

IT Services Review Report –  
Executive Summary  
November 2016



McMaster University is a highly research intensive institution (ranked # 2 in the country) with a strong reputation around the world. Positions at McMaster are highly competitive and sought after by potential students, staff and faculty. In the Fall of 2015, McMaster University determined that it was an opportune time to undertake a functional review of Information Technology (“IT”) services in order to identify how these services could better support the user community. With the Mosaic Enterprise Resource Planning (“Mosaic”) project transitioning to sustainment mode (the most comprehensive and costly enterprise IT project that the University had undertaken) the timing was ripe to undertake this review. The University Budget Committee had approved the University Technology Services (“UTS”) budget for 2015/16 (which includes both Mosaic and traditional UTS administrative enterprise computing functions); however, funding for Mosaic sustainment was primarily one-time. It was determined that a full review of all technology-related services was required to better understand needs and potential improvements that could be made to IT service delivery which would impact budget submissions going forward.

The scope was comprehensive and included all units providing or supporting IT services at the university. A committee of three internal members and three external University Chief Information Officers (“CIO”) was formed, supported by a project manager who managed the information gathering activities during the project. These activities included in person stakeholder feedback sessions with 25 groups (over 100 participants), submission of a detailed questionnaire by 75 stakeholders across stakeholder groupings, an online community survey that assessed user satisfaction with university IT services (1275 responses across staff, faculty and students), a comprehensive internal scan that captured information around IT staff, infrastructure and the provision of IT services (completed by 35 units) and the compilation of an estimate of IT expenditures across all funds and all departments. All of the information gathered was used as a basis for the committee members to understand the current environment and to make recommendations for improvement.

### **Overview of Current Environment**

The current IT structure at McMaster has evolved over decades and has become quite decentralized and fragmented. There are four units (Research & High Performance Computing Support – “RHPCS”, the MacPherson Institute for Leadership, Innovation and Excellence in Teaching – “MacPherson”, the University Library “the Library” and University Technology Services – “UTS”) that provide IT services on an enterprise basis relating to research, teaching and learning and administrative/operational needs enterprise-wide. More local or specialized service delivery occurs in the faculties and other specialized units. In addition, the Computer Services Unit in the Faculty of Health Sciences (“CSU”) are providers of faculty and staff email at the university. IT staff in units across the entire enterprise are extremely dedicated and hard-working. The strength of the IT staff and their commitment to this institution is clear. IT units have been able to achieve impressive results on very limited budgets. However, an overall framework (and discipline around that framework) that would enable these units to improve upon overall delivery of IT services has not been put in place.

The McMaster community has experienced long-standing frustration with IT services; both by those who provide IT services and those who are touched by them. While users often struggle to get their IT needs met, providers also struggle to successfully meet those needs in the current environment. With the University transitioning from what has often been a challenging Mosaic implementation phase, frustration continues to grow amongst users. Despite this frustration, the IT user and IT provider communities have demonstrated significant enthusiasm and commitment to being part of both the review process and the solution for IT at McMaster.

The following describes the current structure and culture of IT at McMaster at a high level.

### ***Governance and Enterprise Leadership***

- The IT governance structure is currently not robust and inclusive. Committees which are in place typically do not have representation from all key academic mission areas (research, teaching and learning, etc.) or do not have clear governance mandates. Because of this, many stakeholders (IT users and IT providers) feel that they do not have an adequate voice in IT decisions.
- Enterprise-wide leadership and accountability has not been clearly defined.
- The current IT strategy (Vision 2020) does not capture enterprise-wide services and does not encompass all mission areas (for example, research IT, teaching and learning technologies).
- IT budgeting is not performed on an enterprise-wide basis. IT budgets are currently prepared and reviewed at the individual unit level, or as part of larger faculty/department budgets. This makes it extremely challenging for senior leadership to manage IT holistically and have insight into potential opportunities and synergies. Currently, approximately 60% of IT expenditure occurs in the specialized and distributed units.

### ***Structure and Service Delivery***

- A strong IT community (one that shares a common vision and works together to achieve common goals) currently does not exist.
- The IT structure is decentralized and fragmented (which has evolved over decades for a number of reasons). This has resulted in a decentralized IT decision-making framework.
- The university has not identified a level of core, basic IT services available to all users (for example, data storage and back-up, web/content management systems (“CMS”), management of software licenses etc.).
- The current IT service delivery model is not coordinated across the enterprise and there are potentially many units providing core or base-level services. While further investigation needs to take place regarding whether duplication exists, there are very likely opportunities for better coordination and optimization of services.
- A customer service framework has not been ingrained across the institution and IT service management practices are not embedded across the enterprise. Capacity constraints have limited the ability for many IT units to adopt some of these practices.

- Instructors have had challenges with basic teaching and learning IT services, such as lack of harmonized classroom audio visual (“AV”), file upload and grade submission functionality within the learning management system and challenges with accessing blended and other learning technology development services. There are several opportunities to develop more innovative tools to support teaching and learning, for example, predictive learning tools.
- Access to research IT services and to research infrastructure is a challenge, particularly with the existing cost-recovery funding model and the changing research environment.
- Over the past year, users (particularly front line users) have had challenges using the Mosaic ERP system; however, improvements to the sustainment framework have been made.

