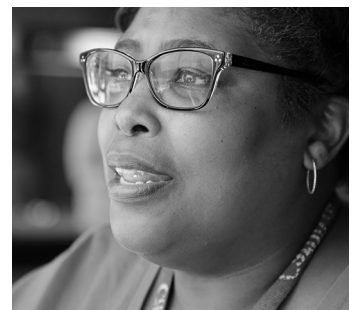
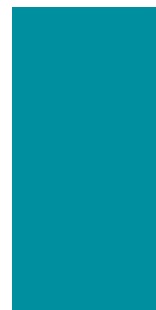


2017–2020

# ITS STRATEGIC PLAN

*Updated: February 2019*







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## LETTER OF INTRODUCTION

The mission of George Mason University is to be an “innovative and inclusive academic community committed to creating a more just, free, and prosperous world.” The Mason Strategic Plan provides a framework and goals for serving students, our community, and the broader global society over the next decade.

Our Information Technology Services Strategic Plan is dedicated to leading Mason’s digital transformation over the next four years in support of the Mason Strategic Plan and the Mason IDEA: Innovation, Diversity, Entrepreneurship, and Accessibility. In partnership with groups throughout the university, we are in the process of transforming Mason to maximize the use of information technology to deliver services to students, the community, and the world.

Information is central to our mission. As data stewards, we work collaboratively across Mason to ensure data access, security, accuracy, and timeliness.

Student success is key to our success. We are renovating ITS to focus on service delivery, project and portfolio management, and ease of use for our customers. Embracing self-service, automation, and business process redesign will help our Mason associates increase the efficiency and effectiveness of their interactions with students, faculty, and staff.

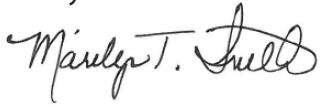
We want to help the Mason community understand the value ITS adds by increasing fiscal and operational transparency. We involve the community in IT decision-making through the Information

Technology Governance Group, the Faculty Senate Technology Policy Committee, the Technology Leadership Council, and other groups.

To put this plan together, we've consulted with university leaders and many Mason community members within and external to ITS. We will monitor progress against this ITS Strategic Plan, which, in addition to Mason's annual goals, will feed our ITS operational plan each year. Please enjoy reading and feel free to contact me with questions or concerns.

Sincerely,

Marilyn T. Smith

A handwritten signature in black ink, appearing to read "Marilyn T. Smith", with a stylized flourish at the end.

Vice President of Information Technology and CIO



## WHO WE ARE

ITS is Mason's central IT organization. We provide IT resources, systems, services, and tools to the university community. Six groups comprise ITS, employing about 380 full-time, part-time, and wage employees (including more than 130 students).

## OUR VISION *(Revised: February 2019)*

To inspire life changing learning and success for our students and for the entire Mason community by providing superior technology and collaborative solutions.

## OUR MISSION *(Revised: February 2019)*

Collaboratively implement and support technology that enriches teaching and learning, research, and university operations.

## OUR PRINCIPLES *(Revised: February 2019)*

1. Engage with our customers and partners to align resources. *(Revised)*
2. Incorporate lifecycle planning to develop sustainable services.
3. Value our people by encouraging their professional growth, promoting well-being, and recognizing excellence.
4. Ensure that information technology assets are protected and monitored, to reduce university risk.
5. Deliver solutions that catalyze student success.
6. Respond with agility to changing technology needs. *(New)*



## OUR GROUPS

**ACADEMIC STRATEGIES** supports the university community by providing the infrastructure for video communications and by creating media content for teaching, learning, and research.

**ENTERPRISE APPLICATIONS** plans, implements, and maintains integrated central and distributed information systems and associated databases that support the business needs of the university. Support is also provided for data marts for Business Intelligence (BI) reporting that support official and end-user reporting requirements, and decentralized systems that support budgeting, sponsored programs activity, imaging, web content management, mobile applications, web development and other university applications.

**ENTERPRISE INFRASTRUCTURE SERVICES** establishes standard architecture for infrastructure and creates technology roadmaps in alignment with the ITS strategic plan. It enables data networking, real-time communication, and broadcast video distribution. It also deploys and maintains reliable IT infrastructure, products and services for all campuses including physical and virtual enterprise servers as well as physical and virtual enterprise storage.

