



INTERNAL AUDIT DIVISION

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Audit of the proGres version 4 registration and case management system at the Office of the United Nations High Commissioner for Refugees

There was a critical need to monitor and report on the proGres version 4 project deliverables against the scope, budget and timelines for the remainder of the project's life to prevent further cost overruns and delays

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Audit of the proGres version 4 registration and case management system at the Office of the United Nations High Commissioner for Refugees

EXECUTIVE SUMMARY

The Office of Internal Oversight Services (OIOS) conducted an audit of the *proGres version 4 (v4)* registration and case management system at the Office of the United Nations High Commissioner for Refugees (UNHCR). The objective of the audit was to assess whether the development, implementation and management of *proGres v4* were carried out in accordance with applicable policies and procedures and in an effective, efficient and timely manner to meet UNHCR's business needs. The audit covered the period from 1 July 2010 (the start date of the project) to 31 May 2017 and included a review of the following project phases: (a) project start-up, initiation and analysis; (b) project management and governance; (c) system design, build and test; (d) system implementation; and (e) project closure and post-implementation support.

There was a critical need to ensure adequate monitoring and reporting of the *proGres v4* project deliverables against the project scope, budget and timelines for the remainder of the project's life to prevent further cost overruns and delays. UNHCR also needed to conduct a gap analysis between system requirements and business needs, review the project roles and responsibilities, enhance user and performance acceptance testing, finalize and formally endorse the *proGres v4* global deployment strategy, enhance planning and data migration procedures for the deployment of *proGres v4*, and enhance user support and prioritization of *proGres v4* development needs.

OIOS made one critical and five important recommendations. To address issues identified in the audit, UNHCR needed to:

- Review and update the current roles and responsibilities of the *proGres v4* project to ensure that all roles and responsibilities are defined, and that an adequate level of organizational accountability and participation within the different divisions' respective areas of responsibility are applied;
- Strengthen project governance by providing regular monitoring and reporting to the Governance Board during the remainder of the project's life, and requesting a decision from the Board on the way forward in case of significant variances in relation to the project scope, budget and timelines (**critical**);
- Enhance the user acceptance and performance testing methodology by ensuring the execution of testing against agreed system performance and usability criteria, and an adequate level of participation of relevant users from headquarters and field;
- Finalize and formally endorse the *proGres v4* global deployment strategy, and establish an operational plan to support its implementation;
- Enhance the deployment process of *proGres v4* to UNHCR operations and partners by providing transparent information on system requirements, functionalities and costs, conducting technical, information security and financial assessments of deployments to partners, and complementing existing data migration procedures with formal agreements at adequate management levels in the field operations on data migration decisions; and
- Enhance the *proGres v4* user support, conduct a full gap analysis to assess to what extent the *proGres v4* functional and technical requirements addressed the business needs, and conduct prioritization of development needs strictly against the identified gaps to expedite the project closure.

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

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Audit of the proGres version 4 registration and case management system at the Office of the United Nations High Commissioner for Refugees

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the *proGres version 4 (v4)* registration and case management system at the Office of the United Nations High Commissioner for Refugees (UNHCR).
2. Registration is the continuing process of recording, verifying and updating of the personal data of refugees and asylum-seekers up until they attain an appropriate durable solution or are determined to be no longer in need of protection. The data captured during the registration process feeds into other UNHCR mandated processes of protection and assistance, durable solutions, and livelihoods. The Profile Global Registration System (*proGres*) had been used by UNHCR since 2003 to provide a common source for population data, to support data management processes in most UNHCR operations, and for production of statistics and reporting. In 2009, UNHCR decided to develop a new registration system to replace *proGres version 3 (v3)*. This was justified based on the following needs: stronger data sharing capabilities at UNHCR and with partners through the implementation of a centralized database; compliance with data security and data protection requirements; and reduction of costs through updates to the system architecture and technology.
3. The *proGres v4* project was launched on 1 July 2010, and up until 31 May 2017, UNHCR had spent \$19.6 million against a budget of \$54.3 million in the development and deployment of *proGres v4*. As at 31 May 2017, of the 130 countries where UNHCR was working, it had deployed *proGres v4* in 22 country operations as well as four regional representations, with a total population of refugees and asylum seekers (the only populations registered) of approximately 600,000.
4. In 2010, UNHCR established a multi-divisional project team led by a Project Manager from the Division of Information Systems and Telecommunications (DIST), who reported to the Deputy Director of the Division of Programme Support and Management (DPSM). At the time of the audit, the team consisted of 16 staff dedicated to data migration and deployment, system development, communication, or project management.
5. Comments provided by UNHCR are incorporated in italics.

II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

6. The objective of the audit was to assess whether the development, implementation and management of *proGres v4* were carried out in accordance with applicable policies and procedures and in an effective, efficient, and timely manner to meet UNHCR's business needs.
7. This audit was included in the 2017 risk-based work plan of OIOS because *proGres* was a core system for UNHCR and its partners for the delivery of protection and humanitarian response to persons of concern and there were risks related to inadequate functioning and performance of the new version of the system.
8. OIOS conducted this audit from July to December 2017. The audit covered the period from 1 July 2010 (the start date of the project) to 31 May 2017. Based on an activity-level risk assessment, the audit covered higher and medium risk areas in the development, implementation and management of *proGres*

v4, which included the following predefined phases from the UNHCR information and communications technology (ICT) project management methodology: (a) project start-up, initiation and analysis; (b) project management and governance; (c) system design, build and test; (d) system implementation; and (e) project closure and post-implementation support.

