

A photograph of the University of Toronto entrance. A dark grey sign with the words "UNIVERSITY of TORONTO" in white serif font is mounted on a stone pillar. Below the sign is a large glass window reflecting the surrounding green trees. The background shows a brick building with ivy and more trees.

UNIVERSITY of TORONTO

IT@UofT

**LEADING CHANGE ACROSS THE
TRI-CAMPUS COMMUNITY**

STRATEGIC PLAN (2019 – 2024)



UNIVERSITY OF
TORONTO

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FRAMEWORK

The **IT@UofT strategic framework** is inspired by a community-wide appetite for working collaboratively and collectively within a federated model that is based on a shared foundation and guiding principles. The framework applies to the entire IT@UofT community across all three campuses and multiple divisions and faculties.

Following a comprehensive consultation process at the University of Toronto (U of T), the following vision and strategic pillars have been developed to guide the future direction of ITS.



University of Toronto Mississauga (UTM)



University of Toronto Scarborough (UTSC)



University of Toronto St. George (UTSG)

Framework

VISION

IT@UofT provides **leadership** that enables the University to achieve our mission by fostering an **integrated** and **collaborative community**, built on **creativity, agility, transparency** and **trust**.

The IT@UofT vision is an enduring goal that is intentionally aspirational and highlights shared key values. Throughout the process, we have heard that the community was looking for leadership and direction to help guide their own decisions.

PILLARS

Three thematic pillars reflecting the key ideas and concepts described by the community provide a foundational focus for the development of further plans within Information Technology Services (ITS) and more broadly across the University.



PEOPLE



SOLUTIONS



COLLABORATION

The IT@UofT Strategic Plan will be successfully implemented through the shared achievement of desired **solution** outcomes, engaged **people** in active roles and **collaboration**.



GUIDING PRINCIPLES



To support success in our shared path forward, a set of common guidelines across the University's tri-campus community will ensure that local decision-making aligns with, and complements, institutional direction, resulting in increased efficiencies and effectiveness. These guidelines reflect the input of the community across all three campuses, representing our collective spirit of renewal.

1. We take a University-wide view and embrace commonalities and strengths while respecting the diverse needs of the divisions and departments.

- We leverage the diversity across divisions at the University. We acknowledge there are differences and unique needs within specific communities, and we balance these with opportunities to develop solutions in the collective that lead to more efficient and effective outcomes.

4. We trust and value peoples' unique talents from across the University.

- We leverage the diverse talents from across the University. Innovation and agility exist outside the enterprise and we find ways to leverage this.

2. We strive to implement simple, sustainable and adaptable solutions for our community.

- We avoid over-building solutions. Demands far exceed our ability to deliver on them, so we focus our efforts on solutions and services that provide the most value and deliver outcomes in a time-sensitive way. We ensure we are meeting new emerging needs and are pushing for efficiencies.

5. Through active engagement, the needs of the students, faculty and staff inform and shape our solutions.

- Gathering requirements from the community is broad and transparent. We ensure ongoing engagement to assess the evolving needs of the community and ensure these needs are being met by having an ongoing dialogue.

3. Security, privacy and accessibility are foundational to our work.

- We require teams and individuals to build security, privacy and accessibility into their projects at the inception stage.

6. We use technology deliberately to achieve efficiencies and deliver more effective service through digitalization and process transformation.

- We embrace digitalization and provide digital leadership for the community. We push the boundaries on transformation and innovation.

The Opportunity

As the largest university in Canada and a global leader in research and teaching, U of T has a unique opportunity to provide transformative digital leadership within the higher education sector. Recognition of information technology as an agent for change in all aspects of our work can be a strategic differentiator as we move beyond simply digitizing information to embrace digitalization. By this we mean, the use of information technology to completely transform what we do and how we do it, encompassing both digital technologies and related processes. This shared goal will, in turn, drive better outcomes around teaching, learning and scholarship across our three campuses.