**ENTERPRISE SERVICE DELIVERY** provides strategic leadership and day-to-day oversight of functional areas including communication technologies, software licensing, desktop support, and help desk services. ESD uses project management, analytical, and process improvement knowledge and skills to guide and support ITS enterprise-level initiatives and processes. The staff work towards integrating ITS processes and use appropriate technologies to support processes that provide effective interfaces between ITS and Mason departments.

**IT SECURITY** provides leadership for university policy development and works in partnership with units and individuals across Mason to formulate policies, assess and actively manage security risks, and establish strategic direction. The group is responsible for setting and maintaining standards and practices to manage the confidentiality, integrity, and availability of university assets and data.

**LEARNING SUPPORT SERVICES** provides an array of resources to faculty, students, and staff that contribute to the innovative teaching and learning environment of the university. LSS provides support for instructional technologies including Blackboard, the campus learning management system. It offers faculty consultations to discuss best practices for teaching online, hybrid and face-to-face courses, as well as strategies for incorporating technology into the curriculum.



# THE STRATEGIC PLAN

## PURPOSE

The ITS 2017–2020 Strategic Plan offers a framework for technology planning at Mason. This plan is designed to align with the Mason IDEA and strategic goals of the university, and articulates the role of technology within higher education and the Mason IT environment. The plan presents our strategic goals, how these goals will be achieved, and how these achievements will benefit the Mason community.

## PLANNING PROCESS AND GOVERNANCE

The Information Technology Governance Group (ITGG), formed in October 2014, is charged with reviewing and prioritizing ITS projects, as well as providing strategic insight to IT leadership. The ITGG is comprised of Mason leaders who represent the colleges, academic, and administrative business units (e.g., University Life, Registrar, Admissions, Human Resources, and Budget and Finance). This group of leaders provided context and guidance to the strategic plan.

The strategic planning process began in May 2015, led by a core team of ITS members. After an initial self-assessment and a series of internal workshops, ITS created Mission, Vision, Values, and Principles statements, comprising a basic framework that defines the direction, behaviors, and collaborative efforts of the entire ITS organization. Once this first step was completed, ITS launched an intensive data-gathering phase involving interviews and focus groups with more than 120 faculty, staff, and students. Stakeholders were asked about current and anticipated challenges and how information technology and ITS could most effectively address them. The collected data from these sessions, coupled with requirements developed by ITS leadership and guided by input from the ITGG, serve as the backbone of this plan and are reflected in the goals and objectives outlined here.

The following themes emerged from the stakeholder interviews:

- Improved access to data to better support business decisions
- Improved information access, security, and compliance
- Enhancement of the technology services environment
- Support for research
- Support for teaching and learning
- Improvement of operational effectiveness and efficiencies

Additional data gathered during the assessment helped ITS identify other stakeholder interests including:

- Increased automation and integration
- Expanded and/or more precise functionality of employed technologies and systems
- Improved communication
- Centralizing services, systems, and support

## **2019 UPDATE & ALIGNMENT WITH THE PRESIDENT'S GOALS**

In the fall of 2018, ITS gathered a committee, comprised of staff in various ITS groups who volunteered their time, to revisit the 2017-2020 ITS Strategic Plan and assess our progress to-date. The committee was charged with reviewing the organization's mission, vision, and principles to make necessary changes that reflect the maturity of ITS. Upon completion, the committee shifted focus to review the ITS goals to ensure they align with the updates to the top-level goals in the Mason Strategic Plan.



## OUR STRATEGIC GOALS

Goals I through III are focused on direct ITS support of the university's strategic initiatives and commitments, while Goals IV through VII are intended to strengthen the capability of ITS to deliver efficient and effective solutions that will support the university's needs into the next decade and beyond. Examples of perceived needs and suggested priorities elicited during stakeholder interviews are noted below each goal's description.