9. The audit methodology included: (a) interviews of key personnel; (b) reviews of relevant project documentation; (c) analytical reviews of data; (d) surveys; and (e) physical observation of the system usage and functioning. The audit was carried out at UNHCR headquarters in Switzerland and Denmark, and at the following field locations: Mozambique, South Africa (Regional Representation), Sri Lanka and Ukraine. An additional 14 country operations and three regional representations were surveyed to collect feedback on these offices' experiences regarding system implementation and usage. OIOS obtained 15 responses (88 per cent response rate) to the surveys. The overall audit coverage of locations with *proGres v4* deployed was therefore of 19 out of 26 locations (73 per cent).

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

III. AUDIT RESULTS

A. Project start-up, initiation and analysis

The business case and the Project Initiation Document did not provide information on whether the investment in *proGres v4* would be affordable and cost-effective

11. The business case and the Project Initiation Document (PID) defined the business need, project objectives, scope and assumptions, as required by the UNHCR ICT project management methodology. Nonetheless, these documents did not adequately specify: (a) the potential technical impact of the new system; (b) a forecast of operational costs of the new system versus running costs of *proGres v3*; and (c) quantifiable metrics for the assessment of project benefits realization. No project review was carried out at the start-up/business case stage to detect the gaps, and the project review that was carried out at the end of the analysis phase referred only briefly to the inexistence of a high-level cost-plan. Therefore, the documents did not inform whether the investment in *proGres v4* would be affordable and cost-effective for effective decision making. Since OIOS addressed similar issues in its report on the audit of the Biometric Identity Management System at UNHCR (report number 2016/18), no new recommendations were raised in this report.

There was a need to conduct a gap analysis between the functional and technical requirements defined and the business needs

12. The project functional and technical requirements need to accurately detail the envisaged solution consistent with the business need, project scope, and existing ICT infrastructure, and to avoid duplication of systems and business processes to ensure operational and cost efficiency.

13. The project team collected the high level functional requirements from July to November 2010, resorting to: (a) designation of lead stream owners within DPSM for each theme (e.g., registration, refugee status determination, resettlement) to lead the identification and documentation of requirements; (b) validation of the requirements by stakeholders in a workshop; and (c) validation of the requirements by the project Steering Committee. The functional requirements fed into the Request for Proposal issued in December 2010, and were refined later in January 2012 in the contract signed with the *proGres v4* supplier. OIOS observed the following issues related to the definition of requirements:

a. *Insufficient involvement of stakeholders:* The requirements validation workshop held in October 2010 included the participation of DPSM, DIST, the Division of International Protection (DIP), and 13 senior (regional) registration officers and technical staff from 12 field locations (i.e., Malaysia, Lebanon, South Africa, Kenya, Thailand, Democratic Republic of the Congo, Senegal, Sudan, Syria, Nepal, Yemen, and Jordan). OIOS did not observe a field representation from all regions or that the project team involved any of its partners in the definition of business requirements, even though one of the main objectives of *proGres v4* was to support partnerships.

b. *Unclear system interoperability and integration requirements:* The business case, PID, and the supplier's contract stated consistently the need for interoperability or integration of *proGres v4* with UNHCR corporate systems. Nonetheless, the supplier's contract did not specify the requirements for system interoperability and integration, apart from stating generically that information would be shared/ exchanged between *proGres v4* and UNHCR systems.

14. The issues above occurred due to insufficient business analysis and project management capacity within the project team at the start of the project to support the definition of requirements. OIOS noted that in Azerbaijan and Venezuela they used locally-developed tools in parallel with *proGres v4* due to a lack of functionalities in the system for household profiling, vulnerability assessments and targeting for specific interventions. The operation in Colombia and the Regional Representation in South Africa also stated that *proGres v4* was not suitable for registration and case management of Internally Displaced Persons (IDPs); and a partner in Ukraine mentioned that their workflow and reporting needs were not met. System development was still ongoing at the time of the audit to address these gaps, except for the use of the system for IDPs; the project team considered this population outside of the project scope, despite of its inclusion in the supplier's contract.

15. The lack of alignment of the *proGres v4* functional and technical requirements with business needs increased the risk that the system would not be optimized and that there would be a need for future additional work on developing the system. However, considering that any gap analysis between the defined functional and technical requirements and the business needs is more suitable at the current project stages that are 'system implementation' and 'post-implementation support', which are dealt with later in this report, OIOS is not raising a separate recommendation in this section.

B. Project management and governance

There was a need to review the *proGres v4* project roles and responsibilities

16. The roles and responsibilities of the project team and respective reporting lines were defined in the project documentation, as required by the UNHCR ICT governance structure. The roles and responsibilities included those of the project sponsor, steering committee, project owner, project manager, and project team. Additionally, the project identified senior project stakeholders and subject matter experts to provide specific contributions to the project. However, OIOS noted the following instances where roles and responsibilities were unclear or inadequately applied:

a. *Overlap of roles:* The 'business owner' should have had the authority to prioritize *proGres v4* features and the responsibility to take the required decisions, while the 'subject matter expert' should have been responsible for providing inputs for system design and system documentation (manuals, user guides, and training materials), and conducting system testing. Nonetheless, subject matter experts became business owners of their specific areas of expertise, coexisting with a global business owner for the project. Furthermore, a new role of 'Senior Business User', assigned to the

Chief of the Identity Management and Registration Section within DPSM, was introduced later by the Steering Committee in its January 2016 meeting. The responsibilities for this new role were not defined in order to reduce the likelihood of any overlap with existing roles, and to clarify his required contribution to the project.

b. *Inadequate role assignment:* The project sponsor role was assigned to the Director of DPSM. The global business owner role was assigned either within DPSM or DIST (the latter for a short period of six months in 2015). Considering that *proGres v4* was a core corporate system of a considerable scale that included a significant number of protection related modules, it did not seem adequate that the sponsorship and ownership were exercised almost exclusively by DPSM. DIP's involvement was solely as a stakeholder/ member of the Steering Committee, and as a subject matter expert providing expertise outside of the core project team. Furthermore, since *proGres v4* was a corporate system, a wider representation of project stakeholders, including from the field, would have been more adequate.

