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FOR INFORMATION

Information and communications technology questions

Summary: This paper provides an update on the status of major information technology (IT) initiatives which have taken place since the 312th Session (November 2011) of the Governing Body. It includes an update on the IT infrastructure transformation project, the IT governance structure, the roll-out of the Integrated Resource Information System (IRIS) to the field and the ILO knowledge gateway.

Author unit: Information Technology and Communications Bureau (ITCOM).

Related documents: GB.306/PFA/ICTS/1; GB.306/PFA/12/3; GB.309/PFA/ICTS/1; GB.310/PFA/2; GB.310/PFA/3.

I. Infrastructure investment study

Background and status

1. The Information Technology (IT) Strategy 2010–15 highlighted the need for the Office to review the existing capacity of the IT infrastructure at headquarters in order to ensure alignment between the ILO's IT delivery capacity and its programme objectives. [1]

2. A study of the ILO's IT infrastructure was carried out by independent external consultants (PricewaterhouseCoopers) from May to September 2010 and the findings and recommendations were presented to the Information and Communications Technology Subcommittee (ICTS) at the 309th Session (November 2010) of the Governing Body. [2] The recommendations included four potential IT infrastructure investment scenarios with estimated costs and other details. The ICTS noted an initial preference for the most comprehensive scenario, the "infrastructure transformation scenario", but indicated that it would like further detailed costing information from the Office before it could endorse the scenario.

3. To maximize transparency and facilitate comprehension of the study, an informal meeting was held with the ICTS during the November 2010 session of the Governing Body. A presentation was given by the Office, and all attendees were provided with: an electronic copy of the full study; detailed costing figures; a list of proposed IT infrastructure investment subprojects; an explanation of the advantages, disadvantages and risks of each scenario; and proposed timelines for implementation. Based on the information provided, the ICTS recommended the adoption of the infrastructure transformation scenario.

4. The infrastructure transformation scenario required US$20.7 million, to be funded through one-off infrastructure investments and regular budget operational expenditure over a five-year period. Funding proposals were presented for consideration by the Governing Body at its 310th Session (March 2011), in the Programme and Budget proposals for 2012–13 [3] and the proposals concerning the use of the 2008–09 Special Programme Account (SPA). [4]

5. In response to a request by the Governing Body for further information, additional details concerning the proposed management and governance of the project were provided in a supplementary information paper. The Governing Body approved an increase in the regular budget for information technology and communications (a programme increase of 7.9 per cent) and an investment through the SPA.

6. A breakdown of infrastructure investment funding can be found in table 1. It should be noted that ongoing operational funds to support implemented infrastructure investment projects will be needed as of 2016. These costs should be included in future programme and budget proposals.

[1] GB.306/PFA/ICTS/1.

[2] GB.309/PFA/ICTS/1.

[3] GB.310/PFA/2.

[4] GB.310/PFA/3.

Table 1. Infrastructure investment funding 2011–15

Infrastructure need	**Amount** (US$ millions)	**Source of funds**
One-off IT investments	6.0 in 2011	SPA (one-off)
Ongoing equipment and licence maintenance	1.9 in 2012–13 5.2 in 2014–15	Regular budget (ongoing) Regular budget (ongoing)
Ongoing global Internet connectivity	3.8 in 2012–13 3.8 in 2014–15	Regional IT budgets (ongoing) Regional IT budgets (ongoing)

7. As IT infrastructure standards, requirements and technologies change rapidly, it was determined that a prudent timeline for the infrastructure transformation project was five years. In order to adhere to this five-year plan, no additional major IT infrastructure projects could be undertaken during this period. The list of 12 approved infrastructure transformation subprojects is presented in table 2.

Table 2. Infrastructure transformation timeline

Project component	**Prerequisites**	**Start year/quarter**	**End year/quarter**
DC.1 Perform minimal upgrade to the existing data centre facility	SPA funds	2011/1	2012/3
SS.1 Rationalize and consolidate server hardware	SPA funds; regular budget operational expenditure	2011/3	2012/2
SB.1 Perform minimal storage upgrades and accompany data growth	SPA funds; regular budget operational expenditure	2011/3	2012/2
DR.1 Replicate data at International Computing Centre (ICC) disaster recovery site – cold standby	SPA funds; regular budget operational expenditure; complete SB.1 and SS.1	2011/1	2012/3
IH.1 Internet/Intranet hosting infrastructure overhaul	Centralized gateway design finalized	2012/1	2012/3
DR.3 Split infrastructure hosting between two hosting sites to extend availability possibilities	Regular budget operational expenditure; complete SS.1	2012/1	2015/2
CO.1 Upgrade connectivity in the regions	Ongoing regional allocations	2012/1	2012/4
FP.3 Migrate to Windows Server for file, print and authentication	SPA funds; regular budget operational expenditure; complete SS.1 and SB.1	2012/2	2013/2
EM.4 Migrate to email as service	SPA funds; regular budget operational expenditure; complete FP.3	2013/1	2013/4
IDM.1 Single identity management	SPA funds; complete FP.3 and SS.1	2013/3	2014/3
DC.3 Move IT hardware and systems to a commercial data centre	Regular budget operational expenditure; complete SS.1, DC.1 and EM.4	2013/1	2014/1
DC.4 Full data centre outsourcing (service provision as well as hosting)	Regular budget operational expenditure; complete SS.1, DC.1 and DC.3	2014/1	2015/1

8. Throughout the life cycle of the IT infrastructure transformation project, periodic progress reports will be submitted to the Governing Body. The current status of subprojects taking place in 2012–13 is provided in table 3.

