



FIRST ITEM ON THE AGENDA

Information Technology Strategy 2010–15

1. The updated Information Technology (IT) Strategy for 2007–09 was submitted to the Subcommittee in November 2007. ¹ An annual report on the progress achieved in the implementation of the Strategy was presented in November 2008. ² This paper presents the Strategy for the next six years aligned with the Strategic Policy Framework (SPF) 2010–15. ³
2. As the period covered by the 2007–09 Strategy comes to a close, it is time to assess the current situation by reviewing expenditures, achievements, and major lessons learned. The appendix provides a summary report of the 12 initiatives under the 2007–09 Strategy under the following three headings: (i) programme execution services, (ii) infrastructure, and (iii) governance, support, and training. Table 1 provides a summary of IT expenditures from all funding sources for the period 2006–09. Total IT expenditure represents some 5.7 per cent of the total Office expenditure from all sources of funds. In an international environment where the costs of Internet connectivity, for example, are especially high, this is below the current industry benchmark of 6.6 per cent for the government sector. ⁴

Table 1. IT expenditures (US\$ '000)

Total ILO expenditures	2006–07 actual	2008–09 forecast ¹
Staff ²	31 054	35 997
Non-staff ³	26 842	25 886
Total IT expenditures ⁴	57 896	61 883

¹ For 2008–09, staff costs reflect the current situation, assuming standard costing for the entire biennium; non-staff costs have been projected from actual expenditures as of July 2009 through December 2009. ² Includes all staff with IT in their job description. ³ Non-staff budget categories include IT service contracts, equipment purchases, hardware and software maintenance, IT training, and data communications. ⁴ The numbers are Office-wide and include ITCOM.

¹ GB.300/PFA/ICTS/1.

² GB.303/PFA/ICTS/1.

³ GB.304/PFA/2(Rev.).

⁴ Blended rate from Gartner: IT Spending and Staffing Report, 2008; and Info-Tech Research Group: 2007–2008 Government II Budget and Staffing Report.

3. This Strategy is one of four integrated strategies prepared by the Office for this session of the Governing Body. This is intended to respond to a key component of the Implementation plan: ILO Declaration on Social Justice for a Fair Globalization adopted by the Governing Body in March 2009.⁵ The paper entitled “Results-based strategies 2010–15: Overview” provides a summary of the purpose and structure of the common results-based framework applied to these four strategies as well as a table showing the interlinkages.⁶

Strategy development process

4. The Information Technology and Communications Bureau (ITCOM) is responsible for defining and leading the implementation of the IT Strategy as adopted by the Governing Body. The main reference for the 2010–15 Strategy is the implementation plan for the ILO Declaration on Social Justice for a Fair Globalization, specifically the goal of “promoting a new organizational culture and new working methods to improve effectiveness and efficiency” with the “aim to set in motion a process of wide-ranging change”.⁷ The Office is committed to delivering a Strategy which maximizes the role of IT as a driver of change enhancing effectiveness, efficiency, and the value of the ILO’s current and proposed investments in IT systems. Building on the lessons learned in 2007–09, the 2010–15 Strategy will be implemented by ITCOM working in partnership with the rest of the Office.
5. Extensive consultations took place for the preparation of this Strategy. The members of the Subcommittee were consulted during the 304th Session (March 2009) of the Governing Body and informal consultations were held during the International Labour Conference in June 2009. Within the Office, more than 60 ILO officials from major departments at headquarters and regional offices participated in the consultation process through group discussions facilitated by a specialist in organizational change. These consultations provide the foundation for the office-wide IT partnership that should continue to develop during the period of this Strategy.
6. The most notable recurring themes and issues that emerged from the consultations include:
 - (a) a desire for greater and ongoing collaboration between senior management, middle management, and ITCOM management when shaping the IT agenda;
 - (b) a need to strike a greater balance between centralization and decentralization of IT resources;
 - (c) a requirement for greater flexibility in IT services;
 - (d) the view of IT as a universal remedy for most problems;
 - (e) a tendency for departments and sectors to focus on their own interests rather than subscribing to an organizational approach to IT; and
 - (f) an expectation on the part of sectors and departments that an ever-increasing range of IT services should be provided.

