indicated failure to respond rapidly to a crisis as a strategic risk. The Global Humanitarian Response Plan for COVID-19 of March 2020 highlighted the risks to which the Organization was exposed related to volatility of demand

and supply and associated challenges for sourcing and delivery. Travel restrictions in more than 107 countries, import/export and port restrictions, reduced commercial shipping operations, increased costs, and limited availability of supplies including medical items also posed serious risks to maintain supply chain continuity amid the ongoing pandemic.

61. However, a comprehensive risk management programme for supply chain planning at the enterprise level had not been established. While the COVID-19 pandemic is only a catalyst to impending challenges of supply chain, implementation of a comprehensive risk management programme at enterprise level based on lessons learned is indispensable for rapid mobilization of alternate supply chain and delivery solutions and implementing risk mitigating measures to deal with future supply chain challenges to ensure business continuity. DOS advised that DMSPC had a comprehensive enterprise risk register to which, OSCM, along with other pillars of DOS, had contributed and subscribed. Therefore, OIOS did not make a recommendation but encourages DOS to implement a comprehensive risk management programme at the enterprise level for the supply chain planning function to address supply chain challenges and effectively respond to crisis situations to maintain business continuity.

62. Additionally, although envisaged in SCM Blueprint, field missions had not conducted any supply chain contingency planning to devise appropriate action in response to unexpected events including stockouts and severe disruptions to their supply chain. The provisional SCOG did not include any guidance on contingency planning. The outbreak of the COVID-19 pandemic also showed the importance of developing contingency plans to maintain business continuity, build supply chain resiliency, and deal with future crisis in the wake of economic slowdown, increasing supply chain volatility, and evolving situations in field missions. Furthermore, the missions did not determine the safety stock levels and reorder points for various category of items. As a result, there was a risk of stock-out situations, especially at the onset of crisis. The determination of safety stock could not be made at the time of audit as the revised business process for the DP/SNP solution in UE2 had not been finalized. No recommendation is made on this issue as it will be addressed with the deployment of the solution.

IV. ACKNOWLEDGEMENT

63. OIOS wishes to express its appreciation to the management and staff of DOS 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 demand and source planning in the United Nations Secretariat

Rec. no.	Recommendation	Critical ³ / Important ⁴	C/ O ⁵	Actions needed to close recommendation	Implementation date ⁶
1	DOS should, in consultation with field missions, take measures to improve the granularity of the demand plan and ensure units of measurement for each category of goods and services are recorded, wherever feasible.	Important	O	Receipt of evidence of improvements in the granularity of demand plans.	31 March 2022
2	DOS should strengthen its change management initiatives to ensure that global annual demand planning by field missions is data-driven and based on adequate quantitative and qualitative analyses.	Important	O	Receipt of an action plan to strengthen the change management initiatives.	31 March 2022
3	DOS should develop a suitable methodology to calculate the forecasting accuracy of mission demand plans and analyze variances at the end of planned period to identify improvements needed and develop corrective actions based on lessons learned.	Important	O	Receipt of the methodology to calculate forecasting accuracy.	31 March 2022
4	DOS should, in consultation with field missions, identify the training needs of users responsible for determining and entering data related to demand requirements and build capacity of staff to ensure accuracy and completeness of data related to the global annual demand plan.	Important	O	Receipt of an action plan developed to train and build the capacity of staff responsible for demand and acquisition planning.	31 March 2022
5	DOS should revise the plan for the material master transformation project with updated milestones and prioritize resources to complete the project to improve the granularity and applicability of material master data.	Important	O	Receipt of the revised project plan for the material transformation project.	31 March 2021
6	DOS should improve management of product identification numbers (PIDs), including: (a)	Important	O	Receipt of guidelines developed to improve the management of PIDs.	31 March 2021

³ Critical recommendations address those risk issues that require immediate management attention. Failure to take action could have a critical or significant adverse impact on the Organization.

