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Proposed programme budget for 2022

Programme planning

Proposed programme budget for 2022

Part VIII
Common support services

Section 29C
Office of Information and Communications Technology

Programme 25
Management and support services

Contents

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 ** In keeping with paragraph 11 of resolution 72/266 A, the part consisting of the programme plan and programme performance information is submitted through the Committee for Programme and Coordination for the consideration of the General Assembly.
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Foreword

The coronavirus disease (COVID-19) pandemic starkly highlighted the criticality of information and communications technology (ICT). Our reliance on resilient and secure ICT global networks, systems and applications to enable the work of the United Nations to deliver on its mandates globally, and for intergovernmental bodies to continue to function, was apparent.

The COVID-19 pandemic represented a major test for the new integrated approach to ICT, with the creation of an integrated Office of Information and Communications Technology in 2019. While challenges arose during 2020, the benefits of that reform were apparent in the ability of the Organization to transition smoothly to largely remote working in many duty stations. Notably, the strategic decisions made by the Secretariat, including, in particular, the move to cloud computing, the choice of ICT platforms and the strengthening of the capacity to deliver enterprise projects globally, were critical to enabling business continuity from March 2020. Looking forward, in 2022 the Office will continue to implement programmes that support the strategic objectives of strengthening interoperability that allow for the effective flow of information throughout the Organization, facilitating coherent and integrated mandate implementation, where ICT is leveraged as a critical operational and strategic enabler for the work of the United Nations and where the Organization is able to respond effectively to rapidly escalating cybersecurity threats.

Ensuring coherent ICT operations across the Secretariat is enabled by a strengthened governance and policy framework that is informed by the business needs of entities and field operations globally. The Office will enhance its monitoring and compliance role to ensure the necessary adherence to policies, standards and architecture, including in the critical area of information security, and mandate delivery globally will continue to be supported by a resilient and secure global network, ICT systems and platforms, and technology solutions developed to address specific business needs and support and facilitate programme delivery.

The growing scale and complexity of cyberattacks, some specifically targeting the United Nations, remains a critical risk. During 2020, the vast majority of cyberattacks that employed malicious emails or web connections were successfully mitigated by the Office. Multifactor authentication was deployed globally and is reflected in a decrease in the number of compromised accounts during the fourth quarter of 2020 of 87 per cent, compared with the average of the previous three quarters. During 2022, the Office will also establish proactive threat hunting capabilities, replacing the existing reactive intrusion detection systems. While preventing all intrusions is not achievable, it is critical that we reduce their occurrence and manage them so as to minimize their impact.

The Office will continue to support the comprehensive data strategy laid out by the Secretary-General aimed at transforming the United Nations into a data-driven organization, where information and data better inform decision-making across all the mandates of the United Nations. While contributing to many of the related work streams, the Office is leading on technology enablers to support this transformation. Supporting the implementation of the strategy will continue to be an area of priority focus in 2022.

Innovation is a cross-cutting enabler that is foundational to the work of the Organization. During 2022, efforts will continue to expand the use of frontier technologies, such as artificial intelligence and blockchain, to build innovative technology solutions to support the work of the United Nations and mandate delivery globally. Conversational artificial intelligence will continue to be strengthened and its use expanded through integration into new systems and solutions.

Digital technologies are shaping our world and continue to transform the way we connect, communicate and collaborate. The importance of ICT to the United Nations as a strategic enabler for mandate delivery continues to grow. The strong support of the General Assembly for ICT is notable and its continued support for sustainable funding for ICT remains critical.

(*Signed*) Patrick **Carey**
Acting Assistant Secretary-General
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A. Proposed programme plan for 2022 and programme performance for 2020

Overall orientation

Mandates and background

29C.1   The Office of Information and Communications Technology is responsible for the delivery of information and communications technology (ICT) in the United Nations. The mandate derives from the priorities established in relevant General Assembly resolutions and decisions, including resolutions 63/262 and 72/266 B. The impact of the coronavirus disease (COVID-19) pandemic has starkly highlighted the importance of ICT in supporting business continuity and mandate delivery across the Secretariat and in intergovernmental bodies.

Strategy and external factors for 2022

29C.2   In 2022, the Office will continue to implement programmes that support the strategic goals of ensuring an environment where interoperability allows information to flow effectively throughout the Organization, facilitating coherent and integrated mandate implementation, where ICT is leveraged as a critical operational and strategic enabler for the work of the United Nations and where the Organization is protected from rapidly escalating cybersecurity threats.

29C.3   The Office will continue to play a lead role in strengthened governance of ICT operations across the Secretariat. Overseen by an expanded ICT Steering Committee, this includes a strengthened policy framework and more proactive engagement of the global ICT community. The Office will also enhance its monitoring and compliance role to ensure adherence globally to applicable ICT policies, standards and architecture, including in relation to information security.

29C.4   The Office supports and facilitates the implementation of mandates by departments, offices and field operations globally. This entails, as a first step, the provision of a resilient and secure global network and ICT systems, platforms and applications that enable collaboration and communication across the Secretariat and across the wider United Nations common system. During 2022, the Office will continue to ensure that ICT infrastructure is maintained and, where required, upgraded to support business continuity, through the required capital expenditures. The Office will also support mandate delivery by Secretariat entities through the development and deployment of technology and data services and solutions that facilitate their programmatic delivery.

29C.5   As demonstrated during the move to largely remote working during the COVID-19 pandemic, the adoption of enterprise platforms that are cloud-based, where United Nations personnel can collaborate and connect regardless of their location, proved critical for the Organization as it adapted to new ways of working. Because of this ongoing programme of work, United Nations personnel have a single place to meet, communicate, share files and collaborate, enabling a mobile and digital workforce. The shift to enterprise platforms from legacy applications will continue, leading to a more cohesive, coherent and resilient ICT ecosystem, as will the strategic shift to cloud-based services.

29C.6   Although capacity has been strengthened, priority will continue to be given to information security, as the United Nations continues to face challenges with regard to adequately mitigating the growing, scale and complexity of cybersecurity threats. During 2022, the Office will establish proactive threat hunting capabilities, replacing the existing reactive intrusion detection systems. This transition will decrease reliance on outsourced services and strengthen internal capacity that is solely focused on United Nations operations, as both the internal ICT landscape as well as the external threat landscape evolve. The Office will also continue to carry out cybersecurity assessments of Secretariat entities to identify risks and, where required, recommend mitigating measures. These assessments can also identify systemic issues that require broader action.

29C.7   The Office will support efforts to transform the Organization to one that more effectively uses data and information to support decision-making and inform strategic direction. This work will be aligned with the Data Strategy of the Secretary-General for Action by Everyone, Everywhere and support the strategic goal of strengthening interoperability. While contributing to many of the related work streams, the Office will lead in the creation of technology enablers to support this transformation. Analytics and data solutions will also continue to be implemented, and associated standards and architecture will be formulated to achieve a consistent approach to data. Work on self-service analytics and other advanced analytics tools will continue to expand, building a cadre of United Nations staff globally who are able to produce analytics products to enhance transparency and enable decision-making as required. Other data-driven initiatives will continue to be deployed globally during 2022. The Office will also support areas such as policy formulation and the governance of information management. The continued shift to cloud-based services will also be instrumental to the implementation of the Data Strategy.

29C.8   Innovation will continue to underpin the work of the Office. Efforts will continue to identify frontier technologies, such as artificial intelligence and blockchain, to build innovative technology solutions to support the work of the United Nations and mandate delivery globally. Conversational artificial intelligence will continue to be strengthened and its use expanded through integration into systems and solutions.

29C.9   For 2022, the Office's planned deliverables and activities reflect known and anticipated challenges related to COVID-19 that are being faced by Member States. Such planned deliverables and activities include continued support in order to maintain the business continuity of the Secretariat and intergovernmental bodies, ensuring that platforms and solutions adequately support remote or hybrid working methods or meetings. Specific examples of such planned deliverables and activities are provided under subprogramme 2.

29C.10   With regard to interoperability and inter-agency coordination, the Office will build on the significant progress of 2020, through which access to collaboration on Secretariat platforms was provided to more than 100,000 personnel from agencies, funds and programmes. Globally, this has facilitated collaboration across the larger United Nations common system and supported coherence in mandate delivery.

29C.11   With regard to the external factors, the overall plan for 2022 is based on the planning assumption that major contractual or licence costs with vendors will not increase at a rate greater than standard inflation.

29C.12   With regard to the COVID-19 pandemic, the proposed programme plan is based on the assumption that the proposed deliverables and activities for 2022 will be feasible to implement. However, if the pandemic were to have a further impact on the planned deliverables and activities, they would be adjusted during 2022 within the scope of the overall objectives, strategies and mandates. Any such adjustments would be reported as part of the programme performance information.

29C.13   The Office integrates a gender perspective in its operational activities, deliverables and results, as appropriate. For example, under subprogramme 3, the enterprise talent management platform now provides hiring managers with analytics during the assessment stages of the recruitment process to ensure that gender parity is taken into consideration throughout the hiring life cycle. In addition, the United Nations Careers Portal is being redesigned to attract and engage a diverse audience, and contribute to a workforce that reflects the breadth of Member States' nationalities, including through increased gender parity and diversity. The Office also continued to work with the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) and the Office of Human Resources on efforts to increase the participation of women in its own workforce and in ICT throughout the Secretariat.

Programme performance in 2020

Impact of COVID-19 on programme delivery

29C.14   During 2020, the COVID-19 pandemic had an impact on the planned deliverables and activities of the Office. The COVID-19 pandemic starkly highlighted the criticality of ICT to the ability of the United Nations to function and represented a major test for the new integrated approach to ICT. The strategic decisions and investments made by the Secretariat, in particular with regard to the move to cloud computing and ICT platform choices, were critical to enabling business continuity during this period, as was the strengthened capacity of the Office to deliver enterprise applications Secretariat-wide since the introduction of management reforms. The deployment in September 2019 of a new integrated software suite that supports productivity, communication and collaboration from any location and addresses a number of complex issues related to interoperability, information security and information management proved instrumental in enabling the work of the Organization to continue uninterrupted, even when the suite became necessary to many staff who were put on mandatory telecommuting arrangements at short notice. However, supporting the Secretariat required strengthening and increasing the capacity of ICT applications, developing new ICT platforms, strengthening cybersecurity and creating guidance on how to work within the new environment. Intergovernmental bodies also needed additional support to function virtually, including with regard to addressing challenges such as simultaneous interpretation. Supporting the ability of the United Nations to communicate globally through virtual events also needed enhancements to the capacity available in March 2020. The results of these efforts became evident during the largely virtual high-level segment of the seventy-fifth session of the General Assembly.

29C.15   Reflecting the importance of continuous improvement and responding to the evolving needs of Member States, the programme will mainstream lessons learned and best practices related to the adjustments and adaptation of its programme owing to the COVID-19 pandemic. Specific examples of lessons learned that will be prioritized include the mainstreaming and enhancement of technologies to support a flexible and secure working model that incorporates remote and hybrid working arrangements. This includes incorporating cybersecurity tools to ensure protection from cyberthreats and secure remote support and software updating capabilities. The need to provide a similar experience for ICT users irrespective of their location is a technology challenge that will continue to be addressed, and will include the adaptation of applications and the proper equipping of personnel to work on-site and/or remotely. Much effort was expended to continually repurpose and rebuild the technology infrastructure in physical conference rooms at Headquarters to facilitate virtual/hybrid meeting participation, as the risk assessments for safety, health standards and social distancing continually changed and evolved during 2020. The COVID-19 pandemic has demonstrated that the Organization's global ICT infrastructure and applications need to be adaptable to changing requirements and be accessible from anywhere, with minimum intervention from the user community. The continued migration to the cloud in 2022 will strengthen the performance, availability and security of the Organization's applications and data, providing more options for agile and flexible approaches to delivering solutions to end users.

Legislative mandates

29C.16   The list below provides all mandates entrusted to the programme.

General Assembly resolutions

63/262	Information and communications technology, enterprise resource planning, and security, disaster recovery and business continuity
69/262, sect. II	Questions relating to the programme budget for the biennium 2014–2015: information and communications technology in the United Nations
70/248 A, sect. V	Special subjects relating to the proposed programme budget for the biennium 2016–2017: information and communications technology in the United Nations
71/272 B, sect. III	Special subjects relating to the programme budget for the biennium 2016–2017: status of implementation of the information and communications technology strategy for the United Nations
72/262 C, sect. I	Special subjects relating to the programme budget for the biennium 2018–2019: status of implementation of the information and communications technology strategy for the United Nations
72/266 B	Shifting the management paradigm in the United Nations

Deliverables

29C.17   Table 29C.1 lists all cross-cutting deliverables, by category and subcategory, for the period 2020–2022.

Table 29C.1
Cross-cutting deliverables for the period 2020–2022, by category and subcategory

Category and subcategory	2020 planned	2020 actual	2021 planned	2022 planned
A. Facilitation of the intergovernmental process and expert bodies				
Parliamentary documentation (number of documents)	**1**	**–**	**–**	**–**
1. Report of the Secretary-General on the status of implementation of the information and communications technology strategy	1	–	–	–
Substantive services for meetings (number of three-hour meetings)	**3**	**3**	**3**	**3**
2. Meetings of the Fifth Committee	1	1	1	1
3. Meetings of the Committee for Programme and Coordination	1	1	1	1
4. Meetings of the Advisory Committee on Administrative and Budgetary Questions	1	1	1	1

Evaluation activities

29C.18   A self-evaluation on data classification completed in 2020 guided the programme plan for 2022.