17. The *proGres v4* team explained that key decisions on the project were taken by the Steering Committee, which included representation of DIP. DIP had also been involved in the development of requirements for the protection modules. Nonetheless, in the view of OIOS, the level of engagement of DIP was insufficient, and this contributed to an inadequate assignment of roles and responsibilities from the outset. Additionally, the UNHCR ICT governance structure did not provide guidance on who should exercise sponsorship and ownership for multi-divisional projects, and UNHCR referred to practical constraints in implementing dual sponsorship. The level of participation of DIP in the Steering Committee's meetings was 48 per cent (19 out of 40 meetings) against 90 per cent attendance by DPSM and 88 per cent by DIST. In addition, the DIP representative in the meetings kept changing, impacting the Division's continued and consistent contribution to the project. The project team had reported to the ICT Governance Board in its 28th meeting (15 December 2016) considerable delays in the project, as substantial re-work was needed in the development of the protection business area due to the late involvement of DIP. If not at the sponsorship level, clarification on the system ownership is important for the completion of the project and for the system's future maintenance.

(1) UNHCR should review and update the current roles and responsibilities of the *proGres v4* project to ensure that all roles and responsibilities are defined, and that an adequate level of organizational accountability and participation within the divisions' respective areas of responsibility are applied while the project is still ongoing and for the system's future maintenance when the project closes.

*UNHCR accepted recommendation 1 and stated that: (i) the Population Registration and Identity Management EcoSystem (PRIMES) Senior Project Manager would finalize the organizational share of responsibilities with other divisions' focal points; (ii) roles and responsibilities would be further developed and agreed in the context of the *proGres v4* accelerated roll out; and (iii) the consolidated organizational chart would be validated by the Project Sponsor, Project Steering Committee and Business Owner in consultation with the Portfolio Management Office before submission to the Assistant High Commissioner (Operations). Recommendation 1 remains open pending receipt of the updated *proGres v4* project roles and responsibilities, demonstrating a complete and broad definition of roles and responsibilities, including an adequate level of participation of relevant divisions.*

There was a critical need to ensure adequate monitoring and reporting on *proGres v4* project deliverables against the project's scope, budget and timelines

18. The Policy on the Governance Process for ICT in UNHCR requires that a project governance structure is in place, including the ICT Governance Board, Business Owners Committee (BOC)¹, and Steering Committee. Furthermore, the UNHCR ICT governance structure requires the Governance Board to ensure that ICT projects are delivered successfully according to their objectives, expected benefits, requirements, time, scope and cost.

19. The required project governance bodies were established and convened during the *proGres v4* project life cycle. The project produced regular updates to the Steering Committee and ad-hoc updates to BOC and to the ICT Governance Board, which included information on the level of implementation of the project plan, project risks and issues, and pending tasks. However, although some project updates to the Steering Committee included information on expenditures incurred and forecasted, this information was limited as it related only to the costs under the contract with the main supplier. This accounted for approximately 41 per cent of the overall project expenditure, excluding consultancy services, staff, and other project costs.

20. A revised project implementation plan, which foresaw the extension of the project by 12 months until July 2014, was discussed by the Steering Committee between March and May 2013. The revised plan led to a contract amendment signed on 7 November 2013, which included additional services resulting in an estimated cost overrun of \$1.4 million. The project team communicated these important changes post facto to the ICT Governance Board on 26 March 2014, thus not allowing the Board to exercise its mandated oversight over the project.

21. In June 2015, DIST and DPSM submitted to the Board an estimate of *proGres v4* deployment costs from 2016 onwards for 3, 4, and 5-year scenarios, in total of \$34.0 million, \$39.4 million and \$40.0 million, respectively, which supported the Board's approval for the project to proceed to implementation. However, in December 2016 the project team informed the ICT Governance Board of a revised project cost estimate of \$54.3 million for 4 years. This figure included costs incurred from 2010 of \$11.6 million and represented an increase of 6 per cent compared to the June 2015 forecast, and an increase of 853 per cent compared to the initial cost forecast of \$5.7 million provided in the business case. There was, however, no record of the position of the Board on the additional changes to the project plan and costs.

22. Meanwhile, the project had also observed a significant time slippage, from the initial three-year timeline to a revised timeline of nine years at the time of the audit. Furthermore, the offline system functionality had not yet been implemented, despite being a key business requirement. Considering that internet connectivity availability in some regions where UNHCR operates was challenging, lack of an offline functionality brought constraints to the effective use of the system. OIOS did not see a record of any communication of this issue to the ICT Governance Board.

23. The project team attributed the deviations to the project plan and cost overruns to additional work on the specification of functional requirements, re-work required for the development of system modules and functionalities, and resolution of connectivity and other system problems. As previously concluded in the report on the audit of the Biometric Identity Management System, lack of regular financial monitoring and reporting for the project were due to limitations of the Managing for Systems, Resources and People (MSRP), the UNHCR enterprise resource planning system, to control expenditures against spending authority at the project level, and the absence of an alternative tool to efficiently monitor project expenditure

¹ The BOC was abolished on 26 March 2015 and its responsibilities were transferred to the ICT Governance Board. It is referred to in this report due to its relevance to the *proGres v4* project.

and budget execution. The project team failed to implement an alternative system to address this gap and to provide timely and accurate reporting to the ICT Governance Board. The project continued to face risks arising from non-adherence to project scope, budget, and timelines since the Board was unable to discharge its oversight responsibilities over the project effectively and to take timely decisions on the continuity of the project.

