

Office of Information Technology (OIT)

Strategic Plan FY 2018 – 2022

Office of Information Technology - Vision, Mission, Pillars, and Values

Vision Statement

Boise State is a center for innovation, learning and research in the state of Idaho and the Northwest Region. The Office of Information Technology (“OIT”) is a key and strategic partner to drive and support these efforts.

Mission Statement

The Office of Information Technology supports innovation and advances education and research at Boise State by providing reliable and sustainable technology solutions to our university community.

In support of this mission, OIT will:

- Provide specific projects and actions that meet both University objectives and organizational needs.
- Create a 3-5 year high-level plan for technology that aligns with the vision and objectives of the University Strategic Plan.
- Address OIT organizational needs and deficiencies.

Our Values

- We listen to and respect students, staff, and faculty.
- We strive for operational excellence by providing efficient, sustainable, secure, and stable university operations through technology.
- We strive for exemplary customer service across all OIT departments.
- We strive to ensure the University information technology (IT) environment is accessible to all, and in particular to individuals with disabilities.
- We encourage creative and critical thinking in our solutions, practices, and operations.
- We are dedicated to a team-oriented environment, gathering varied perspectives, sharing knowledge, and building relationships.
- We leverage open communication and thoughtful business processes to be accountable in our interactions and work.

Our Pillars

In our quest to provide exemplary customer service and innovation in technology solutions and processes, we use pillars to guide and ground us:

- **Keep Score:** We measure our work, share those measurements, and fix what’s broken.
- **Free the Data:** Consistent with privacy, export control and other applicable laws, we make data available, accessible, and usable to our staff and our clientel.

- **Concept of One:** We align our IT services to reduce duplication of effort and services. *Do it once. Do it right. Use it everywhere.* We use one technology, not multiple, to do the same thing.
- **Concept of Zero:** Don't do it at all. Let someone bigger do it.
- **Stop Doing Stuff:** To do new technology - many times we need to stop doing old technology especially when it is inefficient, not widely used, or past reasonable support and maintenance lifecycles.
- **IT Rationalization:** We evaluate the proper sourcing of our technology. Looking first to the cloud, sometimes we build, we buy, or we outsource or partner to focus on value-added IT services. (See Concept of One) We will use technical and business requirements as the basis for choosing new products and new directions. Sustainability and Future-Proofing will be key criteria in evaluating sourcing.
- **Future-Proofing our Technology:** We will select technology products, services or systems that will not need to be significantly updated and are sustainable as technology advances.
- **Amazonification:** Keep adding, keep improving. Our web and mobile experience needs to be a continuous cycle of improvement using a service-oriented architecture. Think iterative development – agile sprint methodology. This applies not just to our development but to our operations, services, and processes in support of all customers – students, faculty, and staff.
- What we do is a **Team Sport**. We stand on the shoulders of others. We learn from others. We borrow from others. We don't do everything ourselves.
- **Value the Human:** The human factor is important to the use of technology. We will utilize proactive design, development, and implementation to ensure access for all.
- **Change is Inevitable:** Technology constantly changes and creates opportunities.
- **Cyber Security:** We implement applicable State of Idaho and Federal cybersecurity guidance to provide tools necessary to perform State, Federal and commercial research.
- **Systems Integration:** We will integrate siloed systems to create operational efficiencies.

Introduction

Information Technology (“IT”) plays an ever-increasing role in the teaching, learning, and research in higher education today. Technology is pervasive both on campus and in the world and is no longer just the domain of the IT department. This is seen daily as University students, faculty, staff and alumni use technology in innovative and creative ways.

OIT is committed to the continuous evolution and improvement of our solutions, services and support for the University community. The OIT Strategic Plan is meant to serve as a blueprint, to be reviewed regularly to ensure alignment of technology initiatives with the broader University Mission and Strategic Plan. The goals identified serve as longer lasting strategies which are achieved through the implementation of supporting objectives and action items, projects, and initiatives. These action items will be accomplished, adapted, and modified as

changes occur to the University strategic priorities, and are meant to reflect the progress of the University as well as technology. Our objectives and action items are guided by the cascading levels of The University Strategic Plan, management directives and regulations. Action items are intended to be a 1 - 5 year view of current identified projects and initiatives to support the University and OIT vision, mission, pillars, values, and objectives.

