

27 February 2015

**IBAN SPECIAL REPORT TO COUNCIL ON THE FINANCIAL SERVICE (FINS)
PROJECT AND ACTIONS NEEDED TO APPLY LESSONS LEARNED**

ACTION SHEET

On 26 February 2015, under the silence procedure, the Council noted the IBAN report IBA-AR(2013)22 and agreed the recommendations contained in the RPPB report, including the recommendation to agree to public disclosure.

NOTE: This Action Sheet is part of, and shall be attached to C-M(2015)0011.

20 February 2015

**IBAN SPECIAL REPORT TO COUNCIL ON THE FINANCIAL SERVICE (FINS)
PROJECT AND ACTIONS NEEDED TO APPLY LESSONS LEARNED**

Note by the Deputy Secretary General

1. I attach the International Board of Auditors for NATO (IBAN) Special Report to Council on the Financial Service (FinS) Project and Actions Needed to Apply Lessons Learned.
2. The objectives of the subject IBAN Special Report to Council are to assess: (1) the Bi-Strategic Command Automated Information Services Financial Service (FinS) implementation schedule and cost; (2) the extent to which the system, as implemented, meets its intended goals and user needs; and (3) the project planning and execution factors that affected implementation progress. The IBAN identifies a number of shortcomings on all these points.
3. The IBAN report has been reviewed by the Resource Policy and Planning Board (RPPB). The RPPB concludes that the issues raised in the IBAN report regarding lack of appropriate governance structure and management of large-scale communication and information system projects and enterprise resource planning within NATO are important to the Alliance – not merely for the FinS project in particular, but for large-scale communication and information system projects in general. The RPPB expects that lessons learned from the FinS project will ensure best-practice governance and management of future large-scale communication and information system projects.
4. I consider that no further discussion regarding this report is required. Consequently, unless I hear to the contrary by **18:00hrs on Thursday, 26 February 2015**, I shall assume that the Council has noted the IBAN report IBA-AR(2013)22 and agreed the recommendations contained in the RPPB report, including the recommendation to agree to public disclosure (para 33h).

IBAN SPECIAL REPORT TO COUNCIL ON THE FINANCIAL SERVICE (FinS) PROJECT AND ACTIONS NEEDED TO APPLY LESSONS LEARNED

Report by the Resource Policy and Planning Board (RPPB)

References:

(a) IBA-A(2013)250 & IBA-AR(2013)22

(b) AC/4-D(2014)0003; BC-D(2013)0230-FINAL

Background

1. The present report by the Resource Policy and Planning Board (RPPB) contains the RPPB's observations and recommendations concerning the International Board of Auditors for NATO (IBAN) Special Report to Council on the Financial Service (FinS) project and Actions Needed to Apply Lessons Learned (reference (a)). The report is based on the full review of the audit report provided jointly by the Budget Committee (BC) and Investment Committee (IC) (reference (b)).

IBAN report summary and conclusions

2. The objectives of the subject IBAN Special Report to Council are to assess (1) the Bi-Strategic Command Automated Information Services Financial Service (FinS) implementation schedule and cost; (2) the extent to which the system, as implemented, meets its intended goals and user needs; and (3) the project planning and execution factors that affected implementation progress.

3. FinS is a commercially-based financial management system, customised for NATO. It functions at nearly all planned Allied Command Operations (ACO) and International Military Staff (IMS) sites. However, full implementation will take approximately 50 months longer than the 18 months initially estimated. In addition, the Nations authorised approximately EUR 2 million in further expenditures as a result of the delay and scope changes over time¹.

4. FinS software as implemented provides users the most needed functionality. However, in the IBAN's opinion the project has not demonstrated the capability for full International Public Sector Accounting Standards (IPSAS) compliance nor cost savings, which were both key project goals. In addition, the IBAN found support weaknesses.

5. The IBAN identified 2 main sets of factors that contributed to most of the delay in project completion compared to initial estimates:

¹ Current status: To date, Nations have authorised approximately EUR 3,5 million in further expenditures as a result of the delay and scope changes over time.

- First, the NATO Communications and Information Agency's (NCIA) plans did not include the appropriate governance structure, project management resources, nor a realistic schedule estimate. In particular, the project lacked authoritative senior leadership and sufficient dedicated staff. In addition, the agency did not sufficiently plan for the time needed to screen and approve multiple requests for authorisation. These weaknesses contributed to approximately 44 percent of the difference between the original and actual project schedules, including delays initiating a key project phase.
- Second, insufficient scope definition and known resource shortfalls hindered timely project completion after implementation had begun. For example, despite the high risk level associated with the International Security Assistance Force's (ISAF) longstanding use of a spreadsheet to manage its finances, implementation of FinS at ISAF was not within the initial project scope. In addition, the initial FinS software configuration did not fully consider differences in how ACO conducts its business compared to other locations where the system was already installed. Implementing the necessary change requests made the project more complex, expensive, and time-consuming. Further, the project suffered from a lack of resource planning, which was necessary to ensure that all NATO stakeholders could meet project commitments and provide project assurance. Together, these factors contributed approximately 43 percent of the overall project delay.

6. In the IBAN's opinion, without careful, upfront planning and better pre-decisional analysis, future similar efforts will be more likely to experience delays, cost increases, and challenges meeting user needs. Accordingly, the IBAN makes the following recommendations. Unless noted otherwise, they are focused on lessons learned and apply to ongoing and future communication and information system (CIS) projects. ACO concurred with all recommendations. NCIA concurred with all except the recommendation pertaining to the early identification of project requirements, which according to the Agency is often not possible for software-intense acquisition projects.

- Recommendation 1: NCIA, ACO, and IMS should conclude service level agreements to address technical support weaknesses found by the IBAN and improve the level of service received by system customers (specific to FinS).
- Recommendation 2: NCIA should propose and the Nations approve an appropriate governance structure, to include a Project Board led by an Executive with a sufficient level of authority and availability.
- Recommendations 3 and 4: NCIA should set clear and realistic expectations for costs and time frames by improving the methodology for determining administrative expenditures and project schedule (addressed in two separate recommendations).
- Recommendation 5: NCIA should present and the Nations consider the full range of benefits and risks associated with the selected implementation approach prior to project authorisation.

- Recommendation 6: CIS project customers should consolidate requirements and formalise the impact of business process changes on proposed software configurations prior to project implementation.
- Recommendation 7: ACO and NCIA should determine a way forward for funding FinS implementation at the E3A component (specific to FinS).
- Recommendation 8: NCIA and project customers should work together to better identify in authorisation documentation the full scope of all stakeholder activities, and clearly present any gaps to be resourced or risk managed.
- Recommendation 9: NCIA should take the necessary steps to improve its use of impact statements to inform the Nations of the relative criticality of specific project elements.
- Recommendation 10: NCIA and system customers should communicate to the Nations the steps being taken to implement the IBAN's recommendations contained in this report.

Joint Budget Committee (BC) and Investment Committee (IC) report summary and conclusions

7. Rather than focusing only on the problems and issues highlighted in the IBAN report, the Joint IC and BC report, dated 23 January 2014, also point out mitigation measures that have been taken by the Committees to address the overall problem of Software Intensive Projects delivering late and over budget.

8. Jointly the IC and BC fully support the recommendations to improve governance and management of large scale communication and information system projects and enterprise resource planning within NATO listed in the IBAN report on FinS and highlight the past history of the previous financial system, the NATO Automated Financial System (NAFS), and the lessons learned as well as the future implementation of the Enterprise Business Applications (EBA), which will address some of the key recommendations in the report.

Previous history

9. The IBAN in its FinS Report focuses on the period from 2006 to today which concerns the replacement of the NATO Automated Financial System (NAFS). In reviewing the subject IBAN report, the Joint IC and BC consider it would add value by viewing the Financial Service (FinS) Project in its longer historical context. The IBAN has also conducted two interim reports² and a final report³ on NAFS covering the preceding period that highlight many of the same points. Indeed, the FinS project was included as part of the Capability Package 9C0103 – Logistics Functional Services (LOG FS) as a follow on

² C-M(2001)53 - IBAN Performance Audit of NAFS (covers also two interim reports)

³ IBA-A(2000)120ch dated 17 May 2000

from NAFS (with its partial, late and cost overestimates introduction using Military Budget funding from 1998 to 2004) partly to benefit from the use of CP and NSIP procedures.

10. Following the Senior Resource Board (SRB) decision on the realignment of funding responsibilities with SRB-N(2002)8-REV2 and the NATO Consultation, Command and Control Board (NC3B) assignment of support to the former NATO CIS Operating System Agency (NACOSA) in 2002; the Bi-SC supported the move to a CP based project for NAFS. The decision to move to a CP was partly predicated on a planned delivery date for FinS as part of a Functional Area Service in LOG FS by 2008 with approval foreseen in September 2006 as pointed out in the IBAN Report.

11. In 2007 with LOG FS stalled and the need to have FinS operating, the Military Budget Committee (MBC) brought the problem to the SRB with OCB(2007)0027. The action by the SRB allowed for the FinS projects to be separated from the LOG FS CP and put on a 'fast track' in the NSIP, albeit the NC3A Type B cost estimates were not available until April 2008 and in the end has produced a product with the shortcomings as pointed out in the IBAN FinS Report.

12. NATO still does not have a NATO wide accounting system it needs to consolidate financial statements, account for Plant, Property and Equipment (PP&E (IPSAS 17)), or use in deployments. While fully supporting the IBAN recommendations, the IC and BC considers the IBAN report could have drawn on the introduction of financial accounting systems in the Military Budget (MB) in drawing lessons and pointing toward how the NATO wide approach, if adopted, could benefit from what has not been a success story for NATO over the past 15 years.

Future Improvements

13. The IC and BC highlight that the NCI Agency is in the process of evaluating bids for the contract award of LOG FS which is expected to be awarded in March 2014⁴. The winning bidder will also be selected for the future implementation of the NCI Agency Enterprise Business Application (EBA), which will deliver among other things an interoperable Agency Financial System for sharing financial information with the Strategic Commands. Although this may not fulfil the requirement for having an NATO wide financial system, it is indeed a step in the right direction.

14. The IBAN report makes reference to the need for the NCIA to develop and tailor a methodology for estimating Project Service Costs (PSC) that accurately reflect the various roles, including the types of services the agency commits to providing. The IBAN's findings suggest that the level of PSC requested by the Agency, especially at project outset, are based more on expectations of what the Nations will accept than on the anticipated level of effort and risk. The Agency is implementing a PSC Estimating Tool in aimed at addressing these issues. Initially this new tool will be focused on estimating the costs for NSIP projects, and on defining the methodology that will be used. The NCI

⁴ The joint IC/BC report is dated 23 January 2014. Current status: the contract award is likely to be delayed until Q1 2015 at the earliest.

Agency in their recent project submission for the NCI Agency Transition Programme which was approved by the BC and IC in mid December 2013⁵ includes an EBA which will specifically address this issue of PSC Estimation.

15. In regards to missed project milestones and delays incurred during project implementation, the IBAN report recommends the NCI Agency take appropriate measures to improve the estimation and project planning processes. The Agency is taking measures to address this with the implementation of a Milestone Tracking regime. Work is currently in progress to identify the top priority projects, and then to implement the Milestone Tracking regime for these as a pilot group of projects in 2014. The NCI Agency has also proposed in their EBA Project the implementation a Milestone Tracking System which will aid in following project progress for those under execution, and to then feed the lessons learned back into the estimation processes.

16. In order to meet the EBA resourcing gaps, the BC agreed to grant authorisation for backfilling Backfill consultancy required for NCI Agency personnel to assist in the implementation of the EBA and NCI Agency Transition Programme. This will provide to Industry the historical knowledge and expertise to develop the project management and financial systems required by the NCI Agency to improve the delivery of NATO software intensive systems.

Joint IC and BC conclusion

17. The IBAN report looks at the implementation issues for a specific software system (FinS). The Investment and Budget Committees see great value in looking at both the previous history and lessons learned from the NATO Automated Financial System. Furthermore these issues apply not only to FinS, but also apply to many NATO software intensive projects currently under implementation.

18. In addition to this, both Implementing Committees have agreed to the future implementation of the Enterprise Business Application which will address the Project Service Cost estimating tool and project milestone tracking system. It is therefore prudent to monitor the implementation of the Enterprise Business Application and to confirm its suitability for NATO.

19. Work has started by the NCI Agency, the Strategic Commands, NATO Office of Resources and the Consultation, Command and Control (C3) Staff in the formation of a 'Software Intensive Projects' Task Force to deal with the problem. The goal of the Task Force is to find ways to enable NSIP software intensive projects to provide realistic plans with reliable costs and schedule estimates, to establish effective NATO industry partnerships and to deliver on schedule projects that meet the Minimum Military Requirements (MMR).

⁵ AC/4(PP)D/27275 -ADD1 / DS(2013)0033; BC-D(2013)0214 / BC-DS(2013)0067

20. In regards to reporting, the NCI Agency as the primary NATO body responsible for the project implementations has agreed to come back to the Implementing Committees to provide regular updates on the status of the top spending software intensive projects and to produce a report to the nations about the Way Ahead on the recommendations included in the IBAN report.

RPPB Conclusions

21. The RPPB appreciates this IBAN Special report to Council on the Financial Service (FinS) project and actions needed to apply lessons learned. The issues raised in the report regarding lack of appropriate governance structure and management of large scale communication and information system projects and enterprise resource planning within NATO are important to the Alliance; not merely for the FinS project in particular, but for large scale communication and information system projects in general. The RPPB expects that lessons learned from the FinS project will ensure a best practice governance and management of future large scale communication and information system projects.

22. The RPPB is very concerned with the number and gravity of shortcomings identified in the IBAN report. The substantial increase in the length of project implementation; the increase in cost⁶; the lack of proper governance and the lack of sufficient risk assessment are shortcomings which urgently need to be corrected by the responsible parties.

23. The lack of appropriate governance structure, project management resources and realistic schedule estimate is of particular concern to the RPPB. Of the shortfalls identified in the implementation approach, in the RPPB's opinion the lack of governance is the most significant because it likely contributed to many of the other challenges identified in the audit report.

24. The RPPB notes that NCIA concurred with all the IBAN recommendations except the one pertaining to the early identification of project requirements, which according to the Agency is often not possible for software-intense acquisition projects. However, the RPPB does not accept this response as the financial system software is commercially available off-the shelf software.

25. The RPPB notes with concern that the FinS project has not demonstrated the capability for full International Public Sector Accounting Standards (IPSAS) compliance nor cost savings, which were both key project goals. The RPPB notes with concern that the evidence does not suggest that FinS implementation has, or will in the future, bring cost savings to the Nations.

26. Allied Command Operations (ACO) and the International Military Staff (IMS), as users of the FinS, confirm the shortcomings identified. They have found the system not fit for purpose or user friendly. Notwithstanding, through internally designed architecture and workarounds adapting internal business processes, ACO has achieved a functional

⁶ To date, Nations have authorised approximately EUR 3,5 million in further expenditures as a result of the delay and scope changes over time.

platform and does not currently have issues regarding financial reporting of fixed assets data directly managed by ACO entities. However, a proper management of fixed assets and inventory can only be achieved by the activation of system modules integrated in the ERP (Enterprise Resource Planning) used by both logistics and finance staff and this is unfortunately still missing. The LOGFS (Capability Package 9C0103) project is to deliver the necessary solutions to fulfil the IPSAS requirements. The delivery date is, based on the latest planning, expected by end 2022. The delay in delivery is of concern since the requirements initially captured might become obsolete by the time they are delivered, which in turn would mean that the solution delivered might not fulfil all the requirements. Regarding cost savings, reductions in operating costs have not been documented. The NATO Combined Communications and Information Services Budget (NCCB) funds FinS operations and maintenance costs including hardware, software, training and required contractual services. While the NCCB for 2013 reflects hardware reductions since 2011, support costs have risen. ACO confirms that these costs rose further in 2014 given the need for more service desk support. In addition, NCIA Service Delivery and ACO officials offer divergent predictions on the future cost of software licensing fees, leaving this area uncertain.

27. The level and growth in Project Service Costs (PSC) is of concern to the RPPB. The IBAN's findings suggest that the level of PSC requested by the Agency, especially at project outset, are based more on expectations of what the Nations will accept than on the anticipated level of effort and risk. Accordingly, the IBAN recommends that a methodology should be developed by the NCI Agency for estimating PSCs and that the justifications for the required level of PSCs should be provided to the Nations. The Board notes that the Agency is currently implementing a PSC Estimating Tool aimed at addressing the need for the NCIA to develop and tailor a methodology for estimating PSCs that accurately reflect the various roles, including the types of services the Agency commits to providing. Further that the NCIA in their project submission for the NCI Agency Transition Programme which was approved by the Budget Committee and Investment Committee in mid December 2013⁷ includes an Enterprise Business Applications (EBA) which will specifically address this issue of PSC Estimation.

28. The RPPB is pleased to note the formation of a 'Software Intensive Projects' Task Force by the NCIA, the Strategic Commands, the NATO Office of Resources and the Consultation, Command and Control (C3) Staff with the goal to find ways to enable NSIP software intensive projects to provide realistic plans with reliable costs and schedule estimates, to establish effective NATO industry partnerships and to deliver on schedule projects that meet the Minimum Military Requirements (MMR). The Task Force has provided the Investment Committee with a final report with distinct practical recommendations to improve project governance and control over scope, cost, schedule and risk⁸.