(2) The UNHCR *proGres v4* team should strengthen the *proGres v4* project governance by: (a) providing regular reports to the Governance Board highlighting significant variances in relation to deliverables and expenditure versus scope, timelines and budget, with adequate reasoning on the deviations; and (b) requesting decision from the Board on the way forward in case of significant variances.

*UNHCR accepted recommendation 2 and stated that: (i) the Project Manager would provide information on budget versus actuals to the Project Steering Committee and all the concerned governance entities; (ii) the *proGres v4* project team would submit status reports including variances to each regular ICT Governance Board meeting; and (iii) a decision-to-proceed would be sought from the ICT Governance Board in case of significant variances. Recommendation 2 remains open pending receipt of evidence of regular monitoring and reporting to the ICT Governance Board flagging significant deviations to the project and the need for a decision on the way forward, regardless of the Board's meetings schedule.*

C. System design, build and test

There was a need to enhance the current user and performance acceptance testing methodology

24. The UNHCR governance process for ICT projects requires that the design and performance specifications are adequately defined and tested to ascertain that the system: meets the requirements that guided its design and development; responds correctly to inputs; performs its functions within an acceptable timeframe; is sufficiently usable; can be installed and run in its intended environments; operates securely; and achieves stakeholders' requirements.

25. The *proGres v4* software development occurred in sprint cycles² supported by detailed system requirements developed through a collaborative approach between the project team and subject matter experts. User acceptance and regression testing was carried out supported on test plans, test scenarios, acceptance criteria, identification of testers, reporting and resolution of bugs, re-testing, production of test-run summaries, and documentation in a specific software. The project also carried out a proof-of-concept review in February 2013 to assess the overall responsiveness of the selected technological platform to meet the business requirements, and a field test in Malawi in August 2014 to assess the usability and performance of the system with UNHCR ICT infrastructure. Nonetheless, OIOS noted the following issues related to system testing:

a. *Unclear acceptance criteria for the proof-of-concept and pilot test:* The Steering Committee raised the need to establish criteria for the formal acceptance of the proof-of-concept in its meeting of 21 February 2013, already at the end of the proof-of-concept stage. However, there was no evidence in the project documentation that the criteria had been established and had supported the Committee's approval of the proof-of-concept given in March 2013. Furthermore, even though individual results of test cases were documented in a specific software, the project

² A sprint cycle, in the Agile software incremental development methodology, is a set period of time during which specific development work has to be completed and resulting functionalities or products made ready for testing.

documentation did not include the overall scope of the proof-of-concept and an overview of the test results to support the decision of acceptance. Discussions held on the proof-of-concept at the Steering Committee between August 2012 and March 2013 referred to constraints of the technical solution in delivering the business requirements and in performing in low internet connectivity environments, which remained a constraint at the time of the audit and raised questions on the basis of the approval. Also, during the field test in Malawi, the key requirement of the offline functionality of the system was tested only to a limited extent and provided unsatisfactory results ('excessively long time for database data export/ import'), but still the Steering Committee recorded in its meeting of 9 September 2014 that the pilot was successfully completed.

b. *Low level of participation of end-users in user acceptance testing:* Except for two locations (Regional Representations in Thailand and South Africa), none of the other 17 locations reviewed had been involved in the system testing. UNHCR explained that the user acceptance testing had been carried out by a mix of UNHCR staff mainly from the *proGres v4* team and some subject matter experts from DIP, as well as by personnel of a contracted vendor. However, the external personnel had limited knowledge of UNHCR business processes and procedures, and the internal formal sign-off on the test results were missing. Feedback of end users was collected only during the deployment of the system to the field or after new system releases and resulted in a considerable number of issues and bugs reported and in the need for software re-development. For example, after system updates, the Representations in Malawi, Serbia, and Sri Lanka and the Regional Representation in the United States referred to several problems that were not working in *proGres v4*, which were attributed to inadequate definition of requirements and/ or to inadequate testing. These problems included: inability to generate refugee status determination (RSD) and resettlement cases; inoperability of the RSD application form and of the Resettlement Registration Form due to poor formatting, missing fields of information and information not populated automatically from the system; problems in conducting multi-entity searches; errors in generating action sheets from the Resettlement module; and existence of fields with drop-down options not properly populated in the Sexual and Gender-Based Violence module.

26. The issues discussed above were due to omissions in the testing methodology, namely regarding the involvement of end-users. Furthermore, the UNHCR test manager role was assigned to a single DIST staff member of the project team, who was given the sole responsibility to define test cases and test acceptance criteria, and to review and approve the test results. This resulted in gaps in the delivery of system requirements, inadequate system usability and performance, an extended project timeline, and additional project costs.

(3) The UNHCR *proGres v4* team should enhance the current user acceptance and performance testing methodology of system enhancements and new developments by ensuring: (a) the execution of testing against agreed system performance and usability criteria; and (b) an adequate level of participation of relevant users from headquarters and field in the final acceptance of test results prior to the roll out of system changes.

