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Progress report on the implementation of the Information Technology Strategy 2018–21

Summary: At its 331st Session (October–November 2017), the Governing Body approved the ILO's Information Technology (IT) Strategy for the period 2018–21. The IT Strategy 2018–21 established outputs, key deliverables, indicators and targets for three outcomes identified in the Strategy. The Office provides an update of progress on an annual basis. This paper covers the third year (2020) of the Strategy period.

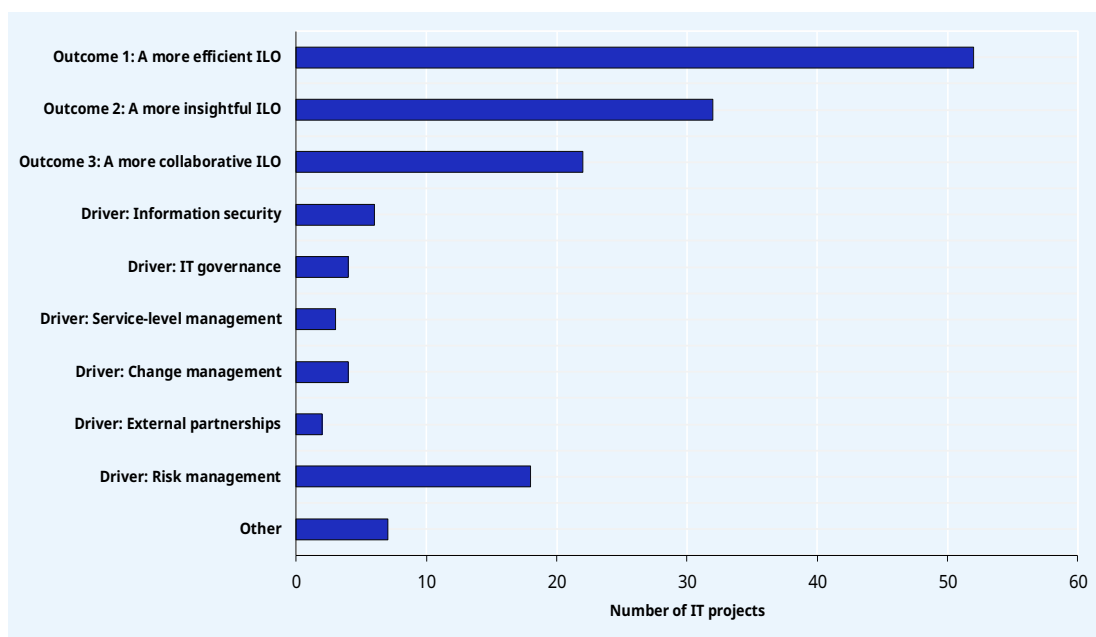
Author unit: Information and Technology Management Department (INFOTEC).

Related documents: [GB.331/PFA/5](#); [GB.334/PFA/3](#); [GB.338/PFA/INF/2](#).

► Introduction

1. The Information Technology (IT) Strategy 2018–21 (IT Strategy) ¹ established a vision and road map to leverage rapidly evolving technologies to more effectively support the delivery of Office-wide reforms, strategies and initiatives. Underpinning the IT Strategy is the delivery of a modern digital workplace. The IT Strategy is structured around three outcomes and six cross-cutting drivers. During this reporting period, it was particularly challenging for the Office to deliver on established outputs, while simultaneously implementing new, unplanned digital services to support the secure remote working required during the global COVID-19 pandemic.
2. The Office has made measurable progress towards achieving the outcomes identified in the IT Strategy: 150 projects were carried out in the Strategy's third year (2020). A list of the projects can be found on the INFOTEC public website page. ² A breakdown by strategy outcomes and drivers is shown below.

