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| Report by the Secretary-General | |
| BUSINESS CONTINUITY - INFORMATION MANAGEMENT INTERNATIONAL TELECOMMUNICATION UNION | |

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| Summary  This document outlines three areas of investment required to ensure that ITU’s information infrastructure continues to be fit-for-purpose and secure, and that it meets the needs of ITU staff, members and other stakeholders and provides for business continuity, risk management, and disaster recovery taking account of lessons learned from the current crisis, and be better prepared for the working environment in the new ITU headquarters building. The three areas are: internal information and records management; information technology working tools and website.  To support these investments an estimated CHF 13 million is required over the next five years, either using savings, reserve account, voluntary contributions or through inclusion in the 2022-2026 strategic and financial plan.  Action required  The Council is invited to **take note** of the report and **advise** on a way forward with respect to funding.  \_\_\_\_\_\_\_\_\_\_\_\_  References  [*JIU/REP/2016/1*](https://www.unjiu.org/sites/www.unjiu.org/files/jiu_document_files/products/en/reports-notes/JIU%20Products/JIU_REP_2016_1_English.pdf) *(ITU management),* [*JIU/REP/2019/5*](https://www.unjiu.org/sites/www.unjiu.org/files/jiu_rep_2019_5_final.pdf) *(Cloud),* [*C20/15*](https://www.itu.int/md/S20-CL-C-0015/en) *(ORMS),* [*C20/43*](https://www.itu.int/md/S20-CL-C-0043/en) *(Accountability).* |

**1. Introduction**

1.1 The purpose of this document is to provide the Council with a forecast of expected investments required to ensure ITU business continuity.

1.2 Since Council 2016 approved the Organizational Resilience Management System (ORMS) framework, ITU has established the following business continuity processes (C20/15):

* Business Continuity Policy (BCP)
* Business Continuity Management System (BCMS) framework
* Business Risk Assessment (BRA)
* Activities and Enabling Processes and Priorities
* Business Impact Analysis (BIA)
* Business Continuity plans (BCP)

1.3 The benefit of these actions has been apparent in the ability of ITU to continue its business during the Covid-19 lockdown.

**2. Background**

2.1 However, there are now challenges with the current platforms, e.g. old technology with no global support with limited business continuity and disaster recovery capacity. There is limited possibility to use currently available commercial off-the-shelf applications and tools together with our existing out-dated platforms. Furthermore, the current tools are human resource intensive, with limited automation (See para. 3.1.3, below).

2.2 Replacement of the platforms will ensure ITU-wide harmonization and compliance with language requirements, designed with Artificial Intelligence/Machine Learning (AI/ML) for languages and analysis in mind; to offer commercial collaboration tools to members, providing self-service tools for all meetings, conferences and events; and to ensure adequate business continuity and disaster recover mechanisms.

2.3 The ORMS project recognized that, despite business risk assessments and the introduction of mitigation measures, unplanned major disruption to products and services (activities) can still occur both locally and globally. The efficient management of disruption necessitates a **Business Continuity Policy**.

2.4 As a result, the ORMS project undertook Business Risk Assessments and used the generic model based on the ITU Risk Management Policy to ensure systemic risk management and organizational resilience, which has nine different categories of risk (environment/man-made, infrastructure-digital disruption, human resources, organizational-event disruption, finance, infrastructure-physical disruption, stakeholder/partners, organizational-office and logistics, and environment-natural) that include potential indicators such as disruption, cause, impact and mitigation. From this methodology, a Strategic Business Impact Analysis (SBIA) was done to analyse activities and the effect that a business disruption can have upon the organization, as well as recovery time of the activity in order to restore it to enable the activity to operate upon resumption.

**3. Areas for investment**

3.1 Information and records management

3.1.1 Information and data underlie all ITU’s activities. ITU has always recognized the value of its information and taken measures to ensure that its information is safely stored, accessible, and fully usable.

3.1.2 Today, ITU’s ability to continue to manage and use its information effectively is at risk, particularly in crisis situations such as the current Covid-19 crisis, due to simultaneous and significant changes in ITU’s business environment, internal and external user needs and expectations, and rapid technology developments. As ITU transitions to its new building, the need for flexible working and paperless procedures becomes urgent, and although ITU has been adopting electronic working methods for many years, many processes are not fully digital as has been highlighted in the current crisis. ITU staff, members, and other stakeholders need to be able to access and use information online from multiple sources, in real-time and anytime (24/7), and there is a growing demand for more collaborative tools. The technology landscape is also changing, with services and systems shifting to the Cloud, and analytics, machine learning, and artificial intelligence offering opportunities to make in-depth use of data and information.

3.1.3 The systems and services that have served ITU well over the past two decades, however, are not adapted to these new requirements. Many of the systems are specialist or bespoke systems and are not interoperable or not fully interoperable. Functionality is often limited, and access is restricted. Information is siloed and therefore difficult to combine, manipulate, or re-purpose. Search tools do not cover all the locations where information is held. Significant critical business content is outside ITU’s larger, structured management systems, held in email boxes, personal email archives, on local hard drives and removeable media, in the Cloud, on servers, and on unmanaged network drives.

3.1.4 The 2019 session of the Council approved a budget to ensure that BR documents are properly protected and preserved before the demolition of the Varembé building so that they will continue to be accessible for use by authorized persons when needed. The next step is to ensure that ITU staff have the appropriate tools, infrastructure, and training to create, store, manage, and access information to continue their daily work during the building transition period and during times when access to the building is denied or restricted as presently. This requires replacing paper-dependent procedures with fully digital work processes, migrating from legacy systems to new solutions that facilitate collaboration, interoperability, and remote access, and establishing official, managed repositories for information that is currently dispersed and often inaccessible.