ITS will use this framework to inform and establish the strategic objectives and initiatives for technology solutions and services that span the University. Other academic and administrative units may also adopt this framework to develop their own initiatives and operational plans. Although decisions will remain

within these units, the intent is to be more transparent and deliberate in order to drive more consistency and alignment across the University. Our collective goal is to determine shared priorities, eliminate duplication and ensure we use our limited resources efficiently. While ITS has responsibility for a suite of central services within a larger distributed ecosystem of IT infrastructure, the Chief Information Officer's (CIO) office is mandated to provide guidance and assume accountability on key issues that span the entire University.

Transformative digital leadership inspires us to work collaboratively and collectively within and beyond our community to create the most supportive environment possible so that our researchers, scholars, teachers and learners can do what they do best on the world stage.

PROFESSOR KELLY LYONS, FACULTY OF INFORMATION





CONTEXT

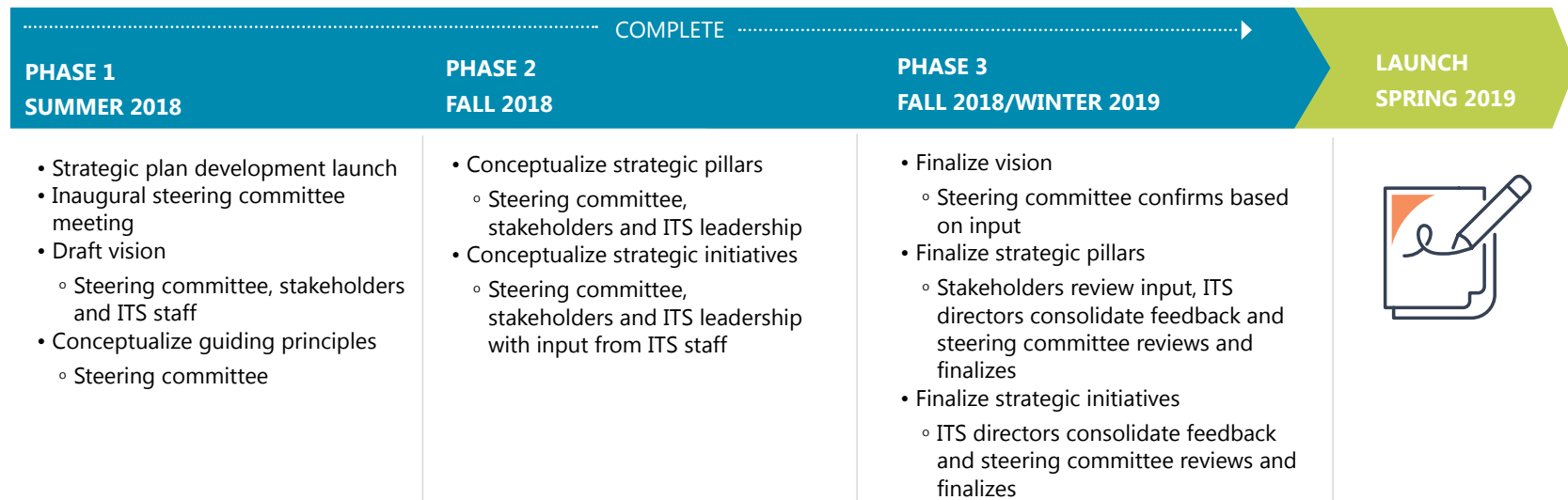
The U of T is characterized by highly distributed responsibility for decision-making across units and divisions and this is reflected in a uniquely decentralized IT support model. We deliberately embrace the distributed nature of our environment and believe it is what makes us a leader on the world stage. We value localized decision-making and the subsequent agility this affords, recognizing that divisions not only have different needs, but potentially different expectations for service delivery. A framework with a clear, shared vision and guiding principles can allow for both consensus-building and flexibility, ensuring we prioritize investments and deliver effective solutions. The community consultations have revealed an opportunity to do more with our available resources, through shared leadership, transparency and trust among the many talented professionals collaborating across our federated model.

