General Assembly

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Agenda item 132
Programme budget for the biennium 2014-2015

Information and communications technology in the United Nations

Report of the Advisory Committee on Administrative and Budgetary Questions

I. Introduction

1.   The Advisory Committee on Administrative and Budgetary Questions has considered the report of the Secretary-General on information and communications technology (ICT) in the United Nations (A/69/517), submitted pursuant to paragraph 12 of General Assembly resolution 67/254 A, in which the Assembly requested the Secretary-General to propose a revised ICT strategy, including lessons learned, by no later than the sixty-ninth session of the Assembly. During its consideration of the above-mentioned report, the Advisory Committee met with the Under-Secretary-General for Management, the Chief Information Technology Officer and other representatives of the Secretary-General who provided additional information and clarification, concluding with written responses received on 11 November 2014.

II. Information and communications technology in the United Nations

A. Background

2.   The Advisory Committee has frequently expressed its concerns regarding the high level of fragmentation of the ICT environment of the United Nations.[1] Offices and departments maintain their own independent ICT units, resulting in a legacy of

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[1] See A/50/7/Add.16; A/54/7, paras. 80-92; A/55/7/Add.8; A/56/7, paras. 80-94; A/57/772, paras. 100-106; A/58/7, paras. 114-126; A/60/7, paras. 110-112 and VIII.42-VIII.50; A/60/735 and Corr.1; A/60/870; A/62/793 and Corr.1 and Add.1; A/63/487 and Corr.1 and 2; A/65/491; A/65/576; A/66/7/Add.1; and A/67/770.

decentralized, non-standardized and fragmented ICT environments across the Organization which has built up over decades and leading to the proliferation of duplicate, incompatible and outdated systems, a limited ability to share and process information, incomplete coverage of user requirements and a lack of transparency regarding ICT expenditure and staffing across the Organization. The Secretary-General has indicated that this fragmentation also drives up the costs of operations and prevents the Organization from realizing economies of scale (see A/65/491 and A/65/576). In his current report (A/69/517), the Secretary-General indicates that there are currently almost 2,000 applications, 70 ICT units, over 130 ICT help desks, 44 data centres and 177 server rooms across the Organization. The Advisory Committee has stressed, as far back as the fiftieth session of the General Assembly, the need for a more centralized approach to managing ICT initiatives and operations, calling for a long-term coordinated ICT strategy and a plan for its implementation throughout the Secretariat, including all duty stations.

3.   To address the above-mentioned issues, the General Assembly adopted a series of reform measures, including: (a) the establishment of the post of Chief Information Technology Officer, responsible for the overall direction and performance of ICT activities in the Organization (resolution 60/283); (b) the replacement of the Integrated Management Information System with a next-generation enterprise resource planning system (resolution 60/283); (c) the adoption of a new ICT strategy for the United Nations based on strong central leadership for the establishment and implementation of Organization-wide ICT standards and activities and a decentralized approach to operations (resolution 63/262); and (d) the establishment of a central, independent Office of Information and Communications Technology, headed by the Chief Information Technology Officer and reporting to the Executive Office of the Secretary-General through the Deputy Secretary-General, to provide central leadership in the area of ICT for the Organization (resolution 63/262).[2] Subsequently, in its resolution 66/246 the Assembly took further action on the management arrangements of the Office of Information and Communications Technology[3] and requested an audit and evaluation by the Board of Auditors on the handling of ICT affairs in the Secretariat, including that Office.

4.   In its report (A/67/651), the Board of Auditors identified three key limitations of the ICT strategy adopted by the General Assembly in its resolution 63/262: (a) insufficient emphasis on the enterprise resource planning system, which was the single largest ICT-enabled business transformation project of the United Nations; (b) insufficient prioritization of information security issues; and (c) insufficient recognition of peacekeeping activities, which account for some 75 per cent of overall ICT expenditure.

5.   The overall conclusion of the Board was that the Organization was unsuccessful in enforcing a more centralized ICT implementation and delivery strategy, attributing this to a variety of factors, including: (a) the lack of an effective governance and accountability framework for managing the ICT affairs of the

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[2] A summary of the implementation of the reform measures is provided in section II of the report of the Advisory Committee on the report of the Board of Auditors on the handling of ICT affairs in the Secretariat (A/67/770).

[3] The General Assembly decided to place the Office of Information and Communications Technology under the Department of Management, also decided that the Chief Information Technology Officer would report accordingly to the Head of that Department and further decided to place the budget of the Office within the budget of that Department.

Secretariat and creating a common vision and commitment across the Organization; (b) the lack of clarity on how the ICT changes envisaged were essential to business needs or to the core objectives of the United Nations; (c) the lack of a clear definition and understanding across the Secretariat of the role and authority of the Office of Information and Communications Technology and its Chief; (d) an insufficient number of ICT professionals with the skills required to lead business transformation initiatives; (e) insufficient consideration of the decentralized and autonomous nature of the entities that constitute the United Nations Secretariat; and (f) the lack of a clear identification of genuinely Organization-wide activities that require strong central control and those that require or merit operational freedom.

6.   The Board recommended that the Secretary-General develop a new ICT strategy that was consistent with both United Nations objectives and realistic ambitions for transformation. It issued a series of recommendations for addressing the weaknesses identified in the areas of ICT governance, information security, technical authority and enterprise architecture, leadership of the Office of Information and Communications Technology for ICT transformation, alignment of ICT with the core work and priorities of the United Nations, and the role of ICT in business transformation. The Secretary-General accepted all of the recommendations of the Board and indicated that an action plan was being developed for the implementation of short-term measures to address the most urgent shortcomings and the definition of a sustainable medium- and long-term strategy for information security (A/67/651/Add.1).

