2024-2026 Wheaton College Technology Plan

Wheaton College Strategy and Information Technology Priorities

Wheaton College stands at the confluence of tradition and innovation, consistently championing the merits of a Christian liberal arts education in an everchanging world. As we embark on this new three-year strategic journey, our commitment is twofold: to preserve the intrinsic values of our faith-based academic approach, and to harness the transformative power of Information Technology (IT) to enhance the educational experience. This strategy outlines how the initiatives and collaborations of Wheaton College's Academic and Institutional Technology (AIT) organization will support and elevate Wheaton College's educational objectives, ensuring that our students, faculty, staff and the larger community are equipped with the tools and systems to thrive in these challenging times.

AIT is committed to aligning its priorities with the larger institutional objectives and strategies as we strive to continually contribute meaningfully to the ongoing success of Wheaton College. In fact, information technology plays a critical role in addressing many of Wheaton College's strategic challenges in these austere times. By automating administrative processes, we can not only reduce manual labor but also enhance our student recruitment efforts. Our technology initiatives also support high-quality instruction, enable data-informed decision-making through analytics, and foster a vibrant digital ecosystem that encourages both online and in-person collaboration.

As technology continues to advance, AIT will strategically adopt innovative solutions. This includes opportunistically leveraging Generative AI and modernizing longstanding processes.

In an era where data breaches and cyber-attacks are increasingly common, the responsibility of AIT extends beyond facilitating administrative and academic activities to also safeguarding the integrity and confidentiality of sensitive data.

Preserving the Enduring Value of a Christian Liberal Arts Education

Wheaton College's in-person liberal arts education offers a unique set of benefits that contribute to a rich and transformative learning experience. Information Technology plays a pivotal role in amplifying this by enhancing teaching environments, promoting interdisciplinary collaboration, and providing broader access to resources.

The focal point of the rigorous, faith-based education at Wheaton College is the classroom environment. AIT plays a central role in equipping and supporting these classrooms, ensuring that faculty have the technological tools to enrich their instruction. At the same time, we take care to ensure that technology enhances rather than hinders the face-to-face interactions that are essential for an engaged and participatory learning experience. In 2022, AIT formed an Instructional Space Committee to guide

strategic investments in over 150 classrooms across the campus. Collaborating with faculty, facilities, the registrar, and other key stakeholders, the committee has transitioned away from outdated classrooms, prioritizing the creation of modern, collaborative learning environments. Additionally, AIT has moved to a more predictable and sustainable budgeting model for classroom upgrades, moving away from reliance on potential year-end surpluses. By proactively managing the classroom environment, AIT will help to continually enhance the quality of teaching and learning at the college for many years to come.

In 2022, Wheaton College undertook an academic reprioritization that better aligned its academic offerings to the needs of students. As part of that, the college initiated a new 4- year General Engineering degree offering a comprehensive engineering education within a Christian liberal arts framework. Over the coming years, AIT will collaborate closely with this program to ensure access to high computational power for simulations, data analysis, and CAD (Computer-Aided Design) applications. Additionally, we will facilitate the installation of specialized equipment and infrastructure for electronics and robotics, as well as discipline-specific software for modeling, simulation, and design. These technological advancements aim to create a robust and comprehensive educational experience, equipping students to meet future challenges in the engineering field.

Virtualizing software brings numerous advantages, including enhanced educational experiences, optimized resource utilization, and simplified administrative processes. To capitalize on these benefits, AIT recently launched "ThunderApps," a cloud-based platform that gives students, faculty, and staff access to Wheaton College's extensive software library, both on-campus and remotely. This innovation allows for greater flexibility by enabling remote access to software and lab resources, beyond the confines of a physical computer lab. As part of our ongoing commitment to technological advancement, AIT will further invest in virtualization technologies, including graphics processing unit (GPU) capabilities in virtual labs, thereby reducing reliance on user-specific device configurations and operating systems.