While organic growth of information technology served us relatively well during the initial period of rapid growth and increased adoption, it is now time for a new approach. Our consultation surfaced gaps in service, duplication of effort and shared concerns regarding sustainability and security. Wants have far exceeded our ability to meet them and there is no clear understanding of how our competing needs are prioritized, how resources are allocated and where accountability rests. The community has signalled that collectively reviewing and setting our priorities is critical, particularly in times of financial constraint.

COMMUNITY CONSULTATION PROCESS

Our comprehensive consultation process took place in three phases over the last 12 months, guided by a steering committee and engaged participation with more than 650 individuals, including academic leaders, instructors, administrators and students from a range of locations within the institution. Through an iterative process outlined in the graphic below, the overarching framework of our vision, pillars and guiding principles was developed as a foundation for planning of key objectives and initiatives for the next five years.

ITS STRATEGIC MILESTONES



A significant outcome of these sessions was the creation of more than 70 digital moments describing, in story form, the needs of the community and the potential for technology to enhance and enrich our experiences. See pages 14-22 for featured digital moments. The active engagement and imagination of the community has contributed significantly to the creation of this plan and the aspirations around IT@UofT. Discussions pushed the boundaries of teaching, learning, scholarship, operational efficiency and digitalization.

ITS CORE VALUES

The objectives and initiatives outlined in the next section are influenced by the ITS core values. Prior to the launch of the strategic planning process, ITS staff identified five core values that collectively drive and inspire us in our daily work. These are foundational to how we operate as a team and key to the behaviours we want to model daily when interacting with one another. Throughout the strategic planning process, we have reflected on these values and used them to shape our vision for the future. We encourage the rest of the community to consider how they see the values reflected and continue the dialogue on their importance in our work together.

| SERVICE AND OPERATIONAL EXCELLENCE | CREATIVE AND CRITICAL THINKING | TEAMWORK | SHARED LEADERSHIP | CULTURE OF LEARNING |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| We strive to deliver high-quality service to all of our clients across the U of T. Innovation and excellence drive our initiatives and client service every day. | We are inspired by creativity and curiosity in our work. We strive to be innovative and agile – using critical thinking to make effective decisions and leverage our resources efficiently. In the process, we encourage different perspectives and consider many alternatives. | We are cooperative, collaborative and work with all of our colleagues to meet the goals and objectives of the University. We value effective communication, knowledge sharing and are open to different perspectives and expertise. We are inclusive and treat each other with respect, fairness and kindness. | We demonstrate shared leadership skills in decision-making, prioritizing and interacting with others. We have a strong commitment to achieving our goals and we lead through empowerment, encouragement and appreciation of others' strengths. | We nurture a culture of learning to ensure we are continuous learners and explorers in the dynamic and ever-changing field of IT. This enhances our personal and professional growth and maintains our ability to be innovative and creative in our work. |

Objectives and Initiatives

PILLARS

The consultation process has set the stage for us to explore, more deeply, how action plans related to each of the three foundational pillars can enable us to achieve our shared vision. Other units and divisions across all three campuses are encouraged to use the framework to develop their own path forward.

ITS has identified priority objectives and corresponding key initiatives that are mapped into strategic theme areas aligning with the overarching framework and pillars. Going forward, operational plans will be developed by the corresponding work teams within ITS, in consultation with key stakeholders in the broader community.

PEOPLE

The U of T is privileged to employ outstanding individuals who share and extend their expertise to advance digital and IT solutions at the University. We must be deliberate in our recruitment, retention and growth of our people. The community members we consulted are seeking a workplace that is inclusive, equitable and diverse. Additional desired elements are an environment that fosters engagement, trust, creativity and respect. We need to ensure that we develop reliable and valued teams based on these attributes. ITS has identified three-year objectives and related initiatives to support and transform the people pillar as follows.

