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Programme, Financial and Administrative Section

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FOR INFORMATION

Information and communications technology questions: Progress report on the Information Technology Strategy 2010–15

Summary: At its 306th Session (November 2009), the Governing Body approved the ILO's IT strategy for the period 2010–15. The IT Strategy 2010–15 establishes indicators, targets, milestones and outputs for each biennium of the six-year period. The Office provides an update on progress on an annual basis. This paper summarizes progress since the last report issued at the 316th Session (November 2012) of the Governing Body.

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Related documents: GB.306/PFA/ICTS/1; GB.306/9/1 (Rev.); GB.306/PFA/11; GB.309/PFA/ICTS/1;
GB.309/PFA/ICTS/2; GB.309/PFA/7; GB.310/PFA/3; GB.313/PFA/1; GB.316/PFA.4; GB.319/PFA/5/1;
GB.319/PFA/5/2.

Executive summary

At the end of 2013, the ILO completed the second of three biennia in implementing its Information Technology (IT) Strategy 2010–15.¹ To keep pace with rapid changes in technology, the Office has been aggressive in modernizing and expanding its IT infrastructure, processes and portfolio of services to more fully leverage technology as a catalyst and enabler of change in delivery of the administrative and substantive work of the Office. In support of Office-wide strategies and ILO organizational reform, an increased focus was placed on delivering applications, tools and technologies to facilitate process improvement, enhanced communication, collaboration and knowledge sharing, and mobile working across the Office. In addition, significant progress was made to ensure that ILO information and technology assets were further protected against the growing global threat of cybercrime.

¹ GB.306/PFA/ICTS/1.

Introduction

1. The IT Strategy 2010–15 highlights the need to elevate and position IT as a strategic enabler and driver of change and identifies areas for improvement. These include restructuring and realigning the IT function to facilitate an Office-wide approach to management of IT resources and assets, and to establish a roadmap towards IT service excellence through delivery of modern, efficient and cost-effective IT services, more closely aligned with the needs of the Office.
2. In support of the IT Strategy 2010–15, the Office implemented 130 IT projects and initiatives during the 2012–13 biennium, completing 110 of them. The remaining 20 projects span two biennia and are currently at various stages of the implementation lifecycle. The list of these projects can be found in the Appendix.
3. Implementation of the IT Strategy 2010–15 is organized around three key outcomes, each linked to the ILO's overarching Strategic Policy Framework. During its November 2012 session, the Governing Body requested that future progress reports be more closely aligned with the format of the IT Strategy 2010–15. In this context, this paper reports on progress made against 2012–13 biennial milestones by IT strategy outcome.

Outcome 1 progress

4. Outcome 1 of the IT Strategy 2010–15 accentuates the need for consolidation of the IT function in the ILO to better meet the needs of the Office. Also highlighted is the need for IT management to be more proactive in engaging with key stakeholders throughout the Office and with the broader United Nations (UN) family. By fostering and strengthening mutually beneficial relationships, the Office is able to more effectively align objectives, generate cross-functional synergies, leverage work done by others, and proactively drive strategic change. Outcome 1 also emphasizes the needs to implement technologies that promote improved knowledge sharing, collaboration and communication throughout the Office.
5. The indicators and associated milestones defined for Outcome 1 for 2012–13 can be summarized as follows:
 - reorganization of the IT function within the Office;
 - roll-out of the ILO's Integrated Resource Information System (IRIS) to the Regional Offices in Lima and Addis Ababa;
 - implementation of joint UN initiatives; and
 - deployment of an electronic records management system.

Reorganization of IT

6. In July 2013, to better position IT as a strategic enabler and driver of change within the Office, the Director-General announced the centralization of all IT and information

management (IM) functions in a new Information and Technology Management Department (INFOTEC) headed by the ILO's Chief Information Officer.¹

7. Consolidation of staff performing decentralized IT and IM functions at headquarters within INFOTEC is moving forward. ILO Library staff and IT specialists throughout headquarters were officially transferred to INFOTEC in November 2013 and progress is being made to facilitate the movement of other staff performing IT and IM functions in 2014.

