Together we enable: New Directions of Waterloo’s IT Community
13 May 2013

The information technology (IT) community has worked together to develop our first set of unified, campus-wide, strategic IT directions, using a very consultative process. Together we are working to support the University’s mission, to uphold Waterloo’s enviable reputation as a technology leader, and to deliver IT that offers the greatest benefit and impact to our users. IT underpins almost everything we do; enabling teaching and learning, research, and administration. In our distributed environment, IT groups must cooperate to provide common services, and to support unique local needs that can lead to innovations.

The IT directions described in this document are based on broad consultations with our users, emerging University directions, and general technology trends. Some activities have already begun, in order to address areas requiring immediate attention. Other opportunities are identified below. Over the next six months, IT will share details about initiatives we expect to complete in the first 18 months, and over the longer term. Our directions will be reviewed, refreshed and communicated regularly, in keeping with the quick pace of change of the IT world.

**IT Community Directions**

IT must facilitate efficient and effective University processes, respect choice in a diverse and innovative environment, and demonstrate leadership in strategic areas. With this balance in mind, we have identified key areas of focus in this first collaborative strategic plan.

- Revitalize our student IT environment
- Grow our technology-enabled learning environment
- Build upon information and technology foundations to support research and administration
- Work together to improve usability, delivery and support of IT

Paying attention to these directions does not mean stopping other activities. Most IT projects under way will continue as planned, but we will align activities to our strategic objectives, which can be found on our website. The IT directions above are broad. In order to ensure continued progress, IT has identified potential initiatives, resulting from consultations, trends, and emerging University directions.

**Getting Started on Initiatives**

Over the next six months we will prioritize projects and initiatives. To do so, we must define how the IT community is governed, makes decisions, and works together. Currently, these processes are not clearly
Consultations and feedback revealed the need for better communication of our activities and decisions, and improved engagement with our users. Our IT-related advisory groups, committees, and working groups are doing good work, but their mandates and representation need to be reviewed and, perhaps, reconstituted. Responsibility and accountability for IT decisions must be understood, articulated, and communicated; likewise for collaborations among IT groups and other departments. With the right processes and communication channels in place, we can optimize our collective resources, avoid duplication of effort, and deliver better services. Work is already under way on defining IT governance and collaborations, to help prioritize the potential opportunities within our IT directions.

**Revitalize our student IT environment**

The challenges: Students at Waterloo have high expectations of the IT environment. We need to keep pace with trends and advancements in order to provide a great experience. The growth of BYOD (bring your own device) has produced an explosion in the demands on wireless and cellular networks. Students expect to be able to work anytime and anywhere, and want access to software for their courses in their preferred work spaces. A number of services for students need improvement.

Potential opportunities:

- **S1**: Provide remote access to specialized software, such as from home and Library, for all students, as is available already in some Faculties.
- **S2**: Provide mobile access to important applications and information.
- **S3**: Ensure excellent connectivity for mobile devices (smart phones, laptops, tablets, etc.) through campus cell service improvements and wireless upgrades, both of which are underway.
- **S4**: Provide a student portal for convenient and customizable access to important information and services, a project that has started and is getting good feedback.
- **S5**: Provide a great co-op job system, in collaboration with Co-operative Education and Career Action, the first stages of which are already underway.
- **S6**: Improve the promissory note process by fully integrating with Quest, a system students already use regularly. It is scheduled for fall term, 2013.

**Grow our technology-enabled teaching and learning environment**

The challenges: Significant changes are occurring in online learning. Universities can offer courses in many ways, including choosing to make content open and free, and to showcase select courses in popular MOOCs (massive open online courses). We want our Waterloo online learning tools to be extensible, so we can add features and functionality, and adaptable, to allow ease of use and teaching innovation. Also, our classrooms need to evolve with technologies that make them flexible for changing needs. While technology is the platform in all of these areas, we need to ensure strategic directions are driven by the needs of the teachers and learners.

