



Technology Master Plan

2023 - 2025

LAKE SUPERIOR COLLEGE

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Mission

Strategically design an entire technology-enhanced, quality experience in the way we teach, the way that we learn, and the way we interface with students. Promote a learning environment that is accessible, flexible, and user friendly. Overcome barriers and deliver the desired institutional transformation our educational community requires. Be intentional in our decision making and alignment of institutional goals and objectives.

Vision

Understand and communicate relevant technology solutions to help the institution make informed long-term choices to meet its strategic objectives. Produce an environment where the system adheres to the environment rather than people adhering to the system. Become a central hub for sharing and collaborating services with similar institutions. Deliver targeted or intentional innovation that allows us to scale up from being moderate to excellent.

Values

- Deliver quality IT services to the campus on time and on budget. Deliver better value for IT spending.
- Drive technology innovation to meet business needs. Be intentional in our decision making.
- Collaborate with business units to make data-driven decisions. Create opportunities.
- Encourage, inspire, and motivate employees to promote and create change, transformation, or evolution.
- Engage in inclusive, trust-based relationships focusing on collaboration and a common vision.
- Support and recognize accomplishments by each other.
- Establish trust and credibility throughout our institution.
- Motivate and inspire people to achieve greatness by setting clear goals and expectations.
- Our roles, responsibilities, and competencies must adapt. Develop staff and their potential.
- Embrace accountability and encourage growth through lessons learned.

Alignment

Technology will utilize and align with our institutional goals defined in our various guiding principles:

- Strategic Plan
- Master Academic Plan
- Campus or Departmental Work Plan
- Educause

Key Principles

- 1) **Sustainable technologies.** *Focus on the correct technology addressing the current need. rather the right technology. Technology as a commodity rather than an asset. Reevaluate technology solutions as they evolve and make strategic decisions to reposition as needed.*

- 2) **Cost Effective technologies.** *Successful implementation of technology should not always require significant expense. Identify the correct solution and determine if there are cost-effective methods to successfully implement. Implement expensive solutions where required.*
- 3) **Innovation and Continuous Improvement.** *Identify and implement ground breaking technologies or utilize existing systems for other means by thinking outside the box. Recognize start-up technologies that could elevate learning and differentiate us from others. Continuously review technologies ability to meet the requirements and standards of current audience.*
- 4) **Proactive Vision.** *Continually focus on the future of technology and what is to come, today's technology should already be addressed. Strategically position the institution to optimize our investments in technology for both today and what is to come. Overcome barriers and deliver the desired institutional transformation our educational community requires.*

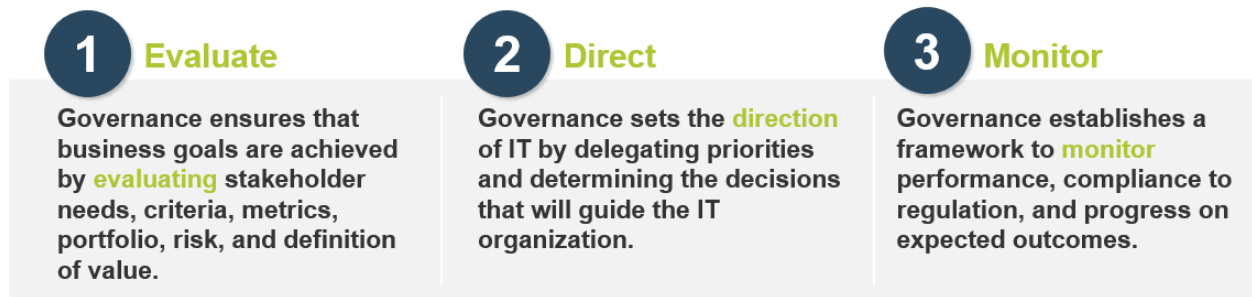
Guiding Factors

- [Educause Top IT Issues, Trends, and Technologies](#)
- [Educause Horizon Report](#)
- **Empower Students:** In the drive to improve student outcomes, be focused on individual students: their life circumstances and their entire academic journey. Leaders are relying on analytics and technology to make progress in retention, persistence, and other student outcomes.
- **Trusted Data:** Collecting, securing, integrating, organizing, standardizing, and safeguarding data and preparing the institution to use data meaningfully and ethically.
- **Modern Business Strategies:** Addressing today's funding challenges and preparing for tomorrow's more competitive ecosystem. With technology embedded into teaching and learning, research, and business operations, it must be embedded into the overall institutional strategy and business model as well.

Governance

Governance is performed both internally and externally to IT, with the intention of providing oversight to direct the institution in meeting goals. Governance is the most effective way to consistently direct IT in areas that provide the most value in producing or supporting business and academic outcomes.

Governance is performed in three ways:



Credit: Info-tech research group

Infrastructure

Infrastructure is the physical, tangible hardware used to interconnect our network, servers, data storage, communications, and operating devices used to send, receive, and manage the data transmitted across the enterprise. Technology Infrastructure supports our overall implementation, monitoring, and operations of our campus enterprise architecture. Align and control how we designate annual Infrastructure Technology funds to be financially sustainable and scalable to address changing demands. Provide infrastructure that promotes innovation and future proofs our environment for years to come.

