University of Windsor
Senate

*5.2.1: **Information Technology Services Annual Report (2021-2022)**

Item for: **Information**

Forwarded by: **Academic Policy Committee**

See attached.

Academic Policy Committee
Annual Report
Information Technology Services
Fiscal 2021 / 22

1.   Executive Summary

A.   Introduction

The mission of the Information Technology (IT) Services Department is to ensure that University systems, applications, and processes are designed, implemented and operated both effectively and efficiently, and serve the Mission and Strategic Priorities of the institution.

For additional information regarding how the strategic direction of IT Services supports the Strategic Priorities of the University, please refer to the IT Services IT Strategic Plan.

B.   Goals and Objectives of Reporting Year

In alignment with the Strategic Priorities of the University, IT Services has established Departmental goals and supporting initiatives for the fiscal 2021/22 year:

Ref.	Goals and Objectives	What Will Success Or Completion Look Like?	Supported Strategic Priorities
21-IT-01	UWinsite System Enhancements	Completion of SIS PUM upgrade, implementation of key planned system (SIS, FIS, CRM) enhancements and continued refinement of sustainment model	1,2,3,4,5
21-IT-02	LMS Solution Renewal	Completion of planning and procurement activities for LMS solution renewal and development of corresponding project implementation plan	1,2,3,5
21-IT-03	Fall Planning / Capital Project Support	Completion of projects to implement classroom technology, wireless network, QR code scanning enhancements and provide general return to campus support (i.e., web, etc.)	1,2,3
21-IT-04	Storage Infrastructure Renewal	Completion of project to refresh and modernize the existing storage infrastructure	1,2,3
21-IT-05	IT Operational Excellence	Continued assessment of potential collaborative initiatives (CUCCIO, CW-E, ORION) and refinement of existing operational and service practices to enhance service delivery	1,2,3,4
21-IT-06	IT Initiatives *Cybersecurity, Data Governance, Documentation, IAM, ITS Website, Service Excellence, Team Dynamix, Web Governance*	Completion of identified objective(s) for respective initiatives as per plans	1,2,3,4,5

IT Services has identified additional goals and objectives for the current fiscal for respective sub-units within the Department that support the priorities of the institution and provide areas of focus for supporting staff. These goals and objectives can be referenced at IT Services Goals & Objectives.

To plan and implement these projects, IT Services undertakes a robust project management process to ensure related activities are aligned to the University's Strategic Priorities. Some examples of this alignment to the University's Strategic Priorities can be referenced in the projects and initiatives highlighted below:

1. *Provide an exceptional undergraduate experience*:
   - Worked collaboratively with key campus partners to complete several return to campus initiatives including upgrade of several classrooms with hyflex technology, implementation of the SafeLancer app and associated QR code scanners and modernization of the campus wireless network
   - Continued practice of extended service coverage hours on the IT Service Desk to include evenings and weekends and support of live chat functionality for campus users
   - Supported upgrade of UWinsite Student to address several existing system issues and improvement the overall experience for users
   - Maintained technical support for the planning of several University capital projects including Transforming Windsor Law (TWL) and Lancer Sport & Recreation Centre (LSRC)

2. *Pursue strengths in research and graduate education*:
   - Continued support of ongoing campus Research Data Management (RDM) in collaboration with the Leddy Library and Office of Research Services to draft and implement processes to assist researchers in completion of Data Management Plans and other data governance practices
   - Maintained support of RedCap to assist researchers in the management of online databases and surveys
   - Completed upgrade of the eRSO system (research portal) to modernize the application and improve experience for users

3. *Recruit and retain the best faculty and staff*:
   - Continued support of campus professional development and training activities for faculty, staff and students for core University systems including UWinsite, Office 365 (Teams, Stream, Bookings, Shifts) and Windows 10/11 applications, cybersecurity best practices and other general technology education initiatives
   - Supported updates to VIP, the University Human Resource Information System, to assist with future implementation of new modules including Time Capture, Time & Attendance and e-Recruitment

