



2023 Annual Report

Agency of Digital Services
3 V.S.A. § 3303

Submitted by

Shawn Nailor, Secretary & CIO

Date

January 23, 2023



Table of Contents

Executive Summary	3
Agency Statutory Language	3
Our Successes in 2022	3
Partner Agency Support Model	3
Enterprise Architecture Division	4
Cybersecurity.....	5
Finance Division.....	6
Shared Services Division.....	7
Enterprise Project Management Office.....	8
Data Division.....	13
Awards Received in 2022	14
Statutory Requirements	15
Costs Saved/Avoided as a result of Technology Optimization.....	15
Financial Report of Revenues and Expenditures for the Current Fiscal Year.....	17
Summary of CY22 Independent Reviews.....	18
Outline Summary of IT Projects Over \$500,000.00.....	18
Agency Performance Metrics and Trends.....	18
Report of Artificial Intelligence Inventory.....	19

Executive Summary

The Agency of Digital Services (ADS) is responsible for supporting the Administration's goals of growing the economy, making Vermont more affordable, and protecting the most vulnerable. To meet these goals, the Agency is committed to proactively providing enterprise-wide cost-effective, customer-focused information technology (IT) services and solutions in a secure, reliable, and up-to-date manner.

The Agency of Digital Services brings together technical and business professionals from across the Executive Branch to support the ongoing, statewide transition to digital government. Examples of this work include continuous evaluation and improvement of systems that deliver support to Vermonters and state employees. For example, turning Vermonters' feedback into improved and enhanced experiences with government interactions. ADS also manages strategic investments in technology and manages the timing and pace of digital government enhancements.

In alignment with Governor Scott's priorities, the Agency of Digital Services identified the following four goals:

- **By 2027**, increase the automation and reliability of services delivered to Vermonters through modern technology.
- **By 2027**, Our goal is to support the creation of a comprehensive Executive Branch IT budget with greater transparency
- **Continuously** defend the state data network and raise employee and citizen awareness of risks in cyberspace to reduce the likelihood of unauthorized access and misuse of Vermont data.
- **By 2027**, improve Vermonters' experience with government by increasing online interaction.

Agency Statutory Language

In the 2019 Legislative Session, statutory language referencing the roles and responsibilities of the Department of Information and Innovation (DII) was replaced with the Agency of Digital Services (ADS). With the passage of Act 49 of the 2019 session, ADS now assumes the responsibility of being the single entity created to provide information technology services and solutions to State government. The legislation also updated reporting requirements for the Agency. ADS is now responsible for providing an annual report each year and an updated strategic plan.

Our Successes in 2022

The information included in our 2023 Annual Report submission highlights our successes from the calendar year 2022. When ADS was created in April 2017, we made it our mission to keep our IT staff embedded in the agencies they support. This model has created many positive outcomes for our partner agencies. We have highlighted some of those successes in this report. In addition, we have highlighted the major successes achieved this year in each of our ADS Divisions. The wide range of successes across all agencies and departments indicates that the entire Executive Branch is benefitting from centralized IT.

Partner Agency Support Model

The establishment of the Agency of Digital Services has created the opportunity for the centralization and modernization of IT needs in the State. In addition, by continuing to house ADS staff resources in the physical locations of State Agencies, we can provide better

coordination, communication, and prioritization of IT need to leadership and staff. Listed below are a few of the successes we have achieved in supporting our partner agencies.

Increased Collaboration with Partner Agency Leadership

While consolidation can present challenges as employees and leadership adjust to changes in the IT reporting structure, it can also foster a more inclusive, road-mapping process. In a number of agencies and departments across state government, IT leadership finds increased and earlier engagement with business leaders in the planning and discussion of technical solutions aimed at helping the business. The elevation of ADS to Agency status has enabled this collaboration to exist by reducing the number of IT “bubbles” across state government.

Increased Collaboration and Support Across IT Professionals

A success experienced through the consolidation in reporting structures across IT professionals is the increased collaboration across agencies and departments. With a reduction of the barriers between IT professionals, we find those who have a skill set that is needed in other locations can more readily assist. For example, the Enterprise Project Management Office (EPMO) was able to assist the Department of Forests, Parks, and Recreation on building the new Acceptable Management Practices (AMP) Application. While these opportunities have always existed, the weekly in-person communication between IT leaders has allowed the challenges to be discussed and solutions to be implemented by the technical staff in a more expeditious manner.

Increased Visibility of Enterprise Offerings

One success experienced through the improved communication and collaboration at the Agency IT leader level is an increased awareness of the capability, technical maturity, and resource availability around the enterprise regarding IT offerings. While centralized IT has consistently made efforts to procure and make available enterprise offerings, the increased communication opportunities between the Chief Technology Office and Agency IT Leaders have created opportunities for discussions on suitability to occur before commitments are made and projects are scoped for incompatible technologies.

Enterprise Architecture Division

Enterprise Customer Relationship Management

In State Fiscal Year 22 (SFY22), the ADS-managed modern enterprise platform for Customer Relationship Management (CRM) engagement with Vermonters grew to include thirty-two (32) major business applications managed by nine (9) different agencies and departments. The enterprise CRM platform reached a new milestone of more than 1 million Vermonter logins this fiscal year.

Key among the new business applications that launched on the CRM was the Department of Children and Families' new Child Development Division Information System (CDDIS), which replaced a 20-year-old legacy system. Experience in adopting the new CDDIS will aid the planning of a critical replacement of the Child Welfare Information System which is a growing concern in terms of stability and security.

The Department of Liquor and Lottery used the CRM platform to build a new system to manage liquor licensing and enforcement. This is the first fully integrated system that DLL has had for these services and functions.

Myvermont.gov expansion

Myvermont.gov” provides single sign-on and account management services for Vermonters across a growing number of public-facing services. In SFY22 this service grew to be adopted by more than 141k Vermonters. As a functional expansion of Okta’s account management, we’ve added an identity-proofing function to improve system security and eliminate fraudulent activities within our services. With these changes in place, we expect to reduce time spent troubleshooting for customers, increase the value of joining myVermont and make it easy for customers to discover and leverage services throughout the state.

To improve the Vermonter digital experience, we’ve integrated myvermont.gov into our CRM (Salesforce) and in SFY23 we will complete the design of a new Salesforce-based Vermonter-centric services portal that will allow Vermonters to use a single doorway, with their single account, to gain access to the full range of SOV online services. Even if the service itself is not provided on the CRM platform, we will create data connections for Vermonters to centrally receive updates from those services, and 1-click connect themselves to those services from this new portal. Vermonters deserve the same high standard of digital experience from their state’s services that they receive from their private finance and consumer service providers.

Technical Infrastructure Improvements

SFY22 saw ADS make great strides toward completing our IT infrastructure goals. We have retired, replaced, and optimized our systems to the point where we are near our goal of being out of the data-center business and eliminating decades-old physical technology debt. Our last state-owned data center is at National life and seeing daily progress toward closure & replacement by cloud-based infrastructure services.

