Winona State University Information Technology Strategic Plan

Continuing to Pioneer the Intersection of Teaching, Learning, Technology, and Engagement

Fall 2021 – Summer 2024

"A Community of Learners Improving Our World"

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Information Technology Services – Winona State University

Mission Statement

Information Technology Services (ITS) provides the technology-based foundation to support and empower the Winona State University (WSU) community to meet and exceed their educational and business needs.

Vision

Information Technology Services endeavors to position the University as a national leader in the innovative and effective use of technology to support the academic enterprise.

Values

People, Performance, and Innovation

Pillars

• **Teaching and Learning.** Information Technology Services will empower technology-enriched teaching, learning, and student success.

• **Digital Transformation (Dx).** Information Technology Services must continue to prepare and support Winona State for shifts in culture, workforce, and technology that will transform our institution's operations.[1]

• **Customer Partnerships and Experience.** Information Technology Services will enhance customer relationships to realize the promise of, "the trusted partner for your digital life."

• **Information Technology Core.** Information Technology Services will provide a resilient, flexible, agile, and secure core information technology infrastructure. A foundation for the other three pillars.

Our Customers

WSU students (current and prospective), faculty, staff, alumni, and retiree

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[1] "Dx: Digital Transformation of Higher Education." EDUCAUSE. https://www.educause.edu/focus-areas-and-initiatives/digital-transformation

Planning Assumptions

There were several planning assumptions used by the All-University Technology Committee (AUTC) and Information Technology Services (ITS) leadership team as the information technology strategic plan for Winona State University (WSU) was being developed. A few of those assumptions are as follows:

- Information technology is critical to the realization of institutional goals and must be aligned with the mission and vision of the University.

- The University is likely to experience budgetary constraints during the effective years in which this information technology strategic plan is implemented.

- The Winona campus is committed to providing a multi-platform, one-to-one, mobile computing strategy to students and faculty through its *e-Warrior: Digital Life and Learning Program* which provides the stage to deliver technology access anytime and anywhere.

- Some Winona State University - Rochester students are not currently involved in the *e-Warrior: Digital Life and Learning Program*, which results in some distinct technology issues for these students and their faculty.

- The University is dedicated to supporting an information technology infrastructure that is secure, robust, reliable, and transparent to the end user.

- Individual faculty members are ultimately responsible for setting the technology expectations of students in their courses. The departments and colleges are responsible for integrating technology into their academic programs as appropriate and assessing these efforts.

- The Minnesota State system office provides and supports the core administrative, productivity, and academic software applications used by the institution.

- Information Technology Services will continue to support alternative modes of information technology access and technology-enabled instruction as necessitated by COVID-19.

- Emphasis must be placed on training and professional development to assist students, faculty, and staff with the use and application of information technology.

Introduction and Background

As COVID-19 began sweeping the globe and approaching the United States, the critical role of information technology became clear quickly as University leadership directed its divisions to begin preparing for remote teleworking. Fortunately, Information Technology Services (ITS) in 2017 included in its strategic plan the need to develop a disaster recovery and business continuity plan. In 2018, this plan was developed and spoke to the possibility of a pandemic. The plan called for and had preparations in place for ITS to provide robust, secure, and reliable information systems and support to enable employees and students to work and learn from home. With a lot of hard work and many hours put in by dedicated staff, this was accomplished in less than 48 hours, well before the University went into full telework mode. This was made possible by a strategic plan that asked the question, "What if?"

Because of this planning, the eWarrior Digital Life and Learning program already had technology at the fingertips of every student and faculty member in the WSU community. We were successful in pivoting to entirely online learning when others struggled. This can be seen in the usage data of services used such as Zoom and D2L. The success of information technology services can be demonstrated by many data points collected and reported in the Information Technology Service (ITS) FY20 Year End Report.

This new Information Technology Strategic Plan also is the first to be developed post-pandemic, which saw rapid digital transformation in the academic enterprise. The plan continues to provide a framework for integrating and prioritizing technology related issues at WSU. It was developed to articulate a common vision for technology and provide a guide for future technology implementations. Assessments (both quantitative and qualitative) of the activities in the plan are critical to moving initiatives forward. Doing this will provide a guide to enhance and improve services to meet the needs of students, faculty, and staff now and in the future. This Information Technology Strategic Plan represents the University's effort to continue to pioneer the intersection of teaching, learning, technology, and engagement.