4. *Engage and build the Windsor and Essex County community through partnerships*:
   - Maintained participation in Connecting Windsor-Essex (CW-E), a non-profit organization comprised of over 40 local stakeholder members and supported ongoing enhancements to internet connectivity for the Windsor-Essex region and other community initiatives including Technovation, a global challenge for students to work with mentors to identify a community problem and build a potential resolution into a working app

5. *Promote international engagement*:
   - Continued support of ongoing enhancements to UWinsite Engage to deliver relevant and timely communications to campus constituents in order to improve engagement

C.   <u>**Successes**</u>

In collaboration with various campus partners, IT Services has completed and continues to support several key University projects and initiatives including:

Major Campus Projects / Initiatives

- <u>Return To Campus</u>
  - o Supported implementation of several key projects during the summer to ensure a safe return to campus for faculty, staff and students in Fall 2021. Highlights of some key projects are described below:

    - <u>Classroom Technology</u>
      - Upgrade of 19 classrooms across campus to incorporate hyflex technology to enable hybrid delivery of several courses
      - Implemented hyflex mobile cart technology for Drama and other identified areas for campus

    - <u>Safe Lancer App</u>
      - Implementation and ongoing maintenance of SafeLancer, a mobile Self-Assessment Questionnaire platform, for students, employees, volunteers, contractors and visitors to complete prior to coming to campus

    - <u>QR Code Scanners</u>
      - Design and install of over 70 QR code scanning stations to support contact tracing capabilities for individuals attending campus for school or work

    - <u>Building Access</u>
      - Provided technical support for implementation of new building access system being led by Facility Services

    - <u>Campus Way Finding</u>
      - Provided technical support for implementation of [CampusGo](#), a new campus way finding system to enhance campus user and visitor experience

    - <u>Wireless Network</u>
      - Upgrade to the campus wireless network to facilitate implementation of QR Code Scanner and Building Access projects and to enhance performance at designated exterior locations to support users

    - <u>Vaccination Attestation</u>
      - Developed and implemented vaccination attestation solution to facilitate tracking and reporting of campus member vaccination status

    - <u>Reporting</u>
      - Created dashboards for campus administrators and Health & Safety staff to monitor daily check-ins
      - Developed and continue to maintain reports provided to MCU and others

- <u>Capital Projects</u>
  - o Maintained technical support for ongoing [LSRC](#), [TWL](#) and other key capital projects to ensure timely completion of assigned activities

Major IT Services Projects / Initiatives

- Infrastructure
  - o In coordination with campus partners, IT Services has led and supported the implementation of several major IT infrastructure upgrades / updates to improve user experience including:

    - ▪ Server and Storage Modernization – Phase 1
      - ▪ Completed procurement of equipment to upgrade and modernize current server and storage infrastructure

    - ▪ Network
      - ▪ Completed upgrades to wireless network core to modernize administrative functionality and enhance performance at identified campus locations

- Applications
  - o Significant upgrades / updates have been made to key University systems including:

    - ▪ Microsoft
      - ▪ Based on continuing updates and enhancements to the overall Microsoft solution, IT Services has undertaken significant effort to maintain, improve and support respective applications including:

        - o Office 365
          - ▪ Continuing deployment of feature updates and enhancements to several MS applications including Teams, Stream, Bookings and Shifts for the University community to improve collaboration and scheduling activities

        - o Windows 10 and 11
          - ▪ Continued migration of University owned PC's from non-current versions of Windows to Windows 10 to support modernized desktop experience
          - ▪ Deployment of Windows 11 for targeted users and planning for broader rollout to campus

        - o Power Automation
          - ▪ Implementation of SharePoint site and automation workflow to facilitate contract approval and processing of GA/TA appointments and Outstanding Scholars

        - o Device Management
          - ▪ On-going deployment of device management for University owned devices to facilitate improved patching and update capabilities

- UWinsite
  - Continued provision of technical expertise and support to the respective Student, Finance and CRM (Engage, Service) systems:

    - UWinsite Student
      - Completed implementation of major PUM (PeopleSoft Update Manager) cumulative updates along with infrastructure upgrades (PeopleTools, Oracle database version, and server rebuilds)
      - PUM project facilitated implementation of several system enhancements to improve student, faculty and staff experience
    - UWinsite Finance
      - Completed retirement of JD Edwards Application (old FIS) with upgrade and preservation of historical data for auditing purposes
      - Implementation of ongoing Quarterly Releases to maintain current version
    - UWinsite Engage and Service
      - Implemented several enhancements including SSO (Single Sign On) for Agent Portal and expansion of Service Cloud to Student Awards & Financial Aid and Cashiers' Offices
    - UWinsite Licensing Renewal
      - In collaboration with campus partners, completed planning efforts for renewal of existing ERP licensing, with primary objective to optimize licensing and enhance functionality of overall solution

- Blackboard (LMS)
  - In collaboration with the Centre of Teaching & Learning and Office of Open Learning, several key system enhancements have been implemented:

    - Bb Learn
      - Maintained and enhanced server capacity to ensure robustness of system for continued increased online use
      - Completed annual upgrade to deliver new features that provide instructors and students with additional functionality
      - Additional integrated tools including Yuja (Enterprise Multimedia and Accessibility System) and Better Examinations (online examinations tool) implemented to provide more comprehensive system functionality

    - Bb Collaborate
      - Maintained support of toll-free phone service to provide cost-effective solution for students utilizing audio services to access courses
      - Increased storage capacity (multiple times throughout the year) to store and maintain additional content from courses
      - Continued efforts to enhance process to archive Bb collaborate recordings to alternate platforms to allow for continued access

    - LMS Licensing Renewal
      - Completed planning efforts to renew existing LMS licensing, including pending project plan and procurement

- VIP Core Upgrade
  - Completed required upgrades to facilitate implementation of modules that support time capture, time and attendance and e-Recruitment activities

- Other Applications
  - IT Services, in collaboration with respective campus partner areas, have undertaken several system updates and enhancements throughout the fiscal period. Some notable application updates include:

    - StarRez (Residence Administrative Application)
      - Replacement of legacy application (STG) to manage residential housing for students
    - AIM (Accessible Information Management System)
      - Replacement of legacy application (SNAP) used by Student Accessibility Services with a more modernized solution
    - Raisers Edge
      - Update of application patches and implementation of e-receipts to enhance system functionality
- Website
  - Ongoing development and enhancement of the University website including:
    - Refinement and update of Return To Campus and other campus websites
    - Review and update of University websites to ensure accessibility compliance to meet WCAG 2.0 requirements and investigation of automated tool to assist with process
    - Completion of migration of all University websites from Drupal v6 to v7 and planning for transition to v9

- IT Service Management (ITSM)
  - Maintained extended service coverage hours on the IT Service Desk to include evenings and weekends and introduced new chat function to provide additional support coverage for campus users
  - Continued development of ITSM program to facilitate continuous improvement of technical services and support including:

    - Service Model Enhancements
      - Finalized integration of "one-stop" shop for Client Services to support all information and classroom technology related needs through:
        - Standardization of systems and operational processes for all information and classroom technologies and services
        - Reassignment of staff to provide enhanced services and support
        - On-going training of IT Services staff on service management industry best practices (ITIL version 4) to ensure alignment of services with operational needs

- o Performance Metrics
  - ▪ Continuing review of key service metrics related to the technologies, systems and processes supported by IT Services to assess and improve Departmental performance, most notably:

  - ▪ Service Requests (Tickets)
    - o Volumes
      - ▪ Continued significant increase in 2021 in comparison to prior years

Year	New / In Process	Variance (YOY)	Completed	Variance (YOY)
2021	33,105	-7.0%	19,018	-8.3%
2020	35,613	32.3%	20,731	22.9%
2019	26,924	30.1%	16,863	15.8%
2018	20,702	9.1%	14,563	-2.7%
2017	18,973	-	14,968	-

  - ▪ Service Level Agreement (SLA) Resolution Rates by Service Type
    - o IT Services reviewing SLA metrics to make continuous service improvements through process efficiencies and resource allocations