Roll-out of IRIS to the field

8. A detailed report of progress on the status of the roll-out of IRIS to the field was provided to the Governing Body during the October 2013 session.² The Office has made additional progress since October 2013.
9. The training of IRIS field "super-users", which is a prerequisite for the global implementation of the "IRIS HR (Human Resources) and Payroll" model, has been completed for designated staff through various modalities.
10. Each of the HR focal points from the Regional Offices in Addis Ababa, Bangkok and Lima has spent three to five weeks in Geneva, working with Human Resources Development (HRD) staff and receiving "on-the-job" training.
11. A two-week training workshop for finance and programme focal points from the field was organized in Geneva in November 2013. The workshop focused on the advanced concepts related to IRIS Phase 2 functionalities, and was attended by 17 staff members from Bangkok, Beirut, Budapest, Jakarta and Lima. The workshop generated a positive response from the field colleagues, and it is intended to continue this networking and knowledge-sharing practice on a biennial basis.
12. Preparations for IRIS Phase 2 roll-out to the Regional Office in Addis Ababa and also to the Regional Office for Latin America and the Caribbean, the first region to receive global "IRIS HR and Payroll" functionality, are under way. The project kick-off dates and visits to the Regional Offices have been agreed and scheduled.

Joint UN initiatives

13. The ILO engaged with the United Nations Office at Geneva (UNOG) to assess the feasibility of having UNOG host and maintain the software to be used for the ILO's new Health Insurance Information System (HIIS). The INFOTEC Project Management Office (PMO) is currently quantifying the total cost of ownership of this proposal. Initial analysis indicates that significant savings could be made using UNOG infrastructure and expertise as opposed to developing and supporting the new HIIS application in-house.
14. The ILO partnered with the United Nations Development Programme (UNDP) to implement the UNDP's Security Needs Assessment Protocol (SNAP) system at the ILO. The UNDP has provided this application at no cost to the ILO. SNAP was implemented at the ILO in November 2013. This application makes it possible to better track, monitor and manage security requests and security incidents in ILO field offices.

¹ IGDS No. 331 (version 1).

² GB.319/PFA/5/2.

15. The ILO led the effort with the UN's ICT Network to develop a common curriculum for a computer-based IT security awareness training programme. This training is available for all staff via the ILO Learning Management System. The main objective of this training programme is to improve awareness of ILO policies, roles and responsibilities with regards to information security and to ensure that staff understand IT risks associated with their day-to-day activities and decisions.
16. During the reporting period, the ILO actively participated in several inter-agency working groups and co-authored papers in support of several joint UN-wide initiatives including recommendations for the use of cloud computing, inter-operability of enterprise resource planning (ERP) systems, and a roadmap for implementing an information security incident response team (ISIRT).

Electronic Document Management System (EDMS)

17. The underlying software supporting several key EDMS applications, including the ILO Internal Governance Documents System (IGDS), Governing Body Documents System (GBDOCS) and IRIS User Centre (IUC), was upgraded to the latest version. The upgrade was required to ensure ongoing vendor support. The upgrade of the software also improved integration with the latest versions of Microsoft Office products.
18. Because of existing resource constraints and IT and IM reform, the roll-out of PANDORA, the ILO's EDMS application used by departments, was delayed. With the expanded mandate of INFOTEC to govern and manage both information and technology, the ILO contracted Gartner Consulting in September 2013 to assist with the development of an information management strategy for the Office. The strategy will also include a resourcing model, roles and responsibilities, and a roadmap for implementing integrated software for management of archives, records, documents, and social and digital media. The information management strategy will be completed in February 2014.
19. To validate the information strategy, INFOTEC is partnering with the Partnerships and Field Support Department (PARDEV) to implement a document collaboration and knowledge-sharing application to more effectively streamline working methods between headquarters and the field when initiating technical cooperation projects.
20. INFOTEC is also working closely with stakeholders in the Policy Portfolio to implement the ILO Knowledge Gateway. The ILO Knowledge Gateway application is under development and will be launched in three phases between March and June 2014.

Outcome 2 progress

21. Outcome 2 of the IT Strategy 2010–15 highlights the need for better IT governance and control of IT expenditure through the centralization of IT equipment, IT projects and IT resources within the Office.
22. The indicators and associated milestones defined for Outcome 2 for 2012–13 can be summarized as follows:
 - more accurate reporting of IT expenditure; and
 - more accurate assessment of IT project costs through a centralized IT coordination function (INFOTEC PMO).

