Division of Information Technolgy Top 40 Wins by IT Strategic Theme for FY2025

Enable Global Impact in Teaching, Research and Outreach	Modernize Administrative Applications	Improve the IT Customer Experience	Improve Capabilities to Use, Manage and Protect Data	Strengthen IT and Data Governance	Core Operational Work
Strengthened VT's leadership in AI innovation by helping faculty, staff, and students integrate cutting-edge AI into their work, driving discoveries that benefit the broader community and beyond using a new AI LLMs as a Service to make powerful generative AI tools available to all its researchers securely, easily, and without added cost.	**Reduced cost and maintenance by consolidating the stand-alone wage timekeeping functionality into VT's existing Enterprise Resource Planning (ERP) solution.** The TimeClock Plus system was eliminated and Banner Time Entry for wage employee hours tracking was implemented.	**Enabled more targeted and effective communication with families of incoming students** by providing parent contact data for First-Time-in-College (FTIC) students to CampusESP, the university's new parent engagement platform.	**Significantly increased VT's proactive system and data security capabilities** through a distributed rollout of Microsoft Defender for Endpoint (MDE). Since the start of 2025, MDE has **auto-remediated or alerted IT staff about 9 high-risk threats , 57 medium-risk threats, 437 low-severity events**, and 885 informational events.	**Tied IT Governance more strongly to University governance, project prioritzation, budget and funding processes, and IT procurement** by updating the IT Governance framework to provide more timely and focused advice and recommendations, creating a new project process and lifecycle, and updating IT procurement processes.	**Created a more robust, secure, and efficient research computing environment** by consolidating infrastructure into five purpose-built HPC clusters. This reorganization empowers the VT community to tackle diverse scientific challenges, from AI and large-scale simulations to biomedical discovery and defense-related research, all with greater computational speed and confidence.
Expanded meaningful, place-based experiential learning opportunities to all undergraduates by building and deploying a **Bridge Experience Program** solution that is used to follow students throughout their experiential learning endeavor. Canvas-based dashboards are provided for program leadership to track and visualize the data.	**Improved resiliancy of emergency phone service in case of cloud service interruptions** by deploying the Zoom Phone Local Survivability service to provide basic phone functionality, including 911 calls, in case the Zoom cloud service is unreachable.	**Streamlined the provisioning of services for employees and departments** by simplifying the telecomunications business model. A collaboration with the budget office resulted in predictable annual charges for departments instead of thousands of individual financial transactions.	**Improved visibility into and monitoring of critcal systems** by deploying a new ServiceNow Agent Collector to over 400 servers and consolidating log processing, filtering, and routing, including a shift to ingestion of logs from a broader range of sources to increase flexibility and scalability.	**Accelerated Virginia Tech's IT modernization efforts** by developing an IT strategic plan for the entire university in partnership with faculty, student, and staff stakeholders. The plan establishes goals and strategies to enable teaching, research, outreach, and operations with the support of technology.	**Supported public safety and operational needs for the Metallica concert at Lane Stadium** by providing custom telecommunications infrastructure and services (network and telephony) to Athletics and LiveNation.
Virginia Cyber Range hosted nine Capture the Flag events at the local, state, and national level, including the Virginia Collegiate Championship; two teacher camps to prepare K12 teacerhs to teach cybersecurity courses; and two Virginia educational conferences.	**Enabled a cost avoidance of $960,000 per year** under the new Google licensing policy by decreasing storage within VT Google Workspace from 6.5 PB to 0.9 PB.	**Provided a more comprehensive and consistent level of support for users and streamline routing escalation processes** by merging three regional IT help desks and DC Area support queues into a unified system that is now integrated with the Division's 24x7x365 4Help service.	**Ensured consistent evaluation of vendor system security** by developing and publishing a new **IT Vendor Risk Assessment Standard** to assist in protecting the confidentiality, integrity, and availability of information important to the university's mission.	**Enhanced the success probability for high priority projects** by creating an IT Project Management Office to provide proper support for significant IT projects across the institution as well as guidance for other kinds of IT projects.	**Enhanced the reliability and security of all VT Alerts channels** by replacing the primary VT Alerts application server and upgrading the primary and secondary servers for the VT Alerts system that serves 73 buildings and Academic Building One in Alexandria.