⁴ Important recommendations address those risk issues that require timely management attention. Failure to take action could have a high or moderate adverse impact on the Organization.

⁵ Please note the value C denotes closed recommendations, whereas O refers to open recommendations.

⁶ Date provided by DOS in response to recommendations.

STATUS OF AUDIT RECOMMENDATIONS

Audit of demand and source planning in the United Nations Secretariat

Rec. no.	Recommendation	Critical ³ / Important ⁴	C/ O ⁵	Actions needed to close recommendation	Implementation date ⁶
	clarifying to field missions the level of details required for requesting new PIDs; (b) retiring PIDs of obsolete items; and (c) providing additional guidance to resolve use of generic PIDs.				
7	DOS should expand the solicitation schedule to include solicitations related to information and communication technology, aviation and corporate support services.	Important	O	Receipt of the expanded solicitation schedule.	31 March 2021
8	DOS should conduct strategic supply chain planning to identify and prepare to meet the longer-term requirements and sourcing solutions of the Organization, and to build capacity to implement rolling demand plans that provide flexibility for adjustment based on evolving operational requirements.	Important	O	Receipt of the strategic plan for longer-term requirements and sourcing solutions, and an action plan to build capacity to implement rolling demand plan.	31 March 2022
9	DOS should establish key performance indicators to measure and monitor the performance of the supply chain planning function and develop a plan to measure and report on the benefits realized.	Important	O	Receipt of established performance indicators for the supply chain planning function.	31 March 2022

APPENDIX I

Management Response



UNCLASSIFIED

Immediate

DATE: 8 December 2020

REFERENCE: DOS-2020-05407

TO: Ms. Eleanor Burns, Director
A: Internal Audit Division
Office of Internal Oversight Services

THROUGH:
S/C DE:

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

A handwritten signature in blue ink, appearing to read 'Atul Khare', with a horizontal line underneath.

SUBJECT: **Audit of demand and source planning in the United Nations Secretariat**
OBJET: **(Assignment No. AH2020-619-01)**

1. I refer to your memorandum, dated 12 November 2020, regarding the draft report on the above-mentioned audit.
2. As requested, please find our comments attached herewith as Appendix I.
3. I thank you for the opportunity to comment on the draft report. My Department stands ready to provide any further information that may be required.

cc: Cynthia Avena-Castillo

Management Response

Audit of demand and source planning in the United Nations Secretariat

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	DOS should, in consultation with field missions, take measures to improve the granularity of the demand plan and ensure units of measurement for each category of goods and services are recorded, wherever feasible.	Important	Yes	ASG, OSCM	First quarter of 2022	Upon technical completion of the Umoja Extension 2 (UE2) solution for Demand Planning (DP) and Supply Network Planning (SNP) around January 2021 and subsequent roll out to clients throughout 2021, the new supply chain planning processes supported by Umoja will be introduced to address the issue. Meanwhile, the Office of Supply Chain Management (OSCM) Business Guidance for the Planning Cycle 2021-2022 incorporated instructions to all entities regarding optimal granularity of demand to be developed in the Demand and Acquisition Planning (DAP) Tool.
2	DOS should strengthen its change management initiatives to ensure that global annual	Important	Yes	ASG, OSCM	First quarter of 2022	Notwithstanding the challenges of the time whereby operational support priorities of the Department of Operational Support (DOS) are influenced and affected by the

¹ Critical recommendations address those risk issues that require immediate management attention. Failure to take action could have a critical or significant adverse impact on the Organization.

² Important recommendations address those risk issues that require timely management attention. Failure to take action could have a high or moderate adverse impact on the Organization.