7.   In its related report (A/67/770), the Advisory Committee highlighted the need to absorb all the lessons learned from prior experience and to adopt a pragmatic, practical and realistic course of action for implementing the recommendations issued by the Board of Auditors. The Committee noted that this would involve a combination of: (a) long-term planning to bring about the cultural, organizational and structural changes that were needed to address root causes and systemic issues at the organizational level; (b) medium- and short-term restructuring to improve the handling of ICT at the United Nations and to better support the ongoing implementation of business transformation initiatives; and (c) immediate actions required to address urgent issues, including on information security matters. With regard to the formulation of a revised ICT strategy, the Advisory Committee emphasized the need to address comprehensively the question of the excessive fragmentation of ICT capacities across the Secretariat, as well as to take into account the unique requirements of the Organization, its complex and decentralized organizational structures and its capacity to absorb change. The Committee expressed its view that the Secretariat should, to the extent possible, adopt a sequential approach to the implementation of the ICT strategy, giving the highest priority initially to supporting the implementation of the enterprise resource planning project. Such an approach would allow the United Nations to absorb more gradually the significant cultural and organizational changes that would undoubtedly result from the implementation of a comprehensive ICT strategy involving the modernization and consolidation of ICT capacities across the Secretariat.

8.   In its resolution 67/254 A, the General Assembly approved the conclusions and recommendations of the Board and endorsed the conclusions and recommendations contained in the report of the Advisory Committee. The Assembly requested the Secretary-General to submit to it at its sixty-eighth session a progress report on the

measures taken to address the priorities identified by the Board in its report, in particular with regard to the implementation of the Umoja enterprise re source planning project and information technology security. The Assembly also requested the Secretary-General to propose a revised ICT strategy, including lessons learned, by no later than the sixty-ninth session of the Assembly, bearing in mind that the purpose of ICT was to support the work of the Organization.

9.   In his progress report on the implementation of recommendations related to strengthening information and systems security across the Secretariat (A/68/552), the Secretary-General provided information on the initial steps in the implementation of the action plan to strengthen information security and on the actions taken in the area of governance, risk and compliance. He indicated that the Organization was introducing significant changes to its global ICT operations, enabling tighter access control and reducing vulnerability to intrusion, in order to support the implementation of Umoja, the enterprise resource planning project. The Secretary-General also provided some information on the activities to be completed during 2014-2015 (see paras. 61-62 below).

B.   Ongoing activities

10.   The United Nations is actively engaged in various stages of implementation of a number of major ICT-enabled business transformation and change management initiatives, including the enterprise resource planning system (Umoja), the International Public Sector Accounting Standards (IPSAS) and the global field support strategy, as well as ongoing human resources management reforms. The Secretary-General also intends to submit for consideration by the General Assembly at its seventieth session proposals for a new global service delivery model for the United Nations. The Advisory Committee was informed that the Office of Information and Communications Technology was already engaged in the implementation of some of the activities outlined in the proposed revised ICT strategy, including planning and preparations for the mainstreaming of Umoja ICT-related activities. In addition, the Office continued to implement, as part of its ongoing work, projects to rationalize ICT organization (see A/65/491) and improve enterprise ICT management (see A/66/94), which were approved by the General Assembly in its resolutions 65/259 and 66/246.

11.   **The Advisory Committee notes that the initiatives above are interrelated and interdependent. It emphasizes the need to harmonize their implementation, ensure coherence and seek synergies in planning the related implementation activities.**

12.   In previous reports of the Secretary-General (A/66/381), the Board of Auditors (A/68/151) and the Advisory Committee (A/65/576), it was highlighted that the implementation of the enterprise resource planning system (Umoja) and enterprise data centres would make consolidated Organization-wide data available on a common platform accessible to users regardless of their location, thereby enabling alternative service delivery models and providing opportunities for achieving greater efficiency and economies of scale. **Regarding the Secretary-General's intention to submit for consideration by the General Assembly at its seventieth session a proposal for a global service delivery model for the United Nations, the Advisory Committee recalls its earlier recommendations on the need for the**

early submission of proposals for a global service delivery model,[4] **which were endorsed by the Assembly in its resolutions 67/246, 67/254 A and 68/284. The Committee once again reiterates its previous recommendations that the Assembly request the Secretary-General to submit proposals for a global service delivery model for consideration by the Assembly as soon as possible.**

C. Key features of the Secretary-General's proposal for a revised information and communications technology strategy

13.   The Secretary-General indicates that the key objectives of the proposed revised ICT strategy for the United Nations are to: (a) set the direction of ICT in support of organizational priorities; (b) harmonize existing infrastructure and processes; and (c) place greater emphasis on innovation to support the substantive work of the United Nations. He proposes a road map for achieving the objectives of the revised strategy over a five-year period, which is summarized in annex I to his report. According to the Secretary-General, the proposed revised ICT strategy will be carried out through: (a) three strategic drivers of change, including modernizing enterprise solutions and infrastructure in support of organizational priorities, transforming ICT structures and service delivery and introducing innovation to provide new technological solutions in the long term; and (b) a framework for improved governance, strong leadership and optimal use of ICT resources.

14.   In his report, the Secretary-General indicates that the key measures and activities proposed to achieve the objectives of the ICT strategy include the following:

(a)   Modernization of enterprise solutions and infrastructure in support of organizational priorities, including technical support for and maintenance of Umoja, as well as other enterprise applications, such as Inspira; implementation of a standardized approach to designing, managing and monitoring the performance of local area networks and the corporate wide area network; establishment of a comprehensive information security framework for the Secretariat; and implementation of effective disaster recovery and business continuity arrangements for all the critical applications of the Secretariat (A/69/517, paras. 10-23);

(b)   Transformation of the enterprise delivery framework of the United Nations and restructuring of the delivery of ICT across the Organization through the merging of many large processing environments into a few highly interconnected enterprise environments and, to the extent possible, through the use of enterprise applications instead of locally developed applications and of enterprise data centres or regional technology centres rather than local data centres (ibid., paras. 24-31). In particular, it is proposed that five enterprise service desks be established at Headquarters, the Economic and Social Commission for Asia and the Pacific, the Global Service Centre at Brindisi, Italy, and the United Nations Offices at Geneva and Nairobi (ibid., para. 31); four regional technology centres be established at Headquarters, the United Nations Offices at Geneva and Nairobi and the Economic and Social Commission for Asia and the Pacific, building on existing capacity at those locations (ibid., para. 30); and three enterprise application centres be established in New York, Bangkok and Vienna by strengthening the capacities of the

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    [4] See A/67/565, A/67/770 and A/68/782/Add.8.

existing application centres in those locations (ibid., para. 29). The Secretary-General states that this will allow the restructuring of delivery of ICT across the Organization, the streamlining of ICT systems and the harmonization of technology units, with a reduction in the level of fragmentation of the current ICT environment. The Secretary-General expects, in particular, to reduce the existing 2,000 applications to approximately 100 key applications and 300 websites, over 131 existing service desks to 5, and the total number of data centres from 44 to the 2 existing enterprise data centres at Valencia, Spain, and Brindisi and an as yet undefined number of other smaller data centres (see para. 2 above; see also para. 19 below);