⁵ GB.304/SG/DECL/1(Rev.).

⁶ GB.306/PFA/12/1.

⁷ GB.304/SG/DECL/1(Rev.).

Outcomes

7. The SPF 2010–15 defines outcome 1 for governance, support, and management as the “effective and efficient utilization of all ILO resources”. Specifically, indicator 1.2 is “improved effectiveness in the management of information technology”. Further to this indicator, the IT Strategy proposes three outcomes which identify the contribution of IT to the achievement of the SPF outcome.

Outcome 1: IT-driven reforms contribute to an integrated, user-friendly, cost-efficient, and transparent administrative system

Strategy

8. Serious administrative reforms require drivers for change. IT in the ILO has been seen for many years as a downstream service responding to policy decisions made by process owners which led to its underutilization as a driver of change. This Strategy envisages the IT function in the ILO evolving from being highly focused on infrastructure and support services to proactively identifying opportunities for administrative integration and efficiency closely aligned to the strategic objectives of the Organization.
9. To effectively drive IT-enabled change and generate cross-functional synergies, IT staff and management will actively engage with key stakeholders, senior management, and process analysts across the Office. To institute better alignment, ITCOM will look beyond its base in support services and build stronger relationships and partnerships with ILO departments, sectors and regions. ITCOM will also look outward to fostering stronger partnerships with other international and UN agencies. This will be achieved through active participation in joint committees, strategy councils, advisory boards, UN networks and informal networks.
10. Technologies that facilitate collaborative working practices strengthen ILO decision-making by enabling better communication and management of work. Innovative technologies that promote teamworking such as knowledge systems, groupware, email, videoconferencing, Skype, Web, e-learning, and social networking, will contribute to the development of a knowledge-based workforce. In designing and delivering IT systems, ITCOM will continue to align itself with organizational demand for enhanced knowledge-sharing, as set down in the ILO’s Knowledge Strategy. As systems such as the Electronic Document Management System (EDMS), the Integrated Resource Information System (IRIS), the Yellow Pages, and the dashboard mature,⁸ it is expected that knowledge-sharing tools will be mainstreamed into the day-to-day work of the Office. Additional investment in IT infrastructure will be necessary to fully leverage the use of these technologies in supporting Strategy implementation and execution across the Office.
11. Office-wide applications, such as IRIS and EDMS, are still largely limited to headquarters and their potential benefits have not yet been fully realized. A concerted effort will be needed on the part of all stakeholders to complete the implementation of IRIS and EDMS.
12. The IT function of the ILO will be strengthened through its repositioning within the Office and through administrative streamlining so that it is better placed to fulfil its strategic role. This will require some internal reorganization to ensure that technology innovation and

⁸ Dashboard is a term now being used generally to refer to a web-based technology page on which real-time information is collated from various sources in the business (wikipedia.org).

initiatives will bring the most value to the Office as well as foster and facilitate innovation and co-ownership in IT initiatives. To support a successful evolution of the IT function into this more strategic role, a number of initiatives will be undertaken, including enhanced communication and training.

Linkages to other strategies

13. The rollout of IRIS to external offices will deploy the modules that are critical to the Human Resources Strategy. The mainstreaming of the knowledge-sharing tools mentioned above will support the Knowledge Strategy. The deployment of the donor dashboard, which is built on both IRIS and the EDMS, will directly support the Technical Cooperation Strategy.

Risks and assumptions

14. The successful deployment of IRIS and EDMS in the regions is based on the assumption that sufficient resources will be available to adapt the applications to the special needs in the field; train the staff to use the applications; and ensure that adequate network connectivity is available. If these two major applications are not rolled out, the Office will not realize the potential benefits of an Organization-wide application of these critical systems.