At this stage, nearly 35% of our server workloads have been migrated to the public cloud, with an additional 15-20% due to be completed by this coming summer. Our efforts to bring cloud storage online have permitted us to continue to grow data storage demand by 25-30% annually without constraint and at substantial cost savings over our previous self-hosted/managed storage infrastructure. In fact, storage demand has grown at the aforementioned rates, yet we’ve made no storage expansion purchases in the past two years and we now have practically unlimited capacity and we’ve not seen an increase in data storage costs to the state (with cloud cost-saving offsetting demand growth).

Cybersecurity and Networking Division

Provisioning a new Security Information and Event Management (SIEM) system

Over the course of this year, ADS Security has completed the procurement and implementation process for a new SIEM system. Capturing and analyzing system and networking logs is a cornerstone of an enterprise’s ability to detect and respond to cybersecurity incidents. Security Information and Event Management (SIEM) is a software solution that aggregates and analyzes activity from many different resources across the entire IT infrastructure. The State had some stand-alone capability in areas of the network that hold sensitive data, but the overall coverage of these systems was limited to about 60% of the enterprise and labor intensive to perform an aggregated analysis. Unifying the multiple systems performing logging and including the unmanaged system logs into one complete system has increased visibility and detection of

system security issues and allows the limited number of personnel monitoring those systems to have an out-sized influence on the overall security of the enterprise.

Core Network upgrades

As part of an ARPA-funded project, the Security and Networking Division for ADS completed phase one of our core network and security upgrades. The work completion was challenged by supply chain difficulties, but the equipment to stabilize the aging infrastructure was finally received in August and work was completed in December. The first phase of this project was specific to the underlying network hardware that powers our data centers. New switches and routers provide the backbone for our ability to stabilize and balance the changes in usage patterns seen in a hybrid working environment. Increased reliance on virtual private networks (VPN) for remote access and the sharp increase in video conferencing have been a constant challenge throughout the process, both in creating a solution and maintaining connectivity.

Partnerships and Exercises

ADS has continued to build on our incident response capability. One of the ways is through the continued development of training and exercises for the key responders within ADS. Another is through the expansion of our cybersecurity exercises to include personnel from other areas in State government and coordination with the Vt National Guard. Training and exercising ADS staff is a foundational action. The training builds depth of knowledge and the exercises provide opportunities to test the effectiveness of the training as well as normalize the stresses of an incident environment. Adding personnel from other organizations facilitates the next level of response activities. It helps remove barriers to coordination and accelerates response when time is essential. There have been seven exercise and coordination events this year including organizations like AOT, the Fusion Center, NUARI, and the VT National Guard.

Finance Division

Communications & Information Technology Fund Surplus

In-State Fiscal Year 2022, the Agency was able to increase the net position of the Communications & Information Technology Fund, by \$957,888. This leaves the fund in a surplus position of \$4.9M. To achieve this position, the Agency has continued to actively work to collect aged receivables; closely monitor expenditures to accurately recover costs through appropriate recovery streams; and, work collaboratively with other agencies' finance and program staff around transparency on technology costing.

Technology Business Management Implementation

Technology Business Management (TBM) is a discipline that improves business outcomes by giving organizations a consistent way to translate technology investments to business value by defining the tools, processes, data, and people needed to manage the business of technology. Based on a standard taxonomy that can be used by technology, finance, and business leaders, TBM enables organizations to react quickly to changing policy dynamics, make data-driven decisions, and align organizations around a common business objective. ADS selected the product Apptio as their TBM based on its extensive use in other States, municipalities, and universities across the United States. The official kickoff date for the project occurred on Wednesday, September 1, 2022, and will continue into 2023 with completion planned sometime in the summer of 2023.

Shared Services Division

COVID-19 Response – Remote Worker

The Shared Services Division continued its efforts to support remote and hybrid workers. Desktop Support continued deploying video conferencing systems in conference rooms across the state; as we close the year, there are over 100 rooms that support video conferencing. Our virtual desktop strategy has made significant gains. We have decommissioned all of the legacy Citrix solutions and replaced them with Azure Virtual Desktop (AVD), a cloud-based product from Microsoft. AVD allows us much greater control, and this has allowed us to cut the cost per virtual desktop in half.

Expanded Voice over Internet Protocol (VoIP) Telephone

The Shared Services Division continued working on this multi-year project in 2022. Continued expansion of the use of Voice over Internet Protocol (VoIP) telephone is reducing costs by allowing us to move off more expensive legacy phone services. We moved several correctional facilities to VoIP this year, which presented new challenges due to the need to provide hardened phones in inmate areas. We also added the new VSP barracks in Berlin and supported the Legislature's move to the VoIP system.

OnBase System Upgrade

The OnBase platform manages document, image, and video content. In addition to storing and retrieving files, OnBase securely manages workflows and business processes, granting access only to those who need access. Shared Services completed the build of a shared enterprise instance of OnBase in Azure with AOT as the first participating agency. In the future, OnBase needs will be met by adding additional agencies to the shared instance, instead of building new dedicated instances. This will reduce costs and the time required to deploy new OnBase functionality.

Expansion of Shared Line of Business Applications

OnBase is one example of where the concept of shared services is expanding from commodity IT, such as email and file storage, and moving into Line of Business (LOB) applications. We are now supporting shared Software as a Service (SaaS) applications, the first being Bynder, a digital asset management application procured by ACCD and soon to be shared with ANR and AOT. By sharing a single application across multiple agencies, we can reduce the cost of SaaS solutions. In the upcoming year, we expect LOB applications to grow and include Grants Management and Case Management.

Expansion of Desktop support customers

The Desktop team continued to pick up new customers. In 2022 we assumed full desktop support for the Secretary of State and the Attorney General's Office.

Staff Development

Across Shared Services, employees have been directed to reserve time each week to grow their skills. As a result, collectively, the 22 employees in Enterprise Application Services (EAS) earned 27 professional certifications. This is evidence of their professionalism and dedication to their customers.

IT Service Management Process Improvement

A major focus for Shared Services this year that will continue into next year is improving IT Service Management (ITSM) processes. To ensure that processes are consistent across the enterprise, the Operational Standards Board was established to create and document ITSM standards.

Global Protect Rollout

A major project this year has been rolling out Global Protect. Global Protect is a new Virtual Private Network (VPN) product that will replace OpenVPN. Global Protect includes the ability to check that remote user devices have passed multiple security checks before granting access to State resources. In order to deploy Global Protect it is necessary to ensure that all remote end-user devices can pass these checks. This has been a lengthy process that is paying major dividends by requiring the identification and remediation of technical debt across the enterprise, resulting in a significantly improved security posture.