(c)   Establishment of an enterprise network operations communications and security centre to monitor the reliability and security of the network and to provide proactive and predictive responses to infrastructure failure and security breaches, in view of the more widespread use of enterprise data centres and systems envisaged as part of the transformation of ICT delivery (ibid., paras. 32-33),

(d)   Harmonization of videoconferencing services across the Secretariat through the establishment of technical standards, standard operating procedures, tools and operations as part of the transformation of ICT delivery in the Organization (ibid., paras. 34-35);

(e)   Development of organizational capacity in analytics in order to make data more widely available throughout the Organization, as well as to better exploit the data to support informed decision-making and the substantive work of the Organization (ibid., paras. 37-38);

(f)   Establishment of a new ICT governance framework which includes the following key components: the Information and Communications Technology Executive Committee, chaired by the Under-Secretary-General for Management and responsible for ensuring that ICT meets the business requirements and objectives of the United Nations; the Information and Communications Technology Board, chaired by the Chief Information Technology Officer and responsible for ensuring the coherent and coordinated global usage of ICT across departments and duty stations; the Information and Communications Technology Policy Committee, responsible for establishing a system of policies, procedures and guidelines to regulate the provision and use of ICT resources and data; and the Architecture Review Board, responsible for reviewing and formulating the enterprise architecture of the United Nations and associated standards and policies (ibid., paras. 46-49);

(g)   A series of measures to develop the skills of ICT staff, ensuring alignment with the requirements of the ICT strategy, facilitating the mobility of ICT staff and promoting technical skills as the basis for career progression (ibid., paras. 50-51);

(h)   Establishment of an ICT performance management framework to strengthen the management and monitoring of ICT strategic programmes, align the performance of ICT with the business needs of the Organization and provide the basis for optimizing and harmonizing ICT assets, projects, services and support; continued use of service-level agreements for assessing ICT service deliverables assessed against performance targets and holding service providers accountable; and development of new requests for proposals with the Procurement Division of the Department of Management of the Secretariat for performance-based contracts,

allowing greater use of key performance indicators in contract management (ibid., paras. 53-55);

(i)   Optimizing the use of ICT resources by focusing on the defragmentation and retirement of systems, as well as through global sourcing, by, inter alia, ensuring that all ICT plans and investments and their implementation are subject to strict governance and review processes; increasing the number of global contracts and negotiating discounts on the basis of purchasing volume; improving contract management in order to allow proper control and accountability; introducing regionalized management for contracts that are specific to a particular region; seeking greater efficiencies in the area of data and voice communications; and reducing contractual costs associated with hardware and software licences (ibid., paras. 56-63).

15.   The Secretary-General indicates that most of the proposals in the strategy, if approved, will be implemented on a cost-neutral basis during the biennium 2014-2015 and that he will put forward detailed resource requirements in the context of the proposed programme budget for 2016-2017, estimated on an indicative basis at an additional $3 million (ibid., para. 58).

16.   The Advisory Committee requested further information on the underlying principles of the proposed revised ICT strategy and the process through which it had been formulated. The Committee was informed that the proposed revised ICT strategy reflected the outcome of an internal consultative process that was initiated in September 2013 and involved the senior management of the Office of Information and Communications Technology and the 22 ICT chiefs of Headquarters departments, offices away from Headquarters and regional commissions. In December 2013, the Information and Communications Technology Executive Committee approved the general direction of the ICT strategy, which was then further developed and refined in consultation with the ICT units of other Secretariat offices/departments and reviewed by the Information and Communications Technology Board. In July 2014, all members of the Executive Committee and the Board and other key stakeholders were given the opportunity to review and comment on the revised ICT strategy. The strategy submitted for consideration by the General Assembly therefore reflected the requirements of the entire Secretariat, based on full internal consultations.

17.   The Advisory Committee was also informed that, in response to the recommendations issued by the Board of Auditors and the decisions taken by the General Assembly, the approach taken in formulating the proposed revised ICT strategy had been to establish capacity within the Secretariat, recognize and build on the respective strengths of the ICT units across the Secretariat and enable them to assume enterprise roles wherever possible. The overall aim was to set realistic ambitions for Secretariat-wide ICT service delivery based on standard processes and a unified approach.

18.   Upon enquiry, the Advisory Committee was further informed that the specific objectives of the proposed revised ICT strategy included the following: to support the implementation of Umoja and ensure that the investment made in Umoja provided lasting value and benefits; to support the realization of the benefits arising from the implementation of Umoja; to establish technologies capable of supporting the future global service delivery model; to ensure that information security was effective throughout the Secretariat and that risks arising from information security-

related issues could be effectively managed, understood and mitigated to the extent possible; to contain escalating costs arising from increasing demand and requirements for ICT services in almost all areas; to strengthen disaster recovery and business continuity across the Secretariat; to optimize the use of ICT hardware, software and human resources across the Secretariat; and to enable greater consistency and transparency with regard to ICT funding and budgets and allow better management of costs and effective prioritization.

19. The Advisory Committee recalls that the 2,000 existing applications referred to in paragraph 25 of the report of the Secretary-General (see also paras. 2 and 14 (b) above) was determined in the context of the ICT structural review, which was presented in the report of the Secretary-General on the status of implementation of the ICT strategy for the United Nations Secretariat (A/65/491). Subsequently, in his fourth progress report on the enterprise resource planning project (A/67/360), the Secretary-General indicated that approximately 700 systems would be replaced by Umoja. **The Advisory Committee recommends that the General Assembly request the Secretary-General to provide in his next report updated information on the total number of applications and those that can be decommissioned, including details on the total number of systems to be replaced by Umoja.**

D. General comments and observations

20. **The Advisory Committee is of the view that the proposed revised ICT strategy constitutes a good basis for the future development of ICT at the United Nations and supports the overall direction of the proposed strategy. It notes that the proposed strategy is based on a consultative approach involving all Secretariat ICT units and focuses on supporting the work of the Organization, prioritizing in particular the activities required to support Umoja implementation and mainstreaming.**

