INTERNATIONAL LABOUR OFFICE

Governing Body
319th Session, Geneva, 16–31 October 2013

GB.319/PFA/5/1

Programme, Financial and Administrative Section
Programme, Financial and Administrative Segment

PFA

Date: 27 August 2013
Original: English

FIFTH ITEM ON THE AGENDA

Information and communications technology questions: Progress on IT infrastructure investments

Purpose of the document

This paper provides an update on the implementation of 12 IT infrastructure projects approved by the Governing Body during its 310th Session in March 2011.

Relevant strategic objective: Cross-cutting.

Policy implications: None.

Legal implications: None.

Financial implications: None.

Decision required: This document is submitted for debate and guidance.

Follow-up action required: None.

Author unit: Information and Technology Management Department (INFOTEC).

Related documents: GB.316/PFA/4; GB.312/PFA/6/1; GB.310/PFA/3; GB.309/PFA/ICTS/1; GB.306/PFA/ICTS/1; GB.306/PFA/11.

Executive summary

In March 2011, the Governing Body approved funding of US$20.7 million over a five-year period to upgrade and modernize the ILO’s IT infrastructure.

Nearly two years into the five-year period, the Office has made substantial progress in carrying out infrastructure improvements. Of the 12 approved infrastructure projects, six have been completed, four are in progress, and two will start in 2015, as originally planned.

All completed projects have been implemented within the approved budget allocations. The projects currently in progress have also remained within budget.

The projects implemented to date have sought to improve underlying core IT infrastructure components. The Office is now implementing the more complex infrastructure transformation projects. These entail technological improvements that will have a significant impact on working methods and which therefore necessitate a more systematic approach to managing the impact of change on staff.

This paper outlines the progress made to date, explains any challenges resulting in delays, and highlights the training and communication activities being carried out.

Introduction

1. The approved funding for infrastructure transformation initiatives over a five-year period included $6 million for one-off infrastructure investments, $1.9 million for ongoing operational costs for 2012–13, and $5.2 million for ongoing operational costs for 2014-15. These funds were allocated to the ILO's central IT department, INFOTEC.

2. Some $3.8 million were also allocated to regional budgets in 2012–13 and in 2014–15 to improve field Internet connectivity in preparation for the roll-out of IRIS and other technologies.

3. As announced in March 2011, sustaining infrastructure improvements beyond the five-year implementation period will entail ongoing operational costs. Future ongoing costs will be determined during the preparation of the Programme and Budget proposals for 2016–17.

4. Table 1 shows a breakdown of the funding.

Table 1. Infrastructure transformation funding

Infrastructure description	Year allocated	Amount allocated (US$ millions)	Source of funds
Hardware/software/IT equipment purchases, implementation costs	2011 (SPA)	6.0	SPA (one-time) allocated to INFOTEC
Hardware/software/IT equipment replacement and upgrades, licence costs, maintenance and support costs	2012–13 (P&B)	1.9	RB (ongoing) allocated to INFOTEC
	2014–15 (P&B)	5.2	RB (ongoing) allocated to INFOTEC
	2016+ (P&B)	TBD	RB (ongoing) allocated to INFOTEC
Field Internet connectivity charges	2012–13 (P&B)	3.8	RB (ongoing) allocated to regions
	2014–15 (P&B)	3.8	RB (ongoing) allocated to regions
	2016+ (P&B)	TBD	RB (ongoing) allocated to regions

5. Table 2 provides a detailed overview of the status of the 12 infrastructure projects approved by the Governing Body.

Table 2. Status of infrastructure projects

	Project status	Project activities	Target completion
1	DC.1	– Replace network cabling, electrical cabling and power supplies	Completed
	Upgrade the ILO data centre facility	– Replace floor structure to support weight of large server racks	Completed
		– Replace glass walls and fire suppression system	June 2014
	In progress	– Move entry doors to enhance physical safety and security	June 2014
	Behind schedule	– Install motion sensitive lighting	June 2014

	Project status	Project activities	Target completion
2	SS.1 Rationalize and consolidate server hardware *Completed* *Ahead of schedule*	– Install new server racks and blade centres – Reduce physical footprint and cooling requirements – Replace 160 stand-alone servers with full virtualized server deployment	Completed Completed Completed
3	SB.1 Upgrade Storage Area Network (SAN) to accompany data growth *Completed* *Ahead of schedule*	– Implement new SAN and Backup Tape Library at HQ – Implement new SAN and Backup Tape Library at UNICC DR Site – Train technical staff on SAN and backup technologies – Migrate ILO data from the old SAN to the new SAN	Completed Completed Completed Completed
4	DR.1 Replicate ILO data at UNICC Disaster Recovery (DR) Site *Completed* *On schedule*	– Implement real-time copying of data between the ILO data centre and the UNICC DR Site	Completed
5	IH.1 HQ Internet/Intranet infrastructure overhaul *Completed* *On schedule*	– Upgrade to latest version of web infrastructure components – Implement load balancing to ensure widespread availability of services	Completed Completed
6	DR.3 Host infrastructure required to support critical ILO systems in a secondary ILO data centre *In progress* *On schedule*	– Install and configure new server racks and blade centres in the ILO's secondary data centre – Implement hardware redundancy and failover for email recoverability	Completed Completed
7	CO.1 Improve connectivity in the regions *Completed* *On schedule*	– Improve connectivity in all ILO field offices to meet minimum bandwidth requirements specified by INFOTEC	Completed
8	FP.3 Migrate to Windows Server for file, print and authentication *In progress* *On schedule*	– Implement Microsoft Windows File & Print Services at HQ – Design Windows architecture for field offices – Implement Microsoft Windows File & Print Services in the field	Completed December 2013 September 2015