► IT Strategy 2018–21 – 2020 workplan – IT projects by outcome/cross-cutting driver

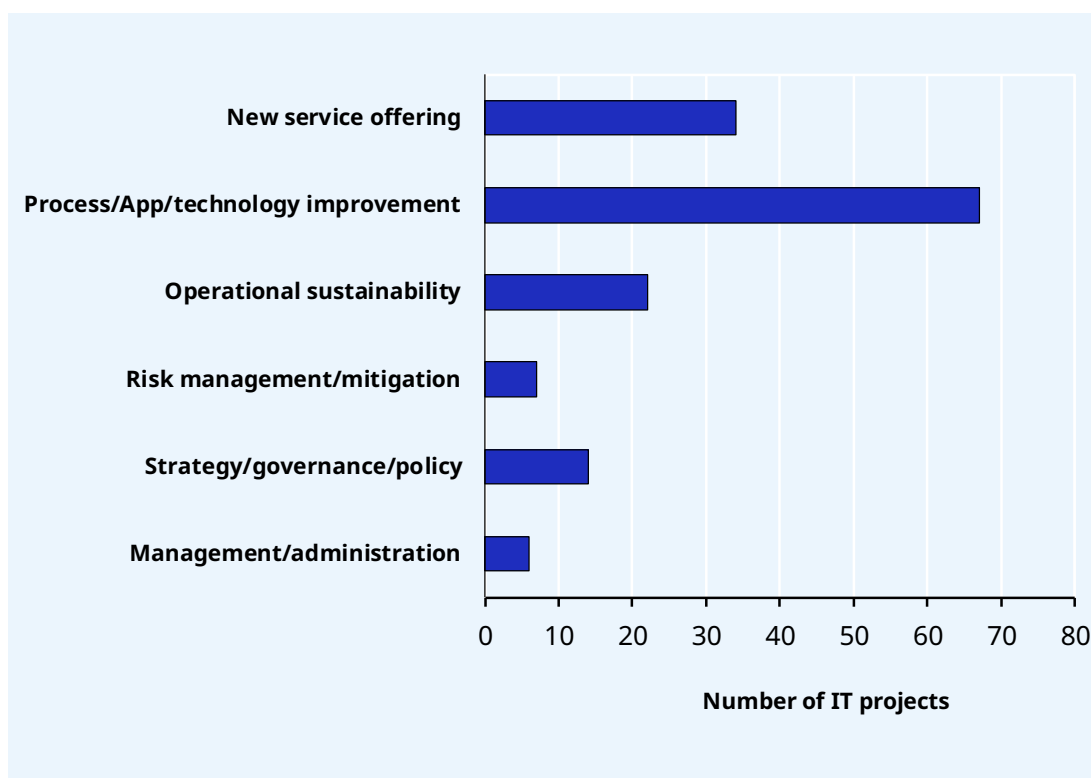


3. Of the 150 projects undertaken, 101 (67 per cent) focused on providing new service offerings or major improvements to benefit ILO staff and constituents. The graph below provides a breakdown by category of projects carried out in 2020.

¹ GB.331/PFA/5.

² IT Strategy – 2020 projects.

► IT Strategy 2018-21 – 2020 workplan – IT projects by category



4. This progress report highlights some of the key IT projects completed and delivered in 2020, grouped by IT Strategy outcome, output and cross-cutting driver. Progress against outcome indicators is reported on a biennial basis. The report for the period covering 2018-19 can be found on the ILO public website.³ The second report of progress against outcome indicators will follow the completion of the biennium 2020-21.

► Strategy outcome 1: A more efficient ILO

5. Outcome 1 of the IT Strategy highlighted the need to leverage advances in technology in order to better support users of ILO IT services in their daily work, with the goal of improving staff productivity, morale and work-life balance. The outputs focused on strengthening mobile working, reducing administrative overheads and costs, enhancing and modernizing ILO applications, improving the user desktop experience and ensuring the high availability of IT services, both on the premises and remotely. Specific emphasis was placed on improved accessibility and reliability of IT services in and with ILO locations outside Geneva.