⁷ AC/4(PP)D/27275-ADD1 / DS(2013)0033; BC-D(2013)0214 / BC-DS(2013)0067

⁸ AC/4-N(2014)0034 and AC/4-N(2014)0034-ADD1 refer

29. The RPPB notes that the NCIA have identified 7 specific actions in response to the 10 IBAN recommendations, of which all have been fully implemented by the end of 2014. The RPPB attaches great importance to ensuring accountability and proper follow-up of the IBAN findings and therefore notes with concern that for 5 of the 10 IBAN recommendations (IBAN recommendations 5, 6, 8, 9 and 10) no specific Agency action has been identified or initiated; the reasons for which vary from the Agency not agreeing to the recommendation (recommendation 6), to no plans in place to implement the recommendation (recommendations 5, 8, 9 and 10). The RPPB notes however information provided by the NCIA that it is currently developing an action plan, based on the recommendation of the Software Intensive Projects Task Force, which would address recommendations 5, 8 and 9. In addition, the NCIA intends to develop a lessons learned report (recommendation 10) by 2Q 2015.

30. The RPPB notes the mitigation measures taken by the Investment Committee and Budget Committee to address the overall problem of Software Intensive Projects delivering late and over budget. The RPPB notes that the Investment Committee has incorporated lessons learned to ensure better governance and management of future large scale CIS projects. The RPPB invites the Implementing Committees to provide it with regular progress updates on this issue.

31. The RPPB is concerned by the continued lack of a NATO wide accounting system needed to consolidate financial statements; to account for Plant, Property and Equipment (PP&E); or to use in deployments.

32. The RPPB concludes that the subject audit report does not contain information which, according to the NATO Policy on Public Disclosure of NATO Information, shall be withheld from public disclosure, and in line with the agreed policy in C-M(2012)0041, recommend that Council agree to the public disclosure of the subject IBAN report.

Recommendations

33. The Resource Policy and Planning Board (RPPB) recommends that Council:

- (a) note the IBAN report IBA-AR(2013)22 along with the present report;
- (b) endorse the conclusions of the RPPB as outlined in paragraphs 21 through 32;
- (c) invite the NCIA and other relevant stakeholders to implement the IBAN recommendations as soon as possible; and the NCIA to provide a progress report to the RPPB by 1 June 2015, including a response to the 5 recommendations where no specific NCIA action has been identified or initiated;
- (d) invite the NATO Office of Resources (NOR) to provide an assessment of the common-funded resources spent in the development and support of accounting systems as the RPPB remains concerned that the continued lack of a NATO-wide accounting system is an impediment to consolidated financial statements, to account for Plant, Property and Equipment, or to be used in deployments;

- (e) note that the Investment Committee has incorporated lessons learned to ensure better governance and management of future large scale CIS projects;
- (f) invite the Investment Committee and the Budget Committee to continue to monitor and address the overall problem of Software Intensive Projects delivering late and over budget, and provide the RPPB with regular progress updates on this issue;
- (g) note that the RPPB, with the assistance of the Budget Committee, will closely monitor the status and implementation of recommendations and outstanding audit observations;
- (h) in line with the agreed policy in C-M(2012)0041, agree to the public disclosure of the IBAN report IBA-AR(2013)22.

---000---

Summary Note for the Council by the International Board of Auditors for NATO on the Financial Service (FinS) Project and Actions Needed to Apply Lessons Learned

Introduction

In accordance with Article 17 of its Charter, the International Board of Auditors (Board) is providing this special report to the North Atlantic Council (Council) with the objectives of assessing (1) Bi-Strategic Command Automated Information Services Financial Service (FinS) implementation schedule and cost, (2) the extent to which the system, as implemented, meets its intended goals and user needs and (3) project planning and execution factors that affected implementation progress. Drawing on a review of authorization and project management documentation and discussions with relevant personnel, the Board conducted this audit from November 2012 through May 2013.

Audit Highlights

FinS is a commercially-based financial management system, customized for NATO. It functions at nearly all planned Allied Command Operations (ACO) and International Military Staff (IMS) sites. However, full implementation will take approximately 50 months longer than the 18 months initially estimated. In addition, the Nations authorized approximately EUR 2 million in further expenditures as a result of the delay and scope changes over time.

FinS software as implemented provides users the most needed functionality. However, in the Board's opinion the project has not demonstrated the capability for full International Public Sector Accounting Standards (IPSAS) compliance nor cost savings, which were both key project goals. In addition, the Board found support weaknesses.

The Board identified 2 main sets of factors that contributed to most of the delay in project completion compared to initial estimates:

- First, NCIA's plans did not include the appropriate governance structure, project management resources and realistic schedule estimate. In particular, the project lacked authoritative senior leadership and sufficient dedicated staff. In addition, the agency did not sufficiently plan for the time needed to screen and approve multiple requests for authorization. These weaknesses contributed to approximately 44 percent of the difference between the original and actual project schedules, including delays initiating a key project phase.
- Second, insufficient scope definition and known resource shortfalls hindered timely project completion after implementation had begun. For example, despite the high risk level associated with the International Security Assistance Force's (ISAF) longstanding use of a spreadsheet to manage its finances, implementation of FinS at ISAF was not within the initial project scope. In addition, the initial FinS software configuration did not fully consider differences in how ACO conducts its business compared to other locations where the

system was already installed. Implementing the necessary change requests made the project more complex, expensive, and time-consuming. Further, the project suffered from a lack of resource planning necessary to ensure that all NATO stakeholders could meet project commitments and provide project assurance. Together, these factors contributed approximately 43 percent of the overall project delay.

In the Board's opinion, without careful, upfront planning and better pre-decisional analysis, future similar efforts will be more likely to experience delays, cost increases, and challenges meeting user needs. Accordingly, the Board makes the following recommendations. Unless noted otherwise, they are focused on lessons learned and apply to ongoing and future communication and information system (CIS) projects. ACO concurred with all recommendations. NCIA concurred with all but one.

- NCIA, ACO, and IMS should conclude service level agreements to address technical support weaknesses found by the Board and improve the level of service received by system customers (specific to FinS).
- NCIA should propose and the Nations approve an appropriate governance structure, to include a Project Board led by an Executive with a sufficient level of authority and availability.
- NCIA should set clear and realistic expectations for costs and time frames by improving the methodology for determining administrative expenditures and project schedule (addressed in 2 separate recommendations).
- NCIA should present and the Nations consider the full range of benefits and risks associated with the selected implementation approach prior to project authorization.
- CIS project customers should consolidate requirements and formalize the impact of business process changes on proposed software configurations prior to project implementation.
- ACO and NCIA should determine a way forward for funding FinS implementation at the E3A component (specific to FinS).
- NCIA and project customers should work together to better identify in authorization documentation the full scope of all stakeholder activities, and clearly present any gaps to be resourced or risk managed.
- NCIA should take the necessary steps to improve its use of impact statements to inform the Nations of the relative criticality of specific project elements.
- NCIA and system customers should communicate to the Nations the steps being taken to implement the Board's recommendations contained in this report.

09 July 2013

*(Final Version 09 October 2013 – including the comments of the
Vice Chief of Staff, Allied Command Operations (ACO)
Director, NATO Office of Resources (NOR)
General Manager, NATO Communications & Information Agency (NCIA)*

INTERNATIONAL BOARD OF AUDITORS FOR NATO

SPECIAL REPORT TO COUNCIL

THE FINANCIAL SERVICE (FINS) PROJECT:

ACTIONS NEEDED TO APPLY LESSONS LEARNED

TABLE OF CONTENTS

	Page No.
1. INTRODUCTION	3
2. BACKGROUND	4
3. FINS IMPLEMENTATION EXPERIENCED DELAYS AND RELATED ADDITIONAL COSTS.....	6
4. FINS GENERALLY FUNCTIONS AS INTENDED BUT KEY PROJECT GOALS HAVE NOT BEEN MET	9
4.1 Acceptable functionality and partial IPSAS capability	9
4.2 Support weaknesses.....	10
4.3 Operating costs unlikely to decrease	11
5. SCHEDULE AND COST RISKS ASSOCIATED WITH IMPLEMENTATION APPROACH WERE NOT FULLY MANAGED	12
5.3 Governance	12
5.4 Management	14
5.5 Time needed for screening and authorization	15
5.6 Conclusion on implementation approach	16
6. INSUFFICIENT SCOPE DEFINITION AND RESOURCE PLANNING SHORTFALLS DELAYED PROGRESS DURING EXECUTION.....	17
6.1 Initial FinS project scope was incomplete	17
6.2 Detailed software configuration needs were incorporated late	18
6.3 FinS implementation at E-3A was postponed	20
6.4 Known ACO resource shortfalls were not addressed.....	21
6.5 NCIA lacked project assurance	23
7. CONCLUSION.....	25
8. SUMMARY OF RECOMMENDATIONS	26
9. ACO/NCIA/NOR COMMENTS AND THE BOARD'S POSITION	29
 APPENDICES	
Appendix 1: List of Abbreviations	31
Appendix 2: Comments from ACO, NCIA, and the NOR	32

1. INTRODUCTION

1.1 In accordance with Article 17 of its Charter, the International Board of Auditors for NATO (Board) is providing this special report to the North Atlantic Council (Council) with the objectives of assessing (1) Bi-Strategic Command Automated Information Services Financial Service (FinS) implementation schedule and cost, (2) the extent to which the system, as implemented, meets its intended goals and user needs and (3) project planning and execution factors that affected implementation progress. The Board chose this audit topic because the implementation delays were clearly evident and potentially indicative of issues that go beyond the FinS project itself. In addition, the subject area relates to NATO entities' ability to issue complete and correct annual financial statements. Further, in the Board's view FinS implementation provides a good case study for the kind of software-intensive projects that are increasingly dominating the NATO Security Investment Programme (NSIP). The Board conducted this review in November 2012-May 2013.

1.2 To assess FinS implementation progress and contributing factors, the Board examined scope and funds authorization documentation, project planning documents, and early versions of the Project Management Schedule. It compared the dates in these documents with the latest Project Management Schedule. The Board used information provided by the NATO Communications and Information Agency (NCIA) project team, Allied Command Operations (ACO), International Military Staff (IMS), E-3A component, and NATO Office of Resources (NOR) officials to determine specific delays and their impact. The Board validated information provided by these officials with other key project documentation such as risk/issue logs, meeting minutes, contracts, and system change requests to determine the most likely contributing factors for the specific delays. The Board also spoke with officials from Allied Command Transformation (ACT) to compare and contrast implementation of the system at ACT with ACO's and IMS' experiences. To determine the extent to which the system meets its goals and user needs, the Board conducted interviews with IMS and ACO officials at the key user level, as well as local users at Joint Force Command Headquarters Brunssum (JFCBS) and Headquarters International Security Assistance Force (ISAF).

1.3 Based on the evidence gathered during the course of the review, the Board intends to focus its recommendations beyond the management of the specific FinS project itself, which, according to the latest schedule, will soon draw to a close. In the Board's opinion, NATO's experience with FinS highlights potential areas for improvement that could apply to all stakeholders involved in a broader range of projects. In particular, these will be relevant for the large-scale communications and information systems (CIS) implementations NATO plans to conduct in the coming years.

1.4 The Board presented a draft of the report to the Supreme Allied Commander Europe, the Director General, IMS, the General Manager, NCIA, and the Director, NOR. The Board received comments from ACO, NCIA, and the NOR. The IMS did not provide written comments but said it agreed with the draft report as written. Chapter 9 contains the Board's position and the comments are reproduced in Appendix 2.

2. BACKGROUND

2.1 Prior to FinS, the Strategic Commands and IMS operated the NATO Automated Financial System (NAFS). It was used for all financial management processes, ranging from budget preparation, budget execution, and recording commitments to making payments. However, NAFS did not allow full IPSAS-compliant financial reporting, and in particular property, plant and equipment.¹ In addition, it could not be run on current operating systems and is no longer supported by the supplier. As a result, NATO faced challenges recruiting consultants for support.

2.2 NAFS was upgraded first at the NATO Communications and Information Services Agency (NCSA, now NCIA Service Delivery)² and then subsequently at ACT. At other locations within the NATO Command Structure, NATO used NSIP funding to upgrade NAFS. Specifically, a NAFS upgrade was included as part of a capability package³ that identified 17 existing systems in the logistics area⁴ for integration and/or replacement. The total investment for the overarching project was estimated at EUR 72 million over time. The NATO Consultation, Command and Control Agency (NC3A, now also part of NCIA) was designated as the Host Nation (HN).

2.3 As stated in the Minimum Military Requirements, the primary goal of the financial system portion of the project, referred to as the Bi-Strategic Command Automated Information Services Financial Service (FinS), was to ensure compliance with IPSAS standards by 1 January 2010 in line with Council direction.⁵ The project also aimed to reduce operations and maintenance costs. This goal was to be achieved by installing FinS at ACO and IMS sites so that the all elements of the NATO command structure would have the same system in roughly the same configuration. Streamlining business processes across all sites and centralizing the equipment installation in one location was expected to lessen the need for local system support, allow central configuration management, and reduce costs by better utilizing experienced support staff. The project was categorized “Essential 1,” which is the highest priority ranking.

2.4 NC3A produced the FinS-specific Type B Cost Estimate (TBCE)⁶ in April 2008, for an estimated total cost of about EUR 7.3 million. Approximately 12 percent of these

¹ This accounting area is covered by IPSAS 17.

² The report will use NCIA to refer to the agency as currently structured.

³ Bi-SC CP 9C0103, “Provide Functional services for Logistics Command and Control (LOG FS)”, approved by Council in June 2007. See C-M(2007)0060, and SRB-D(2007)0004.

⁴ These areas include supply, maintenance and repair, movement and transportation, medical support, infrastructure, and budget and finance.

⁵ PO(2002)109 specified fiscal year 2006 as the starting point for IPSAS compliance NATO-wide, with exceptions related to reporting on plant, property and equipment. The standards allow for a 5-year transition period for IPSAS 17, which would have meant full compliance by January 2011.

⁶ A TBCE is a detailed cost estimate based on surveys, professional opinion, etc. It must provide sufficient information to allow the NATO Office of Resources (NOR) to prepare a meaningful recommendation for the Investment Committee and to allow the Strategic Commands to establish their level of support.

costs were administration and overhead costs, referred to by the agency (and throughout this report) as Project Service Costs (PSC) and the remainder investment costs and internal engineering services.⁷

2.5 The TBCE structured the project in 2 phases. *Phase 1* initially covered implementation at the major ACO commands⁸, to enable the minimum ACO accounting capability required for the achievement of IPSAS compliance. *Phase 2* included activation at the remaining ACO sites and implementation at the IMS Budget Group sites.⁹

2.6 To guide the management of FinS implementation, NCIA used the accepted NATO project management framework, Projects in Controlled Environments (PRINCE2). In this report, the Board evaluates FinS project governance and management against this framework. Elements of this framework relevant to the report findings include the following:

- A *Project Board* is responsible for overall project direction. It is comprised of an *Executive*, a *Senior User*, and a *Senior Supplier*. The framework states that, among other things, the Project Board members should be senior enough to make strategic decisions, such as providing resources. In addition, they should be available to make decisions, and, in general, to provide direction to the *Project Manager* responsible for day-to-day management of the project. The Executive (supported by the Senior User(s) and Senior Supplier(s)) is ultimately accountable for the project's success and is the key decision maker.
- PRINCE2 defines processes for project planning and the management of risk, issues, and scope changes. These processes are defined in various products, including the *Project Management Plan* and *Project Master Schedule*. These products sequence stages and tasks for each project phase and align them within a set time frame. Per the terms in its contract, the FinS implementation contractor created a separate Project Management Plan and Project Master Schedule for both project phases.

⁷ NC3A/NLO/2008/046.

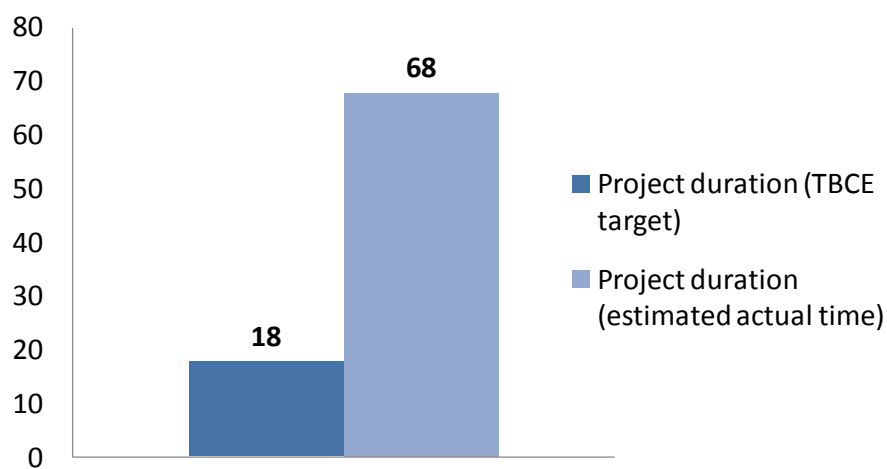
⁸ Supreme Headquarters Allied Powers Europe (SHAPE) headquarters, SHAPE Central Accounting and Treasury, Joint Force Command Naples, JFCBS, Joint Command Lisbon, and the E-3A Airborne Early Warning and Control component.