Management Response

Audit of demand and source planning in the United Nations Secretariat

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
	demand planning by field missions is data-driven and based on adequate quantitative and qualitative analyses.					Organization's financial situation and are focused on the COVID-19 response, OSCM will do what it can to strengthen its change management initiatives, including the major change associated with the roll out of the Umoja DP and SNP solutions.
3	DOS should develop a suitable methodology to calculate the forecasting accuracy of mission demand plans and analyze variances at the end of planned period to identify improvements needed and develop corrective actions based on lessons learned.	Important	Yes	ASG, OSCM	First quarter of 2022	In view of the rollout of the UE2 Solution, options for a new methodology to calculate the forecasting accuracy will be considered as part of the development and deployment of Umoja DP and SNP functionality. In the interim, OSCM developed and deployed, in July 2020, the DAP Delta Dashboard that supports supply chain planners in monitoring the gradual build-up of supply chain plans by capturing changes to the plans on a monthly basis to identify specific practical issues/points of coordination with supply chain stakeholders in the entities. This business intelligence tool provides visibility and analysis of evolving global and local supply

Management Response

Audit of demand and source planning in the United Nations Secretariat

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						chain plans during their implementation in a uniform and consistent manner. The purpose of the dashboard is to support supply chain planners in monitoring the implementation of their supply chain plans by capturing changes from the approved annual plan, on a monthly basis, and identifying potential issues to be discussed at local and global Integrated Business Planning (IBP) meetings for coordination and decision-making purposes.
4	DOS should, in consultation with field missions, identify the training needs of users responsible for determining and entering data related to demand requirements and build capacity of staff to ensure accuracy and completeness of data	Important	Yes	Director, GSC	First quarter of 2022	GSC agrees with the recommendation and will provide DAP training to clients in accordance with their training needs.

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Audit of demand and source planning in the United Nations Secretariat

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
	related to the global annual demand plan.					
5	DOS should revise the plan for the material master transformation project with updated milestones and prioritize resources to complete the project to improve the granularity and applicability of material master data.	Important	Yes	UCS Principal Coordination Officer	First quarter of 2021	The comments of DOS are reflected in the report.
6	DOS should improve management of product identification numbers (PIDs), including: (a) clarifying to field missions the level of details required for requesting new PIDs; (b) retiring PIDs of obsolete items; and (c) providing additional	Important	Yes	UCS Principal Coordination Officer	First quarter of 2021	DOS, through the Material Master Data Management (MMDM) Team, provides guidance to requestors regarding the level of details required for requesting new PIDs and has a process in place for retiring obsolete PIDs (“blocking”) as part of regular master data maintenance. DOS will issue guidance on the use of non-generic PIDs during the procurement process, e.g. when creating the shopping cart, or when a contract is created inside Umoja.

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Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
	guidance to resolve use of generic PIDs.					
7	DOS should analyze if the current process to review the accuracy and other attributes of low value items in demand and source plans outweighs the benefits and explore opportunities to streamline the process.	Important	No	Not applicable	Not applicable	The major benefit of the supply chain planning function is a holistic and integrated approach to provide full visibility of the global requirements for goods and services and to enable clients and stakeholders at United Nations Headquarters to determine optimal sourcing options and delivery solutions for all items in demand, be it, for example, spare parts, consumables, pharmaceuticals, security items or personal protective equipment for COVID-19 response. Disregarding a part of the demand within the operating supply chain based on financial thresholds and capacity considerations undermines the ability of Supply Chain Management (SCM) stakeholders to understand and execute demand driven material management, including the complete flow of goods from vendors to clients. It should be noted that inventory management and

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						inventory planning processes that are directly linked to supply chain planning as parts of the end-to-end integrated SCM processes do not ignore items that are of low value. Furthermore, in order to succeed in the implementation of the category management (CM) approach in SCM, the information on the totality of goods and services relevant to a specific category is of critical importance.
8	DOS should monitor and take appropriate measures to timely replace expiring system contracts for commodities for which there is a continuing demand.	Important	No	Not applicable	Not applicable	DOS provided OIOS with an updated solicitation schedule under a separate cover. With regards to pending contracts under the Global Procurement Support Section (GPSS), it should be noted that these are regional contracts and GPSS is continuously reviewing and scheduling solicitations for replacement contracts based on the analysis of the demand planning data to determine the applicability of the replacement contract. In this regard, the following facts are submitted for