One of the key action items over the next year will be the creation and updating of roadmaps or blueprints for core services that OIT provides to the University. These strategies will be done in collaboration with the Information Technology Planning/Priority Council ("ITPC"), the Information Technology Governance Council ("ITGC"), Colleges, and Departments as appropriate. Many of the actions for OIT will be the result of the roadmaps and blueprints created. This will allow us to create a funding model and strategy for the next 10 years based on these roadmaps and blueprints framed by growth of the University and the vision, mission, pillars and values of OIT and the University. It is imperative that University Executive Leadership is aware and understands the current and potential investments the University will need to make to sustain and grow IT.

The OIT Strategic Plan is divided into these objectives:

- **Infrastructure** - The University will build and maintain a sound, advanced, secure, and productive physical IT infrastructure capable of supporting broad and effective use by students, faculty, and staff throughout the institution, including remote University members.
- **Customer Support** - The University will develop and maintain a robust, multi-tiered staff support environment that meets the diverse levels and specific needs of the University community so that community members can effectively use the University's technology resources. We need to reinvent our academic and business practices to improve service and efficiency.
- **Learning and Teaching** - The University will cultivate excellent teaching and learning using appropriate and innovative technology.
- **System Development and Support** - The University will develop, integrate, and maintain IT resources and acquire, develop and deploy information systems, applications, and tools that enable the effective and efficient function of the University as an enterprise.
- **Quality Through Organizational Initiatives** - OIT will plan and implement specific organizational initiatives to improve quality and effectiveness.
- **Evolve IT Governance** - The University will develop advisory and communication structures to ensure the continued involvement of the University community in the implementation of strategic recommendations and actions presented in this plan.

Infrastructure

The University will build and maintain a sound, advanced, secure, and productive physical information technology infrastructure capable of supporting broad and effective use by students, faculty, and staff throughout the institution, including remote university members.

Compute and Storage

- Expand and support the University compute (servers) and storage capacity to meet campus and research needs for performance, capacity, access, and security.

Networking

- Expand and support the University network to meet campus and research needs for capacity, access, and security.
- Build appropriate research network infrastructure as needed supporting 10G and eventually 40G and 100G as research needs grow.

Cloud Services

- Work with key stakeholders to develop a strategy and approach to the deployment and support of cloud-based computing, including infrastructure and hosted third-party application solutions.

Hyperconverged Infrastructure

- Migrate to a software-centric architecture that tightly integrates compute, storage, networking and virtualization resources into a software defined data center that can exist in multiple locations (both private and public), providing redundancy, scalability, performance, flexibility, sustainability, and cost effectiveness.

Keep Technology and Systems Current and Build Operational Resilience

- Strive to keep systems current by applying patches, updates and new versions in a timely manner.
- Design and build our systems to expect component failures with redundant infrastructure.

Research Cyberinfrastructure

- Update and support execution of the Cyberinfrastructure plan for Research, revising the plan as necessary on an annual basis.
- Develop IT resources that: (1) enable and advance discovery; and (2) support innovation, collaboration, and entrepreneurship by faculty in research.
- Provide storage and virtual servers on demand to University researchers and faculty.
- Implement State of Idaho and Federal cyber security guidelines (e.g., Executive Order No. 2017-02, National Institute of Standards and Technology 800-171) to provide tools necessary to perform State, Federal, and commercial research.

Integrated Identity Management System

- Design and implement a unified/federated University-wide identity management framework, which allows quick and efficient moves/adds/changes within the University, as well as the ability to grant limited secure access to partners outside the University.

Infrastructure Strategic Plan

- Develop the University's Infrastructure Strategic Plan for the next 3-5 years and beyond, in collaboration with key administrative areas, departments and Colleges, with review and approval by ITPC and ITGC. The plan will include the blueprint to evolve OIT Operations into a contemporary software development and information technology organization.
- Implement and execute the plan as prioritized for funding.
- Annually assess and evaluate progress on the plan, with review by ITPC and ITGC.