Enterprise Project Management Office

The Enterprise Project Management Office is responsible for maintaining the records of all information technology projects across the State government. Highlighted below is a list of information technology projects completed by the Agency of Digital Services this year:

Department of Public Safety Computer Aided Dispatch & Record Management System

The original solution had been in place since 1991. A competitive process was completed to select the next vendor. The State desired to implement a modern Computer Aided Dispatch/Records Management System (CAD RMS). This modern CAD RMS provides functionality that meets today's need for comprehensive data analytics and data sharing. It allows the State to appropriately govern and share data across the law enforcement spectrum, e.g., public safety, justice, emergency and disaster management, intelligence, homeland security, and the public. The key to accomplishing our vision was implementing a Software-as-a-Service (SaaS), single statewide CAD RMS solution. Data sharing and automating that data sharing was a primary goal. The Vermont State Police (VSP) & agencies' VSP dispatches successfully went live with the Valcour CAD RMS as scheduled on 12/6/2021. The second and final rollout (192 users) was successfully rolled out on 01/02/2022.

Department of VT Health Access Medicaid Management Information System (MMIS) OnDemand Replacement

This project replaced the soon-to-be non-supported OnDemand content management solution owned by the vendor Gainwell Technologies with the State-owned and operated OnBase solution. The OnDemand Replacement (ODR) Project was a collaborative effort led by the Department of Vermont Health Access (DVHA) with support from the Agency of Digital Services (ADS), the Agency of Human Services (AHS), and Gainwell. The ODR project's goal was to replace the OnDemand current state functionality with the State-owned OnBase Enterprise Content Management (ECM) system. This project was unique in that we did not contract with a third party vendor but rather relied on a State of Vermont partner to perform design, development, and implementation services. The project was successfully completed on 1/18/2022.

Department of Libraries Integrated Library System (ILL/ILS) Project

One of the primary functions of the Department of Libraries is to provide a system that allows libraries to lend materials to other libraries. This interlibrary loan means that Vermonters can have ready access to materials not only at their library but to materials at other libraries across the country. Libraries also require an Integrated Library System (ILS) to manage materials and circulation. This new solution provides the Vermont State Library with such a system. This project was successfully completed on 3/31/2022.

Department of VT Health Access Integrated Eligibility and Enrollment (IEE) Disaster Recovery Online App/Doc Uploader

The Integrated Eligibility and Enrollment (IE&E) program did not have a plan in place in the case that the document uploader and Medically Aged Blind and Disabled (MABD) online application tools were not available for Vermonters to use. IE&E had to develop a plan for moving to a backup system/server within a specified time per the Centers for Medicare and Medicaid (CMS) requirements which states that the IE&E program has the document uploader and MABD online app back to functioning within 8 hours of a system failure. The Azure cloud was utilized to provide a disaster recovery and backup approach that fulfills the Recovery Time (RTO) and Recovery Point Objective (RPO). The customer portal technical team worked with the state's cloud services team to design and implement this solution. The project was successfully completed on 4/1/2022.

Department of Health Immunization Record (IMR) Bi-Directional Project

The goal of this project was to make updates to the Vermont Immunization Registry (IMR) that are pre-conditions to implementing a full bi-directional exchange of immunization data. Implementing the actual exchange will be a separate project. Currently, the IMR receives reports of vaccination events from providers electronically via messages sent per the internationally recognized Health Level 7 (HL7) standard. The Vermont Department of Health (VDH) looked to add to the ability for provider Electronic Health Record systems (EHRs) and other appropriate systems to also send a query to the IMR and receive back the current, complete history for their patients per the HL7 standard messages defined for this purpose. For this to occur appropriately and efficiently, key enhancements were required to the IMR data model and functions. Without full bi-directional exchange, providers can only access their patient's complete records by logging into the IMR because their EHRs do not contain records a patient may have received from providers who do not share the same EHR system. The ability for EHRs to query the IMR allows the provider to request and receive a full history from within the EHR. This query function also facilitates automating the updating of vaccination data in other systems that appropriately maintain vaccination records. This includes NBS, the system used by VDH Epidemiology to maintain and share information regarding cases of reportable diseases such as Covid-19. This query function also potentially supports access by the public to their vaccination records electronically. Adding this query ability to establish truly "bi-directional" exchange has been a goal for the IMR for many years (and an expectation of CDC funders). While it applies to all vaccine data, the need for this has been greatly amplified with the Covid Vaccine due to both the volume of vaccinations occurring and the increased importance of access to records for providers to identify patients in need of vaccines, analysis of case history for positive Covid cases, and verification of vaccination for participation in travel and activities. This project was successfully completed on 4/1/2022.

Department of VT Health Access Integrated Eligibility and Enrollment (IEE) Medicaid for the Aged Blind and Disabled (MABD) Online Application-Self-Service

The goal of the Integrated Eligibility and Enrollment (IE&E), Medicaid for the Aged Blind and Disabled (MABD) Online Application Self-Service project was to enhance the ease by which a Vermonter can apply for MABD and to meet Federal requirements by providing an online option. This project makes the MABD online application available for self-service for new applicants or enrollees transitioning from Medicaid for Children and Adults. Previously, Vermonters could only apply for MABD through the mail (paper application) or in person. This project was successfully completed on 4/8/2022.

Department of Health Situation Management and Response Tool (SMART)

The goal of this project was to establish a system that allows Epidemiology staff and others involved in response to a situation or Outbreak of a condition in a community to manage and communicate data in a situation-centered manner. This includes data about any facility involved, as well as line lists of the persons who are contacts and cases identified in the response. It is anticipated that the National Electronic Disease Surveillance System Base System (NBS) data regarding confirmed cases will feed this system, and NBS will remain the primary source of truth for personal data. This system addresses the limitation that NBS is person-centered, does not have the capacity to relate and facilitate easy access to data associated with a Situation or Outbreak, and does not include the means to manage all data involved in responding to a Situation. This project was successfully completed on 4/29/2022.

Department of Motor Vehicles Stickers on Demand Project

The goal of the Department of Motor Vehicles (DMV) Stickers on Demand project was to replace the current process of mailing inspection stickers with hardware housed at state inspection sites, thereby reducing financial risk from carrying sticker inventory and removing the payment transaction link between the client and DMV. This project procured and distributed hardware to inspection sites that will print inspection stickers on demand. Doing so reduces the financial risk to the State from holding an inventory of sticker books and from managing escrow accounts and increases customer satisfaction. Sticker on demand is a continuation of the Automated Vehicle Inspection Program (AVIP) which started in 2017 in the State of Vermont. By continuing with this technology, the State will see yearly cost savings associated with staff and materials. At any point throughout the year, multiple staff will have to perform some tasks involved with the inspection program. Whether it be mailing stickers, processing money from inspection stations for escrow, or processing returned stickers from stations.