Measurement

Outcome 1

Indicator	Baseline	Target for 2010–15
1.1. Number of regions where IRIS and EDMS are widely available	<ul style="list-style-type: none"> ■ Only limited IRIS functionality is available in the external offices ■ Available EDMS functionality is only partially utilized in the Office 	<ul style="list-style-type: none"> ■ Main IRIS functionalities have been deployed to all regions ■ EDMS is used Office-wide
1.2. ILO participation in cross-organizational or “One UN” IT reform initiatives	ILO has implemented Intranet-sharing with UNDP	ILO will implement at least two shared “One UN” IT initiatives, or other cross-organizational projects

Biennial milestones

2010–11	2012–13	2014–15
<ul style="list-style-type: none"> ■ IRIS has been rolled out to the Regional Offices in Bangkok and Beirut, and to the ILO Office in Budapest ■ Donor dashboard has been widely deployed ■ Communication and training initiatives have been undertaken 	<ul style="list-style-type: none"> ■ ITCOM is reorganized and better aligned with the needs of the Office ■ IRIS has been rolled out to the Regional Offices in Addis Ababa and Lima ■ EDMS deployment to headquarters and the regions is completed 	<ul style="list-style-type: none"> ■ IT at the ILO has been reorganized to better serve the whole ILO ■ Official correspondence is handled electronically only through EDMS

Note: Biennial costs for this outcome are estimated at 42 per cent of the total IT expenditures.

Outcome 2: A collaborative Office-wide approach to the use of IT resources and capabilities is embedded, resulting in improved IT governance and efficiencies**Strategy**

15. Before the arrival of personal computers in the 1980s, the mainframe was the only computer to be found in the ILO. IT resources were centralized, as were applications development, process analysis, and support. The introduction of the personal computer and the consequent availability of inexpensive computing capacity provided opportunities for decentralization of IT resources and capabilities to individual departments. This shift resulted in departments having their own IT capacity to develop and run applications meeting their special needs, and to do so within a short period of time. The ILO and other organizations of the UN system all experienced this change and followed this pattern of decentralization of IT capacity and resources.
16. When decentralization was carefully analysed at the ILO (during the year 2000 project), it was found to have led to fragmentation and duplication of IT investments, with an inevitable negative impact on the efficient use of resources. This highlighted the need for better IT governance and the need to rethink the extent of decentralization of IT resources.
17. A full understanding of the decentralization of IT resources must start with an accurate accounting of IT expenditures throughout the Office. At headquarters, IRIS can be used for this purpose. Once IRIS is deployed in all the regions, full and accurate reporting of IT expenditures throughout the Office will be readily available. It will then be possible to examine carefully where and how the ILO spends its IT resources, and what can be done to more effectively manage *all* IT resources.
18. The consultations referred to above revealed that ILO staff often perceive IT services provided as unlimited and provided at no direct cost to the user. It is no surprise that such perceptions lead to the assumption that the increased demand for IT resources can and should be absorbed. At the same time, staff are increasingly reliant on IT for their work. Thus, demand increases and external support service costs for hardware and software rise.
19. There is also a large number of applications based on old technologies dispersed throughout the Office. These require support, introduce risk to organizational data, and hamper efforts to modernize and consolidate. The costs of upgrading and supporting these systems are a drain on scarce resources.
20. Better management of IT expenditure requires redefining how IT projects are evaluated and authorized. This Strategy proposes the establishment of a centralized project coordination function to systematically evaluate the business case behind each initiative, looking at strengths, risks, costs, benefits and the so-called total cost of ownership. This function would operate similarly to the existing IRIS Governance Board. Development of projects will then be guided by expertise available, ensuring that important projects obtain sustained priority and are effectively implemented.
21. Over the past biennium, resource constraints have impeded progress in the deployment of important systems such as IRIS and EDMS. Under this Strategy, it is envisaged that some resources will be released through the elimination of inefficient and fragmented IT efforts currently driven by excessive decentralization.