29C.19   The findings of the self-evaluation referenced above have been taken into account for the programme plan for 2022, which will assess the compliance of ICT systems and services against the established enterprise architecture, while noting that an examination of data and data classification is an important prerequisite for enterprise architecture, which is designed to ensure that ICT systems and services are implemented in a manner that supports the needs of the Organization for data and information and that they support the work of the offices and departments of the Secretariat. In addition, the enterprise architecture supports strategic aspects of ICT by increasing coherence, which facilitates cybersecurity efforts and supports interoperability.

29C.20   A self-evaluation of the compliance of information and communication technology systems and services against the enterprise architecture is planned for 2022.

Programme of work

Subprogramme 1
Strategy and technology innovation

Objective

29C.21   The objective, to which this subprogramme contributes, is to enhance an innovative, secure, unified digital space for the United Nations.

Strategy

29C.22   To contribute to the objective, the subprogramme will continue to focus on the establishment of strategies, policies and governance, as well as the provision of advisory services covering information technology, innovation and information management, including cybersecurity management services, to the Organization. The subprogramme works closely with United Nations clients to identify their key data, information and technology priorities or challenges and facilitate the adoption of solutions to meet their needs. By working in close collaboration with internal and external partners, the subprogramme ensures results through the innovative, integrated and secure design and implementation of technology solutions. The subprogramme supports the core work of the United Nations by using emerging innovative technologies, such as artificial intelligence, machine learning and distributed ledger technology, to provide strategic solutions and enabling environments in partnership with relevant United Nations entities. Strategic and policy aspects of information management are central to this subprogramme, as is the implementation of the Data Strategy of the Secretary-General.

29C.23   The use of technology to support the core work of the United Nations is established in General Assembly resolution 69/262, and technology innovation is a pillar of the information and communications technology strategy for the United Nations. The subprogramme also supports United Nations entities in reducing the level of risk to the image, resources, data, operations and safety of the personnel and assets of the United Nations. The subprogramme promotes information security campaigns, supports and implements security measures, strengthens proactive threat management capabilities and promotes the use of advanced security features. In parallel, the subprogramme's efforts also focus on supporting Secretariat entities to ensure that information security risks do not hamper efforts to implement United Nations mandates or adversely affect support to Member States. The subprogramme further helps to facilitate access to data across the Organization by leveraging modern technology, strengthens data literacy by co-leading the implementation of the Data Strategy and governs information and data management. The subprogramme will continue to develop and strengthen information management strategies and policies as well as promote the effective use of data.

29C.24   The above-mentioned work is expected to result in:

(a)   Better awareness of innovation techniques and new technologies, and increased capacity of Secretariat entities to deliver on mandates;

(b)   Strengthened resilience of the Organization and better awareness by end users of existing and future threats, and a strong central capability and capacity to support the global Secretariat in safeguarding the data, information, services, solutions and infrastructure of the United Nations;

(c)   Improved use of information and data by departments and offices;

(d)   A coherent ICT landscape in the Secretariat through compliance with policies, procedures and guidelines as well as common standards, strategies and architecture.

Programme performance in 2020

29C.25   Programme performance in 2020 includes the below result that emerged during 2020, as well as programme performance presented under results 1 and 2 below.

Improved security of technology environment and responsible and innovative use of information and communications technology solutions

29C.26   Given the interconnected nature of the Organization's systems and data, all entities of the Secretariat, including field missions, have a role in keeping the overall ecosystem safe. Cybersecurity has become a key enabler of not only regular ICT operation, but also the ability of the Organization to deliver on its mandates. As part of the ongoing efforts to improve the cybersecurity posture of the Organization, the subprogramme conducted four cybersecurity assessments at different field missions in 2020 (the United Nations Mission in South Sudan (UNMISS), the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA), the United Nations Integrated Office in Haiti (BINUH) and the United Nations Interim Administration Mission in Kosovo (UNMIK)). Further assessments were put on hold owing to COVID-19-related travel restrictions but are expected to be resumed as soon as the situation allows. These assessments focused on the different cybersecurity risks that each mission operates under, and attempted to detect attack vectors that, if exploited by an adversary, could have a negative impact on the ability of the mission to operate safely or allow unauthorized access to the mission's information and/or assets. Knowledge transfer activities were also conducted to help the mission proactively tackle cybersecurity risks going forward.

29C.27   The subprogramme also supported mandate delivery by Secretariat entities through the development of software solutions for use by Member States in their jurisdictions. These solutions help counter money-laundering and the financing of terrorism, detect the travel of terrorists and serious criminals, manage land registries and educate primary school students. In this regard, the subprogramme completed key technical components of the goTravel solution for the Office of Counter-Terrorism, which is used to facilitate the detection of terrorists and serious criminals and their travel movements in compliance with Security Council resolutions 2178 (2014), 2396 (2017) and 2482 (2019). Another successful application of emerging technologies, in partnership with the United Nations Children's Fund, is the learning platform UNILEARN, which was built and piloted for 120,000 primary school children, parents and teachers in the state of Rajasthan, India. The subprogramme has also supported the United Nations Human Settlements Programme (UN-Habitat) on the implementation of a blockchain-enabled solution to improve the capacity of Afghanistan to manage land registry records.

Progress towards the attainment of the objective, and performance measure

29C.28   The above-mentioned work contributed to the objective, as demonstrated by Member States, in collaboration with other United Nations entities, having access to innovative United Nations technology solutions, and the improved cybersecurity posture of the Organization that enables it to detect potential attack vectors before they are exploited (see table 29C.2).

Table 29C.2
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)
The United Nations Mission for the Referendum in Western Sahara and the United Nations Military Observer Group in India and Pakistan have an increased awareness and practical knowledge of risks and mitigation measures	Passenger data management solution established to facilitate detection of terrorists' travel The United Nations Assistance Mission in Afghanistan and the United Nations Support Office in Somalia/United Nations Assistance Mission in Somalia have access to up-to-date cybersecurity assessments and areas to improve security of technology environment were identified	The Caribbean Community and Botswana have access to goTravel through collaboration with the Office of Counter-Terrorism Afghanistan has access to the land registry solution through the UN-Habitat/Government of Afghanistan "City for All" programme UNMISS, MINUSMA, BINUH and UNMIK have access to up-to-date cybersecurity assessments and mitigation and improvement measures by missions have commenced

Impact of COVID-19 on subprogramme delivery

29C.29   Owing to the impact of COVID-19 during 2020, the subprogramme cancelled the 2020 data symposium event, which resulted in a greater effort to coordinate data awareness and outreach and slowed engagement with key ICT stakeholders. The subprogramme also had to change its approach to some advisory services, such as on-site information management services for United Nations entities. This change resulted in reduced scope for the provision of policy governance advice and the sharing of best practices. The cybersecurity assessments of field missions have been postponed until travel restriction are lifted. However, the subprogramme supported efforts to strengthen the information security of the Organization as new risks and threats emerged in the virtual workspace environment. A significant increase in demand was noted for: (a) security architecture services that supported remote working arrangements, including the development of solutions for the remote management of computers, remote access to internal applications and assessments of remote simultaneous interpretation platforms; and (b) additional threat monitoring and incident response requirements due to increased cybersecurity threats. However, these demands created an overload on the existing resources, which were also affected by the liquidity crisis. These changes had an impact on the programme performance in 2020, as specified under results 1 and 2 below.

Planned results for 2022

29C.30   The planned results for 2022 include results 1 and 2, which are updates of results presented in the preceding proposed programme plans and therefore show both the programme performance in 2020 and the proposed programme plan for 2022. Result 3 is a new planned result.

Result 1: better information, enhanced data sharing and reduction in risk of security breaches[1]

Programme performance in 2020

29C.31   The subprogramme has drafted an information management framework in consultation with entities across the Secretariat and other United Nations organizations. Once endorsed, the framework will create opportunities to generate standardized principles, policies, guidelines and procedures, and

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[1] As reflected in the proposed programme budget for 2020 (A/74/6 (Sect. 29C)).

facilitate access to and the sharing of information while reducing the risk of its duplication. The subprogramme also established information governance strategies for enterprise solutions, such as Unite Workspace, and continued to provide guidance and support to client departments on the adoption of technology solutions. Furthermore, the subprogramme, in coordination with the Executive Office of the Secretary-General, is leading the implementation of the "technology environment" enabler outlined in the Data Strategy of the Secretary-General by providing strategic coordination and oversight of United Nations technology, governance and processes.

29C.32   The above-mentioned work contributed to the adoption by client departments of some policies and procedures, such as the technical procedure for data classification and the technical procedure for sharing information with external parties, and the adoption by client departments of new technology solutions such as Unite Workspace, which did not fully meet the planned target of adoption by client departments of new policies and procedures and adoption by client departments and Member States of new technology solutions. The target was not fully achieved because, owing to liquidity constraints, capacity and resources were insufficient to develop all the supporting guidance documents needed during 2020 to support the information management framework.

Proposed programme plan for 2022

29C.33   The subprogramme will continue the work related to the planned result, in line with its mandate. To contribute to further progress towards the objective and in response to recent developments, the work in this subprogramme will evolve to include continued coordination on the technology environment enabler outlined in the Data Strategy of the Secretary-General, the implementation of the information management framework, the creation of policies, guidelines and standards to support the information management framework and the development of a compliance function. The expected progress is presented in the updated performance measure below (see table 29C.3).

Table 29C.3
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)	2021 (planned)[a]	2022 (planned)
• Discussions between client departments on the information security governance framework	• Identification by client departments of standards for analytics and business intelligence systems and data	• Adoption by client departments of some policies and procedures, such as the Secretariat ICT technical procedure on sharing information with external parties and the job aid on guidance on the use of electronic signatures • Adoption by client departments of new technology solutions, such as Unite Workspace	• Adoption by client departments of the use of conversational artificial intelligence	• Adoption of the information management framework and two supporting policies and guidelines by client departments • Usage by clients of a compliance function to monitor and assess the effectiveness of controls established in policies and procedures

[a] To maintain accountability for initial programme plans, the 2021 target is carried forward from the proposed programme budget for 2021 and reflects best estimates at that point in time before the COVID-19 pandemic. Programme performance for 2021 will be reported in the proposed programme budget for 2023.

Result 2: mainstream the use of artificial intelligence[2]

Programme performance in 2020

29C.34   The subprogramme has launched an artificial intelligence-based chatbot for Secretariat staff that includes a number of initial skills such as the ability to impart information about COVID-19, basic facts about the United Nations and its senior leadership, information about the Sustainable Development Goals and the management of email and calendars. The chatbot system provides an intuitive interface that allows users to quickly get the information they need from multiple sources in a more precise and informative way. It also provides personalized and secure virtual assistance by performing personal tasks related to messaging and calendar management. The subprogramme will also continue to expand on the chatbot's skills and promote its use across the different departments of the United Nations. Over time, as the system evolves, it will be able to provide support for the departments' unique operational needs.

29C.35   The subprogramme will continue to provide frontier technologies that can be used by the departments and offices of the Secretariat, in accordance with ICT policies, standards and architecture, to support the implementation of their mandates. In addition, the subprogramme will continue efforts related to the establishment of partnerships throughout the United Nations system.

29C.36   The above-mentioned work contributed to users having access to conversational artificial intelligence in order to find information, which met the planned target of the development of an artificial intelligence-based chatbot prototype, "Alba", and the building of United Nations context-aware language understanding capabilities, reflected in the proposed programme budget for 2021.

Proposed programme plan for 2022

29C.37   The subprogramme will continue the work related to the planned result, in line with its mandate. To contribute to further progress towards the objective and in response to recent developments, the subprogramme's work will evolve to include the implementation of the conversational artificial intelligence platform in other official languages of the United Nations and the alignment of frontier and emerging technologies with organizational priorities and the Data Strategy of the Secretary-General, as well as the use of conversational artificial intelligence in the context of enterprise applications, such as those related to policies and processes. The expected progress is presented in the updated performance measure below (see table 29C.4).

Table 29C.4
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)	2021 (planned)[a]	2022 (planned)
• Research and development of core building blocks for natural language processing	• Building of United Nations context-aware language understanding capabilities • Development of artificial intelligence-based chatbot prototype, Alba	• Users have access to conversational artificial intelligence to find information • Availability of 9 artificial intelligence capabilities for offices and departments	• Full realization of the benefits of conversational artificial intelligence • Applications can include conversational artificial intelligence capabilities	• Availability of conversational artificial intelligence in 3 official languages of the United Nations

[a] To maintain accountability for initial programme plans, the 2021 target is carried forward from the proposed programme budget for 2021 and reflects best estimates at that point in time before the COVID-19 pandemic. Programme performance for 2021 will be reported in the proposed programme budget for 2023.

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[2] As reflected in the proposed programme budget for 2021 (A/75/6 (Sect. 29C)).

