



ORGANISATION DE L'AVIATION
CIVILE INTERNATIONALE

INTERNATIONAL CIVIL
AVIATION ORGANIZATION

Internal Audit Report on Procurement

IA/2024/6

Office of Internal Oversight

ACRONYMS

ADB	Bureau of Administration and Services
ANB	Air Navigation Bureau
ATB	Air Transport Bureau
BVM	Best Value for Money
CDI	Capacity Development Implementation Bureau
DOA	Delegation of Authority
DPO	Delegated Purchase Order
ERP	Enterprise Resource Planning
FIN	Finance Branch
FOS	Field Operations Section
HQ	Headquarters
ICAO	International Civil Aviation Organization
ITB	Invitation to Bid
JIU	Joint Inspection Unit
KPIs	Key Performance Indicators
LEB	Legal Affairs and External Relations Bureau
LTA	Long-Term Agreement
OIO	Office of Internal Oversight
PO	Purchase Order
PRO	Procurement Section
RFP	Request for Proposal
RFQ	Request for Quotation
RO	Regional Office

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EXECUTIVE SUMMARY

1. As part of its annual work plan for 2024 (C--WP/15226), the Office of Internal Oversight (OIO) carried out an audit of the end-to-end Procurement process, covering procurement for headquarters and regional offices (corporate procurement), and technical cooperation and technical assistance procurements (state procurement). The audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Audit*.
2. The objectives of the audit were to (a) assess the adequacy and effectiveness of governance, risk management and internal control processes within ICAO's procurement; (b) determine whether ICAO manages its procurement of goods and services in an effective, efficient and economic manner, and in compliance with applicable rules and regulations; and (c) identify risks and readiness going into the new enterprise resource planning (ERP) Quantum system.
3. OIO recognizes the following progress and achievements in procurement management by the Procurement Section (PRO) in the Bureau of Administration and Services (ADB), which increased productivity, standardized processes and improved records management:
 - The issuance of the Procurement Code improved governance over the procurement process and helped ensure adequate roles and responsibilities, including proper segregation of duties between requestors of procurement, the procurement function and contract management, including supplier performance.
 - Launch of the e-procurement system, which regional offices have used progressively.
 - Numerous long-term agreements (LTAs) with vendors for increasing efficiency.
 - The introduction and sharing of the annual procurement report.
 - During the last three years, only one bid protest was received which was independently reviewed and found to be unjustified and there were no litigations on any contract.
 - There was also high satisfaction from bureaus and regional offices interviewed by OIO of the services provided by PRO.
4. OIO noted some areas to enhance the maturity of the overall procurement process, including governance and risk management over the process, and the need to implement safeguards building on its current achievements:

Procurement monitoring and management oversight:

- Limited monitoring and oversight due to insufficient resource capacity and lack of automated reports, which resulted in a weakened second line assurance that is necessary to manage inherent risks, particularly over procurement on behalf of states. PRO is responsible for both transaction processing (first line of management) and procurement risk monitoring (second line of management). The latter is not fully defined and implemented and there is a need to revisit the Second Line Management concept in the procurement process.
- Need to strengthen procurement-related data availability and completeness. Additionally, key management information such as lead times to measure the efficiency of completing a procurement process, and other risk factors or exceptions and key performance indicators for procurement are not in use, due to the absence of dedicated dashboards and underlying data which are limited by the current enterprise resource planning (ERP) system.

Managing inherent procurement risks pertaining to state procurement:

- Undertaking procurement on behalf of states exposes ICAO to inherent risks, and existing safeguards need to be enhanced at the project inception and contract management phases to effectively mitigate these risks. Approximately 28 percent of state procurement by value or 27 percent by number of contracts issued was done on a sole source basis and in general

represented extensions of previous procurement processes that were sometimes also undertaken on the same basis. OIO was informed that the relatively high sole source procurement is a direct result of the nature of projects in the aviation industry. Competitive tendering relating to state procurement should be sought when possible. There are also cases where competitive tendering was carried out, but resulted in only a single offer, or only one technically acceptable offer. This needs to be analysed as it was recurrent in previous audits and highlighted by the Contracts Board recommendations.

- Potential root causes are (i) the nature of typical state procurement are infrastructure related, installation and maintenance, and software projects which are usually long-term, while the budget allocation by states is shorter-term and does not cover the expected lifecycle of procured goods and services; and (ii) the inherent nature of risks related to procurement projects were not adequately identified at the project development stage and risk-mitigating actions were inadequately designed and monitored for the whole project lifecycle.

Regular training:

- Need for specific role-based procurement and contract management training for requisitioners, allotment holders, evaluation panels, members of the Contracts Board and contract managers to ensure all involved understand their roles and accountability assigned to them.
5. The audit experienced some limitations due to data search constraints and limitations in the current ICAO ERP system Agresso and OIO was reliant on data requested from PRO. Consequently, the assurance provided by OIO is limited to the extent of data that was identified.

Overall Conclusion

6. Based on the results of the audit, OIO has given an overall audit rating of *"Some Improvement Needed"*.
7. OIO noted that controls over the procurement process were functioning, such as the existence of the procurement code, clarity of roles of stakeholders involved, Contracts Board existence, use of the electronic e-procurement system, award approval reviews, etc. However, controls such as non-recurrence of training, absence of a procurement risk management strategy, better procurement planning, enhanced oversight of delegated purchase order (DPOs) needed some improvement.
8. Two areas were assessed as *"Major Improvement Needed"*:
- The need to strengthen the second line oversight and management assurance over procurement, particularly in relation to procurement on behalf of states.
 - The need to more effectively manage the inherent risks pertaining to procurement on behalf of states, address their root causes starting at the project inception stage and enhance safeguards to attract competition, ensuring value for money and transparency in the process.
9. This report contains 9 recommendations of which 3 are high priority. The high risks are associated with enhancing risk management at project inception and implementation phases, including adding safeguards with respect to procurement on behalf of states; and exercising better oversight, including providing adequate assurance. Other areas of improvement include implementing a procurement strategy aligned with ICAO's strategic priorities, holding business owners/managers accountable for inadequate procurement planning, conducting tailored training on procurement and contract management, and ensuring the new ERP-Quantum system can facilitate improved procurement data availability and reporting to enhance oversight. Management comments and proposed actions to implement the recommendations are detailed in the Management Action Plan in Annex 4.

Acknowledgement

10. OIO wishes to thank management and staff for their assistance and cooperation during the audit.

RESULTS OF THE AUDIT

Background

11. ICAO's Procurement Section (PRO) provides support and services to Secretariat Staff with respect to procurements for the Organization (headquarters, regional and sub-regional offices), and for technical cooperation and technical assistance procurements (state procurement) for aviation equipment and services for a state which has entered into a framework agreement with ICAO. The implementing unit is the Capacity Development and Implementation Bureau (CDI).
12. All procurement activities at ICAO are regulated by the ICAO Procurement Code (the Code) that was issued in December 2021. This Code does not apply to:
 - contracts of employment;
 - external collaboration contracts with individuals;
 - grant agreements between ICAO and a grantee;
 - lease agreements concerning ICAO offices at Headquarters or Regional Offices and Subregional Offices.
13. The overall objective of ICAO's procurement activities is to ensure that procurement of equipment, supplies, and services is carried out in the best interest of the Organization and/or assisted States, having due regard to the availability of funds, economy, transparency, efficiency, accountability, national, regional or international competition and applicable international aviation standards. For additional background information see Annex 2.
14. The general principles that underpin the conduct of procurement at ICAO are:
 - best value for money (BVM);
 - fairness, integrity and transparency;
 - effective competition; and
 - best interest of ICAO and its Partners.
15. During the drafting of the revised Procurement Code in 2020-2021, the UN Gender Policy Procurement Framework was not considered because the ICAO Gender framework at the time was not mature. PRO indicated that it may review its integration with the second revision of the Procurement Code planned in 2026-2027. OIO was informed that currently, implementing this framework for highly technical purchases may limit the number of proposals, but PRO will further explore how the UN Gender Policy Procurement Framework can add value to the ICAO procurement process and what types of procurement will be targeted.