Linkages with other strategies

22. The accurate recording of Office-wide IT expenditures will lead to a better understanding of where the gaps are; this will identify requirements for IT staffing and training, which are linked to the Human Resources Strategy.

Risks and assumptions

23. Eliminating fragmentation and inefficiencies is necessary if the Office is to better manage all its IT expenditures to ensure the efficient use of scarce resources.

Measurement

Outcome 2

Indicator	Baseline	Target for 2010–15
2.1. Measuring IT expenditures throughout the Office	<ul style="list-style-type: none"> ■ ITCOM resources can be accurately and fully reported ■ Other IT expenditures at headquarters cannot be accurately and fully reported ■ IT expenditures in external offices can only be estimated 	All categories of IT expenditures can be fully and accurately reported throughout the Office
2.2. A central coordinating function for overseeing costly* Office-wide IT initiatives	Currently there is no centralized function that coordinates resources expended on IT initiatives other than for IRIS-related developments	Centralized function is in place for managing the prioritization and guiding the execution of costly IT initiatives

Biennial milestones

2010–11	2012–13	2014–15
<ul style="list-style-type: none"> ■ Non-ITCOM IT resources can be fully and accurately reported at headquarters ■ Terms of reference for the centralized function are agreed ■ Study completed on IT investment needs 	<ul style="list-style-type: none"> ■ All IT resources in external offices can be fully and accurately reported ■ Centralized function is operational to assess, evaluate, and prioritize costly Office-wide IT initiatives 	<ul style="list-style-type: none"> ■ An Office-wide IT budgeting infrastructure is used to rationalize purchasing decisions ■ Centralized function is managing the execution of costly Office-wide IT initiatives

* When the total cost of ownership (TCO) exceeds US\$20,000.

Biennial costs for this outcome are estimated at 5 per cent of the total IT expenditures.

Outcome 3: A culture of service excellence in consolidated IT operations is embedded, resulting in a more effective use of resources

Strategy

24. The Office is committed to the provision of modern technology services that are delivered in a timely fashion, while providing a level of performance which is cost-effective. ITCOM, as the main unit in the Office responsible for implementing this IT Strategy, will focus on ensuring that the staff, processes, and infrastructure are in place so that these services can be delivered in a cost-effective and predictable manner. ITCOM will work in partnership with the rest of the Office to ensure that the ILO is getting the best return on all

its IT investments. Ongoing staff development, knowledge-sharing, and continuous learning are the cornerstones of this approach.

25. The Office is not in a position to provide all the IT services that are requested. It must select the services that provide the greatest value, and identify realistic, cost-effective service levels. A catalogue of IT services will be defined; it will contain descriptions of major services (IRIS, EDMS, email, file-sharing, Internet access, etc.) along with service-level commitments. These service levels will describe what is required in order for the service to be delivered in a sustainable fashion; they also detail the quality measurements to be used and how they will be reported. This will ensure that expectations and costs are proactively managed through a service-level agreement (SLA).
26. An updated inventory of all IT assets throughout the Office will be maintained, covering hardware, software, and applications. This will enable the monitoring of adherence to standards; a better understanding of IT needs when considering future services; assessment of the impact of all changes in an interconnected IT environment; and insight into the fragmentation of IT investments to plan future consolidation. Fragmented infrastructure will be assessed to identify opportunities for reducing energy consumption, licence expenses, and maintenance costs.
27. There will always be a gap between specific local needs and Office-wide delivery capacity. A threefold approach will be adopted to better manage the situation where external expertise is used to fill this gap. This approach will consist of the provision of analytical expertise to assist with early design decisions to ensure greater coherence across the Office; technical assistance to identify the most cost-effective secure hosting infrastructure; and evaluation expertise to ensure that external service contracts apply quality standards in a consistent and measurable manner.
28. This outcome demands enhanced performance by IT staff and relies heavily on collaboration across the Office. Realization of the benefits of this approach will require difficult prioritization decisions.