Result 3: seamless access to United Nations data for all personnel

Proposed programme plan for 2022

29C.38   The Organization must be able to respond to complex situations in the most efficient and well-informed way. A quick, effective response across multiple geographic and disciplinary layers requires the intelligent management of large amounts and a large variety of data. Managers and decision makers can be supported to find the information they need to make fast, well-informed decisions. The subprogramme aims at supporting data-driven decision-making by making sure that the Secretariat's technology tools and processes are aligned to empower United Nations personnel in the optimal use of data for insight, impact and integrity. An internal pilot project to catalogue data was implemented as an initial step, and research was conducted on data exchange platforms and best practices.

Lessons learned and planned change

29C.39   The lesson for the subprogramme was that there were fragmented data infrastructures in the Organization that prevented data interoperability and systems integration. In applying the lesson, the subprogramme will work on a subset of authoritative data sets and will assess how the data exchange platform can be extended to accommodate all data sources, and at the same time look at opportunities to harmonize the United Nations data infrastructures. The subprogramme will provide United Nations personnel with a data exchange platform that serves as a central gateway to authoritative data sources. It will include vital information about the data and where and how the data can be accessed. The key activities will include the identification of the data sources and coordination with the data owners to establish appropriate governance and a data literacy programme. In addition, the subprogramme will also integrate governance functionality into the platform to support data quality and monitor compliance with established governance policies. Universal access to the data can be achieved with the implementation of an Organization-wide data provisioning and distribution model that allows data access to specific users in a well-governed and secure manner. The subprogramme will continue to build and extend on the capabilities of the data exchange platform based on lessons learned from the pilot project. The data exchange platform will leverage machine learning and other artificial intelligence techniques to accelerate and automate data management and governance processes.

Expected progress towards the attainment of the objective, and performance measure

29C.40   This work is expected to contribute to the objective, as demonstrated by clients having access to available authoritative data sources to help them in their decision-making processes (see table 29C.5).

Table 29C.5
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)	2021 (planned)	2022 (planned)
–	–	–	Users in 3 entities have access to authoritative data sets which help them in a wide array of decision-making processes	An additional 6 entities have access to authoritative data sets which help users in a wide array of decision-making processes

Deliverables

29C.41   Table 29C.6 lists all deliverables, by category and subcategory, for the period 2020–2022 that contributed and are expected to contribute to the attainment of the objective stated above.

Table 29C.6
Subprogramme 1: deliverables for the period 2020–2022, by category and subcategory

Category and subcategory

E. Enabling deliverables

Information and communications technology: formulation, updating and institutionalization of ICT and information management policies and standards; enterprise architecture framework and compliance oversight mechanism; analytics and innovation guidelines for oversight and accountability; analytics and frontier technology solutions accessible to Secretariat entities: repeatable technology solutions and realization of the benefits of conversational artificial intelligence; expert advice to ICT service providers on information management; policies and procedures for data privacy and mechanisms for oversight of adherence to data privacy principles; disaster recovery plan for critical systems; and information security framework across Secretariat entities, comprising a framework document on information security and security assessment of systems and entities.

Subprogramme 2
Operations support

Objective

29C.42   The objective, to which this subprogramme contributes, is to achieve an optimized ICT infrastructure and technology environment for all United Nations entities, within which the Organization's global technology solutions, systems and applications are delivered securely and in an intuitive manner.

Strategy

29C.43   The subprogramme will continue to implement and upgrade systems and infrastructure to enable the Secretariat and Member States to effectively deliver on the Organization's core work and deliverables. The rapid adoption of global enterprise platforms gives users a single place to meet, communicate, share files and collaborate, enabling a mobile and digital workforce. Further work is planned to enable broader collaboration and the sharing of information within the larger United Nations common system with the continued goal of simplification of the underlying information and communications technology infrastructure.

29C.44   The subprogramme will contribute to enabling the Data Strategy of the Secretary-General. The implementation of self-service analytics and other advanced analytics tools will continue to expand the cadre of United Nations staff globally who can produce their own analytics products to enhance transparency and enable decision-making. Other data-driven initiatives, such as the situational awareness technology platform Unite Aware and the Unite field remote infrastructure monitoring system, will continue to be rolled out globally, supporting data-driven decision-making by senior management in peace operations.

29C.45   The subprogramme will continue to implement hybrid cloud hosting, which is transforming how the Organization hosts its data and applications. Consolidating the Organization's data primarily in a United Nations-managed cloud environment will facilitate the objective of the Data Strategy of the Secretary-General to simplify access to the Organization's data.

29C.46   The subprogramme will continue to advance the delivery of ICT support and services through a standardized information technology service management framework; create a cross-cutting client service desk approach to carry out the Secretariat's customer relationship management activities; provide around-the-clock support for enterprise applications such as Umoja, Inspira and Unite Mail;

provide faster resolution of incidents and service requests; and increase customer satisfaction and application uptime.

29C.47   The subprogramme plans to support Member States on issues related to COVID-19 by continuing to facilitate virtual collaboration across the United Nations system, supporting intergovernmental meetings through a hybrid model that caters to both in-person and remote participants.

29C.48   The above-mentioned work is expected to result in:

(a)   The facilitation of mandate delivery by Secretariat entities by a modern, resilient and secure global ICT infrastructure;

(b)   Greater collaboration across the United Nations common system that supports the Secretariat in the execution of its mandates with greater agility;

(c)   A modern and secure technology environment that serves as the foundation for the Data Strategy of the Secretary-General;

(d)   A user base that is capable and familiar with the systems and processes required to present relevant information to inform decision makers in the most optimal way;

(e)   Improved satisfaction of end users with ICT enterprise services and increased engagement and communication with clients;

(f)   Enterprise-level solutions to facilitate complex intergovernmental meetings and remote access, verbatim report-writing and translation, interpretation, broadcast and webcast capabilities.

Programme performance in 2020

29C.49   Programme performance in 2020 includes the below result that emerged during 2020, as well as programme performance presented under results 1 and 2 below.

Business continuity in the time of COVID-19

29C.50   The subprogramme supported the work of the Secretariat and intergovernmental bodies from the onset of the COVID-19 pandemic in March 2020, which required strengthening and increasing the capacity of ICT infrastructure and broadcasting and conferencing systems, the commissioning of new ICT remote simultaneous interpretation platforms and the issuance of guidance on how to work in the new virtual environment.

29C.51   The United Nations videoconferencing capacity was increased from 400 simultaneous connections globally on 15 March to 1,000 by June 2020. This upgrade was critical to enabling large complex meetings of intergovernmental bodies to run simultaneously. A new virtual meeting platform was introduced that allowed up to 1,000 participants to interact. The procurement of three remote simultaneous interpretation systems was completed and integrated into existing conference room systems.

Progress towards the attainment of the objective, and performance measure

29C.52   The above-mentioned work contributed to the objective, as demonstrated by the enhanced capabilities detailed above. The subprogramme ensured that the Secretariat and intergovernmental bodies were provided with the technical solutions to enable business continuity and mandate delivery following the move to largely remote working as a result of the restrictions imposed because of the COVID-19 pandemic (see figure 29C.I).

Figure 29C.I
Performance measure: number of simultaneous United Nations videoconferencing connections globally
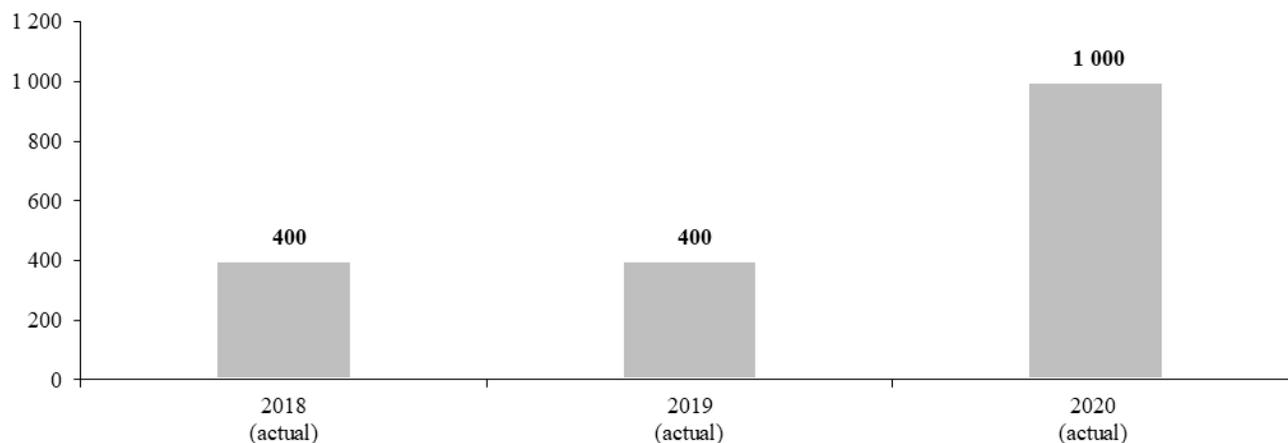
Impact of COVID-19 on subprogramme delivery

29C.53   Owing to the impact of COVID-19 during 2020, the subprogramme postponed the planned establishment of an operations centre simulation training environment at the Regional Service Centre in Entebbe, Uganda, as a result of restrictions on the travel of passengers and the transport of cargo.

29C.54   At the same time, from the outset of the pandemic, the subprogramme supported the work of the Organization and its personnel with regard to working remotely, as it had the appropriate enterprise tools and systems in place and the capacity to scale up to the required levels. This enabled the Secretariat workforce to effectively transition in a short number of weeks in March 2020 to primarily remote working in many duty stations. This also enabled the Organization to continue mandate implementation globally by facilitating communication and collaboration. To continue to support meetings of intergovernmental bodies, the subprogramme transitioned to a new model, facilitating complex meetings with both full remote participation and hybrid in-person and remote participation.

Planned results for 2022

29C.55   The planned results for 2022 include results 1 and 2, which are updates of results presented in the preceding proposed programme plans and therefore show both the programme performance in 2020 and the proposed programme plan for 2022. Result 3 is a new planned result.

Result 1: technology towards a connected United Nations[3]

Programme performance in 2020

29C.56   During 2020, the subprogramme delivered fit-for-purpose ICT infrastructure and platforms that allowed the Organization to connect, collaborate and communicate. The rapid move to remote working in many duty stations due to COVID-19 starkly highlighted the criticality of ICT to the ability of the United Nations to function. The strategic decisions, including the move to the cloud and the global deployment of the Unite Mail and Unite Workspace suite of collaboration and communication tools, completed in September 2019, were critical to enabling the Secretariat to transition to a digital workforce.

29C.57   The above-mentioned work contributed to increased customer satisfaction with Unite Service Desk services, resulting in a customer satisfaction level of 94 per cent, which exceeded the planned target of 85 per cent customer satisfaction reflected in the proposed programme budget for 2020, and

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[3] As reflected in the proposed programme budget for 2020 (A/74/6 (Sect. 29C)).

phase 2 of the Unite Workspace project migrated a large volume of United Nations files from local infrastructure in duty stations to centrally managed locations, providing remote access to the files.

Proposed programme plan for 2022

29C.58 The subprogramme will continue the work related to the planned result, in line with its mandate. To contribute to further progress towards the objective, the subprogramme will pursue enhancements to the collaboration and communication platforms, such as seamless sharing of complex files, collaboration in real time and integration with the telephony system, which will result in increased customer satisfaction. The expected progress is presented in the performance measure below (see figure 29C.II).

Figure 29C.II
Performance measure: customer satisfaction with services delivered
(Percentage)
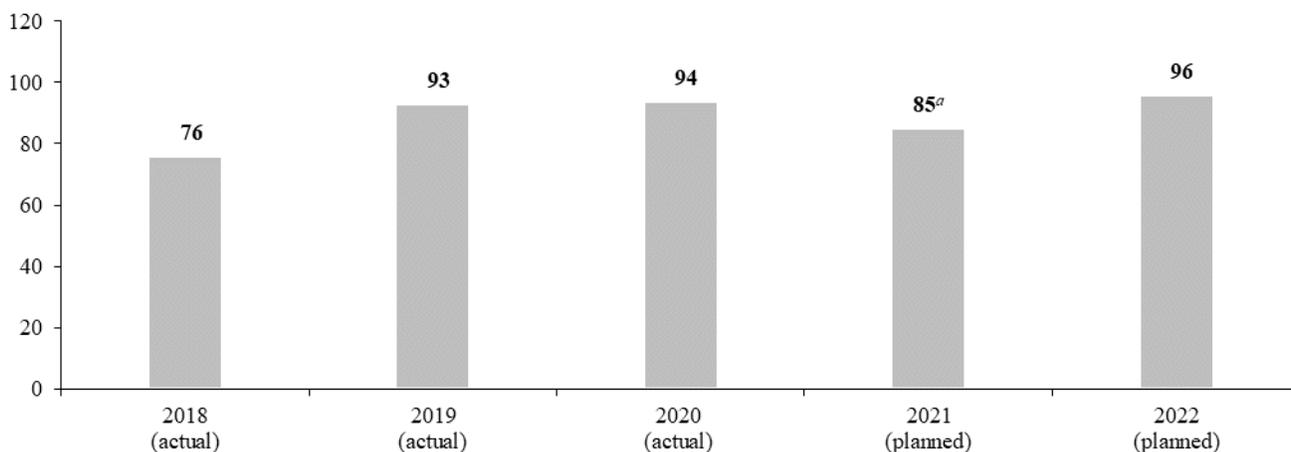
[a] To maintain accountability for initial programme plans, the 2021 target is carried forward from the proposed programme budget for 2021 and reflects best estimates at that point in time before the COVID-19 pandemic. Programme performance for 2021 will be reported in the proposed programme budget for 2023.