21. **The Committee considers that the strategy proposes a pragmatic approach to reducing the fragmentation of ICT capacities by building on and developing the existing strengths of ICT units across the Secretariat while taking into account the decentralized nature of the United Nations and its complex organizational structures. At the same time, the Committee considers that the distribution of responsibility for ICT delivery across multiple centres in numerous geographically dispersed centres may present some management challenges. It emphasizes that the successful implementation of the proposed strategy will require effective governance and management arrangements that clearly set out the performance targets, and accountability among the various centres responsible for ICT delivery. Furthermore, the Advisory Committee is of the view that strong central leadership for the establishment and strict enforcement of a comprehensive set of corporate ICT policies and standards will be required, as will the full support and commitment of senior managers across all offices/departments to fully apply the ICT strategy and decisions taken at the central level. In this regard, the Advisory Committee recalls that in its resolution 60/283 the General Assembly decided that the Chief Information Technology Officer was responsible for the overall direction and performance of ICT activities in the Organization.**

22.	**Furthermore, the Advisory Committee is of the view that, while the proposed revised ICT strategy sets out a set of goals for the future state of ICT and a high-level plan for transforming ICT delivery at the United Nations over the next five years, a more detailed analysis should be carried out. The Advisory Committee emphasizes the importance of ensuring that the ICT strategy of the United Nations is anchored in a coherent, well-coordinated and inclusive approach that covers the entire Secretariat. It recommends that the General Assembly request the Secretary-General to continue to further develop and refine his proposal for the ICT strategy, for consideration and endorsement by the Assembly at its seventieth session, taking into account the observations and recommendations in the paragraphs below. He should also be requested to elaborate a plan for the implementation of the proposed revised ICT strategy, including information on the key milestones and deliverables, expected benefits, risks, assumptions, constraints and cost estimates, as well as on governance and management arrangements and the impact on organizational structures. The Secretary-General should also establish, at the outset, baseline information that can be used to assess progress over the implementation period.**

23.	**In the following paragraphs, the Advisory Committee recommends that the Secretary-General be requested to provide in his next report details on, inter alia, the implementation plan for the revised ICT strategy; project assurance; the ICT activities to be managed at the central, regional and local levels; the final geographic structure envisaged for the ICT strategy; ICT costs; expected qualitative and quantitative benefits; and the status of the 10-point action plan to strengthen information security. The Committee also recommends that the General Assembly request the Secretary-General to submit his proposals on a new global service delivery model for the United Nations as soon as possible. The Secretary-General's refined analysis and proposals regarding the revised ICT strategy should be consistent with the proposals to be submitted on the global service delivery model.**

## E.	Information and communications technology governance and management framework

24.	The Secretary-General discusses ICT governance and leadership issues in paragraphs 42 to 49 of his report. He provides details on the role of the Chief Information Technology Officer and a description of the proposed governance framework, setting out the lines of authority, accountability and teamwork among the various bodies and units that manage ICT in the Secretariat. The Secretary-General states that the framework is intended to provide oversight of the ICT architecture, standards and investment choices of the United Nations and support efforts to harmonize the fragmented ICT landscape of the United Nations.

25.	As indicated in the report of the Secretary-General, the key components of the governance framework include the Information and Communications Technology Executive Committee, the Information and Communications Technology Board, the Information and Communications Technology Policy Committee and the Architecture Review Board (see para. 14 (f) above). The Secretary-General also indicates that the leadership role of the Chief Information Technology Officer is a crucial component of the governance framework in ensuring accountability to Member States for all ICT responsibilities and activities (see paras. 27-29 below). Upon enquiry, the

Advisory Committee was provided with further details of the respective roles of the Information and Communications Technology Executive Committee and the Information and Communications Technology Board (see annex I).

26. **As indicated in paragraph 21 above, robust governance, management and accountability arrangements, strong leadership, comprehensive standards and procedures and effective communication and coordination will be required to ensure the successful implementation of the proposed revised ICT strategy and the transformation of ICT delivery at the United Nations. The Advisory Committee recommends that the General Assembly request the Secretary-General to keep the governance, management and accountability arrangements under review and ensure their continued effectiveness and to report thereon to the Assembly in his next report.**

Role of the Chief Information Technology Officer

27. In his report, the Secretary-General indicates that the Chief Information Technology Officer is the senior officer responsible for meeting the objectives of the strategy and leading all ICT activities across the Secretariat and is accountable to the Under-Secretary-General for Management. The Advisory Committee was informed that the Chief Information Technology Officer was responsible for establishing a comprehensive ICT management framework for the development and promulgation of corporate ICT standards and architecture and ICT policies and guidance for the United Nations, with which all Secretariat entities are required to comply. The function and leadership role of the Chief Information Technology Officer was crucial in ensuring consistency in ICT delivery while driving the changes that were needed to overcome the existing fragmentation of the ICT landscape, as well as in ensuring that the ICT transformation was driven by organizational priorities.

28. In this connection, the Advisory Committee recalls that in its previous report (A/67/770) it stressed the need to designate a single individual as the senior responsible owner to assume full accountability for the development and implementation of the ICT strategy and to also grant to that designated individual the requisite authority to implement and enforce the ICT strategy, as approved by the General Assembly. The Advisory Committee also recalls that, in its resolution 63/262, the Assembly endorsed the ICT strategy presented in the report of the Secretary-General entitled "Investing in information and communications technology: information and communications strategy for the United Nations Secretariat" (A/62/793 and Corr.1 and Add.1), thereby establishing a key function of the Chief Information Technology Officer, which was to oversee, through appropriate delegation, ICT operations and investments in all offices of the Secretariat (A/62/793, para. 29 (h)). The Advisory Committee further recalls that in its resolution 60/283 the Assembly decided that the Chief Information Technology Officer was responsible for the overall direction and performance of ICT activities in the Organization.