### GOAL I

#### ADOPT CREATIVE NEW SOLUTIONS THAT ADVANCE TEACHING AND LEARNING

##### **Representative Accomplishments to Date:**

- Supported the Wiley partnership through implementation and integration with Wiley information systems
- Implemented the registration system for the Online Virginia Network
- Co-led the Student Experience Redesign initiative with academic partners
- Created a technology classroom 'sandbox' to host new academic technologies
- Supported the implementation of a Customer Relationship Management (CRM) tool for undergraduate and graduate admissions
- Migrated Blackboard from a managed hosting environment to Blackboard SaaS (Software as a Service), a cloud-based service, for a refreshed interface and mobile-friendly experience for faculty and students
- Transitioned Mason to the Common Application to increase Mason's visibility and encourage a seamless process for applicants

**Planned Future Initiatives:**

- Implement integrations between Mason systems and NVCC in support of the Advance Program
- Conduct a survey of Faculty satisfaction with the Learning Management System (LMS) and academic support structure
- Continue enhancements in support of the Online Virginia Network
- Work with the facilities division to coordinate classroom layout and furniture designs with IT and Audiovisual systems
- Support implementation of a Customer Relationship Management (CRM) tool for the student lifecycle
- Implement Faculty Activity and Collaboration Tool (FACT) to assist in the uniform creation and secure storage, collaboration, and submission of data related to the professional life cycle of a faculty member



## GOAL II

## SUPPORT ROBUST AND VERSATILE ADMINISTRATIVE SYSTEMS AND PROMOTE DATA-INFORMED DECISION-MAKING

**Representative Accomplishments to Date:**

- Completed a study of Ellucian Banner and suite applications to discover gaps in functionality and improve efficiency
- Upgraded to MicroStrategy for reporting services, migrated all existing reports from Discoverer, and retired Discoverer
- Established a Data Governance Council to build a data governance model
- Built a robust Business Intelligence program to support self-service reporting and predictive/prescriptive analytics
- Partnered with university academic and administrative leaders to identify and meet their data needs
- With the Office of Communications and Marketing, redesigned Mason's core web assets in cooperation with Mason units and schools to create a unified web presence using a common architecture
- Completed upgrade of Mason's Ellucian Banner system to the latest release, Banner 9 (XE), utilizing enhancements inherent in the latest release and maintaining compliance with Ellucian's upgrade release schedule
- Supported the implementation of a data analytics practice

**Planned Future Initiatives:**

- Facilitate the creation of a data governance model
- Upgrade Banner Self-Service

- Partner with Enrollment Management to design and implement a student lifecycle Customer Relationship Management (CRM) tool
- Utilize output from Huron engagement to select a university budget system
- Rollout Business Intelligence (BI) self-service

## GOAL III

### SUPPORT RESEARCH AT MASON, SUPPORTING R1 STATUS

#### Representative Accomplishments to Date:

- Upgraded network connections between Mason's campuses to enable very high speed data transfers between computing and data resources
- Conducted evaluation of Mason's preparedness for research involving Controlled Unclassified Information (CUI) and commenced a project to create an environment to host CUI research
- Partnered with the VP of Research to create a plan to provide central technical support for research

#### Planned Future Initiatives:

- Work with the university's research community and the Office of Research to develop a research cyberinfrastructure plan
- Partner with the Office of Research and sister organizations in other institutions to explore the creation of advanced networks of research instruments and services that enhance the Commonwealth's research competitiveness
- Team with the Office of Sponsored Programs to provide technology support for administrative operations

## GOAL IV

### PROTECT MASON'S INFORMATION RESOURCES, BALANCING SECURITY AND ACCESS

#### Representative Accomplishments to Date:

- Developed a comprehensive IT Security roadmap for the university

- Implemented a new firewall with enhanced security features
- Implemented Two-Factor Authentication (2FA) for Virtual Private Network (VPN) access and all applications using Central Authentication Service (CAS) including Banner, Patriot Web, and the Travel System
- Replaced Mason's Security Information and Event Management (SIEM) tool with Splunk
- Strengthened WordPress server security and plug-in management
- Assisted Fiscal Services to achieve Payment Card Industry (PCI) compliance and established roles and procedures for this annual process