⁹ ACO sites included Command Component Air Ramstein, Command Component Maritime Northwood, Command Component Land Heidelberg, Kosovo Force, NATO Headquarters Sarajevo, Command Component Air Izmir, Command Component Land Madrid, and NATO Programming Centre. IMS sites included IMS NATO Headquarters, NATO Defence College Rome and Research and Technology Agency Paris. Heidelberg and Madrid subsequently fell out of the project's scope because they are no longer part of the NATO Command Structure as a result of NATO Command Structure Reform.

3. FINS IMPLEMENTATION EXPERIENCED DELAYS AND RELATED ADDITIONAL COSTS

3.1 Completion of the FinS project is estimated to occur significantly later than the initial target. The implementation schedule for ACO and IMS as presented by NC3A in the April 2008 TBCE estimated final system acceptance for all sites in the fourth quarter of 2009, roughly 18 months after funds authorization. According to authorization documentation, project completion was to coincide with the deadline for implementation of IPSAS in January 2010. Contrary to these documents, the Board notes that IPSAS allow a 5-year transitional period, which would have made full compliance mandatory beginning with the 2011 financial statements. With the exception of the E-3A component, since March 2013 FinS has been implemented and functioning at all originally planned sites. However, according to the latest funds request by NCIA, final system acceptance is not projected to occur until November 2013, representing a 68-month project duration. This is approximately 50 months longer than the TBCE target, as shown in Figure 1.

Figure 1: Target and actual implementation time (months)



3.2 As shown in figure 2, the 50-month difference between the timeline presented in the TBCE and the estimated final system acceptance date can be attributed to 3 main sets of factors. In order of impact, these include the following:

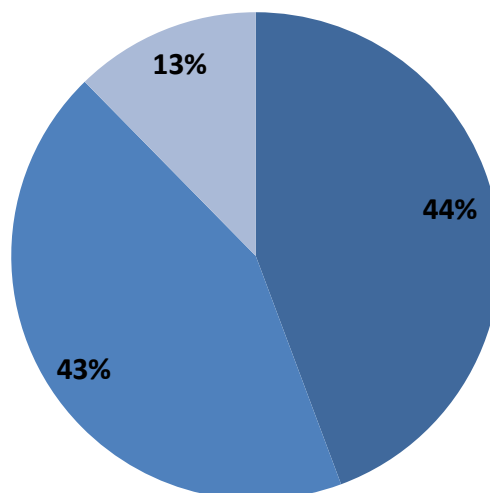
- First, as discussed in section 5 of this report, undocumented governance, management, and schedule risks materialized. As a result, although NCIA and its customers completed Phase 2 tasks according to schedule, the phase did not occur simultaneously with Phase 1 as originally planned. In addition, these risks contributed to delays in transitioning to Phase 2. Together, these factors comprise 44 percent of the overall delay.

Second, as this report elaborates in section 6, the project experienced delays during execution, primarily in Phase 1. Contributing factors for these delays, amounting to 43 percent of the overall difference between initial and current schedule estimates, included insufficient initial scope definition, scope additions including late software configuration changes and resource planning shortfalls.

- Third, initial approval by the Nations occurred 6 months later than the TBCE anticipated, which accounts for 13 percent of the overall delay.

Figure 2: Factors contributing the difference between schedule estimate at TBCE and expected actual schedule

- Time needed to initiate and complete Phase 2
- Shortfalls in scope, configuration and resource planning; new requirements
- Delay obtaining first stage authorization



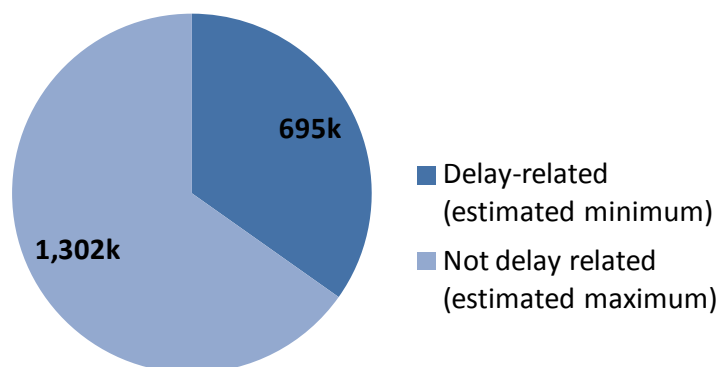
3.3 The Board's analysis of project authorization documents shows that the Nations approved additional costs of approximately EUR 2 million above the original EUR 7.3 million project estimate. EUR 700,000 of these costs can be directly attributed to project delays.¹⁰ Approximately EUR 600,000 of the delay-related costs resulted from the need to extend a database administration support contract. Although NCIA obtained these services for a lower unit cost than estimated, the overall costs to the Nations through NSIP for these services amounts to twice what was foreseen at contract signing. The Board notes that had the project been delivered according to the TBCE schedule, some of these costs may have transitioned to the Military Budget as Operations and Maintenance.

¹⁰ For this analysis, the Board used authorized figures rather than actual expenditures, because one can more clearly attribute delays as a cause using the former. Expenditures appear to track roughly with authorized figures.

3.4 The remaining EUR 100,000 in delay-related costs include PSCs needed to sustain the project team throughout the longer-than-planned implementation period. According to NCIA officials, this figure is most likely higher. However, separating the PSCs associated solely with the delay from other costs resulting from additional requirements is very difficult without a specific attribution in authorization documentation. As a result, the Board is unable to verify the exact figure for delay-related costs, and presents the number as an estimated minimum.

3.5 The non delay-related EUR 1.3 million in costs shown in Figure 3 fall into 2 categories. First, they include cumulative additional authorizations due to increases and decreases in scope, such as implementation at ISAF and additional IMS budget group sites, automated currency conversion capability for one ACO site, and a reduction due to the lack of authorization of Independent Verification and Validation (IV&V). Second, they include cumulative additional authorizations associated with bidding results that differed from estimates, such as a higher cost for the implementing contractor's services.¹¹ Because a portion of these costs include additional PSCs that may be delay-related, the Board presents this figure as an estimated maximum.

Figure 3: Cumulative additional funds, as authorized (NSIP, EUR, compared to TBCE)



¹¹ Figure 3 does not include additional scope funded through the Military Budget, amounting to approximately EUR 600,000 to date.

4. FINS GENERALLY FUNCTIONS AS INTENDED BUT KEY PROJECT GOALS HAVE NOT BEEN MET

4.1 Acceptable functionality and partial IPSAS capability

4.1.1 In discussions with the Board, FinS users expressed satisfaction with the system, stating that it provides most of the intended functionality within a stable operating environment. The functionality offered by the prior system, NAFS, remains basically unchanged in FinS, with some improvements. IMS users highlighted features such as the ability to create bulk invoice uploads in the accounts receivable and accounts payable modules. At ISAF, which previously lacked any financial system, the Board observed significant improvements in financial management. Officials told the Board that in most cases weaknesses relate more to processes than to any shortcomings in the system. For example, at ACO, a complex account code structure has developed over time to incorporate the performance of budget, project accounting, and controlling functions simultaneously, according to ACO officials. This structure, rather than FinS, hinders SHAPE-level finance staff from performing their tasks most effectively and efficiently, according to some ACO officials. On the other hand, according to other ACO officials, it has been necessary to provide sufficiently detailed information requested by higher headquarters.

4.1.2 Nevertheless, one of the main justifications for FinS implementation, fully accounting for property, plant and equipment, has not been validated. The IMS uses its own tool to account for these assets, because during testing its users found the software's fixed asset module not fit for purpose or user friendly. ACO also has not yet used the module, but users told the Board it has been fully tested and they plan to use it now that a way forward has been approved by Council to adapt IPSAS.¹² However, according to ACO users, FinS only allows the reporting of assets upon receipt of an invoice rather than at delivery. As a result, the system allows for partial IPSAS compliance in this area, although workarounds are possible. IMS users attributed this weakness to the lack of real-time data exchange with property accounting systems. The Board observed that users continue to manually enter data such as item valuation into ACO's property accounting system, in a process prone to error.

4.1.3 All users interviewed by the Board agree that FinS would benefit from better reporting tools. Existing tools in FinS allow the creation of rudimentary reports on budget execution, but developing statements of financial position and performance still requires significant additional work for ACO and IMS users. As a result, for example, IMS users said they are developing and testing, together with NCIA, their own reporting tools to assist them in presenting the information contained in FinS in a format most useful for management decisions. Similarly, ACO users employ a parallel process for all reporting and statistics generation, which results in additional workload. The Board

¹² C-M(2013)0006.

notes that improved business intelligence and reporting is included in the follow-on capability to be delivered as part of the LOG FS projects.

4.2 Support weaknesses

4.2.1 Like NAFS before it, the current version of the software that underpins FinS will begin facing support restrictions in the current year, soon after implementation will complete. Challenges are already apparent, because support personnel are less likely to be trained on the installed version, according to IMS officials. IMS and ACO officials assured the Board that the organizations will fund a technical upgrade to the latest version in 2014, which will address these risks. In addition, according to NCIA Service Delivery officials, further reduction of existing customizations associated with the implemented version of FinS are supposed to occur following this upgrade. It will not require significant business process changes, yet IMS officials said that the upgrade will bring opportunities for increased effectiveness and efficiency.

4.2.2 IMS and ACO users at the SHAPE and subcommand level expressed dissatisfaction with the level and quality of technical support, newly centralized within NCIA Service Delivery. For example, users can no longer independently reset system passwords. As a result, for example, ISAF users were losing over 3 days of work due to the ISAF work schedule and time difference with Europe. IMS officials told the Board that NATO CIS security regulations make fixing these problems more challenging. In another example, an erroneous software patch made in April 2013 inadvertently blocked the Accounts Payable module ACO-wide. It also erased the electronic signature capability at JFCBS. JFCBS staff told the Board that, in their opinion, NCIA had not provided timely resolution to service tickets that had been submitted since FinS was implemented.

4.2.3 IMS users said that insufficient time had passed since their go-live to assess the level of support, but that early signs were not encouraging. These officials said they had developed system administrator workflow guidelines to aid NCIA Service Delivery in providing effective support but had yet to receive any feedback. They also said that they had not seen evidence of a service level agreement. Such an agreement could help increase the quality of service by allowing users to determine the desired level of support based on how much they are able to pay. It could also establish targets with which to make objective assessments of service quality. The Board recognizes the value of this approach, because without steps to help ensure satisfactory support, FinS users will be unable to use the system to its full potential.

Recommendation 1:

4.2.4 The Board recommends that NCIA Service Delivery conclude service level agreements with ACO and IMS that clearly specify the level of support expected and fairly represent the costs.

4.3 Operating costs unlikely to decrease

4.3.1 The second main goal of the FinS project, reductions in operating costs, has not been documented. The NATO Combined Communications and Information Services Budget (NCCB) funds FinS operations and maintenance costs including hardware, software, training and required contractual services. According to ACO's 2013 NCCB submission, centralizing third party-provided support infrastructure for all sites resulted in lower workload at those sites, but a higher workload at the NCIA Service Delivery FinS Service Desk. Thus, while the NCCB for 2013 reflects hardware reductions since 2011, support costs have risen. ACO officials expect these costs to rise further in 2014 given the need for more service desk support. In addition, NCIA Service Delivery and ACO officials offer divergent predictions on the future cost of software licensing fees, leaving this area uncertain.

4.3.2 NCIA Service Delivery officials told the Board that a main target is to achieve one centrally operated, standardized baseline of Enterprise Business Applications that will be the future foundation for a NATO-wide shared services centre. While this goal shows the potential for manpower savings, the outcome of the ongoing shared services initiative at NATO, including the extent to which the NATO Command Structure will participate, is far from clear. Building on the Board's prior work, a July 2013 Special Report to Council made 2 recommendations and highlighted 5 sets of critical factors to ensure the success of the Shared Services initiative at NATO.¹³

4.3.3 The Board notes that FinS authorization documentation did not contain investment appraisals that would have specified, for example, the extent to which the number of support personnel could be reduced due to centralization. It is the Board's view that generic savings targets such as those presented in FinS authorization documentation are not helpful. A better approach may be to define specific areas for savings, based on sound research, and then compel NATO entities to follow through. Recommendations in this area are beyond the scope of this report, but the Board is considering future follow-up reviews of the capability development process and NSIP programme that may allow further investigation. As it stands, the evidence does not suggest that FinS implementation has, or will in the future, bring cost savings to the Nations.

¹³ IBA-AR(2013)20.

5. SCHEDULE AND COST RISKS ASSOCIATED WITH IMPLEMENTATION APPROACH WERE NOT FULLY MANAGED

5.1 The implementation approach planned by NCIA and approved by the Nations separated FinS from the other LOG FS projects, and then further divided the FinS project into 2 phases. The approach also called for separately authorizing and procuring each FinS project element.¹⁴ By approving FinS implementation ahead of the other LOG FS elements, the Nations increased the possibility of fielding this essential capability early on, relative to the other more ambitious projects. In addition, by limiting sole source contract awards to only those project elements with the most compelling justification, the approach improved the chance of gaining benefits from competitive bidding. Potential benefits included lower costs and maximized participation by qualified firms. For example, in theory the approach allowed for Phase 2 implementation to be procured competitively as a separate work package from Phase 1.

5.2 However, several undocumented schedule and cost risks associated with this approach materialized, contributing to the delay. They included planning shortfalls in the areas of governance, management, and time needed to screen and approve authorization requests. The TBCE envisioned a total implementation time frame of roughly 18 months, with phases 1 and 2 ending simultaneously. However, rather than completing simultaneously, Phase 2 began nearly 15 months after the Phase 1 “go-live” date. Achieving “go live” at the originally planned Phase 2 sites took approximately 8 months, without notable delays. Together, the time needed to prepare and implement Phase 2 amounts to approximately 44 percent of the projected 50-month difference between final system acceptance as estimated by the TBCE and the currently estimated implementation time frame.

5.3 Governance

5.3.1 Of the shortfalls identified in the implementation approach, in the Board’s opinion the lack of governance is the most significant because it likely contributed to many of the other challenges discussed in this report. Although FinS implementation was defined as a separate project, it was not governed like one. Specifically, the project’s official governance structure did not include senior leadership at the provider and user level in accordance with PRINCE2. According to project management documentation, Allied Command Transformation (ACT) was assigned the role of Executive. As such, ACT was responsible for providing the resources, particularly staff time, required to make the project a success. The documentation further states that

¹⁴ Work package 1 encompassed all activities undertaken by the contractor to build and verify the FinS software and to activate it at the Phase 1 sites. Work package 2 included the same activities for Phase 2 sites and development of training material and user and system support documentation. Work package 3 covered the Commercial-Off-the-Shelf hardware needed, minus equipment already in use. Work package 4 included Independent Verification and Validation (IV&V) services. Work package 5 included database administration support (3 personnel for the duration of project). Work package 6 covered security accreditation planning and implementation activities.

ACT chairs the Integrated Project Management Team (IPMT), which is the senior decision-making entity for the project. The IPMT is comprised of representatives from the provider and customer organizations, among others.

5.3.2 In the Board's opinion, project direction of the type envisioned by the PRINCE2 Executive role was not within ACT's competency, nor could it reasonably be expected to have been. For example, ACT lacks the authority to allocate staff or other resources inside NCIA, ACO, or IMS. Rather, these organizations each have their own internal processes for staffing and funding project implementations. In addition, NCIA, rather than ACT, chairs the IPMT meetings. According to available meeting minutes, ACT representatives did not attend IPMT meetings that focused on FinS. Rather than project direction, ACT's responsibilities were tied to its role as Transformation Authority. These include coordinating the priority of installation, operation, and support associated with the capability requirements and representing such issues in front of NATO committees.

5.3.3 In addition, the IPMT's responsibilities extended beyond FinS to include the full range of the LOG-FS projects. In 22 meetings between April 2007 and February 2013, FinS was discussed mainly to update LOG FS stakeholders on project progress and challenges. A FinS-only IPMT met in an ad-hoc fashion 8 times between March 2010 and November 2011. According to IMS and NCIA officials, during both phases project-related decisions were made most often at the working level. Typical fora included weekly Project Progress Meetings.

5.3.4 The TBCE called for the creation of a Project Board accountable for the overall direction and management of the project, separate from the IMPT. However, no such Board was included in the governance structure defined by the Project Management Plan. According to NCIA officials, the FinS project did have a Project Board comprised of NCIA officials. However, in the Board's opinion this Project Board did not meet PRINCE2 requirements because it did not include user representation and operated outside the project's agreed governance framework.