Audit Objectives, Scope and Methodology

16. The objectives of this audit were to:
 - a. assess the adequacy and effectiveness of governance, risk management and internal control processes within ICAO's procurement.
 - b. determine whether ICAO manages its procurement of goods and services in an effective, efficient and economic manner, and in compliance with applicable rules and regulations.
 - c. identify risks and readiness going into the new ERP-Quantum system.
17. The audit scope covered the: (a) adequacy of the procurement governance, policy, procedures and guidance, and ensuring that key procurement risks are addressed; (b) effectiveness of existing controls; and (c) efficiency of the procurement process to serve the needs of ICAO and its Partners.
18. OIO's approach was guided by the four procurement principles prescribed in the Procurement Code: best value for money; fairness, integrity and transparency; effective competition; and best interests of ICAO and its Partners. The audit covered the procurement of goods and services for Headquarters

and Regional Offices, as well as Technical Cooperation and Technical Assistance Procurement over the period January 2023 to July 2024.

19. DPOs are under the purview of the respective allotment holders and are generally reviewed in detail during the regional office dedicated audits. However, during this audit, upon high-level review, weaknesses were noted with respect to the use of DPOs and are highlighted. Additionally, contract management was out of scope for this audit as OIO has performed an audit of contract management¹ as part of its 2023 OIO work plan. However, during this audit, upon high-level review, weaknesses were noted with respect to contract management and are highlighted.
20. OIO carried out a review of relevant documentation, including policies, administrative instructions, guidance material, and risk assessment activities governing ICAO's procurement. OIO also interviewed internal clients to determine if they were satisfied with the procurement services and to identify areas of concern. States were not interviewed and OIO did not conduct any procurement project site visits.
21. Additionally, sample testing and data analysis of procurement cases and records was performed, as appropriate; procedures such as review of existing tools and systems were included.

Grouping of Findings

22. The findings in this report are grouped based on the end-to-end procurement process.

Audit Observations and Conclusions

Procurement strategy and governance

Implementing a procurement strategy

23. Developing a more strategic approach to procurement through identifying the procurement profile of ICAO's business needs and addressing those procurement needs in a long-term strategic risk-informed approach and fit-for-purpose structure is key for the successful acquisition of goods and services necessary for ICAO operations. The same can be said for its partners and protecting ICAO from associated inherent risks. In this regard, a global procurement strategy seeks to ensure that (i) it is aligned with the ICAO strategic priorities in the Business Plan, (ii) corresponding risks are mitigated, and (iii) the broader approach and resources needed are mapped out towards the implementation of priorities and management assurance that risks are effectively mitigated. The strategy is expected to be a living document to reflect new opportunities and lessons learned.
24. There is no global procurement strategy at the highest level where procurement would be privy to strategic drivers or initiatives by the Organization, allowing procurement to contribute at the inception of such initiatives. There is a dedicated procurement strategy in place for information technology procurements, which can be expanded to ICAO's other procurement needs. A corporate annual procurement plan as well as individual procurement plans are in use, while the individual procurement plans include a strategy for a particular procurement exercise (i.e. RFQ, RFP, ITB, etc.).
25. OIO was informed that PRO faces challenges in developing an effective global procurement strategy for the following reasons:
 - PRO is not privy to the long-term business needs to advocate for corporate strategic procurement risk management and planning.
 - For state procurement, procurement requests are ad-hoc depending on whether states deposit funds.

¹ [IA/2023/3: Internal Audit Report on Contract Management](#)

- A culture of change is required for corporate procurement as most requests are issued to PRO only when the applicable units' budgets are assigned, and PRO is approached very late in the process.
26. While PRO does not have a long-term strategy focused on business needs, PRO understands the procurement requirements and requests business units to plan annually, which is then used for advancing the procurement process. For corporate procurement, PRO holds meetings with allotment holders based on their annual submitted plans and their individual procurement requirements. PRO also has placed mechanisms to maintain and update the procurement plans of the units (such as Teams channels). Additionally, ad-hoc meetings are held on individual procurement transaction strategies and during these meetings, PRO determines if there are similar planned procurements and if there is an ability to consider issuing LTAs, and/or combining procurements for both efficiencies and cost-savings.
27. A global procurement strategy will provide an opportunity to further understand the business needs, procurement requirements, related inherent risks and resources required for PRO to enhance its procurement end-to-end process, thereby building on already existing elements and good practices to effectively support ICAO in achieving its strategic priorities and objectives.

Functional key performance indicators

28. Procurement key performance indicators (KPIs) are used to evaluate and monitor the performance of an organization's procurement function. KPIs help an organization to optimize and regulate spending, quality, time and costs.
29. In 2011, the Joint Inspection Unit (JIU) found that most UN agencies had not established KPIs for procurement, and organizations had not developed a culture of measurable results. The JIU recommended that organizations should establish: (i) proper procurement monitoring and performance-evaluation mechanisms; and (ii) regular internal (to senior management) and external (to governing bodies) reporting with respect to procurement activities, capturing all essential information, to facilitate analysis and decision-making. Following this report, several UN agencies' procurement functions have adopted KPIs, including consolidating performance data.
30. PRO had not established KPIs for procurement. Examples of KPIs include *'time-cost of POs'*, *'procurement cost reduction'*, *'lead time'*, *'procurement impact'*, *'gender-responsive and sustainable procurement'*, *'client satisfaction'*, etc. The limited availability of accurate procurement statistical data for performance analysis, due in part to the limitation of the current ERP system, and the absence of a longer-term strategy may hamper PRO from establishing and measuring the KPIs.
31. Respondents to the OIO interviews of Bureaus and ROs were satisfied with the services they received from PRO but pointed out that in some cases, the procurement process was lengthy and complex. At the same time, OIO acknowledges that business requestors could be the source of delays due to inadequate planning of projects and related procurement activities; ineffective utilization of plans to start procurement actions well in advance; incomplete or inaccurate information provided to PRO etc.
32. PRO indicated that they do not have internal KPIs and do not track lead times as sometimes funding is dependent on the requestors/states and even though awards are made, without funds, ICAO cannot enter into contracts and commit the Organization. However, they do track some statistics e.g. how many cases submitted to the Contracts Board were recommended without the need for clarification and prepare the annual report to management, which includes some statistics.

Procurement lead times and efficiency

33. Based on a sample review, OIO noted an average of 414 days from the time a requisition is recorded in Agresso to the time that a contract/PO was issued. It was also noted that on average, it took 218 days to award a contract/PO after closure of the tender. Refer to Annex 3 for further details.

34. OIO is aware that there are justifiable reasons for the time to complete a procurement from start to end. Some of the lengthy periods are attributable to third parties and States, where ICAO requires information during a procurement process, or the lack of funds available. However, it would be beneficial if PRO introduces tracking and identifies the underlying reasons for cases that took longer than expected, in an attempt to improve the process and take heed of lessons learned where necessary. The existing systems like UNAll may be explored for this purpose.
35. Additionally, although the information is available, statistics of tenders cancelled and readvertised should be kept and formally logged in order to understand the cause resulting in the cancellation and identify areas for improvement and lessons learned.

Risk management

36. The JIU in its report issued in 2011, highlighted that procurement activities carry high inherent risk and therefore require proper risk management. Risk is elevated in ICAO because of its procurement on behalf of states. The JIU recommended that Executive Heads of the United Nations bodies integrate risk management into the procurement process. This should include the operation of procurement units, analysis of procurement activities as well as introducing risk management when conducting individual procurements.
37. So far, there is no corporate risk assessment or risk mitigation plan for the end-to-end procurement process, including procurement for states, which comprised about 81 per cent of procurement volume for 2023. ICAO will benefit from an end-to-end risk assessment for procurement with adequate mitigating measures.
38. Upon review of the corporate risk register, OIO noted only one risk with regard to procurement which related to staff training. The risk register could also be revisited based on the findings of this audit, particularly the perceived risks regarding procurement projects for states.

Recommendation 1 Procurement strategy and risk management

Priority Medium

The Chief PRO, with support from the Director ADB, should develop a corporate procurement strategy to reflect key business needs and associated risks, with effective mitigating actions and assurance, including resources, KPIs, and tools. The associated risks should come from an end-to-end risk assessment for procurement, covering the related inherent risks and root causes with adequate mitigating measures.

Closing criteria:

- a. An approved procurement strategy accompanied by appropriate performance mechanisms for the Procurement Section, introducing KPIs, and a reporting mechanism on strategy implementation, for example through quarterly senior management meetings and in the annual procurement report.
- b. Implementation of a risk mitigation plan, incorporating an end-to-end risk assessment over the procurement process, covering headquarters, regional offices and state procurement with adequate mitigation actions.