Output 1.1: Increased scope and availability of IT services “on the go”

6. From March to December 2020, during the global COVID-19 pandemic, the majority of ILO staff were required to telework on either a rotation or full-time basis. IT played a significant role in facilitating the work of the Office during that time. The Office was

³ IT Strategy – 2018-19 indicators.

required to accelerate delivery of IT strategy outputs, as well as to deploy new services to ensure that staff had remote access to all critical ILO systems.

7. To ensure a secure remote working environment, infrastructure and equipment were purchased to support ILO-configured laptops and enable an ILO virtual private network (VPN). Subsequently, secure ILO laptops were delivered to nearly 90 per cent of all ILO staff. The aim is to reach the remaining 10 per cent of staff in early 2021. In addition to laptops, large computer screens, stand-alone keyboards, headsets, mice, and mouse pads were provided to ILO headquarters staff who were teleworking from home.
8. Several web-based platforms were developed to assist with the management of logistics for staff, external service providers and other visitors who were required to be on the premises to support critical Office functions. These included new IT platforms to assist the Medical Service and the Human Resources Department in clearing staff for return to office, an application for allocating staggered working hours for staff, an online registration system to support ad hoc visits and a platform for monitoring travel. The ILO Emergency Notification System was also enhanced. Dedicated digital platforms were implemented to support the Office's substantive work in researching, collecting and disseminating COVID-related information pertaining to the world of work.
9. During the year, the ILO made significant progress in the implementation of Microsoft Office 365 (O365), including the full migration of all ILO user identities and email accounts to the cloud and preparation for the migration of personal network drives to Microsoft One Drive in the cloud. This functionality will make it possible for staff to access files on any device, at any time and from any location with an internet connection. The implementation of multi-factor authentication capabilities with O365 will further strengthen the security of ILO data and systems when working remotely. Other technologies to further support remote working, such as the use of digital signatures, are currently being evaluated.
10. The global pandemic required the Office to find new and improved ways to communicate virtually, as both mission and training-related travel were extremely limited. By leveraging the power of videoconferencing, instant messaging and virtual training programmes, staff were provided viable alternatives to work around the travel limitations.
11. The Office implemented mobile device management (MDM) software on all ILO smartphones at headquarters to ensure that ILO data stored on mobile devices is secure and that sensitive information is not vulnerable to theft or exposure to malware and other viruses. MDM makes it possible for ILO IT staff to monitor and manage these devices to ensure they are protected and updated with the latest software versions and security patches. MDM also segregates ILO data from personal data. If a staff member's personal device is lost, stolen or compromised in any way, ILO data can be remotely locked or wiped from the device without affecting personal data stored on the device. MDM is a precursor to the implementation of an Office-wide "bring your own device" policy in 2021.

Output 1.2: A more enriched and secure desktop experience

12. The implementation of the Windows 10 desktop operating system was a major productivity and security benefit to staff. Windows 10 was fully implemented at headquarters in 2019 and targeted for field implementation in 2020. The migration to Windows 10 in the field posed a number of challenges during the global pandemic with the majority of staff working remotely. Despite these challenges, the exceptional support

provided by the chiefs of regional administrative services, and the excellent collaboration between field and headquarters IT teams resulted in all field PCs being upgraded to Windows 10 by the end of 2020.

13. The Office began the implementation of Microsoft Windows Defender for end-point protection in 2020. This software provides a number of security enhancements and benefits to staff, including improved malware blocking, leveraging advanced machine learning technology, network protection, vulnerability reduction, auditing and response capabilities and file recovery. Threat analytics are also collected in real time which provide the ILO's Information Security and Assurance Services Unit with essential information and specific recommendations for improving the ILO's overall security posture.
14. In conjunction with the migration to O365, new anti-spam software was implemented Office-wide. To reduce phishing, impersonation, ransomware and other malware often embedded in emails and associated attachments, all URLs and attached files are checked for malicious content. Suspicious emails are automatically quarantined and staff can opt to release, block or delete. Any malicious content detected is automatically removed from the email.