### ***Funding***

- Service model and process optimization opportunities do exist. However, it appears that IT has been underfunded for a number of years and strategic investment is required.
- Variant funding models (full or partial cost recovery etc.) across the IT units make accessibility to IT services and infrastructure challenging for many users and have an impact on how units collaborate and work together. Accessibility is an issue particularly relating to research IT services and also teaching and learning services (where lack of funding is a barrier to access).

The University’s investment in MOSAIC was a strategic choice made to improve efficiency and effectiveness in the delivery of services. Implementation of MOSAIC was UTS’ first priority. We understand that the size and scope of MOSAIC meant that other technology projects were given lesser prioritization. The University’s decision to prioritize MOSAIC which indirectly led to slower progress and delays on other projects created some frustration across the campus. In addition, concerns have been raised around the lack of trust in the services provided by UTS, which has continued to be a challenge. However, the frustration with IT has been at play for decades.

All of the issues above have a direct impact on customer satisfaction of IT services at McMaster. Results of the IT Services online survey (from May 2016) illustrate that there is some degree of satisfaction around IT service delivery, yet there is substantial room for improvement overall. Below are high level results from the survey for faculty, staff and graduate students and for the full student community (graduate and undergraduate students):

## How Satisfied or Dissatisfied are you with McMaster's ability to meet your IT service needs?

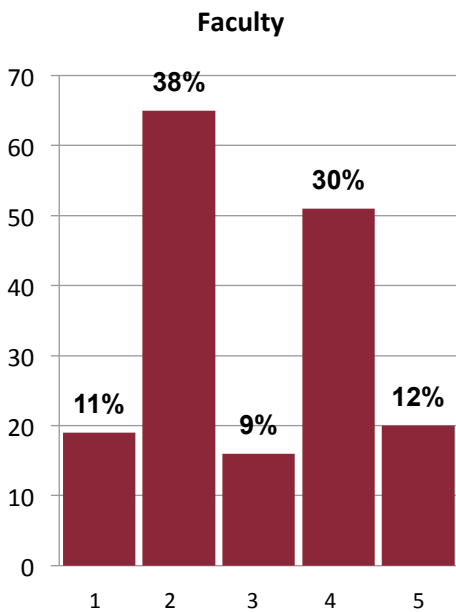


Figure 1.1. N=171, M=2.9, SD=1.26

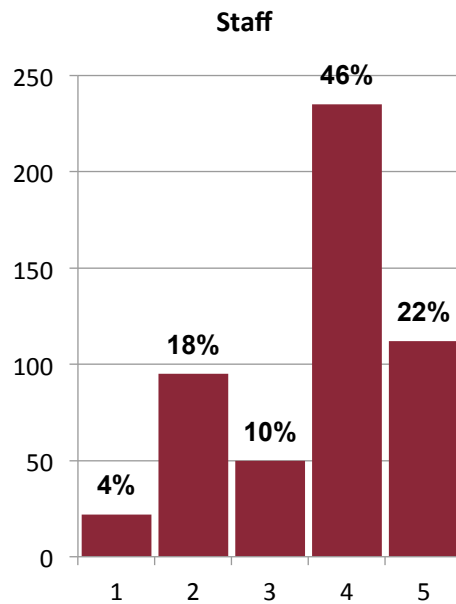


Figure 1.2. N=514, M=3.6, SD=1.14

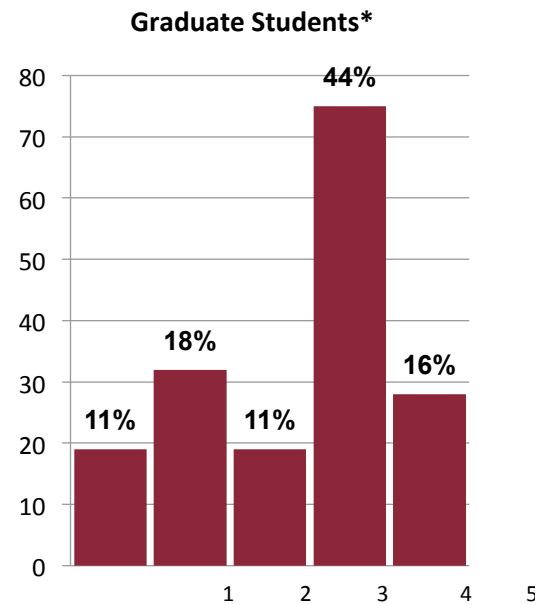


Figure 1.3. N=173, M=3.4, SD=1.26

- |   |
|---|
| <ol style="list-style-type: none"> <li>1. Completely Dissatisfied</li> <li>2. Somewhat Dissatisfied</li> <li>3. Neither Satisfied nor Dissatisfied</li> <li>4. Somewhat Satisfied</li> <li>5. Completely Satisfied</li> </ol> |
|---|

\*Graduate Students only.