Procurement planning

Corporate procurement planning

39. Effective and efficient procurement is highly dependent on proper planning. Efficient procurement planning enables PRO to determine needs in advance, consolidate processes and avoid post facto situations. Although ICAO introduced the standard procurement planning process, the planning is not complete and several procurement exercises carried out in 2023 and 2024 were not included in the annual procurement plan submitted by the respective bureaus and regional offices.
40. Upon review of a sample of corporate sole source procurement cases, OIO noted that 7 out of 15 cases i.e. CAD\$216 993 out of CAD\$704 256 were not included in the annual procurement plan. Additionally, based on a sample review of corporate competitive procurement cases, it was noted that 9 out of 14 cases i.e. CAD\$1 631 784 out of CAD\$2 274 569 were not included in the annual procurement plans submitted to PRO. Below are examples of OIO's review:
- Case 1: CAD\$25 000 - the request to undertake a training was requested three weeks prior to the training taking place, whereas this event was known well in advance. The procurement had to be done on a sole source basis.
 - Case 2: CAD\$93 101 - This case was not included in the procurement plan, even though the renovation of the premises was planned and agreed before the beginning of the year. The procurement had to be done on a sole source basis.
 - Case 3: CAD\$225 000 - the contract was coming to an end on 19 February 2023 and was tendered relatively late on 17 January 2023 and only awarded on 20 April 2023, even though it was included in the procurement plan.
41. Weak procurement planning communicated to the procurement section may lead to a decreased probability of receiving valid offers, decreased competition, and increased lead times and delays, due to the lower efficiency in the use of resources by undertaking last-minute actions.

Post facto cases

42. Based on sample review, OIO noted 6 post facto whereby contracts were awarded or amended on a post facto basis. For one case, the Contracts Board did not approve an extension as it would have resulted in another post facto case. Below are examples of 4 post facto cases noted:
- Case 1: Operation and maintenance of a system: US\$977 529 - approval by the Secretary General, following the Contracts Board recommendation was obtained on 17 July 2024, while the start date was 1 July 2024. Based on sole source extensions, the total value of the contract increased from an initial US\$13.8 million to US\$16.4 million with the last extension of US\$977 529 being awarded on a post facto basis.
 - Case 2: US\$665 300 – Maintenance of security equipment - ICAO had de facto entered into a commitment as the vendor continued providing the services even after the contract expiry in June 2023. The amendment was signed in December 2023. The initial contract was awarded on a sole source basis for US\$3.6 million with subsequent sole source extensions bringing the contract value to US\$10.3 million.
 - For another two cases, (provision of simultaneous interpretation for CAD\$11 479 and provision of licences for CAD\$28 500) payment already became due and there was no option but to pay.
43. PRO indicated that once a contract is awarded, it is handed over to the contract managers who had requested the goods/services to manage the contract. The monitoring of the approaching expiry dates by contract managers and business units at ICAO is not automated in the current ERP system Agresso, but this option would be explored in Quantum or through Dashboards. It is important to make use of a contract management tracking tool to avoid post facto awards in future. However, this should not be an excuse as there are means to track expiration dates through calendars and Excel as a tool. Additionally, in some cases, states provide the inputs late which results in the post facto cases.

44. PRO should explore how the new ERP-Quantum system can assist with strengthening the annual procurement planning exercise, including generating reports of non-compliance for sharing with Senior Management.

Recommendation 2	Improve procurement planning process and reduce post facto awards
Priority	Medium
The Chief PRO should:	
(i) Regularly remind Regional Offices and Bureaus about adequate procurement planning with a requirement to update their plans regularly.	
(ii) Formally inform states that post facto awards will not be tolerated ahead of any contract expiration.	
Closing criteria:	
a. Communication to Bureaus and Regional Directors reinforcing the need for adequate procurement planning to include all planned procurements and obtain certification from Bureaus and Regional Directors that all known planned procurements were included in the annual procurement plan.	
b. Formal communication to states at the project inception stage regarding non-acceptance of post facto requests after contract expiry.	

Procurement operations

Use of sole source solicitation method

45. Sole sourcing is a non-competitive procurement process through the solicitation of only one source. It does not require bids or quotes from prospective vendors, implying a lack of full and open competition. While permitted within the UN system and in ICAO's Procurement Code, sole source procurements bear inherent risks to obtaining and demonstrating the best value for money because the price from a sole vendor might not be competitive. Refer to Annex 2 for the conditions for sole source procurement.
46. Table 1 below compares the total of state procurement and the corresponding sole source for 2023 and for 7 months of 2024.

Table 1 – Sole source versus total procurement

State procurement	2023 (US\$)	2024 (till 31 July) (US\$)	Total for audit period (US\$)
Total procurement volume – State	73 944 868	37 934 572	111 879 440
Conducted on sole source basis	17 025 825	14 839 853	31 865 678
Percentage on sole source for state procurement by value	23%	39%	28%
Total POs	52	32	84
Sole source POs	11	12	23
Percentage on sole source for state procurement by PO count	21%	37%	27%

Source: ICAO Annual Procurement Report 2023 and data extract from Agresso system

Note: For 2024, only 7 months were reviewed, hence the figure is disproportionate as compared to 2023. Out of the US\$14 839 853 for field procurement, US\$10 million relates to a single procurement case.

47. OIO reviewed a sample of 15 sole source cases for HQ and RO procurements totalling CAD\$704 256 and 16 sole source cases, conducted in 2023 and 2024, relating to state procurement totalling US\$29.8 million out of US\$31.9 million. Each case was documented, justified, reviewed by PRO and recommended by the Contracts Board in line with the thresholds. However, OIO believes that in some cases inadequate planning may have led to the need for sole source and that ICAO and the state may not have always benefitted from the best value for money. The main justification for the cases reviewed by OIO referred to *(i) a previous determination pertaining to an identical procurement activity, or a need to standardize the requirement based on a recent procurement activity; or (ii) a demonstrated exigency for the purchase*. Refer to Annex 3 for further details.
48. OIO notes that the requests for sole source were justified as to be compatible with existing equipment, proprietary basis for maintenance, software and spare parts. Some cases were extensions of previous contracts that were also conducted based on sole sourcing. Although standardization may be a legitimate justification, the inherent risk is that there might be an indirect contribution to creating a situation of limiting competition where certain needs can only be procured from one vendor. OIO is aware that PRO had conducted market comparisons on sole source quotes to ensure pricing is reasonable and within the market range.
49. OIO notes that sole source procurement may be inevitable due to the nature of the request, such as maintenance of previously purchased equipment, familiarization and training purposes, budget limitations for new investments leading to a competitive tender, etc. While these requests may be permissible, this still poses a risk for ICAO, and it nevertheless remains a proportion of the total procurement volume that can be reduced.
50. There is an inherent risk that ICAO may be used to procure a certain brand or contract with a specific vendor which public procurement policies would not easily allow.
51. OIO was informed that although states are aware that a current contract is coming to expiration and that a new competitive tender must be issued, there are often delays by the state in confirming new requirements or specifications thereby leaving ICAO no choice but to extend current contracts to maintain operations or services at the state level. While maintaining business or aviation continuity is important it should not be done at the expense of ICAO's reputational risk *and consequently, the state should be clearly advised at the project development stage of this. CDI contract managers should also advise states of contract expirations well in advance*. Moreover, large-scale projects which involve ongoing large procurements should require full-time on-site monitoring by CDI to ensure amongst others proper planning to minimize exceptions.