Output 1.3: More “fit-for-purpose” administrative applications

15. The digitization of documents, tools, repositories and templates were key enablers for the successful running of the fully virtual Committee of Experts on the Application of Conventions and Recommendations (CEACR) held in November–December. The automation of the CEACR was a major business process improvement and required a concerted and collaborative effort across portfolios. Further enhancements to automate CEACR workflow processes are scheduled for completion in early 2021.
16. Although the roll-out of IRIS to all ILO regions was completed in 2019, additional requests to implement IRIS for several project locations were made in 2020. Having IRIS access enables projects to process their own IRIS transactions rather than relying on the services of country offices, which are often understaffed. The ability to carry out administrative and programmatic activities independently provides for greater controls and efficiency, as processing time is reduced. In 2020, the Office completed the implementation of IRIS for three project locations. A further 12 project locations are at various stages of implementation.
17. The Office completed the implementation of an electronic Organizational Procurement Planning application to enable more effective work scheduling, and to achieve timely and better value acquisition of goods and services. This application will be used to govern and administer all Office procurement plans for 2021.
18. An online application was deployed for staff to initiate, approve and submit requests to PRODOC for producing and distributing ILO digital and print publications, official meeting documents, promotional materials and other products such as interactive PDFs, infographics and data visualizations. PRODOC can then process those requests using automated workflows and application interfaces with design and publishing software. ILO staff can also follow the status of their requests online.
19. An extensive rewrite of the software used to manage the issuance of contracts for temporary short-term staff (interpreters, translators and operators) for official ILO meetings was completed in 2020. The process to mass hire and pay these short-term staff was streamlined and fully integrated with IRIS.

20. The new Staff Health Insurance Fund online self-service application was made available to all ILO retirees, reducing administrative overheads, increasing awareness of the status of claims and decreasing paper, printing and postage costs. The possibility for former ILO officials to submit claims remotely has been extremely beneficial during the global pandemic.

▶ Strategy outcome 2: A more insightful ILO

21. Outcome 2 of the IT Strategy highlighted the need to enhance the configuration, structure and dissemination of ILO data to enable better informed decision-making, more accurate and timely reporting, and improved overall operational effectiveness. To achieve the expected benefits of outcome 2, outputs focused on exploiting big data, building data warehouses, developing personalized dashboards and implementing a modern electronic records and web content management systems.

Output 2.1: Improved quality and use of ILO data

22. The ILO Working Group on Transparency approved the work plan to achieve the first milestone towards improving full compliance with the International Aid Transparency Initiative (IATI) Standard. The IATI Standard is widely recognized by over 800 organizations, with the goal of improving the transparency of aid, development and humanitarian resources in tackling poverty. Planned enhancements include the capture and mapping of project donor codes, geographical locations and identification of humanitarian projects in IRIS. The publishing of ILO data in accordance with the IATI Standard will also be automated which will facilitate more frequent reporting.

Output 2.2: Enhanced and actionable business intelligence

23. A successful pilot was carried out to assess the viability of software for generating ILO financial statements and various analytical reports using underlying data from IRIS. This software will assist in the preparation of the ILO's financial reports, reporting to the Governing Body, the Independent Oversight Advisory Committee, and the International Labour Conference, and for future ongoing quarterly/monthly financial reporting for internal analysis and reporting to regional offices. The software will be implemented in 2021.

Output 2.3: More “fit-for-purpose” web-based dashboards

24. ILO data dashboards are information management tools that visually track, analyse and display key performance indicators (KPIs), metrics and key data points to monitor the health of the process, portfolio or organizational unit. Data from multiple systems is consolidated, aggregated, mapped and presented visually. These dashboards allow ILO staff to improve overall delivery and respond quickly to issues and opportunities. The dashboards are intuitive and allow the user to customize the presentation of data and visually prioritize the information most pertinent to current needs. This makes it possible to see, at a glance, the status of activities and progress needed to meet commitments and achieve goals.
25. Over the course of the year, ten data dashboards were delivered to assist the Office in carrying out its mandate in a more efficient and effective manner. Of particular note were dashboards providing targeted content for senior management roles. Other

thematic dashboards are under development, to support outcome-based work plans and flagship programmes. An employee dashboard for all staff is in the final stages of testing and will be released in early 2021.

