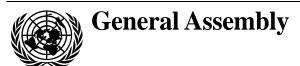
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Administrative and budgetary aspects of the financing of the United Nations peacekeeping operations

Information and communications technology security, disaster recovery and business continuity for the United Nations: arrangements for the secondary data centre at Headquarters

**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 arrangements for a secondary data centre at Headquarters (A/63/743). During its consideration of the report, the Committee met with representatives of the Secretary-General, who provided additional information and clarification. The Committee also visited the current primary and secondary data centres in the Secretariat and DC2 Buildings.
- 2. The report of the Secretary-General was issued pursuant to General Assembly resolution 63/262, by which the Assembly requested the Secretary-General to report to it at the first part of its resumed sixty-third session on the risk mitigation measures to be taken during the relocation of the primary data centre to the North Lawn (sect. IV, para. 11), as well as to present a new proposal for a secondary data centre, including on cost-sharing arrangements (sect. IV, para. 19).
- 3. According to the current schedule, the new North Lawn data centre will be ready for occupancy in November 2009, and the data centre in the Secretariat building must be vacated by March 2010 in order to avoid delays in the implementation of the capital master plan project. The Secretary-General proposes to set up the initial information and communications technology (ICT) infrastructure and to relocate systems from the Secretariat Building to the North Lawn data centre



in phases during the four-month period from 1 November 2009 to 28 February 2010 (see A/63/743, paras. 20 and 21).

- 4. The Secretary-General indicated that, in order to meet this timetable, a new secondary data centre must be fully operational by the end of October 2009. He further indicated that the timetable did not allow for the construction of a data centre, as originally planned, and that, consequently, a commercial data centre facility must be identified and leased by 1 July 2009 in order to ensure the availability of a fully functional centre, set up with the necessary initial ICT infrastructure, by the end of October 2009. He also stated that this presented a very challenging timetable for the completion of all the associated procurement and negotiation processes, significantly increasing the risk that the deadline for the commissioning of the new secondary data centre would not be able to be met (see A/63/743, paras. 21 and 22).
- 5. In view of these constraints, the Secretary-General proposes to establish a temporary secondary data centre for the two-and-a-half-year period from 1 July 2009 to 31 December 2011 and to revert to the question of the permanent secondary data centre during the biennium 2012-2013. The key elements of the proposal for a temporary secondary data centre include:
- (a) Leasing of a commercial "infrastructure-ready" data centre facility at a total estimated cost of some \$11 million, comprising annual rent of \$4.3 million and an initial set-up charge of \$350,000;
- (b) Establishment of a service delivery agreement with the International Computing Centre (ICC) to provide the necessary equipment and services for running the new secondary data centre at a total cost of \$12.7 million, comprising one-time costs of \$994,700 and \$1 million for commissioning equipment and migrating applications, respectively, as well as annual charges of \$5.4 million for operating the data centre;
- (c) Decommissioning of the existing secondary data centre in the DC2 Building as from July 2010, with an annual reduction of \$627,800 in the current service delivery agreement with ICC;
- (d) Sharing of the costs of the secondary data centre between the regular budget (80 per cent) and peacekeeping budgets (20 per cent) on the basis of the proportion of capacity of the secondary data centre used for peacekeeping and non-peacekeeping operations.

A breakdown of costs by object of expenditure, funding source and financial period is provided in table 2 of the report of the Secretary-General.

6. The Secretary-General is requesting urgent action on the proposal because, as indicated in paragraph 11 of the report, if the primary data centre in the Secretariat Building is not vacated as planned by the end of March 2010, the implementation of the capital master plan project will be delayed, resulting in a cost increase currently estimated at about \$14 million per month owing to several costs associated with swing space leases and the resumption of construction activity after an interruption.

