Virginia Tech
Invent the Future

Virginia Polytechnic Institute and State University

Vice President for Administration

Information Technology Strategic Plan

2014 – 2019

Virginia Polytechnic Institute and State University

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Introduction

As our division continues to grow and develop, technology is becoming an increasingly important component in the operations of each department. If used and implemented effectively, technology allows every employee to continue performing at the highest level of efficiency. While no employee's work can be replaced by any piece of technology, offering the best tools we can often enables and improves the level of service to all of our customers.

However, technology can hinder operations when not implemented in an effective and organized manner. This document outlines the strategy to be utilized for the procurement, installation, application, and maintenance of technology through the division. In addition, it ensures all related activities align with the established strategic plans of the university, division, and Information Technology for Administrative Services.

Sherwood G. Wilson, Ph.D.
Vice President for Administration

I am pleased to offer this Information Technology (IT) strategic plan for years 2014 – 2019 to all supported departments. This long term strategic plan will guide the operations of this department and the applications of technology within the division. Through the highly collaborative nature of this plan's development, a new level of excitement has been spurred within the department. Our staff are passionate about maintaining the highest level of service and leading the division through a holistic approach to technology implementation and use. This passion will continue to grow as we continue to develop to better align with the business needs of supported departments.

As always, your feedback and comments are invited in the spirit of continuous improvement and innovation. It is also important to note, that the feedback and guidance from our various supported departments and department heads was instrumental in the creation of this plan.

Malcolm W. Beckett, D.B.A.
Director, Information Technology for Administrative Services

Executive Summary

Information Technology for Administrative Services is a department still in the early stages of development, but supporting a wide variety of administrative and public safety departments of Virginia Tech. This plan serves as a guiding document for the next phase of development. Input was obtained from a wide variety of stakeholders, including supported departments, employees of the department, and senior management. Based on this research, this plan was developed to guide the development and implementation of technology within the Vice President for Administration's division, provide the highest possible levels of service, and ensure the technology is driven by the business needs of the departments.

Background

Information Technology for Administrative Services (ITAS) has long since had a tradition of striving to provide excellent support for computing and technical needs for Virginia Tech's Vice President for Administration's division and administrative services. From its humble origins as small departmental Information Technology group within the Office of Transportation to now a unified division. ITAS strives to provide the most effective and efficient IT solutions to support the division and the greater university. ITAS has seen continued growth in knowledgeable staff dedicated to empowering users to accomplish extraordinary things.

During this process, the group has been commonly referred by many names – IT4AS, VPAS IT and now ITAS. Additionally, ITAS has spent much of its existence in disparate locations throughout campus.

Today, centralized in one location, Building 270J, ITAS remains dedicated to providing paramount support to Business Services, Facilities, Office of Emergency Management, Environmental Health and Safety, Virginia Tech Police Department and Vice President of Administration in the following areas:
- Desktop Computing Support
- Enterprise Systems Administration and Maintenance
- Enterprise Infrastructure Administration and Maintenance
- Hardware and Software Procurement
- Management of university computing equipment
- Security and Data Management of digital information
- End users training and resources

ITAS embodies the university motto, *Ut Prosim* (That I May Serve), now and into the future.

Methodology

This strategic plan was developed using a mixed methods approach; including both goals based and issues based methodologies. This was a highly collaborative process involving feedback and input from numerous sources. This included facilitated planning sessions, survey research, analysis of existing metrics, and a needs assessment.

The goals based approach was used to define the mission, vision, and values of the organization. These served as the foundation for the established goals and ensured all activities aligned with the mission and vision of the department. The goals were further refined into specific objectives supporting the mission and vision.

Further planning was conducted using the issues based approach. This approach assisted in identifying gaps and deficiencies from the specific. Further refinement was accomplished using the identified issues, leading to a comprehensive document guiding the activities and development of the department while addressing known issues and aligning with the strategic vision of the department.

Alignment to University and Division Goals

This document and all associated plans have been made in alignment to the strategic plans of both the Virginia Tech and Administrative Services division. Specifically, this plan addresses the challenges identified in the university strategic plan: "The needs and challenges of a data-driven society" and "Organizational efficiency and flexibility". As demonstrated in this document, the ITAS planning responds to the challenges through enhancing innovation in the networked university and encouraging critical thinking, creativity, and developing new strategies for meeting the ever changing needs of the university community.