Output 2.4: Better managed enterprise content

26. In the field and at headquarters, the ILO's infrastructure must be able to support a creative and robust research culture in the context of the ILO Centenary Declaration for the Future of Work. This can be aided by improving communication flows among research teams across the Office and strengthening collaboration. To maximize the impact of the ILO's institutional research and outreach, the Office purchased an enhanced research services platform underpinned by the Ex Libris Esploro software suite.
27. Esploro provides a unified system of research data through automated capture of either direct or mediated content. Metadata curation and enrichment make published ILO content easily discoverable through various channels and institutional portals. Esploro will be leveraged to measure ILO research impact on the world of work through relevant KPIs and benchmark analysis, providing both a quantitative and qualitative assessment of content produced by individual ILO researchers.
28. The selection of software to replace the ILO public website was also completed in 2020. The new software will be implemented in 2021. The new public website will be critical in ensuring that the ILO retains its position as the leading expert on the world of work in an increasingly competitive environment.

▶ Strategy outcome 3: A more collaborative ILO

29. Outcome 3 of the IT Strategy highlighted the need for staff, constituents and social partners to leverage advances in technology in order to exchange ideas more freely, work in virtual teams and collaborate and communicate at a high level to effectively deliver on the ILO's mandate in an increasingly complex, connected and digital world. To achieve the expected benefits of outcome 3, outputs focused on delivery of fully integrated digital products to better support knowledge-sharing, teamwork and communities of practice.

Output 3.1: Enriched collaboration tools in support of substantive delivery

30. In conjunction with the migration to O365, the Office carried out five pilots with Microsoft Teams (Teams) software to assess the effort and costs associated with commencing the roll-out of Teams to facilitate enhanced collaboration in 2021.
31. Teams is a key pillar of the ILO's digital workplace and enables a shared, virtual work environment between remote and local users. It is a feature-rich and secure platform which provides for shared workspaces, conversation channels, persistent chat, instant messaging, virtual meetings, document co-authoring, document management, enhanced search and integration with dozens of third-party applications and services.
32. Several other collaborative software products were procured to integrate with Teams to support continuous improvement and innovation including Mural, Trello and Prospero. Mural and Trello are tools that support design thinking, agile methodologies, and better

management of project tasks. Proserpi provides end-to-end processes to manage innovation by making mechanisms available for engaging staff and other stakeholders on ideation, promoting the most promising ideas, initiating idea campaigns utilizing crowdsourcing, promoting a start-up mindset and recognizing the most participative contributors.

Output 3.2: An intranet that is tailored to the needs of staff based on their role and preferences

33. In support of this outcome, 13 ILO legacy sites were migrated to SharePoint in 2020 to facilitate improved internal communications. This brings to over 50 the total number of sites migrated during the IT Strategy period. The migration of all legacy intranet sites to internal communications will be completed in 2021. In addition, the Office initiated the redesign and rebranding of sites in accordance with new ILO standards. In moving beyond the ILO intranet as a platform primarily for communication, additional SharePoint intranet sites were implemented with a focus on providing support for operational activities.
34. Of particular note was the ILO Travel Portal which brings together all available content on procedures and policies for ILO travel types. Staff have direct access to travel regulations, DSA rates, exchange rates, lump sum calculations, travel agency details, laissez-passer and visa forms, and the link to the UNDSS security clearance application.