29. The Advisory Committee requested information on the mechanisms envisaged for ensuring compliance with the corporate ICT strategy across all ICT units of the Secretariat. It was informed that, should the General Assembly approve the proposed revised ICT strategy, the Secretariat would prepare and promulgate a Secretary-General's bulletin on the Office of Information and Communication

Technology, which would establish the requisite mechanisms for delegation of authority and procedures for ensuring compliance with the revised ICT strategy, as approved by the Assembly. **The Committee expects that the Secretary-General will take action in a timely manner to update the relevant organizational, administrative and management arrangements indicated above, which are necessary for the implementation of any further decisions that the Assembly may take in future regarding the proposed revised ICT strategy. The Committee also emphasizes the need to determine the impact of the above-mentioned arrangements and compliance mechanisms on the functions and responsibilities of other ICT units in the Secretariat, in particular those that are called upon to assume enterprise roles or to serve as regional technology centres, and to harmonize any related Secretary-General's bulletins, as required.**

Information to support decision-making

30.   In its report on the handling of ICT affairs in the Secretariat (A/67/651), the Board of Auditors highlighted the need for the Information and Communications Technology Executive Committee to consider strategically important matters, such as the review of periodic investment profiles, in-depth risk analyses, including trend perspectives, and the delivery of value from ICT. **The Advisory Committee recommends that the General Assembly request the Secretary-General to ensure that the Executive Committee is provided with high-quality information to support informed decision-making, including assessments of risk.**

31.   In this connection, the Advisory Committee requested additional information on potential risks to the implementation of the proposed revised ICT strategy, given the delays experienced in the implementation of certain phases of Umoja and the related budget increases for the overall project. The Committee was informed that, in the light of its close collaboration with the Umoja project team, the Office of Information and Communications Technology was able to identify, register and establish plans to mitigate risks on an ongoing basis and that there was no notable risk to the proposed strategy.

Project assurance

32.   The Board of Auditors has highlighted the importance of ensuring an effective system of project assurance for major business transformation initiatives that can provide an independent assessment (i.e. independent of the project team) of whether the elements required to deliver a project successfully are in place and operating effectively (see A/67/164). The Board has indicated that assurance can be derived from an internal challenge function or external sources and that it can be planned at the outset of a project or be triggered by an event during a project. The Advisory Committee has also highlighted the value of an independent assessment as a useful tool for the Secretariat in analysing lessons learned and charting a course of action for addressing issues and challenges faced (see A/67/770). **The Advisory Committee considers that, at this stage, an independent internal challenge mechanism should be put in place to provide independent advice and oversight regarding, inter alia, the scope, cost and implementation timetable, with a view to ensuring that the project remains on track to achieve its objectives. In this regard, the Advisory Committee also emphasizes the need to take into account lessons learned and best practices from past implementation of management**

reform initiatives in setting up the above-mentioned internal advisory and oversight mechanism and to ensure its independence from the governance and leadership of ICT at the United Nations. The Advisory Committee recommends that the General Assembly request the Secretary-General to report on the action taken in this regard in his next report.

F. Proposed revised information and communications technology strategy

Central control versus operational freedom

33.   The Secretary-General states that the proposed revised strategy supports the principle that there needs to be a better balance between central control and operational freedom (A/69/517, para. 24). He notes that departments need the operational freedom to act quickly and indicates that the Office of Information and Communications Technology can support this process while providing enterprise systems that will allow them to work in a more unified manner. The Secretary-General also states that his proposals to harmonize functions in regional ICT units and data and application centres will bring about this balance while reducing fragmentation.

34.   In its previous report (A/67/770), the Advisory Committee noted that tension existed between centralization and decentralization in all operating models for the delivery of services. It stressed that the Organization needed to come to an agreement on how to adapt its existing operating model to new requirements resulting from the implementation of Organization-wide initiatives such as the enterprise resource planning system and information security, which required tight central control, while taking into account the high level of decentralization in ICT operations, as well as the autonomous nature of some of the entities of the Secretariat. **The Advisory Committee continues to believe that there is a need to strengthen central control to comprehensively address the question of the excessive fragmentation of ICT capacities across the Secretariat. The Committee recommends that the General Assembly request the Secretary-General to identify precisely the activities that require tighter control and should be managed centrally, those that can be managed at the regional level and those that can be delegated to local ICT units and to report thereon in his next report. He should also be requested to report on the steps taken to implement the central management of activities requiring tighter control.**

Transformation of the enterprise delivery network

35.   The Secretary-General's proposals for the transformation of the enterprise delivery network are outlined in paragraphs 24 to 31 of his report. As indicated in paragraph 14 (b) above, the ICT strategy envisions the delivery of ICT through a network of enterprise application and data centres and regional technology centres, which are to be designated or established at various locations across the Secretariat.

36.   The Advisory Committee was informed, upon enquiry, that the suitability of various locations for the establishment of regional technology centres had been based on an analysis of the following elements: (a) environmental factors, including safety and security and presence of United Nations entities; (b) technical factors, including network connectivity and infrastructure, as well as the availability and

skill level of application development personnel; (c) a financial analysis and operational considerations, including consideration of the relative cost of service provision by United Nations staff and contractual personnel; and (d) other operational considerations, such as the availability of management expertise and service provider capacity and time zone factors. With regard to the proposed enterprise application centres, the main selection criteria used were the level of the existing technical expertise and capacity at that location and its compliance with the approved enterprise architecture and standards. **The Advisory Committee recommends that the General Assembly request the Secretary-General to provide in his next report information on the existing enterprise architecture and ICT standards, as well as on the procedures in effect for the approval of such standards and architecture.**

37. **The Advisory Committee considers that the envisaged designation of various locations as enterprise or regional ICT centres can have a significant impact on, inter alia, the organizational structure, lines of accountability, working methods, processes and procedures and also have financial implications. The Committee emphasizes that the establishment of any new enterprise or regional ICT centres must be approved by the General Assembly on the basis of a detailed proposal that addresses the issues above and sets out clearly, inter alia, the rationale for the establishment of the centre, the criteria used to determine the suitability of the proposed location, details on the financial implications, including any initial investments and recurring costs, as well as information on the expected operational effectiveness of the proposed arrangements. The Secretary-General should submit such proposals in his future reports for any centres that are proposed to be established during the subsequent reporting period. With regard to any existing centres that are proposed to be integrated as part of the ICT strategy, in particular any facilities created for peacekeeping operations, the Advisory Committee emphasizes that such centres must be aligned and harmonized with the proposed revised ICT strategy. The Advisory Committee recommends that the Assembly request the Secretary-General to provide in his next report details on the final geographic structure envisaged under the proposed revised ICT strategy.**

38. **The Advisory Committee expects that the transformation of the delivery of ICT services will result in reduced duplication and fragmentation and allow greater harmonization of the ICT capacities of the Secretariat. The Committee also expects that the transformation will lead to a higher quality of service, streamlined business processes and improved working methods and result in the optimal use of resources and the realization of efficiency gains. It recommends that the General Assembly request the Secretary-General to identify all potential qualitative and quantitative benefits and explain how they can be derived from the transformation of the delivery of ICT services, including the methodology and benchmarks used to identify and measure those benefits, and to report thereon in his next report (see also paras. 58-59 below).**

Peacekeeping information and communications technology capacities

39. As indicated in paragraph 4 above, the Board of Auditors identified as one of the three key limitations of the current ICT strategy the insufficient recognition given to peacekeeping activities, which account for some 75 per cent of overall ICT

expenditure (A/67/651, para. 18). As indicated in the related report of the Advisory Committee, any ICT strategy for the United Nations that did not encompass peacekeeping operations would lack credibility (A/67/770, para. 46).

