

Division of Information Technology
Operational Plan for FY2022 – FY2023
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Pillar I: Innovation in Teaching and Learning

With partners within and external to the university, we focus on the intersection of innovation, pedagogy, and technology to ensure that Virginia Tech can achieve its vision, mission, and goals for undergraduate and graduate education in Blacksburg, Roanoke, the Greater Washington, D.C. Metropolitan Area, and beyond.

Priorities:

- A. Scale online undergraduate, graduate, and professional programs through instructional design, cohort-based training, assessment, and innovation and adoption of emerging technologies.
 - B. Develop data-informed learning and teaching tools and practices that integrate existing institutional data and new sources of learning data to help faculty, departments, and colleges understand and improve student learning outcomes.
 - C. Provide technology and support resources focused on lifelong learning and inquiry, consistent with our global land grant mission.
 - D. Facilitate mobile strategies for teaching and learning and substantially increase appropriate use of the cloud for experiential learning, content delivery, and collaboration.
- **Priority A :** [Improve Online Program Support](#)
 - **Priority B:** [Data Analytics Phase 2](#)
 - **Priority D:** [Computer Labs of the Future](#)

Pillar II: Advancing Research and Discovery

We strive to advance scholarship and increase competitiveness in innovation and research at Virginia Tech by providing access to advanced cyberinfrastructure for a broad set of Virginia Tech researchers.

Priorities:

- A. Establish a sustainable business model for shared advanced cyberinfrastructure that leverages a cost-center model, central and unit-level investment, and a coordinated approach to high-performance computing across the university.
- B. Facilitate appropriate cloud-based and on-premises compliance-based and collaborative data sharing and computing environments that are scalable, adaptive, and agile.

- C. Advance the ability of Virginia Tech researchers to easily leverage scalable and secure public and on-premises cloud resources for computing, storage, and collaboration.

Priority A:

- [Develop and publish a multi-year funding and investment priority roadmap](#)
- [Establish and maintain full life-cycle roadmaps and management plans](#)

Priority B:

- [Create systems for the development and hosting of computing portals](#)
- [Develop an Inclusive Research Cloud and Microservices Infrastructure Strategy](#)

Priority C:

- [Develop New partnerships with Institutes, Centers, and Departments](#)
- [Expand Current Research Computing Support to Include Protected/Sensitive Data Sources \(NIH/HIPAA/CUI/etc.\)](#)
- [Develop and Deliver a Cloud-based, and Easily-accessible and Usable Storage and Computing Environment](#)

Pillar III: Leveraging Technology for Outreach

We work with partners to leverage technology and apply our knowledge and expertise for outreach beyond the university in support of technology-related economic development and educational efforts in the Commonwealth of Virginia communities-and in the wider region.

Priorities:

- A. Enhance and expand the Virginia Cyber Range to increase scale, expand access, and extend functionality in service to K-12, community college, and university educators, advancing cybersecurity education for the Commonwealth and the Nation.
- B. In partnership with local governments and other external partners, identify and advance one or more “smart city” or similar test beds or pilot projects to advance research and applications.
- C. Explore and pursue opportunities to expand community and regional broadband infrastructure to support university initiatives in the greater Washington DC metropolitan area, Roanoke, New River Valley, and statewide to promote research, education, and economic development.

D. Formalize the Division of IT K-12 STEM outreach initiative into a cohesive, focused program that effectively engages regional K-12 students and enhances engagement by division employees.

- **Priority A:** [Expand US Cyber Range to a Wider Audience](#)
- **Priority B:** [Smart City Test Beds and/or Pilot Projects](#)
- **Priority C:** [Broadband](#)

Pillar IV: Enhancing Organizational Excellence

We strive to promote and enhance organizational excellence across the university through services and technologies that advance data-informed decision-making, enterprise effectiveness, and innovation.

Priorities:

- A. Advance the university's use and aspirations for data-informed decision-making by providing aggregation of data through data lake models, tools and services for analytics and visualization, enhanced data governance, and role-based access while ensuring appropriate privacy, security, and compliance.
- B. Foster new and enhance existing partnerships across the university to provide effective solutions that best serve Virginia Tech's students, faculty, staff and other stakeholders and to ensure that enterprise services, projects, and plans are agile, responsive, and promote organizational excellence.
- C. Work with the Division of Research and Innovation to evolve the university's research administration systems, including Summit, through a common roadmap and collaborative deployment that reduces barriers for researchers and administrators and scales with the university's growing research enterprise. We strive to promote and enhance organizational excellence across the university through services and technologies that advance data-informed decision-making, enterprise effectiveness, and organizational innovation.
- D. Partner with others at the university and beyond to explore innovative "smart campus" capabilities for sustainability, safety, and efficiency, and institutionalize and scale capabilities that provide significant value.
- E. Align enterprise applications to meet evolving constituent expectations for mobile-enabled solutions and promote innovation in user experience.
- F. Enable timely, accurate, streamlined access to data and IT Resources to all members of the university community.
- G. Expand the use of Robotic Processing Automation (RPA) tools and technologies.