Competitive State Procurement

52. According to the best practices, a minimum of three bidders is typically required. The procurement code indicates that all reasonable efforts shall be made to identify a minimum of seven potential vendors for formal solicitation. If it is not possible to identify this number of vendors, an explanation as to why this is the case should be prepared and kept on file.
53. OIO noted from its sample review of 25 competitive procurements, that 15 cases (representing 60 per cent) totalling US\$53 million, resulted in two or less offers, or only one offer that was evaluated as technically compliant. At the same time, these cases may indicate that transparency needs to be enhanced; the below serve as examples only:
- In several cases only one or two offers were received, despite retendering; it should be assessed as this was recurrent in previous audits and highlighted by the Contracts Board recommendations.
 - In few instances, PRO contacted the prospective bidders to check the reasons for not bidding, they indicated that they could not meet the technical or legal requirements and hence could not make an offer.
 - [REDACTED]

- In one case a prospective bidder raised concerns that the technical requirements catered exclusively to a select few vendors. This was reviewed and it was concluded that this was not related to restrictive technical requirements.
54. Having a low number of technically compliant bidders is an indication that there is a need to identify the cause of what is hindering effective competition, including additional checks to ensure that technical specifications are not narrowing the competition. Also, the low number of bids requires additional time and resources for PRO to perform price reasonability and justify the best value for money, which in turn may delay procurement. OIO was informed that limited participation in some states by vendors can be attributed to the nature of the commodity being procured that requires local enterprises and efforts. PRO on occasion went back to prospective bidders to check the reasons for not submitting offers. This should be done regularly, and the feedback should be analysed as potential lessons learned for future procurements.
55. There are challenges in attracting competition, ensuring the best value for money and transparency in the process. At the same time, during the last three years only one bid protest was received which was found to be unjustified and there were no litigations on any contract.
56. The key inherent risks with state procurement are as follows:
- Inadequate design of the lifecycle of long-term procurement projects due to the nature of the goods/services being procured and the need at the onset of project initiation to document whether or not it is feasible to change selected suppliers too often, and if done, what would be the impact, for example: resulting in additional costs for onboarding a new supplier, training in new systems and environmental sustainability as well as understanding the true life cycle costs, including for spare parts and further maintenance service contracts. *CDI and PRO should explore a longer-term solution for the design of projects requiring investment into infrastructure procured or built as well as systems and software, etc. This might entail having a cost and benefit analysis and a detailed risk register as part of the project documentation and completing the procurement plan at the starting phase of the procurement projects; a Project Board represented by technical, legal and operations colleagues to ensure the technical, legal, financial, and operational feasibility of the procurement-related projects before they are signed with the states.* CDI indicated that in order to enhance project quality assurance, it is deploying a mechanism/framework focusing on quality planning and quality control.
 - CDI procures aviation equipment and services for a state which has entered into a framework agreement with ICAO. *CDI at the project inception phase should assess what value it brings with the procurement of some commodities to achieve capacity development and implementation, including CDI's technical capacity for the projects they accept during the procurement and contract management phases, including mitigation measures for key legal and reputational risks in case there are issues with inadequate technical support and/or the quality of delivered goods and services.*

Recommendation 3 Enhancing project design and risk management for procurement related projects

Priority High

The Director, CDI in coordination with the Director, ADB should:

- (i) Identify at the onset of the project, the potential risks and subsequent procurement, and document the inherent risks and mitigating actions. During the procurement and contract management phases, the risk register should be updated and the effectiveness of mitigating actions monitored and revised as needed.
- (ii) Reinforce with states and allotment holders the strict ICAO procurement rules, including the contract management requirements to ensure that a timely, transparent and fair competitive procurement process is followed, including the implications on the procurement process and timeframe.

Closing criteria:

- a. Project document detailing measures enhanced in the procurement process to address transparency and competition. Updated Contracts Board form that contains confirmation that it is satisfied that the ICAO procurement principles were followed prior to recommending the award.
- b. Proof of communication to states as well tracking of rejected requests from states for sole sourcing, branding, and specific vendor awards, etc.

Recommendation 4 Promoting effective competition

Priority High

The Chief PRO should provide regular statistics to pinpoint the number of procurement cases using trend analysis and feedback received for enhancing future procurement processes and promoting competition, including feedback for unresponsive bids and periodical market surveys and UN Country Team vendor base.

Closing criteria:

- a. Regular reports on procurement statistics and risks noted with causes and areas of improvement, including briefing to senior management covering key risks and red flags in the procurement process.
- b. Evidence of sourcing undertaken to identify potential vendors based on the commodity being procured, and confirmation that market surveys of other UN Agencies' were checked.

Reasonableness of costs

57. An assessment of the reasonableness of quoted prices is mandatory when only one proposal is received or in the case of a sole source. OIO noted that for certain cases the assessment of reasonable costs could be improved, for example:

- Case 1: US\$8 351 614 - refurbishment, repair and preventive maintenance of aircraft rescue and firefighting vehicles - a price comparison of refurbished vehicles vis-a-vis new vehicles revealed that the average cost is almost equal to purchasing a new truck. This was communicated to the state by PRO, however, the state opted for refurbished vehicles. The

reasonableness of price performed could be improved as many items quoted by the vendor were above market price for similar items. The reasonableness of price was assessed by reviewing the same vendor's offer and seeking clarifications on the offer.

- Case 2: US\$14 264 264 - waste thermal plant - the offer was 45 per cent higher than the internal estimate, though this was justified in the report to the Contracts Board.
- Case 3: US\$147 928 - remodelling and purchase of equipment- there was only one offer, and the price was 24 per cent higher than the market prices used in the comparison.

58. OIO was informed that market estimations are prepared usually at the planning stage and before the technical requirements are fully defined, resulting in differences with final prices obtained.

Vendor spread

59. OIO noticed during the period January 2023 to July 2024, that 70% of the volume of state procurement or US\$78.6 million was issued to 10 vendors. Some of these vendors were awarded with more than one contract. The contracts ranged from US\$4.7 million to US\$15.7 million and were composed of seven vendors in [REDACTED] for US\$57.5 million, one vendor in [REDACTED] for US\$10.9 million, and two vendors in [REDACTED] for US\$10.2 million.
60. It will be beneficial to review purchasing patterns, key trends, as well as the types of equipment or services procured for states to identify potential risks, and any improvements to be made to the procurement process.

Recommendation 5	Justification for reasonableness of costs
Priority	Medium
The Chief PRO should ensure that the reasonableness of costs is performed by referring to comparable services and goods from other vendors.	
Closing criteria:	
Documented commercial evaluations and reasonable price checks to other vendors that provide the same or similar goods/services within the same region within an acceptable time range.	

High-level review of Delegated Purchase Orders

61. As indicated in the audit scope, Delegated Purchase Orders (DPOs) i.e. procurement below \$10 000 are under the purview of the respective allotment holders and are covered during the regional office dedicated audits. However, during this audit, if weaknesses were noted with respect to the use of DPOs, these are highlighted below.
62. The responsibility for compliance for low-value procurement rests with the respective allotment holders. The volume of DPOs in 2022 and 2023 is reflected in table 2 below:

Table 2 - DPO amount and count 2022 and 2023

Type	2022		2023	
	Count	Amount (CAD\$)	Count	Amount (CAD\$)
Procurement volume – HQ and RO	566	1 495 687	609	2 928 830

Source: ICAO Annual Procurement Reports 2022 and 2023

63. With regards to HQ or RO procurement, OIO identified various purchases in a 12-month period that exceeded the CAD\$10 000 DPO threshold, while they were not always for the same project, the purpose or items were similar. For some cases though an informal competitive process was followed, based on the amount, those cases may have required that a more formal solicitation procurement process be followed such as a request for quotation (RFQ), or an LTA could have been sought.
64. OIO noted 5 cases totalling CAD\$84 715 whereby the total value of goods services purchased in a 12-month period from the same vendor exceeded CAD\$10 000, negating the need for a more formal solicitation method. OIO also noted 7 cases totalling CAD\$122 309 whereby each DPO was issued over the value of CAD\$10 000, while a DPO should not exceed CAD\$10 000.
65. The trends indicate that there may be potential non-compliance with procurement practices by some allotment holders.
66. Statistics of DPO usage are included in the annual procurement report and PRO indicated that at the time of preparing this annual report, a sample of DPOs was reviewed.

Threshold for procurements below \$10 000

67. Open international competition is the standard modality for all procurements with a value of \$10 000 and above and the authority to contract is vested in the Chief PRO. Such procurement requests must be processed through the ICAO e-tendering portal and on the United Nations Global Marketplace, except if the need can be covered through an existing valid LTA. However, if the need through an LTA is above \$10 000, the approval authority rests with the Chief PRO.
68. OIO noted that from 1 January to 31 December 2023 a total of 609 cases amounting to CAD\$2.9 million for procurements below CAD\$10 000 were done through DPOs.
69. ROs and Bureaus interviewed during this audit informed OIO that even for cases just over CAD\$10 000, the entire procurement process via PRO must be followed and that in certain cases, the procurement process took longer than expected due to competing priorities in the Procurement Section. Some Units indicated that the DPO threshold may be outdated as it has not changed in over 10 years and no consideration was given to inflation and price escalations brought upon after the Covid-19 pandemic.
70. This should be assessed based on the Organization's risk tolerance and would require training of the staff and personnel concerned in the field (requisitioners, allotment holders). *Since LTAs follow a more stringent procurement process, it may be considered that this threshold is increased.*

Recommendation 6 Usage of DPOs and DPO threshold

Priority Medium

The Chief PRO should:

- (i) Send out a communication to all allotment holders to reiterate their responsibilities in ensuring that procurement procedures for informal methods of solicitation are complied with.
- (ii) Assess whether the DPO threshold of \$10 000 can be increased subject to the necessary training, risk tolerance, dedicated capacity and accountability structure.