There will be some cost offset to the state in terms of supplies and materials needed for the inspection program. Implementation of stickers on demand also addresses the fraud and theft of inspection stickers which will reduce non-inspectable vehicles from receiving stolen or fraudulent stickers thus, protecting the traveling public. The environmental impact of stickers on demand reduces waste. The inspection stickers will be printed, at the station, upon completion of a passing inspection according to the AVIP tablet. This eliminates the production of vinyl-type inspection stickers, the ordering of inspection stickers in bulk for a year, and the waste associated with excess stickers. The excess stickers are destroyed and end up in a landfill which will no longer be the case with stickers on demand. Sticker on demand further benefits small businesses. It enables the inspection stations to have immediate access to inspection stickers which would normally have to be paid for in advance and wait for them to be mailed. The project was successfully completed on 5/27/2022.

Department of Forests, Parks and Recreation Point of Sale Reservation System

The previous reservation/point-of-sale/customer database/accounting system used by Forest Parks and Recreations was 12 years old and lacked many contemporary features and efficiencies. The goals of this project are to improve the customer interface and increase staff productivity and management capability. State park customers are accustomed to using contemporary IT functionality in their interactions with the state parks on the website and through social media. This project was completed on 6/22/2022,

Department of VT Health Access Integrated Eligibility and Enrollment (IEE) Premium Processing Project

As part of the State fiscal year 2019 budget, the Vermont Legislature instructed the State to return Qualified Health Plan (QHP) premium processing to insurance carriers. This transition became effective for the plan year 2022. The goal of the Premium Processing project was to streamline the financial transactions and processes associated with the administration of health coverage and financial benefit programs. The State first transitioned responsibility for Qualified Health Plan premium processing to insurance carriers for coverage starting 1/1/2022. This allowed the State to implement other processes which could include workarounds to appropriate notice and terminate Medicaid (Dr. Dynasaur) coverage for nonpayment. The resulting product ensures that: 1) Customers will understand what they need to pay, by when, and how it will impact their coverage, 2) Customers will know who to call when there is a problem, 3) Staff will understand the premium payment process and their role in it, 4) Improved data quality and a simplified user interface will ensure that staff can understand and trust the information they are seeing and communicate next steps to the customer, 5) Vermont is in compliance with State rules and legislative direction regarding premium processing, and 6) It will reduce the operating expenses associated with health insurance exchange. Effective November 1, 2021, Issuers (BlueCross and BlueShield of VT, MVP Healthcare, and Northeast Delta Dental) are now responsible for invoicing, processing, and collecting their customer's monthly premiums enrolled through Vermont Health Connect. This project was successfully completed on 6/30/2022.

Agency of Education Knowledge Center Expansion (KCE)

The goal of the AOE Knowledge Center Expansion project is to expand the existing COVID Help Desk application with the development of a community portal to provide a public-facing, searchable Knowledge Base solution. The initial version of the AOE Helpdesk application built on the Salesforce platform allowed the Agency to manage the intake of questions and feedback and route them internally for managed responses. This still puts the burden of information finding on AOE staff. AOE proposed to add a community portal component to the existing helpdesk tool and expose knowledge articles to users to empower them to self-serve information as a first step prior to entering a ticket to request a response. This project expanded upon the existing COVID Help Desk application with the development of a community portal to provide a public-facing, searchable Knowledge Base solution and expanded the Help Center functionality to all AOE divisions. The Knowledge Articles in the solution are organized by Hubs and Topics, as well as resource type, to help users find the appropriate content quickly and easily. The project was successfully completed on 7/1/2022.

Department of Forests, Parks, and Recreation Acceptable Management Practices (AMP) Application

The goal of the Forests Parks and Recreation Acceptable Management Practices for Protection Water Quality on Logging Jobs in Vermont (AMP) is to develop a mobile application for an AMP manual and other assessment tools making it easier for Vermont foresters to determine the type and costs of Acceptable Management Practices (AMPs) for Maintaining Water Quality on Logging Jobs to improve and increase adherence to Vermont's water quality statutes. AMPs are intended and designed to prevent sediment, petroleum products, and woody debris (logging slash) from entering Vermont's waters. Based on annually tracked and reported data, requests for technical assistance from stakeholders on AMP-related information are increasing, indicating that there is a desire for them to learn more and implement better practices. This project aimed to use mobile technology to achieve this. Leverage a smartphone or tablet "app" to make it easier for foresters and loggers to reference AMP information as well as use mobile tools to help determine appropriate or applicable AMPs. In addition to determining individual AMP practices, the app allows the user to create a "Job" or "project" for a parcel or harvest unit that will keep track of multiple AMP practices and calculate the potential cost of implementing those AMPs. This project was successfully completed on 7/6/2022.

Department of VT Health Access Integrated Eligibility and Enrollment (IEE) Medicaid for the Aged Blind and Disabled (MABD) Compliance Project

This project intended to come into compliance with Federal requirements for our Medicaid for the Aged, Blind, and Disabled (MABD) populations with regards to ex-parte renewals, redeterminations, and Change of Circumstance (COC). The State's previous process for MABD was manual and highly inefficient, requiring much effort on the part of the customer. To improve this process, ex-parte renewal responses, redeterminations, and COCs needed to be available to Vermonters via all modalities (phone, in-person, online, and by mail). This effort was to build tools/processes that meet all modalities to ensure CMS compliance. The project goals included building new, compliant processes that will be developed through a modification of existing operational processes along with some minor technical system changes where needed. This project was successfully completed on 7/11/2022.

Agency of Education Statewide Assessments

The Agency of Education (AOE) is required by federal law to administer a peer-reviewed assessment to all students in the areas of Math, Science, and English Language Arts (ELA), as described in Vermont's Consolidated State Plan. On 10/31/2022, development and implementation contracts expired for the current ELA, Math, and Science assessments. The goal of this project is the establishment of a platform to administer peer-reviewed assessments to all students in the areas of Math, Science, and English Language Arts, as well as for peer-reviewed assessment development, as described in the Consolidated State Plan. The project was successfully completed on 10/28/2022.

Department of Liquor and Lottery Gaming Solution

The Vermont Lottery sells both instant and online tickets. The goal of this project was to implement a fully integrated gaming system that will support the needs of the Lottery for at least the next six years, including Providing retailer terminals, support systems, and services that are new, operationally sound, incorporating the highest level of integrity and security, and minimizing risk to the State, Provide terminals which lead to a high retail satisfaction for quality and performance; Provide a System that is sufficiently flexible to meet the State's changing

requirements and maximize the net lottery proceeds for the State of Vermont. The Lottery Gaming Services and Systems requirements include revenue optimization services; operational services; sales channels, sales channel connectivity, and sales channel support services; terminal games; lottery gaming system management, accounting, and operational capabilities; primary and backup computer systems, operational facilities, and connectivity; software updates and maintenance. This project was successfully completed on 10/31/2022.