As mentioned, ITAS' strategic plan also directly compliments and supports the 2012 Administrative Services strategic plan. This is done by providing the tools necessary to support the administrative and physical operations functions of the university. This includes systems allow day-to-day operations such as those of facilities, but also the critical public safety functions residing within the division. By supporting and enabling these functions, the division is better equipped to meet the challenges identified in the division and university strategic plans.

IT Mission Statement

Empower and support administrative services to operate efficiently and effectively by providing consistent, high quality, and innovative solutions.

IT Vision Statement

Leading the university in collaborative solutions through the use of effective, efficient, and dynamic technology.

Core Values

The core values of the department represent the individual values of each team member within the organization. These clear and universally agreed upon values are agreed upon by members of the department, and serve and the foundation for this plan and guiding principles for all activities undertaken by the department. They are proudly and prominently displayed as a constant reminder of the principles and standards to which each individual is held.

Integrity: Value and honor the trust granted upon the individual employees and the department, while holding ourselves to the highest ethical standards.

Leadership: Regardless of position, all department employees lead through action and guidance.

Accountability: As individuals and a department, responsible for addressing and resolving any issues to the highest levels of integrity in a timely manner and being accountable for those actions.

Service: Continuously demonstrating an eagerness to serve the university community, all supported departments and individuals.

Equality: Providing the same high quality service to all supported departments and individuals.

Empowerment: Provide the tools necessary to empower individuals and departments to meet and exceed division goals through the use of effective technology.

Quality: Provide dependable and reliable support and services through all products and services provided.

Strategic Goals

The strategic goals of this plan were identified through the planning process in collaboration with both internal and external stakeholders. These goals are reflective of the desired outcomes after completion of this period. In addition, the strategic goals help best determine the allocation of resources and activities within the department.

1. Be prepared to provide continuity of operations in the event of critical system failure, disaster, or major incident affecting the university community and division.

2. Leverage existing knowledge and systems available to the university community for higher levels of interoperability and efficient operations.

3. Develop, offer, and support business intelligence tools to support department planning and collaboration.

4. Communicate effectively with stakeholders both inside and outside the department and division.

5. Operate as a financially viable and sustainable department within the division, and ensure technology in supported departments remains sustainable.

6. Provide the highest levels of effective customer service and user experience to the business tools offered and supported within the division.

7. Develop and support an information technology governance model to empower departments through the use technology, while protecting university data and resources.

8. Ensure a safe and secure computing environment exists which protects the individuals, departments, and user data entrusted to the department and division.

Strategic Objectives

Each strategic goal has been further refined into specific objectives or initiatives. These objectives serve as specific milestones relating to each goal. The ultimate outcome of each goal is dependent on the success of failure of the specific objectives.

Strategic Goal 1: Continuity of Operations.
Be prepared to provide continuity of operations in the event of critical system failure, disaster, or major incident affecting the university community and division.

Objective 1.1
Identify and capture the design and configurations for all supported and maintained information systems.

Objective 1.2
Conduct risk management planning outlining support and mitigation requirements for all supported and maintained information systems.

Objective 1.3
Conduct backup capacity planning for all servers and information systems hosted by the department.

Objective 1.4
Identify and conduct usability and life assessments of all hardware supporting critical systems.

Objective 1.5
Identify and implement backup system meeting requirements of the department and allowing for adequate future expansion.

Objective 1.6
Identify system and operational dependencies with other Virginia Tech departments.

Objective 1.7
Conduct a benchmarking study of similar universities organizations of similar configuration and their handling continuity of operations planning.

Strategic Goal 2: Leverage Existing Knowledge and Resources.
Leverage existing knowledge and systems available to the university community for higher levels of interoperability and efficient operations.

Objective 2.1
Develop an understanding of business objectives and workflows of both Central IT and Administrative Services, and evaluate internal processes to better align and compliment.

Objective 2.1
Develop and implement a trust relationship between domains operated within the division and central university services to provide interoperability division and centrally operated information systems.

Objective 2.2
Align development of business intelligence system with cloud based central services offerings to prevent duplication of efforts and most effectively utilize resources.

Objective 2.3
Identify opportunities that further promote the Active Directory trust relationship between Virginia Tech Central Information Technology and Information Technology for Administrative Services.

Objective 2.4
Compare and contrast the information technology portfolio offerings promoted by Information Technology for Administrative Service to those that exist for the entire university.