Result 2: improved collaboration[4]

Programme performance in 2020

29C.59 The subprogramme's implementation of Unite Workspace phase 2 delivered a suite of collaborative tools to more than 56,000 users globally, and migrated locally stored files to the cloud so that they are now accessible from each end-user device, including mobile devices. The Unite Service Desk revised its catalogue and provided global support for these new solutions. Furthermore, the subprogramme continued the delivery of business intelligence products, allowing staff to produce their own dashboards, thereby facilitating decentralized and local decision-making.

29C.60 Following the transfer of the resident coordinator system to the Secretariat, the subprogramme has focused on supporting greater interoperability between the Secretariat and the agencies, funds and programmes of the United Nations system. Technical solutions are being implemented in a phased manner to enable business-to-business connections among entities, allowing the personnel of United Nations system organizations to gain access to the information services and collaboration platforms of other organizations of the United Nations system. To date, approximately 105,000 staff members from United Nations system organizations and affiliates have been provided access to Secretariat

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[4] As reflected in the proposed programme budget for 2021 (A/75/6 (Sect. 29C)).

collaboration and file-sharing platforms. This has enabled broad collaboration across the United Nations common system, increasing client satisfaction with services provided by the subprogramme.

29C.61 The above-mentioned work contributed to clients having access to real-time solutions, including the new collaborative tools, to resolve their own issues quickly, which met the planned target reflected in the proposed programme budget for 2021.

Proposed programme plan for 2022

29C.62 The subprogramme will continue the work related to the planned result, in line with its mandate. While the subprogamme will continue the delivery of collaboration and communication platforms and self-service analytical tools to the Secretariat, access to these platforms and tools will be provided progressively to other United Nations system organizations in the context of the Data Strategy of the Secretary-General (see table 29C.7).

Table 29C.7
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)	2021 (planned)[a]	2022 (planned)
The continuous focus on efficiency and automation decreased the resolution time by 66 per cent for all supported applications; for Umoja, Inspira and Unite Mail, which account for 69 per cent of the service requests, the average resolution time was just three hours	Unite Service Desk consolidated further tier 1 service desks; resolution time decreased by more than 50 per cent; and Unite Service Desk achieved an all-time high average customer satisfaction rate of 93 per cent	Clients have access to real time solutions, including the new collaborative tools, to resolve issues quickly	The continual deployment of new software and development of more functionalities within the client portal will improve the client experience and reduce resolution time	Clients have improved access to real-time solutions and collaboration tools, including use of artificial intelligence and machine-learning methods

[a] To maintain accountability for initial programme plans, the 2021 target is carried forward from the proposed programme budget for 2021 and reflects best estimates at that point in time before the COVID-19 pandemic. Programme performance for 2021 will be reported in the proposed programme budget for 2023.

Result 3: enhanced situational awareness for decision makers

Proposed programme plan for 2022

29C.63 The subprogramme successfully completed piloting Unite Aware in the United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA) at the end of 2019. Unite Aware is a technology platform designed to provide a coherent and comprehensive approach to situational awareness and information analysis for United Nations peace operations. The Unite Aware platform standardizes the technologies used to collect and manage a broad range of data and information sources in a secure manner and then presents that information to non-uniformed and uniformed decision makers by means of visualization, reporting and analysis instruments. The holistic approach taken has delivered a coherent and intuitive technology platform and associated processes.

Lessons learned and planned change

29C.64 The lesson for the subprogramme resulting from the pilot was the need for a learning platform to support the roll-out and ongoing acceptance of Unite Aware. A diverse user group that included

uniformed personnel who regularly rotate highlighted the need for readily available training for incoming staff. In applying the lesson, the subprogramme will modularize online learning to allow new users to learn the areas related to their work during predeployment and the early stages of deployment. Incorporating the learning component as an integral part of the Unite Aware platform will effectively introduce new users to the platform and ensure its overall sustainability.

Expected progress towards the attainment of the objective, and performance measure

29C.65   This work is expected to contribute to the objective, as demonstrated by the fact that Unite Aware is already fully operational in MINUSCA. The subprogramme is expected to increase the availability of the Unite Aware technology platform to more peace operations (see table 29C.8).

Table 29C.8
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)	2021 (planned)	2022 (planned)
–	MINUSCA pilot of Unite Aware platform	Availability of Unite Aware platform in MINUSCA	Availability of Unite Aware platform to 2 additional peace operations	Availability of Unite Aware platform to 4 additional peace operations

Deliverables

29C.66   Table 29C.9 lists all deliverables, by category and subcategory, for the period 2020–2022 that contributed and are expected to contribute to the attainment of the objective stated above.

Table 29C.9
Subprogramme 2: deliverables for the period 2020–2022, by category and subcategory

Category and subcategory	2020 planned	2020 actual	2021 planned	2022 planned
A. Facilitation of the intergovernmental process and expert bodies				
Conference and secretariat services for meetings (number of three-hour meetings)	**32 460**	**29 879**	**33 434**	**33 251**
Meetings of intergovernmental and expert bodies at Headquarters	32 460	29 879	33 434	33 251
E. Enabling deliverables				
Information and communications technology: hardware and infrastructure, and software and applications.				

Subprogramme 3
Enterprise solutions

Objective

29C.67   The objective, to which this subprogramme contributes, is to ensure effective and efficient implementation of the mandates of Secretariat entities.

Strategy

29C.68   To contribute to the objective, the subprogramme will continue to develop and maintain technical solutions that support mandate delivery by Secretariat entities. In this context, the subprogramme

will enhance identity management by leveraging cloud technology, implement application integration by electronic data exchanges, upgrade service management solutions, enhance talent management and manage the United Nations safety and security information systems. The subprogramme will also continue to work with Umoja and peacekeeping missions on uniformed capabilities management solutions. It will further contribute to the development pillar of the Secretary-General's reform initiative by providing information technology solutions to support mandate delivery by substantive departments and offices, and will support public website content management and knowledge management solutions as well as deploy and support collaboration and communication tools and services.

29C.69   The above-mentioned work is expected to result in:

(a)   Users enabled to operate applications and equipment with one single identity;

(b)   Further automation of administrative support processes;

(c)   Faster recruitment and onboarding of personnel;

(d)   Increased availability of information for professional security officers to perform their duties of protecting United Nations personnel across the United Nations system;

(e)   More timely reimbursements to troop- and police-contributing countries;

(f)   Facilitation of contributions to the Sustainable Development Goals through technology solutions, as articulated by programmatic mandates;

(g)   Improved information-sharing between and among the Organization's stakeholders, including enhanced coordination and cooperation within and across the Secretariat and the broader United Nations system.

Programme performance in 2020

29C.70   Programme performance in 2020 includes the below result that emerged during 2020, as well as programme performance presented under results 1 and 2 below.

Timely information on COVID-19 available to United Nations medical personnel

29C.71   In response to the outbreak of the COVID-19 pandemic, the subprogramme developed a centralized COVID-19 data hub accessible to medical personnel of the United Nations system that provides daily situation reporting of confirmed cases across the Organization worldwide. This facilitated the work of United Nations medical services and decision-making by senior management of the entities concerned, supporting mandate delivery and response coordination. While the data hub is available across the United Nations system, access is open only to a very limited and controlled number of medical personnel because of the strictly confidential nature of medical data.

Progress towards the attainment of the objective, and performance measure

29C.72   The above-mentioned work contributed to the objective, as demonstrated by the timely provision of an information technology solution for the United Nations system (see table 29C.10).

Table 29C.10
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)
–	–	26 medical focal points have access to daily situation reporting of confirmed COVID-19 cases

Impact of COVID-19 on subprogramme delivery

29C.73   Owing to the impact of COVID-19 during 2020, the subprogramme experienced delays in the planned completion of some deliverables, leading to the suspension of some on-site training and delayed deployment of a number of programmatic support solutions to users, such as mobile applications for logistics support. The pandemic also caused delays to the Wayfinder proof of concept, which is intended to offer accessible indoor navigation solutions to persons with disabilities. These delays were due to travel restrictions affecting the project team and reduced access to the installation sites at the United Nations Headquarters complex.

29C.74   At the same time, however, the subprogramme identified new activities related to the COVID-19 pandemic, within the overall scope of its objectives, namely the COVID-19 data hub for the United Nations system that provides daily situation reporting of confirmed cases among United Nations personnel worldwide, thereby supporting the work of the Organization's medical services and decision-making by senior management. The new deliverables contributed to results in 2020, as specified in the emerging result for 2020 above.

Planned results for 2022

29C.75   The planned results for 2022 include results 1 and 2, which are updates of results presented in the preceding proposed programme plans and therefore show both the programme performance in 2020 and the proposed programme plan for 2022. Result 3 is a new planned result.

Result 1: global access to applications, anywhere, anytime[5]

Programme performance in 2020

29C.76   The subprogramme has improved information-sharing and online collaboration between personnel, enabling a flexible and responsive global workforce and improving staff productivity and effectiveness. In particular, the subprogramme completed the development of the electronic Committee on Contracts to support the delegation of authority in procurement across all duty stations and deployed the second phase of uniformed capabilities management to facilitate timely processing of reimbursement to troop- and police-contributing countries. The subprogramme also deployed the second phase of the enterprise knowledge gateway, with a chatbot, questions and answers, and full-text search capability extended across the Department of Peace Operations policy and practice database on official guidance and best practices in the areas of conflict prevention, electoral assistance, mediation, sustaining peace and the police, among others. Furthermore, the subprogramme built a service portal for the United Nations Office at Nairobi, enabling information-sharing and transparency on administrative services provided by the Office to agencies, funds and programmes.

29C.77   The above-mentioned work contributed to a 70 per cent increase to 16,000 personnel actively using collaboration and communication tools in December 2020, from a baseline of 9,400 users in March 2020, and an increase of 23 solutions accessible from any location on multiple devices, which met the planned target of a higher percentage of staff actively using collaboration and communication tools and a greater number of solutions accessible from any location on multiple devices reflected in the proposed programme budget for 2020.

Proposed programme plan for 2022

29C.78   The subprogramme will continue the work related to the planned result, in line with its mandate. To contribute to further progress towards the objective, the subprogramme will continue to provide shared enterprise solutions that are built on standard platforms and are compliant with enterprise security and architecture requirements for secure access to information, online collaboration and communication between personnel from any location at any time, and will review highly customized

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[5] As reflected in the proposed programme budget for 2020 (A/74/6 (Sect. 29C)).

enterprise solutions for migration to modern technology standards. The expected progress is presented in the performance measure below (see table 29C.11).

Table 29C.11
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)	2021 (planned)[a]	2022 (planned)
Few staff have access to collaboration and communication tools	More staff actively use collaboration and communication tools	70 per cent increase to 16,000 personnel actively using collaboration and communication tools 23 additional solutions accessible from any location on multiple devices	Online collaboration and communication tools are used by personnel while working remotely or travelling on official business, and for online meetings	Increased and widespread utilization of online collaboration and communication tools

[a] To maintain accountability for initial programme plans, the 2021 target is carried forward from the proposed programme budget for 2021 and reflects best estimates at that point in time before the COVID-19 pandemic. Programme performance for 2021 will be reported in the proposed programme budget for 2023.

Result 2: United Nations partners to collaborate with the Organization on any device from any location[6]

Programme performance in 2020

29C.79　The subprogramme has developed a sophisticated system to extend access to shared systems to United Nations partner entities, governmental and non-governmental organizations and academic and research institutions, among others. Once access is granted by authorized personnel, secure and seamless online collaboration is enabled between the Secretariat and United Nations partners from any device and any location. For example, the subprogramme collaborated with the Umoja project team to register external partners on two portals for Member States, namely the Umoja contributions and budget planning portals. The subprogramme also enriched the functionality of the electronic travel advisory application to allow location service and headcounts of United Nations personnel, including the agencies, funds and programmes, in risk management areas. Furthermore, the subprogramme carried out several enhancements to the verification module of Inspira, including making it mobile compatible, for use by the agencies, funds and programmes to check the references of candidates recommended for selection.

29C.80　The above-mentioned work contributed to enabling the collaboration of the Secretariat with 5,396 active United Nations external partner accounts, exceeding the target of 3,676 reflected in the proposed programme budget for 2021.

Proposed programme plan for 2022

29C.81　The subprogramme will continue the work related to the planned result, in line with its mandate. To contribute to further progress towards the objective, the subprogramme will maintain and support partner registration for access to United Nations tools and applications. Since a large number of registrations were already established in 2020, precipitated by the necessity of remote working due to the pandemic, the number of external partners is expected to increase at a slower pace or remain stable over the coming years. The expected progress is presented in the performance measure below (see figure 29C.III).

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[6] As reflected in the proposed programme budget for 2021 (A/75/6 (Sect. 29C)).