Agency of Education Grants Management Solution

This initiative implemented a new Grants Management System for the Agency of Education. The scope included online grant applications in a dozen program areas throughout the AOE, including workflow review and approvals between the AOE and VT School Districts. Grant monitoring was developed for each one and a data warehouse was established for a number of reporting opportunities. The project was successfully completed on 11/4/2022.

Department of VT Health Access Integrated Eligibility and Enrollment (IEE) Vermont Health Connect Modern Data Analytics Reporting (MDAR)

The goal of this project was to replace Vermont Health Connect (VHC)'s hosted Oracle Business Intelligence Suite Enterprise Edition (OBIEE) reporting platform with a Software as a Service (SaaS) reporting platform. The Oracle Data Integrator (ODI) and Oracle Business Intelligence Suite Enterprise Edition (OBIEE) tools have been inadequate in delivering up-to-date reporting information, with intermittent defects that cause considerable delays in available reporting data and create a concerns meeting Service Level Agreements (SLAs) for Federal requirements. Additionally: keeping the Oracle software up to date has been mired with expensive work that has occupied state resources in addition to the costs incurred by the vendor, the licensing, and the Oracle support costs. The project was successfully completed on 11/30/2022.

Data Division

Data Analytics Practice

Capitalizing on the successful expansion of data analytics during the pandemic, ADS expanded its ability to offer advanced analytics services to our partner agencies as part of our Division of Artificial Intelligence. Early successes include the development of a number of products to support the Governor's Public Safety Enhancement Plan, unifying data from Public Safety and Human Services to support decision-makers as they develop sustainable support for communities

30 Years of Mapping Vermont

This year marks the thirtieth anniversary of the passage of Act 258- which created the Vermont Center for Geographic Information (VCGI), a part of the Data Division at the Agency of Digital Services. In 1992, staff was mailing out an average of 3 orders a week with floppy disks containing 17 MB of data. At the time, it was estimated that demand for data over the next couple of decades would grow at a rate of 2%-10% annually, which (at the high end) would result in well under 2,000 users. These forecasts were off, as we now see over a half million visits from over 80,000 users accessing over 20TB of data. In these past couple of decades, online maps and spatial data have expanded from the niche world of tech-savvy geographers in academia to a basic government service expected by the public. The growth and success of GIS in Vermont can largely be attributed to the collaboration of over 20 different partner

agencies, regional planning commissions, and others outside of government contributing to over 1000 datasets to the Open Geodata Portal.

A View from Above

ADS led a group of interagency partners in the development of the 2022-2023 Lidar Plan, establishing the 2023 goal of collecting statewide quality level 1 airborne lidar data, which is used to create high-resolution models of ground and surface elevation (4x the resolution of any existing data.) The United States Geological Survey (USGS) awarded matching funds for the project, which would make Vermont the first state to complete the collection of quality level 1 lidar. 2022 also saw the largest single-year leaf-off aerial imagery collection completed for the state, after a challenging 2021 when late-season snow made it impossible to capture much of the state before leaf-out. Lidar data and aerial imagery together support actions across every section of the state strategic plan, from lowering the cost of housing development and infrastructure design to flood hazard mapping and process automation.

Mapping Taxation

In collaboration with the Tax Department, the VCGI team worked the tax department to publish a boundary file of local tax rates, which allows retailers nationally to integrate local sales tax rates from across the country into their online sales platforms. The effort made significant improvements to an outdated and inaccurate database that was previously used. An easy-to-use 'Local Option Tax Finder' application was also released to help small businesses without sophisticated automated systems find the correct tax rates for Vermont addresses. The tax parcel mapping team also had a busy year – incorporating updated property boundaries for 150 municipalities into the statewide parcel maps and receiving over 1800 land surveys in the recently created land survey library.

Census, Redistricting, & Strengthening Elections

To help municipal clerks and the Secretary of State's Office with the impacts of redistricting, new voting district boundaries were published and a 'District Finder' application was developed to help to allow for the quick verification and visualization of the newly adopted legislative districts. The voter registration list was geocoded and audited to ensure that voters were registered in the correct districts. ADS and the Secretary of State's office led national discussions amongst election directors on using map data & technology to strengthen election security. A newly formed partnership with the Census also helped make it easier to coordinate with federal partners and ensure that administrative boundary refinements/modifications come from a single authoritative source across all levels of government.

Awards Received in 2022

The State of Vermont was bestowed 14 awards that recognize innovative and user-friendly services and websites. These awards bring national recognition to Vermont and showcase Vermont as a leader in technology. The following awards were received in FY2022:

- dotCOMM Gold Award: Department of Fish & Wildlife Vermont Outdoors Mobile Application
- dotCOMM Gold Award: DLL Education Storefront
- dotCOMM Honorable Mention: DMV Learner's Permit Application
- Center for Digital Government – Government Experience Project Award: DMV Learner's Permit Application
- W3 Gold Award: Department of Fish & Wildlife Vermont Outdoors Mobile Application
- W3 Silver Award: DLL Education Storefront

- W3 Silver Award: DMV Learner’s Permit Application
- MarCOMM Gold Award: Department of Fish & Wildlife Vermont Outdoors Mobile Application
- MarCOMM Award, Honorable Mention: DMV Learner’s Permit
- Davey Silver Award: DMV Learner’s Permit Application
- Davey Silver Award: Department of Fish & Wildlife Vermont Outdoors Mobile Application
- Hermes Creative Gold Award: Climate Change in Vermont
- Hermes Creative Award, Honorable Mention: Vermont Emergency Rental Assistance Portal
- Hermes Creative Award, Honorable Mention: Vermont temporary Plates and Registration System

Statutory Requirements

The Agency of Digital Services is statutorily required by 3 V.S.A. § 3303 to provide the following data. The data collected helps our Agency, the Legislature, and others to understand the importance of coordination and investment in information technology for the State.

Costs Saved/Avoided as a Result of Technology Optimization

This requirement tasks our Agency with documenting costs saved or avoided through technology optimization for the last fiscal year. In this table, we have identified where our Agency saved or avoided costs due to technology modernization. The table below indicates the partner agency or department where savings occurred, the name of the initiative, and the total amount and frequency of the savings or cost avoidance.

