



**FOR INFORMATION:**

**TO:** Planning and Budget Committee

**SPONSOR:** Elizabeth Sisam, Assistant Vice-President, Campus and Facilities Planning

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**DATE:** November 2, 2010 for November 10, 2010

**AGENDA ITEM: 6**

**ITEM IDENTIFICATION:**

Project Planning Report for the Renewal of the University of Toronto St. George Campus Data Centre.

**JURISDICTIONAL INFORMATION:**

Under the Policy on Capital Planning and Capital Projects, the Planning & Budget Committee reviews Project Planning Reports prepared for a capital project and recommends to the Academic Board approval in principle of the project.

**BACKGROUND:**

The University's main data centre moved to the McLennan Physics building in 1977. Built to house a mainframe computing platform and the supporting peripheral equipment of the day, and now well beyond its useful life, its design exposes the University's current information assets to greater risks than those ever conceived of in 1977.

Thirty-three years later, computing has become essential for the University to function. Most faculty, students and staff use computers on a daily basis for instructional activity, research, administrative work or communication.

The Data Centre houses all of the University's central business and critical systems. These information technologies provide a host of new marketing and communication methods and, through the web, showcase of the University internationally.

**HIGHLIGHTS**

The University requires a modern data centre that can accommodate necessary power and cooling densities. The University also needs to address the many single points of failure in the supporting infrastructure as well as building envelope deficiencies that pose a serious risk to the University's substantial investment in IT infrastructure and irreplaceable information assets.

Furthermore, to make a compelling case for divisions to host their servers centrally, either virtually or physically in the McLennan Data Centre, a data centre is required that instills confidence, eliminates the risks identified in the external audit<sup>1</sup> and provides access to better infrastructure (power, cooling, fire suppression, emergency power) than the divisions can afford on their own.

The University faces unprecedented financial pressures including many competing demands for funding. Nonetheless, it is an inescapable fact that the University is more heavily dependent than ever before on a stable network and highly-available central services operating 7 days a week, 24 hours a day.

Approval in principle is being sought for two phases, the first to address risk mitigation and the second to provide growth capacity. It is recommended that Phase 1, risk mitigation, including the emergency backup generator, be implemented now.

The proposed project will not require any additional building area and the move into renovated space will liberate space, nearly 167 NASM, for reassignment by the Provost's office. An expanded use by Physics & Canadian Institute for Theoretical Astrophysics would be a possible outcome given that their research computers are currently in this space.

## **FINANCIAL AND PLANNING IMPLICATIONS**

The Total Project Cost for Phase 1 which addresses risk mitigation, including an emergency generator is estimated to be \$5,160,100.

Phase 2 which addresses capacity growth will be an additional \$945,000.

The report seeks approval in principle for both phases and approval to implement Phase 1 of the Renewal of the St. George Data Centre.

Current operating costs in the McLennan Building are charged at a rate equivalent to \$119.23/GSM or \$85,488 for the existing space (717 GSM), thus for the reduced area to be allocated to the Data Centre (450 GSM) an annual cost of \$53,654 would be expected. However, because data centre power and cooling requirements are extraordinary, this method of calculating operating costs is inadequate. It is recommended that power use for the IT load and mechanical load be separately metered to apportion expenses to the Faculty of Arts and Science and separately to the Data Centre. For information, current average power costs for 2009-10 have been \$0.11118/kWh.

## **FUNDING SOURCES**

Funding sources for Phase 1 of the project will be \$2,835,000.00 from Information & Technology Services and central funding of \$2,325,100.00.

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<sup>1</sup> MP367 DC External Audit Report: <https://files.me.com/phopewell/q9065k>

## **SCHEDULE**

- Planning and Budget recommendation      November, 2010
- Academic Board recommendation      November 2010
- Business Board recommendation      December, 2010
- Governing Council approval      December 2010
- Team selection & appointment      January, 2011
- Construction start      April, 2011
- Occupancy      August, 2011

## **RECOMMENDATIONS**

It is recommended that the Planning and Budget Committee recommend to the Academic Board:

1. That the Project Planning Report for the Renewal of the St. George Data Centre in its present location in the McLennan Physical Laboratories Building be approved in principle.
2. That the project scope for Phase 1, as identified in the Project Planning Report, be approved at a total project cost of \$5,160,100 with sources of funding as follows:

Information & Technology Services	\$ 2,835,000.00
<u>Central funding</u>	<u>\$ 2,325,100.00</u>
Total	\$ 5,160,100.00

3. That, pending available funding, Phase 2 be brought forward to implementation through the Accommodation and Facilities Directorate in accordance with the Policy on Capital Planning and Capital Projects.