Closing criteria:

- a. Evidence of communication to Allotment holders addressing the recommendation.
- b. Analysis of DPO threshold increase with pros and cons for decision making.

Corporate training on procurement and contract management

71. ICAO personnel assigned with procurement and contract management responsibilities need to be adequately skilled with access to relevant training, development opportunities and good practices.
72. OIO noted that while presentations on the revised Procurement Code were made with its launch in late-2021, since then, ICAO personnel did not benefit from a dedicated procurement and contract management training. At present there is only one mandatory training for requisitioners, however this is not monitored and there are no statistics of completion. PRO indicated that there is no mechanism to track these trainings, as this is often conducted individually prior to requisitioners undertaking a procurement process. However, practical training is often provided when requisitioners reach out to PRO for assistance in a particular procurement process.
73. Additionally, procurement and contract management guidance is limited to the Procurement Code and the *"quick guide for requisitioners and allotment holders"*. These documents aim to provide general guidance and are not necessarily intended to provide detailed and practical examples or techniques to manage the procurement process, contracts, or vendor performance.
74. ROs and Bureaus interviewed during this audit confirmed this absence of training and expressed a high interest in being (re)trained on procurement and contract management to ensure they become more acquainted with procedures, processes, best practices, and tools supporting the entire process. It was also mentioned that with the implementation of the new ERP-Quantum system, they are concerned as they have not seen or had an overview of the procurement process in the Quantum system and expressed a need to be trained.
75. From the results of this audit, OIO is of the view that there is a need for specific risk-focused procurement and contract management training for requisitioners, allotment holders, members of technical evaluation committees, members of the Contracts Board and contract managers to ensure full transparency in the procurement process, minimize any conflict of interest, minimize human error, identify procurement red flags and to enhance the skills of personnel involved.
76. With the implementation of the Procurement Code now almost three years in practice, and the move to the new ERP-Quantum system, lessons learned, emerging risks and missing pieces should be included in the training, including updating processes for Quantum system rollout.

Procurement due diligence

77. The Procurement Code requires that the evaluation panel should satisfy itself that there is no indication of fraud, price-fixing or suspicious actions by some bidders. The Procurement Code also identifies patterns of potential bid-rigging, such as the splitting of schedules between bidders, where one bidder is lowest for schedule one, the other for schedule two, and so on.
78. Evaluation reports sampled by OIO did not include any detailed analysis of red flags reviews and there was no formal mechanism in place for the additional checks to be done to identify such red flags in the evaluation process. The lack of analysis or formal procedures for evaluating and clearing red flags exposes ICAO to potential fraud and/or collusion and reputational risk. Considering the high risk of procurement fraud, evaluation panel members should be trained and made aware of common fraud schemes and red flags to look out for.
79. OIO notes that PRO is not part of the technical evaluation for purposes of segregation of duties. However, it would be important that results were checked to ensure that the process was fair and that bidders were not unnecessarily disqualified from participating further in the process. This is especially important for marginal cases where bidders were very close to meeting the threshold and considered further in the process. Also, for cases where scores of the technical evaluation committee members are very different, it will be useful to probe the reason instead of taking an average score to finalize the evaluation.
80. OIO did not identify bid-rigging or collusion, however formal procedures for evaluating and clearing red flags could reduce ICAO's exposure to potential fraud and/or collusion.

Recommendation 7	Structured training on procurement and contract management
Priority	Medium
<p>The Chief PRO should develop, roll out and monitor compliance with a training programme for requisitioners, allotment holders, members of evaluation committees, members of the Contracts Board and contract managers, based on their roles. Such training should include how to reduce post facto, identify typical red flags in the procurement process, including who is responsible for performing this, etc.</p> <p>Closing criteria:</p> <ol style="list-style-type: none"> Development and roll out of end-to-end procurement and contract management training, incorporating ERP-Quantum system requirements and process. Updated technical evaluation summary report confirming red flags checking was performed. Tracking completion rates of procurement training. 	

Contract management

81. As indicated in the audit scope, Contract Management was out of scope, however, during this audit, if weaknesses were noted with respect, these are highlighted below.
82. OIO noted a case for CAD\$40 000 whereby the contract was extended almost one year after the contract had ended.
83. For another case, after signing the contract with the vendor, the local representative changed, and no contract amendment was initiated until this was raised during the audit.

Management of bank guarantees

84. OIO noted that as part of its review of contracts with vendors for state procurement, the management of bank guarantees for performance can be strengthened. There were 5 instances for contracts totaling US\$25.2 million, whereby It was noted that performance bank guarantees were not timely obtained or not extended when contracts were amended.
85. In 3 of the 5 cases, though the signed contracts included the requirement for a bank guarantee, OIO was informed that during payment negotiations, different payment terms were negotiated that resulted in waiving the need for a bank guarantees, however the signed contract was not amended.
86. Delays in receiving or updating bank guarantees may expose ICAO to financial risk against potential supplier non-performance or misconduct. The existing monitoring tool of bank guarantees should be enhanced to track those that need to be amended for changes in contract end date or contract value.

Monitoring and oversight

Oversight and assurance over the procurement process

87. Monitoring and oversight activities include regular reviews, exception-based reporting and second-line assurance by management to ensure that inherent risks in a procurement process are mitigated to an acceptable level. The overall managerial oversight and responsibility of ICAO's procurement activities is delegated to the Chief PRO. ICAO's accountability framework also includes a provision that the internal control system requires regular monitoring to assess its strength, resilience, and performance over time.
88. During the period under review, OIO noted that PRO was not able to perform ongoing procurement monitoring and oversight activities, such as compliance checks relating to cumulative procurement

values; analysis of transactions potentially deviating from the Procurement Code, or thresholds requiring different solicitation methods. OIO is aware that PRO is involved in the procurement process, provides guidance and support as needed to comply with the Procurement Code; and that foreseen detailed procedures and steps are followed from procurement planning to the award of a contract.

89. OIO also noted that there is no provision for external assurance/oversight, e.g. audit or evaluation, to ensure that a project has effectively met its deliverables and intended objectives and that the entrusted public funds were used to ensure the best value for money. Based on OIO's review of project documents of other UN agencies, there should be oversight provisions and mechanisms built into the project implementation plan and sufficiently funded by the funding partner to provide reasonable assurance. OIO will be performing a separate review of the Project Lifecycle which may result in other recommendations.
90. The concept of the second line function of the Three Line Management Risk Management Model is not embedded in the Procurement Code. In ICAO, due to its size and limited resources for procurement, PRO combines first and second-line functions: PRO is undertaking the role of a first-line function that is involved in direct support of procurement transactions and there is very little time and capacity for proactive risk monitoring and oversight expected of a second-line function for procurement.
91. There is no formalized monitoring framework on *"who does what and when"* to ensure that any exceptions from the Procurement Code are detected and their root causes are corrected, and if the Procurement Code effectively mitigates key risks. Some elements of monitoring exist for example:
 - PRO prepares an annual procurement report after year-end that provides an overview of the previous year's procurement activities, statistics, key vendors used, etc., and this report involves manual collection, consolidation and analysis of data. While this report is useful and includes valuable information, it cannot be used for proactive risk management of procurement deviations, exceptions and inefficiencies. The trends identified in the annual report might not be analyzed and used for enhancing risk management actions, but mainly for information purposes.
 - With the establishment of the Contracts Board there is an element of oversight as a second-line role, but these are for cases above a threshold and the Contracts Board is composed of part-time members that have other jobs in ICAO, therefore they are heavily reliant on the work done by PRO and evaluation panels to inform their work. Their role is not to review evaluations or perform red flags checking, etc.
92. OIO was informed that this is because of the structure imposed due to the lack of funding for a compliance officer to provide oversight over procurement, without resources, PRO is not able to exercise effective oversight. Ongoing oversight of procurement, particularly relating to procurement on behalf of states, needs to be strengthened to achieve what is cited above.