Linkages with other strategies

29. Because this outcome is heavily reliant on a qualified and motivated workforce, it is directly linked to the staff development, teamworking and performance management elements of the Human Resources Strategy. Moreover, a collaborative workforce makes use of knowledge-sharing tools, thereby linking this outcome to the Knowledge Strategy.

Risks and assumptions

30. If the quality of IT services is not improved, the Organization will be unable to optimize the use of resources, thus making it more difficult to maintain its relevance and status in an increasingly competitive environment.

Measurement

Outcome 3

Indicator	Baseline	Target for 2010–15
3.1. Percentage of hardware deployed in a consolidated configuration	10 per cent of the Office's hardware is deployed in a consolidated configuration	50 per cent of hardware will be deployed in a consolidated configuration
3.2. Number of SLAs defined for the services that have been identified as high value to the Organization*	The only service-level definition published on the Intranet indicates that service outside of office hours is provided on a "best effort" basis	SLAs for ten high-value services are defined and monitored through the monthly publication of statistics on the Intranet
3.3. Reduction in energy and cooling consumption (carbon footprint)	Power and cooling as measured for January 2010	20 per cent reduction in energy and cooling consumption of data centre

Biennial milestones

2010–11	2012–13	2014–15
<ul style="list-style-type: none"> ■ Self-service utility is deployed ■ A service catalogue will be published ■ SLA template is published ■ An inventory of major infrastructure elements is created 	<ul style="list-style-type: none"> ■ SLAs are defined for five high-value services ■ Infrastructure elements are reviewed for possible consolidation 	<ul style="list-style-type: none"> ■ SLAs are defined for an additional five high-value services ■ 24/7 IT service support will be explored and costed against commercial or service-sharing possibilities

* A high-value service is defined as one with a large number of users (such as email) and a yearly operational cost that exceeds US\$50,000.

Biennial costs for this outcome are estimated at 53 per cent of the total IT expenditures.

The challenges ahead

- 31.** This Strategy defines a new direction for the IT function so that it is more responsive to the needs of the Office and the Organization as a whole. Workers everywhere have become increasingly dependent on technology and Office staff will need IT to face the challenges ahead. There is no shortage of technological solutions on the market, but the challenge will be to acquire what is needed, when it is needed, within allocated resources, and to efficiently use the technology that is provided to the Office.
- 32.** For IT to meet the needs of the Office and deliver on the three outcomes set down in this Strategy, a substantial additional investment in IT infrastructure will be required over the six-year period. The Office will commission a study to identify priority areas where the IT infrastructure needs to be transformed, and to assess the level of investment required to achieve this transformation.
- 33.** To summarize:
- (a) Outcome 1 requires that the IT function in the Office "reinvents" itself.
 - (b) Outcome 2 requires that the ILO takes an Office-wide approach to IT so as to better manage all its IT resources.
 - (c) Outcome 3 sets out the road map to IT service excellence which will deliver the modern and cost-effective IT that the Office needs.
 - (d) The linkage between the IT and Human Resources Strategies is manifested through the strong reliance on a qualified and motivated workforce to deliver the three outcomes.

- (e) To ensure that the Office staff effectively use the available IT knowledge-sharing tools, there is a strong reliance on the Knowledge Strategy to promote true collaboration throughout the Office.
- (f) This IT Strategy, which spans a six-year period, will need to be adapted and updated in line with changes in technology. Given the pace of change in both IT hardware and software, the Office must be ready to move quickly to take advantage of IT innovations which could enhance administrative reform, strengthen knowledge-sharing capacity, and increase cost-effectiveness with the ultimate goal of supporting better delivery of services to ILO constituents.

34. *The Subcommittee may wish to propose to the Programme, Financial and Administrative Committee to recommend that the Governing Body endorse the Information Technology Strategy 2010–15.*

Geneva, 12 October 2009.