Service Type Category (2021 Ticket Volume)	Number of Days[1]			SLA Improvement (YOY)
	2019	2020	2021	
Identities & Directories (6,359)	7.8	2.6	0.9	65%
Teaching & Learning (2,486)	5.9	4.6	1.0	78%
UWinsite (2,566)	29.2	20.4	7.75	62%
Messaging & Collaboration (1,695)	13.8	5.2	3.3	38%
Other Services (7,696)	16.9	1.3	3.9	-230%

  - ▪ Client Satisfaction
    - o IT Services continuing to administer surveys to assess client satisfaction
      - ▪ Overall satisfaction scores of survey respondents decreased slightly in 2021 in comparison to 2020, but continue to trend positively in relation to prior years

Year	Average Satisfaction Score (rating out of 5)			Satisfaction Variance (YOY)
	Online / TDX[2]	Website Experience	Overall Service Rating	
2021	4.68 (89%)	4.66 (88%)	4.75 (96%)	-1%, 0%, -1%
2020	4.72 (94%)	4.65 (93%)	4.78 (96%)	3%, 3%, 4%
2019	4.56 (91%)	4.52 (90%)	4.62 (92%)	2%, 2%, -2%
2018	4.49 (90%)	4.45 (89%)	4.69 (94%)	-

[1] Average number of days (based on business / operating hours), not including tickets with no defined SLA (e.g., Scantron service requests)
[2] Online / TDX refers to using TeamDynamix ticketing application

- System Availability
  - Average uptime of core systems (monitored) has slightly improved in 2021

Year	Average Uptime	Variance (YOY)
2021	*98.0*	*0.1%*
2020	*97.9*	*-0.7%*
2019	*98.6*	*1.0%*
2018	*97.6*	*-*

- Security
  - Several existing and new security related metrics are being monitored including:

Metric	Performance (2021 YTD Nov*)	Performance (2020 YTD Nov*)
E-Mail Blocked	*42%*	*56%*
Incoming Connections Blocked at Firewall	*99%*	*98%*
Known Comprised Accounts	*127*	*93*
Encrypted University Devices	*3,341*	*1,992*
Centrally Managed University Devices	*15,644*	*10,872*
Accounts Utilizing MFA	*100%*	*100%*

- Virtual Desktop Infrastructure (VDI)
  - In collaboration with the Leddy Library, maintained support of virtual desktop infrastructure (VDI) in Leddy Library, Faculty of Engineering and Faculty of Science to provide students with virtual, remote access to software and other computing resources to support online continued studies
  - Supported launch of Leddy Library Laptop Lending program to provide students with Chromebooks to facilitate online learning

- Desktop Technologies
  - Refinement of the existing Preferred PC program (Dell) for desktop technologies to deliver:
    - Continued standardization of supported PC devices and additional options for high-powered computing hardware
    - Better pricing and delivery times

- Security
  - Maintained efforts to enhance the University's cybersecurity program through:
    - Continued development and expansion of the IT Cybersecurity website including additional resources to support remote and other important information security protocols
    - Conducted self-phishing exercises for IT Services and Finance departments to improve cyber awareness of staff members
    - Delivered presentations and information sessions to various groups within the campus community to promote cyber awareness and education
    - Maintained participation in number of external cybersecurity initiatives with partner organizations (i.e., CUCCIO, CW-E) to further improve cybersecurity program

- IT Governance
  - Maintained efforts to lead and participate on several IT governance related initiatives to ensure continued campus engagement on key IT initiatives:

    - IT Governance
      - Maintained efforts to ensure ongoing transparency of key decisions related to information technology and facilitate an aligned, secure and sustainable technology strategy

    - Data Governance
      - Continued efforts to further develop and implement key data governance initiatives including:
        - On-going collaboration with Leddy Library, Office of Research Services and other campus partners to support development of a proposed campus framework to address Tri-Council Research Data Management (RDM) requirements

    - UWinsite Governance
      - Maintained support UWinsite Steering and respective Advisory Committees to ensure that identified business and technology requirements that impact the overall UWinsite system (Student, Finance and Engage) are addressed and provide oversight for the selection and implementation of new related systems, components and modules