Enhance PRO staffing and capacity

93. It is apparent that while the procurement of ICAO is functioning, processes are in place, documentation is in order, and there is an adequate policy to govern the process, there is a lack of ongoing monitoring, especially over procurement on behalf of states, which increases inherent risks.
94. The procurement volume has been increasing steadily (see Table 3) but the structure of PRO and its funding had not changed.

Table 3 – ICAO's annual procurement spend 2020-2023

	2020 (CAD\$)	2021 (CAD\$)	2022 (CAD\$)	2023 (CAD\$)
Procurement volume – HQ and RO	10 561 366	16 626 648	15 063 915	23 553 557
	2020 (US\$)	2021 (US\$)	2022 (US\$)	2023 (US\$)
Procurement volume – Technical/State	22 010 000	21 930 000	49 804 412	74 498 072

Source: ICAO Annual Procurement Reports 2022 and-2023

95. Though CDI provides ICAO with a fixed annual amount for the services provided for state procurement, this amount is not available to be utilized by PRO.
96. PRO is not able to absorb additional work should any team member be absent, and these are high impact and high probability risks. In addition to servicing the increased demands of all headquarter bureaus, regional offices and technical/state procurement, PRO must fulfil several functions in support of procurement and contracting organization-wide (as temporary or ongoing responsibilities), for example:
 - Provide strategic guidance, training and advice on all procurement matters.
 - Provide technical ERP-related procedures training and support on all procurement matters.
 - Maintain the ERP related to procurement, based on regular trend analysis of exceptions to the policy, revise key procedures and introduce tools related to the procurement framework.
 - Oversee procurement planning and monitoring at ICAO.
 - Promote knowledge building/sharing in relation to procurement and related matters.
 - Manage external audit-related activities in relation to the procurement function.
97. Moreover, since January 2024, the Procurement Section has been heavily involved with the implementation of the new ERP-Quantum system without additional resources. There is a huge potential for automating the exception-based monitoring in the upcoming ERP, however it needs a dedicated investment, at least on a temporary basis.
98. Through interviews with several Bureaus and ROs, all were mostly satisfied with the services and competency of the procurement team. Most units highlighted that while they were highly satisfied, they are of the view that PRO is understaffed as sometimes it took longer than usual to respond to their queries and some procurement cases took longer than expected to complete.
99. PRO may not be adequately structured and have the capacity to strengthen a growing procurement function to meet the demand and therefore cannot exercise proactive monitoring and oversight, training and other tasks expected from the policy owner responsibilities.

Recommendation 8 Establish second line function within PRO for ongoing monitoring and oversight

Priority High

The Director ADB should consider strengthening a second-line monitoring and management assurance function over procurement activities, including an adequate structure to conduct such oversight and other responsibilities expected from the policy owner.

Closing criteria:

- a. Outline of clear roles and process to perform monitoring, training, and risk management for second line roles over procurement activities.
- b. Enhancement in the project and procurement oversight, including revisions of existing procedures to adequately mitigate the existing risks.

Procurement policy

100. The issuance of the Procurement Code in December 2021 improved governance over the procurement process and helped ensure adequate roles and responsibilities, including proper segregation of duties between requestors of procurement, the procurement function and contract management, including supplier performance. The Contracts Board mandate, its roles and responsibilities were clearly established.
101. OIO suggests that the below two observations pertaining to the Contracts Board be addressed with the next planned revision of the Procurement Code.

Composition of the Contracts Board

102. The Procurement Code has established the Contracts Board. Its roles and responsibilities are clearly defined in Chapter 9, including its mandate, its composition and review process whereby the Contracts Board has the role of oversight on processes and advisor to the appropriate procurement authority. Refer to Annex 2 for the requirements of the Contracts Board composition.
103. OIO noted that the current Chair of the Contracts Board is the Deputy Director of the Air Transport Bureau (ATB). OIO also noted that at times the Legal Affairs and External Relations Bureau (LEB) is represented by the Deputy Director instead of the Senior Legal Officer.
104. Since it is expected that from time to time the composition of the Contracts Board may change and/or evolve, it may be better if its members are appointed, in writing by the Secretary General for a certain period, while the Procurement Code does not need to specify the Contracts Board actual composition, rather include a suggestion on its membership.

Minutes of Contracts Board meetings

105. Chapter 9.3 of the Procurement Code states that:

"...meetings amongst the members are mandatory for procurements in excess of \$1 000 000. Recommendations of the Contracts Board shall be documented in the form of the Contracts Board submission, duly signed. For physical meetings of the Contracts Board, minutes shall be prepared by the Secretary of the Contracts Board."

106. OIO was informed that in practice it is up to the Chair of the Contracts Board to decide if minutes of its meetings are required. OIO noted that there are recordings for all meetings, but minutes are not prepared. OIO is aware that all cases recommended by the Contracts Board were documented on the standard form.
107. Minutes act as a reference point for members, helping them recall what was discussed, decided, and what action items were assigned. Clear and detailed minutes promote transparency within an organization, making it clear what happened during meetings. Artificial Intelligence tools can be used for summarizing the recorded meetings, with full respect to confidentiality and privacy.

Recommendation 9 Contracts Board update in the Procurement Code

Priority Medium

The Chief PRO should update the Procurement Code to indicate how Contracts Board Members will be appointed and their terms; and reinforce the requirement that minutes are required for meetings of the Contracts Board for procurement cases of \$1 000 000 and more or update the Procurement Code to align with current practice.

Closing criteria:

Updated chapter 9.3 in the Procurement Code on composition and minutes of the Contracts Board.

ERP-Quantum system implementation

108. PRO makes use of an e-procurement system that was rolled out at headquarters and regional offices. Vendors can register in the system, submit their bids electronically, the system is also used for bid opening and serves as the filing system for submitted bids. The system is mandatory for all bureaus and regional offices, including for Requests for Expressions of Interest, but not for purchases below \$ 10 000, sole source, and orders against LTAs. Bid evaluations are done outside the system. Although there is a link to the current ERP, the e-procurement system is not integrated with it.
109. As indicated in the report, the availability (or lack) of data to automatically capture, report, consolidate and analyze exceptions from the Procurement Code (e.g. whether a PO is based on sole sourcing, if delegation of authority is not complied with, if LTA was used, etc.) weakens the Chief PRO's ability to generate trends by each bureau or regional office; identify the root causes of such exceptions; and hold individual managers accountable.
110. Based on the results of this audit, examples include post facto cases, renewal of contracts after expirations, bank guarantee management, change of local agent without contract amendment, etc., there is a need for enhancing contract management. Currently, the process is manual, and monitoring is left to individual contract managers using a fact sheet or spreadsheet.
111. In line with the implementation of the new ERP-Quantum, and to improve contract management subsequent to an award, an integrated contract management module which covers critical requirements should be included in the new ERP-Quantum.
112. OIO believes that it is important for PRO to:
 - Ensure that gaps in the current e-procurement system are addressed in the new Quantum e-procurement module.
 - Introduce a comprehensive framework for monitoring procurement transactions (e.g. automation of exceptions reporting, dashboards of disaggregated data on a real-time basis, reporting to senior management, acting on non-compliance trends, etc.).
 - Implement and roll out a contract management module with the new ERP-Quantum system.
 - As part of the procurement and contract management training, incorporate the ERP-Quantum system requirements and process.

ANNEX 1: DEFINITION OF AUDIT TERMS

Audit Ratings

In providing an overall assessment of the results of the audit, OIO uses the following standardized audit rating definitions:

Audit Assessment	Definition
Effective	Controls evaluated are adequate, appropriate, and effective to provide reasonable assurance that risks are being managed and objectives should be met.
Some Improvement Needed	A few specific control weaknesses or areas for improvement were noted; generally however, controls evaluated are adequate, appropriate, and effective to provide reasonable assurance that risks are being managed and objectives should be met.
Major Improvement Needed	Several key control weaknesses were noted and/or several areas of strategic/high importance were identified where significant improvements can be made to increase efficiency and effectiveness.
Unsatisfactory	Controls evaluated are not adequate, appropriate, or effective to provide reasonable assurance that risks are being managed and objectives should be met.