Figure 29C.III
Performance measure: total number of external accounts of authorized United Nations partners (cumulative)
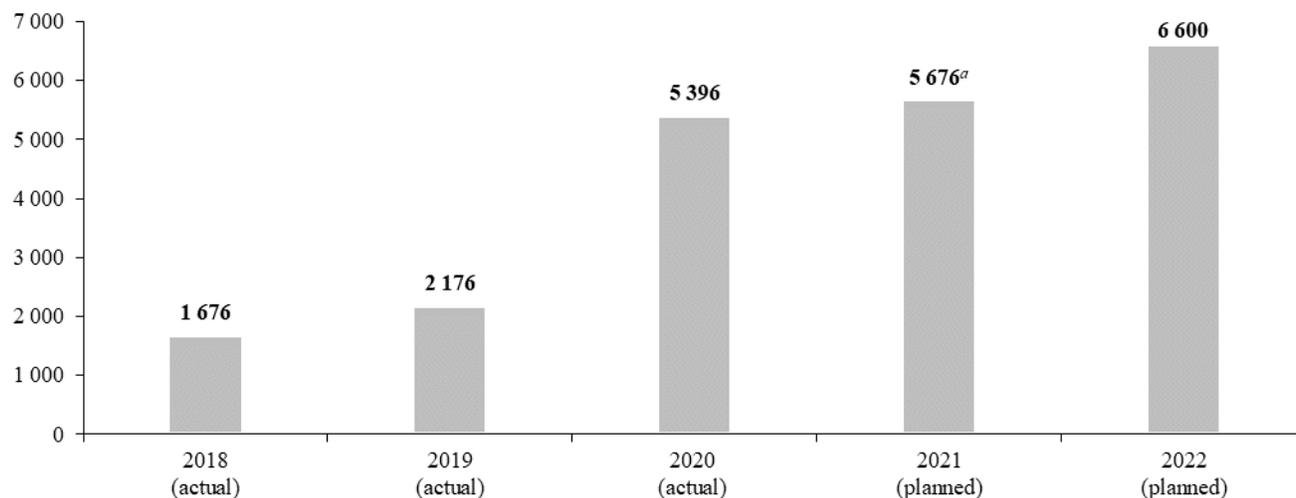
a To maintain accountability for initial programme plans, the 2021 target is carried forward from the proposed programme budget for 2021 and reflects best estimates at that point in time before the COVID-19 pandemic. Programme performance for 2021 will be reported in the proposed programme budget for 2023.

Result 3: timely custom information technology solutions for mandate delivery

Proposed programme plan for 2022

29C.82 Mandate delivery by substantive entities is facilitated by information technology solutions that are developed by the subprogramme. Examples of past projects include a United Nations Environment Programme virtual reality application to demonstrate the volume and impact of carbon emissions; a United Nations Office for Disaster Risk Reduction solution for partnerships at the local, national, regional and global levels to support the implementation of disaster risk reduction strategies and plans; and the Economic and Social Commission for Asia and the Pacific Sustainable Development Goals helpdesk as a one-stop online service providing access to Goal-related tools, knowledge products, data portals, expertise, advice and opportunities for peer-learning and regional South-South cooperation through thematic areas, covering a multitude of topics.

Lessons learned and planned change

29C.83 The lesson for the subprogramme was related to the surge capacity of ICT resources for timely implementation of past projects. Although the Office of Information and Communications Technology serves as the technology supplier, it does not control if or when projects needed by client offices start, since they depend on the prioritization and availability of funding determined by the substantive offices concerned. In applying the lesson, the subprogramme will combine available internal capacity with on-demand contractual services, striking the right balance between surge capacity and preserving essential project knowledge in-house.

Expected progress towards the attainment of the objective, and performance measure

29C.84 This work is expected to contribute to the objective, as demonstrated by Secretariat entities' access to additional information technology solutions to support the programmatic mandates of the Secretariat (see table 29C.12).

Table 29C.12
Performance measure

2018 (actual)	2019 (actual)	2020 (actual)	2021 (planned)	2022 (planned)
–	–	Technology Facilitation Mechanism in use by the Department of Economic and Social Affairs FeedUP@UN in use by the Economic Commission for Europe Fourth edition of Sendai Framework monitoring solution in use by the United Nations Office for Disaster Risk Reduction	Three additional information technology solutions available to support mandate delivery by Secretariat entities	Three additional information technology solutions available to support mandate delivery by Secretariat entities

Deliverables

29C.85   Table 29C.13 lists all deliverables, by category and subcategory, for the period 2020–2022 that contributed and are expected to contribute to the attainment of the objective stated above.

Table 29C.13
Subprogramme 3: deliverables for the period 2020–2022, by category and subcategory

Category and subcategory

E. Enabling deliverables

Information and communications technology: implementation and support for content management, communications and collaboration solutions provided to all Secretariat personnel and external partners; ongoing development and support for the enterprise web management platform (Unite Web), including security and standards compliance, used by Secretariat entities, field missions and permanent missions; enterprise talent and performance management solutions for around 55,000 users; integration with more than 30 applications; Umoja support, including uniformed capabilities management; support for service management solutions for approximately 10,000 users; safety and security solutions for about 40,000 users; specific programmatic solutions for peace and security to facilitate management of time and attendance for military and United Nations police personnel, sexual exploitation and abuse incident reporting and misconduct case tracking; and Technology Facilitation Mechanism, food loss and waste management and Sendai Framework monitoring solutions for the Sustainable Development Goals.

B.   Proposed post and non-post resource requirements for 2022

Overview

29C.86   The proposed regular budget resources for 2022, including the breakdown of resource changes, as applicable, are reflected in tables 29C.14 to 29C.16.

Table 29C.14
Overall: evolution of financial resources by object of expenditure
(Thousands of United States dollars)

| | | | | | *Changes* | | | | |
Object of expenditure	2020 expenditure	2021 appropriation	Technical adjustments	New/ expanded mandates	Other	Total	Percentage	2022 estimate (before recosting)
Post	26 239.9	24 812.8	–	–	(41.0)	(41.0)	(0.2)	24 771.8
Other staff costs	1 344.9	1 757.1	–	–	(52.5)	(52.5)	(3.0)	1 704.6
Consultants	435.2	101.5	–	–	–	–	–	101.5
Travel of staff	7.4	101.7	–	–	34.6	34.6	34.0	136.3
Contractual services	19 479.4	10 493.2	–	–	1 455.3	1 455.3	13.9	11 948.5
General operating expenses	4 871.4	11 573.6	–	–	(1 137.9)	(1 137.9)	(9.8)	10 435.7
Supplies and materials	34.1	81.1	–	–	(1.2)	(1.2)	(1.5)	79.9
Furniture and equipment	800.0	1 813.3	–	–	(48.6)	(48.6)	(2.7)	1 764.7
Improvement of premises	0.3	784.4	–	–	(784.4)	(784.4)	(100.0)	–
Other	68.8	–	–	–	–	–	–	–
Total	**53 280.0**	**51 518.7**	**–**	**–**	**(575.7)**	**(575.7)**	**(1.1)**	**50 943.0**

Table 29C.15
Overall: proposed posts and post changes for 2022[a]

	Number	Details
Approved for 2021	182	1 ASG, 1 D-2, 6 D-1, 16 P-5, 23 P-4, 35 P-3, 11 P-2/1, 16 GS (PL), 71 GS (OL), 2 LL
Reassignment	–	1 GS (OL) in executive direction and management
Redeployment	–	1 P-2 from subprogramme 2 to subprogramme 1, 2 GS (OL) from subprogramme 2 to executive direction and management
Proposed for 2022	182	1 ASG, 1 D-2, 6 D-1, 16 P-5, 23 P-4, 35 P-3, 11 P-2/1, 16 GS (PL), 71 GS (OL), 2 LL

[a] More information on post changes is reflected in annex III.

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Note: The following abbreviations are used in tables and figures: ASG, Assistant-Secretary-General; GS (OL), General Service (Other level); GS (PL), General service (Principal level); LL, Local level.

Table 29C.16

Overall: proposed posts by category and grade

(Number of posts)

| Category and grade | 2021 approved[a] | Changes | | | | | 2022 proposed |
		Technical adjustments	New/expanded mandates	Other	Total	
Professional and higher						
ASG	1	–	–	–	–	1
D-2	1	–	–	–	–	1
D-1	6	–	–	–	–	6
P-5	16	–	–	–	–	16
P-4	23	–	–	–	–	23
P-3	35	–	–	–	–	35
P-2/1	11	–	–	–	–	11
Subtotal	**93**	**–**	**–**	**–**	**–**	**93**
General Service and related						
GS (PL)	16	–	–	–	–	16
GS (OL)	71	–	–	–	–	71
LL	2	–	–	–	–	2
Subtotal	**89**	**–**	**–**	**–**	**–**	**89**
Total	**182**	**–**	**–**	**–**	**–**	**182**

[a] Includes two temporary posts (1 P-4 and 1 P-2).

29C.87   Additional details on the distribution of the proposed resources for 2022 are reflected in tables 29C.17 to 29C.19 and figure 29C.IV.

29C.88   As reflected in tables 29C.17 (1) and 29C.18 (1), the overall resources proposed for 2022 amount to $50,943,000 before recosting, reflecting a net decrease of $575,700 (or 1.1 per cent) compared with the appropriation for 2021. Resource changes result from one factor, namely other changes. The proposed level of resources provides for the full, efficient and effective implementation of mandates.

Table 29C.17

Overall: evolution of financial resources by source of funding, component and subprogramme

(Thousands of United States dollars)

(1)   *Regular budget*

| Component/subprogramme | 2020 expenditure | 2021 appropriation | Changes | | | | | 2022 estimate (before recosting) |
			Technical adjustments	New/ expanded mandates	Other	Total	Percentage	
A. Executive direction and management	2 977.5	2 954.5	–	–	122.4	122.4	4.1	3 076.9
B. Programme of work								
1. Strategy and technology innovation	11 038.8	10 047.0	–	–	36.2	36.2	0.4	10 083.2
2. Operations support	23 929.8	23 465.5	–	–	(592.7)	(592.7)	(2.5)	22 872.8

Component/subprogramme	2020 expenditure	2021 appropriation	Changes					2022 estimate (before recosting)
			Technical adjustments	New/ expanded mandates	Other	Total	Percentage	
3. Enterprise solutions	15 333.8	15 051.7	–	–	(141.6)	(141.6)	(0.9)	14 910.1
Subtotal, B	**50 302.4**	**48 564.2**	**–**	**–**	**(698.1)**	**(698.1)**	**(3.0)**	**47 866.1**
Subtotal, 1	**53 280.0**	**51 518.7**	**–**	**–**	**(575.7)**	**(575.7)**	**(1.1)**	**50 943.0**

(2)   *Other assessed*

Component/subprogramme	2020 expenditure	2021 estimate			Change	Percentage	2022 estimate
A. Executive direction and management	16 858.7	15 323.5			167.7	1.1	15 491.2
B. Programme of work							
1. Strategy and technology innovation	3 670.7	3 581.4			(21.3)	(0.6)	3 560.1
2. Operations support	44 325.9	39 992.0			(571.6)	(1.4)	39 420.4
3. Enterprise solutions	16 475.8	19 990.8			(116.1)	(0.6)	19 874.7
Subtotal, B	**64 472.4**	**63 564.2**			**(709.0)**	**(1.1)**	**62 855.2**
Subtotal, 2	**81 331.0**	**78 887.7**			**(541.3)**	**(0.7)**	**78 346.4**

(3)   *Extrabudgetary*

Component/subprogramme	2020 expenditure	2021 estimate			Change	Percentage	2022 estimate
A. Executive direction and management	377.6	170.5			–	–	170.5
B. Programme of work							
1. Strategy and technology innovation	832.0	950.6			–	–	950.6
2. Operations support	28 777.9	32 551.3			(2 093.3)	(6.4)	30 458.1
3. Enterprise solutions	5 882.9	4 243.1			–	–	4 243.1
Subtotal, B	**35 492.8**	**37 745.1**			**(2 093.3)**	**(5.5)**	**35 651.8**
Subtotal, 3	**35 870.4**	**37 915.6**			**(2 093.3)**	**(5.5)**	**35 822.3**
Total	**170 481.4**	**168 322.0**			**(3 210.3)**	**(1.9)**	**165 111.7**

Table 29C.18
Overall: proposed posts for 2022 by source of funding, component and subprogramme
(Number of posts)

(1)   *Regular budget*

| Component/subprogramme | 2021 approved | Changes | | | | 2022 proposed |
		Technical adjustments	*New/ expanded mandates*	*Other*	*Total*	
A. Executive direction and management	17	–	–	2	2	19
B. Programme of work						
1. Strategy and technology innovation	35	–	–	1	1	36
2. Operations support	76	–	–	(3)	(3)	73
3. Enterprise solutions	54	–	–	–	–	54
Subtotal, B	**165**	**–**	**–**	**(2)**	**(2)**	**163**
Subtotal, 1	**182**	**–**	**–**	**–**	**–**	**182**

(2)   *Other assessed*

Component/subprogramme	2021 estimate		Change	2022 estimate
A. Executive direction and management	–		–	–
B. Programme of work				
1. Strategy and technology innovation	4		–	4
2. Operations support	27		–	27
3. Enterprise solutions	21		–	21
Subtotal, B	**52**		**–**	**52**
Subtotal, 2	**52**		**–**	**52**

(3)   *Extrabudgetary*

Component/subprogramme	2021 estimate		Change	2022 estimate
A. Executive direction and management	–		–	–
B. Programme of work				
1. Strategy and technology innovation	–		–	–
2. Operations support	12		–	12
3. Enterprise solutions	–		–	–
Subtotal, B	**12**		**–**	**12**
Subtotal, 3	**12**		**–**	**12**
Total (1, 2 and 3)	**246**		**–**	**246**