Priority A:

- [Advance Data-Informed Decision Making through Data Lake Models, and Tools and Services](#)
- [Data Analytics Community of Practice](#)

Priority B:

- [NI&S Business Model Transformation](#)

Priority C:

- [Summit Agreements](#)
- [Export Control Support](#)

Priority E: [Pilot Evaluation of Ellucian Experience](#)

Priority F:

- [Create an Enterprise Authentication Hub](#)
- [Create an Enterprise Identity Governance and Administration Service](#)
- [Modernize Password and Authentication; Upgrade Login](#)

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Priority G: [Expand the Use of Robotic Process Automation \(RPA\) tools and technology](#)

Pillar V - Differentiating the VT Experience

We strive to provide a technology experience for the university community and stakeholders that is consistent, robust, and exceeds expectations.

Priorities:

- A. Strive for a robust mobile experience, leveraging a unified approach to user engagement to provide access to University IT services.

- B. Explore, plan, and provide the communications and collaboration platforms for the next decade, which includes how we communicate and collaborate by voice, video, messaging, and data sharing.
 - C. Strive for a consistent experience across all Virginia Tech locations, especially Blacksburg, Roanoke, and the Greater Washington, D.C. Metropolitan Area, including for access to university services, local connectivity, connectivity between locations, and connectivity to the Internet and research and education networks.
 - D. Ensure accessibility to provide the Virginia Tech technology experience to all members of the university community.
 - E. In partnership with the Virginia Tech community, work to safeguard the privacy of their data and ensure transparency in how their data is used and shared.
- **Priority A: [Implement a Unified Endpoint Management \(UEM\) System](#)**
 - **Priority B: [Citizens Broadband Radio Service](#)**
 - **Priority D: [Accessibility](#)**

People: Investing in and Enabling our Workforce

We will foster a culture of employee engagement committed to attracting, retaining, and developing skilled IT talent by:

- A. Creating an inclusive culture that promotes and values diversity, equity, and inclusion
- B. Maintaining effective recognition programs for exceptional contribution
- C. Providing a welcoming, safe, and accessible work environment for all employees
- D. Creating clear pathways for career development and advancement opportunities
- E. Strengthening the capabilities of our organization through effective performance management practices
- F. Being flexible to offer options that support a high quality work life balance
- G. Cultivating trusting relationships that enable collaboration and innovation.

- [IT Connect Program](#)
- [Diversity Strategic Plan](#)
- [Internship Program \(IT LEAP\)](#)

Processes: Investing in Operational Excellence

We embrace a culture of continuous improvement, striving for excellence in everything we do, to deliver services that are responsive to the university's needs and nimble by committing to these transformational principles:

- Collaborating to leverage our collective expertise
- Identifying and eliminating barriers, unnecessary workflows and duplicative and/or redundant effort, processes, and steps
- Using best practices to deliver our services
- Working in partnership with stakeholders to ensure our work is aligned with Virginia Tech strategic priorities
- Leveraging technology to simplify and scale processes
- Deploying foremost organizational change management principles to navigate new systems, processes, and structures.

Technology: Investing in Capable, Resilient, and Secure Infrastructure

Our strategic technology goals focus on the four strategic technology areas of Mobile, Cloud, Connected, and Secure.

- Mobile:* We strive to enable mobile connectivity for our students and faculty across enterprise functions through a consistent mobile strategy.
- Cloud:* We strive to enable secure, cost effective use of cloud technologies and services through an enterprise cloud strategy, architecture, and best practices. We work to prepare our students to succeed in a cloud-centric workplace.
- Connected:* We work to enable global, seamless connectivity for our students, faculty and staff, devices, and all buildings and locations.
- Secure:* We work to ensure the appropriate security of our users, systems, and data. We strive to safeguard data privacy for our students and employees.

Cloud: [Develop Baseline Configuration for Cloud Service Providers](#)