Internal control is defined as a process effected by senior management and staff, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting and compliance objectives. Whilst internal control provides reasonable (but not absolute) assurance of achieving organizational objectives, limitations may result from:

- suitability of objectives established as a precondition to internal control;
- reality that human judgment in decision making can be faulty and subject to bias;
- breakdowns can occur because of human failures such as simple errors;
- ability of management to override internal control;
- ability of management, other staff, and/or third parties to circumvent controls through collusion;
- external events beyond the organization's control.

Priority of Audit Recommendations

The audit recommendations in this report are categorized according to priority as a guide to management in addressing the issues raised. The following categories are used:

High: recommendations, which address significant and/or pervasive deficiencies or control weaknesses, or areas where significant improvements can be made.

Medium: recommendations, which address important deficiencies or control weaknesses, or areas where some improvements can be made.

Low: suggestions, which represent best practice, or general opportunities for improvement.

ANNEX 2: PROCUREMENT VOLUME AND ADDITIONAL BACKGROUND

Procurement volume

The total value of procurement of goods and services for ICAO Corporate Headquarters and Regional Offices from 1 January 2023 till 31 December 2023 was CAD\$23.5 million (2022: CAD\$15.1 million) and from 1 January 2024 to 31 July 2024 was CAD\$5.4 million. The increase in the spending for 2023 compared to 2022 is attributable to the purchase of ICT equipment and licenses in line with the move to the new ERP-Quantum system planned to go live in early-2025.

The total procurement for ICAO Technical Cooperation/Technical Assistance Projects in 2023 was US\$74.5 million from 1 January 2023 to 31 December 2023 (2022: US\$49.8 million) and from 1 January 2024 to 31 July 2024 was US\$38.3 million. State procurement is based on requests from States and the volume changes based on those requests received.

Table 4 – Procurement volume: HQ and RO Procurement and State Procurement

Details	2022 (CAD\$)	2023 (CAD\$)	2024 (till 31 July) (CAD\$)
Procurement volume – HQ and RO	15 063 915	23 553 557	5 417 480
Procurement volume HQ	13 561 944	21 669 004	5 107 182
Procurement volume RO	1 501 971	1 884 553	310 298
Number of POs (count)	184	179	62
Average value per PO	81 869	131 584	87 379
PO number per month (average)	15	15	5
Procurement value per personnel	5 021 000	7 851 000	1 806 000
Details	2022 (US\$)	2023 (US\$)	2024 (till 31 July) (US\$)
Procurement volume – State Procurement	49 804 412	74 498 072	38 341 021
Number of POs (count)	50	52	32
Average value per PO	996 088	1 432 655	1 198 157
PO number per month (average)	4	4	3
Procurement value per personnel	16 601 000	24 833 000	12 780,000

Source: ICAO Annual Procurement Report 2022, 2023 and data extract from Agresso system

Based on the above procurement volume, the Contracts Unit, falling under the Procurement Section, develops up to 200 contracts annually and there are on average 100 amendments to existing contracts.

Summary of state procurement process

ICAO' enters into a framework agreement with a state, followed by a project document to support it in capacity implementation and development with respect to aviation related matters and to assist a state in achieving compliance with ICAO aviation standards. The support provided to the state include turnkey projects that involve capacity development, construction management, procurement of aviation services and equipment, technical expertise, or a combination of all, etc. The project implementation period varies anywhere from a few months to several years and includes procurement and contract management. ICAO and the state have joint responsibility for project monitoring and ICAO has signed the project document in the capacity of 'Executing Agency'.

Per the signed project document, ICAO must follow the ICAO Procurement Code for procurement on behalf of the state, which includes the procurement principles of best value for money (BVM), fairness, integrity, transparency, and effective competition. The overall process and communication with the state is structured and the procurement process is in line with the end-to-end procurement process per the Procurement Code.

When a request is made by a state, CDI through its Technical Support and Quality Assurance Section sources technical expertise to draw up technical requirements which are first shared with the requesting state for concurrence and then reviewed by PRO to ensure adherence to procurement related aspects per the

procurement code. The case is then tendered, after that offers received are evaluated (formal, technical, commercial, vetting) and awarded in line with the provisions in the Procurement Code. The technical evaluation consists of several steps, including verification of capability, experience of the vendor, adherence to requirements and other matters. OIO was informed that there are also other checks in the overall evaluation process which, along with the technical evaluation, may result in the elimination of bidders. Once a contract is issued, the contract is managed by CDI through its Field Operations Section (FOS).

Delegated Purchase Orders versus Purchase Orders

Delegated Purchase Orders - Allotment Holders at Headquarters and in the Regional and Sub-Regional Offices, as well as the Chief, Field Operations Section (C/FOS) for Technical Cooperation & Technical Assistance, have, subject to the provisions of the Procurement Code, delegated authority to procure goods and/or services provided the value of the procurement does not exceed \$10 000 per delegated purchase order (DPO).

Purchase Orders - Procurements above \$10,000 are carried out by the Procurement Section by means of a purchase order (PO) or separately written contract as appropriate.

Structure of the Procurement Section

The current structure of PRO is composed of 11 staff as follows:

- P5 – Chief of Procurement.
- P4 – Head of Procurement Unit for State Procurement, supported by two staff members, one G6 and one G7.
- P3 – Procurement Officer/Head of Corporate Procurement, supported by two staff members, both G7.
- G6 – Catalogue and Supplier Performance/Portal.
- P3 – Head of Contracts Unit, supported by one G7.
- G5 – Administrative Assistant.

The Section is funded by the regular budget. There is a fee that CDI transfers to ICAO Finance Branch (FIN) for procurement services received. The fee has been fixed for the 2023-2025 budget based on FIN statistical analysis, though the procurement volume has increased, mainly as a result of the slowdown of the world economy during the pandemic years and subsequent recovery.

Conditions for sole source procurement

The Procurement Code lists the conditions for sole source procurement and indicates that sole source procurement should be exceptional and done only under the following circumstances:

- *there is no competitive marketplace for the requirement, such as where a monopoly exists, where prices are fixed by legislation or government regulation, or where the requirement involves a proprietary product or service;*
- *there has been a previous determination with regard to an identical procurement activity, or there is a need to standardize the requirement following recent procurement activity;*
- *the proposed contract is with organizations of the United Nations system or governmental bodies provided that a due diligence market survey has demonstrated that the services offered are the most efficient and cost-effective;*
- *the proposed contract is for equipment that is used, pre-owned, reconditioned or remanufactured provided that its value has been objectively appraised by an independent quality surveyor and that its acquisition is supported by a sound business case, taking into account total cost of ownership and other factors (age, warranties, maintenance, repairs, availability of spare parts, etc.) over the remaining useful life of the asset;*
- *offers for identical items have been obtained through a competitive process during the preceding six months, unless there has in the meantime been a substantial change in price or market trends;*

- *the proposed contract is for the purchase or lease of real property where market conditions do not allow for effective competition. For example, the choice of the location is based on security considerations, as confirmed by ICAO and in-country United Nations entities; and*
- *there is a demonstrated exigency for the purchase requirement. An "exigency" is an exceptional, compelling and unforeseeable need, not resulting from poor planning or management or from concerns over the availability of funds that will lead to serious damage, loss or injury to ICAO property or staff if not addressed immediately. Consequently, the "demonstrated" exigency must be linked to a situation beyond the control of ICAO, i.e. emergency situations or force majeure.*

The authority to contract for the provision of goods and services is vested in C/PRO as follows:

- For procurement below \$200 000 and sole source below \$50 000;
- For procurement equal or above \$200 000 and sole source equal or above \$50 000, only upon prior approval of the Secretary General following recommendation by the Contracts Board.

Composition of the Contracts Board

The Procurement Code, Chapter 9.3 specifies the composition of the Contracts Board as follows:

"The Contracts Board shall be comprised of three members as follows:

- *Chairperson: Chief, Finance Branch, or an alternate, designated by the Secretary General;*
- *Director: Air Navigation Bureau or alternate; or*
- *Director Air Transport Bureau or alternate; and*
- *Senior Legal Officer from the Legal and External Affairs Bureau.*

The director participating in the Contracts Board shall not be the one for whose organizational unit the procurement is being effected and therefore, it may either be the Director of the Air Navigation Bureau or the Director of the Air Transport Bureau."