5.3.5 The lack of an appropriate Project Executive and documented Project Board limited senior-level accountability and direction. For example, IMS users told the Board that it took pressure from the Budget Committee to find a way forward during the nearly 15 month delay between go-live at Phase 1 sites and the initiation of Phase 2. In addition, the lack of high-level direction, to include clear definitions for the types of acceptable system changes and concomitant enforcement, hindered the effective exercise of scope change management. This contributed to delays associated with emerging requirements as discussed in section 6. Without an authoritative and available project Executive and a Project Board fully incorporated into a project's governance framework, project stakeholders will be less able to keep future CIS project implementations sufficiently resourced, within schedule and according to an agreed scope.

Recommendation 2:

5.3.6 The Board recommends that in developing or approving future Project Management Plans for CIS implementations, all project stakeholders ensure that the project Executive possesses the authority necessary to provide the kind of strategic guidance and decision-making required by the PRINCE2 framework.

5.3.7 The Board further recommends that the project Executive report to a dedicated Project Board, which should be fully representative of the stakeholder base, have its composition, roles and responsibilities defined in the Project Management Plans, and meet on a regular basis.

5.4 Management

5.4.1 The implementation approach also implied additional management responsibilities for NCIA, which were not sufficiently incorporated into project planning. In particular, the agency was responsible for synchronizing each project element. These elements included separate procurements for Phases 1 and 2 implementation, hardware, and database administration. In addition, NCIA was directly responsible for security accreditation. According to NCIA officials, for NATO CIS projects third party firms have typically assumed the integration role as part of their contractual obligations. In its planning, however, NCIA did not make explicit its responsibilities to integrate the various project elements, which NCIA officials said took more time and effort than initially expected. In particular, neither the TBCE nor the Project Management Plan accurately reflected integration tasks or the resources needed to perform them. As a result, for example, only one post in NCIA was assigned to the project full-time during most of Phase 1.

5.4.2 According to NCIA officials, projects are much more likely to be approved if PSCs are underestimated up front, with the expectation that the Nations will be more likely to approve additional expenditures after implementation is underway. These officials told the Board that projects similar to FinS implementation outside of NATO carry higher administrative costs than the Nations are willing to approve. They also said that the Nations typically approve requests with the expectation that administrative costs for CIS projects should not be significantly different from those for other types of projects such as construction. The Board has not assessed other projects or made comparisons that would validate this claim. However, the potential schedule and cost implications of this possible trend may further increase the financial risk to the Nations.

5.4.3 In the case of FinS, when the project schedule and level of effort surpassed estimates, the agency increased the proportional level of PSCs relative to investment costs. For example, the TBCE estimated PSCs as 12 percent of investment costs. In the latest authorization to implement FinS at additional IMS Budget Group sites, the Nations approved PSCs amounting to approximately 36 percent of investment costs for

the specific request. According to the Board's analysis, the total authorized PSCs for the project amounted to approximately 16 percent of investment costs.

5.4.4 According to NSIP guidance, as the HN NCIA is responsible for accurately projecting its administrative costs. In addition, the NOR is supposed to assess whether these costs are reasonable. In the Board's opinion, unless NCIA ensures its requests reflect project needs based, at a minimum, on the role the agency expects to perform and services it commits to provide, projects will continue to be delivered above estimated costs and behind schedule. Further, without better justifications for these costs, the NOR will be less able to determine whether they are reasonable. Ultimately, without an accurate picture of expected costs, the Nations will not have the information they need to make informed decisions.

Recommendation 3:

5.4.5 The Board recommends that NCIA fully define the type of implementation role it expects to perform in future project management planning documentation.

5.4.6 The Board also recommends that NCIA develop and tailor a methodology for estimating PSCs that accurately reflect the various roles, including the types of services the agency commits to providing. The costs presented in TBCEs should be prepared in accordance with this methodology.

5.4.7 The Board further recommends that NCIA improve its justification to the Nations for the required level of PSCs, which could include elements such as the results of a comparison or benchmarking with similar case studies outside NATO.

5.5 Time needed for screening and authorization

5.5.1 In the Board's opinion, the TBCE did not adequately consider the time needed to screen and approve the large number of authorization requests. The Board's analysis shows that the NOR took a cumulative 13 months to screen the 9 scope and funds requests associated with the FinS project, and the Nations took an additional 10 months to approve 8 of them.¹⁵ In particular, the 6 month delay prior to initial approval from the Nations to move forward pushed the project start date back by 6 months, immediately jeopardizing the plan to complete the project by the end of 2009.¹⁶ Similarly, the 4.5 months needed to obtain approval to move forward with Phase 2 contributed to the lengthy period between go-live at the Phase 1 sites and Phase 2 contract signing.

¹⁵ As discussed further in section 6.6, the Nations did not approve the Independent Verification and Validation (IV&V) work package.

¹⁶ At this time, a further 3 months delay resulted from negotiations with the Phase 1 contractor, during which it became clear that the initial schedule predicted for completion of NATO's deliverables was unrealistic, according to the FinS project manager. The Board includes these 3 months among delays associated with requirements and resources, discussed in section 6.

5.5.2 According to NSIP procedures, as HN it is NCIA's responsibility to accurately estimate the expected implementation schedules for NSIP projects in the TBCE and subsequent authorization documents. In addition, it is among the HN's responsibilities to clearly state all risks in these documents, to the extent they can be anticipated, to best inform the Nations' decision-making. Further, the NOR is supposed to assess whether the HN's schedule is realistically achievable based on the risks and other factors stated in the authorization requests from the HN.

Recommendation 4:

5.5.3 The Board recommends that NCIA improve its process for estimating project schedules. At a minimum, this will entail analysis of past projects, taking into full consideration the amount of time realistically needed for the NOR to screen requests for authorization and for the Nations to approve them.

5.6 Conclusion on implementation approach

5.6.1 The FinS implementation approach is likely to be repeated with other projects that are more complex and potentially carry greater risk. As HN, NCIA's credibility will suffer if the Nations and entities within NATO perceive that it is unable to deliver capabilities according to its estimates. According to NCIA officials, loss of credibility is one of the agency's major institutional risks. Without additional steps to more accurately present the risks of a given implementation approach, NCIA may be less able to take advantage of an opportunity to mitigate its overall risks. In addition, the NOR may be less able to effectively screen authorization requests. More generally, without a clearer picture of the potential risks associated with a given approach to implementing the project at hand, including governance, management, and timing implications, the Nations will be less able to weigh them against the expected benefits.

Recommendation 5:

5.6.2 For future NSIP CIS project implementations, the Board recommends that NCIA more clearly state project schedule and cost risks against expected benefits, such as those to be gained by maximizing competition, prior to establishing a project implementation and procurement approach. As appropriate, NCIA should present alternative approaches, including separating or grouping work packages, together with the risks and opportunities associated with each. The NOR should then screen these approaches prior to making its initial recommendations to the Nations.

6. INSUFFICIENT SCOPE DEFINITION AND RESOURCE PLANNING SHORTFALLS DELAYED PROGRESS DURING EXECUTION

The Board's analysis of project management documentation and summaries provided by the FinS project team show that the FinS project experienced further delays during project execution, primarily in Phase 1. During this phase, actual project performance lagged established milestones by a cumulative 10 months. As discussed in the following paragraphs, the delays resulted mainly from evolving requirements, including those arising from insufficient scope planning and late-emerging needs for software configuration changes, and resource shortfalls. These shortfalls included an insufficient number of personnel at ACO available to complete project implementation tasks according to schedule and lack of a project assurance function at NCIA. Taken together, requirement- and resource-related delays contributed to 43 percent of overall delays, as shown earlier in Figure 2.

6.1 Initial FinS project scope was incomplete

6.1.1 CIS project schedule and costs are best controlled when requirements and user needs are fully identified prior to beginning implementation activities. Project management principles, including those that underpin the PRINCE2-based Project Management Plan, state that more detailed and accurate customer articulation of requirements prior to project implementation lead to fewer scope changes and less risk in cost and schedule.

6.1.2 In one significant case, new requirements resulted from the decision to install FinS at an additional site that should have been included within the initial project scope. For example, after implementation had begun, ACO determined that ISAF should be considered the same as other ACO subcommands rather than as a subset of JFCBS, which required the addition to the system of a new operating unit. ACO subsequently expanded the requirement to implement the FinS system itself at ISAF to mitigate risks such as unauthorized alteration of data and fraud, as raised repeatedly by the Board and others. Implementation of full FinS functionality at ISAF was delayed from the initial projection of October 2011 to December 2012. This was due to a combination of the factors discussed in this report and the need for ISAF-specific system adaptations. Unlike the other ACO sites, ISAF lacked a pre-existing financial system.

6.1.3 Since NATO assumed the ISAF mission in 2003, the Board has reported on its serious concerns about the lack of controls over financial transactions at the command. In its audits of ACO's financial statements for the years ending 2003 through 2005, these concerns caused the Board to qualify ACO's accounts. In 2008 the Board recommended that ISAF replace the spreadsheet software used to manage all its finances. In response, the ACO Financial Controller stated that this was a long standing concern and that he had prioritized ISAF to be included among the early tranches of

FinS implementation.¹⁷ Subsequently, similar statements were made in response to repeated Board observations in this area. It is therefore not clear to the Board why ISAF was not included in the initial project scope as defined by the TBCE. Although well-justified, the late addition of ISAF added cost and complexity to FinS implementation, and contributed to the longer time than anticipated to complete the project.

6.1.4 In other cases, implementation of FinS at additional sites resulted from factors that could not have been anticipated at the beginning of the project. In particular, organizational changes within NATO associated with Agencies Reform created the need to install or reconfigure FinS at the Collaborative Support Office, the Office of the Chief Scientist, and the Centre for Maritime Research and Experimentation. Implementation at the Collaborative Support Office was already covered in the project funds under the entity's previous name, the Research and Technology Agency. This work will add a projected 8 months to the time necessary to achieve final system acceptance, as well as EUR 472,625 in additional costs authorized by the Nations in April 2013.¹⁸

6.2 Detailed software configuration needs were incorporated late

6.2.1 Over the course of FinS implementation, FinS customers identified further requirements, including software configuration needs, which should have been incorporated from the beginning of the project. Project management documentation state that FinS would be configured at ACO and IMS to resemble, from the beginning, the system as already implemented at ACT and NCSA. Defining system configuration as such is referred to as establishing a "baseline." As a result, the project schedule and costs were based on a scope limited to the configuration, including functionalities and customizations, of the software as it was installed at ACT and NCSA. The rationale for minimizing customization among sites includes keeping the project within cost and schedule and, following project completion, the need to facilitate centralized administration and maintenance, a key project goal for achieving cost reductions. The more changes occur at the local level or in response to specific requests from the customer, the harder it is to meet this goal.

6.2.2 According to ACO officials, the baseline did not fully consider differences in how ACO conducts its business compared to ACT and NCSA. One of the most significant business processes not reflected was ACO's requirement to centrally process payments requested by local commands above a set monetary value. According to a memorandum ACO sent to NCIA in May 2010, this functionality and others were provided by custom programs developed for the legacy system, NAFS. ACO made the assumption that they would be replicated in the standard payment functionality provided by FinS. However, the functionalities offered by prior system customizations at ACO were not explicitly referenced in the initial system specifications. The time needed to design, install and test the central payment function and the revised go-live schedule

¹⁷ CM(2008)0039.

¹⁸ AC/4(PP)D/26163-ADD10.

made necessary to accommodate ACO's year-end closing process added nearly 4 months to the schedule and additional costs (approximately EUR 300,000) funded through the Military Budget.

6.2.3 Other detailed software configuration needs emerged after implementation began. Some, like central payment, related to the baseline. For example, because ACO operates in more countries than either ACT or NCSA, its financial system required a greater level of site-specific customization to conform with local payment formats. The level of effort involved contributed to the project team's inability to conduct implementation activities at more than one site simultaneously. Other requirements arose due to changes in ACO's business processes. For example, a change request consolidating the Military Budget and NSIP sets of books¹⁹ into one operating unit per site did not anticipate the significant time and effort needed to revise the chart of accounts. Executing such changes often involved substantial efforts by NCIA and the contractor to analyze the cost and schedule impact and produce contract modifications.

6.2.4 During Phase 2, like ACO IMS faced challenges delivering all required documentation due to time pressure, but was able to identify its system configuration needs on schedule. These needs were incorporated into the functional design and implemented without delaying the project. The requests included unique payment formats and interfaces between system modules. IMS officials attributed the relative success of Phase 2 implementation at IMS sites to ACO's prior refinement of the baseline, the leadership skills and experience brought by the consultant NCIA hired to lead Phase 2, and excellent communication with NCIA and the contractor. In addition, the scale of IMS compared to ACO implementation, including the number and size of the sites, was smaller. Finally, NCIA officials credit a more appropriate contract type used during Phase 2, during which the entire IMS implementation occurred.

6.2.5 In the Board's view, ensuring that all assumptions are documented and that, to the extent possible, users clearly identify all requirements prior to system implementation, especially if they relate to key business processes, is a success factor. Unless its customers take further steps to ensure the consolidation of such requirements prior to project implementation, NCIA's ability to effectively manage the risk of cost and schedule increases will continue to be limited.

¹⁹ A set of books is a financial reporting entity that shares the same chart of accounts, functional currency and accounting calendar. A set of books partitions general ledger data; actuals, encumbrances and budgets.

Recommendation 6:

6.2.6 To mitigate the risk of cost and schedule increases, the Board recommends that for future CIS implementations conducted by NCIA, ACO and any other customer(s) consolidate and make explicit their requirements prior to system implementation. This includes the clear identification of all known implementation sites. It also includes a system configuration baseline that fully reflects customer business processes and includes all documentation related to existing customizations whose functionality the customer wants to retain. To provide assurance to the Nations that provider and customer(s) are in agreement, the Board further recommends that ACO and any other customer(s) formally document concurrence with the system baseline prior to contract award.

6.2.7 The Board further recommends that for projects incorporating business process changes, ACO and any other customer(s) fully document these changes within initial project requirements and include them in the initial project scope. If for any reason requirements and business processes cannot be finalized beforehand and incorporated into the baseline, the Board recommends that NCIA, with input from its customers, assess the cost and schedule risks of further changes. This assessment should be presented to the Nations at the time of authorization for contract award.

6.3 FinS implementation at E-3A was postponed

6.3.1 Beyond the delays discussed, requirements that were not fully understood or defined at project initiation resulted in deferred implementation at one location. Specifically, at the E-3A component in Geilenkirchen, Germany, which in 2012 represented over 21 percent (EUR 185 million) of ACO's EUR 862 million budgeted expenditures, FinS implementation will require an interface with the component's unique logistics system and establishment of unclassified internet connectivity. The interface was included in the original FinS Phase 1 project scope and Statement of Work. However, the level of complexity involved in changing business processes and the costs of acquiring equipment and developing the prerequisite network capability were not fully identified in the beginning. This prompted ACO in May 2010 to recommend postponing implementation at E-3A.

6.3.2 Implementation of FinS at E-3A has now slipped to at least April 2014, and the full range of funds needed for implementation have not yet been identified. Although E-3A finance and accounting staff told the Board that NAFS continues to function adequately, it is no longer supported by the manufacturer and the risks that prompted NAFS' replacement ACO-wide remain. Without rapidly determining a way forward, ACO risks system degradation and data loss at E-3A. In addition, the component will face ever-increasing challenges obtaining system support, since the software is over 12 years old, which will increase costs.

Recommendation 7:

6.3.3 The Board recommends that NCIA and ACO rapidly agree a way forward for making any needed business process changes and obtaining the necessary resources to implement FinS at the E-3A component.

6.4 Known ACO resource shortfalls were not addressed

6.4.1 ACO, which was responsible for a greater number of deliverables than any other project stakeholder, was unable to provide the inputs required to keep the project on schedule. Many of these deliverables included inputs in the area of data preparation, migration and testing whose timely completion were essential to maintain project momentum. Because many of these tasks were not completed on time, Phase 1 was delayed by another 2 months.

6.4.2 According to project documentation and ACO officials, the 13 staff in ACO's Office of the Financial Controller Corporate Accounting and Control branch and existing finance and accounting staff at the ACO sites conducted these tasks as extra duties, with no augmentation throughout the course of the project. The extended project timeline further limited the availability of these personnel. In addition, as stated in project documentation and in communication with the Nations, critical positions within the ACO Financial Controller's office were either unfilled at key points during project implementation or were downgraded. For example, the branch responsible for directing ACO's implementation activities lacked a Senior User during the time frame when data migration activities were supposed to occur. NCIA project team officials told the Board that communication with ACO became much more difficult with this position unfilled, which hindered project execution.

6.4.3 Assessing available resources against planned activities prior to project execution and then assigning sufficient resources is a fundamental project management activity. The PRINCE2 framework states that priority for resourcing should be given to those tasks that, if finished later than planned, would also delay the entire project. Accordingly, the FinS Project Management Plan states that adequate and sufficient project staffing to meet stated goals is a critical success factor. However, the full extent of the FinS project's resource needs was not sufficiently considered at the time of authorization nor effectively addressed during project execution.

6.4.4 ACO's resource requirements were repeatedly identified as a significant issue in the project team's issue and risk logs from early on, but were not fully assessed and understood until spring 2010, after ACO began experiencing challenges meeting its commitments to the project. In May 2010, ACO drafted a request for additional funding to augment the number of personnel supporting FinS implementation at ACO, but it was not brought before the Nations for consideration. ACO and NCIA officials offer divergent explanations, which the Board is unable to verify because documentation for why this request did not go forward is unavailable.