	Project status	Project activities	Target completion
9	EM.4 Migrate to email as service *In progress* *Behind schedule*	– Select vendor to assist with implementation and training – Implement Exchange/Outlook email pilot in INFOTEC – Migrate all HQ staff from GroupWise to Exchange/Outlook – Host Exchange/Outlook email services with a cloud provider – Migrate all field staff from GroupWise to Exchange/Outlook	Completed December 2013 September 2014 December 2014 December 2015
10	IDM.1 Single Identity Management *In progress* *On schedule*	– Implement Identity Management at HQ – Implement Windows 7 on the desktop at HQ – Implement Windows 7 on the desktop in the field	Completed June 2014 March 2015
11	DC.3 Move IT hardware and systems to a commercial data centre *Not started* *On schedule*	TBD *Not scheduled to start until late 2015* *Requires P&B commitment to ongoing funding prior to commencing project* *Estimation of ongoing costs will take place in late 2014*	2016
12	DC.4 Full data centre outsourcing as a managed service *Not started* *On schedule*	TBD *Not scheduled to start until late 2015* *Requires P&B commitment to ongoing funding prior to commencing project* *Estimation of ongoing costs will take place in late 2014*	2016

Challenges resulting in delays

6. As highlighted in table 2, two infrastructure transformation projects are slightly behind schedule. Both have been delayed by nine months. These delays do not affect the other infrastructure transformation projects that are currently under way.

7. Project DC.1, to carry out physical infrastructure improvements to the INFOTEC data centre, was put on hold pending a decision from the building renovation Steering Committee on the final location of the data centre within the building. Pending this decision, only the most critical infrastructure improvements were carried out in 2012.

8. In April 2013, the decision was taken to keep the data centre in its current location. The remaining data centre improvements are scheduled to be carried out by June 2014. This includes replacing the fire suppression system and the existing glass walls with shatter-proof safety glass; installing motion detectors; and relocating entry doors for improved access, security and visibility.

9. Project EM.4, to implement and roll out a centralized, Office-wide email system supported 24 hours a day, seven days a week, 365 days a year, has been delayed owing to risks associated with hosting the ILO's email system with a commercial cloud-based service provider.

10. A preliminary market assessment of cloud providers in 2012 determined that those offering email services in the cloud had not yet reached an adequate level of maturity to meet the requirements of the ILO. In particular, concerns over the privacy, ownership and visibility of potentially sensitive ILO emails located in the cloud have delayed competitive bidding and the subsequent selection of a service provider.

11. Extensive consultations on the UN-wide adoption of cloud computing services have taken place within various UN executive boards and governance organs without a consensus having been achieved. More deliberation is required before the ILO can accept the inherent risks of using the cloud services currently offered by commercial cloud providers.

12. In view of these constraints, the Office decided that a more prudent approach would be to split the implementation of the new ILO email system into three phases.

13. The first phase involves migrating the mailboxes of headquarters staff from GroupWise to Exchange/Outlook and continuing the in-house management of email over the next year to allow commercial cloud-based services to mature.

14. The second phase involves re-evaluating cloud-based services in 2014, including the private cloud-based services offered by the United Nations International Computing Centre (UNICC). Once a service provider is selected, the mailboxes of headquarters staff will be migrated to the service provider by the end of 2014.

15. The third and final phase involves migrating the mailboxes of field staff to the service provider by the end of 2015. This phase requires all desktop computers in the field to be upgraded to Windows 7 in advance of the migration to the new email system.

Training and communication

16. A number of technical briefings have been held with LAN administrators and other IT support specialists at headquarters. These staff members are actively participating in various aspects of infrastructure transformation initiatives and are providing valuable input to facilitate planning and decision-making. Technical workshops for regional counterparts are scheduled to take place in November 2013.

17. An information session was held in June 2013 to update staff on pending changes to their personal computing environment and the anticipated benefits of IT transformation improvements to future working methods. A follow-up session has been planned for October 2013.

18. Training sessions aimed at building confidence in these new technologies are being organized for all staff. User guides are also being prepared. All training materials will be published on the ILO Intranet in English, French and Spanish. Training will be provided just before these new technologies are rolled out.