While Wheaton College primarily offers a residential, in-person undergraduate experience, many of our graduate programs are either fully online or have a hybrid format. AIT is dedicated to implementing and maintaining technology that is both robust and user-friendly to support the varied needs of instructors and students alike. To achieve this, we provide a range of technologies including videoconferencing tools, online chat, and various options for both synchronous and asynchronous communication. Our Academic and Scholarly Technology team assists faculty in deploying interactive quizzes, polls, and other formative assessments to enrich the learning experience. Looking ahead, we plan to further enhance dual-modality classroom environments to better serve our academic community.

In 2022 and 2023, AIT collaborated with the academic division to launch a new Learning Management System (LMS). This platform makes it easier for instructors to create, import, and organize various types of course content, such as syllabi, lectures, readings, and assignments. Designed with a user-friendly interface, the LMS is easy to navigate for both instructors and students. Moving forward, AIT will continue to collaborate with faculty to enhance the platform, focusing on improving accessibility standards, optimizing for mobile devices, creating more intuitive dashboards, and integrating AI capabilities.

In partnership with the Provost's Office, Deans, academic units, and key governance committees—including the Technology and Information Resources (TIR) faculty subcommittee and the Student Technology Advisory Committee —AIT is dedicated to closely collaborating with Wheaton College's faculty and students. Our collective aim is to deliver a consistently exceptional educational experience grounded in Christian liberal arts principles.

Facilitating Effective and Efficient Operations

Enrollment is crucial to the success of Wheaton College as it ensures a vibrant academic community and sustains the breadth and depth of diverse programs and courses the institution offers. A robust enrollment also reinforces the college's reputation and its ability to attract top-tier faculty and resources. In 2023, AIT collaborated with both undergraduate and graduate admissions to roll out a new Software-as-a-Service (SaaS) platform. This platform streamlines the entire student recruitment and admissions process, directly contributing to a noticeable increase in freshman enrollment for the fall of 2023. While the initial results are promising, there are areas for improvement. Specifically, the platform still needs to be better integrated with the financial aid and scholarship systems, as well as with the existing student records database. Additionally, we aim to enhance the platform's Customer Relationship Management (CRM) features to better target follow-up communications and broaden Wheaton College's outreach to potential students. Optimizations for supporting graduate admissions are also in the pipeline.

To capitalize on opportunities to enhance Wheaton College's operational efficiency, in 2023 AIT led an implementation of a Software as a Service (SaaS) platform for Human Resources and Finance, replacing antiquated on-premises systems that supported a multitude of manual processes. Continued efforts are essential to stabilize, optimize and fully realize the benefits of the new platform. While initial implementation has already reduced hardware and maintenance costs, ongoing efforts are crucial for stabilization and optimization of the new platform. As the campus community becomes more familiar with these systems and AIT gains further expertise, we anticipate additional automation and enhanced self-service features. Moreover, we plan to implement other modules including the performance and project management to streamline labor-intensive functions further.

In the years to come, AIT intends to transition additional key enterprise systems at Wheaton College to cloud-based platforms in a deliberate and thoughtful manner. Specifically, we will closely monitor advancements in student information systems as well as financial aid platforms. AIT, in collaboration with our [Administrative Applications Advisory Committee](#) (AAAC) and other college leadership, will make the move when we are confident that these newer systems can offer superior service to our campus community and when our stakeholders are prepared for the transition.

To assist the college in meeting its efficiency objectives, AIT will also reassess how to best align its workforce talent with present requirements, necessitating focused retooling and retraining of staff.

The Need for Better Analytics

Business intelligence (BI) is a crucial resource, enabling Wheaton College to make data-informed decisions, aligning resources and efforts with institutional goals. However, the college's current BI infrastructure is a patchwork of methods for data generation, reporting, and analysis, some of which are notably outdated. This has been further complicated by our recent migration to Software as a Service (SaaS) platforms, which has disrupted our existing data strategy. Acknowledging the urgency to modernize, AIT is actively collaborating with Institutional Research, data analysts, and other key stakeholders to reassess and revamp our data strategy.

The objective is to roll out a new, user-friendly BI platform that minimizes the need for specialized training while offering advanced capabilities like predictive modeling, machine learning, and statistical analysis. This new BI infrastructure will aim to ensure data accuracy, promote real-time analytics,

facilitate user collaboration, and remain cost-effective. This concerted effort will empower Wheaton College with the insights needed to adapt, innovate, and excel in fulfilling its educational mission.