Governance - All University Technology Committee (AUTC)

The All-University Technology Committee reviews technology initiatives, assesses technology use and recommends policy and resource utilization. The committee reviewed and assisted in the implementation of the Information Technology Strategic Plan development process and reviewed information collected from the focus group sessions held from September 2019 to February 2020.

All University Technology Committee (AUTC) Membership (2020 - 2021)

Ex-Officio
Kenneth Janz, Associate Vice President for Academic Affairs, Dean of the Library, and Chief Information Officer
Ken Graetz, Director for Teaching, Learning, and Technology Services

Inter Faculty Organization (IFO) Representation
Gregory Richard, Associate Professor, College of Liberal Arts, AUTC Chair 2020-2021
Pat Paulson, Professor, College of Business
Lawrence Schrenk, Assistant Professor, College of Business
Joseph West, Associate Professor, College of Science and Engineering
Vernon Leighton, Professor, Library and Information Services

Minnesota Association of Professional Employees (MAPE) Representation
Lori Mjoen, Project Management, Information Technology Services
Travis Norman, Digital Transformation and User Experience, Information Technology Services

Administrative and Service Faculty (ASF) Representation
Doug Westerman, KQAL – General Manager, Mass Communications Department

American Federation of State, County, and Municipal Employees (AFSCME) Representation
Dustin Tollefsrud, Technology Specialist, Adult and Continuing Education (ACE)

Students
Vacant
Vacant

Middle Managers Association (MMA) Representation
Robin Honken, Director - Digital Transformation and User Experience, Information Technology Services

Deans' Council Representation
Charla Miertschin, Dean, College of Science and Engineering

Information Technology Strategic Planning Development Process

This document represents the culmination of work started in September of 2019. In the fall of 2019, the All-University Technology Committee (AUTC) developed and endorsed the planning concept of a foundation (Information Technology Core) and the three pillars (Teaching and Learning, Digital Transformation and Customer Partnerships and Experience). This foundation and three pillars were used to collect feedback from the campus.

Robin Honken, Lori Mjoen, and Kenneth Janz conducted several technology planning and listening sessions across the campus during the fall 2019 and spring 2020 semesters. During these 12 planning and listening sessions, general feedback and ideas from various stakeholder groups were collected.

The feedback and ideas were developed into facilitating activities. It is important to note that listening sessions were held prior to the COVID pandemic. Because of the intense nature of support related to COVID, work on the strategic plan was put on hold for 6 months. Work restarted on the plan in September of 2020. Specific modifications were made to the strategic plan by the ITS Leadership Team and AUTC in response to service and support that have been changed/altered by the pandemic. The product of this process is contained in this plan.

Next Steps

Once the information technology strategic planning is complete, the Information Technology Services (ITS) leadership team will create a **tactical plan** to operationalize the Information Technology Strategic Plan. ITS will **perform and execute** the tactical plan. ITS will **assess and evaluate** the outcomes and report the results back to AUTC and Cabinet. The Information Technology Strategic Plan will guide all future technology implementations at Winona State University.

Responsible Positions – Office Holder

Abbreviation	Full Title	Responsible Position	Fall 2021 Office Holder
ITS	Information Technology Services	Chief Information Officer	Kenneth Janz
TLT	Teaching and Learning Technology Services	Director	Ken Graetz
IDS	Infrastructure and Data Services	Director	Dave Gresham
DTUE	Digital Transformation and User Experience	Director	Robin Honken
SEC	Security Office	Data Security Officer	Tobias Schmidt

Strategic Framework

Winona State University has a strategic framework which guides the University. The University strategic framework themes are broadly written to include the whole University community and to help the campus community identify and support the underlying goals of each theme. The five themes help organize planning and initiatives of the University.