6.4.5 During their respective financial system implementations ACT and later IMS did not experience the same issues as ACO did with data preparation, migration, and testing. However, IMS officials told the Board that a significant amount of overtime was required and that implementation could have benefitted from earlier planning of certain tasks. To save time, IMS officials said they developed a different approach to the tests undertaken prior to system acceptance by the user. Even though IMS had no additional resources dedicated to its implementation tasks, its personnel were able to complete all tasks on time and adhere to the go-live schedule.

6.4.6 The resource shortfalls experienced by ACO may indicate broader systemic weaknesses. The Nations fund the typical NSIP project to include project investment and HN administrative costs. While these categories may be sufficient for traditional NSIP activities such as infrastructure building, CIS implementations often require efforts by customers to implement business changes. According to ACO and NCIA officials, an effective approach to enterprise resource planning must more fully consider the range of processes and their interactions, not just desired functions, to be successful. This generally requires substantial analysis prior to identifying the technical solution(s) and investment by the customer, neither of which occurred for FinS implementation.

6.4.7 In the absence of sufficient functional analysis, ACO's financial processes were not fully optimized in line with FinS capabilities, limiting the system's potential to increase effectiveness and efficiency. NCIA leadership took the position that "a significant limitation on FinS implementation has and continues to be the lack of enough resources qualified to perform both a thorough business process review as well as a revision of the currently in use [system] configurations."²⁰ The Board notes that the ACO Office of the Financial Controller is currently undertaking an optimization study to increase the effectiveness and efficiency of its financial operation business processes, among other things.

6.4.8 In the Board's opinion, without ensuring the completion of all business process analyses prior to project implementation, and, if well-justified, applying the necessary resources, the Nations will be unable to benefit from the full potential of costly future enterprise-wide CIS implementations. In addition, the Board sees value in achieving full visibility at project authorization of the level of effort required not just by the provider but also the customer, to include a clear picture of all available resources and any gaps. Without such visibility, the Nations will lack a full understanding of the actual project scope, to include potentially unmet needs that could affect project success.

²⁰ Comments on a report by the Resource Policy and Planning Board on IPSAS implementation within NATO, C-M(2013)0006.

Recommendation 8:

6.4.9 The Board recommends that, for future CIS projects, NCIA coordinate with ACO and any other customer(s) to include in its authorization requests a detailed break-down of all tasks needed to complete the project. These should include required tasks for the customer and the resources committed by the customer to the project. For enterprise-wide applications, particular attention should be paid to any functional and process analyses needed.

6.4.10 Drawing on an analysis of past experience and knowledge of the industry, the Board further recommends that NCIA work with its customers to identify any potential gaps in customer resources. NCIA should present risks to cost and schedule and alternatives, if available, associated with less than full resourcing of these gaps so that the Nations can make informed decisions.

6.5 NCIA lacked project assurance

6.5.1 The lack of project assurance also affected FinS implementation. The FinS project was designed assuming that a contractor would provide Independent Verification and Validation (IV&V) services²¹ in a project assurance role. Project assurance is a key component of project management in the PRINCE2 framework. For example, the framework states that elements to be assured can include quality control, acceptability of the solution under development, and whether scope changes are taking place unnoticed. The Nations initially approved IV&V at first stage authorization, but then were unable to achieve consensus to provide contract authority. As a result, this element of the project was never authorized. According to project team officials, funding constraints across the NSIP programme associated with the financial crisis played a major role.

6.5.2 In the absence of the specialist assistance associated with project assurance, NCIA took longer than expected for critical tasks such as accepting project design. According to NCIA officials, the agency lacked personnel with the expertise necessary to determine whether the design produced by the contractor met user needs. As a result, the agency was unable to apply the appropriate level of quality control. This challenge was compounded by the use of a firm-fixed price contract for Phase 1 implementation, which NCIA official said fostered an adversarial relationship with the contractor due to different interpretations of project scope. Challenges during design acceptance contributed to a 4-month delay in project execution.

²¹ The IV&V contractor would have been responsible for (1) mitigating risks and reacting promptly to deviations by assisting in the preparation of specification and bidding materials, (2) conducting independent risk assessment, performance reviews, configuration audits and delivery compliance verification, (3) assisting NCIA in Critical Reviews, (4) inspecting code and verifying implementation contractor's tests, and (5) supporting NCIA during acceptance tests and in project management activities.

6.5.3 NCIA did not report the criticality of this work package until it was too late. Project documentation makes it clear that risk mitigation, which consisted of NCIA providing project assurance as an extra Phase 1 responsibility, was neither realistic nor sufficient since the project team was unable to assume IV&V duties. In addition, according to PRINCE2, project assurance has to be independent of the project manager. Although the project team identified the lack of IV&V support as an issue in November 2009 when it became clear that the Nations would not support it, NCIA did not link IV&V to project schedule and cost risks in its official communications with the Nations until late 2010, by which time delays had already occurred.

6.5.4 In the Board's opinion, the strategy of separating the project into several discrete components, as occurred with FinS, makes it all the more important to clearly demonstrate to the Nations the importance of each element in achieving project goals. According to FinS project team officials, during the authorization process NCIA generally does not effectively demonstrate the impact and risks of not funding project elements, referred to as impact statements. Without more detailed impact statements attached to each approval request, the Nations may not have the information they need to be fully informed on the merits of specific project elements, especially when they are looking to achieve savings.

Recommendation 9:

6.5.5 The Board recommends that for future requests NCIA proactively assess and present to the Nations the relative importance to project success of each project element. This will help Nations avoid decisions to reduce expenditures that may result in other costs incurred later that would outweigh any savings perceived at authorization.

7. CONCLUSION

7.1 FinS implementation at ACO and IMS, the third implementation of the same system at NATO, can be distinguished from previous iterations in three main respects, which represent both challenges and opportunities. First, it included major business process changes at the ACO level. This magnified the complexity of a project already challenged by the large number of sites, each with their own unique characteristics. Second, the HN NCIA managed the project within the NSIP framework as an integrator. As such, the Nations had a greater direct impact on project implementation through the authorization process, and the role of NCIA as HN in governing and managing the project became critical. Third, the project was significantly delayed, to the point at which it may not be in place for long before a contractor proposes a new solution as part of the LOG FS projects.

7.2 In the Board's opinion, the recommendations in this report, summarized in the following section, flow from lessons learned during FinS implementation. NCIA and other entities within NATO are poised to implement further projects, such as those contained within LOG FS, on a much larger scale of funding, scope, and complexity. Without reporting to the Nations how the Board's recommendations contained in this report are being addressed, NCIA, ACO, and IMS may miss an opportunity to demonstrate progress in an area that will directly impact future Alliance efforts to conduct its business more effectively and efficiently. In particular, it is the Board's view that addressing the governance and project leadership issues would have had positive effects throughout the other areas highlighted in this report, and are therefore the most critical to get right in the future.

Recommendation 10:

7.3 Following a reasonable amount of time to be agreed between the Nations, ACO, IMS, and NCIA, the Board recommends that NCIA coordinate these stakeholders' efforts and lead the production of a joint communication to the Nations listing the steps being taken to address the recommendations contained in this report.

8. SUMMARY OF RECOMMENDATIONS

Recommendation 1:

4.2.4 The Board recommends that NCIA Service Delivery conclude service level agreements with ACO and IMS that clearly specify the level of support expected and fairly represent the costs.

Recommendation 2:

5.3.6 The Board recommends that in developing or approving future Project Management Plans for CIS implementations, all project stakeholders ensure that the project Executive possesses the authority necessary to provide the kind of strategic guidance and decision-making required by the PRINCE2 framework.

5.3.7 The Board further recommends that the project Executive report to a dedicated Project Board, which should be fully representative of the stakeholder base, have its composition, roles and responsibilities defined in the Project Management Plans, and meet on a regular basis.

Recommendation 3:

5.4.5 The Board recommends that NCIA fully define the type of implementation role it expects to perform in future project management planning documentation.

5.4.6 The Board also recommends that NCIA develop and tailor a methodology for estimating PSCs that accurately reflect the various roles, including the types of services the agency commits to providing. The costs presented in TBCEs should be prepared in accordance with this methodology.

5.4.7 The Board further recommends that NCIA improve its justification to the Nations for the required level of PSCs, which could include elements such as the results of a comparison or benchmarking with similar case studies outside NATO.

Recommendation 4:

5.5.3 The Board recommends that NCIA improve its process for estimating project schedules. At a minimum, this will entail analysis of past projects, taking into full consideration the amount of time realistically needed for the NOR to screen requests for authorization and for the Nations to approve them.

Recommendation 5:

5.6.2 For future NSIP CIS project implementations, the Board recommends that NCIA more clearly state project schedule and cost risks against expected benefits, such as

those to be gained by maximizing competition, prior to establishing a project implementation and procurement approach. As appropriate, NCIA should present alternative approaches, including separating or grouping work packages, together with the risks and opportunities associated with each. The NOR should then screen these approaches prior to making its initial recommendations to the Nations.

Recommendation 6:

6.2.6 To mitigate the risk of cost and schedule increases, the Board recommends that for future CIS implementations conducted by NCIA, ACO and any other customer(s) consolidate and make explicit their requirements prior to system implementation. This includes the clear identification of all known implementation sites. It also includes a system configuration baseline that fully reflects customer business processes and includes all documentation related to existing customizations whose functionality the customer wants to retain. To provide assurance to the Nations that provider and customer(s) are in agreement, the Board further recommends that ACO and any other customer(s) formally document concurrence with the system baseline prior to contract award.

6.2.7 The Board further recommends that for projects incorporating business process changes, ACO and any other customer(s) fully document these changes within initial project requirements and include them in the initial project scope. If for any reason requirements and business processes cannot be finalized beforehand and incorporated into the baseline, the Board recommends that NCIA, with input from its customers, assess the cost and schedule risks of further changes. This assessment should be presented to the Nations at the time of authorization for contract award.

Recommendation 7:

6.3.3 The Board recommends that NCIA and ACO rapidly agree a way forward for making any needed business process changes and obtaining the necessary resources to implement FinS at the E-3A component.

Recommendation 8:

6.4.9 The Board recommends that, for future CIS projects, NCIA coordinate with ACO and any other customer(s) to include in its authorization requests a detailed break-down of all tasks needed to complete the project. These should include required tasks for the customer and the resources committed by the customer to the project. For enterprise-wide applications, particular attention should be paid to any functional and process analyses needed.

6.4.10 Drawing on an analysis of past experience and knowledge of the industry, the Board further recommends that NCIA work with its customers to identify any potential gaps in customer resources. NCIA should present risks to cost and schedule and

alternatives, if available, associated with less than full resourcing of these gaps so that the Nations can make informed decisions.

Recommendation 9:

6.5.5 The Board recommends that for future requests NCIA proactively assess and present to the Nations the relative importance to project success of each project element. This will help Nations avoid decisions to reduce expenditures that may result in other costs incurred later that would outweigh any savings perceived at authorization.

Recommendation 10:

7.3 Following a reasonable amount of time to be agreed between the Nations, ACO, IMS, and NCIA, the Board recommends that NCIA coordinate these stakeholders' efforts and lead the production of a joint communication to the Nations listing the steps being taken to address the recommendations contained in this report.

9. ACO/NCIA/NOR COMMENTS AND THE BOARD'S POSITION

9.1 Based on a draft of this report, the Board received written factual and formal comments from ACO, NCIA, and the NOR. These comments are reproduced in Appendix 2. The IMS did not provide comments but told the Board that it agreed with the draft report as written. In response to the factual comments received and a subsequent meeting with NCIA staff by request of the NCIA General Manager, the Board made changes to the text as appropriate. The Board is satisfied that the changes to the report address the comments as discussed with NCIA.

9.2 In their general comments, ACO and the NOR concurred with all of the Board's recommendations. NCIA concurred with all recommendations except Recommendation 6, pertaining to the early identification of project requirements. According to the NCIA comments, for software-intensive acquisition projects it is often not possible to fully define requirements and business changes—and hence, the full project scope—at the outset. The Board notes the NCIA position. However, the Board's recommendation is focused on major scope elements like the central payment capability and others used as examples in its report. These types of requirements can—and should, in the Board's opinion—be clearly identified by the customer up front and incorporated into project scope by the provider early on. The Board keeps its recommendation.

9.3 In its comments, ACO stated that the late incorporation of these same requirements resulted from the lack of proper coordination and understanding of ACO requirements by NCIA. The Board confirms that during the audit both ACO and NCIA officials said that communication challenges hindered project implementation. In addition, as ACO stated in its factual comments on the draft, the resource shortfalls highlighted in the Board's report reduced the ability of the ACO CIS community to take up the role of intelligent customer. While acknowledging these factors, based on the evidence presented during the audit the Board maintains its position that ACO made incorrect assumptions about what the initial project scope included and added or changed some functional business requirements after implementation began. These factors also contributed to the scope changes, associated delays and cost increases.

9.4 In the Board's opinion, the views stated by NCIA and ACO highlight the importance of Recommendation 6. In making this recommendation, the Board encourages customer and provider to work more closely to agree on necessary business requirements, especially during a project's early stages. Accordingly, the Board welcomes the position expressed by both ACO and NCIA that the user/customer should take a more active role in project planning and management. In particular, the Board strongly supports the NCIA proposal to include user representation on the Project Boards, which is in line with PRINCE2. If properly implemented in conjunction with the Board's other recommendations, this will help mitigate risks to cost and schedule.

9.5 The Board would also welcome a discussion on the NOR suggestion to close completed elements of a project with a Joint Final Inspection and Formal Acceptance prior to the approval of scope changes.

9.6 The Board views the comments provided by ACO, NCIA, and the NOR as a good foundation on which to build in future communications to the Nations on the steps taken to implement the Board's recommendations.

LIST OF ABBREVIATIONS

ACO	Allied Command Operations
ACT	Allied Command Transformation
Board	The International Board of Auditors for NATO
CIS	communication and information systems
CNAFS	Centralised NAFS
FinS	Bi-Strategic Command Automated Information Services Financial Service
HN	Host Nation
IMS	International Military Staff
IPSAS	International Public Sector Accounting Standards
ISAF	International Security Assistance Force
IV&V	Independent Verification and Validation
JFCBS	Joint Force Command Headquarters Brunssum
LOG FS	Functional services for Logistics Command and Control
NAFS	NATO Automated Financial System
NC3A	NATO Consultation, Command and Control Agency (now part of NCIA)
NCCB	NATO Combined Communications and Information Services Budget
NCIA	NATO Communications and Information Agency
NCSA	NATO Communication and Information Services Agency (now NCIA Service Delivery)
NOR	NATO Office of Resources
NSIP	NATO Security Investment Programme
PRINCE2	Projects in Controlled Environments project management framework
PSC	Project Service Costs
SHAPE	Supreme Headquarters Allied Powers Europe
TBCE	Type B Cost Estimate

***Comments of the Vice Chief of Staff,
Allied Command Operations (ACO)***

**SUBJECT: DRAFT SPECIAL REPORT TO COUNCIL ON THE FINANCIAL SERVICE
PROJECT AND ACTIONS NEEDED TO APPLY LESSONS LEARNED**

REFERENCE: IBA-A(2013)184, Draft Special Report to Council on the Financial Service (FinS) Project and Actions Needed to Apply Lessons Learned, dated 09 July 2013.

1. Further to the letter at Reference, please find attached at Enclosure, ACO's clarifications and or comments on the Board's Draft Special Report at Subject.
2. The responses provided by ACO at Enclosure 1, highlight that the crux of the issues related to the implementation of the project and progress during its execution mainly relates to the lack of a proper scope definition and baseline of the NATO Security Investment programme (NSIP) project, as well as the lack of a proper coordination and understanding of the users' requirements by the Host Nation.
3. With regard to the weaknesses in the system support, ACO agrees with the Board recommendation to conclude Service Level Agreements (SLA) with NCIA and trust that the ongoing initiative undertaken by ACO to establish an overarching SLA, which clearly identifies all FinS users' requirements, would help increase the quality of services vis-à-vis the users' desired level of support and allocated resources.
4. ACO also deems necessary that the implementation of future Enterprise Resource Planning (ERP) projects, will foresee a more active role of the users in the planning and management of the project and a better coordination and cooperation between the
4. ACO also deems necessary that the implementation of future Enterprise Resource Planning (ERP) projects, will foresee a more active role of the users in the planning and management of the project and a better coordination and cooperation between the service provider and the intelligent customer.
5. The point of contact for this issue is Laura Ciarlone, Branch Head Corporate Accounting and Control SHAPE J8, NCN 254-3882.