    - LMS Governance
      - Supported continued activities of the LMS Steering Committee to:
        - Investigate and review potential LMS solutions, best practices, tools, processes in order to further enhance initiatives related to course delivery and learning activities
        - Created an LMS Project Steering Committee consisting of various faculty, staff and student members to ensure comprehensive renewal process for existing LMS licensing

    - VIP Governance
      - Supported continued activities of the VIP Steering Committee to:
        - Oversee the development and implementation of HRIS related strategies, projects and initiatives to ensure effective engagement of faculty, staff and students

    - Web Governance
      - Continued support of Web Advisory Committee activities provide oversight to the development, implementation and management of the University website
      - Specific activities related to the further development and review of University webpages and required accessibility requirements

    - IT Services Strategic Plan
      - IT Services has continued efforts to review and refine the IT Services IT Strategic Plan as required

D. Challenges

IT Services continues to face several challenges in supporting increasing service and technology expectations from the campus community. These challenges continue to be amplified given the primarily remote, on-line environment in which the University continues to operate.

Some key challenges have been highlighted below:

- Resources
  - On-going enhancements, maintenance and necessary client support for core campus systems and technologies, most notably Office 365, UWinsite, Blackboard and hyflex classrooms, have continued to consume significant IT Services time and resources in order to address operational needs. These increased demands, combined with other urgent pandemic related service requests continue to impede the Department's ability to complete planned projects and provide expected levels of service. Given the on-going anticipation of a more on-line environment and other continually changing pandemic related requirements, resources within IT Services will remain constrained.
  - To help address this challenge, IT Services continues to evolve and leverage an operational resource plan to ensure, to the extent possible, that staffing is appropriately aligned with required departmental activities

- Financial Sustainment
  - Escalating technology costs caused by incremental reliance on technology and increased equipment, licensing and support costs, further heightened by supply chain shortages as a result of the pandemic, have continued to constrain the budget of IT Services
  - To help manage this challenge to the extent possible, IT Services continues to leverage a business plan to forecast anticipated capital and operational expenses and maintain alignment with established budgets

- Supply Chain
  - Global chip shortages, along with other supply and logistics related concerns have resulted in significant lead time and delivery issues
  - To help address this challenge, IT Services has partnered with key vendors and attempted to plan required project work according to anticipated delivery times to ensure expectations and required timing can be reasonably achieved.

- Information Security
  - The online environment in which the University continues to operate has magnified risks and potential external cyber threats to campus systems and associated information. These risks have been highlighted with recent "Print Nightmare" and "Log4j" vulnerabilities that have resulted in several operational challenges and consumption of significant IT Services resources in order to address and mitigate potential issues.
  - To help address this situation, IT Services continues to develop and promote the IT Cybersecurity Program to provide a robust security infrastructure and improve cyber awareness and education within the campus community

- Professional Development
  - Limited departmental budgets continue to impair ability to provide IT Services staff with necessary training and development opportunities to maintain knowledge and skills associated with evolving technologies and systems
  - To help manage this challenge, IT Services continues to assess training and development opportunities and appropriately match to priority needs

2.   Report

A.   Goals and Objectives and the University's Strategic Plan

As mentioned previously in the Report, additional details on the goals and objectives that have been established for IT Services for the current fiscal year and how these support the University's Strategic Plan can be found at IT Services Goals & Objectives.

B.   Future Actions/Initiatives

- Return To Campus
  - o Evolving pandemic related requirements continue to shift planned projects and initiatives, however, the following priorities have been confirmed for 2022:

    - ▪ Classroom Technology
      - Additional 12 mobile carts being prepped for deployment for Winter 2022 to support instructional use, with an additional 8 mobile carts being prepped for deployment to further support academic and administrative collaboration
      - Continued refinement and enhancement to hyflex technologies in existing classrooms and mobile carts to ensure rich experience by students and faculty
      - Implementation of hyflex technology in 8 meeting rooms across campus for use by faculty, staff and students
      - Update of other identified campus classrooms and lab spaces to implement active learning and realize other collaborative and pedagogical opportunities
- Capital Projects
  - o Continue to provide required technical support for key capital projects such LSRC, TWL and other Facility Services projects in order to facilitate completion as scheduled