Cybersecurity

While it's essential to support the college through various functionalities, AIT also prioritizes keeping the campus secure from cyber threats. Our comprehensive cybersecurity program includes key elements like Risk Assessment, Network Security, Endpoint Security, and Access Control. These measures safeguard everything from the campus network to individual devices, all while incorporating robust authentication methods and password policies. Data Protection is another focus area, emphasizing the secure encryption and storage of sensitive student and financial records. To build a security-aware culture, we offer Security Awareness Training and maintain an Incident Response Plan. We also conduct regular audits and monitoring, assess Vendor Risk Management, and ensure compliance with applicable laws like the Family Educational Rights and Privacy Act (FERPA). AIT continually leverages support and expertise from our cybersecurity partner, GreyCastle Security, to ensure Wheaton College has the most current, effective and robust cybersecurity practices while working to strengthen and enhance protocols.

In partnership with several on campus collaborators along with GreyCastle Security, we've recently convened high-level committees, including the Cybersecurity Advisory Team (CAT) and the Information Security Steering Committee (ISSC) to elevate the profile of cybersecurity issues and establish solid practices and guidelines. Moving forward, we'll collaborate with other campus stakeholders and peers at other academic institutions to maintain a secure campus environment.

Generative Artificial Intelligence (AI)

The year 2023 was a breakout year for Generative AI, with the explosive growth of tools such as ChatGPT and Bard. While AIT champions the use of these tools to enhance efficiency and effectiveness, we also recognize the technology's potential drawbacks and advocate for its responsible usage.

Over the years, there has been a nuanced relationship between technology and the Christian mission at Wheaton College. Although technology has proved invaluable for disseminating teachings and enhancing administrative efficiency, we maintain that it should never supplant the vital human interactions essential to faculty-student relationships, pastoral care, mentorship, and community building. While our faculty hold diverse opinions on the role of technology in academics, the college's Academic and Institutional Technology department concurs that any adopted technology must be in harmony with Wheaton College's core values and mission.

Generative AI is increasingly being employed by both students and faculty at Wheaton College for a range of academic and administrative purposes. It has aided AIT in resolving complex technical issues by providing relevant computer code and has also been effective in editing documents. Additionally, our new administrative systems are incorporating AI functionalities that promise to automate mundane tasks and offer predictive analytics to enhance student well-being. However, Generative AI raises concerns about academic integrity due to its capabilities for summarizing content and generating text. It also carries the risk of producing inaccurate or biased information. Consequently, AIT is committed to staying abreast of developments in this field, implementing beneficial solutions, and helping to formulate guidelines for the responsible use of AI across both academic and administrative settings.

Priorities

The following are our key priorities, organized by functional area:

Academics and Scholarship
- We've set up annual funding to update the technology in instructional spaces every five years. [1] Additionally, for each new space requiring technology, we will deactivate an older, obsolete space to ensure a stable count of well-maintained classrooms. To this end, we've established an [Instructional Spaces Committee](#) that is continuously evaluating our spaces, aligning them with the college's enrollment objectives and other key priorities.
- We will ensure that all learning spaces are flexible, streamlined, user-friendly, and designed for self-operation. We will shift focus to software solutions versus hardware to provide increased faculty and student flexibility in the classroom.
- The student feedback form will move to an online, cloud-based, one-touch solution. Faculty and students will have portal access and Deans, Department Chairs, and Office Coordinators will have dashboard access.
- We are committed to developing and supporting efficient approaches that not only enable an exceptional online education for the Graduate School but also ensure equal access to campus resources—a critical factor for the program's success. By leveraging existing campus technologies and building repeatable support structures, we aim to establish a scalable learning infrastructure. Additionally, offering high-quality instructional design for both credit-bearing and non-credit courses will further solidify the College's standing and reputation in the realm of Christian higher education.
- We will continue to expand the use of virtual software computer labs to reduce the expense and need for proprietary computer labs on campus and facilitate greater student flexibility by encouraging the use of each student's own computer. The student laptop requirement that went into effect in 2020 will assist with this.
- Working in partnership with the library, we will support faculty and students with digital scholarship endeavors as a strategic part of showcasing the excellent work that is being done at Wheaton College. [2]
- AIT will continue to upgrade the One-Button Studio facility as funds allow. The studio enables faculty and staff to independently operate green-screen video recording sessions that include visual aids for presentations and course use. This setup offers a professional video environment that is both user-friendly and superior to self-made alternatives, all without the need for specialized staff assistance.
- AIT will continue to collaborate with faculty to explore pedagogically sound applications for emerging technologies within the liberal arts setting. This includes areas such as computer-generated imagery, digital enhancements, virtual and augmented reality, digital humanities, artificial intelligence, and robotics, which are all gradually gaining traction in academia.
- We will work on enhancing MS Teams as our single platform for video conferencing, chat, and telephony. This platform will also facilitate large group presentations/streaming for up to 250 to 10,000 participants.
- AIT will maintain its collaboration with the Provost to offer WheatonX, a non-credit open education platform designed for lifelong learning. This platform serves as an introduction to the