An icon has been created for each strategic framework theme. To show alignment between the information technology strategic plan and the overall strategic framework the icons that most closely align with each theme have been placed next to the corresponding pillar. The themes are as follows:

Theme 1 – Student Learning

Goal: Create and sustain a coordinated and rigorous set of learning experiences inside and outside the classroom to prepare students for their post-graduate life.

Theme 2 – Student Success

Goal: Enhance the student experience while evolving to meet the needs of future students by providing comprehensive support programs and services so that students can successfully meet their goals.

Theme 3 – Stewards of Place and Recourses

Goal: Enhance a culture of learning and stewardship of resources at Winona State University to prepare students to become responsible citizens and community members.

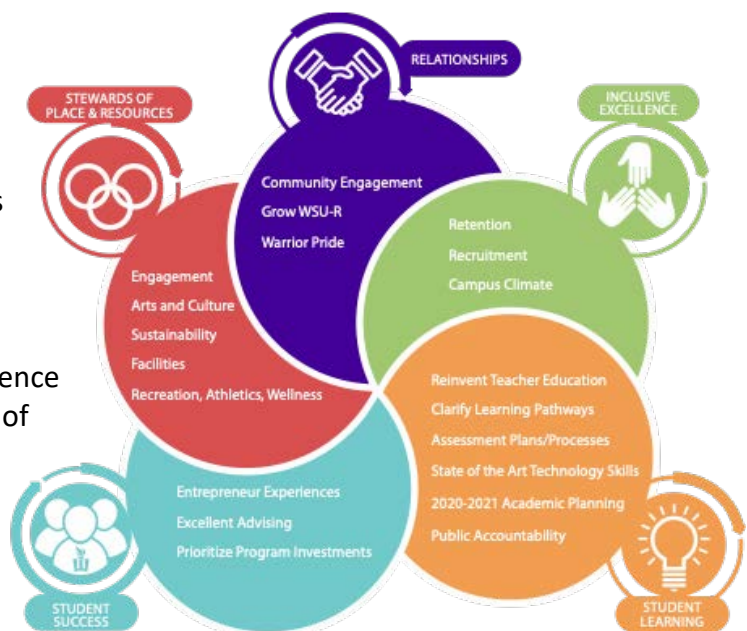**Theme 4 – Inclusive Excellence**

Goal: Increase diversity in the University community and embrace a culture of inclusive excellence.

Theme 5 – Relationships

Goal: Strengthen internal and external relationships by promoting an environment that enriches WSU, Winona, and Rochester community constituents.

1. Teaching and Learning

Information Technology Services will empower technology-enriched teaching, learning, and student success.

1.1 Support high-quality learning experiences

Activity	Responsible	Time (yrs.)
1.1.1 Improve the use of instructional technology through standards, guidelines, templates, and actionable analytics. *Assessment:* Work with System Office, leverage D2L data, survey data, and count the number of developed templates which have been added to the repository.	TLT	1-3
1.1.2 Support Universal Design for Learning standards across the curriculum. *Assessment:* Review the number of courses that implement Universal Design for Learning standards.	TLT	1-3
1.1.3 Develop and connect with repositories of open course materials. *Assessment:* Review the number of faculty who are integrating Open Learning Materials into their courses.	TLT	1-2
1.1.4 Enhance the ability of faculty to be agile in delivery of course activities and content. *Assessment:* Review the number of faculty who participate in training, as well as the number of online, HyFlex, and hybrid courses.	TLT	1-3
1.1.5 Work with stakeholders to develop a course delivery strategy that includes a quality improvement process. *Assessment:* Review the number of academic programs that include alternative delivery options as well as the rate of adoption of quality assurance practices.	TLT	1
1.1.6 Leverage the power of adaptive and personalized learning technologies to improve student learning. *Assessment:* Review the number of courses that include adaptive learning activities.	TLT	1-3

1.2 Enhance professional development support

Activity	Responsible	Time (yrs.)
1.2.1 Develop asynchronous online learning opportunities for faculty. *Assessment:* Count the number Wiki articles, support videos, self-guided D2L courses, and LinkedIn Learning offerings.	TLT	1-3
1.2.2 Enhance instructional design and learning engineering practices. *Assessment:* Count the number of faculty who are participating in Instructional Design Professional Development Opportunities as well as the number of courses which are integrating Instructional Design Standards.	TLT	1-3