Table 29C.19
Overall: evolution of financial and post resources
(Thousands of United States dollars/number of posts)

	2020 expenditure	2021 appropriation	*Technical adjustments*	*New/ expanded mandates*	*Other*	*Total*	*Percentage*	*2022 estimate (before recosting)*
				Changes				
Financial resources by main category of expenditure								
Post	26 239.9	24 812.8	–	–	(41.0)	(41.0)	(0.2)	24 771.8
Non-post	27 040.1	26 705.9	–	–	(534.7)	(534.7)	(2.0)	26 171.2
Total	**53 280.0**	**51 518.7**	**–**	**–**	**(575.7)**	**(575.7)**	**(1.1)**	**50 943.0**
Post resources by category								
Professional and higher	93	–	–	–	–	–	–	93
General Service and related	89	–	–	–	–	–	–	89
Total	**182**	**–**	**–**	**–**	**–**	**–**	**–**	**182**

Figure 29C.IV
Distribution of proposed resources for 2022 (before recosting)
(Number of posts/thousands of United States dollars)

Distribution of posts
182 posts

ASG	1
D-2	1
D-1	6
P-5	16
P-4	23
P-3	35
P-2/1	11
GS (PL)	16
GS (OL)	71
LL	2

Distribution of financial resources
$50 943.0

Post 24 771.8
Non-post 26 171.2

Distribution of non-post financial resources
$26 171.2

1 704.6	Other staff costs
101.5	Consultants
136.3	Travel of staff
11 948.5	Contractual services
10 435.7	General operating expenses
79.9	Supplies and materials
1 764.7	Furniture and equipment
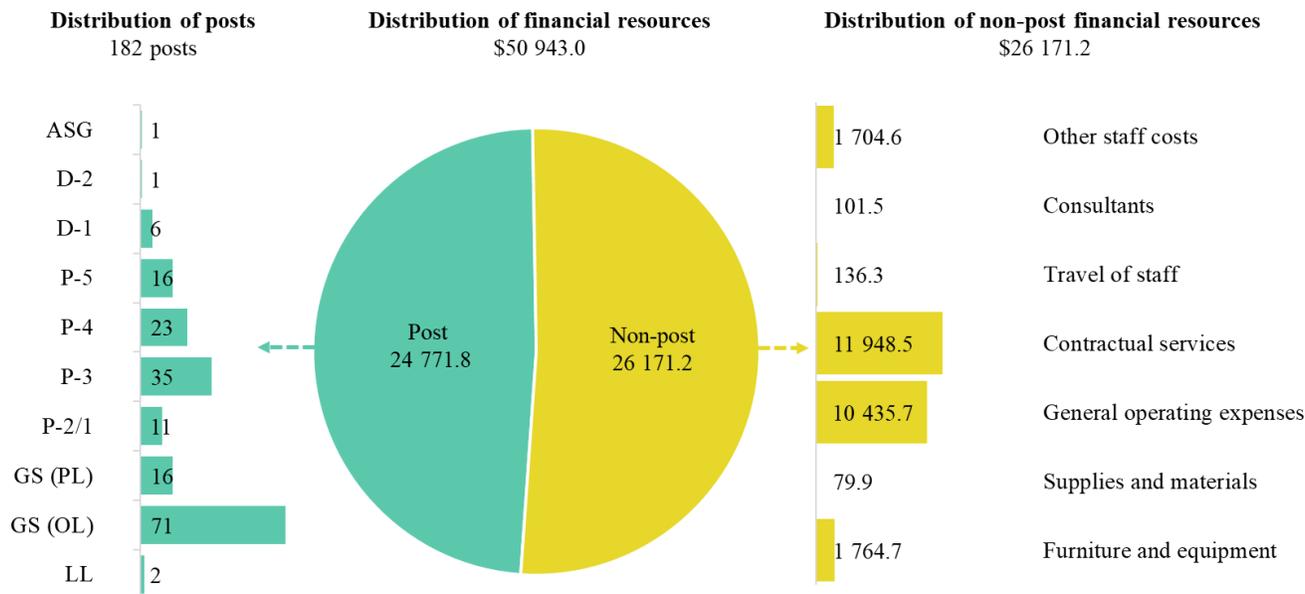
Explanation of variances by factor, component and subprogramme

Overall resource changes

Other changes

29C.89   As reflected in table 29C.17 (1), resource changes reflect a net decrease of $575,700, as follows:

   (a)   **Executive direction and management**. The net increase of $122,400 results from the proposed inward redeployment of one post of Administrative Assistant (GS (OL)) from subprogramme 2

to facilitate central coordination and monitoring of training needs for the Office of Information and Communications Technology, and the proposed inward redeployment of one post of Information Systems Assistant (GS (OL)) from subprogramme 2, which would be reassigned as Procurement Assistant (GS (OL)) to reinforce the Office's capacity for the full range of ICT procurement-related functions, including contract administration and its systemic processing ($137,000), partly offset by reduced requirements under furniture and equipment ($14,600) due to measures aimed at building back better for new working methods that could be sustained after the COVID-19 pandemic;

(b)   **Subprogramme 1, Strategy and technology innovation**. The net increase of $36,200 results from the proposed inward redeployment of one post of Associate Telecommunications Engineer (P-2) from subprogramme 2 to strengthen the capacity for compliance and monitoring activities ($125,200), and increased requirements under travel of staff to undertake an assessment, monitoring and compliance programme for information security to mitigate risks arising from ICT implementation and usage globally ($36,200), as well as increased requirements for maintenance of equipment and premises, taking into account past expenditure patterns, resulting in an increase under general operating expenses ($89,900). The increase is partly offset by reduced requirements under furniture and equipment ($215,100) based on past expenditure patterns;

(c)   **Subprogramme 2, Operations support**. The net decrease of $592,700 relates to:

(i)   Reduced requirements under post resources ($303,200) due to the proposed redeployment of one post of Associate Telecommunications Engineer (P-2) to subprogramme 1 and the redeployment of two posts of Information Systems Assistant (GS (OL)) to executive direction and management, as explained in annex III;

(ii)   Reduced requirements under other staff costs ($52,500), travel of staff ($1,600) and supplies and materials ($1,200), taking into account the measures aimed at building back better for new working methods that could be sustained after the pandemic;

(iii)   Reduced requirements under general operating expenses ($1,227,800) and improvement of premises ($784,400) due to the realignment of requirements for broadcasting and conferencing services at United Nations Headquarters, based on expenditure patterns and past experience; this is partly offset by the increased requirements described in subparagraph (iv) below;

(iv)   Increased requirements under contractual services ($1,596,700) to cover the support of broadcasting and videoconferencing services, which are critical for the provision of support to various meetings and conferences of intergovernmental and Secretariat bodies at Headquarters, and contractual costs associated with the management and maintenance of physical security equipment such as turnstiles, security cameras, passes and identification and other systems located on the Secretariat campus and other Secretariat buildings in New York; as well as increased requirements to cover minor repairs and support for broadcasting and conference equipment ($181,300);

(d)   **Subprogramme 3, Enterprise solutions**. The decrease of $141,600 relates to reduced requirements under contractual services ($141,600) expected to be achieved by leveraging the online collaboration functionality of enterprise platforms and reducing the need for software customization.

Other assessed resources

29C.90   As reflected in tables 29C.17 (2) and 29C.18 (2), the Office of Information and Communications Technology is supported by other assessed resources, estimated at $78,346,400, including 52 posts, as well as non-post resources and through cost recovery from peacekeeping operations. The projected reduction in the level of ongoing ICT support services results from the streamlining of services

provided to peacekeeping operations, combining services where global solutions are available and the reduction in the overall level of peacekeeping operations. Other assessed resources represent 47.5 per cent of the total resources for the Office.

Extrabudgetary resources

29C.91   As reflected in tables 29C.17 (3) and 29C.18 (3), the Office of Information and Communications Technology expects to receive extrabudgetary contributions, estimated at $35,822,300, including 12 posts, as well as non-post resources. The resources, which include central costs recovered from departments and offices, would provide for ICT services to end users, such as service desk support and the operation and maintenance of ICT infrastructure. This would include the development and deployment of tailored technology solutions to support mandate delivery by substantive departments and offices, such as solutions that help to ensure the safety and security of United Nations system personnel, training of uniformed personnel, rapid deployment, public broadcasting and data analysis capabilities. Extrabudgetary resources represent 21.7 per cent of the total resources for the Office.

29C.92   The extrabudgetary resources under this section are subject to the oversight of the Office of Information and Communications Technology, which has delegated authority from the Secretary-General.

Executive direction and management

29C.93   Under General Assembly resolutions 69/262, 70/248 and 71/272 B, the central authority of the Chief Information Technology Officer was reaffirmed and strengthened with regard to information security and the overall direction and performance of ICT activities within the Organization. The Chief Information Technology Officer will continue to provide overall strategic direction and central leadership for the establishment and implementation of Organization-wide ICT and for planning and coordinating ICT activities Secretariat-wide, including infrastructure and enterprise systems, with a view to achieving coherence and coordination in the area of ICT within the work of the United Nations and between the Secretariat and funds, programmes and specialized agencies of the Organization. The Office of the Chief Information Technology Officer assists in providing overall strategic planning and management, coordinates the work of the internal organizational units and maintains liaison with the chiefs of information and communications technology in other United Nations departments, offices and duty stations.

29C.94   In accordance with the 2030 Agenda for Sustainable Development, in particular target 12.6 of the Sustainable Development Goals, in which organizations are encouraged to integrate sustainability information into their reporting cycles, and in compliance with the cross-cutting mandate set out in paragraph 19 of General Assembly resolution 72/219, the Office of Information and Communications Technology is integrating environmental management practices into its operations. For 2022, the Office will continue to provide departments and offices with solutions to support the achievement of the Goals, as well as reducing its infrastructure footprint in data centres by moving to the cloud, thus reducing its environmental impact.

29C.95   Information on compliance with regard to the timely submission of documentation and advance booking for air travel is reflected in table 29C.20. In order to improve compliance with the advance air ticket purchase policy, central monitoring measures have been put in place, with the publication of monthly reports that provide visibility to travel performance. The Office of Information and Communications Technology will further strengthen this process and address the root causes of non-compliance to increase the compliance rate for the timely submission of documentation and advance ticket purchase during the year.

Table 29C.20
Compliance rate
(Percentage)

	Actual 2019	Actual 2020	Planned 2021	Planned 2022
Timely submission of documentation	100	33	100	100
Air tickets purchased at least 2 weeks before the commencement of travel	44	33	100	100

29C.96   The proposed regular budget resources for 2022 amount to $3,076,900 and reflect an increase of $122,400 compared with the appropriation for 2021. The proposed increase of $122,400 is explained in paragraph 29C.89 (a) above. Additional details on the distribution of the proposed resources for 2022 are reflected in table 29C.21 and figure 29C.V.

Table 29C.21
Executive direction and management: evolution of financial and post resources
(Thousands of United States dollars/number of posts)

	2020 expenditure	2021 appropriation	Changes					2022 estimate (before recosting)
			Technical adjustments	New/ expanded mandates	Other	Total	Percentage	
Financial resources by main category of expenditure								
Post	2 191.1	2 226.0	–	–	137.0	137.0	6.2	2 363.0
Non-post	786.4	728.5	–	–	(14.6)	(14.6)	(2.0)	713.9
Total	**2 977.5**	**2 954.5**	**–**	**–**	**122.4**	**122.4**	**4.1**	**3 076.9**
Post resources by category								
Professional and higher		5	–	–	–	–	–	5
General Service and related		12	–	–	2	2	–	14
Total		**17**	**–**	**–**	**2**	**2**	**–**	**19**

Figure 29C.V
Executive direction and management: distribution of proposed resources for 2022 (before recosting)
(Number of posts/thousands of United States dollars)
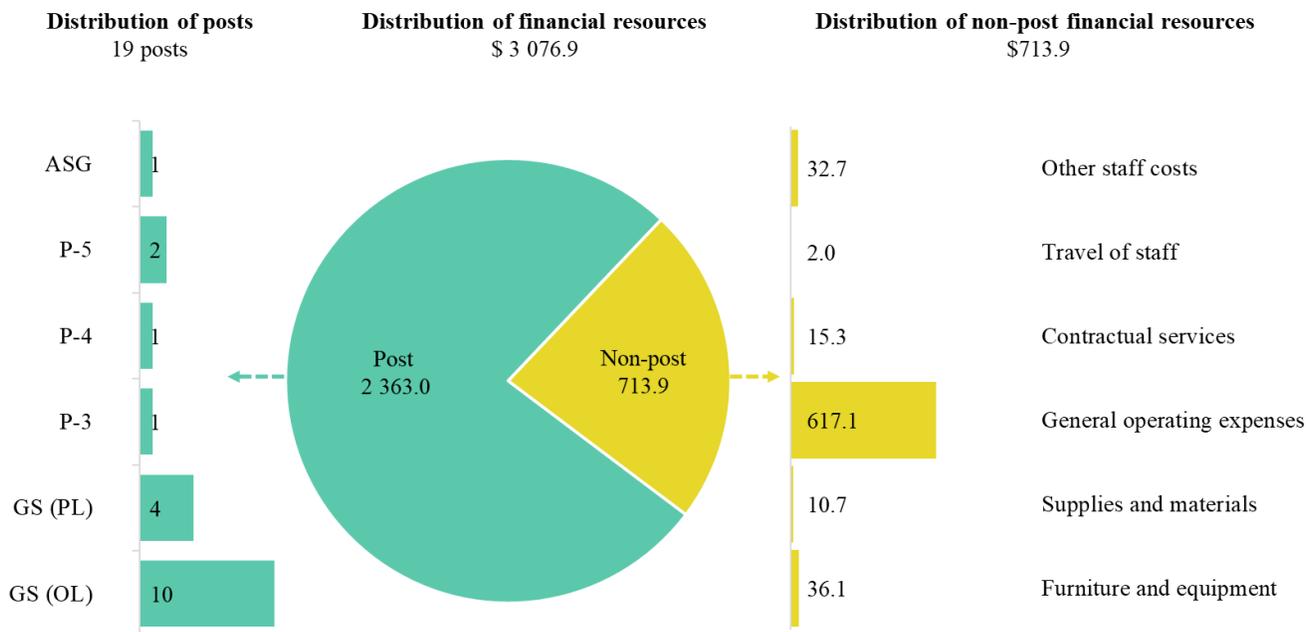
Other assessed resources

29C.97   Other assessed resources for executive direction and management are estimated at $15,491,200 and consist of the Umoja maintenance and support provided under the support account for peacekeeping operations. The budget level proposed for the 2021/22 period reflects an increase of $167,700, as indicated under the support account budget report for the period.