---

[1] Industry best practice is to replace classroom technology every 4-5 years. Extending the time results in newer mobile devices not being able to connect to the displays.

[2] Digital scholarship is the use of digital evidence, methods of inquiry, research, publication, and preservation to achieve scholarly and research goals. Digital scholarship can encompass both scholarly communication using digital media and research on digital media. See: http://www.lib.washington.edu/digitalscholarship/about.

college for prospective students and allows faculty to share their expertise with the global church community. WheatonX also features a variety of "behind-the-scenes" courses, many of which are grant-funded.

- AIT is actively engaging with the Graduate School to develop technology and classroom enhancements that will facilitate the seamless delivery of hybrid classes, featuring both in-person and online synchronous learning, by Fall 2024. Our goal is to optimize the educational experience for both faculty and students.
- Committed to elevating the event experience on our highly "event-driven" campus, AIT's production team will proactively deliver top-tier support for hundreds of high-profile events within resource constraints. We will showcase excellence in audio, video, and lighting to create a consistently professional environment.
- Subject to available funding, AIT will lead transformative upgrades to Wheaton College's marquee event space, Edman Chapel, focusing on enhancing audio, video, and lighting. Collaborating closely with facilities, we will strategically reposition the audio, video, and lighting controls to the front of the house on the main floor, optimizing the narthex and auditorium's first floor in the process.
- Recognizing the significant effort required to adapt to new technologies, AIT will deliberately slow the rate of change to allow both our team and the broader community to master the recently implemented tools. Over the past two years, AIT has modernized our Learning Management Systems by transitioning from EduNext and Schoology to Canvas, upgraded our video streaming service from Ensemble to Panopto, and replaced our homegrown PHP Student Feedback Form with Qualtrics.

Infrastructure and Security
- Strengthening Wheaton College's cybersecurity shield is paramount. We will continue down the path of strengthening our human shield through improved and increased training efforts and explore ways to continually increase engagement with the community to strengthen our top cybersecurity asset…the ThunderSHIELD. We will increase focus on improving cybersecurity processes which will enhance both efficiency and defense capabilities. We anticipate a significant increase in the frequency as well as the ever evolving nature of cybersecurity threats moving forward. Consequently, we will stay laser focused on cybersecurity threat education and emerging technologies that will enable us to stay ahead of the curve to minimize risk. One example is eliminating local administrator access by deploying AdminByRequest which will eliminate our highest risk and reduce support burden through machine learning and workflow technologies.
- AIT will continue to ensure that the College's online data and resources are not only easily accessible but also securely guarded against emerging threats. To make cybersecurity seamless for end-users, we'll focus on simplifying compliance by prioritizing security policies, educational initiatives, and user engagement. As part of our proactive strategy, AIT will replace the existing Fortinac network access control system with a more user-friendly and efficient solution, thereby enhancing the end-user experience and minimizing the support demands on our team.
- Recognizing the essential role of the campus's wired and wireless network in the College's operations, AIT will actively manage and scale our network infrastructure to accommodate the growing number of devices, increased dependence on cloud services, and emerging IoT technologies. We will annually replace outdated networking equipment, both wired and wireless, as part of our commitment to maintaining robust connectivity. AIT will also invest in upgrading technology to support new protocols and will expand internet service annually to meet escalating bandwidth requirements.