Agency/Department	Initiative	Amount	Frequency
ADS AOT	Cancel 16 G3 Licenses	\$ 5,585.12	Annual
ADS AOT	Cancel 4 G3 Licenses	\$ 1,396.28	Annual
ADS ACCD	Retire ThinkVT.com jobs board	\$ 37,925.00	biennial
ADS AOE	Deprecation of 2 VMs	\$ 5,196.64	Annual
ADS AOE	Deprecation of 2 VMs	\$ 14,368.68	Annual
ADS AOE	Cancel 98 SF users due to deactivation of SF app	\$ 202,076.98	Annual
ADS AHS	Negotiate Oracle Partitioning down from standard ITS65	\$ 552,982.00	Annual
ADS AOE	Deprecation of 3 VMs	\$ 11,672.97	Annual
ADS AOE	Deprecation of Azure AOE-EDE-SQL	\$ 7,446.07	Annual
ADS AOT	Cancel 19 G3 Licenses and change 14 others from G3 to F1	\$ 92,119.00	Annual
ADS AOA	Retirement of Footprints Server - Migration to Ivanti	\$ 4,385.00	Annual
ADS/VDOL	Citrix Licensing - Removal of 50	\$ 9,250.00	Annual
AOT	Switching CVO Compute to AZG Reserved Instances	\$ 62,656.00	Annual
AOE	Migrated Oracle databases to archive and SQL environment	\$ 45,918.00	Annual
AOE	shutting down file servers with Sharepoint migration/VSMS	\$ 33,505.00	Annual
AOE	Ivanti for new computer deployment	\$ 1,890.00	Annual

DPS	Retire 5 Servers	\$ 29,047.00	Annual
DPS	Implementation of Electronic Warrants	\$ 880,000.00	Annual
AOT	Removal of 7 Partner G3 accounts.	\$ 2,296.00	Annual
AOT	Switched 9 AOT O365 from G1 to F3	\$ 174.00	Annual
ADS AHS	Negotiated free work by Quisitive for Microsoft server	\$ 152,500.00	Annual
ADS	Reduction of Staff Augmentation Costs in the DVHA Portfolio	\$ 280,800.00	Annual
ADS	Reduction of Staff Augmentation Costs in the DVHA Portfolio	\$ 280,800.00	Annual
ADS AOT CTO	Migration off RWIS SAN and subsequent shutdown	\$ 3,300.00	Annual
AOE	Consolidation of SQL Analysis and EDE environments - decommission sql analysis server	\$ 7,050.00	Annual
ADS AHS	Care Management R3 Certification (ADS/AHS achieved R3, as a first in nation, certification that increase federal match)	\$ 412,500.00	Annual
ADS AHS CTO	Cloud Hosting Savings post move of AHS servers to Azure (comparing SFY21 to SFY22 costs)	\$ 407,000.00	Annual
ADS Enterprise Architecture	VHC Migration to Onbase (eliminate Optum hosting)	\$ 300,000.00	Annual
ADS EPMO	Recruitment	\$ 93,600.00	Annual
ADS EPMO	Resource Assignments	\$ 553,280.00	Annual
ADS EPMO	Resource Assignments	\$ 349,440.00	Annual
ADS EPMO	Resource Assignments	\$ 249,600.00	Annual
ADS EPMO	Resource Assignments	\$ 114,000.00	Annual
ADS EPMO	Resource Assignments	\$ 94,000.00	Annual
ADS EPMO	Resource Removal	\$ 300,000.00	Annual
ADS VDOL	Cancel IBM Service no longer needed with Move to Blue Hill	\$ 33,189.00	Annual
ADS VDOL	Cancel Flex-ES System no longer needed with move to Blue Hill -FLEX-ES support maintenance for a 34 MIPS tServer. 7 x 24 x 365 support includes v7 FLEX-ES, SUSE Linux, Custom-Configured hot-synch software, Faketape, and one PCA-1 single port Parallel Channel Adapter.	\$ 23,300.00	Annual
ADS/AGR	Upgraded licensising and registration system to allow online self service renewals and accept credit cards and ACH transactions	\$ 40,000.00	Annual
ADS/AGR	Adobe InDesign/Acrobat License Savings	\$ 572.04	Annual
AOE	Cancelling Sifter Software License	\$ 588.00	Annual
AOE	Switching from Open Voice to Skype for Business Audio Con	\$ 600.00	Annual
ADS/CTO	Virtual Firewalls, M&O Savings	\$ 358,400.00	Annual
ADS/CTO	Optum Hosting Reduction	\$ 100,000.00	Annual
ADS/CTO	VMWare Upgrade	\$ 433,000.00	Annual
ADS CTO	Mulesoft Maintenance Costs - ADS negotiated savings of this amount AFTER the business had received a "final" offer from the vendor.	\$ 30,000.00	Annual

ADS CTO	Pfsense rollout (open-source) for load-balancing (replacement of F5 @\$5k/ea)	\$ 50,000.00	Annual
ADS CTO	Pfsense rollout (open-source) for FW (replacement of vshield @\$2k/ea)	\$ 140,000.00	Annual
ADS CTO/AOT	AOT IDIQ (Contracts Management) Salesforce project		Annual
ADS/CTO	Rubrik Backup Solution (replacing NetBackups)	\$ 240,000.00	Annual
ADS/DOL	Transition to LANDesk/Ivanti	\$ 6,000.00	Annual
ADS/DOL	UI Backup Check Printer SN#JPCL5C700M - Discontinued Supp	\$ 1,308.09	Annual
ADS/DOL	Citrix Concurrent Licenses - Dropped 98 licenses	\$ 18,130.00	Annual
ADS/DOL	Symquest Scanner Maintenance - Discontinued Support	\$ 9,015.64	Annual
ADS/DOL	Labor ACD Calling Center Support Renewal	\$ 10,000.00	Annual
ADS/DOL	Symantec Endpoint Protection for Labor Domain	\$ 4,665.00	Annual
ADS/DOL	SEP for Dettics Call Center	\$ 1,091.00	Annual
ADS/DPS	Replace MaaS360 MDM with Microsoft Products	\$ 30,000.00	Annual
ADS/DPS	Decommissioning, moving divisions to SharePoint, shifting from VMs to Isilon storage	\$ 29,700.00	Annual
ADS/Shared Ser	current core WAN wave circuit (TechVault to Waterbury) provided by Fairpoint (\$6000/month) with a FirstLight wave circuit (\$2000/month). This is a \$48,000/year savings; \$144,000 savings over the 3 year commitment for the FirstLight circuit.	\$ 48,000.00	Annual
ADS/Shared Ser	Microsoft Reseller Competition	\$ 57,000.00	Annual
ADS/TAX	Transition to LANDesk/Ivanti	\$ 7,000.00	Annual
Secretary's Office	Active Position and Vacancy Management	\$ -	Annual
ADS/AHS/DVH A	Discontinue hosting in Optum for Webcenter Content/Capture replaced by Onbase	\$ 301,980.00	Annual
ADS/CTO	Oracle contract savings (Peoplesoft, Oracle)	\$ 286,982.00	Annual
Savings Total		\$ 7,858,280.51	

Financial Report of Revenues and Expenditures for the Current Fiscal Year

The following table highlights the revenues and expenditures of ADS in the current fiscal year. The information is broken down into the description, budget, carry-over, total budget, expenses, and revenues. The bottom row of the table indicates the total expenses and revenues from FY22.