CREATE A CULTURE OF CONTINUOUS SKILL AND PROFESSIONAL DEVELOPMENT.

- Publish recommended U of T resources for development and growth of IT staff
- Enhance onboarding program
- Expand opportunities for leadership development and mentoring initiatives

CULTIVATE HIGH PERFORMANCE TEAM PRACTICES IN IT.

- Identify opportunities to build a high-performance team culture
- Increased focus on initiatives reflecting ITS core values
- Improve ITS internal communication strategy

INCREASE THE VISIBILITY, TRANSPARENCY AND AVAILABILITY OF IT TALENT AND SPECIALIZED SKILL SETS.

- In partnership with HR, initiate an IT talent program for IT@UofT that embraces aspects such as recruitment, retention, diversity and secondments
- Communicate ITS organizational structure, roles and projects
- Plan strategies to leverage IT talent across the units



SOLUTIONS

ITS has identified objectives and related initiatives within the solutions pillar aimed at improving day-to-day activities in support of the University mission.

Empower educators and learners through broader access to transformative teaching and learning apps and resources.

- Finalize process for Academic Toolbox expansion and uptake
- Extend faculty support for technology-enhanced teaching and learning strategies
- Support implementation of next generation classroom technologies by partnering on the classroom renewal initiatives

Digitalization of the University's core administrative systems focused on process reengineering (including assessment, redesign and implementation of recommendations).

- Modernise and extend the Administrative Management Systems (AMS), including HR Talent Management Suite, Finance and Research systems
- Implement a new cloud-based infrastructure for AMS
- Continue to leverage efficient technological solutions that help students to achieve academic and personal success through the Next Generation Student Information Services (NGSIS)

Create a culture of evidence-based (data driven) decision-making and information flow.

- Provide leadership in the development of an evidence-based decision-making culture that enables citizen-based data scientists (this means people are empowered to make decisions and allows data work to be completed in distributed areas and divisions)
- Utilize and contribute to central data governance standards and processes

Enable a secure computing environment and protected management of information.

- Enable work anywhere, on any device, with secured data and device management
- Expand baseline controls and security standards
- Enhance network defences

Leverage alternative service delivery models that can deliver enhanced security, increased agility, improved return on investment (ROI) and more flexible solutions.

- Identify best practices for procurement and management for cloud technologies
- Provide leadership and technical expertise in the area of needs analysis, design and architecture to help make evidence-based decisions around where best to host services
- Define new cloud-based architectural and security standards

Rationalize, standardize and simplify systems and services across the three campuses.

- Partner with divisions to provide an array of options to modernize core and local infrastructure
- Roll out a comprehensive network as a service subscription offering
- Review of existing wireless network technology across the three campuses





DIGITAL MOMENT

Streamlined Workflow

Elizabeth receives a notification reminder that the deadline for an upcoming budget presentation.

She logs into the central data portal using two-factor authentication. Based on her staff role and department affiliation, she's given access to appropriate information sourced from a variety of integrated systems, including financial, human resources and student data. The portal allows Elizabeth to view historical records and predict project scenarios and trends for the next fiscal year.

Once the draft presentation has been created, Elizabeth creates an online working group and shares the file with her team via Office 365.

During the presentation, Elizabeth makes some additional edits in real-time based on feedback from the dean and uploads the report to the financial system following the meeting.

By using available business intelligence and collaboration tools, Elizabeth was able to complete the budget report in record time and, with contributions from her team, share a financial forecast for the next fiscal year.

COLLABORATION

In order to succeed within a federated model, we need a clearer understanding of how we engage, how we collaborate and how we function as a collective. The following objectives and initiatives reflect feedback from the community emphasizing the need for a transparent, integrated, unified, coordinated, trusted, consistent, proactive and inclusive environment.

Increase transparency and collaboration through proactive, streamlined and trust-based communication between ITS and the U of T community.