ANNEX 3: EXAMPLES AND SAMPLES

Procurement lead times and efficiency

Table 1 – Procurement lead times

Requisition Date	Published Date	Type	Requisition No	Closure Date	Award Amount (\$)	PO Date	Length of time published	Minimum days to publish	Time from Requisition to Contract / PO	Time from tender close to Contract / PO
28/08/2022	10/11/2022	ITB	21101899	30/01/2023	1 550 246	27/11/2024	81	21	822	667
09/02/2022	16/11/2022	RFP	21101862	31/01/2023	3 498 512	28/11/2023	76	21	657	301
16/11/2022	09/09/2023	ITB	21101908	24/10/2023	8 351 614	28/06/2024	45	21	590	248
09/03/2022	03/11/2022	RFP	21101869	07/02/2023	5 056 838	08/09/2023	96	21	548	213
20/07/2023	02/02/2024	ITB	21101930	13/03/2024	72 081	26/06/2024	40	21	342	105
27/10/2022	06/04/2023	ITB	21101905	11/05/2023	147 927	01/08/2023	35	21	278	82
22/02/2023	17/03/2023	RFP	11126177	11/04/2023	27 375	30/08/2023	25	21	189	141
14/07/2023	01/08/2023	ITB	11126769	24/08/2023	192 919	14/12/2023	23	21	153	112
12/10/2023	08/11/2023	ITB	11127169	29/11/2023	50 000	04/03/2024	21	21	144	96
Average in days									414	218

Source: Manually compiled from Agresso system and e-procurement system

Use of sole source solicitation method - Sole source examples

Table 2 – Sole source examples

No	Case summary
Case 1 and 2 (Public Works and RO Utilities)	The initial contract was based on a DPO conducted on sole source. The contract was increased via three change orders up to CAD\$93 101. The justification was that <i>"there was a demonstrated exigency for the purchase"</i> .
Case 3 (PBB Maintenance)	The initial contract was awarded for US\$1.6 million in 2021 and was awarded on a post facto basis. Renewals on a sole source increased the contract to US\$11.4 million with an end date of December 2023. The justification for sole source was <i>"the need to standardize the requirement or where for technical reasons, compatibility with other systems or equipment is essential"</i> and the reasons for the extensions was that a new competitive process was completed in March 2023, but contract negotiations were still ongoing in September 2023, owing to delays from the state.
Case 4 (Aeronautical Information software)	ICAO had contracted this vendor since 2013. In 2021 a contract was awarded for US\$192 000 based on sole source, with an expiry date of July 2023. Subsequent amendments to the contract were made with a new end date of July 2025 and a new contract amount of US\$344 000. The justification for sole source was <i>"i) that there was no competitive marketplace for the requirement and ii) the need to standardize the requirement or where for technical reasons, compatibility with other systems or equipment is essential"</i> and the reason for the extension was that the state did not have a budget to replace the current system.
Case 5 (Additional Works for Public Address System)	A contract was awarded in 2017 to the same vendor for the same project for US\$1.4 million which was awarded on a competitive basis. In 2023, a contract based on sole source was awarded in an amount of US\$1.6 million which was 59% of the vendors average annual revenue. The ICAO recommended practice is that an award should not exceed 30% of the vendor's average revenue, unless appropriate bank guarantees are put in place. The justification for sole source was the need to <i>"standardize the requirement based on a recent procurement activity"</i> .
Case 6 (Software system upgrade)	The supplier had been awarded contracts on sole source since 2007, and therefore was approached for the systems software update and hardware and was issued a new contract for US\$10.9 million in 2024. The justification for sole source was that <i>"there was no competitive marketplace for the requirement, such as where a monopoly exists, where prices are fixed...etc."</i>

ANNEX 4: MANAGEMENT ACTION PLAN

Ref	Recommendation	Priority Rating	Accepted (Y/N)	Management Comments	Agreed Actions	Office/ Section Responsible	Target Date
1.	The Chief PRO, with support from the Director ADB, should develop a corporate procurement strategy to reflect key business needs and associated risks, with effective mitigating actions and assurance, including resources, KPIs, and tools. The associated risks should come from an end-to-end risk assessment for procurement, covering the related inherent risks and root causes with adequate mitigating measures.	Medium	Yes	Agreed. The agreed action is subject to PRO being privy and involved in ICAO business initiatives. This also requires advanced planning by Business Owners for Corporate Procurement.	PRO shall engage business owners to obtain needs and requirements in order to consolidate a corporate procurement strategy.	PRO	30 June 2025
2.	The Chief PRO should: (i) Regularly remind Regional Offices and Bureaus about adequate procurement planning with a requirement to update their plans regularly. (ii) Formally inform states that post facto awards will not be tolerated ahead of any contract expiration.	Medium	Yes	Agreed	PRO will remind Regional Offices and Bureau and also request CDI/FOS to provide onward advice to States.	ADB and PRO	30 June 2025
3.	The Director CDI in coordination with the Director ADB should: (i) Identify at the onset of the project, the potential risks and subsequent procurement and document the inherent risks and mitigating actions. During the procurement and contract management phases, the risk register should be updated and effectiveness of mitigating actions monitored and revised as needed. (ii) Reinforce with states and allotment holders the strict ICAO procurement rules, including the contract management requirements to ensure that a timely, transparent and fair competitive procurement process is followed, including the implications on the procurement process and timeframe.	High	Yes	Agreed	(i) PRO shall support CDI at the onset of the project to identify any procurement related risks (ii) PRO shall provide a text to be integrated into CDI Project documents so that States can be advised.	CDI with support of PRO	30 June 2025

Ref	Recommendation	Priority Rating	Accepted (Y/N)	Management Comments	Agreed Actions	Office/ Section Responsible	Target Date
4.	The Chief PRO should provide regular statistics to pinpoint the number of procurement cases using trend analysis and feedback received for enhancing future procurement processes and promoting competition, including feedback for unresponsive bids and periodical market surveys and UN Country Team vendor base.	High	Yes	This is on-going work even as of the time of this report is being presented by OIO., PRO proposes this be implemented bi-yearly.	PRO to report bi-yearly and implement a formal process	PRO	30 June 2025
5.	The Chief PRO should ensure that reasonableness of costs is performed by referring to comparable services and goods from other vendors.	Medium	Yes	This is part of current operations	PRO shall endeavor to apply respective documentation as appropriate.	PRO	30 September 2025
6.	The Chief PRO should: (i) Send out a communication to all allotment holders to reiterate their responsibilities in ensuring that procurement procedures for informal methods of solicitation are complied with. (ii) Assess whether the DPO threshold of \$10 000 can be increased subject to the necessary training, risk tolerance, dedicated capacity and accountability structure.	Medium	Yes	(i) and (ii) Agreed	PRO shall endeavor to implement	PRO	(i) 30 June 2025 (ii) 31 December 2025
7.	The Chief PRO should develop, roll out and monitor compliance with a training programme for requisitioners, allotment holders, members of evaluation committees, members of the Contracts Board and contract managers, based on their roles. Such training should include how to reduce post facto, identify typical red flags in the procurement process, including who is responsible for performing this, etc.	Medium	Yes	Agreed, this was already being planned. With the implementation of the new ERP in Q2/2025 it is expected that the Organization will require some time for familiarization. Therefore, and given that 2025 is an Assembly Year, it is proposed that this training be undertaken accordingly in due course.	PRO, subject to funds availability, recruit a consultant to support the training.	PRO	31 March 2026

Ref	Recommendation	Priority Rating	Accepted (Y/N)	Management Comments	Agreed Actions	Office/ Section Responsible	Target Date
8.	The Director ADB should consider strengthening a second-line monitoring and management assurance function over procurement activities, including an adequate structure to conduct such oversight and other responsibilities expected from the policy owner.	High	Yes	This function, associated roles and procedures will be considered in the context of the overall organizational risk management and compliance activities and will be subject to available funding for the next triennium.	This function, associated roles and procedures will be considered subject to available funding for the next triennium.	ADB	28 February 2026
9.	The Chief PRO should update the Procurement Code to indicate how Contracts Board Members will be appointed and their terms; and reinforce the requirement that minutes are required for meetings of the Contracts Board for procurement cases of \$1 000 000 and more or update the Procurement Code to align with current practice.	Medium	Yes	PRO may issue an addendum to PRO Code including after consultation with the Chair of the Contracts Board. A major review shall occur after sufficient time of use on new Quantum ERP in 4 th Quarter 2026.	PRO to issue amendment to the PRO Code after consultation with the Chair of the Borad	PRO	30 June 2025