40. The Advisory Committee requested additional information on how peacekeeping ICT activities and capacities had been reflected in the proposed revised ICT strategy. It was informed that, like all other Secretariat entities, the Department of Field Support and all field missions were required to comply with the corporate ICT standards architecture, policies and guidance established and promulgated under the authority of the Chief Information Technology Officer. The Advisory Committee was also informed that the Department of Field Support had been an active participant in the establishment of the current and proposed new governance structures and had aligned its activities in the field accordingly.

41. The Advisory Committee requested clarification on the Secretary-General's proposals. The information provided in response to its request indicated that, consistent with the proposed approach for the transformation of ICT delivery, in which a broad range of Secretariat entities are designated as enterprise or regional technology centres, hosting services for all enterprise systems of the Secretariat would be provided by the Enterprise Data Centre at Valencia, which is managed by the Department of Field Support and was established initially to serve as a secondary active telecommunications facility and a backup to the United Nations Logistics Base at Brindisi to provide disaster recovery and business continuity for peacekeeping operations. Furthermore, the Global Service Centre at Brindisi, also managed by the Department of Field Support, would serve as one of the five enterprise service desks providing help desk and support services for all enterprise systems across the Secretariat. In addition to its new enterprise-level responsibilities, the Communication and Information Technology Service of the Department of Field Support would continue to provide day-to-day operational support to the field missions supported by the Department. **The Advisory Committee is of the view that the role of the Department of Field Support in managing enterprise services should be kept under review.**

42. In this connection, the Advisory Committee recalls that in his fourth annual progress report on the implementation of the global field support strategy (A/68/637 and Corr.1), the Secretary-General proposed to establish a Regional Information Communications Technology Service within the Regional Service Centre at Entebbe to provide non-location-dependent information technology support services to client missions. In his overview report on the financing of the United Nations peacekeeping operations for the 2014/15 period (A/68/731), the Secretary-General also proposed to restructure the ICT facilities located in Brindisi and Valencia under a Field Technology Operations Centre which would assume, inter alia, a regional leadership role for all missions not based in the Middle East or East Africa. He indicated that regional cooperation arrangements already existed for the delivery of ICT services to missions in those two regions.

43. **The Advisory Committee emphasizes that the revised ICT strategy should be inclusive and apply equally to all Secretariat entities, including peacekeeping operations. Regional ICT capacities for peacekeeping missions are an integral part of the Secretariat and, like any other ICT facility in the Secretariat, should be included in the effort to consolidate and streamline ICT delivery across the Secretariat.**

44.   **The Advisory Committee recommends that the General Assembly request the Secretary-General to submit in his next report proposals regarding the role, location and contribution of each Secretariat entity called upon to provide ICT services at the enterprise or regional levels, including the Department of Field Support and peacekeeping missions. He should also provide information on the functions to be transferred to those centres from the 70 local ICT units and the impact of those transfers. The Committee also recommends that the Secretary-General provide details on the cost-sharing arrangements proposed for the provision of ICT services under the regular budget, the peacekeeping budget and extrabudgetary sources of funding.**

G.   Mainstreaming Umoja support

45.   Information on the mainstreaming of Umoja support is provided in paragraphs 11 to 14 of the report of the Secretary-General. As indicated, the mainstreaming plan involves: (a) progressive downsizing of the Umoja project team from 90 to 74 posts at the end of 2015, most of the 16 posts proposed to be downsized being related to administrative and support functions; (b) further downsizing of the project team from 74 to 50 posts early in 2017, with the incumbents of the 24 posts proposed to be downsized consisting mainly of process experts to be transferred to business units; and (c) the transfer in January 2017 of responsibility for Umoja to the Chief Information Technology Officer, who will take over the management and execution of activities related to ICT. As indicated, those ICT-related activities include: (a) ongoing system support and maintenance capacity to manage, maintain and enhance the Umoja production environment; (b) yearly building and testing programmes of work to integrate new functionality into the production environment, including the release of the Umoja Extension 2 functionality; and (c) periodic release of new functionality and/or maintenance packages within the Secretariat.

46.   The Secretary-General indicates that a temporary project team under the direction of the Chief Information Technology Officer comprising staff from the Umoja team and the Office of Information and Communications Technology has been established to ensure the successful mainstreaming of functions. The project team will determine which tasks can be mainstreamed in the short term (up to 3 months), medium term (3 months to 1 year) and long term (more than 1 year). Tasks that will be mainstreamed in the short and medium term will be transitioned to existing areas in the Office of Information and Communications Technology. A detailed plan will be developed for each area of mainstreaming.

47.   The Advisory Committee notes that activities for planning and preparing the mainstreaming of Umoja support under the responsibility of the Chief Information Technology Officer have commenced. In its report on the sixth progress report of the Secretary-General on the enterprise resource planning project (A/69/418), the Advisory Committee noted the importance of rigorous planning and preparation for the future downsizing of the project team and emphasized that the Umoja project team and the Office of Information and Communications Technology should continue to work closely together in order to ensure that in-house expertise was developed in time for the transfer of responsibility for the support of the system to the Office. The Committee also recommended that the project governance and management structures, which in its view were necessary to deliver a complex

business transformation such as Umoja Extension 2, should be maintained until the entire system was fully deployed throughout the Secretariat.