- Create shared accountability through plans that are inclusive of institutional and divisional strategic objectives and tactical initiatives based on enhanced governance processes
- Facilitate efficiencies in project initiation and management through improved requirements gathering, intake processing, visibility and awareness of ITS projects across the University
- Standardize processes and practices for change and incident management

Improve collaboration and communication using distributed strategies to enable engagement across all units.

- Ensure University-wide fluency in using e-communications and collaboration tools, such as Office 365
- Implementation of Enterprise Service Centre (ServiceNow) for shared service centres across the University
- Publish updated comprehensive service catalogue and knowledge base
- Improve and integrate communications strategy related to service interruptions

Leverage shared infrastructure and technologies supporting research.

- Participate in University-wide research data management group along with other key stakeholders and service providers
- Continued collaboration with vice-president research and innovation (VPRI) and University of Toronto Libraries (UTL) on developing support resources for researchers through the proposed Centre for Research and Innovation Support (CRIS)
- Open a new shared research data centre with energy capture features, in partnership with Faculty of Arts & Science and Faculties & Services
- Partnering on design of network infrastructure to enable better integrated local environments

Focus Areas

SUPPORTING TEACHING AND LEARNING

The implementation of Quercus as our new learning management engine marks the beginning of a significant opportunity to transform teaching and learning at the University. We are ready to move on to the next stage in the evolution of the U of T's educational technology environment, also known as the Academic Toolbox. We will transform our approach to integration of educational technologies in response to stakeholder input, recognizing that divisions and departments may have local resources and specific program needs. Our criteria for consideration of new tools will include impact, pedagogical support, sustainability and innovation.

We are in the process of renewing our processes for integration of high-priority tools and resources to address the emergent needs for teaching and learning across a range of functional areas, including collaboration, assessment, digital content production and classroom response systems. At the same time, we must ensure basic needs are met, such as protecting student data and sustainability of platforms offered.

The ultimate goal of the University's Academic Toolbox Renewal initiative is to create a strong foundation through which students and instructors have flexible access to program-appropriate tools that support active learning within a technology-enhanced learning environment.





DIGITAL MOMENT

Classroom Connections

Professor Anaya Patel explores several new learning technologies now available to her students through Quercus and the Academic Toolbox. She also wants to share data visualization software to support active learning and is pleased to learn of improvements to wireless technology integrated into the next generation teaching station.

She posts a quick query to a one-stop online support service that auto-populates her profile information and stored user preferences. Her question is promptly triaged and she receives a quick start guide immediately to help quickly connect with the system.

As Physical Geography 101 begins, the professor launches a new webinar-streaming platform to broadcast and record the class, allowing students to log in remotely and also to accommodate those with accessibility needs. The system prompts her to post the recording in a shared U of T video repository, automatically linked to the course in Quercus.

Pleased that her students are engaged and that their accommodation needs are met, she shares her success in using technologies with peers in the Geography department.





DIGITAL MOMENT

Supporting Student Success

Jenaya is a first-year student with a learning disability who is about to take a mid-term test online on her laptop and is anxious for the process to go smoothly. She requires technological supports as an accommodation.

She has some questions about the compatibility of her text-to-speech software with the Quercus testing tools and the lab browser lockdown environment accessed via single sign-on.

While consulting with a coordinator at Accessibility Services, Jenaya uses the new Enterprise Service Centre (ServiceNow) to get advice and they are able to test and confirm the software is compatible.

Exploring further, she finds additional integrated supports to help her prepare, including exam details in the Course Information System and new study aid apps in the Academic Toolbox.



DIGITALIZATION OF CORE ADMINISTRATIVE SYSTEMS FOCUSED ON PROCESS REENGINEERING

Beginning in 2019, the University will embark on a three to five-year modernization program of our main enterprise systems around Human Resources, Finance and Research. Improvements to the systems include an upgrade of the entire HR Talent Management Suite to SAP Success Factors, an upgrade of the core HR and Finance systems to the most recent version of SAP and an upgrade in core technology to an in-memory database, allowing for significant performance improvements. To enable the upgrade, all infrastructure supporting the new versions of SAP software will be upgraded and moved to a more robust cloud platform allowing for 24/7 support of this investment for the University.