#### **Planned Future Initiatives:**

- Expand governance, risk, and compliance programs to all university servers
- Continue to identify, classify, and implement best practices to serve critical applications
- Continue to build the Security Awareness program to provide information to help employees recognize and respond appropriately to security concerns
- Update and strengthen the university's IT policies and procedures to meet the challenges of today's rapidly changing threat environment



#### **Representative Accomplishments to Date:**

- Completed annual upgrades of technology in University Registrar Classrooms and network equipment in academic and residential buildings
- Replaced the Storage Area Network (SAN) for increased storage bandwidth and process efficiency
- Upgraded Mason's virtual computing lab (VCL)

#### **Planned Future Initiatives:**

- Grow availability, capacity, and reliability of IT resources
- Design and implement processes and procedures to evaluate opportunities to use cloud-based offerings first when sourcing systems and services
- Improve automation, modularity, efficiency, and resilience of the Aquia Data Center
- Align ITS Continuity of Operations plan with the university's needs and priorities
- Stay abreast of technology developments and opportunities to optimize Mason's IT infrastructure

- Create roadmaps for services and service environments
- Develop processes to support effective transition of new technology into production, and to retire legacy systems and technology

## GOAL VI

### ENHANCE OPERATIONAL EFFICIENCY AND EFFECTIVENESS, INCREASING THE EASE OF DOING BUSINESS AND REDUCING COST

#### **Representative Accomplishments to Date:**

- Streamlined and simplified the process of connecting to the wireless network
- Conducted an analysis of the cost of ITS services
- Implemented a new IT Service Management Tool with enhanced workflows and self-service
- Launched OneDrive for Business as a cloud storage and file sharing solution
- Reduced use of paper forms and improved security of student transactions in the Registrar and Financial offices with the implementation of Dynamic Forms
- Improved ability of units to collaborate through the rollout of Webex Meeting Center and Skype for Business
- Enhanced Desktop Management system to provide greater security, ability to update operating systems and applications, and delegation of management tools to departmental IT staffs

#### **Planned Future Initiatives:**

- Investigate rate structures and chargeback models that will better support the university's IT needs
- Build a customer-friendly catalog of ITS services, with new self-service and automation options, and expanded access to services
- Streamline and automate workflows, consolidate resources, and establish/adopt technology standards and architecture that promote efficient, resilient, and sustainable services
- Expand the use of Virtual Desktop Technologies to improve management, security, and accessibility to resources
- Enhance self-service support by incorporating Artificial Intelligence technologies
- Develop a comprehensive and sustainable inventory of software licenses in use at Mason, and processes to support and fund licensing

## GOAL VII

### STRENGTHEN THE ORGANIZATION, POSITIONING ITS TO SUPPORT EVOLVING ROLES AND TO ADDRESS EMERGING CHALLENGES

#### **Representative Accomplishments to Date:**

- Created the ITS Leadership Development Team and instituted the ITS Management Essentials Program
- Transitioned Patriot Tech to Barnes and Noble for an improved customer experience
- Implemented organizational changes to support the rapid, continuing growth and increasing demands of the university and to work together to transform ITS into an agile, customer-focused, collaborative, and service-driven organization
- Developed a new intake process – the ITS Solution Request Process – to support university partners in requesting ITS' help in developing and implementing their technology solutions

#### **Planned Future Initiatives:**

- Promote "One ITS" with consistent policies and procedures, a common intake system, and a robust knowledge management system
- Create a forward thinking organizational design plan that anticipates future strategic staffing and training needs
- Strengthen business analysis capabilities to help Mason's business units identify requirements and solutions that can transform their processes
- Explore new avenues and opportunities for staff recruitment, retention, and development, and cross train ITS staff to increase their knowledge of services offered to provide better service to our clients
- Build capability to support global endeavors such as Mason Korea
- Foster recognition of ITS as an organization that learns from other business units and offers creative solutions



# NEXT STEPS

The ITS Strategic Plan will serve as guidance for annual ITS operating plans, in which more specific and targeted objectives will be defined based on annual budgets and current priorities jointly determined by ITS and the ITGG. Metrics will be developed to track progress on this strategic plan. The objectives that are successfully achieved each year, and the resulting progress towards top-level goals stated in the Mason Strategic Plan, will be documented in the ITS Annual Report.