Activity	Responsible	Time (yrs.)
1.2.3 Promote and deliver digital citizenship learning opportunities to the entire campus community. *Assessment:* Count the number of participants in the Digital Citizenship program.	TLT	1
1.2.4 Support the development of micro-credentialing programs. *Assessment:* Count the number of new badge programs and how many badges have been distributed.	TLT	1-3

1.3 Enrich learning spaces

Activity	Responsible	Time (yrs.)
1.3.1 Leverage and improve learning space assessment process (e.g., Classroom Report Card). *Assessment:* Review the process that has been developed and level of user satisfaction of that process.	TLT	1
1.3.2 Enhance methods and strategies to deliver on-premise courses remotely. *Assessment:* Count the number of faculty who are interested in delivering in-person experience remotely and the number of classrooms which are equipped to deliver remote instruction (HyFlex Classrooms).	TLT	1-3
1.3.3 Enhance our ability to support events using large venues (e.g., streaming) and multi-room events (e.g., Frozen River). *Assessment:* Count the number of large venues that have been remodeled.	TLT	1-2
1.3.4 Enhance support for the use of technology in active learning classrooms. *Assessment:* Count the number of technology-enabled active learning classrooms as well as the number of hours that these rooms are booked.	TLT	1-3

1.4 Sustain innovation

Activity	Responsible	Time (yrs.)
1.4.1 Establish scalable application of extended reality in specific disciplines. *Assessment:* Count the number of integrations.	TLT	1-3
1.4.2 Support interested faculty to identify and make accessible open educational resources for instruction. *Assessment:* Calculate and document the cost savings produced for students.	TLT	1-3
1.4.3 Explore Competency-based learning applications. *Assessment:* Count the number of courses utilizing competency-based learning.	TLT	1-3

1.4.4 Evaluate adaptive and next generation learning environments and trends (e.g., gamification, personalized learning). *Assessment:* Develop and review recommendations for evaluating trends.	TLT	1-3
1.4.5 Assess the effectiveness of new educational technology tools and methods being applied at WSU. *Assessment:* Count the number of processes developed and adopted at WSU.	TLT	1-3

2. Digital Transformation (Dx)

Information Technology Services must prepare Winona State now for shifts in culture, workforce, and technology that will transform our institutions operations.

2.1 Improve data handling and associated business processes

Activity	Responsible	Time (yrs.)
2.1.1 Enhance strategies to ensure system interoperability, scalability, and extensibility as well as data integrity in taking on new projects. *Assessment:* Add a "Done/Not Done" option/goal to the project Intake process.	DTUE	1-3
2.1.2 Continue to create a seamless experience for students from prospects to graduates. (Specific examples below) • Winona and Rochester Admissions and Warrior Hub basic functionality with Salesforce (Year 1) • Implement Salesforce communication module in ACE and IT workflows (Year 1) • Implement Salesforce for housing and international students (Years 1-2) • Implement AskWSU as an Salesforce module (Year 2) • Implement Salesforce for student progress reporting (Year 2) • Implement application to academic programs in Salesforce (Year 2-3) • Implement Salesforce for advising (Years 2-3) *Assessment:* Count the number of new offerings within Salesforce and survey customer satisfaction.	DTUE	1-3
2.1.3 Continue to automate business processes for enhanced efficiencies. *Assessment:* Count the number of business processes that have been transformed.	DTUE	1-3
2.1.4 Support process improvement, and system reengineering to reduce redundant or unnecessary efforts and improve end-user experiences. (Using tools we currently have) *Assessment:* Count the number of forms developed, develop a process to review customer services experiences (done/not done), and survey customer satisfaction.	DTUE	1-3
2.1.5 Enhance data visualization and access to data. *Assessment:* Count the number of PowerBI reports	DTUE	1-3
2.1.6 Implement an enhanced document imaging process. *Assessment:* Determine whether implementation has been completed (done/not done).	DTUE	1