# II. Comments and observations

- The Committee considers that the report does not provide a complete analysis of the costs that are likely to be incurred over the lifespan of the project. In this connection, the Committee would have found it useful if estimates of comparative costs had been provided for: (a) leasing versus acquisition of the ICT equipment; (b) the provision of services in house versus a service delivery agreement with ICC; and (c) temporary leasing of premises versus construction of a permanent secondary data centre. Upon enquiry, the Committee was informed that, were the ICT equipment to be acquired rather than leased, the total cost for data centre equipment and services would amount to \$12.7 million, comprising \$7.1 million for acquisition of the equipment, \$1.6 million for maintenance of the equipment and \$4 million for ICC services. Under this option, the outlay in 2009 due to the initial capital costs for equipment would be \$12.6 million, compared with \$7.2 million in the Secretary-General's proposal. The Committee was further informed that, even under the current proposal, ICC would have the option of buying the ICT equipment using United Nations systems contracts, thereby ensuring that the United Nations did not incur a higher cost under the proposed arrangement. The Committee recommends that a final decision on whether to lease or purchase be based on an analysis of which option would result in the least cost to the Organization, taking into account the expected lifespan of the relevant ICT equipment.
- 8. In addition, the Committee notes that the proposed solution involves an initial relocation from the DC2 site to the temporary data centre for two and a half years followed by a second move from the temporary to the permanent secondary site. It is evident from the Secretary-General's proposal that such relocations are costly: they involve complex, high-risk processes that require considerable preparation and mobilize large numbers of specialized staff over extended periods, during which such staff would not be able to contribute to other strategic projects such as the enterprise resource planning system. The Committee emphasizes the importance of the conduct of a full analysis of costs and the provision of complete costing information to facilitate its consideration of and decision-making on such proposals, particularly in the light of the potential for duplication and the resource implications.
- 9. In its report on ICT (A/63/487 and Corr.1 and 2, para. 83), the Committee requested that the Secretary-General provide information on the costs already incurred in connection with the Long Island City site. Upon enquiry, the Committee was informed that the costs incurred thus far for investigating the different options for the secondary data centre totalled \$178,000, covering expenditures arising from the "due diligence" evaluation of the various sites, as well as the design of and construction cost estimates for the data centre in the United Nations Federal Credit Union (UNFCU) building in Long Island City. Of that amount, \$20,000 was funded from resources appropriated under section 36, Office of Information and Communications Technology, of the programme budget for the biennium 2008-2009 and \$158,000 from the capital master plan under the arrangements set out in the letter from the Secretary-General to the President of the General Assembly (A/C.5/62/29).
- 10. The Secretary-General does not provide assurances that the deadline for the commissioning of the new secondary data centre can indeed be met (see para. 4 above and A/63/743, para. 22). The Committee points out that the need for ensuring

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full capability for disaster recovery and business continuity at United Nations Headquarters in the context of the capital master plan project has been known for some time. The Secretary-General submitted an initial proposal in October 2007 for the construction of a data centre at the UNFCU building in Long Island City to replace the centre in DC2, including the possibility of establishing a joint operation and sharing costs with other United Nations entities located in New York (A/62/477). However, in September 2008, the Secretariat determined that the Long Island City site was not viable after it had entered into a long-term lease for the proposed data centre (A/63/743, paras. 1-5). Subsequently, the Secretariat pursued a search for alternative sites and determined, in January 2009, that it would not be possible to build a data centre in time for the relocation of the primary data centre. The Secretariat then decided to opt for leasing commercial, "infrastructure-ready" data centre facilities where it could immediately install and operate its own ICT equipment.

- 11. In the view of the Committee, this sequence of events demonstrates continued deficiencies in the planning and management of the project, which appear to be based on an improvised reaction to situations as they arise rather than being the result of anticipation of potential issues, preparation for a variety of contingencies and consideration of strategic, long-term requirements. Given the significant impact of any delay in the relocation of the primary data centre on the overall cost of the capital master plan, as well as the complexity of the project, which requires long lead times for procurement and commercial telecommunications links, the Committee believes that the Secretariat should have proactively considered a variety of different, scalable options from the outset, in September 2008, when the Long Island City option was abandoned, in order to ensure sufficient time to fully develop cost-effective alternative proposals as well as to implement technically sound and robust solutions. Furthermore, the Committee believes that some of the risks associated with the current DC2 facility (see para. 15 below) could have been mitigated earlier through managerial due diligence and foresight.
- 12. In this connection, the Committee is not convinced by the Secretariat's argument that the delays are due partially to the fact that it had to re-evaluate its strategy relating to the secondary data centre for Headquarters in the light of the principles set out by the General Assembly for managing disaster recovery and business continuity, such as the consolidation of systems in central data centres and the use of enterprise data centres rather than local data centres (see A/63/743, paras. 16-19). In the Committee's view, the requests of the Assembly endorse and build upon the Secretary-General's own long-term proposals for a more unified approach to global operations and the implementation of enterprise systems to be hosted globally at the United Nations Logistics Base at Brindisi, Italy, as set out in documents A/62/477 and A/62/510/Rev.1, rather than establishing new parameters for the secondary data centre that have an impact on the strategy.
- 13. Upon enquiry, the Committee was informed that a definitive classification of critical and non-critical systems did not yet exist. Such a classification would allow for clear prioritization of the systems to be backed up in the secondary centre. At present, business continuity capability is provided for the systems generally acknowledged to be important, such as e-mail, BlackBerry, the Integrated Management Information System (IMIS), treasury and budget systems, the Official