Extrabudgetary resources

29C.98   Extrabudgetary resources for 2022 are estimated at $170,500 and would provide for one general temporary assistance position (P-3). The resources would support the Enterprise Programme Management Section in the overall management of the financial and programmatic functions and activities under this programme.

Programme of work

29C.99   The proposed regular budget resources for 2022 amount to $47,866,100 and reflect a decrease of $698,100 compared with the appropriation for 2021. The proposed decrease is explained in paragraphs 29C.89 (b) to (d) above. The distribution of resources by subprogramme is reflected in figure 29C.VI.

Figure 29C.VI
Distribution of proposed resources for 2022 by subprogramme
(Millions of United States dollars)
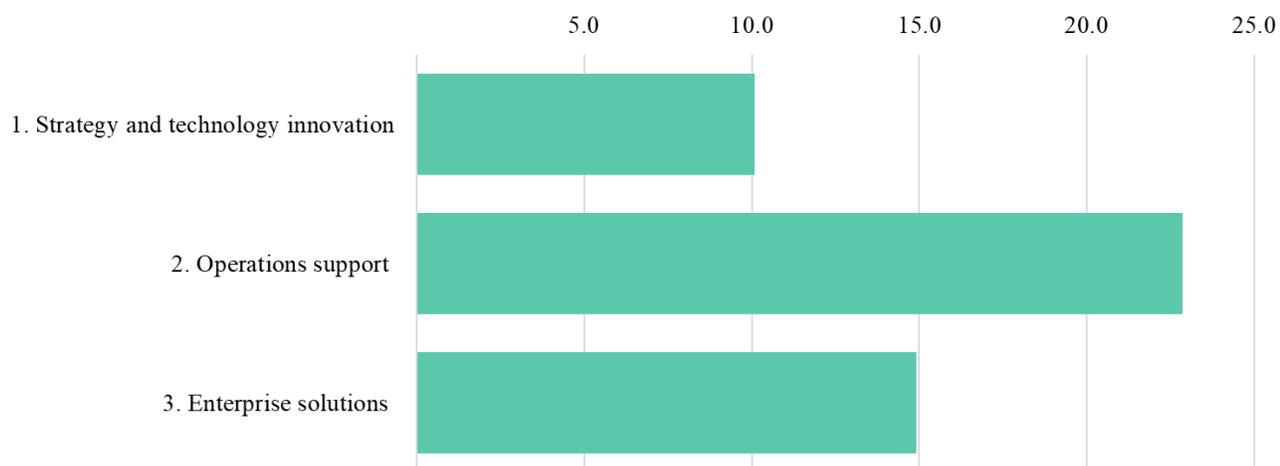
Subprogramme 1
Strategy and technology innovation

29C.100   The proposed regular budget resources for 2022 amount to $10,083,200 and reflect an increase of $36,200 compared with the appropriation for 2021. Additional details on the distribution of the proposed resources for 2022 are reflected in table 29C.22 and figure 29C.VII.

Table 29C.22
Subprogramme 1: evolution of financial and post resources
(Thousands of United States dollars/number of posts)

			Changes					2022 estimate (before recosting)
	2020 expenditure	*2021 appropriation*	*Technical adjustments*	*New/ expanded mandates*	*Other*	*Total*	*Percentage*	
Financial resources by main category of expenditure								
Post	5 662.6	5 601.1	–	–	125.2	125.2	2.2	5 726.3
Non-post	5 376.2	4 445.9	–	–	(89.0)	(89.0)	(2.0)	4 356.9
Total	**11 038.8**	**10 047.0**	**–**	**–**	**36.2**	**36.2**	**0.4**	**10 083.2**
Post resources by category								
Professional and higher		24	–	–	1	–	–	25
General Service and related		11	–	–	–	–	–	11
Total		**35**	**–**	**–**	**1**	**–**	**–**	**36**

Figure 29C.VII
Subprogramme 1: distribution of proposed resources for 2022 (before recosting)
(Number of posts/thousands of United States dollars)

Distribution of posts	Distribution of financial resources	Distribution of non-post financial resources
36 posts	$10 083.2	$4 356.9

D-2   1
D-1   2
P-5   5
P-4   9
P-3   6
P-2/1 2
GS (PL) 1
GS (OL) 10

Post 5 726.3

Non-post 4 356.9

88.8   Travel of staff
3 477.5   Contractual services
230.0   General operating expenses
6.1   Supplies and materials
554.5   Furniture and equipment
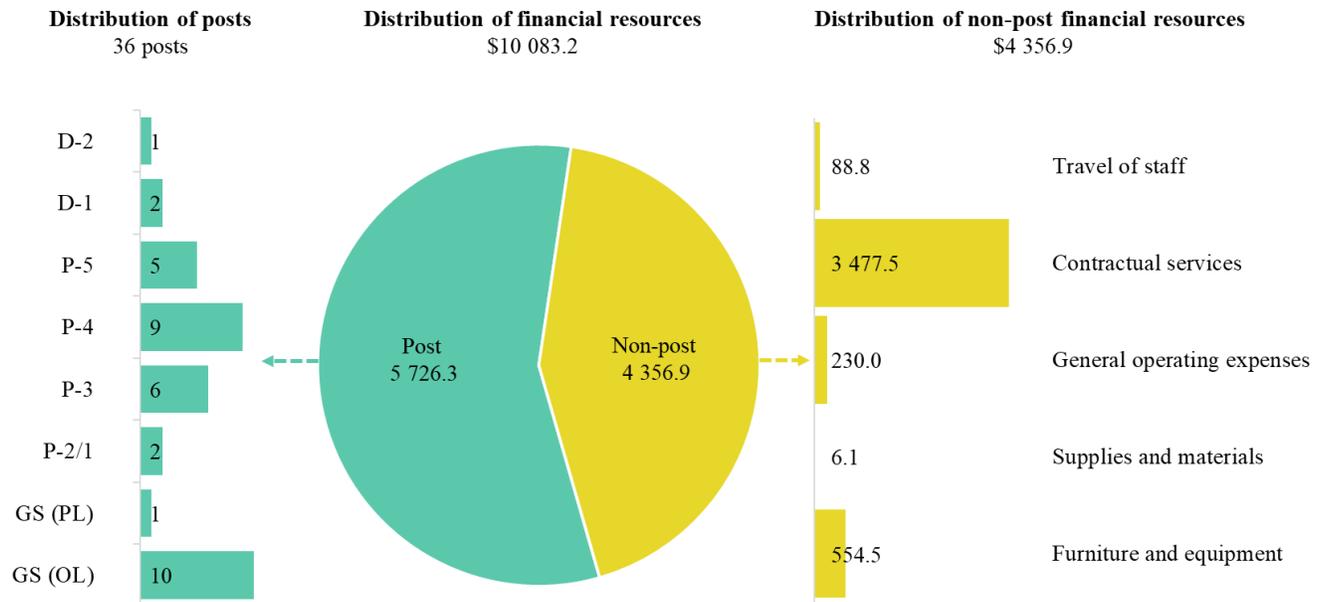
Other assessed resources

29C.101   Other assessed resources for the subprogramme, under the support account for peacekeeping operations, are estimated at $3,560,100 and would provide for four posts (1 P-4, 2 P-3 and 1 P-2), as well as non-post resources. The resources would support the protection of ICT assets from cyberthreats through the strengthening of ICT security. They would also support peacekeeping-specific systems with: (a) monitoring and compliance; and (b) disaster recovery planning activities.

Extrabudgetary resources

29C.102   Extrabudgetary resources for the subprogramme are estimated at $950,600 for non-post resources. The resources would enable the provision of integrated services to allow data to be transferred effectively and securely between systems in alignment with data governance processes that are being instituted as part of the Secretary-General's data strategy. In addition, funding will be used to ensure that existing technology implementation will be expanded to support the core work of the Secretariat by integrating the emerging technology solutions with systems to make the greatest use of structured and unstructured data and information. Cybersecurity, policy and innovation technology are foundational to the broader work being undertaken by the Office of Information and Communications Technology to implement systems and solutions through extrabudgetary resources and, as part of subprogramme 1, resources will be used to ensure compliance with standards, architecture and cybersecurity. The United Nations conversational artificial intelligence platform is in the process of being implemented, and its integration with a wide variety of systems and data sources as well as its expansion to address requirements related to multilingualism and accessibility will be addressed. The resources would enable the Office to meet the growing demand for conversational artificial intelligence and related innovation technology (Alba chatbot).

Subprogramme 2
Operations support

29C.103   The proposed regular budget resources for 2022 amount to $22,872,800 and reflect a decrease of $592,700 compared with the appropriation for 2021. Additional details on the distribution of the proposed resources for 2022 are reflected in table 29C.23 and figure 29C.VIII.

Table 29C.23
**Subprogramme 2: evolution of financial and post resources**

(Thousands of United States dollars/number of posts)

| | | | | Changes | | | | 2022 |
	2020 expenditure	2021 appropriation	Technical adjustments	New/ expanded mandates	Other	Total	Percentage	estimate (before recosting)
Financial resources by main category of expenditure								
Post	10 361.5	9 006.5	–	–	(303.2)	(303.2)	(3.4)	8 703.3
Non-post	13 568.3	14 459.0	–	–	(289.5)	(289.5)	(2.0)	14 169.5
Total	**23 929.8**	**23 465.5**	–	–	**(592.7)**	**(592.7)**	**(2.5)**	**22 872.8**
Post resources by category								
Professional and higher		24	–	–	(1)	(1)	–	23
General Service and related		52	–	–	(2)	(2)	–	50
Total		**76**	**–**	**–**	**(3)**	**(3)**	**–**	**73**

Figure 29C.VIII
Subprogramme 2: distribution of proposed resources for 2022 (before recosting)

(Number of posts/thousands of United States dollars)

Distribution of posts 73 posts	Distribution of financial resources $22 872.8	Distribution of non-post financial resources $14 169.5
D-1: 2	Post 8 703.3	794.3 Other staff costs
P-5: 3	Non-post 14 169.5	31.6 Travel of staff
P-4: 5		3 328.8 Contractual services
P-3: 12		9 564.8 General operating expenses
P-2/1: 1		29.5 Supplies and materials
GS (PL): 9		420.5 Furniture and equipment
GS (OL): 41		
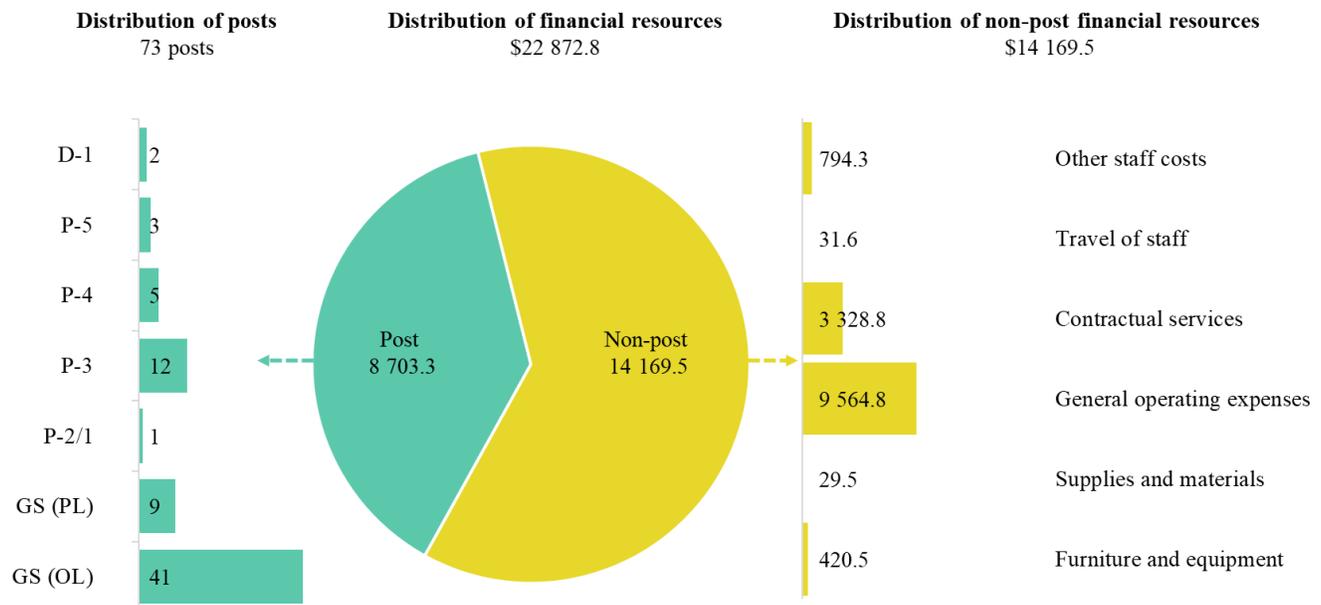
Other assessed resources

29C.104   Other assessed resources for the subprogramme are estimated at $39,420,400 and would provide for 27 posts (1 D-2, 1 D-1, 2 P-5, 7 P-4, 6 P-3, 4 GS (PL) and 6 GS (OL)), as well as non-post resources. These resources would be used to optimize the core ICT infrastructure hosting critical systems – in Brindisi, Italy; Valencia, Spain; and New York – for the efficient support of field operations. In addition, these resources would be used to continue to facilitate and support videoconferencing and virtual meetings for various Secretariat entities and peacekeeping operations by leveraging cloud-based technologies.