UNHCR accepted recommendation 3 and stated that: (i) testing roles had been assigned within the proGres v4 team; (ii) a revised testing process would be analyzed and evaluated for endorsement and development of proGres v4 testing guidance; (iii) a pilot testing approach in field operations had been adopted; and (iv) focal points were being established in priority country operations to work closely with the proGres v4 team. Recommendation 3 remains open pending receipt of the proGres v4 testing guidance and of examples of recent testing done against agreed system performance and usability criteria and with an adequate level of participation of relevant users from headquarters and field.

D. System implementation

There was a need to finalize and formally endorse the *proGres v4* global deployment strategy

27. The PID specified that the deployment of *proGres v4* would occur in accordance with a deployment strategy, defined at the end of the pilot phase. However, the project team did not produce a deployment strategy as initially envisaged due to delays in the project and the ongoing system development. Most operations reviewed during the audit were consistent with the explanations of DPSM that the deployment had been demand driven, with the regional representations working as promoters and facilitators of the process. The deployment of *proGres v4* to the field targeted mainly small operations to minimize the deployment risk, rather than done based on prioritization of country operations.

28. The *proGres v4* team had drafted a deployment strategy for 2017 early in the year, but it had not yet been formally approved as at September 2017. OIOS noted that the draft strategy could benefit from the following enhancements: (a) definition of roles and responsibilities of the different actors involved in the deployment planning and delivery; (b) definition and operationalization of a weighting and scoring scale to be applied to the prioritization criteria; (c) specification of the prioritization process, including its periodicity of implementation, and validation/ sign-off of the prioritized list of countries for deployment and of changes to the prioritization criteria; and (d) definition of an operational plan to support the implementation of the strategy. Without a formal global deployment strategy and an implementation plan, UNHCR was exposed to risks of inadequate planning and budgeting for the necessary deployment resources and further delays in the implementation of *proGres v4*.

(4) The UNHCR *proGres v4* team, in coordination with relevant UNHCR divisions, should finalize and formally have the *proGres v4* global deployment strategy endorsed, and establish an operational plan to support the implementation of the strategy.

*UNHCR accepted recommendation 4 and stated that the *proGres v4* team: (i) had circulated the draft deployment strategy to UNHCR Divisions for feedback; (ii) would seek formal endorsement of the finalized strategy; and (iii) would subsequently establish an operational plan. Recommendation 4 remains open pending receipt of copies of the enhanced and endorsed *proGres v4* deployment strategy and of the operational plan.*

There was a need to enhance planning and data migration procedures for the deployment of *proGres v4*

29. Implementation and transition of *proGres v4* to operations need to be supported by adequate planning, comprising timely and objective communications with country operations regarding the system technical and operational requirements, system functionalities, staff resources, costs, data migration procedures, and training.

30. Most operations reviewed confirmed that the planning of the deployments had taken place in close coordination between headquarters and the respective locations and regional representations, supported by frequent and timely communications. The majority of users in the field also stated that training provided by the *proGres v4* team in the context of the deployment of the system had been sufficient. Gaps in refresher training and in the access of partners to user manuals, instructions and system releases available in the *proGres v4* support website were being addressed by the *proGres v4* team. However, most of the planning documentation did not include information on deployment and post-deployment costs and the entity which would bear those costs, technical requirements for the deployment of the system, plans with agreed actions and responsibilities to support the deployment, and follow ups on those plans to certify the level of readiness

for the deployment. In particular, the following cases could have been mitigated with enhanced deployment planning and follow-up:

a. Problems with internet connectivity and/or respective costs were identified in Mozambique, the Regional Representation in South Africa and Ukraine. In Mozambique, a July 2017 external technical evaluation report on the government partner's ICT equipment and data network pointed out the following issues: poor condition of the data network infrastructure, which led to oscillation of the internet signal and difficulties in the functioning of *proGres v4* and printing of documents; and lack of capacity of installed equipment. The Regional Representation in South Africa had to support the additional internet connection costs for the Government of Swaziland because the internet speed at the partner was not enough for *proGres v4* performance, even for a small caseload. In Madagascar, the Regional Representation had to increase the partner's project budget to cover the additional internet costs. In Ukraine, OIOS physically observed a training course for the deployment of the system to two partners in Odessa held in one of the partner's facilities, and the internet connection and speed hindered the training by being too slow and failing constantly.

b. Regarding data migration, the process followed did not involve three UNHCR operations (the Representation in Mozambique and the Regional Representations in Australia and Thailand), and in four operations (the Representations in Mozambique, Sri Lanka and Russia and the Regional Representation in Senegal) data migrated for RSD and/ or resettlement cases were inaccurate and incomplete. In some of these locations, data cleansing was still pending more than a year after the data migration, with the offices lacking resources for the task, and with no technical solution. The Regional Representation in Senegal (referring to the deployment in Ghana) and the Representation in Sri Lanka stated that there had been an incorrect and non-agreed mapping of data and insufficient time dedicated by the *proGres v4* team to the migration process.

31. The issues cited above occurred due to gaps in the definition of a standard information package and the migration procedures to support the deployment process. UNHCR explained that deployment costs were supported by the deployment team, that guidance on bandwidth and on *proGres v4* requirements had become available in the *proGres v4* support website, and that the standard UNHCR setup was sufficient to accommodate the system. Furthermore, the data migration process was supported by improved standard migration packages, but the success of the process depended as well on data sources and quality of data available, and by effective data cleansing prior to the migration to be carried out by operations. Nonetheless, UNHCR was still exposed to the risks that its operations and partners were insufficiently informed on the system and associated costs and that insufficient assessments of partners' conditions to deploy *proGres v4* could result in unforeseen costs. There was also a risk of compromised data migration.