Table 3. IT infrastructure progress report as of March 2012

Project component	Comments	Status
DC.1 Perform minimal upgrade to the existing data centre facility	Network and electrical cabling replaced. All primary data centre servers located in earthed racks and primary universal power supply replaced. Primary data centre floor reinforced to withstand the weight of consolidated storage and server arrays. Glass walls covered with shatter-proof film.	On target
SS.1 Rationalize and consolidate server hardware	Server virtualization is at 95 per cent of what is possible.100 per cent of production servers have maintenance and support contracts. Less than 5 per cent of current server hardware remains obsolete. These servers are used only for testing purposes at this time.	On target
SB.1 Perform minimal storage upgrades and accompany data growth	Storage area network (SAN) arrays and extensions have been configured and implemented in ITCOM's primary and secondary disaster recovery data centres. Training of staff on the new SAN completed. Migration of data is under way. An upgraded tape library has been implemented in the secondary data centre. A disaster recovery tape library has been ordered for the disaster recovery data centre. A virtual tape library has been purchased and is being used to reduce consumption of tapes and speed up recovery operations for recent data.	On target
DR.1 Replicate data at ICC disaster recovery site – cold standby	All SAN data are being replicated at ICC. ITCOM is now in contact with other departments to encourage them to move their data onto the SAN and benefit from real-time data replication of data at an offsite location.	On target
IH.1 Internet/Intranet hosting infrastructure overhaul	Implementation completed end 2011.	Complete
CO.1 Upgrade connectivity in the regions	A purchasing template and evaluation criteria have been drafted and distributed to help field office support staff standardize their bidding documents and prioritize needs. Guidance on the purpose and use of 2012–13 programme and budget connectivity funds has been provided to the regions.	On target
FP.3 Migrate to Windows Server for file, print and authentication	A request for proposals (RFP) for file and print migration activities was launched at the start of 2012. Evaluation of offers is currently under way. Creation of new directories and identity roles begins in January 2012 with an expected completion date of 1 April 2012. Technology training of operations and support staff under way.	On target
EM.4 Migrate to email as service	A request for information (RFI) on hosting the email service has been finalized. Process to be launched in March 2012. Specifications for migration effort will be completed in the first quarter of 2012. An RFP will be launched in mid-2012. Training needs currently under evaluation.	On target

9. All the infrastructure transformation subprojects listed in table 3 were on target to be completed in 2012–13, with one exception: the subproject "Internet/Intranet hosting infrastructure overhaul", which was completed ahead of schedule. Web-based applications hosted on outdated infrastructure were posing security risks to the Office, which was becoming increasingly problematic and was limiting the deployment of new technologies. To address this, the subproject was moved forward and completed ahead of schedule. This has reduced operational support levels and made it possible to work on other initiatives.

Challenges

10. A key challenge is one of managing priorities among a number of proposals within the existing resource envelope.

11. A reduction in the number of managers in ITCOM has resulted in an increase in the number of staff reporting to each manager. Successful implementation of the 12 infrastructure transformation subprojects requires a significant investment of management time to coordinate project activities and the work required of the staff. The recent establishment of the Project Management Office should enable the Office to deliver on the agreed objectives. The infrastructure transformation timeline is ambitious and will require close coordination throughout the Office. The recent establishment of the Project Management Office should enable the Office to plan IT developments more effectively and strengthen overall IT capacity.

Training and communication

12. The infrastructure investment study identified the need for the Office to engage in a significant training and change management effort in order for the infrastructure transformation project to succeed. To this end, all ITCOM supervisory staff are being trained in basic project management and coordination. In addition, a technical training programme has been developed in consultation with external experts and internal staff to maintain and upgrade skills.

13. A briefing session was held in December 2011 with all IT staff located in the different sectors to discuss preparation work for the Windows Server file and print migration subproject, which started in January 2012. This subproject requires the coordinated efforts of ITCOM staff and local area network (LAN) administrators.

Job description realignment

14. With the introduction of new technologies and a process-oriented approach to the delivery of IT services, it has become increasingly apparent that the duties outlined in IT staff job descriptions, and the work that should be performed in a modern IT unit, need to be better aligned. ITCOM managers have begun a consultative process with staff and the Human Resources Development Department in order to revise job descriptions and align them with the roles and responsibilities applicable in a modern organization.

II. IT governance

15. An internal governance document is being prepared to formalize and institutionalize a new IT governance structure within the Office. The new structure will establish an accountability and decision-making framework to ensure that IT responsibilities are

aligned with the overarching strategic objectives of the Office; that the IT services deliver maximum value for money; and the active management of risk related to the Office's IT assets.

16. An important component of the new governance will be the Project Management Office which was established in January 2012. It ensures a centralized project coordination function in support of the IT strategy and is responsible for systematically evaluating and documenting the business case and value justification behind each project initiative, looking at strengths, risks, costs, benefits and the total cost of ownership.

III. Field roll-out

17. The roll-out of the Integrated Resource Information System (IRIS) to the remaining regional offices is on target. Phase 2 of the IRIS roll-out is planned for implementation in the Regional Office for Latin America and the Caribbean and the Regional Office for Asia and the Pacific in 2012. The full IRIS solution should be available in the Regional Office for Africa in 2013.

18. Possibilities are also being explored to accelerate the current deployment schedule. As the roll-out is dependent on capacities and resources that go beyond IT proper, the plans are being reviewed closely with the regional offices and the relevant units at headquarters.

IV. ILO gateway

19. Hardware and software have been procured for the ILO knowledge gateway in support of Decent Work Country Programmes and the ILO's results-based knowledge strategy for 2010–15. [5] Extensive consultations are taking place with all relevant units on the design, development and integration of key applications and on the sources of data that will feed the gateway. The design of the final website and user interface is also nearing completion.

Geneva, 1 February 2012

[5] GB.306/PFA/12/3.