IT expenditure

23. Prior to the start of the 2012–13 biennium, INFOTEC worked with the Financial Services Department (FINANCE) to implement changes to IRIS account coding structures. These changes have made it possible to report more accurately on ongoing IT operational expenses at a detailed level directly from IRIS. This has enabled the Office to better identify ongoing resource commitments required for future biennia, better govern discretionary funding for IT projects, benchmark expenditure against widely accepted metrics, and more easily evaluate opportunities to re-negotiate rates with preferred vendors of IT goods and services.
24. In accordance with good practice, the Office benchmarked IT expenditure following the closure of the 2012–13 biennium to determine its relative cost position in comparison with industry peers, and to identify areas and opportunities for cost optimization, investment prioritization and operational improvement. ILO IT expenditure was benchmarked against IT expenditure within national and international governments of similar size and budget to that of the ILO.³
25. The result of the benchmarking exercise demonstrated that the ILO has been able to operate, invest, grow and transform IT infrastructure and services in a cost-conscious manner. In 2013, the ILO's annual IT expenditure as a percentage of total operational expenses was 5.1 per cent compared to the industry average of 8.9 per cent. ILO's annual IT expenditure per employee was US\$12,280 compared to the industry average of US\$22,734. ILO's IT staffing level as a percentage of all employees was 4.2 per cent compared to the industry average of 7.2 per cent.

Coordination of IT projects

26. The INFOTEC Project Management Office (PMO) became fully operational in 2013. Thirteen templates and associated procedures have been published to support the project proposal and project management lifecycle. All documentation is available on the ILO's collaboration platform. Several key IT projects initiated in the last half of 2013 have been evaluated and costed through the PMO. These include the replacement of e-banking software, hosting of e-tendering software, IRIS leave management functionality and a travel reporting data warehouse. The PMO is currently working with responsible departments to document the business case and the total cost of ownership for replacement of HIIS and the intranet.
27. Details pertaining to the ILO's portfolio of projects will be available online. The Office is implementing web-based project management software which will provide a standardized tool for the Office to manage and report on IT projects. The implementation is scheduled for completion in May 2014.

Outcome 3 progress

28. Outcome 3 of the IT Strategy 2010–15 highlights the need for improving and professionalizing the delivery of IT services, and the modernization of the ILO's IT infrastructure to effectively support the future needs of the Office.

³ Gartner Research Publication G00258843 "IT Key Metrics Data 2014: Key Industry Measures: Government – National and International Analysis: Current Year".

29. Indicators and associated milestones defined for Outcome 3 for 2012–13 can be summarized as follows:
- implementation of an IT service catalogue and service level agreements (SLAs);
 - implementation of an IT asset register; and
 - hardware consolidation, virtualization and reduction of the ILO Data Centre carbon footprint (IT infrastructure modernization sub-projects).⁴
30. Underpinning indicators and outcomes in the IT Strategy 2010–15 is the need to ensure IT assets are adequately protected and ensure that IT risk management is aligned with overall enterprise risk management. An update on IT security initiatives is therefore included in this paper.

IT service catalogue and SLAs

31. A service catalogue comprising 24 technology services was completed and published in August 2013 on the INFOTEC intranet.⁵ The catalogue contains a description of each service, how to request the service, the relevant prerequisites and associated service level agreements including normal hours of operation and hours of support.

IT asset register

32. The Office has completed the implementation of a centralized database containing all major IT assets. An IT risk assessment was completed in March 2013 to categorize and classify IT assets.

IT infrastructure transformation

33. A detailed progress report on the status of the IT Infrastructure Transformation Project was provided during the October 2013 session of the Governing Body.⁶ The Office has made additional progress since October 2013.
34. The replacement of glass walls and the installation of secured entry doors enclosing the ILO Data Centre were completed in December 2013. Improvements to secure ILO information and IT assets were also implemented in 2013. Final improvements to replace the fire suppression system and install cameras and motion-sensitive lighting in the ILO Data Centre will be completed in early 2014.

IT security

35. To comply with audit recommendations, INFOTEC implemented software to automate the application of vendor-supplied critical security patches in a timely manner on servers

⁴ GB.310/PFA/3.

⁵ <https://www.ilo.org/intranet/english/support/itcom/services/index.htm>.

⁶ GB.319/PFA/5/1.

located in the ILO Data Centre. The Office-wide password policy and data backup policy in the field were revised to ensure compliance with good practice.