48. **The Advisory Committee recommends that the General Assembly request the Secretary-General to prioritize the activities related to the transfer of responsibility for the post-deployment support of Umoja to the Office of Information and Communications Technology.**

H. Human resources in information and communications technology

49. In paragraphs 50 to 52 of his report, the Secretary-General indicates that the Office of Information and Communications Technology will work with the Office of Human Resources Management to address issues related to the development of skills and career progression of ICT personnel across the Secretariat. He puts forward a number of measures, including: (a) creating new generic job profiles and standard job profiles in collaboration with the Office of Human Resources Management, based on revised ICT needs and career paths; (b) reclassifying ICT staff positions, where necessary, to ensure that the Organization adapts properly to emerging technology; and (c) establishing a training and mobility programme for ICT personnel.

50. Upon enquiry, the Advisory Committee was informed that the main issues facing ICT professionals were the lack of upward mobility, the lack of career prospects for staff performing specialized tasks, the need to create training opportunities for staff who had remained at the same grade levels over long periods of time, the inability of staff to take advantage of opportunities offered externally in the ICT industry and the lack of recognition for consistently good performance.

51. The Advisory Committee recalls that the Board of Auditors, in its report on the handling of ICT affairs in the Secretariat (A/67/651), noted that the skills base of the Office of Information and Communications Technology was predominantly directed at the running of day-to-day ICT operations rather than at leading business transformation. It recommended that, over time, the Secretariat redirect existing resources of the Office to more strategic activities and that it consider the use of alternative sourcing arrangements for day-to-day ICT support services. The Advisory Committee also notes that in-house expertise will have to be developed in time for the transfer of responsibility for the support of Umoja to the Office by early 2017.

52. **The Advisory Committee recognizes the need to establish training programmes for upgrading the skills of ICT staff. It emphasizes, however, that any proposals entailing changes to the human resources management framework, including job profiles and career paths of United Nations staff, must be analysed and developed by the Office of Human Resources Management in accordance with the established rules and regulations and the human resources management policy framework of the Organization. The Committee recommends that the General Assembly request the Secretary-General to ensure that any proposal put forward in this regard is based on a detailed analysis.**

I. Information and communications technology costs and benefits

Costs of information and communications technology delivery at the United Nations

53. In paragraph 59 of his report, the Secretary-General provides some information on the costs of ICT at the United Nations, based on an analysis of current and historical ICT budgets. Annex III to the report of the Secretary-General presents the information in a table. Upon enquiry, the Advisory Committee was provided with a corrected version of the table, which is attached as annex II to the present report. Upon enquiry, the Advisory Committee was informed that the captured cost data presented some limitations owing to shortcomings in current accounting and human resources management systems, which did not provide for the itemization of ICT costs, consistent definitions of ICT functions or a clear identification of personnel performing ICT tasks.

54. In this connection, the Advisory Committee recalls that, pursuant to its observations and recommendations on cross-cutting issues related to peacekeeping operations (A/68/782), it requested the Board of Auditors to conduct a comprehensive, Secretariat-wide audit of peacekeeping ICT expenditure, including staff and other personnel costs, and to present the outcome of that audit in the next report of the Board on peacekeeping operations. **Given the difficulties faced in obtaining comprehensive and accurate information on current ICT costs across the Secretariat, the Advisory Committee intends to request the Board of Auditors to expand coverage of its audit of ICT expenditure to include the ICT expenditure of all Secretariat entities.**

55. The Secretary-General indicates that it is expected that the implementation of Umoja will alleviate current limitations and allow a detailed analysis of all ICT costs. Global sourcing will be implemented using Umoja to support process integrity and visibility and will comply with IPSAS. The Secretary-General also states that the new governance framework will allow holistic analyses of costs and savings and, furthermore, that the United Nations will strengthen visibility and control of ICT expenditure through the establishment of standard processes, a centralized contract management capacity, a repository of contracts and a management tool for software licences and hardware purchases.

56. **The Advisory Committee recommends that the General Assembly request the Secretary-General to refine his analysis of current ICT expenditure in order to establish more accurate baseline information from which to measure progress in improving efficiency and effectiveness in the delivery of ICT services, and to report thereon in his next report. The Secretary-General should also be requested to gather benchmarking data that would allow a comparison of the costs of ICT services provided by the United Nations with industry standards.**

57. **The Advisory Committee emphasizes the importance of ensuring that the implementation of the proposed revised ICT strategy allows increased transparency with regard to ICT capacities and resources and the cost of ICT services across the Secretariat. It recommends that the General Assembly request the Secretary-General to ensure that proper procedures and systems for recording, tracking and analysing the costs of ICT activities with a**

sufficient level of detail and in a standardized and comparable manner are in effect across the entire Secretariat, and to report thereon in his next report.

Cost-benefit analysis

58.   As indicated in paragraph 18 above, one of the objectives of the proposed revised ICT strategy is to support the realization of the benefits arising from the implementation of Umoja, in particular those arising from the decommissioning of existing systems that will be replaced by Umoja. The implementation of the proposed revised ICT strategy, which aims to reduce the level of fragmentation and duplication across the Secretariat, will also engender both qualitative and quantitative benefits. Similarly, global sourcing is expected to yield more favourable contractual terms, including economies of scale.

59.   **While recognizing that the cost-benefit analysis will evolve over time as the implementation of the proposed revised ICT strategy progresses, the Advisory Committee is of the view that cost-benefit analysis is an important tool in the decision-making process for evaluating projects and determining their feasibility and that such an analysis should be prepared at the outset of the project. Accordingly, the Advisory Committee recommends that the General Assembly request the Secretary-General to provide a cost-benefit analysis as part of his refined proposals for the revised ICT strategy. The analysis should clearly distinguish between the benefits to be derived from changes in the approach to ICT service delivery and those related to the implementation of Umoja or any other management reform initiative. The Secretary-General should also be requested to provide information on the impact of the implementation of the proposed revised ICT strategy on the operations of the Organization and any expected improvements to programme delivery.**

Financial implications of the proposed revised information and communications technology strategy

60.   The Secretary-General indicates that most of the proposals in the strategy, if approved, will be implemented on a cost-neutral basis during the biennium 2014-2015. He provides information on the indicative level of additional resource requirements for the biennium 2016-2017, which are estimated at approximately $3 million, to cover estimated requirements related to the implementation of activities related to the comprehensive information security strategy ($1.1 million) and the implementation of the proposed revised ICT strategy ($1.9 million). The Advisory Committee will revert to this issue in the context of its consideration of the proposed programme budget for the biennium 2016-2017.