COMMENTS OF THE VICE CHIEF OF STAFF, ALLIED COMMAND OPERATIONS

ACO'S RESPONSES ON THE IBAN DRAFT SPECIAL REPORT ON THE FINS AND ACTIONS NEEDED TO APPLY LESSONS LEARNED

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
1	2.2 & 2.6 first bullet		NAFS was upgraded first at the NATO Communications and Information Services Agency (NCSA, now NCIA Service Delivery) and then subsequently at ACT. At other locations within the NATO Command Structure, NATO used NSIP funding to upgrade NAFS. A Project Board is responsible for overall project direction. It is comprised of an Executive, a Senior User, and a Senior Supplier. The framework states that, among other things, the Project Board members should be senior enough to make strategic decisions, such as providing resources.	N/A	N/A	The funding of the NAFS upgrade for ACT and NCSA was funded by MB funds. This funding mechanism has proven to be more flexible than the NSIP procedures. This funding mechanism would provide an effective tool to the Project Board to accomplish his task to provide the necessary resources for the project implementation in a timely and effective manner. In ACO's J8 view the funding of a complex ERP system implemented in an operational environment such as ACO with various entities spread in different geographical locations should be ensured through the most efficient and effective mechanism.
2	3.5	FinS implementation experienced delays and related additional costs	The non-delay-related EUR 1.3 million in costs shown in Figure 3 fall into 2 categories. First, they include cumulative additional authorisations due to increases and decreases in scope, such as implementation at ISAF and additional IMS budget group sites, automated currency conversion capability for one ACO site, and a reduction due to the lack of authorisation of Independent Verification and	N/A	N/A	The "automated currency conversion capability for one ACO site" refers to MARCOM Northwood. The original structure for ACO was one Set of Books (SOB) and, as a consequence, one General Ledger (GL) using only one functional currency (EUR). However, MARCOM Northwood executes a budget in GBP. The issue was clearly identified since the very beginning of the project, and different options to handle this were proposed. However due to a lack of analysis at Project management level, the issue was never properly developed nor during Phase 1 nor

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
			validation (IV&V).			during Phase 2. At the end ACO managed on his own the completion of the Northwood migration. The additional cost related to this effort was one additional month Oracle post go live support.
3	4.1.1	FinS generally functions as intended but key project goals have not been met / Acceptable functionality and partial IPSAS capability	In discussions with the Board, FinS users expressed satisfaction with the system, stating that it provides most of the intended functionality within a stable operating environment. The functionality offered by the prior system, NAFS, remains basically unchanged in FinS, with some improvements. IMS users highlighted features such as the ability to create bulk invoice uploads in the accounts receivable and accounts payable modules. At ISAF, which previously lacked any financial system, the Board observed significant improvements in financial management. Officials told the Board that in most cases weaknesses relate more to processes than to any shortcomings in the system. For example, at ACO, a cumbersome account code structure has developed over time to incorporate the performance of budget, project accounting, and controlling functions simultaneously, according to ACO officials. This structure, rather than FinS, hinders finance staff from performing their tasks most effectively and efficiently.	N/A	N/A	ACO J8 agrees with the Board. Streamlining the “cumbersome account code structure” is one of the actions that have been identified further to the ACO J8 optimisation study that is going on. ACO J8 is currently reviewing this area in order to simplify the chart of accounts and to tackle budget planning, execution and analysis in a complex organisation as ACO. It is possible that the result will be the further implementation of dedicated ERP module for budget performance and project accounting Improvements in this regard have already been realised through the centralisation of the master data what reduces the uncontrolled creation of accounting code combinations, redundancy of codes, and improves a consistent approach in the way financial transactions are accounted for ACO-wide.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
4	4.1.2	FinS generally functions as intended but key project goals have not been met / Acceptable functionality and partial IPSAS capability	Nevertheless, one of the main justifications for FinS implementation, fully accounting for property, plant and equipment, has not been validated. The IMS uses its own tool to account for these assets, because during testing its users found the software's fixed asset module not fit for purpose or user friendly. ACO also has not yet used the module, but users told the Board it has been fully tested and they plan to use it now that a way forward has been approved by Council to adapt IPSAS. However, according to ACO users, FinS only allows the reporting of assets upon receipt of an invoice rather than at delivery. As a result, the system allows for partial IPSAS compliance in this area, although workarounds are possible. IMS users attributed this weakness to the lack of real-time data exchange with property accounting systems. The Board observed that users continue to manually enter data such as item valuation into ACO's property accounting system, in a process prone to error.	N/A	N/A	ACO confirms that the current FA module in FinS allows the reporting of assets upon receipt of an invoice rather than at delivery and concurs with the statement reported in the paragraph. ACO has not yet used the module, awaiting the approval of an adapted NATO IPSAS framework which occurred on 02 Aug 2013. As already reported to IBAN in relation to the implementation of IPSAS 17, ACO management decided not to capitalise such assets until a clear decision on the IPSAS way ahead had been taken. Accordingly ACO did not use the fixed asset module. In the meanwhile the FinS asset module has been fully tested and will be implemented and used iaw the NATO IPSAS framework. The FA module was part of the baseline and it was already implemented in former NCSA. ACO was the entity within the users' sites who identified the issue about the delivery principle in the Fixed Assets (FA) module and proposed how to tackle that approach in their business process for the time being. ACO J8 is willing to reinforce the use of all ERP functionalities including the 'Oracle project' Module in order to smoothly process transactions compliant with IPSAS. The current logistic tool used in NATO for property accounting (NDSS) does not represent the proper and most effective solution to allow for IPSAS compliance as a proper management of fixed assets and inventory can only be achieved by the using system modules integrated within the same ERP system used by both logistics and finance staff. ACO has been predicating since the very beginning that a proper use of an ad-hoc ERP module for Property Accounting and Inventory would help to support the IPSAS compliance requested at NATO level.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
5	4.1.3	FinS generally functions as intended but key project goals have not been met / Acceptable functionality and partial IPSAS capability	All users interviewed by the Board agree that FinS would benefit from better reporting tools. Existing tools in FinS allow the creation of rudimentary reports on budget execution, but developing statements of financial position and performance still requires significant additional work for ACO and IMS users. In addition, during its audit work at ISAF the Board observed inaccuracies inherent to several reports produced by the system, including for cash, payables, and receivables. As a result, for example, IMS users said they are developing and testing, together with NCIA, their own reporting tools to assist them in presenting the information contained in FinS in a format most useful for management decisions. Similarly, ACO users employ a parallel process for all reporting and statistics generation, which results in additional workload. The Board notes that improved business intelligence and reporting is included in the follow-on capability to be delivered as part of the LOG FS project.	N/A	N/A	The statement reported about reporting in ISAF is not correct. The Board already made the same comment in the draft fact sheet for ISAF related to the 2012 FS and ACO had the opportunity to clarify this issue. ACO J8 agree with the Board that Fins would benefit from better reporting tool. The baseline didn't consider any reporting features, stating that this requirement was included in the CP 103 LogFS that is still on-going. FinS users believe that this issue was due to a lack of understanding of the users requirements by the Project Management which consequently led to weaknesses in the project scope definition.
6	4.2.1	FinS generally functions as intended but key project goals have not been met /	Like NAFS before it, the current version of the software that underpins FinS will begin facing support restrictions in the current year, soon after implementation will complete. Challenges are already apparent, because support personnel are less likely to be trained on the installed version, according to IMS	N/A	N/A	ACO agree with the Board statement. ACO will fully implement and use Release 12 in 2013 and will be the forerunner for the implementation of release within the military organisations.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		Support weaknesses	officials. IMS and ACO officials assured the Board that the organisations will fund a technical upgrade to the latest version in 2014, which will address these risks. In addition, according to NCIA Service Delivery officials, further reduction of existing customisations associated with the implemented version of FinS are supposed to occur following this upgrade. It will not require significant business process changes, yet IMS officials said that the upgrade will bring opportunities for increased effectiveness and efficiency.			
7	4.2.2	FinS generally functions as intended but key project goals have not been met / Support weaknesses	IMS and ACO users at the SHAPE and subcommand level expressed dissatisfaction with the level and quality of technical support, newly centralised within NCIA Service Delivery. For example, users can no longer independently reset system passwords. As a result, for example, ISAF users can lose over 3 days of work due to the ISAF work schedule and time difference with Europe. IMS officials told the Board that NATO CIS security regulations make fixing these problems more challenging. In another example, an erroneous software patch made in April 2013 inadvertently blocked the Accounts Payable module ACO-wide. It also erased the electronic signature capability at JFCBS. JFCBS staff told the Board that only 5 of its 12 support requests	N/A	N/A	ACO confirms the dissatisfaction expressed about the level and quality of technical expertise within NCIA. However, the examples given create confusion while mixing internal issues with services which were supposed to be provided by NCIA. Nevertheless, wrt to the example reported by the Board, ACO decided not to wait for a technical solution from NCIA and proactively proposed and implemented an alternative solution in order to solve and manage the requirements in ISAF in the absence of support through NCIA. This solution developed for ISAF has been implemented likewise in all other ACO commands starting August 2013.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
			submitted following system go-live in April 2011 had been addressed as of June 2013.			
8	4.2.4	FinS generally functions as intended but key project goals have not been met / Support weaknesses	See "Recommendation (description)" column	1	The Board recommends that NCIA Service Delivery conclude service level agreements with ACO and IMS that clearly specify the level of support expected and fairly represent the costs.	ACO J8 welcomes the IBAN recommendation and underlines that the process for establishing SLAs between the intelligent customer and the service provider is currently under revision in order to implement an overarching SLA that constitutes a common platform for identifying at corporate level all FinS users requirements. Such SLA has to be developed in close cooperation and coordination with and respecting the priorities set by DCOS CCD/ ACOS J6 with regard to services to be delivered and availability of resources.
9	4.3.1 & 4.3.3	FinS generally functions as intended but key project goals have not been met / Operating costs unlikely to decrease	The second main goal of the FinS project, reductions in operating costs, has not been documented. The NATO Combined Communications and Information Services Budget (NCCB) funds FinS operations and maintenance costs including hardware, software, training and required contractual services. According to ACO's 2013 NCCB submission, centralising third party-provided support infrastructure for all sites resulted in lower workload at those sites, but a higher workload at the NCIA Service Delivery FinS Service Desk. Thus, while the NCCB for 2013 reflects hardware reductions since 2011, support costs have risen. ACO officials expect these costs to rise further in 2014 given the need for more service desk	N/A	N/A	ACO shares the doubts of the IBAN whether FinS will generate cost savings for the Nations in the future. Different factors and parameters need to be compared. ACO will closely monitor potential costs savings that can derive from the implementation of FinS and the centralisation of financial activities during the J8 optimisation study.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
			support. In addition, according to ACO and IMS officials, the individuals previously performing local system administration functions have been reassigned other duties, resulting in no net manpower savings. Finally, NCIA Service Delivery and ACO officials offer divergent predictions on the future cost of software licensing fees, leaving this area uncertain. The Board notes that FinS authorisation documentation did not contain investment appraisals that would have specified, for example, the extent to which the number of support personnel could be reduced due to centralisation. It is the Board's view that generic savings targets such as those presented in FinS authorisation documentation are not helpful. A better approach may be to define specific areas for savings, based on sound research, and then compel NATO entities to follow through. Recommendations in this area are beyond the scope of this report, but the Board is considering future follow-up reviews of the capability development process and NSIP programme that may allow further investigation. As it stands, the evidence does not suggest that FinS implementation has, or will in the future, bring cost savings to the Nations.			
10	5.1	Schedule and	The implementation approach planned	N/A	N/A	ACO concurs with the IBAN that the Phase 2

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		cost risks associated with implementation approach were not fully managed	by NCIA and approved by the Nations separated FinS from the larger LOG FS project, and then further divided the FinS project into 2 phases. The approach also called for separately authorising and procuring each FinS project element. By approving FinS implementation ahead of the other LOG FS elements, the Nations increased the possibility of fielding this essential capability early on, relative to the other more ambitious projects. In addition, by limiting sole source contract awards to only those project elements with the most compelling justification, the approach improved the chance of gaining benefits from competitive bidding. Potential benefits included lower costs and maximised participation by qualified firms. For example, in theory the approach allowed for Phase 2 implementation to be procured competitively as a separate work package from Phase 1			implementation could have been procured competitively as a separate work package. However, due to the huge delays the project had already suffered as a result of the management of the project by the HN, and in order to accomplish the implementation of the system ACO-wide and at IMS, both ACO and IMS requested a deviation from the normal methods of procurement in order/in the hope to expedite the contract award and the delivery of the capability. The request of both ACO FC and IMS FC was forced by events as a consequence of the lack of timely actions by the HN to support alternative solutions. The purpose of the sole source request was to minimise additional risks and inefficiencies in the implementation of the project. Had the sole source not been accepted, the delay in the project execution would most probably have been even longer than it already was. A normal intelligent customer/service provider relation and decisions on how projects should be organised and executed need to be taken in common understanding and agreement. Restriction in the PE have impacted on the ability of ACO CIS community to take up the role of intelligent customer in the many CIS projects, creating an unbalance in the relation intelligent customer/service provider.
11	5.3.2	Schedule and cost risks associated with implementation approach were not fully managed /	In the Board's opinion, project direction of the type envisioned by the PRINCE2 executive role was not within ACT's competency, nor could it reasonably be expected to have been. For example, ACT lacks the authority to allocate staff or other resources inside NCIA, ACO, or	N/A	N/A	ACO agrees with the IBAN comments

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		Governance	IMS. Rather, these organisations each have their own internal processes for staffing and funding project implementations. In addition, NCIA, rather than ACT, chairs the IPMT meetings. According to available meeting minutes, ACT representatives did not attend IPMT meetings that focused on FinS. Rather than project direction, ACT's responsibilities were tied to its role as Transformation Authority. These include coordinating the priority of installation, operation, and support associated with the capability requirements and representing such issues in front of NATO committees.			
12	5.3.3	Schedule and cost risks associated with implementation approach were not fully managed / Governance	The FinS project also lacked a Project Board. The TBCE called for the creation of a Project Board accountable for the overall direction and management of the project, separate from the IPMT. However, no such Board was created, leaving the PMT as the senior decision-making body. In addition, the IPMT's responsibilities extended beyond FinS to include the entire LOG-FS project. In 22 meetings between April 2007 and February 2013, FinS was discussed mainly to update LOG FS stakeholders on project progress and challenges. A FinS-only IPMT met in an ad-hoc fashion 8 times between March 2010 and November 2011. According to IMS and NCIA officials, during both phases	N/A	N/A	ACO agrees with the IBAN comments. It is suggested to reword "LOG FS" into "CP (Capability Package) 103 LOG FS", containing numerous projects.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
			project-related decisions were made most often at the working level. Typical fora included weekly Project Progress Meetings.			
13	5.3.4	Schedule and cost risks associated with implementation approach were not fully managed / Governance	The lack of a Project Executive and Project Board limited senior-level accountability and direction. For example, IMS users told the Board that it took pressure from the Budget Committee to find a way forward during the nearly 15 month delay between go-live at Phase 1 sites and the initiation of Phase 2. In addition, the lack of high-level direction, to include clear definitions for the types of acceptable system changes and concomitant enforcement, hindered the effective exercise of scope change management. This contributed to delays associated with emerging requirements as discussed in section 6. Without an authoritative and available project Executive and a dedicated Project Board, project stakeholders will be less able to keep future CIS project implementations sufficiently resourced, within schedule and according to an agreed scope.	N/A	N/A	ACO agrees in principle with the IBAN observation. However, the critical key-factor impacting on the delays is the project scope definition. The lack of project scope definition mainly triggered the requests for additional requirements that were not envisioned in the initial business case and baseline.. The lack of resources in the project plan for the migration of data is one of the examples showing the weakness of the project scope definition. Migration of data (specifically for a big and complex on-going organisation like ACO) is a task of the utmost importance that must be fully resourced within the project scope. This task is part of best practices for the implementation of any financial system and needs to be included by default in the scope of an ERP project. There were only few exceptions where the users identified new requirements during the implementation of the project which however are to be attributed to the change of NCS. The Board should note that ACO FC brought the issue at the BC to find a way forward during the 15 month delay between Phase 1 and 2 in order to put pressure on NCIA.
14	5.4.2	Schedule and cost risks associated with implementation approach were	According to NCIA officials, projects are much more likely to be approved if PSCs are underestimated up front, with the expectation that the Nations will be more likely to approve additional expenditures	N/A	N/A	ACO acknowledges the comment made by the IBAN and would like to point out that NCIA as the HN decided autonomous on the strategy to seek the IC authorisations and funding for the realisation of the project. Several requirements, clearly identified by the

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		not fully managed / Management	after implementation is underway. These officials told the Board that projects similar to FinS implementation outside of NATO carry higher administrative costs than the Nations are willing to approve. They also said that the Nations typically approve requests with the expectation that administrative costs for CIS projects should not be significantly different from those for other types of projects such as construction. The Board has not assessed other projects or made comparisons that would validate this claim. However, the potential schedule and cost implications of this possible trend may further increase the financial risk to the Nations associated with NCIA's inexperience as a CIS integrator.			users were not included in the request for authorisation in order to keep the costs presented to the Nations at a lower level. The approach of the HN was to submit an initial submission at the lowest cost possible and afterwards reiterate and progressively redefine the original requests. ACO shares the IBAN assessment on NCIA's inexperience as CIS integrator. For example, the contract signed with Oracle did not foresee the possibility for the contractor to perform tests and to prepare the system during the non-working hours or during the week-ends (prior to the go-live). This option should have been foreseen in accordance with standard best practises for the implementation of ERP projects. Another issue is related to the implementation of FinS Phase2 where ACO was forced to plan for downtime of the system in all ACO-sites, due to the peculiarity of the contract. This downtime prevented all Fins users locally and at corporate level to perform day-to-day business by using the system and forced the organisation to build alternative solutions with the creation of a huge number of backlog transactions.
15	5.4.5 5.4.6 5.4.7	Schedule and cost risks associated with implementation approach were not fully managed / Management	See "Recommendation (description)" column	3	The Board recommends that NCIA fully define the type of implementation role it expects to perform in future project management planning documentation. The Board also recommends that NCIA develop and tailor a	ACO agrees with the IBAN recommendation. The lesson learned is that proper management of a complex ERP project can only be achieved if the users, who are the ones having the necessary professional knowledge of the system and the requirements, take a more active role in the definition of the project scope and requirements, including the analysis of strategic technical and financial solutions, estimates of costs, benchmarking, technical analysis of bids prior to contract award. The users can offer the HN team necessary advise and assessment for