- 36.** The INFOTEC Information Security Office implemented software which allows the Office to automatically scan critical IT assets. This software assesses and quantifies potential vulnerabilities in ILO applications and provides input into the IT risk management process.
- 37.** The INFOTEC Information Security Office has also implemented an integrated Office-wide centralized management and monitoring system for the protection of workstations and servers against malicious software. This software blocked approximately 315,000 viruses in 2013. The software also enabled the Office to rapidly identify new viruses and work with McAfee, the ILO's anti-virus software provider, to remove these viruses.
- 38.** Information collected from monitoring software is analysed to more proactively identify and respond to information security threats before they impact the Office. This helped reduce the time and cost of reacting to security-related incidents by 87 per cent during 2013.
- 39.** To further protect ILO data, software is being implemented to encrypt, mask and scramble sensitive data used in ILO systems, including IRIS. This is of particular relevance with the increased use of external service providers requiring access to ILO systems for assisting with application development and support activities.

Geneva, 5 February 2014

Appendix

Information and Technology Management Department (INFOTEC) Biennium Work Plan 2012–13

Output 1							
Output category		Output description			Output activity		Status
Level 1	Level 1 description	Level 2	Level 2 description	Level 3	Level 3 description	Completed/in progress	
1	Office-wide applications	1.1	Major projects completed	1.1.1	IRIS Lima P2 rollout	C	
				1.1.2	IRIS Bangkok P2 rollout	C	
				1.1.3	IRIS Addis P1 rollout	C	
				1.1.5	IRIS accelerated rollout global HR/payroll model	C	
				1.1.7	IRIS leave management P2	IP	
				1.1.8	IRIS user centre	C	
				1.1.9	IRIS implementation of reform structures	C	
				1.1.10	Knowledge gateway	IP	
				1.1.12	eQuestionnaire	C	
				1.1.13	Learning Management Module	C	
				1.1.14	Performance Management (pilot)	C	
				1.1.16	Plone consolidation	C	
				1.1.17	Microsoft Outlook (email)	IP	
				1.1.18	Field security system for SERVSEC	C	
				1.1.19	DWCS collaboration tool	C	
				1.1.20	Rollout of FISEXT to Yangon	C	
				1.1.21	Centralized purchasing of PCs/MS licences	C	
				1.1.22	JSTOR e-journal archiving	C	
				1.1.23	Summon eDiscovery tool	C	
				1.1.24	Digitalization of Library documents	IP	
				1.1.25	Archive of ILO working papers automatically uploaded to REPEC	C	
		1.2	Major software upgrades completed	1.2.1	Oracle eBusiness Suite (IRIS) 12.1.3	C	
				1.2.2	Oracle Business Intelligence	C	
				1.2.3	Oracle Web Centre	C	
				1.2.4	Oracle UCM	C	
				1.2.5	Oracle DB for decentralized apps	C	
				1.2.6	FAST search engine	C	
				1.2.7	Groupwise	C	
				1.2.8	Microsoft Windows 7	IP	
				1.2.9	Internet Explorer 8	C	
				1.2.11	FISEXT (MS Outlook compatibility)	C	
				1.2.12	FISEXT (Windows 7 compatibility)	C	
				1.2.13	IRIS DB upgrade	C	
	Departmental applications	1.3	Major applications implemented	1.3.1	IRIS OAB removal	C	
				1.3.2	IRIS HRD data warehouse	IP	
				1.3.3	IRIS FINANCE data warehouse	IP	
				1.3.4	IRIS rental subsidy allowance	C	
				1.3.6	Youth EMP data warehouse	C	
				1.3.7	CEPOL data warehouse	C	
				1.3.8	NHIS (HIIS replacement)	IP	
				1.3.10	STATISTICS data warehouse	C	
				1.3.11	IRIS testing software configuration	C	
				1.3.12	HPPM	IP	
				1.3.13	INFORM website	C	
				1.3.14	LABORDOC	C	
				1.3.15	Office Wings replacement (Mamut)	IP	
		1.4	Major applications enhanced	1.4.1	IRIS Fixed Assets Module	C	
				1.4.2	IRIS Travel Module	C	
				1.4.3	Donor Dashboard (public access enabled)	C	
				1.4.4	IGDS	C	
				1.4.5	IPEC	C	
				1.4.6	EVAL	C	
				1.4.8	NORMLEX	C	
				1.4.9	Travel year-end accrual process	C	
				1.4.10	SM ACI implementation	C	
				1.4.11	IRIS purchasing - blanket agreements	C	
		1.5		1.5.2	EDMS/Plone documents integration	C	
				1.5.3	OID/single sign on pilot	C	