Customer Support

The University will develop and maintain a robust, multi-tiered staff support environment that meets the diverse levels and specific needs of the University community so that community members can effectively use the University's technology resources and the University can reinvent our academic and business practices to improve service and efficiency.

Build a Community of Support

- Review past support needs, surveys of students and employees, and interview deans and chairs to identify how OIT can focus support.
- Look to the University's Prioritization Plan to identify campus needs based on University priorities. Centralize support services where possible.

Cyber Security

- Design and implement security awareness and education programs across campus starting with Securing the Human in FY 2017. Provide technical support and guidance for achieving reasonable attainment of cybersecurity compliance requirements.

Web Accessibility

- Establish a dedicated Web Accessibility Team to provide governance, remediation, training and support to ensure all of the University's public-facing websites are accessible.
- Expand accessibility support for student-facing content.
- Facilitate discussions with University stakeholders to create updated policies on procurement and access to new instructional content.

Automate Support

- Automate support of our context technologies and provide quality, personal, core technologies and services to the University.
- Services in support of printing, conference rooms, and event management will be expanded.

- Migrate each of the computers in our public pedagogical computer system to a virtualized operating system (VDI).

Campus-Wide Support Model

- Develop and communicate a well-articulated model defining the roles that users of technology, departmentally-based IT support providers, and OIT play in collaboratively supporting the University's ecosystem, in order to better leverage resources across the University.
- Develop and implement an enterprise-based technology training approach.

Teaching and Learning

The University will cultivate excellent teaching and learning using appropriate and innovative technology.

Classroom Technology

- Working with faculty, facilities, registrar and others, review the state of classrooms and develop a holistic plan to address the issues of instructional need, capacity, scheduling, presentation quality, etc., in order to that ensure learning spaces are relevant, presentable, and strategic. Work with stakeholders to implement the plan, as appropriate.
- Bring all lecture classrooms to the current university standards for technology/media.

Blackboard/LMS

- Create a robust environment in support of Blackboard by improving tools and processes, engaging user communities, and growing the expertise of Blackboard Support Staff.
- Evaluate current LMS, and determine and implement future direction.

Media Management

- Collaborate with the Technology for Learning and Teaching Group ("TLTG") and the Center for Teaching and Learning ("CTL") to develop and implement strategies to address the University's needs for equipment, infrastructure, support, and appropriate spaces for enhanced digital content (video, audio, graphics, etc.), including but not limited to video streaming, video capture and editing, and media storage.

Emerging Technology for Teaching and Learning

- Work with LTS, the IDEA shop, and TLTG to define and explore support models, professional development, and discipline-specific strategies for the discovery, organization, presentation, and research of emerging technologies for teaching and learning.

Learning Technology Solutions Strategic Plan

- Develop the University's Learning Technology Solutions Strategic Plan in collaboration with CTL, TLTG, the IDEA Shop, faculty, and students for the next 3-5 years and beyond, for review, funding, and approval by ITPC, the Dean's Council, and ITGC.

- Implement and execute the Learning Technology Solutions Strategic Plan as identified and funded.
- Submit an annual assessment and evaluation of progress to ITPC, Dean's Council, and ITGC.

System Development and Support

The University will develop and maintain IT resources and acquire, develop and deploy information systems, applications, and tools that enable the effective and efficient function of the University as an enterprise.

Evolve the Enterprise, Web, and Mobile Application Environment

- Expand the use of SaaS options where appropriate, under a University Application architecture framework that includes myBoiseState, PeopleSoft, web, and mobile applications.
- Ensure that myBoiseState is the key delivery method for the integration/mashup of online services for web and mobile.
- Upgrade myBoiseState web and mobile with additional functionality and features with sustainable technology framework.
- Plan and implement a continuous release cycle based on Boise State's agile methodology.

Enterprise System Vision and Strategy Roadmap

- Develop the University's Enterprise System Strategic Plan in collaboration with ITPC and key administrative areas for the next 3-7 years and beyond, with review for approval and funding recommendations by ITPC and ITGC.
- Implement the Enterprise System Strategic Plan as identified.
- Submit an annual assessment and evaluation of progress to the ITPC and ITGC.