Extrabudgetary resources

29C.105   Extrabudgetary resources for the subprogramme are estimated at $30,458,100 and would provide for 12 posts (1 P-4, 2 GS (PL) and 9 GS (OL)), as well as non-post resources. Central costs recovered from departments and offices would provide for ICT services offering users a personal computing core package that includes email, collaboration and communication tools, network access, a phone system, service desk support for computers, and desktop and enterprise applications. These funds also include hosting charges for departmental systems hosted at the United Nations Headquarters data centre in New York. The extrabudgetary resources would also: (a) support rapid deployment of communications during crises; (b) support the substantive data analysis of open public broadcasting by a peace operation; (c) assist in the creation of a United Nations-owned secure data network. The rapid deployment capability will be focused mainly on the design of a highly mobile communications system for field operations support to be integrated into a vehicle by the Global Service Centre. The data analysis creates a platform to store and analyse public broadcasting sources used for the transcription and analysis of segments of interest to a mission. The secure data network consists of the design and pilot implementation in the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo of a highly secure data network for use by substantive components. Following the results of this pilot, the capability will be mainstreamed into all peacekeeping operations, as needed.

Subprogramme 3
Enterprise solutions

29C.106   The proposed regular budget resources for 2022 amount to $14,910,100 and reflect a decrease of $141,600 compared with the appropriation for 2021. Additional details on the distribution of the proposed resources for 2022 are reflected in table 29C.24 and figure 29C.IX.

Table 29C.24
**Subprogramme 3: evolution of financial and post resources**

(Thousands of United States dollars/number of posts)

			Changes					2022 estimate (before recosting)
	2020 expenditure	*2021 appropriation*	*Technical adjustments*	*New/ expanded mandates*	*Other*	*Total*	*Percentage*	
Financial resources by main category of expenditure								
Post	8 024.7	7 979.2	–	–	–	–	–	7 979.2
Non-post	7 309.1	7 072.5	–	–	(141.6)	(141.6)	(2.0)	6 930.9
Total	**15 333.8**	**15 051.7**	**–**	**–**	**(141.6)**	**(141.6)**	**(0.9)**	**14 910.1**
Post resources by category								
Professional and higher		40	–	–	–	–	–	40
General Service and related		14	–	–	–	–	–	14
Total		**54**	**–**	**–**	**–**	**–**	**–**	**54**

Figure 29C.IX
Subprogramme 3: distribution of proposed resources for 2022 (before recosting)

(Number of posts/thousands of United States dollars)

Distribution of posts
54 posts

Distribution of financial resources
$14 910.1

Distribution of non-post financial resources
$6 930.9

Post			
D-1	2		
P-5	6		
P-4	8		
P-3	16		
P-2/1	8		
GS (PL)	2		
GS (OL)	10		
LL	2		

Post 7 979.2

Non-post 6 930.9

877.6	Other staff costs
101.5	Consultants
13.9	Travel of staff
5 126.9	Contractual services
23.8	General operating expenses
33.6	Supplies and materials
753.6	Furniture and equipment
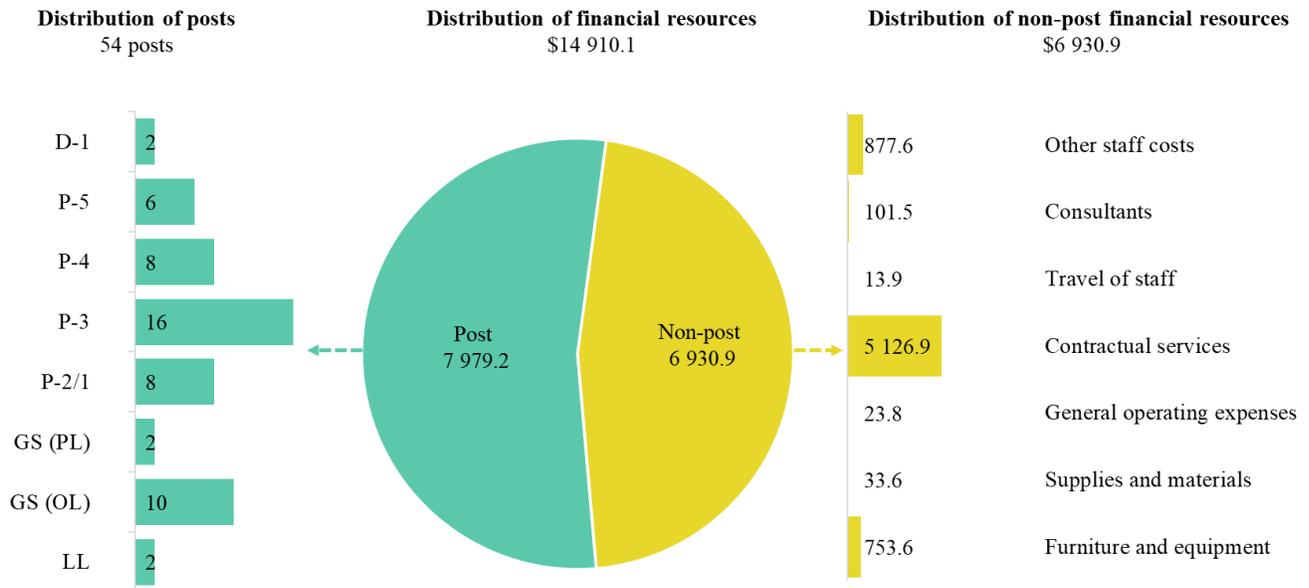
Other assessed resources

29C.107   Other assessed resources for the subprogramme are estimated at $19,874,700 and would provide for 21 posts (5 P-4, 3 P-3, 2 P-2/1, 1 GS (PL) and 10 GS (OL)), as well as non-post resources. The resources would enable the development and support of more than 40 information technology applications to support peacekeeping operations.

Extrabudgetary resources

29C.108   Extrabudgetary resources for the subprogramme are estimated at $4,243,100 for non-post resources. The resources would enable the development of solutions to support Umoja, help to ensure the safety and security of United Nations system personnel data and support substantive departments in the delivery of their mandates.

Annex I

Organizational structure and post distribution for 2022

Office of Information and Communications Technology

ASG for Information and Communications Technology**
**dual reporting line to USG for Management Strategy, Policy and Compliance and USG for Operational Support
(executive direction and management)

RB	SA	SA GTA	XB
1 ASG			
1 P-5			
1 P-3			
1 GS (PL)			
1 GS (OL)			

Enterprise Programme Management Section (executive direction and management)

RB	SA	SA GTA	XB
1 P-5			
1 P-4			
3 GS (PL)			
7 GS (OL)			
1 GS (OL)[b]			
1 GS (OL)[b]			

Operations Support Division (subprogramme 2)

| RB	SA	SA GTA	XB
	1 D-2		
	2 P-4		
	1 GS (PL)		

Policy, Strategy and Governance Division (subprogramme 1)

RB	SA	SA GTA	XB
1 D-2	1 P-4		
1 P-3	1 P-2		
1 GS (OL)			

Enterprise Solutions Service (subprogramme 3)

RB	SA	SA GTA	XB
1 D-1			

Cybersecurity Section (subprogramme 1)

RB	SA	SA GTA	XB
1 D-1			
1 P-5			
4 P-4			
3 P-3			
1 P-2			
3 GS (OL)			

Service Operations Service

RB	SA	SA GTA	XB
1 D-1	1 P-3		
1 P-4	1 GS (PL)		
1 GS (OL)			

Regional Service Management Service

RB	SA	SA GTA	XB
2 P-5	1 D-1		1 P-4
3 P-4	1 P-5		2 GS (PL)
4 P-3	1 P-4		9 GS (OL)
8 GS (PL)	5 P-3		
37 GS (OL)	2 GS (PL)		
	4 GS (OL)		

Records Management Unit

RB	SA	SA GTA	XB
1 P-5			
1 P-4			
1 P-3			
1 GS (OL)			

Policy and Compliance Service

RB	SA	SA GTA	XB
1 D-1	1 P-3		
2 P-5			
4 P-4			
1 P-3			
1 P-2[a]			
1 GS (PL)			
5 GS (OL)			

Enterprise Applications Centre: Americas

RB	SA	SA GTA	XB
1 D-1	2 P-4		
1 P-5	1 P-3		
4 P-4	2 P-2		
9 P-3	5 GS (OL)		
1 P-2			
2 GS (PL)			
6 GS (OL)			

Enterprise Applications Centre: Asia

RB	SA	SA GTA	XB
5 P-5	3 P-4	1 P-4	
4 P-4	2 P-3	2 P-3	
7 P-3	1 GS (PL)		
7 P-2	5 GS (OL)		
4 GS (OL)			
2 LL			

Technology Operations Service

RB	SA	SA GTA	XB
1 D-1	2 P-4		
1 P-5	1 GS (OL)		
1 P-4			
7 P-3			
1 P-2			
1 GS (PL)			
3 GS (OL)			

Technology Solutions Section

RB	SA	SA GTA	XB
1 P-3	1 P-5		
	2 P-4		
	1 GS (OL)		

Data Management and Privacy Unit

RB	SA	SA GTA	XB
1 P-5	1 P-3		

Abbreviations: ASG, Assistant Secretary-General; GS (OL), General Service (Other level); GS (PL), General Service (Principal level); GTA, general temporary assistance; LL, Local level; RB, regular budget; SA, support account for peacekeeping operations; USG, Under-Secretary-General; XB, extrabudgetary.

[a] Redeployment from subprogramme 2.

[b] Reassignment from subprogramme 2.

Annex II

Summary of follow-up action taken to implement relevant recommendations of the oversight bodies

Brief description of the recommendation	*Action taken to implement the recommendation*
Advisory Committee on Administrative and Budgetary Questions **A/75/7**	
The Advisory Committee looks forward to receiving information on the progress of the harmonization of cost recovery processes in the next budget submission (para. VIII.67).	The Office of Information and Communications Technology is in the process of developing the total cost of ownership for ICT products, services and solutions, as well as the associated ICT rates for fixed and variable costs in the environments in which they are delivered. Progress in this regard will be reported in the next budget report.

Annex III

Summary of proposed post changes, by component and subprogramme

Component/subprogramme	Posts	Grade	Description	Reason for change
Executive direction and management	1	GS (OL)	**Redeployment** of 1 post of Administrative Assistant from subprogramme 2	To facilitate central coordination and monitoring of learning and training needs and related transactions for Office of Information and Communications Technology staff.
	1	GS (OL)	**Redeployment** of 1 post of Information Systems Assistant from subprogramme 2 and reassignment to a post of Procurement Assistant	To reinforce the Office's capacity in respect of the full range of ICT procurement work, including the related contract administration and its systemic processing, as well as improve the effective integrated management of procurement functions and finance across the Office.
Subprogramme 1 Strategy and technology innovation	1	P-2	**Redeployment** of 1 post of Associate Telecommunications Engineer from subprogramme 2	To provide support in consolidating the Office's audit coordination and strengthen capacity for compliance and monitoring activities.
Subprogramme 2 Operations support	(1)	P-2	**Redeployment** of 1 post of Associate Telecommunications Engineer to subprogramme 1	To provide support in consolidating the Office's audit coordination and strengthen capacity for compliance and monitoring activities.
	(1)	GS (OL)	**Redeployment** of 1 post of Administrative Assistant to executive direction and management	To facilitate central coordination and monitoring of learning and training needs and related transactions for Office staff.
	(1)	GS (OL)	**Redeployment** of 1 post of Information Systems Assistant to executive direction and management	To reinforce the Office's capacity in respect of the full range of ICT procurement work, including the related contract administration and its systemic processing, as well as improve the effective integrated management of procurement functions and finance across the Office.

Abbreviation: GS (OL), General Service (Other level).