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
					methodology for estimating PSCs that accurately reflect the various roles, including the types of services the agency commits to providing. The costs presented in TBCEs should be prepared in accordance with this methodology. The Board further recommends that NCIA improve its justification to the Nations for the required level of PSCs, which could include elements such as the results of a comparison or benchmarking with similar case studies outside NATO.	the implementation of the most efficient and effective solution while reducing to a minimum the recourse to adaptations of the baseline catering for requirements that could have been included as of the very beginning in the initial scope of the project.
16	5.5.3	Schedule and cost risks associated with implementation approach were not fully managed / Time needed for screening and authorisation	See "Recommendation (description)" column	4	5.5.3 The Board recommends that NCIA improve its process for estimating project schedules. At a minimum, this will entail analysis of past projects, taking into full consideration the amount of time realistically needed for the NOR to screen	ACO agrees with the IBAN recommendation. The necessity to have a contingency plan to cater for project delays which lacked completely in the FinS project should also be considered. This plan needs to ensure a minimum support to the users if the implementation of the project suffers major delays.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
					requests for authorisation and for the Nations to approve them.	
17	5.6.1	Schedule and cost risks associated with implementation approach were not fully managed / Conclusion on implementation approach	The FinS implementation approach is likely to be repeated with other projects that are more complex and potentially carry greater risk. As HN, NCIA's credibility will suffer if the Nations and entities within NATO perceive that it is unable to deliver capabilities according to its estimates. According to NCIA officials, loss of credibility is one of the agency's major institutional risks. Without additional steps to more accurately present the risks of a given implementation approach, NCIA may be less able to take advantage of an opportunity to mitigate its overall risks. In addition, the NOR may be less able to effectively screen authorization requests. More generally, without a clearer picture of the potential risks associated with a given approach to implementing the project at hand, including governance, management, and timing implications, the Nations will be less able to weigh them against the expected benefits.			ACO agrees with the Board comment.
18	5.6.2		See "Recommendation (description)"	5	5.6.2 For future NSIP	ACO agrees with the IBAN recommendation that the

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
			column.		CIS project implementations, the Board recommends that NCIA more clearly state project schedule and cost risks against expected benefits, such as those to be gained by maximising competition, prior to establishing a project implementation and procurement approach. As appropriate, NCIA should present alternative approaches, including separating or grouping work packages, together with the risks and opportunities associated with each. The NOR should then screen these approaches prior to making its initial recommendations to the Nations.	HN and the NOR elaborate several alternatives before any submission to the Nations. However, the customer should have the possibility to give his comments/remarks wrt the different alternatives before these are presented to the Nations.
19	6	Insufficient scope definition and resource planning shortfalls delayed progress during	The Board's analysis of project management documentation and summaries provided by the FinS project team show that the FinS project experienced further delays during project execution, primarily in Phase 1. During this phase, actual project	N/A	N/A	ACO agrees in principle with the IBAN that insufficient scope definition and resource planning shortfalls delayed progress during the execution of the project. However, the lack of adequate project scope definition and resource planning is not to be attributable to the users or to the evolving of initial requirements (except those related to changes in the

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		execution	performance lagged established milestones by a cumulative 10 months. As discussed in the following paragraphs, the delays resulted mainly from evolving requirements, including those arising from insufficient scope planning and late-emerging needs for software configuration changes, and resource shortfalls. These shortfalls included an insufficient number of personnel at ACO available to complete project implementation tasks according to schedule and lack of a project assurance function at NCIA. Taken together, requirement- and resource-related delays contributed to 43 percent of overall delay.			NCS). The definition of the baseline is one important example in the FinS project, in both Phase 1 and Phase 2. The relation between customer and service provider needs to be improved and roles and responsibilities in the planning and execution of the project need to be clarified in order to guarantee that whoever is in charge of performing a particular task, disposes of enough dedicated and experienced resources.
20	6.1.2	Insufficient scope definition and resource planning shortfalls delayed progress during execution / Initial FinS project scope was incomplete	In one significant case, new requirements resulted from the decision to install FinS at an additional site that should have been included within the initial project scope. For example, after implementation had begun, ACO determined that ISAF should be considered the same as other ACO subcommands rather than as a subset of JFCBS, which required the addition to the system of a new operating unit. ACO subsequently expanded the requirement to implement the FinS system itself at ISAF to mitigate risks such as unauthorised alteration of data and fraud, as raised repeatedly by the Board and others. Implementation of full FinS	N/A	N/A	ACO reiterates what is already stated above with regard to the definition of the requirements, to the project scope and to the configuration of the project baseline. Moreover the issue is not to add an additional Operating unit to include ISAF in the project scope, but is related to the issue on how to manage workflow in an operation versus in a static headquarter. The definition of the baseline made by the HN did not provide the possibility for including requirements related to both kinds of entities.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
			functionality at ISAF was delayed from the initial projection of October 2011 to December 2012. This was due to a combination of the factors discussed in this report and the need for ISAF-specific system adaptations. Unlike the other ACO sites, ISAF lacked a pre-existing financial system.			
21	6.1.3	Insufficient scope definition and resource planning shortfalls delayed progress during execution / Initial FinS project scope was incomplete	Since NATO assumed the ISAF mission in 2003, the Board has reported on its serious concerns about the lack of controls over financial transactions at the command. In its audits of ACO's financial statements for years ending 2003 through 2005, these concerns caused the Board to qualify ACO's accounts. In 2008 the Board recommended that ISAF replace the spreadsheet software used to manage all its finances. In response, the ACO Financial Controller stated that this was a long standing concern and that he had prioritised ISAF to be included among the early tranches of FinS implementation. Subsequently, similar statements were made in response to repeated Board observations in this area. It is therefore not clear to the Board why ISAF was not included in the initial project scope as defined by the TBCE. Although well-justified, the late addition of ISAF added cost and complexity to FinS implementation, and contributed to the longer time than	N/A	N/A	ISAF was added to the scope with AC4(PP)D26163-ADD4. On 22 February 2011 the IC approved the implementation of FinS in ISAF. The request was made as soon as the financial operations in ISAF started to exponentially grow, as ISAF HQ managed in theatre more than 80M Euros. Initially Excel spreadsheets were used to manage these funds and track the financial transactions. The lack of robust internal controls and of the required audit trails generated a serious risk of improper or unauthorised alteration of financial data. Therefore ACO decided to implement FinS in ISAF to mitigate these risks. It was decided to implement the FinS in ISAF at the same time of the implementation of the system at JFC Brunssum (end of March 2011).

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
			anticipated to complete the project.			
22	6.2.2	Insufficient scope definition and resource planning shortfalls delayed progress during execution / Detailed software configuration needs were incorporated	According to ACO officials, the baseline did not fully consider differences in how ACO conducts its business compared to ACT and NCSA. One of the most significant business processes not reflected was ACO's requirement to centrally process payments requested by local commands above a set monetary value. According to a memorandum ACO sent to NCIA in May 2010, this functionality and others were provided by custom programs developed for the legacy system, NAFS. ACO officials made the assumption that they would be replicated in the standard payment functionality provided by FinS. However, the functionalities offered by prior system customisations at ACO were not explicitly referenced in the initial system specifications, which ACO nevertheless accepted. The time needed to design, install and test the central payment function and the revised go-live schedule made necessary to accommodate ACO's year-end closing process added nearly 4 months to the schedule and additional costs (approximately EUR 300,000) funded through the Military Budget.	N/A	N/A	ACO J8 points out once more that this issue was due to a bad definition of the system baseline by the HN. ACO consists of several entities located in different countries with different requirements for payments, transactions, VAT, etc. ACO does not agree with the IBAN stating that it accepted the proposed baseline even though the specific requirements reflecting ACO's business processes had not been included.
23	6.2.3	Insufficient scope definition and resource	Other detailed software configuration needs emerged after implementation began. Some, like central payment,	N/A	N/A	ACO disagrees with the IBAN comment. ACO business processes required to include specific functionalities in the system baseline such as the

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		planning shortfalls delayed progress during execution / Detailed software configuration needs were incorporated	related to the baseline. For example, because ACO operates in more countries than either ACT or NCSA, its financial system required a greater level of site-specific customisation to conform with local payment formats. The level of effort involved contributed to the project team's inability to conduct implementation activities at more than one site simultaneously. Other requirements arose due to changes in ACO's business processes. For example, a change request consolidating the Military Budget and NSIP sets of books into one operating unit per site did not anticipate the significant time and effort needed to revise the chart of accounts. Executing such changes often involved substantial efforts by NCIA and the contractor to analyse the cost and schedule impact and produce contract modifications.			central payment process, the NSIP segment and other peculiarities related foreign currency and to theatre. ACO had serious difficulties to convince both the HN and the contractor to implement these functionalities. The local payment format is not a customisation, but part of a well defined baseline covering different countries. The NSIP issue was due to the fact that NSIP COA is different from the MB in NAFS. As the new system was designed to have only one set of books (namely the same COA, currency, calendar) the requirement had been clearly stated by ACO since the beginning.
24	6.2.4	Insufficient scope definition and resource planning shortfalls delayed progress during execution / Detailed software configuration	During Phase 2, like ACO IMS faced challenges delivering all required documentation due to time pressure, but was able to identify its system configuration needs on schedule. These needs were incorporated into the functional design and implemented without delaying the project. The requests included unique payment formats and interfaces between system modules. IMS officials attributed the relative success of Phase 2	N/A	N/A	ACO welcomes the IBAN comments that the successful implementation of phase 2 for IMS was at least partially owed to ACO's past experience and refinement of the baseline. ACO also acknowledges the IBAN comment that recognises that NCIA established a more appropriate project structure for phase 2 implementation than it did in phase 1.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		needs were incorporated	implementation at IMS sites to ACO's prior refinement of the baseline, the leadership skills and experience brought by the consultant NCIA hired to lead Phase 2, and excellent communication with NCIA and the contractor. In addition, the scale of IMS compared to ACO implementation, including the number and size of the sites, was smaller. Finally, NCIA officials credit a more appropriate contract type used during Phase 2, during which the entire IMS implementation occurred.			
25	6.2.5	Insufficient scope definition and resource planning shortfalls delayed progress during execution / Detailed software configuration needs were incorporated	In the Board's view, ensuring that all assumptions are documented and that, to the extent possible, users clearly identify all requirements prior to system implementation, especially if they relate to key business processes, is a success factor. Unless its customers take further steps to ensure the consolidation of such requirements prior to project implementation, NCIA's ability to effectively manage the risk of cost and schedule increases will continue to be limited.	N/A	N/A	ACO agrees with IBAN comments. In addition, we would like to add that a complex ERP contract lacking specific and direct knowledge of the user's requirements by the HN procurement Team leads to weaknesses in the project implementation. It is essential for the management of the project to insert the users' view and professional knowledge in a more constructive way in the selection and validation process. To realise this proper management of such contract requires a dedicated team in charge for the project or, as an alternative, additional resources supporting the everyday activities of the customer in order to allow the responsible staff to focus on the ERP project implementation on a full time basis.
26	6.2.6 & 6.2.7		See "Recommendation (description)" column	6	6.2.6 To mitigate the risk of cost and schedule increases, the Board recommends that for future CIS implementations conducted by NCIA,	ACO agrees with the IBAN recommendation. Roles and responsibilities need to be clearly identified between users and HN. In addition, ACO welcomes the Board's recommendation that any customer should formally document concurrence with the system baseline prior

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
					ACO and any other customer(s) consolidate and make explicit their requirements prior to system implementation. This includes the clear identification of all known implementation sites. It also includes a system configuration baseline that fully reflects customer business processes and includes all documentation related to existing customisations whose functionality the customer wants to retain. To provide assurance to the Nations that provider and customer(s) are in agreement, the Board further recommends that ACO and any other customer(s) formally document concurrence with the system baseline prior to contract award. 6.2.7 The Board further recommends that for projects incorporating business process changes, ACO and any	to contract award. In this regard ACO points out that the agency should allow the users a more active role in the definition of the project scope and baseline, but also in the procurement phase and particularly prior to contract award. This will ensure an earlier identification of issues such as non-compliance with the requirements, by the users who have the required expertise to evaluate this. Also recently for the contract award stage of the CP 103 LOG FS discussions took place between ACO/ACT/IMS and NCIA on the way the agency had considered the users' involvement in the CP 103 LOGFS implementation in order in order to ensure the adequate 'representation' of the user community interests in the bid evaluation process. NCIA still thinks that the users involvement is only required at the acceptance and execution phase and not during the technical bidding evaluation process. NCIA's did even not accept the list of users' SME that was provided to the Agency to support the bid evaluators in case clarifications on technical aspects of the bids would be required. This attitude is clearly not compliant with the IBAN recommendations.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
					other customer(s) fully document these changes within initial project requirements and include them in the initial project scope. If for any reason requirements and business processes cannot be finalised beforehand and incorporated into the baseline, the Board recommends that NCIA, with input from its customers, assess the cost and schedule risks of further changes. This assessment should be presented to the Nations at the time of authorisation for contract award.	
27	6.3.3	Insufficient scope definition and resource planning shortfalls delayed progress during execution / FinS implementation	See "Recommendation (description)" column	7	6.3.3 The Board recommends that NCIA and ACO rapidly agree a way forward for making any needed business process changes and obtaining the necessary resources to implement FinS at the E-3A component.	ACO agrees with IBAN comments. ACO has initiated the actions required to bring the stakeholders together, to agree on the way ahead and to ensure FinS will be implemented at E3A. The issues that stopped in the past this implementation were mainly related to connectivity; organisation; logistic system and System support.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		at E-3A was postponed				
28	6.4.2	Insufficient scope definition and resource planning shortfalls delayed progress during execution / Known ACO resource shortfalls were not addressed	According to project documentation and ACO officials, the 13 staff in ACO's Office of the Financial Controller and existing finance and accounting staff at the ACO sites conducted these tasks as extra duties, with no augmentation throughout the course of the project. The extended project timeline further limited the availability of these personnel. In addition, as stated in project documentation and in communication with the Nations, critical positions within the ACO Financial Controller's office were either unfilled at key points during project implementation or were downgraded. For example, the branch responsible for directing ACO's implementation activities lacked a Senior User during the time frame when data migration activities were supposed to occur. NCIA project team officials told the Board that communication with ACO became much more difficult with this position unfilled, which hindered project execution.	N/A	N/A	ACO agrees with the Board comment. The NATO PE policy is to limit the number of PE positions to the bear minimum required for the everyday activities. Every project creates additional tasks that the staff has to perform as extra duties. Furthermore, the BC imposed in 2010 a strict hiring policy that made it quasi impossible to ask for additional staff. In surplus to the shortage of manpower and dedicated ACO staff to work (on a full time basis) on the project, the HN project management considered an essential and critical task such as the migration of the data from the legacy NAFS to FinS by default as a task to be performed by the available ACO staff. This is not in accordance with best practise in both private and many other international public sector organisations.
29	6.4.7	Insufficient scope definition and resource planning shortfalls delayed	In the absence of sufficient functional analysis, ACO's financial processes were not optimised in line with FinS capabilities, limiting the system's potential to increase effectiveness and efficiency. NCIA leadership takes the	N/A	N/A	ACO does not concur with the IBAN statement that it didn't optimise its financial processes in line with FinS capabilities. We recognised that additional improvements can be performed, however, already positive results have been achieved by centralising some financial activities especially in the corporate

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
		progress during execution / Known ACO resource shortfalls were not addressed	position that "a significant limitation on FinS implementation has and continues to be the lack of enough resources qualified to perform both a thorough business process review as well as a revision of the currently in use [system] configurations." The Board notes that the ACO Office of the Financial Controller is currently undertaking an optimisation exercise to increase the effectiveness and efficiency of its financial operation business processes.			accounting area. The changes required to obtain these results were supported by the FinS and the re-engineering of some of business processes and procedures. They included the implementation of a central payment program, the reconciliation of the sub-ledgers with the General Ledgers, the management of centralised master data for customers, banks and the use of one common chart of account. ACO developed specific standard operating procedures in accordance with the re-engineered ACO internal business processes and procedures to be consistently implemented across all the ACO Commands. ACO J8 is aware that this is an evolving and dynamic process and will be further refined based on the findings and the outcome of the study currently ongoing to define the optimal ACO-wide J8 organisation.
30	6.4.8	Insufficient scope definition and resource planning shortfalls delayed progress during execution / Known ACO resource shortfalls were not addressed	In the Board's opinion, without ensuring the completion of all business process analyses prior to project implementation, and, if well-justified, applying the necessary resources, the Nations will be unable to benefit from the full potential of costly future enterprise-wide CIS implementations. In addition, the Board sees value in achieving full visibility at project authorisation of the level of effort required not just by the provider but also the customer, to include a clear picture of all available resources and any gaps. Without such visibility, the Nations will lack a full understanding of the actual project scope, to include potentially	N/A	N/A	ACO agrees with the Board comment emphasising the need of achieving full visibility at project authorisation of the level of effort required not just by the provider but also the customer. A more active participation of the user in the analysis, planning and contractor selection process should be agreed and implemented based on a clear definition of respective roles, tasks and responsibilities.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
			unmet needs that could affect project success.			
31	6.4.9 & 6.4.10	Insufficient scope definition and resource planning shortfalls delayed progress during execution / Known ACO resource shortfalls were not addressed	See "Recommendation (description)" column	8	6.4.9 The Board recommends that, for future CIS projects, NCIA coordinate with ACO and any other customer(s) to include in its authorisation requests a detailed break-down of all tasks needed to complete the project. These should include required tasks for the customer and the resources committed by the customer to the project. For enterprise wide applications, particular attention should be paid to any functional and process analyses needed. 6.4.10 Drawing on an analysis of past experience and knowledge of the industry, the Board further recommends that NCIA work with its customers to identify any potential gaps in customer resources. NCIA should present	ACO agrees with the recommendation of the Board. A close cooperation between customer and service provider with a clear definition of the respective roles and responsibilities is a key element. Customer's expertise should be taken into account by the agency while defining requirements, project scope and baseline The agency should also align the management of the project to standard best business practises for the implementation of complex ERP projects in different entities spread over several geographical locations. Project risk management should be implemented including a contingency plan should the project suffer delays. The availability of resources must be ensured through the most efficient and effective source of funding. Before initiating the project and also for changes in project scope a cost benefit analysis should be performed to assess the viability of the project in relation to the expected benefits.