- Microsoft
  - o Given the evolving nature of the Microsoft environment, IT Services continues to make significant resource investments to support of several related applications and programs. Some notable investments moving forward include:

    - ▪ Windows 10 and 11
      - Maintain efforts to deploy required updates to Windows operating system to ensure continued support and compatibility for campus users
    - ▪ Office 365
      - On-going implementation of new and continually changing Microsoft apps including Teams, Bookings and Shifts that further support collaboration and productivity activities across campus

- UWinsite
  - Successful negotiation of required renewal of existing ERP licensing with Oracle
  - Review, identification, prioritization and implementation of planned system enhancements for broader UWinsite solution, most notably for:

    - Student
      - Investigation and implementation of revamped graduate application process using Campus Solutions / replacing legacy application
      - Expanded use of GT Forms to facilitate improvements to self-service functionality

    - Finance
      - Implementation of Supplier Self-Service Portal to streamline vendor management
      - Planning for potential implementation of a new Research Accounting module to improve user experience and administration
      - Replacement of legacy eCommerce system with enhanced solution
      - Continued development and enhancement of query and reporting tools
      - Implementation of Research Grants – Payroll Commitments Integration to improve processing efficiencies

    - Engage and Service
      - Enhancements to chat functionality to improve user experience
      - Investigation into recruitment tools such as Oracle Fusion Sales & Service and Oracle Digital Assistant & Intelligent Advisor for potential implementation
      - Data integration fixes and review of new integration tools (Oracle Integration Cloud)
      - Implementation of SSO (Single Sign-On) for Ask Portal

- Blackboard (LMS)
  - Complete pending procurement process and commence implementation of new LMS solution
  - Continued expansion of available features and functionality with the existing LMS, as is possible, to provide faculty, staff and students with improvements to the current solution

- VIP (HRIS)
  - In collaboration with the Office of the Provost, Human Resources and Finance, initiate efforts to commence implementation of the following available system modules to further enhance user experience and recognize operational efficiencies:
    - Time & Attendance – establishment of a standardized, enterprise solution
    - Time Capture – integration of time capture devices and VIP system
    - e-Recruitment – replacement of Authorization for Hire, ARAC and Form 1 processes

- Website
  - Support continued development and improvement of the broader University website, more specifically as it relates to:
    - On-going development and maintenance of Return To Campus and other critical University websites and web-based solutions
    - Continued completion of accessibility audits and implementation of required updates to University websites to ensure compliance with WCAG 2.0
    - Finalize process to select and implement an automated web governance solution to support compliance process
    - Complete required planning and initiate migration of current Drupal version (v7) to more current version (v9)

- Desktop Technologies
  - Continued modernization and standardization of approximately 3,000 computer workstations across campus including upgrading the Windows operating system and enrolment of devices in the University device management system

- Network Infrastructure
  - Continue efforts to update the campus wireless network to improve performance at identified locations and enhance overall user experience
  - Complete project to replace existing server and storage area network infrastructure with new, modernized technologies

- Cybersecurity Program
  - Continue efforts to further develop existing IT Cybersecurity Program to strengthen user awareness and improve current security protocols
  - Finalize implementation plan for enterprise encryption solution

- Training
  - Continue efforts, as is possible, to provide user training for ever evolving applications such as Microsoft, UWinsite and other core solutions to promote better adoption and utilization of available campus systems and technologies

- IT Services Management
  - On-going assessment and refinement of a balanced IT scorecard that can be used to assess overall Departmental performance and effectively communicate status of identified key performance indicators

- University Strategic Planning
  - Provide required assistance, reporting and technical support for pending campus Strategic Planning process

C. Recommendations for Senate consideration (if any)

Continue support of IT Services through the following activities:
- Providing regular feedback on current campus technologies, systems and services that will support further enhancement of the user experience
- Fostering awareness and promoting the value of information technology related services within the broader University community
- Reinforcing the need to be compliant with applicable policies, protocols, recommendations and best practices to ensure the protection of University information technology related assets
- Advocating for ongoing education of adoption of cybersecurity initiatives and other new technology solutions being introduced across campus