Output 3.3: An improved website that more effectively promotes the ILO's purpose and contribution to the world of work

35. As a lead agency, the ILO partnered with other stakeholders in overseeing the development and enhancement of several public-facing websites designed to achieve ILO goals through peer-to-peer collaboration, advocacy and knowledge-sharing. The following websites were developed or implemented in 2020.
 - **SKILLS and Lifelong Learning Knowledge Sharing Platform.** This web-based platform was enhanced to support content in non-official languages through automated translation. Other improvements include access for external users that allows them to contribute thoughts and ideas, new content notifications, richer country profiles and members-only spaces for event organizers and participants. Search and filtering features were also improved to help users find relevant resources and to improve overall user experience.
 - **Alliance 8.7 Knowledge Platform.** This website serves as a public knowledge hub for the ILO Global Slavery Observation (GSO) database, consisting of a collection of data on relevant laws and policies and the prevalence of forced labour and trafficking in ILO Member States. The goal of GSO is to leverage and influence policy action on these issues. In 2019, the Office developed a data entry application to capture and categorize information. In 2020, the Office built a data visualization dashboard to display the data captured in the application.
 - **Employment and Labour Markets Policies Database.** This database will provide a unique, web-based platform for ILO staff and constituents and the general public to access up-to-date information on employment and labour market policies.

Output 3.4: Fully-integrated and unified communications

36. The COVID-19 pandemic and the ensuing periods of lockdown for most ILO staff and constituents generated a need to scale up the ILO's remote meeting capabilities. Several departments worked together to set up infrastructure and services to run events with a substantial remote participation. By mid-2020, major official meetings were being held virtually using Zoom and other available technologies and services.
37. The pandemic also created the momentum for the adoption of Skype for Business, which facilitates remote communication among ILO staff and with external parties. Between April and September 2020, the Office had reached a monthly average of 13,000 remote meetings. This is expected to increase further with the deployment of Microsoft Teams.
38. The broad adoption of Skype for Business and Microsoft Teams resulted in a reduction in the ILO's dependency on traditional telephony and reduced overall telecommunication costs. It was therefore determined that there would be little financial value in migrating voice communication to voice over internet protocol, as originally envisioned in the IT Strategy.
39. With increased reliance on internet-based services, it was important to ensure that business traffic and voice communications took priority over internet browsing. Such prioritization is a core feature of the ILO standard infrastructure implemented in ILO country, regional and project office locations. Internet traffic is analysed and categorized in real time, and prioritized according to the available bandwidth and importance associated with each category.

► Synergies and cross-cutting drivers

Information security

40. Information Security Management System processes and related IT decision support systems were recertified for compliance with international standard ISO/IEC 27001. New processes required to support cloud computing services such as O365 were included in the review and deemed to be optimal and compliant with best practice.
41. The Office implemented new techniques and enhanced processes to monitor compliance with the ILO Information Security Policy for computer network usage. These measures proactively reduced the risk of targeted phishing campaigns against ILO constituents.

Governance

42. The Project Management Office (PMO) supporting the work of the Information Technology Governance Committee (ITGC) worked closely with ILO business units to clearly qualify, quantify and link the contribution of proposed IT initiatives to the achievement of specific business outcomes and outputs. Increased involvement at the portfolio level resulted in improved priority setting and long-term commitment to funding of IT initiatives. At total of 27 proposed IT initiatives submitted by departments and offices were evaluated by the PMO in 2020.
43. The ITGC determined that, given the increasing cyber risks associated with the digital landscape, all staff would be required to complete the ILO's Information Security Awareness Training Programme before accessing the ILO network and systems on their

ILO PCs, laptops, tablets and smartphones. This training therefore became mandatory as of 2020. By the end of the year, 86 per cent of staff had completed it. An escalation procedure has been implemented to ensure that all remaining staff complete the required training by the end of January 2021.