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Improved the academic course scheduling process through implemention of CourseLeaf's CLSS software. IT facilitated integration with Banner through a data bridge, enabling seamless transfer of course and section information. The new system now supports comprehensive user role management for staff and faculty across all VT course scheduling.	**Prepared the institution for conversations about application rationalization and reduction of technical debt** by creating guiding principles around application development/selection to reduce customization and align business processes to industry standards.	**Simplified internet access for the University community while reducing administrative overhead and lowering support/operational costs** by launching VT Open WiFi and eliminating credential requirements in certain cases.	**Enhanced Virginia Tech's cybersecurity posture** by leading two tabletop cybersecurity drills - one around the OmniSOC (34 attendees) and another around the Payment Card Industry (14 attendees).	**Identified future IT policy enhancements to ensure they are up-to-date, comprehensive, compliant with relevant regulations, and aligned with the university's strategic goals** by conducting a comprehensive review of existing IT policies, standards, and guidelines with an eye on simplfying and clarifying IT policies across the institution.	**Implemented a regional network in the Washington DC Metro Area** that provides for a more consistent VT user experience for that region while also providing additional service redundancy to that region, including duplication of certain services so that the DC Metro area can continue to function even if connectivity to the Blacksburg campus is lost.
Reduced costs and improved Cyber Range reliability by rebuilding backend infrastructure, updating Squid proxy environment (used to isolate student cyber range environments from the open internet) with new Amazon Web Service (AWS) instance types.	**Enabled real-time campaign performance monitoring, supported data-driven decisions, and enhanced transparency for stakeholders** by developing and implementing an interactive dashboard to track key performance indicators for **o**nline giving.	**Reduced departmental administrative burden around on/off boarding of adjunct faculty** by developing new identity processes to carry over adjunct accounts from one semester to the next even though adjuncts are not designated as employees between semesters.	**Enhanced visibility into IT security system risk assessments** by updating the inventory of system risk classifications, completing risk assessments on all high risk systems, and creating a new dashboard to provide university leadership insight into unit inventory compliance status.		**Standardized financial processes and accountability across the division** by consolidating and aligning finance and business teams while also increasing staffing in those areas.
Significantly enhanced the university's capacity for advanced research/teaching and empowered faculty and students to explore complex data, simulations, and designs in unprecedented detail and realism by expanding the Immersa Deck to provide a cutting-edge, highly immersive 3D visualization environment to provide expanded space, higher resolution, and advanced projection and tracking technologies.	**Enhanced security and reduced customization and maintenance complexity** by transitioning to baseline Banner functionality for managing direct deposit. The security is enhanced through additional logging of change notifications to help detect potentially fraudulent activity.	**Began shifting the culture within the Division of IT** by restructuring the Division's operating areas and hiring new leadership for Network Infrastructure & Services; Enterprise Solutions & Enabling Technology; Security & Identity; Advanced Research Computing; and IT Governance, Planning, and Strategy.	**Improved compliance with ongoing security awareness training requirements from 6% to over 85%** by centralizing and simplifying the security awareness training (both first-time and refresher) and proviiding a dashboard that provides university leadership insight into awareness training compliance status.		**Enhanced crime deterrence and strengthened the protection of the safety and property of the Virginia Tech community** by deploying 217 security cameras in support of departmental initiatives and completing 258 video preservation requests.

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Enhanced the transfer credit evaluation process by expanding the use of CollegeSource tools to enable automated matching of courses, faculty evaluation workflows, and reflection of those decisions in degree audits and Banner records.	**Eliminated customization and streamlined and standardized invoice processing** by transitioning the HokieMart (Jaggaer) invoice integration from the custom process to the Ethos Integration platform.	**Reinstated in-person, walk up support options for the community** that had been paused during COVID.	**Ensured continued aherence to IT security best practices** by condulting 29 scheduled penetration tests at the request of departments and 64 unannounced penetration tests of other critical systems exposed to the internet.		**Created significant financial savings for the Division of IT** by migrating over 300 linux servers from Red Hat Enterprise Linux to an open source enterprise grade operating system with minimal disruption and no loss of functionality.
Empowered VT researchers to make discoveries faster, collaborate more broadly, and keep VT at the forefront of research and innovation by providing researchers, faculty, and students access to powerful tools to advance AI, analyze complex scientific problems, and innovate across disciplines through the deployment of the new Falcon GPU cluster.	**Reduced the number of room and event scheduling solutions being used across the university** by centralizing funding for and increasing adoption of Accruent EMS, resulting in improved coordination and resource management.	**Increased feedback on help desk interaction by 4.7%** in six months by enabling additional methods of providing feedback.	**Enhanced security posture of and enabled proactive incident response for the Common Platform** (DoIT's enterprise service for shared virtualized server hosting) by Integrating a service to provide cloud-native runtime security that detects threats, abnormal behavior, and compliance violations.		**Ensured compliance with Virginia Tech and Commonwealth policies by** completing responses for an external IT audit with the state's Auditor of Public Accounts (APA) that included 11 request lists as well as four internal audits conducted by the Office of Audit and Risk Compliance (OARC) around VT cybersecurity and incident handling processes (including penetration test of some VT systems), IT policy compliance, internally developed software security practices, and IT inventory and data classification processes.
Enhanced research and data processing capability at Fralin Biomedial Research Institute by upgrading connectivity at the Roanoke location to 100 Gbps and added a redundant 100 Gbps connection.	**Improved efficiency and scalability and significantly reduced the multiplicity of custom system integrations** by standardizing on the Boomi Integration Platform as a Service to facilitate inter-system data exchange and migrate legacy system data to new platforms.	**Ensured DoIT is properly staffed to support institutional needs** by working with each unit within DoIT to fill 40 of 45 vacancies (89%) over the last year.	**Created a modern foundation for data warehousing and advanced reporting capabilities** by deploying a Snowflake data platform instance in AWS to support scalable, cloud-based data analytics and integration.		**Improved resiliency of Blacksburg campus network** by increasing the capacity of the backup internet service ten-fold.