Point for decision: Paragraph 34.

Appendix

Summary of IT Strategy 2007–09

IT Strategy (ITS) initiatives	ITCOM expenditures (US\$)		Notable achievements	Major lessons learned
	2006–07	2008–09		
ITS1: collaborative working	626 365	1 016 998	<ul style="list-style-type: none"> ■ The Plone knowledge-sharing system was deployed; currently hosting 47 communities of practice ■ Yellow Pages application developed and deployed ■ Intranet sharing with UNDP 	Sustained staff involvement requires substantial retraining to overcome cultural barriers
ITS2: EDMS	1 214 783	1 180 845	<ul style="list-style-type: none"> ■ Internal Governance Documents System deployed ■ Electronic registry operational in ITCOM 	Insufficient resources have caused substantial delays
ITS3: IRIS	8 485 222	8 059 888	<ul style="list-style-type: none"> ■ Upgrade to Oracle Release 12 ■ Rollout to the field started ■ Donor dashboard developed ■ Miscellaneous enhancements in usability and functionality 	Problems in the Oracle software can be difficult to diagnose and correct; this will have a major impact on the rollout and must be planned for accordingly
ITS4: technology watch	165 498	156 941	Evaluation of server consolidation tools – VMware selected	Some open source tools can have hidden costs
ITS5: infrastructure	7 185 410	7 204 160	<ul style="list-style-type: none"> ■ New network installed at headquarters ■ WiFi deployed in all meeting rooms ■ New Internet security systems installed at headquarters 	<ul style="list-style-type: none"> ■ Insufficient resources have caused substantial delays ■ Better coordination is needed with the building management teams
ITS6: connectivity	570 989	580 935	<ul style="list-style-type: none"> ■ Upgrade of all firewalls in the field ■ Upgraded Internet access for headquarters and some field offices ■ New methodology for auditing field connections 	Connectivity in the field will play a major role in the rollout of IRIS and EDMS
ITS7: remote/mobile	76 224	82 743	<ul style="list-style-type: none"> ■ BlackBerry deployed at headquarters and field 	

IT Strategy (ITS) initiatives	ITCOM expenditures (US\$)		Notable achievements	Major lessons learned
	2006–07	2008–09		
			<ul style="list-style-type: none"> ■ Secure remote access to files stored on headquarters network 	
ITS8: security	849 062	996 886	<ul style="list-style-type: none"> ■ IT security officer post created and filled ■ IT security policy published ■ Basic disaster recovery site at UNICC 	<ul style="list-style-type: none"> ■ The lack of clear accountability for security must be addressed ■ Insufficient resources are delaying key security initiatives ■ Cross-cutting metrics needed
ITS9: staffing improvements	36 374	39 235	Information Technology Infrastructure Library (ITIL) training for all ITCOM staff.	
ITS10: governance	384 113	285 787	<ul style="list-style-type: none"> ■ 34 of 35 COBIT¹/ITIL processes have a maturity index of 2 or greater ■ More staff participation in the governance definition process 	Sustained staff involvement requires substantial discipline and retraining to overcome professional barriers
ITS11: support	2 672 820	3 361 870	<ul style="list-style-type: none"> ■ Service desk formed by merging ITCOM Help Desk with IRIS Service Centre ■ Client satisfaction with ITCOM services increased from 67 per cent in 2006 to 70 per cent in 2008 	Decentralized IT support results in an uneven quality of service and is not cost-efficient
ITS12: training	466 288	471 390	Oracle software (UPK) installed to develop customized training	
Total ITCOM expenditures	22 733 147	23 437 680		

Notes: Non-ITCOM expenditures are not included above. Expenditures from 2008–09 are estimated projections taking into consideration actual expenditures, encumbered funds, and planned expenditures through the end of 2009.
¹ COBIT: Control objectives for information and related technology.