3.1.5 Information assets also need to be protected from loss, damage, or unauthorized disclosure or modification. The recently completed ORMS project identified cyber-attack and denial of service as significant risks to ITU information and in particular to data provided by Member States. The ORMS project also undertook a Strategic Business Impact Analysis that identified ITU’s key activities and established priorities for the activities to be recovered first in the event of a significant disruption. In most cases, recovery of these activities will require access to essential information. At the same time, data protection and data privacy are becoming a priority, requiring policies, procedures, and systems to ensure that personal information is captured, stored, and processed in ways that are secure. To address these concerns, ITU needs to develop an organization-wide data/information classification framework that would include classifying information in terms of both its need for protection from unauthorized access or disclosure (sensitivity) and its need for availability (criticality), and identifying and implementing the protection requirements for each category of information (both sensitivity and criticality) throughout the information lifecycle (creation, storage, use, and disposal).

3.1.6 Finally, digital transformation requires electronic archiving. Without the right planning, today’s information can easily be lost forever. Due to the fast evolution of technology and its fast obsolescence, ITU must take proactive steps to capture, protect, and future-proof information submitted by members as well as decisions taken on frequency allocations, satellite coordination, development of regulations and standards, and a range of other activities and responsibilities so that this content can still be accessed and used in the long-term.

3.1.7 ITU urgently needs to invest in developing digital work processes, implementing a data/information security classification system, and establishing electronic archiving. A five-year project would include the following activities:

* Establish priorities
  + Paper-dependent business processes to simplified and become fully digital
  + Types of information to be secured, protected, and preserved
* Develop policies and project plans
* Establish official, managed repositories for critical business content
* Identify and analyse the threats, risks and protection requirements to ITU information, and identify the types of information that are critical to ITU’s activities, and develop a classification scheme for sensitivity and define categories of critical records
* Identify and select electronic archiving solutions for ITU information in all formats (documents, video, audio, images, data, web, social media, etc.)
* Train staff

3.1.8 The secretariat will need to recruit experts in digital transformation, data classification, and electronic archiving on fixed duration posts. Additional costs include acquisition of systems and migration of information to new solutions. An initial estimate for this project is CHF 8 million over a five-year period.

3.2 The Information Technology (IT) working tools of the Union

3.2.1 Over the past few decades ITU’s ERP and CRM platforms, which currently run on SQL Databases on-premises, have been upgraded multiple times, enabling ITU and its delegates to take advantage of new functionalities and technologies.

3.2.2 Now SAP has re-designed its entire software offering (ERP, SRM, CRM, other) to run on HANA, an in-memory database developed by SAP, preferably in the Cloud. As a consequence, SAP announced that by 2025 (potentially to be extended until 2027) all current SAP ERP, SRM and CRM solutions should migrate to S/4HANA, SAP’s next generation business suite. In addition, ITU’s e-commerce platform needs to be migrated to C/4HANA by early 2021.

3.2.3 ITU has taken several steps in preparing for this major effort. The first phase of this migration project - the migration of ITU’s e-commerce platform to C/4HANA in the Cloud - will be kicked-off in the middle of 2020. The subsequent major phase will be the migration to S/4HANA. The target date to achieve this is December 2025.

3.2.4 The migration of ITU’s entire SAP systems landscape to C/4HANA and S/4HANA is estimated to cost approximately CHF 5 million. Part of the resources for the ERP migration effort has already approved by the Council and included in the 2020-2021 budget (2 million) and through savings (1 million) from previous years. The remaining 2 million for ERP/CRM upgrade will be included in the 2022-2025 strategic and financial plan.

3.3 ITU Website

3.3.1 The current ITU website went live in 2012 and has grown organically since. Some 2 million users visit the website each year. ITU’s current platform vendor announced in 2018 the discontinuation of its platform and regular support in the coming few years. Operating without a platform supported by the vendor poses a serious risk to business continuity and security. As the existing platform is not being further developed, this limits ITU’s possibility of taking advantage of commercially available innovations (e.g. ML/AI) existing in the market, including new tools to harmonize the website and support automated translation into the six languages. Reference is made to the Council Working Group on languages of February 2020 ([CWG-LANG/10/2](https://www.itu.int/md/S20-RCLCWGLANG10-C-0002/en)).

3.3.2 To mitigate these risks, and support innovation, including improved mobile access, ITU needs to migrate to a modern web site platform. Modern platforms facilitate harmonization and standardization of structure and features, and can be maintained by non-technical staff, thus creating new staff efficiencies. A new platform would also provide industry standard services to meet evolving expectations of membership and other stakeholders.

3.3.3 To support migration to a new platform, an initial estimate of CHF 2 million over a three-year period would be required.

**4. Conclusion**

ITU’s information infrastructure requires urgent upgrading and investment if it is to continue to be fit-for-purpose and secure, and meet the evolving needs of ITU staff, members and other stakeholders, be better able to meet future business continuity and disaster recovery needs and be prepared for the new working environment in the future ITU headquarters building.

Council is invited to take note of this report, its requests for investment, and to advise on the way forward with respect to funding.

The estimated investment funding requests amount to CHF 13 million over the next five years as follows:

1. Information and records management, estimated at CHF 8 million over 5 years
2. The Information Technology (IT) working tools of the Union, estimated at 3 million (including 2 million pending for the ERP/CRM) over the next four years
3. Communication/new web platform estimated at CHF 2 million over a three-year period.

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