Project Management Office (PMO)

- Evolve to meet the growing needs for project management at the University, including the adoption and optimization of TeamDynamix.
- Implement and optimize PMO and OIT using the TeamDynamix project management system.

Security and Policy

- Work with University stakeholders to deploy appropriate policies and effective enforcement to secure the integrity of IT resources, safeguard institutional information, protect the privacy of University community members, and ensure the continuity of the institution's IT resources and information repositories in the face of possible disaster scenarios.
- Update the University's Security Services roadmap in collaboration with key administrative areas for the next 3-5 years and beyond, with emphasis on the Top 5 CIS Critical Security Controls, as outlined in the State Cybersecurity Executive Order.

- Use a campus-wide security assessment to evaluate and measure the maturity of our information security programs on an annual basis, in order to identify activities to protect IT systems and minimize cyber security risks for the University.
- Produce an annual report on progress against the plan, which details regulations and requirements necessary for compliance, and submit to ITGC for review/acceptance.

Data Warehouse and Business Intelligence Strategic Plan

- Develop the University's Data Warehouse and Business Intelligence roadmap/blueprint, in collaboration with key administrative and academic areas, for the next 3-5 years and beyond.
- Implement a full Data Warehouse encompassing data from all core enterprise systems (Student, HR, Finance, Research, LMS, Hobson's, Budgeting, etc.).
- Align Data Governance with current Institutional Research ("IR") efforts.
- Expand membership and scope of current data governance model.

Quality through Organizational Initiatives

OIT will plan and implement specific organizational initiatives to improve quality and effectiveness.

- Develop a multi-tiered career progression path with a commitment to cultivating employee diversity for technical positions with clearly defined criteria for achieving all levels including salary bands.
 - Update on an annual basis.
 - Evaluate and categorize existing staff as appropriate.
 - Find funding to reflect tier and appropriate salary banding while striving to be cost effective and FTE neutral.
- Enhance IT Staff Development
 - Establish an internal leadership academy for junior leaders.
 - Establish a mentorship program for senior leaders.
 - Establish a budget for the internal training program.
 - Develop a cross training plan and the flexibility to move staff between teams for selected projects, in order to allow for temporary detail assignments for specified periods of time.
- Engage with governance structures to develop a Durable Funding Strategy for Technology at the University; determine which aspects of IT are best delivered on a pay-per-use model, what the cost and charge mechanisms should be, and which aspects should simply be a part of centrally funded infrastructure.
 - Replace Phone and Network Chargeback Model
- Develop XaaS - Infrastructure as a Service (IaaS), Platform as a Service (Paas) and Software as a Service (SaaS) - Services Contracts with the State of Idaho
- In partnership with facility planning, develop a long term space plan that co-locates OIT staff to meet the needs of an evolving efficient technology organization.
 - Build a tower if a funding source can be found.

- Identify short term succession plans for each current director.
- Review and revise Risk Management, Business Continuity, and Disaster Recovery Efforts.

Evolve IT Governance

The University will develop advisory and communication structures to: i) ensure continued involvement of the University community in the implementation of strategic recommendations and actions presented in this plan ii) support the ongoing operation of IT resources delivered to the University community; and iii) improve the flow of information between the OIT and the University community in all its forms.

- Propose an evolving governance model to meet the changing needs of the University and better balance strategic alignment, organizational planning, budget influence and sponsored decision making. Charters for the governance model will be reviewed and updated as appropriate by the following governance and advising groups:
 - ITGC
 - ITPC
 - TLTG
 - Research Cyberinfrastructure Advisory Council (“RCAC”).
- Create a strategic roadmap for Enterprise Systems (including BI), Infrastructure, Learning Technology Solutions, Cyber Security, Research Cyberinfrastructure, and Customer Support.
- Create a blueprint for new and additional funding needs for the next 10 years based on the Strategic Plans for Enterprise Systems, Infrastructure, Learning and Teaching, Security, Customer Support and the growth of the University.
- Secure funding as appropriate.
- Create feedback loops to help identify where we can achieve improved value to our faculty, students, and staff from within our existing services portfolio.