(5) The UNHCR *ProGres v4* team should enhance the deployment process of *proGres v4* to UNHCR operations and partners by: (a) providing transparent information on system requirements, functionalities and costs, as well as technical, information security and financial assessments of deployments to partners; and (b) complementing existing data migration procedures by seeking formal agreement at adequate management levels in the field on the data migration process, namely in terms of data cleansing and data mapping decisions.

*UNHCR accepted recommendation 5 and stated that: (i) communication with partners would be enhanced with the creation of a website for partners, by sharing key planning documents with partners, and with the availability of a dedicated PRIMES Support email address (also available for country operations) for collection of feedback; (ii) a video demonstrating the use of *proGres v4* modules would be developed; (iii) the process of data migration would be enhanced with the*

*development of specific guidance and a template to capture data cleansing and data mapping decisions, to be signed off by the operations and monitored by the Project Manager. Recommendation 5 remains open pending receipt of: (i) recent examples of improved communications to UNHCR operations and partners during the planning and delivery of deployments, including evidence that the website for partners and media materials on the use of *proGres v4* have been developed and are available to UNHCR operations and partners; and (ii) copies of the guidance on data migration and of recent examples on the use of the template implemented to document and approve data migration decisions.*

E. Project closure and post-implementation support

There was a need to enhance user support and prioritization of development needs

32. Post-implementation support and system usage monitoring mechanisms need to be in place to ensure that feedback from users is gathered, the level of response to the business needs is assessed, and any possible technical and performance problems arising from the use of the system are properly and timely detected and solved. This information should adequately feed into the end of project report, which signals the closure of the project and handover to the business owners and operations support.

33. OIOS noted that 8 out of the 19 operations reviewed were not satisfied or were only partially satisfied with the level of support provided on *proGres v4*. The most frequent complaints referred to the long time it took to solve problems related to user access, and resettlement and RSD processing. UNHCR explained that it had implemented three levels of support for *proGres v4*: Level 1, at the Global Service Desk level, to resolve the straightest forward incidents; Level 2, of a technical or functional nature, to assess, resolve or route incidents to Level 3; and Level 3, at the main *proGres v4* supplier level. UNHCR further explained that long-standing unsolved issues reported by the operations in Mozambique and Sri Lanka could have been due to pending business analysis and development priorities. The Global Service Desk statistics, which provided information on the number of tickets raised and respective aging, did not seem to assist the *proGres v4* team in assessing the type of issues and origin. Furthermore, operations with earlier deployments, such as Mozambique and Malawi, were still exploring the system and looking into ways of optimizing its use. Additionally, partners only had indirect access to user support by reporting problems they experienced through UNHCR local contacts in their respective country or regional offices. DPSM, DIP and DIST were taking steps to improve jointly the functional support structure to address these gaps, with the creation of a User Support Unit.

34. Since the *proGres v4* project was still ongoing, UNHCR had not yet assessed the extent to which project objectives and benefits had been achieved. OIOS collected feedback during the audit on the level of satisfaction of operations with the system, main advantages and benefits, existence of unmet needs, and experienced gains or losses in operational efficiency. The highlights on the assessment of the level of satisfaction were as follows: 53 per cent of operations were either satisfied or very satisfied with the ease of use of the system; 42 per cent with the availability and adequacy of system outputs, e.g., population of concern documentation, assistance lists, reports and statistics; and 58 per cent with the system reliability and data accuracy; while 32 per cent of operations were either unsatisfied or very unsatisfied with the speed of the system, and 37 per cent with the possibility of usage in different scenarios, e.g., in emergency; and 42 per cent of operations were either somewhat satisfied or somewhat unsatisfied with the availability of modules and functionalities.

35. Fourteen out of the 19 operations referred to advantages and benefits from the system, which included: data sharing, accessibility of information from different locations, capabilities to monitor activities of partners, improved planning, improved integrity and strengthened anti-fraud mechanisms in

resettlement cases, and improved data security as compared with data previously dispersed in different databases. The most commonly stated unmet needs, as raised by 10 operations, were: lack of an emergency registration functionality; lack of offline functionality; lack of local integration and voluntary repatriation modules to support durable solutions; lack of referrals, and scheduling functionalities; lack of system alerts; inadequate reporting/ statistics; lack of bulk printing and updates (e.g., Asylum Seekers/ Refugees Certificates); inability to view a person's processing history cross-modules; and lack of adaptability to partner's processes. Two operations expressed satisfaction with the gains in efficiency derived from harmonized case management, and decreased need to travel to remote locations. However, five operations referred to losses of efficiency from increased data entry and case processing times.

36. Lower levels of satisfaction with the system and unmet needs of operations resulted from the fact that the system was still undergoing development. In January 2017, the *proGres v4* team instituted a periodic prioritization of development activities undertaken jointly by DPSM, DIP and DIST. However, the prioritization was not done specifically against the approved project scope and system requirements, and UNHCR identified new priorities that resulted from new business needs that developed during the project life. This led to ineffective prioritization and continually extended project timeline, with additional costs.

(6) The UNHCR *proGres v4* team, in coordination with relevant Divisions, should: (a) enhance the *proGres v4* user support by adequately identifying and assessing incidents reported by type and origin, following up on long-pending incidents, and verifying coverage of partners; (b) conduct a full gap analysis to assess to what extent the *proGres v4* functional and technical requirements addressed the business needs (e.g., in terms of system interoperability and integration); and (c) conduct prioritization of development needs strictly against the identified gaps, to expedite the project closure.