2.2 Develop and enhance academic support processes

Activity	Responsible	Time (yrs.)
2.2.1 Develop strategies that leverage technology to enhance student retention and completion. (e.g. APRS) (Analytics) *Assessment:* Review strategies and determine if those strategies have enhanced student retention and completion.	DTUE	1-3
2.2.2 Develop strategies to unify student experiences into a unified portal. *Assessment*: Determine whether portal creation has been completed (done/not done).	DTUE	1
2.2.3 Develop a mobile friendly strategy for students to access systems and services. *Assessment:* Count the number of systems and services that provide mobile access.	DTUE	1-3
2.2.4 Utilize metrics and analytics to evaluate effectiveness of IT services in supporting teaching and learning. *Assessment:* Build additional metrics into the Information Technology Assessment Plan.	DTUE/TLT	1-3

2.3 Enhance telework

Activity	Responsible	Time (yrs.)
2.3.1 Enhance remote service accessibility and return on investment in teleworking. *Assessment:* Count the number of systems which are remotely accessible, develop accountability measures, and review/record the amount of money saved on facilities.	DTUE/IDS/SEC	1
2.3.2 Provide training, support, and professional development to enhance staff teleworking skill and productivity. *Assessment:* Count the number of training and professional development sessions.	TLT/SEC	1
2.3.3 Examine business processes to support teleworking operations. *Assessment:* Review and record all processes which support teleworking operations.	DTUE	1-2

3. Customer Partnerships and Experience

Information Technology Services will enhance customer relationships to realize the promise of "the trusted partner for your digital life."

3.1 Enhance support services

Activity	Responsible	Time (yrs.)
3.1.1 Create and holistically review service catalog and services for efficiency and effectiveness. *Assessment:* Review the completed services catalog and all services offered.	DTUE	1
3.1.2 Implement a review process for centrally supported campus software. *Assessment:* Determine whether a software review process has been implemented (Done/Not Done).	DTUE	1

3.2 Strengthen benchmarks and metrics

Activity	Responsible	Time (yrs.)
3.2.1 Gather more information on what students want around technology to enhance the customer experience so users become more self-sufficient. *Assessment:* Count the number of feedback opportunities offered for students: focus groups, surveys, etc.	DTUE/TLT	1-3
3.2.2 Leverage the higher education analytics available through EDUCAUSE to continue to improve services. *Assessment:* Count the number of services aligned with the Educause analytics.	DTUE/TLT	1-3

3.3 Augment community communication tools and relationships

Activity	Responsible	Time (yrs.)
3.3.1 Support the efforts of Marketing and Communications to redesign the Winona State University Website and Content Management System (CMS) tools. *Assessment:* Document all website enhancements and which CMS tools are in utilized.	DTUE	1-3
3.3.2 Continue to build and enhance IT Communication Plan. *Assessment:* Allocate resources for IT communication and measure end user satisfaction.	DTUE	1-2

3.3.3 Marketing the strengths, dynamic nature, depth of services, & technology foundation of the e-Warrior program to current and new students. (Partner with Admissions and Marketing and Communications) *Assessment:* Determine whether a communication plan has been developed (done/not done) and review partnership successes related to the marketing of the e-Warrior program.	DTUE/TLT	1-3
3.3.4 Continue to build IT relationships with other Minnesota State institutions to create better support for WSU students learning and transferring from those campus locations. *Assessment:* Review the engagements with other institutions and review the impact and/or improved service opportunities for WSU students.	DTUE	1-3

4. Information Technology Core.

Information Technology Services will provide a resilient, flexible, agile, and secure core information technology infrastructure. A foundation for the other three pillars.