Audience: Network Administrator, Data Center, System Administrator, CIO

Meeting: Bi-weekly

Reference Materials: Infrastructure and Enterprise Planning – Budget Definition; Data Center Analysis and Planning; Infrastructure and Enterprise Replacement List (5 year plan); Sustainability and Future Proofing IT Infrastructure, Microsoft Teams

Applications, Software, and System Management

As Lake Superior College expands its application and software technologies there is a need to inventory these systems as well as continuously review their applicability. In addition, we need a framework for identifying and implementing innovative solutions.

- 1) Application Inventory and ownership
- 2) Scheduled and Continuous review of applications, software, or systems
- 3) Innovative solutions

Audience: Technology, CIO

Meeting: Bi-weekly

Reference Materials: Technology Advisory Committee and Budget Definition; Classroom Data; Lab Stats; Microsoft Teams

Data Management

Effective data management is crucial for organizations to make informed decisions, improve operational efficiency, and ensure data security and privacy. Develop a comprehensive data management strategy to ensure the integrity, security, and privacy of organizational data.

- 1) Implement data governance frameworks and establish policies and procedures for data collection, storage, analysis, and sharing.

- 2) Leverage data analytics tools and techniques to derive actionable insights, support evidence-based decision-making, and drive continuous improvement across the organization.

Audience: Technology, CIO

Meeting: Bi-weekly

Reference Materials: Technology Advisory Committee and Budget Definition; Classroom Data; Lab Stats; Microsoft Teams

Security and Privacy

In an increasingly digital landscape, ensuring robust security and privacy measures is of paramount importance for organizations.

- 1) Strengthen the organization's cybersecurity posture by implementing multi-layered security measures, including firewalls, intrusion detection and prevention systems, and robust authentication mechanisms.
- 2) Conduct regular security assessments and penetration testing to identify vulnerabilities and proactively address security risks.
- 3) Foster a culture of security awareness and train staff on best practices for data protection, password management, and the responsible use of technology.

Audience: Technology, CIO

Meeting: Bi-weekly

Reference Materials: Technology Advisory Committee and Budget Definition; Classroom Data; Lab Stats; Microsoft Teams

Frontline Support Services

Establish expectations that influence the success of resolving support requests. It is critical our Support Technicians provide timely, quality, and correct resolutions to support requests. It is important our Support Technicians feel respected, take pride in their work, and are valued member of our campus community. Each Support Technician is expected to follow the operations, principles, and expectations set forth within this document. This will lead to positive improvements in our support service operations and improved satisfaction within our campus community. The frontline staff will continue to grow their portfolio to support student technology services and future educational demands.

Audience: Frontline Support Technicians, ITS II, CIO

Meeting: weekly

Reference Materials: Support Technicians Operational Practices; Technology Advisory Committee and Budget Definition; Classroom Data; Lab Stats; Microsoft Teams

Academic and Student Technologies

Academic Technology encompasses the design, development, utilization, management, and evaluation of processes and resources for teaching and learning. The goal is to align and control how we designate annual Technology funds to support academic technology initiatives. To develop an academic technology plan that is financially sustainable and scalable in addressing demands.

- 1) Classroom technologies, including campus equipment distribution and classroom support;
- 2) Learning resources and study area collections for faculty and student use;
- 3) Media development, defined as the systematic design and production of instructional materials;
- 4) Academic computing services supporting

Audience: Faculty, Staff, Students, CIO, IT Governance Team

Meeting: Monthly

Reference Materials: *Technology Advisory Committee and Budget Definition; Classroom Data; Lab Stats; Microsoft Teams; Educause*

3 Year Work Plan

YEAR 1

| THEME: Data Management and Process Automation | Year |
|---|------|
| CRM (e.g. Salesforce) | 2023 |
| Data Reporting (e.g. PowerBI) | 2023 |
| Business Process Automation (e.g. BP Logix) | 2023 |
| Communication Efficiency and Automation (e.g. Phone System, AI) | 2023 |
| Academic Computing Footprint | 2023 |

YEAR 2

| THEME: Security and Network | Year |
|--|------|
| Systems Management | 2024 |
| User and System Security | 2024 |
| Network Redesign (e.g. Segmentation, Wifi upgrades, Switch Upgrades) | 2024 |
| Classroom Infrastructure Upgrades | 2024 |
| Administrative ERP | 2024 |

YEAR 3

| THEME: Cloud Migrations | Year |
|-----------------------------------|------|
| Storage and Data | 2025 |
| System and Application Migration | 2025 |
| Virtualization and Cloud Upgrades | 2025 |
| Student ERP | 2025 |

Appendix

- *Infrastructure and Enterprise Planning – Budget Definition;*
- *Data Center Analysis and Planning;*
- *Infrastructure and Enterprise Replacement List (5 year plan);*
- *Support Technicians Operational Practices;*
- *Technology Advisory Committee and Budget Definition;*
- *Classroom Data;*
- *Lab Stats;*
- *Microsoft Teams*