SFY2023 Revenues and Expenditures 07/01/22 - 12/31/22										
Dept	Budget Period	Descr	Fund	Budget Amt	SFY22 Carry-Over	SFY23 Excess Receipts Requests	One-Time Appropriations	Total Budget	Expended Amt	Revenue
1105500000	2023	Comm & Info Technology	10000	\$ 179,572.00	\$ 240.80	\$ -	\$ -	\$ 179,812.80	\$ 137,757.29	\$ -
1105500000	2023	Comm & Info Technology	21328	\$ 13,905.00	\$ -	\$ -	\$ -	\$ 13,905.00	\$ 200.00	\$ -
1105500000	2023	Comm & Info Technology	21330	\$ 385,436.00	\$ 509.31	\$ -	\$ -	\$ 385,945.31	\$ 293,024.19	\$ -
1105500000	2023	Comm & Info Technology	21932	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1105500000	2023	Comm & Info Technology	21951	\$ -	\$ -	\$ -	\$ 67,010,000.00	\$ 67,010,000.00	\$ 37,119.03	\$ -
1105500000	2023	Comm & Info Technology	22045	\$ -	\$ 0.25	\$ -	\$ -	\$ 0.25	\$ -	\$ -
1105500000	2023	Comm & Info Technology	58100	\$ 113,728,754.00	\$ 16,111,565.70	\$ -	\$ -	\$ 129,840,319.70	\$ 54,633,140.57	\$ 37,544,154.00
1105500000	2023	Comm & Info Technology	59300	\$ 3,130,267.00	\$ 375,979.14	\$ -	\$ -	\$ 3,506,246.14	\$ 1,356,705.41	\$ -
1105891901	2023	Firewalls, Data Storage	10000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1105891902	2023	Network Device Upgrades	10000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1105892101	2023	ADS-Cybersecurity Risks	22045	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1105892102	2023	ADS-DMV IT System	20105	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1105892201	2023	ADS-Cybersecurity Infrastruc	22047	\$ -	\$ 1,298,753.14	\$ -	\$ -	\$ 1,298,753.14	\$ 508,629.39	\$ -
1105892202	2023	ADS-Cyber Security	10000	\$ -	\$ 3,300,000.00	\$ -	\$ -	\$ 3,300,000.00	\$ 1,346,886.32	\$ -
1105892301	2023	ADS-Racial Justice Statistics	10000	\$ -	\$ -	\$ -	\$ 520,300.00	\$ 520,300.00	\$ -	\$ -
1105991901	2023	Digital Orthophoto Mapping	31100	\$ -	\$ 60,287.30	\$ -	\$ -	\$ 60,287.30	\$ 11,906.64	\$ -
1105992001	2023	ADS - Digital Orthophoto Map	31100	\$ -	\$ 124,920.00	\$ -	\$ -	\$ 124,920.00	\$ 22,310.00	\$ -
1105992101	2023	ADS - Digital Orthophoto Map	31100	\$ -	\$ 123,873.00	\$ -	\$ -	\$ 123,873.00	\$ 57,768.99	\$ -
1105992201	2023	ADS - Digital Orthophoto Map	31100	\$ -	\$ -	\$ -	\$ 125,000.00	\$ 125,000.00	\$ -	\$ -
Totals				\$ 117,437,934.00	\$ 21,396,128.64	\$ -	\$ 67,655,300.00	\$ 206,489,362.64	\$ 58,405,447.83	\$ 37,544,154.00

Summary of CY22 Independent Reviews

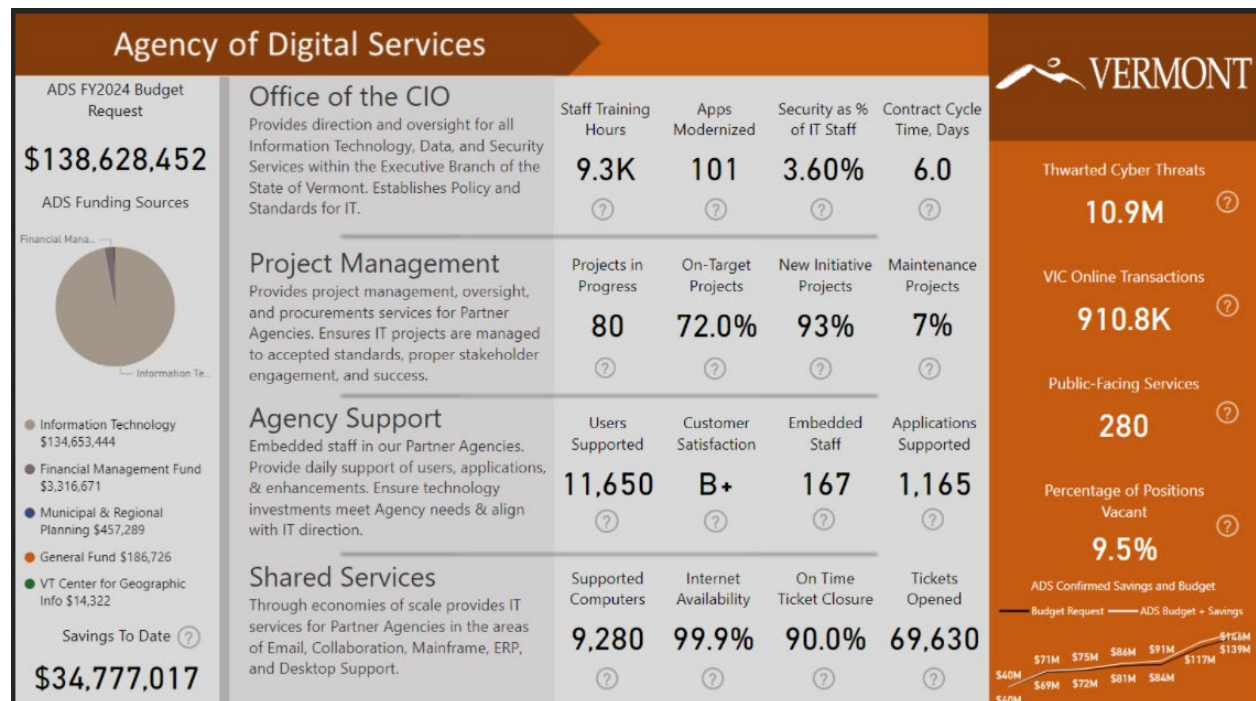
Per statute, ADS is required to hire an independent contractor to conduct an independent review of technology projects with total costs of over \$1 million. Additionally, we must provide summaries of each independent review conducted. The independent reviews must include an acquisition cost assessment; a technology architecture and standards review; an implementation plan assessment; a cost analysis and a model for benefit analysis; an analysis of alternatives; an impact analysis on net operating costs for the agency carrying out the activity; and a security assessment. The Independent Review summaries can be found in the Information Technology Activity Report ([Independent Reviews | Enterprise Project Management Office \(vermont.gov\)](#)).