Document System, the Secretary-General's system for managing his contacts and schedule, the iSeek Intranet site and the United Nations website (see also para. 14 and annex below). The Committee recalls that in General Assembly resolution 63/262, the Assembly requested the Secretary-General to prioritize systems in order to minimize the cost of disaster recovery and business continuity (sect. IV, para. 3). The Committee was informed that the Business Continuity Management Unit of the Office of Central Support Services was responsible for undertaking the classification effort and for reporting on the matter to the Assembly in the context of the Secretary-General's proposals for a unified disaster recovery and business continuity plan, as requested in resolution 63/262 (sect. IV, para. 12). The Committee notes with regret the absence of such a classification, which, in its view, constitutes a deficiency in the Secretary-General's proposal. The Committee considers that such a classification would be an essential basis for the establishment of a timeline for the migration of systems and would also allow streamlining and optimization of the migration process. The Committee urges the Secretariat to make every effort to conclude this process expeditiously and to provide to the Assembly at the time of its consideration of this question, an inventory of systems classified according to their degree of criticality.

- 14. In this connection, the Committee considers that the terminology used to qualify systems, which are referred to critical, major, important or non-critical, merits clarification. Upon enquiry, the Committee was provided with additional information on the systems that are backed up or running in the DC2 data centre, including their criticality, which is provided in the annex below. The Committee notes that: (a) systems such as Windows, antivirus programs and firewalls are considered critical, as they affect the continued availability of all other ICT systems running in the data centres; (b) systems such as IMIS, e-mail and BlackBerry are considered to be important; and (c) non-critical systems include departmental applications such as the e-commerce system for the United Nations Postal Administration (Department of Management) and the Networked Interactive Content Access System, used for managing digital content, including photographs and video (Department for Public Information). The Committee was informed that, due to capacity limitations in the primary data centre in the Secretariat Building, these non-critical departmental applications are hosted in DC2 only.
- 15. According to the Secretariat, during the move of the primary site to the North Lawn, demands on DC2 would increase for data backup and running systems. During the move, the DC2 data centre will acquire the role of a primary data centre for the systems that are being relocated. In the view of the Secretariat, this would magnify the risk of failures due to power disruption (DC2 lacks emergency power) or other circumstances, leading to the possible disruption of critical communications systems (e.g. e-mail, BlackBerry) as well as key administrative systems (e.g. IMIS) (see A/63/743, paras. 8 and 9). The Secretariat reiterated to the Committee that neither the power supply nor the cooling systems in DC2 could be upgraded.

## III. Recommendations

16. The Committee considers that the Organization has been put in a difficult position in which it is forced to make a strategic decision on an urgent basis in respect of a proposal for a substantial investment, which the Committee considers to be lacking in analysis, information and overall information on

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financial implications. More importantly, the Committee is not convinced that the proposal put forward is the most cost-effective one possible or the most workable. The Secretary-General himself acknowledges the challenging timetable for the project and the significant risk that the deadline for the commissioning of the data centre will not be able to be met. In this connection, the Committee points out that the General Assembly, in its resolution 63/262, requested the Secretary-General to report on the risk mitigation measures to be taken during the relocation of the primary data centre to the North Lawn (sect. IV, para. 11). The Secretary-General's proposal does not appear to provide the necessary assurance that its implementation would sufficiently mitigate those risks.