Potential opportunities:

- **TL1**: Establish the means for setting University directions for teaching and learning technologies.
- **TL2**: Offer avenues for faculty and student input towards investigating the next technologies.
- **TL3**: Work with Desire2Learn to build upon LEARN as an exciting learning space.
- **TL4**: Increase support for live collaboration tools, such as videoconferencing and web collaboration, allowing outreach of teaching and learning. Already underway.
- **TL5**: Evolve the technologies deployed to classrooms, with input from instructors and students.

**Build upon information and technology foundations to support research and administration**

The challenges: The IT landscape is ever-changing. New devices appear regularly on our campuses. Software solutions are offered “in the cloud”, where servers, networks and services are run on our behalf. Electronic access to data is ever more vital. Our users need access to reliable and current data in order to understand and plan work in their areas. Not all of our systems have evolved with information migration capacity. We need to provide extensible, forward-looking IT systems that allow growth, adaptation to new technologies, and resilience. We must enable access to high quality data and information when, where and how it is needed, while upholding data security, integrity, and privacy.

Potential opportunities:

- **IT1**: Work with the stewards of data to provide access to information for analysis, inquiry and reporting, based on current, reliable and consistent data. Some needs include:
  - Document, define, and communicate information about the data we hold.
  - Provide a governed data hub to supply authorized data (open and security classified), including options that allow development of applications to use that data.
- **IT2**: Improve the resilience of our data centres, including better back-up power, and find a longer term solution for an off-site data centre for disaster recovery, continuity, and expansion.
- **IT3**: Consider and plan the use of cloud services, including private clouds, to provide computing resources (servers, storage, back-up) as demands arise.
- **IT4**: Provide local versions, where cloud systems may not be appropriate solutions, of frequently needed tools such as a drop-box and video and audio storage and delivery systems.

**Work together to improve the usability, delivery and support of IT**

The challenges: During the consultation process, IT users recounted stories where usability proved a barrier to many systems running University processes, such as financial reporting (FORE), admissions (GAP), recruiting (HR), and Quest student information. IT groups, working with steering groups that guide the evolution of these systems, need to ensure that intuitive interfaces are a priority. Other aspects of usability include excellent support and communications, and providing services useful to our users. Keeping users informed of IT service interruptions, changes, improvements, and work in progress is important so that users know what is happening, understand change, and trust IT decisions.

Potential opportunities:

- **U1**: Work with the groups that steer the University-wide process management tools, to seek user input on usability problems.
- **U2**: Develop a usability resource, including tools and expertise, with a team to address usability in applications and in data.
• **U3**: Create integrated, service-oriented helpdesks that uphold excellent standards and stay connected in order to share information so we can best serve users.

• **U4**: Facilitate improved internal and external communications and collaboration by providing and using appropriate tool sets (such as social networking applications and add-ons to Drupal).

• **U5**: Provide software distribution online, in collaboration with Retail Services to rationalize all software sales across campus.

• **U6**: Make IT staff development a regular practice, in order to foster excellence in IT services, staff knowledge renewal and to assist in succession and back-up planning.

### Next Steps

IT is an enabling community that partners with University groups for most projects. For most of the potential opportunities and initiatives identified above, IT groups will partner with process owners (steering groups or departments) to help identify and create improvements; the owners will set priorities. For purely IT activities, we will need to identify leaders for projects and set priorities. All activities or initiatives that are not already under way need a plan that includes the scope of the activity, priority, the time lines, as well as communications as to how these projects will proceed.

An initial set of measures, called indicators, will track progress of strategic objectives. For example, as a partial measure of how well we provide data when, and how, it is needed, we may track and report what open data is released over time (and what requests are not met), and what uses are made of the data. Many indicators are new and will evolve and expand in time.

Our website, [https://uwaterloo.ca/it-strategic-plan/](https://uwaterloo.ca/it-strategic-plan/) will be updated as plans evolve.

**Figure 1**: Time line for the IT Directions horizon