*UNHCR accepted recommendation 6 and stated that: (i) the User Support Unit was being put in place bringing expertise from DPSM, DIP and DIST; (ii) the *proGres v4* team would conduct the recommended assessment and produce a gap analysis report; and (iii) the team would evaluate gaps and priorities. Recommendation 6 remains open pending receipt of evidence that the User Support Unit has adequately established a process to identify and assess incidents reported, and a copy of the gap analysis report together with the prioritizations of the *proGres v4* development needs undertaken consistently with the gap analysis.*

IV. ACKNOWLEDGEMENT

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

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

STATUS OF AUDIT RECOMMENDATIONS

**Audit of the proGres version 4 registration and case management system at the Office of the
United Nations High Commissioner for Refugees**

Rec. no.	Recommendation	Critical ³ / Important ⁴	C/ O ⁵	Actions needed to close recommendation	Implementation date ⁶
1	UNHCR should review and update the current roles and responsibilities of the <i>proGres v4</i> project to ensure that all roles and responsibilities are defined, and that an adequate level of organizational accountability and participation within the divisions' respective areas of responsibility are applied while the project is still ongoing and for the system's future maintenance when the project closes.	Important	O	Submission to OIOS of the updated <i>proGres v4</i> project roles and responsibilities, demonstrating a complete and broad definition of roles and responsibilities, including an adequate level of participation of relevant divisions.	30 June 2018
2	The UNHCR <i>proGres v4</i> team should strengthen the <i>proGres v4</i> project governance by: (a) providing regular reports to the Governance Board highlighting significant variances in relation to deliverables and expenditure versus scope, timelines and budget, with adequate reasoning on the deviations; and (b) requesting decision from the Board on the way forward in case of significant variances.	Critical	O	Submission to OIOS of evidence of regular monitoring and reporting to the ICT Governance Board flagging significant deviations to the project and the need for a decision on the way forward, regardless of the Board's meetings schedule.	30 June 2018
3	The UNHCR <i>proGres v4</i> team should enhance the current user acceptance and performance testing methodology of system enhancements and new developments by ensuring: (a) the execution of testing against agreed system performance and usability criteria; and (b) an adequate level of participation of relevant users from headquarters and	Important	O	Submission to OIOS of the <i>proGres v4</i> testing guidance and of examples of recent testing done against agreed system performance and usability criteria and with an adequate level of participation of relevant users from headquarters and field.	30 June 2018

³ Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

⁴ Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

⁵ C = closed, O = open

⁶ Date provided by UNHCR in response to recommendations.

STATUS OF AUDIT RECOMMENDATIONS

**Audit of the proGres version 4 registration and case management system at the Office of the
United Nations High Commissioner for Refugees**

Rec. no.	Recommendation	Critical ³ / Important ⁴	C/ O ⁵	Actions needed to close recommendation	Implementation date ⁶
	field in the final acceptance of test results prior to the roll out of system changes.				
4	The UNHCR <i>proGres v4</i> team, in coordination with relevant UNHCR divisions, should finalize, and formally have the <i>proGres v4</i> global deployment strategy endorsed and establish an operational plan to support the implementation of the strategy.	Important	O	Submission to OIOS of copies of the enhanced and endorsed <i>proGres v4</i> deployment strategy and of the operational plan.	30 June 2018
5	The UNHCR <i>ProGres v4</i> team should enhance the deployment process of <i>proGres v4</i> to UNHCR operations and partners by: (a) providing transparent information on system requirements, functionalities and costs, as well as technical, information security and financial assessments of deployments to partners; and (b) complementing existing data migration procedures by seeking formal agreement at adequate management levels in the field on the data migration process, namely in terms of data cleansing and data mapping decisions.	Important	O	Submission to OIOS of: (i) recent examples of improved communications to UNHCR operations and partners during the planning and delivery of deployments, including evidence that the website for partners and media materials on the use of <i>proGres v4</i> have been developed and are available to UNHCR operations and partners; and (ii) copies of the guidance on data migration and of recent examples on the use of the template implemented to document and approve data migration decisions.	30 June 2018
6	The UNHCR <i>proGres v4</i> team, in coordination with relevant Divisions, should: (a) enhance the <i>proGres v4</i> user support by adequately identifying and assessing incidents reported, by type and origin, following up on long-pending incidents, and verifying coverage of partners; (b) conduct a full gap analysis to assess to what extent the <i>proGres v4</i> functional and technical requirements addressed the business needs (e.g., in terms of system interoperability and integration); and (c) conduct prioritization of development needs strictly against the identified gaps, to expedite the project closure.	Important	O	Submission to OIOS of evidence that the User Support Unit has adequately established a process to identify and assess incidents reported, and a copy of the gap-analysis report together with the prioritizations of the <i>proGres v4</i> development needs undertaken consistently with the gap analysis.	30 September 2018

APPENDIX I

Management Response

**Audit of the proGres version 4 registration and case management system at the Office of the
United Nations High Commissioner for Refugees**

Rec. no.	Recommendation	Critical ⁷ / Important ⁸	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	UNHCR should review and update the current roles and responsibilities of the <i>proGres v4</i> project to ensure that all roles and responsibilities are defined, and that an adequate level of organizational accountability and participation within the divisions' respective areas of responsibility are applied while the project is still ongoing and when the system transfers to business as usual mode.	Important	Yes	Deputy Director, DPSM	30 June 2018	<ul style="list-style-type: none"> - A PRIMES Senior Project Manager under DPSM was recruited in February 2018. He will be working closely with other division focal points and counterparts to finalize the revised organizational share of responsibilities. - A meeting is planned on the 12th March with all the key UNHCR stakeholders of the <i>proGres v4</i> accelerated roll out project to among the topic of the agenda clarify and agree on the roles and responsibilities of each division. - The deployment briefing note provided to OIOS gives a description of roles and responsibilities of the v4 deployment, which will be further developed. - The Project Sponsor, Project Steering Committee and Business Owner, in consultation with the PMO, will validate the proposal consolidated organizational chart before presenting it to the AHC (Operations).
2	The UNHCR <i>proGres v4</i> team should strengthen the <i>proGres v4</i> project governance by: (a) keeping the project budget updated during the remaining of the project's life; (b) providing regular monitoring and reporting on the project to the Governance Board, highlighting significant variances in relation to	Critical	Yes	<i>proGresV4</i> , Project Manager	30 June 2018	<ul style="list-style-type: none"> - The budget monitoring system and mechanism has been included as part of the responsibilities of the project manager (PM). - A dedicated staff of RMU located in GSC Copenhagen assists the PM in his budget management responsibilities. - A Budget management system (expenditures planning, expenditures