- We will replace our end-of-life storage area network with a solid-state disk-based solution by Pure Storage. This will not only improve reliability and performance but will greatly enhance our disaster recovery capabilities through breach detection technologies and the ability to quickly restore our enterprise environment from air-gapped backups of our application and data storage environments.
- To capitalize on the security and efficiency benefits offered by cloud-based solutions, AIT will transition to end-to-end cloud services whenever feasible. By doing so, we aim to leverage the superior security measures provided by these vendors, which often exceed Wheaton College's in-house capabilities. This shift will not only allow us to adopt new cloud-hosted services but will also facilitate the migration of existing on-premise services to the cloud, thereby reducing our on-site infrastructure over time.
- Given that Wheaton College is both a beacon of Christian hope and a potential target for cyber threats, AIT continues to enhance its disaster recovery strategies. We will implement robust cloud-based backups, phase out legacy tape systems, and improve our Disaster Recovery as a Service (DRaaS) offerings. These steps are aimed at safeguarding the institution's key systems and ensuring swift recovery in case of emergencies.
- AIT will continue to play a crucial role in partnership with campus stakeholders in complying with the growing regulatory and legal requirements for properly securing information and technology resources. With assistance from our managed security service provider, Wheaton will achieve compliance with the Gramm-Leach-Bliley Act (GLBA) and NIST 800-171 to protect student financial data, Payment Card Industry Data Security Standards (PCI DSS) for credit card information, the California Consumer Privacy Act, the EU General Data Protection Regulation (GDPR), HIPAA for the new Center for Family and Relational Health, and NIST standards as required by the Office of the Comptroller of the Currency (OCC) for the Wheaton College Trust Company.
- AIT is committed to advancing faculty scholarship in the Natural Sciences Division and across other academic disciplines by actively supporting the College's high-performance computing (HPC) cluster. As we recognize the growing computational needs in social sciences, humanities, and the emerging Engineering program, AIT will take the lead in cross-campus partnerships to secure sustainable funding for this vital resource. As the existing HPC cluster approaches its end of life, AIT will explore innovative solutions, including leveraging cloud resources, to meet these evolving computational demands.

Enterprise Applications
- Enterprise and administrative applications at Wheaton College will continue to subscribe to the following design principles:1) cloud-based preferred; 2) user-centric interfaces; 3) Wheaton NetID authentication; 4) accessible to all users; 5) web-based; and 6) an architecture that values analytics, agility, and service focus.
- AIT serves as the initial consultation point for departments considering new technological solutions. We will assess business problems and consult on leveraging existing resources to meet departmental needs. If a new solution is required, AIT will guide the evaluation process to ensure compatibility with the College's existing technology ecosystem and timely value realization. AIT is committed to providing enterprise applications that not only support the core mission of the College but also offer secure, frictionless, and adaptable access to services and information.
- Having successfully deployed a commercial Identity and Access Management system, implemented an enterprise-class two-step authentication solution, and migrated 95% of our single sign-on enterprise applications to the Online Passport authentication solution, our focus is now on the future. We are currently enhancing our Identity and Access Management system to further secure Wheaton identities. Additionally, we are in the process of implementing Oracle Cloud

HCM for pending worker processing. Over the next two years, our primary aim will be to integrate the Identity and Access Management system seamlessly with Oracle Cloud HCM.

- Following the successful deployment of Oracle Cloud in the areas of Human Resources (HCM) and Finance (ERP), guided by the recommendations from the HESS Consortium and peer institutions, we were able to retire several outdated systems like Banner HR, Banner Finance, Unimarket, Affordable Care Act Reporting, PayCor, and Concur. Our next steps involve optimizing and extending the robust features offered by Oracle Cloud through additional integrations and enhancements.

- The second wave of the Oracle implementation will include Enterprise Performance Management (EPM). Once complete, we will be able to retire Cognos Planning Analytics (TM1).

- The final wave will of the Oracle implementation will include Student Information System (SIS), Student Accounts Receivables, Financial Aid, and Degree Auditing. Once complete, we will be able to retire Automic Application Manager, Evisions, Concur and Banner. The timing of this has yet to be determined.