Service-level management

44. Several major projects were completed in 2020 to ensure that all current and planned IT services met customer expectations. Of particular note was the IT-related work required to support the rental of several floors of the ILO headquarters building to UNICEF.
45. The infrastructure supporting IRIS was upgraded and migrated to a new hosting provider, resulting in cost savings of nearly 30 per cent and system performance improvements of approximately 50 per cent.
46. The importance of data and analytics to support decision-making and provide the Office with valuable insight into opportunities and areas for improvement are critical to the success of the ILO's mandate. To set a baseline and determine the ILO's level of maturity in data and analytics, ILO performance was assessed by a leading research and advisory firm. The assessment covered 25 activities across seven functions of the Office. Maturity scores were measured on a scale from 1 (low) to 5 (high). The ILO achieved scores from 3 to 5 on five of the seven functions.
47. The functions where the ILO demonstrated adequate to high levels of maturity were: managing data and analytics; creating and maintaining analytics content; and integrating, managing and governing data and analytics assets. Functions where improvement was needed included the need to better align data and analytics to Office outcomes and to further develop supporting organizational structures and talent. Functions requiring improvement will be addressed in 2021.

Change management

48. INFOTEC worked closely with portfolios, departments and offices to ensure that the communication of major IT-related change initiatives was frequent and effective. Key communication events and training sessions were conducted throughout the year, whenever the use of new applications and technologies brought significant changes to underlying processes and ways of working.
49. Against the backdrop of the global COVID-19 pandemic, the rate at which new technologies and applications were deployed or accelerated required a concerted effort to ensure that staff were able to understand and apply these new technologies and applications as quickly as possible. INFOTEC worked closely with the Department of Communication and Public Information to ensure that communications were targeted to the appropriate audience. In addition to standard user engagement approaches such as user broadcasts and documentation posted on the ILO intranet, video was used extensively to train staff on these new technologies and applications. Tools were also deployed to improve the provision of remote assistance to staff teleworking over long periods of time due to the pandemic.

External partnerships

50. A number of ILO senior IT professionals continued participation in various UN committees, advisory boards and networks in 2020, including:

- United Nations System Chief Executives Board for Coordination (CEB): Digital and Technology Network and Infrastructure Transformation Subgroup
 - United Nations International Computing Centre: Management Committee and Advisory Group
 - United Nations Enterprise Resource Planning Special Interest Group
 - United Nations Disability Inclusion Strategy Working Group
 - United Nations Information Security Special Interest Group
 - United Nations Inter-Agency Telecommunications Advisory Group
 - United Nations Library and Information Network for Knowledge Sharing
 - High-Level Committee on Management of CEB: Working Group on Document Standards and Working Group on the Future of the UN Workforce
- 51.** The ILO continues to strengthen partnership and collaboration with other UN system agencies and international financial institutions in the area of cybersecurity and data protection. The Office developed and implemented an automated exchange of cybersecurity incident response data between its Azure cloud security platform and the United Nations International Computing Centre’s Common Secure platform. This software reduces the risk of cyberattacks on inter-agency projects and initiatives and has resulted in a more efficient use of human resources and a reduction in the time needed to detect and mitigate potential incidents.
- 52.** In support of the 2030 Agenda for Sustainable Development, a new technology has been selected and will be used to upgrade the Research4Life (R4L) portal. This will greatly improve the user experience. The ILO partnered with other agencies to contribute funding towards this initiative with a goal of enhancing discoverability capabilities, automating the capture of metadata and recognizing R4L partners more fully.

Risk management

- 53.** The ILO’s IT risk register was updated in 2020. Each risk identified was subjected to an impact assessment to determine the probability and potential consequences of associated risk events. A significant number of remedial actions were implemented to ensure that any remaining risk was within acceptable levels (low or medium) for all 13 identified risks.
- 54.** For the biennium 2020–21, the Governing Body approved US\$6.9 million to replace obsolete hardware and software underpinning essential ILO systems; carry out major technology upgrades; and resource new, strategic, large-scale IT initiatives. In 2020, 18 major projects were therefore carried out to replace or upgrade obsolete software and hardware. A list of these projects can be found under cross-cutting driver 6 (risk mitigation) in the 2020 Workplan Summary of IT Initiatives found on the INFOTEC public website page.⁴

⁴ IT Strategy – 2020 projects.