Serial	Ref.	Paragraph/ SubParagraph	Draft IBAN Report quoted text	Rec n.	Recommendation (description)	ACO's Clarifications / Comments
					risks to cost and schedule and alternatives, if available, associated with less than full resourcing of these gaps so that the Nations can make informed decisions.	
32	ACO	Conclusion	See "Recommendation (description)" column	10	7.3 Following a reasonable amount of time to be agreed between the Nations, ACO, IMS, and NCIA, the Board recommends that NCIA coordinate these stakeholders' efforts and lead the production of a joint communication to the Nations listing the steps being taken to address the recommendations contained in this report	ACO doubts the feasibility to provide follow-on to the Nations on the steps taken in order to address the recommendations contained in this Report. These steps could only be implemented in the context of the implementation of another major ERP project which is not foreseen for the near future. For future ERP projects ACO would like to underline the need for a more active role of the users in the project planning and management and for improving the coordination and cooperation from cradle to grave between the service provider and the intelligent customer. The project should be a common customer/provider project in all its aspects to include cost forecasts and funding requirements, time schedule, risk management, etc.

***Comments of the Director,
NATO Office of Resources (NOR)***

1. The NATO Office of Resources welcomes the opportunity to comment on the IBAN report at reference. We have looked at the report and confirm that the information in the draft is complete from our perspective. We have one recommendation for incorporation in the report to make which relates to Recommendation 5; in addition, we provide some general remarks which reinforce or complement the IBAN findings and recommendations.

Governance - Recommendation 2

2. The NOR considers that PRINCE 2, as a project management methodology both widely accepted by NATO and industry, can be used as a framework to manage projects in a successful way. In this context, the NOR notes and agrees with the IBAN's analysis and Recommendation 2 that any project management methodology needs to include the appropriate governance structure, project management resources and realistic schedule estimate.

Management - Recommendation 3

3. The IBAN's findings suggest that the level of Project Service Costs (PSC) requested by the Agency, especially at project outset, are based more on expectations of what the Nations will accept than on the anticipated level of effort and risk.

Accordingly, the IBAN states in Recommendation 3 that a methodology should be developed by the NCI Agency for estimating PSCs and that the justifications for the required level of PSCs should be provided to the Nations. The NOR supports this open approach to deriving PSCs and welcomes this kind of transparency.

4. In the FinS report, the NCI Agency position as expressed to the IBAN was that PSCs were too low, the NOR agrees that for the FinS project, the PSCs were indeed underestimated. Based on the NOR's experience PSCs for CIS projects significantly exceed the 5-10% requested for civil works project administrative costs. The NOR takes into account the complexity of software intensive projects which involve customization or development when determining how much PSCs to recommend to the Committees.

5. When it comes to NCI Agency as the sole CIS Service provider to NATO, the Agency has a responsibility to deliver projects as authorized, on time and within budget. It is the NOR experience that the longer a project goes on, the more money it costs to NATO and the greater the risk of operational, technical, programmatic, and financial changes. For a medium sized CIS project there are an average of between 3-6 requests for additional scope and funds per project. As a possible mitigation measure, the NOR

proposes that a partial Joint Formal Acceptance Inspection (JFAI) be undertaken to close the already approved project under implementation, before changes to the project are agreed. This incremental approach will ensure that some capabilities can be delivered to the Commands in a timely manner and appropriate changes can be accommodated later on.

Conclusion on Implementation Approach - Recommendation 5

6. Regarding the IBAN Recommendation 5, the NOR considers that there is substantial value to NCI Agency considering alternative approaches during the preparation of the request, including separating or grouping work packages, together with the risks and opportunities associated with each. The NOR supports this approach to screening alternative solutions which will help in understanding the NCI Agency's implementation approach.

7. In summary and based on its experience with other CIS projects at NATO, the NOR considers that the valuable lessons learned from this performance audit are also applicable in a broader context. The report therefore provides a potential basis for further performance audit reports on other NATO projects that are experiencing delays, cost overruns or other implementation issues.

***Comments of the General Manager,
NATO Communications & Information Agency (NCIA)***

Summary of NCI Agency Actions:

- | | |
|---|-----------------------|
| • Implement SLAs with primary customers | - by 1st January 2014 |
| • Customer representation on Project Boards | - 01 2014 |
| • PSC Estimating Tool - initial capability | - end of 2013 |
| • Benchmarking of PSCs against industry | - 01 2014 |
| • Milestone Tracking for high priority projects | - end of 2013 |
| • Clarity on FinS implementation for E3A | - end of 2013 |
| • NCI Agency Auditor follow-up | - 01 2014 |

Specific feedback on each recommendation:

Recommendation 1: *IBAN recommends that the NCI Agency conclude Service Level Agreements with ACO and IMS that clearly specify the level of support expected and fairly represent the costs.*

The Agency recognises the need for SLAs to be established with our customers, and with the recent re-organisation being based around the ITIL framework these SLAs are a required ingredient for a Service-based organisation. Director Demand Management and his team are actively working with our Service Line Chiefs and with ACO, IMS and our other primary customers to have SLAs in place by 1st January 2014.

Recommendation 2: *IBAN recommends that the Agency should make sure that the Project Executive possesses the authority to provide the necessary guidance and decision-making. They also recommend that a dedicated Project Board that represents the stakeholder base meet regularly.*

The Agency follows the PRINCE 2 framework and has in place dedicated Project Boards with a Project Executive for all projects including FinS, this is normally the CAT Chief, and in the future will be the Service Line Chief who will also have responsibility for chairing Service Change Boards, this having the holistic responsibility for all elements of the service lifecycle. We are also working on improvements to the membership and role of the Project Board, with the intent to invite representatives of the stakeholder community to be active members, enabling them to raise issues and influence the direction that the project is going. This is planned to be in place in Q1 2014.

Recommendation 3: *IBAN recommends that the Agency define the type of implementation role it expects to perform in the project management documentation.*

IBAN also recommends that the Agency develop and tailor a methodology for estimating PSCs accurately, based on the implementation role selected. Furthermore, IBAN recommends that the Agency justifies the PSC levels to the nations by means of using comparison or benchmarking with similar case studies outside NATO.

The Agency is currently implementing a PSC Estimating Tool aimed at addressing these issues. Initially this new tool will be focused on estimating the costs for NSIP projects, and on defining the methodology that will be used; this first step is expected to be completed before the end of 2013. Once we have this in place we will then look further afield at similar cases outside of NATO; this will be undertaken in Q1 2014. Following on from these 2 tasks the PSC Estimating Tool will be continually updated based on lessons learned from project execution and industry comparisons.

Recommendation 4: *IBAN recommends that the Agency improve its process for estimating project schedules, by means of analysing past projects.*

The Agency welcomes the recommendation and is already taking measures to improve our estimation and planning processes with the implementation of a Milestone Tracking regime. This will enable us to better track project progress for those under execution, and to then feed the lessons learned back into our estimation processes. Work is currently in progress to identify the top priority projects, and then to implement the Milestone Tracking regime for these as a pilot group of projects; this will be completed before the end of 2013, with Milestone tracking being extended to all projects throughout 2014.

Recommendation 5: *IBAN suggests that the Agency provide alternative procurement methods and their implications to the NOR, which should then screen and present recommendations to the nations.*

The Agency welcome the recommendation and will follow this approach for projects where alternative procurement methods are viable, however, the preparation of multiple options would lead to a cost increase for development of the TBCE, therefore processes and a framework within both NCI Agency and the NOR needs to be put in place to ensure that this approach is followed when appropriate and that the agency is recompensed for the additional work required, which is essentially putting multiple detailed cost estimates in a TBCE. At this time no plans are in place to implement this change, but if the NOR wish me to do so then I will ensure that this is analysed further and that recommendations are made for joint agreement.

Recommendation 6: *IBAN suggest that any customers should consolidate and make explicit all of their requirements prior to system implementation. They have the same recommendation for business changes, implying that they should be done before the implementation.*

The Agency are unable to agree with this recommendation, especially for software intense acquisition projects as it is often not possible to fully define requirements and business changes at the outset, but only during the development of the solution. Instead, the Agency will promote a significantly more iterative process that will enable NATO to be more agile, respond better to changing requirements, and ultimately save significant costs that are currently being spent pursuing outdated requirements. Additionally, the NCI Agency, as the designated IT Services provider for NATO, is charged with achieving efficiencies so already takes into account common requirements from different users in designing and implementing systems that can be leveraged across the NATO enterprise.

Recommendation 7: *IBAN suggests that ACO and the Agency take the necessary steps to make sure FinS can be implemented at E3A.*

The Agency has taken the necessary steps with ACO to advance this and currently ACO is analysing whether all the pre-conditions necessary to start up the FinS implementation at E3A have been accomplished or not. We expect to have clarity before the end of 2013.

Recommendation 8: *IBAN suggest that the Agency include - in the authorisation documents a list of all tasks required to be executed by the stakeholders to complete the project. This would help the stakeholders get ready the resources and time required for the implementation. IBAN also suggest that the Agency should include risks to reflect the cases where full availability of stakeholders cannot be guaranteed.*

The Agency welcomes the recommendation. We have recently started using the concept of a Stake holder Engagement Process in some projects in order to document and track all Stake holder Engagement activities and inform the stake holders in advance of what they will be required to be a part of. Risks related to stakeholder involvement will continue to be included within the project risk log. Increased visibility of the above will be introduced to ensure that all stakeholders are aware of the importance of their involvement in the delivery of capability.

Recommendation 9: *IBAN suggest that the Agency represent the relative importance to project success of each project element (particularly in reference to the IV&V component not funded in FinS).*

The Agency welcomes the recommendation and will reflect the importance of the various elements in the project in a better way.

Recommendation 10: *IBAN suggest that the Agency coordinates the stakeholders' efforts and produce a joint communication to the nations listing the steps being taken to address the recommendations.*

The Agency welcomes the recommendation and would lead the production of a report to the nations about the Way Ahead on the recommendations included in the report.

Specific comments on other parts of the report

Section 3.1. p. 2-6: *IBAN says that the FinS project was completed in 68 months, thus 50 months later than the original forecast of 18 months. IBAN provides more details at section 3.2.*

The total duration also includes the time to implement all the requested scope changes and delays triggered by other project stakeholders; therefore we are unable to agree with the details of the breakdown presented at section 3.2 and we would like to have the opportunity to discuss so as to achieve a better understanding.

Section 3.3, p 2-7: *IBAN maintains that there was a need to extend the database administration support for a longer period of time due to delays and this means that the Nations had to pay additional costs.*

It is correct that NSIP had to pay more for this activity than planned due to the delays in the project. However, it should be noted that the activity would still have had to be funded by the Nations through MBC funding had the project completed without delays and that therefore the additional costs to the Nations, if any, are marginal.

Section 4.1. p. 2-9: *Various shortcomings of the current implementation are highlighted, especially focusing on the validation of whether the full IPSAS-compliant accounting has been reached as envisioned. The report refers to users' comments about additional reporting facilities which would help and lack of real-time data exchange with property accounting systems.*

These shortcomings are not in the scope of FinS and as such should not be attributed to the way the project was conducted.

Section 4.2. p. 2-10: *IBAN refers to support weaknesses with some examples, such as the fact that users cannot reset system passwords.*

The example is not in line with our future centralised Service concept. The facts about issues not resolved do not provide the full information and cannot be used to show a declining support. It is also not clear what benchmark should be used to show that the service is getting worse.

Section 4.3, p. 2-11: *IBAN points out that operating costs are unlikely to decrease, claiming that although centralising the hardware and support should reduce the costs, the overall workload for the FinS Service Desk had increased, thus suggesting higher costs. They also mentioned that the former local support personnel have been assigned to other duties and as such there was no net manpower savings.*

The section contradicts its main premise, by mentioning the support staff who have been reassigned. This is indeed showing manpower savings within the context of FinS and thus successful achievement of a project goal. The fact that the individuals have been re-assigned to do other tasks is an issue for senior management outside of the NCI Agency who are accountable for benefits realization. They have realized the benefits from the project but have allowed these benefits to be applied elsewhere.

Section 5.3. p.2-12: *IBAN claims that ACT was assigned as the Executive for the project, without the authority required for an Executive and the project lacked a Project Board.*

This is completely inaccurate as there was a PB from early on in the project. The only problem is that we do not have User Representation in the PB and we do it by proxy, through Demand Management. It is intended to address this in the future by including direct user representation within appropriate Project Boards.

Section 5.4. p. 2-14: *IBAN mentions that the NCI Agency has difficulty to get projects authorised unless PSCs are underestimated upfront and they claim that some Agency staff referred to the Agency's inexperience as a CIS integrator. There is a reference to the latest request for additional funding for FinS to be approximately 36% of the PSC costs. There is also a statement from the NOR mentioning that they believe NCI Agency will use the excessive PSCs to cover pre-existing shortfalls resulting from underestimation of PSCs.*

We have been acting as a CIS Integrator on many occasions (looking at AMN as a recent example) so it is difficult to see where this claim came from. The first comment is also quite inaccurate as we typically request a reasonable amount of PSCs, but which then typically is not approved in full.

The 36% reference is also confusing and out of context. What is correct is that the PSCs for FinS only (part of LOGFS) was about 15% and the total LOGFS, including the new IFB that is in the acquisition phase, is now around 16%.

The comment attributed to the NOR is also strange as we have been moderately successful in getting enough PSCs for FinS, so no case of underestimation here.

The section contradicts its main premise, by mentioning the support staff who have been reassigned. This is indeed showing manpower savings within the context of FinS and thus successful achievement of a project goal. The fact that the individuals have been re-assigned to do other tasks is an issue for senior management outside of the NCI Agency who are accountable for benefits realization. They have realized the benefits from the project but have allowed these benefits to be applied elsewhere.

Section 5.3. p.2-12: *IBAN claims that ACT was assigned as the Executive for the project, without the authority required for an Executive and the project lacked a Project Board.*

This is completely inaccurate as there was a PB from early on in the project. The only problem is that we do not have User Representation in the PB and we do it by proxy, through Demand Management. It is intended to address this in the future by including direct user representation within appropriate Project Boards.

Section 5.4. p. 2-14: *IBAN mentions that the NCI Agency has difficulty to get projects authorised unless PSCs are underestimated upfront and they claim that some Agency staff referred to the Agency's inexperience as a CIS integrator. There is a reference to the latest request for additional funding for FinS to be approximately 36% of the PSC costs. There is also a statement from the NOR mentioning that they believe NCI Agency will use the excessive PSCs to cover pre-existing shortfalls resulting from underestimation of PSCs.*

We have been acting as a CIS Integrator on many occasions (looking at AMN as a recent example) so it is difficult to see where this claim came from. The first comment is also quite inaccurate as we typically request a reasonable amount of PSCs, but which then typically is not approved in full.

The 36% reference is also confusing and out of context. What is correct is that the PSCs for FinS only (part of LOGFS) was about 15% and the total LOGFS, including the new IFB that is in the acquisition phase, is now around 16%.

The comment attributed to the NOR is also strange as we have been moderately successful in getting enough PSCs for FinS, so no case of underestimation here.