Objective 2.5
Create a portfolio of all ITAS technology offerings and their descriptions to better explain offerings to stakeholders.

Objective 2.6
Design an Administrative Service Information Technology Knowledgebase from existing ticket systems, documentation, and other resources within and outside of the department.

Objective 2.7
Develop an information systems classification system for evaluating potential risk and redundancy in portfolio offerings, hardware systems and operational procedures.

Objective 2.8
Perform an inventory of existing knowledge and skills currently available within the department.

Strategic Goal 3: Business Intelligence Tools.
Develop, offer, and support business intelligence tools to support department planning and collaboration.

Objective 3.1
Develop and propose a business plan for the use of business intelligence within the division including business objectives identified by senior management, stakeholder requirements, resource availability, and system capabilities.

Objective 3.2
Establish a business intelligence governance committee to develop a comprehensive governance model and guiding document and establish a cycle to regularly review and update.

Objective 3.3
Identify potential existing sources of business intelligence metrics from sources both internal and external to the division.

Objective 3.4
Implement and offer a division wide business intelligence system.

Objective 3.5
Develop and offer administrative services a balance scorecard page or dashboard based on division and senior management needs.

Strategic Goal 4: Effective Communication.
Communicate effectively with stakeholders both inside and outside the department and division.

Objective 4.1
Develop and implement a communications plan addressing internal and external communications needs and practices, while providing a consistent means of internal and external communication.

Objective 4.2
Increase internal awareness and education through the use of training and meetings.

Objective 4.3
Redesign the IT web presence in alignment with the mission and vision of the department and division.

Objective 4.4
Develop customer portal offering information for supported departments, self service activities, and transparency into information systems operations.

Objective 4.5
Develop a mechanism for notifying customers of regular and emergency maintenance, as well as routine incidents.

Objective 4.6
Establish a common set of metrics in the form of questionnaires to determine growth and changes to perceptions over time.

Objective 4.7
Establish a consistent method of communication internally and with external customers that has the same look, feel, and process.

Strategic Goal 5: Financial Sustainability.
Operate as a financially viable and sustainable department within the division, and ensure technology in supported departments remains sustainable

Objective 5.1
Implement lifecycle planning for infrastructure currently in production and used throughout the division.

Objective 5.2
Assemble an accurate fiscal analysis of all incoming and outgoing expenditures for ITAS.

Objective 5.3
Develop a balance scorecard for ITAS with key performance indicators.

Objective 5.4
Identify opportunities that could yield possibilities for decreasing operating cost and overhead.

Objective 5.5
Identify solutions for decreasing equipment cost for supported Administrative Services departments.

Objective 5.6
Develop and offer a standardized portfolio of offerings to provide enhanced service and allow more efficient projection of costs.

Strategic Goal 6: Customer Experience.
Provide the highest levels of effective customer service and user experience to the business tools offered and supported within the division.

Objective 6.1
Develop and routinely update standardized hardware configurations to streamline procurement and support.

Objective 6.2
Enhance user's desktop computing experience through existing network resources such as refinement of roaming profile configuration and folder redirection.

Objective 6.3
Develop and offer a comprehensive training plan for all employees supported by ITAS to allow for better understanding and utilization of computer resources we provide.

Objective 6.4
In the spirit of continuous improvement, consult with key stakeholders from various supported departments that we support to provide feedback and suggestion on improvement

Objective 6.5
Collaborate with key Administrative Services units, to create self-service training resources on data storage and resources.

Strategic Goal 7: Information Technology Governance.
Develop and support an information technology governance model to empower departments through the use technology, while protecting university data and resources.

Objective 7.1
Develop a data classification model for determining security levels of information for information handled through ITAS information systems in collaboration with Records Management.

Objective 7.2
In collaboration with other departments, become active in consulting and review of all IT procurements throughout the division.

Strategic Goal 8: Secure Computing Environment.
Ensure a safe and secure computing environment exists which protects the individuals, departments, and user data entrusted to the department and division.

Objective 8.1
Establish centralized logging, monitoring, and alerting for department servers and resources.

Objective 8.2
Deploy a managed Antivirus system for all clients and all platforms.

Objective 8.3
Develop and document a default firewall policy, as well as institute a change management process for any modifications.

Objective 8.4
Deploy a system that allows for regular security scans and testing from both internal and external sites.

Objective 8.5
Identify and implement solutions for all supported departments that meets all applicable information assurance standards and legislative requirements.