- 17. The Committee has outlined in the present report its serious concerns in respect of the Secretary-General's proposals. However, the Committee recognizes that the secure relocation of the primary data centre from the Secretariat Building to the North Lawn facility is an essential component of the capital master plan and that a reliable secondary data centre is an important factor (see also A/63/736, para. 49). In addition, disruptions in the provision of some ICT services would have an adverse impact on the operations of the entire Organization.
- 18. Under the circumstances and given the time constraints, the Committee finds itself in a position where it has no prudent alternative but to recommend approval of the Secretary-General's proposal to establish the new secondary data centre. Accordingly, the Committee recommends that the General Assembly take note of the total estimate of \$25,737,500 for the project, as well as the Secretariat's strategy of entering into a service delivery agreement with the International Computing Centre. The Committee also recommends that the Assembly approve additional resource requirements of:
- (a) \$3,774,100 under section 36, Office of Information and Communications Technology, and \$1,995,200 under section 28D, Office of Central Support Services, under the programme budget for the biennium 2008-2009;
- (b) \$2,384,300, to be included in the proposed budget of the support account for the peacekeeping operations for the period from 1 July 2009 to 30 June 2010.
- 19. The Committee does not object to the cost-sharing arrangement for the new data centre proposed by the Secretary-General. However, it recommends that the General Assembly request the Secretary-General to re-examine the approach for dividing costs between the regular and peacekeeping budgets. Under the current approach, the cost-sharing ratio of peacekeeping to non-peacekeeping activities is established on a case-by-case basis, taking into account the proportion of peacekeeping and non-peacekeeping operations at each site. In the future, as Brindisi becomes an Organization-wide hub centralizing enterprise applications used across the United Nations, it may be timely to consider shifting towards the application of a common cost-sharing arrangement between peacekeeping and non-peacekeeping operations across the Organization.

- 20. The Committee further recommends that the Secretary-General be requested to review the migration strategy with a view to seeking efficiencies, prioritizing among the critical and non-critical applications to be migrated and optimizing the utilization of existing facilities, and to ensure that the scope of the project is as lean as possible, consistent with the need to preserve the integrity of the Organization's data.
- 21. The Committee believes that the continuing deficiencies in the planning and management of this project must be remedied. It stresses that the successful implementation of the project will require effective leadership and management, as well as clearly defined roles and responsibilities, rigorous monitoring of progress against performance targets, procedures to ensure that corrective action is taken quickly should problems emerge and mechanisms to hold individuals accountable for their areas of responsibility. The Secretary-General should also be requested to ensure that robust, technically sound solutions are put into place. In this connection, the Committee recommends that the Secretary-General be requested to utilize the services of an independent expert possessing a high degree of technical experience in the field of migration and relocation of data centres to validate the project implementation plan and provide advice to the implementation team, as required, without disrupting the project schedule, to be funded from within existing resources. The Committee also requests that the necessary measures be taken to ensure the confidentiality of the Organization's data during the relocation of the primary data centre from the Secretariat Building to the North Lawn facility.

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## **Annex**

# Systems currently running in the DC2 data centre, including their criticality

- 1. Several systems operated by the Office of Information and Communications Technology are considered critical, as they affect the continued availability of all other information and communications technology systems running in the data centre. Therefore, it has established such systems, listed below, in both the primary data centre in the Secretariat Building and a backup in the DC2 secondary data centre, with capacity for the secondary data centre to take over automatically if there is a failure in the primary data centre:
  - Windows Active Deployment System (ADS) (for workstation login)
  - Symantec antivirus (for virus protection)
  - Firewalls (for security of United Nations information assets from external threats)
  - Local area network and Internet access (for all computing resources)
  - Shared printing (for accessing shared printers)
- 2. The following important systems are currently backed up in the DC2 secondary data centre onto "storage systems" that facilitate easy retrieval and ensure that no data are lost:
  - Integrated Management Information System
  - Galaxy
  - Treasury systems (Operations Processing Integrated Control System investment management, SWIFT, check printing)
  - Procurement system (Reality/Procureplus)
  - ePAS (performance appraisal system)
  - Budget information system
  - iSeek (Intranet)
  - Parts of the United Nations website (www.un.org)
  - Webmail for the Secretariat and permanent missions
  - Official Document System
  - E-mail
  - Some Lotus Notes applications
  - · BlackBerry
  - Mobile Office (for pandemic business continuity)
  - Secretary-General's system for managing his contacts and schedule
  - Executive Office of the Secretary-General "Corlog" for tracking/correspondence

- Security video (from security cameras)
- SQL databases (nearly 300 of them for various departments)
- Some finance and budget applications for the Department of Peacekeeping Operations
- Some applications for the Office for the Coordination of Humanitarian Affairs and the Department of Economic and Social Affairs
- 3. Owing to capacity limitations in the primary data centre, some non-critical departmental systems, such as the e-commerce system for the United Nations Postal Administration and the Networked Interactive Content Access System, a system for managing digital content (pictures, videos, etc.), are running only in the DC2 data centre.

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