



SPONSOR: Nadeem Shabbar, Chief Real Estate Officer

CONTACT INFO: 416-978-4322 or email: Nadeem.shabbar@utoronto.ca

DATE: November 12, 2010 for December 13, 2010

AGENDA ITEM: **5(c)**

**ITEM IDENTIFICATION:**

**The Renewal of the University of Toronto St. George Campus Data Centre in the McLennan Physical Laboratories Building**

**JURISDICTIONAL INFORMATION:**

Pursuant to Section 5.2. (b) of its Terms and Reference, the Business Board approves expenditures for, and the execution of, approved Capital Projects.

**PREVIOUS ACTION TAKEN:**

This is the first time this project is being presented to the Business Board. Other boards and committees approved to date include:

- Planning and Budget Committee – November 10, 2010

**HIGHLIGHTS:**

The University's main data centre moved to the McLennan Physics building in 1977 after the initial data centre in the Sanford Fleming building was destroyed by a fire. 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 purpose of the data centre is to provide a protected and stable operating environment for the University's critical information systems such as: ROSI, Blackboard, UTOR info, AMS/SAP, DUA system, internet and research network connectivity for St George, UTSC and UTM, all fibre optic network connections for St George campus, campus wireless network, OCTEL voicemail, and enterprise data storage and archiving.

The renewal project will deliver:

- A scalable data centre with Day-1 capacity of 125kW IT load
- Reduce the number of planned electrical shutdowns

- Protect the critical load from dust, debris, and damage
- Eliminate the risk of flooding
- Reduce the cost of cooling
- Reduce the risk of fire
- Consolidate the existing computing infrastructure to 16 cabinets
- Add emergency generator to power both IT and mechanical loads up to 750k
- Add a new and separate cooling plant

The proposed project will not require additional building area. The Data Centre is located on the third floor of the McLennan Physics Building North Wing. The proposed renewal plan calls for renovating the west section of the Data centre to create an open area of approximately 4,449 square feet. In addition, the consolidation will free up 3,216 square feet space for other University uses.

### **FINANCIAL AND/OR PLANNING IMPLICATIONS:**

The Total Project Cost for the Renewal of the University of Toronto St George Campus Data Centre is \$5,160,100. The funding for this project is from two sources: Information and Technology Services funding of \$2,835,000 and central funding of \$2,325,100. Occupancy is expected to be August 2011 with a construction start date of April 2011. The construction cost is estimated at \$903 per sq. ft.

### **RISK IMPLICATIONS**

The current system has a high likelihood of failure and has on several occasions caused the University's network to go down and operate at a sub-optimal level.

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 and provides access to better infrastructure (power, cooling, fire suppression, emergency power) than divisions could afford on their own.

### **RECOMMENDATION:**

Be It Resolved

THAT the Vice-President, Business Affairs be authorized to execute the Renewal of the University of Toronto St George Campus Data Centre in the McLennan Physical Laboratories Building project at a total project cost not to exceed \$5,160,100 with sources of funding as follows:

Information and Technology Services	\$2,835,000
Central Funding	\$2,325,100