⁷ Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

⁸ Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

**Audit of the proGres version 4 registration and case management system at the Office of the
United Nations High Commissioner for Refugees**

Rec. no.	Recommendation	Critical/ Important ⁸	Accepted? (Yes/No)	Title of responsible individual	Implementa tion date	Client comments
	deliverables versus scope, budget, and timeline, with adequate reasoning on the deviations; and (c) requesting decision from the Board on the way forward in case of significant variances.					<p>records and commitments management, regular monitoring and reporting), is being developed with following expected outcomes:</p> <ul style="list-style-type: none"> - The PM provides budget vs actuals to the Project Steering Committee and all the concerned governance entities. - The v4 project team will submit status reports including variances at each regular ICT Governance Board meeting. - Decision-to-proceed will be sought from the ICT Governance Board in case of significant variances.
3	The UNHCR <i>proGres v4</i> team should enhance the current user acceptance and performance testing methodology of system enhancements and new developments by ensuring: (a) the execution of testing against objective and agreed system performance and usability criteria; and (b) an adequate level of participation of relevant users from headquarters and field at least in the final acceptance of test results prior to the roll out of system changes.	Important	Yes	proGresV4 Project manager	30 June 2018	<ul style="list-style-type: none"> - Testing roles have been assigned to specific members of the v4 team members, who are working closely with DIST and the external developers - The reviewed testing process is being analyzed and will be evaluated by the end of March 2018 for an endorsement and the development of v4 testing guidance. - The approach of a pilot testing phase in field operations has been adopted, e.g. the Rapid registration tool will be tested in South Africa on 12th March 2018 before deploying it to the targeted operations. - Focal points are being established in priority focus countries, so-called “top 80 countries” to work closely with the team in GSC Copenhagen.
4	The UNHCR <i>proGres v4</i> team, in coordination with relevant UNHCR divisions, should finalize, and formally have the <i>proGres v4</i> global deployment strategy endorsed and establish an	Important	Yes	proGresV4 Deployment Lead, DPSM	30 June 2018	The proGres v4 Team is currently revising the deployment strategy and will seek formal endorsement of the document. The draft is circulating for Divisions’ feedback. Based on the finalized deployment strategy, the team will establish an operational plan.

**Audit of the proGres version 4 registration and case management system at the Office of the
United Nations High Commissioner for Refugees**

Rec. no.	Recommendation	Critical/ Important ⁸	Accepted? (Yes/No)	Title of responsible individual	Implementa tion date	Client comments
	operational plan to support the implementation of the strategy.					
5	The UNHCR <i>ProGres v4</i> team should enhance the deployment process of <i>proGres v4</i> to UNHCR operations and partners by: (a) providing transparent information on system requirements, functionalities and costs, as well as technical, information security and financial assessments of deployments to partners; and (b) complementing existing data migration procedures by seeking formal agreement at adequate management levels in the field on the data migration process, namely in terms of data cleansing and data mapping decisions.	Important	Yes	proGresV4 Deployment Lead, DPSM	30 June 2018	<ul style="list-style-type: none"> - The proGres v4 team has requested DIST to create a sharepoint website for partners, which will serve as a platform for communication with partners. - The key documents (briefing notes, deployment requirements and plans, support procedures, guidance, etc.) will be shared with partners. - A PRIMES support email address has been created and communicated to field operations and partners for real-time feedback provision. - A video on the use of v4 modules will be developed. The video montage will be outsourced to a service provider for production. The proGres v4 team is working with the Senior Protection Advisor on data migration and protection procedures. A revised guidance will be issued at the beginning of June. - The proGres v4 team will work on a template to capture data cleaning and data mapping decisions, to be signed off by the Operations and monitored by the PM.
6	The UNHCR <i>proGres v4</i> team, in coordination with relevant Divisions, should: (a) enhance the <i>proGres v4</i> user support by adequately identifying and assessing incidents reported, by type and origin, following up on long-pending incidents, and verifying coverage of partners; (b) conduct a full gap analysis to	Important	Yes	Chief of Section, IRMS	30 Sept. 2018	<ul style="list-style-type: none"> a) A User Support Unit is currently being put in place, which brings together specific expertise from DPSM, DIP and DIST. b) The project team will conduct the recommended assessment and produce a gap analysis report. c) The project team will evaluate gaps and priorities as recommended.

**Audit of the proGres version 4 registration and case management system at the Office of the
United Nations High Commissioner for Refugees**

Rec. no.	Recommendation	Critical/ Important ⁸	Accepted? (Yes/No)	Title of responsible individual	Implementa tion date	Client comments
	<p>assess to what extent the <i>proGres v4</i> functional and technical requirements addressed the business needs (e.g., in terms of system interoperability and integration); and (c) conduct prioritization of development needs strictly against the identified gaps, to expedite the project closure.</p>					