J.   Information security

61.   In his report, the Secretary-General provides an update on progress achieved in the implementation of recommendations related to strengthening information and systems security across the Secretariat. He states that the Office of Information and Communications Technology has established a comprehensive information security framework for the Secretariat, building on the interim initiatives identified in his progress report on the implementation of recommendations related to strengthening

information and systems security across the Secretariat (A/68/552) in the areas of prevention, incident detection and response, and governance, risk and compliance.

62. The Advisory Committee recalls that, in that progress report, the Secretary-General proposed additional requirements of $3,440,700 to implement urgent measures to strengthen ICT security in the Secretariat under section 29E, Office of Information and Communications Technology, of the proposed programme budget for the biennium 2014-2015 (A/68/6 (Sect. 29E)). The Advisory Committee, in its related report (A/68/7/Add.11), recommended that the General Assembly request the Secretary-General to accommodate any additional requirements for temporary assistance and travel of staff from within the resources provided for in the proposed programme budget for the biennium 2014-2015 and to report in the relevant performance report on any additional expenditure required under contractual services or under furniture and equipment. In its resolution 68/247 A, the Assembly endorsed the conclusions and recommendations contained in the report of the Advisory Committee.

63. **The Advisory Committee recommends that the General Assembly request the Secretary-General to provide in his next report a detailed update on the implementation status of the 10-point action plan to strengthen information security approved by the Assembly in its resolution 68/247 A, including details on related expenditure.**

III. Conclusions and recommendations

64. **The actions requested of the General Assembly are set out in paragraph 69 of the report of the Secretary-General. The Advisory Committee recommends that, subject to its comments and recommendations in the paragraphs above, the Assembly take note of the report of the Secretary-General and request him to submit for consideration at its seventieth session a refined proposal for the ICT strategy of the United Nations.**

Annex I

Proposed information and communications technology governance framework

Role and functioning of the Information and Communications Technology Executive Committee

The Information and Communications Technology Executive Committee is chaired by the Under-Secretary-General for Management and comprises senior managers at the Under-Secretary-General level from substantive and support areas, as well as the Chief Information Technology Officer, as an ex officio member. It meets on a quarterly basis to review the information and communications technology (ICT) strategy and programme performance and to determine the ICT investment portfolio, as needed.

The Executive Committee is the highest-level decision-making body on major ICT matters in the Secretariat and provides overall strategic direction, prioritization and decision-making for ICT in the Secretariat. It aims to optimize investment in ICT and ensure its continued alignment with the substantive and support programmes of the United Nations. The purview of the Executive Committee covers the entirety of ICT activities in the Secretariat, regardless of organizational location or funding source. Specifically, the Executive Committee shall: (a) review and monitor progress against the strategy; (b) review and endorse major changes in ICT governance structures; (c) review the overall programme performance of ICT; (d) determine the investment portfolio and management priorities; and (e) ensure institutional support for programmes and changes introduced by ICT.

Role and functioning of the Information and Communications Technology Board

The Information and Communications Technology Board is chaired by the Chief Information Technology Officer and comprises members at the D-1 or D-2 level representing Headquarters offices and departments, offices away from Headquarters, economic commissions and tribunals. It meets quarterly and may set up smaller committees to deliberate on specific matters and report to the Board.

The Board is responsible for ensuring the coherent and coordinated global usage of ICT across departments and duty stations, in line with the objectives of the Secretariat and the general policy direction provided by the Information and Communications Technology Executive Committee. The overall goals of the Board are to: (a) ensure that the ICT needs of departments and offices are identified and met; (b) ensure maximum standardization of systems; (c) avoid duplication of efforts; (d) ensure that departments and offices implement ICT programmes and services that best support their business needs; and (e) ensure that ICT projects and initiatives are aligned with the overall goals and priorities of the Secretariat. Specifically, the Board shall perform the following functions: (a) coordinate the implementation of the revised ICT strategy; (b) advise the Executive Committee on the implementation and management of ICT in relation to monitoring the Organization's requirements and industry trends; (c) coordinate comprehensive analyses of future requirements for ICT infrastructure and services; and (d) liaise with local ICT committees at offices away from Headquarters, funds and programmes and the inter-agency coordination machinery.

Annex II

Budgetary overview

The table below corrects the table contained in annex III to the report of the Secretary-General on information and communications technology in the United Nations (A/69/517).

Overview of information technology and communications resources for the bienniums 2010-2011 to 2014-2015, including resources for Umoja

(Millions of United States dollars)

Biennium	Regular budget[a]	Extrabudgetary[a]	Support account[b]	Peacekeeping missions[b]	Special political missions[c]	Total	Umoja[d]	Total including Umoja	Annual	Annual including Umoja
2010-2011	301.5	24.9	144.3	1 048.4	Included in regular budget	1 519.0	100.7	1 619.7	759.55	809.85
2012-2013	210.6	24.9	73.8	963.6	58.8	1 331.7	137.3	1 469.0	665.85	734.50
2014-2015	240.7	28.4	37.7	950.7	49.8	1 307.3	129.4	1 436.7	653.65	718.35
Total 2010-2015	**752.8**	**78.2**	**255.8**	**2 962.7**	**108.6**	**4 158.1**	**367.4**	**4 525.4**	**–**	**–**

[a] See table entitled "Resources allocated to information technology" (A/64/6 (Introduction)) and A/68/6 (Introduction), table 14, which include staff costs based on an analysis of posts dedicated to ICT programmes. As extrabudgetary resources presented in document A/68/6 excluded expenditure for information technology-related posts, for the purpose of the present analysis it is assumed that extrabudgetary resources for the 2010-2011 biennium were kept at the same level as reported for 2012-2013.

[b] See A/C.5/64/15, A/C.5/65/15, A/C.5/66/14, A/C.5/66/18, A/C.5/68/21 and A/C.5/68/26. As the resources presented in those reports excluded post expenditure for information technology-related posts, for the purpose of the present analysis it is assumed that staff costs for the 2012-2013 and 2014-2015 bienniums were kept at the same level as those reported for 2010-2011.

[c] A/68/327, table 5, excludes staff costs.

[d] A/68/375 and A/69/385 and Corr.1.