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						<p>consideration by the Office of Internal Oversight Services (OIOS):</p> <ul style="list-style-type: none"> • GPSS coordinates closely with the major requisitioners in the region. GPSS considers it important to establish reliable demand data from the client missions in order to conclude contracts that meet their needs. When the requirement is of a one-time nature, and if the product descriptions are very diverse from one mission to the next, the benefits of consolidation and economies of scale will not materialize. In this regard, a clear commitment on the part of the client missions/contract users is necessary for the timely initiation of new/replacement contracts. • GPSS shares the current list of its contracts with the client missions and the details are also shared regularly during the IBP meetings

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						<p>with the client mission. Missions' requirements are discussed and the priority for the replacement contracts is adjusted accordingly.</p> <ul style="list-style-type: none"> • Client missions, for various reasons, including operational reasons, as well as to address specific requirements, have been procuring goods outside of these systems contracts and this occurs even when contracts are in place. • The vacancy rate in GPSS is 23 per cent and GPSS effectively manages its resources by supporting clients who need mission-specific assistance, as well as providing <i>de facto</i> procurement duties for various small missions in the African continent. <p>Based on the above explanation, it should be noted that the close monitoring of global demand</p>

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Audit of demand and source planning in the United Nations Secretariat

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						planning is already being undertaken and the solicitation schedule is regularly updated for replacement contracts. To benefit from economies of scale and to have effective utilization of contracts, a close assessment of the long-term needs of the missions, when necessary, would be more effective than the automatic replacement of expired contracts.
9	DOS should expand the solicitation schedule to include solicitations related to information and communication technology, aviation, and corporate support services.	Important	Yes	Chief, SCPS	First quarter of 2021	The comments of DOS are reflected in the report.
10	DOS should conduct strategic supply chain planning to identify and prepare to meet the longer-term requirements and sourcing solutions of	Important	Yes	Chief, SCPS	First quarter of 2022	The reference by OIOS to the SCM Blueprint (2018) and the Supply Chain Operational Guidance Planning chapter has been taken out of context, since strategic supply chain planning changed in 2019 with the establishment of OSCM. The

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Audit of demand and source planning in the United Nations Secretariat

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	the Organization, and build capacity to implement rolling demand plans to provide flexibility to adjust demand plans based on evolving operational requirements.					documents were developed when the erstwhile Logistics Support Division of the erstwhile Department of Field Support was a leading entity for SCM initiatives. Strategic SCM initiatives with a long-term horizon are determined by OSCM. Please note that the Supply Chain Planning Service has been providing long-term demand forecasts to CM for the establishment of system contracts, and multi-year demand trend analysis in support of the development of CM strategies and action plans.
11	DOS should establish a mechanism for field missions to consolidate delivery requirements to achieve economies of scale and reduce environmental impact of multiple shipments along the same delivery routes.	Important	No	Not applicable	Not applicable	This recommendation is beyond the remit of DOS. Nevertheless, OSCM is currently examining the establishment of such a mechanism, which logically requires, <i>inter alia</i> , a dedicated central/regional hub capacity, including staffing, with the modification of the existing funding mechanism and delegation of authority framework acceptable to all concerned Heads of Entities.

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Audit of demand and source planning in the United Nations Secretariat

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
12	DOS should establish key performance indicators to measure and monitor the performance of the supply chain planning function and develop a plan to measure and report on the benefits realized.	Important	Yes	Chief, EOS	First quarter of 2022	The comments of DOS are reflected in the report.
13	DOS should implement a comprehensive risk management programme at the enterprise level for the supply chain planning function to address supply chain challenges and effectively respond to crisis situations to maintain business continuity.	Important	No	Not applicable	Not applicable	DMSPC has a comprehensive enterprise risk register to which, OSCM, along with other pillars of DOS, contributes and subscribes.