

FOR INFORMATION:

TO: Planning and Budget Committee

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

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DATE: April 1, 2010 for April 12, 2010

AGENDA ITEM: 7

ITEM IDENTIFICATION:

Terms of Reference for a Project Planning Committee for University of Toronto St. George Campus Data Centre Renewal

JURISDICTIONAL INFORMATION:

Under the Policy on Capital Planning and Capital Projects, section 5A, the membership and terms of reference of the Project Committees shall be reported to the Planning & Budget Committee.

BACKGROUND:

The University's main data centre in the McLennan Physics building at 255 Huron Street was built in the mid seventies and was designed to support, primarily, a mainframe computing environment. The data centre now houses all of the university's business critical systems such as: UTOReMail and UTOReXchange (central student, staff and faculty e-mail systems), UofT home page, AMS financial and payroll systems, ROSI student Information System, Blackboard Learning management System, UTOReAuth central authentication and authorization system, Domain Name Services. It is also the central concentration point for the University's entire fibre backbone and wireless network infrastructure, connectivity to UTM and UTSC and gateways to the Internet and GTANet.

As technologies have evolved (e.g. blade computing and server virtualization) power and cooling densities of contemporary rack-based servers and networking equipment have increased dramatically. The original 30+ year old under floor cooling distribution infrastructure is no longer sufficient to handle the substantial heat loads of server racks and in the future, per rack power loads will continue to increase as densities increase. The raised floor air conditioning plenum is clogged with network and power cabling reducing cooling efficiency even further.

There have been several water leaks from overhead roof drains and other sources that have resulted in service outages and damaged equipment. There are many single points of failure in the UPS and power distribution infrastructure which could result in hours if not days of service outages for any of the University's business critical systems named above.

There is no backup power generation capability in the event of a prolonged (i.e. longer than 10 minutes) power outage. There is no environmental monitoring to alert operations staff to leaks, heat problems, or other factors that could endanger the equipment.

The University requires a modern data centre that can accommodate today's (and tomorrow's) power and cooling densities and also needs to address the many single points of failure and building envelope deficiencies that pose a serious risk to the University's substantial investment in IT infrastructure and its reputation. The project planning committee will identify the scope of work for this project and recommend an implementation plan.

PROPOSED MEMBERSHIP:

Patrick Hopewell, Director, Enterprise Infrastructure Solutions
Tom Molnar, Manager, Hardware Infrastructure
TBA, Manager, Data Centre
Bruce Wildfong, Supervisor, Network Operations
Ron Swail, Assistant Vice-President, Facilities & Services
Julian Binks, Director, Planning & Estimating, Capital Projects, Real Estate Operations
Olivier Sorin, Graduate Student, Humanities, French
TBA, Undergraduate Student
Alan Webb, Planner, Campus & Facilities Planning

TERMS OF REFERENCE:

1. Propose a plan that will address the current and future requirements for the University of Toronto St. George Campus Data Centre.
2. Review options for the location of the Data Centre and recommend a preferred location that will best serve the University.
3. Identify the capital cost of the Data Centre and all other resource implications, including projected increases to the annual operating cost as a result of the plan.
4. Identify any costs associated with staging during implementation of the project.
5. Identify a funding plan for the project.
6. Report by May 30, 2010.