How well do the IT services offered by McMaster meet your needs as a student?

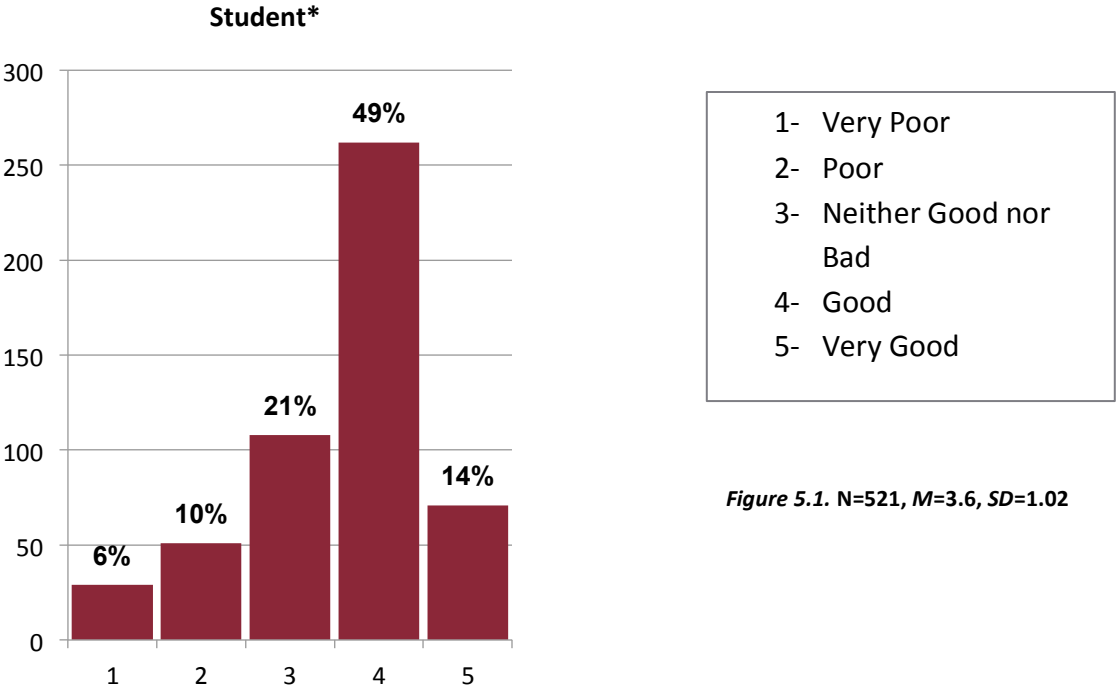


Figure 5.1. N=521, M=3.6, SD=1.02

\*Graduate and undergraduate students.

**Conclusion and Key Areas of Focus**

Overall, there are opportunities to improve customer satisfaction around IT services, however, the current governance and leadership structures make it very difficult to manage IT on a holistic, enterprise basis. While a distributed framework is not, in itself, the reason that McMaster has experienced these challenges, it certainly increases the complexity around IT service delivery and necessitates the need for some important structures to be in place.

There are five areas that are considered to be highest priority and it is recommended that they be addressed before other initiatives are commenced. These include:

1. Development of a multi-tiered governance structure – to ensure the right stakeholders participate in IT decision-making (strategic planning, budgeting, project prioritization etc.).

2. Enterprise-wide accountability and leadership for IT services – responsible for the development and implementation of a strong environment and community around enterprise IT.
3. Investment in critical infrastructure and services – to provide IT with the tools to be successful in IT delivery.
4. Service model optimization and core service rationalization – a consultative activity to define core services and determine how best those services are delivered across the enterprise.
5. Strategic hires (across the enterprise) to drive change around IT service management and other key areas – dedicated resources to implement the framework and processes around IT service delivery.

It is recommended that an Improvement Fund be established (managed by the highest-level IT Governance committees) to demonstrate commitment and dedication to enhancing and improving IT at McMaster. Many of the activities identified throughout the report require dedicated funding and it is extremely important that funding is not a barrier to the implementation of recommended improvements. This funding should address areas that are clearly visible to end users and demonstrate some quick wins (for example, Wi-Fi improvements will quickly be noticeable to users with back-end infrastructure improvements and service management enhancements occurring at the same time). Therefore, it is recommended that McMaster fund these requirements first, and look to optimize at a later stage, addressing potential duplication of services, process efficiencies etc.

The Committee has found real dedication by all participants in the review process to making improvements and to being part of the change. Their involvement in the review process is much appreciated by the review team and the committee members and was critical to the review process. The IT staff across the enterprise are to be commended for their dedication and hard work and for what they have been able to achieve given the existing IT structure and organization (and typically with limited funding).

The IT landscape is constantly changing and the recommendations in this report will help position McMaster to provide the support that IT staff and IT units require to effectively deliver IT services. While these activities are not overnight fixes and will take a significant amount of time, effort and financial commitment, the outcomes of these initiatives will be improved culture and trust around IT services, better management and governance of IT and ultimately, improved staff, faculty and student satisfaction.