Output 2						
Output Category		Output Description		Output Activity		Status
Level 1	Level 1 Description	Level 2	Level 2 Description	Level 3	Level 3 Description	Completed/In-Progress
2	Project management	2.1	PM methodology implemented	2.1.1	PM portfolio	C
				2.1.2	PM templates	C
				2.1.3	PM status reporting	C
				2.1.4	ITGC reporting templates	IP
				2.1.5	ITGC investment costing model	C
	IT/IM strategy/governance	2.2	ITM/IT strategy/gov. implemented	2.2.1	ITGC Office Directive	C
				2.2.2	ITGC Charter	C
				2.2.4	HPSM processes standardized	C
				2.2.5	Library strategy	C
				2.2.6	IM strategy	IP
				2.2.7	Taxonomy/thesaurus mapping	C
				2.2.8	IT password policy published	C
				2.2.9	Oracle fusion architecture review	C
				2.2.10	Field office centralization architecture	C
				2.2.11	Library collection development policy published	C
	IT/IM organization	2.3	INFOTEC reorganization completed	2.3.1	IRIS org structure IGDS	C
				2.3.3	ITS chart of accounts revision	C
		2.4	IT centralization studies completed	2.4.1	LAN admin study	C
				2.4.2	Web dev study	C
				2.4.3	Printing study	C
				2.4.4	Statistics study	C
	IT/IM management	2.5	IT work planning completed	2.5.1	Workplan for 2014-15	IP
		2.6	IT expenditures are reported	2.6.1	IT spend in HQ captured	C
				2.6.2	IT spend in field captured	IP
		2.7	IT/IM service availability defined	2.7.1	Library services survey	C
				2.7.2	Technology services catalogue published	C
				2.7.3	SLAs for high value services defined	C
	IT/IM security and compliance	2.8	IT risk management implemented	2.8.1	IT risk assessment	IP
				2.8.2	IT audit response register	C
		2.9	IT security improvements implemented	2.9.1	IT security monitoring	C
				2.9.2	IT security policies/procedures	C
				2.9.3	IT security awareness programme	C
				2.9.4	Anti-virus protection migration from IOU	C
				2.9.5	Anti-virus home user programme	C

Output 3						
Output Category		Output Description		Output Activity		Current
Level 1	Level 1 Description	Level 2	Level 2 Description	Level 3	Level 3 Description	Completed/In-Progress
3	Infrastructure and operations	3.1	Data centre transformation completed	3.1.1	Servers are virtualized	C
				3.1.2	Electrical cabling replaced	C
				3.1.3	UPS replaced	C
				3.1.4	Flooring replaced	C
				3.1.5	Network cabling replaced	C
				3.1.6	Glass is tempered	C
				3.1.7	Fire suppression system replaced	IP
				3.1.8	Security barriers/cameras	IP
				3.1.9	Glass is replaced	C
		3.2	Microsoft file and print implemented	3.2.1	Active directory implementation	C
				3.2.2	OIM/OID implementation	C
				3.2.3	NDS file structures migrated	C
				3.2.4	Exchange servers installed	C
				3.2.5	Guest user migration	C
				3.2.6	MS file restructuring (reform)	IP
		3.3	Microsoft Outlook implemented	3.3.1	Groupwise email migration	IP
		3.4	DR/backup solution implemented	3.4.1	SAN replication at UNICC	C
				3.4.2	Virtual tape library	C
				3.4.3	Data protector (backup SW)	C
		3.5	Technology upgrades completed	3.5.1	IRIS hosted infrastructure replacement	C
				3.5.2	Wi-Fi replacement GB conference rooms and R2	C
				3.5.3	Groupwise mailbox size increase	C
				3.5.4	Groupwise server	C
				3.5.5	Electronic voting system	C
				3.5.6	Video streaming system	C
				3.5.7	Citrix (teleworking) pilot	C
				3.5.8	Field connectivity	C
				3.5.9	SAN	C
				3.5.10	iPad pilot	C
				3.5.11	Wi-Fi replacement CABINET	C
				3.5.12	Automated patching Windows/SLES	C
				3.5.13	SHARP printer replacement	C
				3.5.14	BlackBerry server	C
				3.5.15	Zen works 11	C
				3.5.16	Windows 7 bundling	C
		3.6	Major Library improvements	3.6.1	Installation of new Compactus	C
				3.6.2	Installation of new furniture	IP
				3.6.3	Maintenance of existing Compactus	C

Total completed:	110
Total in progress:	20
Total projects:	130