The implementation of the new HR Talent Suite is an important step in fully modernizing the main HR systems at U of T. These new applications will allow for personalized training paths, focused career development and improved talent acquisition through advanced marketing and onboarding career sites, along with cutting-edge workforce analytics allowing for improved visibility into U of T talent pools. These initiatives align with the input of the community through the digital moments process.





DIGITAL MOMENT

Welcome to U of T

Andrei is a skilled software developer who has recently been hired at ITS for an important new project.

When he arrives, he is pleased to discover that a single account and password has already been provisioned, with all of the roles and access permissions in place to allow access to the HR systems and Finance Information System services he needs.

As part of his onboarding process he is referred to a comprehensive resource that includes a checklist of tasks and HR forms to be completed as well as links to information about university services that he may want to learn more about.

Andrei is particularly interested in professional development opportunities and sees there is an outline of potential broad career paths that he might pursue, including training and qualification details and recommended Organizational Development and Learning Centre (ODLC) programs.

He is off to a good start and will continue to receive notifications and updates as his role and opportunities in ITS continue to evolve.

RESEARCH FOCUS

As one of the premier research universities in the world, we are providing additional focus on support for the current needs described by IT leaders responsible for scholarly initiatives in both small and large divisions and departments. We heard from a number of faculty and staff about diverse and unique research infrastructure needs, combined with processes requiring agility, constrained within funding cycles. While capable and resourceful, IT professionals supporting research initiatives identified persistent infrastructure and support gaps, often linked to sustainability and security requirements.

Storage: overall need for generalized storage, ranging from the small to the very large, with strategies for refreshing and bridging between funded projects.

Networking: support to update aging cable plants and switches where needed to improve service and security.

Processing power/servers: local infrastructure upgrades and/or migration to shared virtual servers to meet current server and processor power needs and security considerations.

Computational software: review of the existing and potential opportunities for site licencing to improve access to diverse products.

Along with the VPRI and UTL, ITS will ensure a renewed focus on the needs of the research community and work collaboratively with the community through the soon-to-be established CRIS.





DIGITAL MOMENT

Collaboration Supports Research

Dr. David Vladnovsky is a research stream faculty member who is a leading expert in paleontology. He is writing a grant application to explore the evolution of brontosaurus DNA for an international study. As the deadline approaches, he knows he has to prepare a budget and needs to plan for efficient server space that will be reliable and secure.

He recalls that he and his local IT team can contact ITS for support on costing out the server infrastructure and planning for secure data transfer methods. He uses a one-stop online support service to initiate the consultation process regarding shared

hosting on the enterprise server and is provided with written confirmation of the available security provisions for his research data, which he is able to use to prepare an ethics protocol for submission to the review committee.

A few months later, after hearing the exciting news that the funding council has approved his research project, he is ready to take advantage of the recommended server hosting option. In collaboration with both ITS and his local unit staff, he is ready to successfully clone a brontosaurus!

Conclusion

On behalf of ITS and the CIO's office, a huge thank you goes out to the U of T community across all three campuses. We appreciate your time, candor and significant investment in the IT@UofT Strategic Plan. This aspirational initiative was truly a collaborative and collective-based effort. It was an effort that took into consideration the unique needs and talents across the University.

It is our hope that this plan will help guide you and your teams in developing aligned and effective operational and tactical plans going forward and bring transparency to our decision making.

In the future, we will provide regular progress updates on the plan.

The IT@UofT Strategic Plan will provide direction for ITS as we advance the initiatives highlighted through the consultation process. We invite you to join us in adopting this new framework to advance IT@UofT.

For more information visit the ITS website at <http://main.its.utoronto.ca/about/strategic-plan> or contact the CIO directly at cio.office@utoronto.ca.



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