4.1 Enhance and expand the core network operations

Activity	Responsible	Time (yrs.)
4.1.1 Enhance the network infrastructure for maximum robustness while maintaining a secure environment: • Enhance/Upgrade WiFi System University wide for more coverage, including more density in residence hall BYOD network • Ensure bandwidth remains sufficient to meet demand • Implement 802.1x – smart switching where network equipment knows who the user is and attaches appropriate security posture to that person • Replace aging internal datacenter firewall hardware. *Assessment:* Create and work the 3-year network plan (Done/Not Done).	IDS	1-3
4.1.2 Design and implement new telecommunications system utilizing the cloud system to take advantage of leading-edge unified communications concepts for maximum flexibility (including emerged need to work remote) and long-term cost savings. *Assessment:* Determine whether the system and plan has been designed (Done/Not Done).	IDS	1-2

4.2 Improve and augment infrastructure systems

Activity	Responsible	Time (yrs.)

4.2.1 Leverage cloud services for flexibility, growth and continuity.
• When services are extremely complex.
  • Example Document Imaging
• For Business Continuity/ Disaster Recovery purposes
  • Example- when geo-redundancy is a requirement
• Application environment for both development and production
  • Example – Engage Portal
• Move authentication services to Office 365 for maximum flexibility and efficiency within Minnesota State System
 	
Assessments: Complete an annual evaluation of increased flexibility, added redundancy, and cost savings.
	IDS	1-3

4.2.2 Evaluate academic and business storage needs based on performance and capacity requirements. *Assessment:* Complete an annual evaluation by seeking client feedback related to speed, capacity, and whether security needs are being met.	IDS	1-2

Activity	Responsible	Time (yrs.)
4.2.3 Continue building out a Hyper Converged Infrastructure (HCI). Allows for the easy standing up of servers and services in a high-capacity virtual environment as needs come and go. This results in less data center energy consumption, reduces the labor-intensive work of installation and maintenance of stand-alone server hardware, and slows down the obsolescence of solutions. *Assessment:* Determine whether the virtual environments are meeting expectations of reduced cost and increased flexibility (yes/no).	IDS	1
4.2.4 Utilize mobile device management tools (MDM) to create a more efficient process to distribute and manage all mobile devices (laptops, tablets, phones). *Assessment:* Determine whether the number of automated scripts has been reduced, and if there has been a decrease in time needed to support devices.	IDS/DTUE	1-3
4.2.5 Focus on application data integration needs as tools and services emerge from NextGen. *Assessment:* Determine whether we are meeting the needs of the community in terms of getting data to them securely and in the format desired.	IDS	1-3

4.3 Enhance IT Security

Activity	Responsible	Time (yrs.)
4.3.1 Update the internal IT policy site: • Refresh documents to reflect new Minnesota state nomenclature • Update internal responsible parties for data ownership *Assessment:* Determine whether the templates have been refreshed, the content is more easily viewable, changes are self-tracking, and content is more easily publishable.	SEC	1-3
4.3.2 Assess and address top MinnState security initiatives. This is a partnership effort with SCSU, MNSU, NORM and the SO. • Finalize the internal security assessment tool and make it available to the entire system. • Take the assessment and review findings. • Establish a common reporting architecture for the system. *Assessment:* Determine whether all campuses within the Minnesota State system have been provided with a standardized framework to build a 2-3 year tactical roadmap for addressing security shortcomings.	SEC	1-3

4.3.3 Implement the Umbrella Domain Name Services (UDNS) filtering solution. • UDNS forwarders need to be deployed for the residence halls • The Mobile protection services built into the AnyConnect VPN client can help protect our users wherever they are in the world and not only when on campus. *Assessment*: Determine whether appliances and client have been deployed. Quantify the measurable amount of malware protected/detected before users come back to campus.	SEC	1
4.3.4 Align data governance practices with the system office processes to reduce overlap and increase efficiency of approvals. *Assessment:* Measure the number of places we store and enter data for the purposes of data and software governance. (Today, we duplicate all aspects of what gets submitted to the system office. Our goal is to start the process locally for ease of our users, but to automate the upload and approval at the system level.)	SEC	1-2

4.4 Improve budgeting and related processes

Activity	Responsible	Time (yrs.)
4.4.1 Develop sustainable funding model for information technology. *Assessment:* Determine whether a new budget model has been developed (Done/Not done).	ITS	1-3
4.4.2 Develop a process for updating the Business Continuity Plan. *Assessment:* Determine whether the process has been developed (Done /Not Done).	IDS	1