- Recognizing that the Chapel attendance tracking system has reached the end of its lifecycle, we are actively prioritizing the search for a modern, streamlined solution. Leveraging the latest technologies, we aim to simplify processes and enhance functionality, ensuring the system remains robust and reliable for future use.

- Having established TouchNet Marketplace as a successful platform for electronic payments across 25 active storefronts, we are committed to its ongoing expansion. In the coming years, our focus will be on launching additional storefronts to further serve the College community and broaden our range of transactional activities.

- After successfully transitioning from Ellucian's CRM Recruit to the more robust Slate Admissions CRM, we've already enhanced the capabilities of our Admissions Office. The initial phase saw the core Slate product implemented and CRM Recruit retired. In a subsequent wave, we extended Slate's utility to departments like Athletics, the Conservatory of Music, Bridge, Aequitas, and the Wheaton Summer Institute. Moving forward, we are dedicated to further optimizing the Slate system to deliver an increasingly seamless, data-driven, and integrated admissions experience across all key departments.

- Recognizing the ubiquity and functionality of mobile phones as essentially portable computers, we are committed to adopting a "Mobile First" approach in our technology development. Our focus will be on creating responsive web applications and, where it makes sense, launching mobile apps to make accessing institutional tools easier and more efficient. This initiative will ensure that Wheaton College continues to meet the evolving needs of our community.

- AIT is committed to implementing an advanced data warehousing strategy that encompasses all of the College's various systems. We will focus on providing user-friendly reporting tools to enable administrators to make data-informed decisions, forecast outcomes, and set future strategies. The cornerstone of our plan is to deploy a multi-faceted reporting tool that aggregates data from a wide range of sources, empowering reporting managers to create custom reports that best serve their individual needs.

- AIT is leading the necessary change to digitize administrative processes, aiming to eliminate error-prone and inefficient paper-based workflows. We are scaling the deployment of OnBase, a sophisticated document and image management system, to streamline form processing and achieve seamless integration with our enterprise systems. This initiative is a key part of our ongoing commitment to operational excellence across the College.

- AIT is facilitating the transition from manual to automated class scheduling, enabling the Registrar to allocate more time to directly supporting students and faculty. To realize this transformation, our team is collaborating across campus to establish new space standards that will maximize the utilization of available rooms. This upgrade is designed to streamline administrative

efficiency and enhance academic support.

Support & Service
- Our team is committed to advancing IT Service Management strategies that seamlessly align with the institution's overarching mission. We are actively documenting repeatable processes to bolster service reliability, both at the desk and in the classroom, thereby elevating customer satisfaction. By employing a robust IT Service Management System, we aim to foster synergistic collaborations within AIT and throughout the broader Technology@Wheaton community.
- Our team is set to employ Problem Management and Root Cause Analysis, key aspects of Information Technology Infrastructure Library (ITIL) best practices, to scrutinize our existing infrastructure and address ongoing issues. By strategically utilizing available tools and data, we aim to pinpoint the root causes of challenges, allowing us to deploy targeted solutions that elevate both IT Support and service levels.
- To reduce support complexity and provide a common experience for our faculty, staff, and students we will standardize on the O365 platform for email, document and team collaboration, chat, video conferencing (Teams). This will also involve transitioning our alumni accounts to O365 as an email forwarding service, to reduce the security events that are created by the current Google Apps alumni system.
- AIT will focus on expanding and refining our virtual application and desktop services, enabling greater accessibility to crucial College technical resources for users, no matter their location or device. This approach also makes it possible to offer students cost-effective access to specialized software for short-term needs.
- Our team aims to cultivate a culture of technical curiosity across all departments, empowering individuals to explore and become more adept at using technology. This not only enhances efficiency but also contributes to the effective application of tech resources, just as with cybersecurity.
- AIT will continue to elevate the onboarding experience for new employees. From deploying optimized computer setups to offering targeted technology training, we're committed to providing regular reminders about resources available for questions and ongoing support.

Conclusion

The priorities outlined in this document may be ambitious, but, when achieved, will provide Wheaton College with an excellent technical infrastructure that is user-centric and aligned with best practices within the industry. These plans will be reviewed annually and adjusted as needed to remain relevant.