Outline Summary of IT Projects Over \$500,000.00

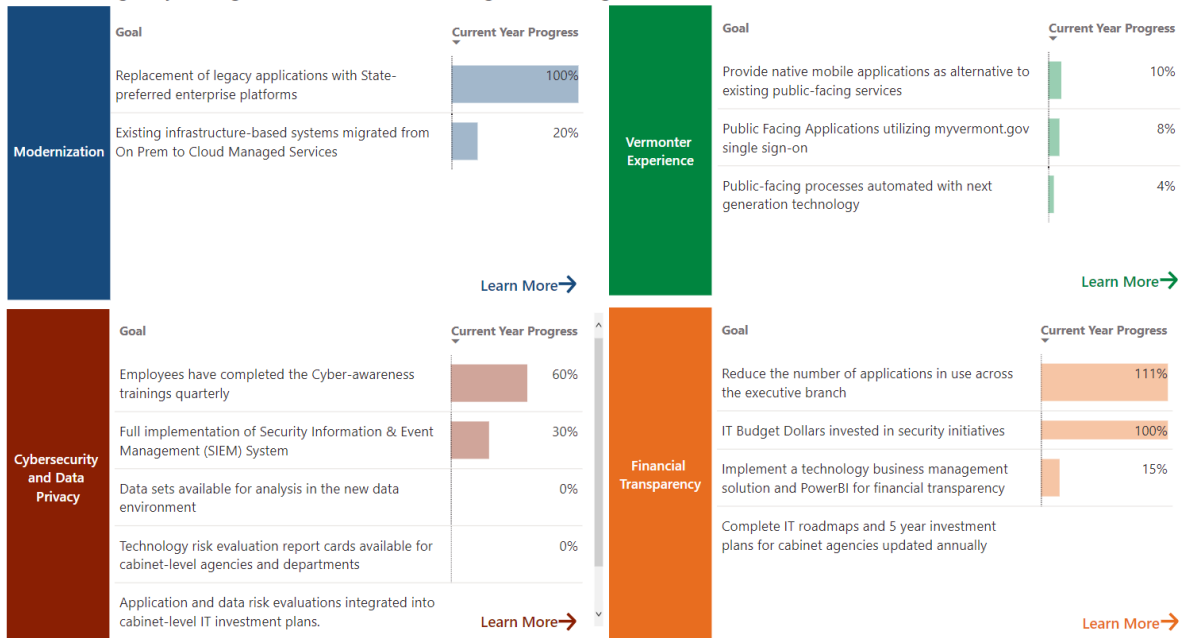
The ADS Project Management Office is constantly tracking data on all IT projects. Our agency is required to provide an outline summary of information, including scope, schedule, budget, and status for information technology projects over \$500,000.00. Highlighted in this report are projects which meet the \$500,000.00 threshold, as well as the top 10 IT projects chosen by the CIO. This information can be found in the Information Technology Activity Report ([EPMO Annual Report FY23.pdf](#) (vermont.gov)).

Agency Performance Metrics and Trends

To ensure successful Agency performance, our Agency is constantly tracking data and metrics. The data includes baseline and annual measurements for each division of the Agency.



Vermont Agency of Digital Services (ADS) Strategic Plan Progress



Report of Artificial Intelligence Inventory

The following is the inventory of Artificial Intelligence Systems currently identified by the Division of Artificial Intelligence as defined in and pursuant to 3 V.S.A. § 3305 b. The following elements are defined in the inventory. Please note that cost information is still being gathered and will be more complete in future reports.

Purpose, Proposed Use	a description of the purpose and proposed use of the automated decision system,
Intended Benefits	its intended benefits, including any data or research relevant to the outcome of those results
Capabilities in use	a description of the automated decision system’s general capabilities
Capabilities not in use	reasonably foreseeable capabilities outside the scope of the agency’s proposed use
Makes independent decisions	whether the automated decision system is used or may be used for independent decision-making powers
Decision impact type	the impact of those decisions on Vermont residents
Decision impact description	the impact of those decisions on Vermont residents
Supported Decisions	what decision or decisions it will be used to make or support
Decision Type	whether it is an automated final decision system or an automated support decision system
Types of data inputs	the type or types of data inputs that the technology uses
Data source process	how that data is generated, collected, and processed

Types of data generated	and the type or types of data the automated decision system is reasonably likely to generate
3rd party bias test result	whether the automated decision system has been tested for bias by an independent third party, has a known bias, or is untested for bias
Data storage	how automated decision system data is securely stored and processed
Data Sharing	whether an agency intends to share access to the automated decision system or the data from that automated decision system with any other entity, which entity, and why
Lifecycle cost	a description of the IT fiscal impacts of the automated decision system, including initial acquisition costs and ongoing operating costs, such as maintenance, licensing, personnel, legal compliance, use auditing, data retention, and security costs
Cost savings	any cost savings that would be achieved through the use of the technology
Funding sources	any current or potential sources of funding, including any subsidies or free products being offered by vendors or governmental entities

UVM Automotive Repository of Traffic Signs (ARTS), an AI to Identify traffic signs and geolocate them for an inventory that intends to Provide an up-to-date inventory of VTrans' roadside assets.

In use by: AOT

Decisions Made or Supported:

- Supported decisions: Project sign replacement, inventory management
- Impact of Decision on Vermonters: Direct
- Decision Impact: None
- Decision Type: Support

Capabilities:

- In use: Classify signs, track objects across monocular low frame rate imagery, estimate object distance and bearing from camera
- Not in use: Could be trained for other roadside assets, like guardrails or pavement markings.
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Forward-facing road imagery
- Data source process: Images captured during annual surveys
- Types of data generated: Geolocated sign data
- Data storage: Secure state database
- Data sharing: Yes, UVM to continue the development

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

Fugro **Pavement Condition Classification**, an AI to Classify pavement quality that intends to Provide up-to-date detailed pavement condition.

In use by: AOT

Decisions Made or Supported:

- Supported decisions: Project prioritization and selection, funding requests
- Impact of Decision on Vermonters: Direct
- Decision Impact: None
- Decision Type: Support

Capabilities:

- In use: Detect pavement quality from downward-facing imagery
- Not in use:
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Downward-facing road imagery
- Data source process: Images captured during annual surveys
- Types of data generated: Pavement segment condition rating
- Data storage: Secure state database
- Data sharing: Yes, in aggregates, with partners and the public.

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

CrowdStrike **Falcon** is an AI to Identify security compromises on State computers that intends to Improve the security posture of the state's IT infrastructure.

In use by: ADS

Decisions Made or Supported:

- Supported decisions: Information Security activities
- Impact of Decision on Vermonters: Indirect
- Decision Impact: Can disable impacted workstations, quarantine files
- Decision Type: Final

Capabilities:

- In use: Detect indicators of compromise on workstations
- Not in use:
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Computer usage data
- Data source process: Monitored in real time on machines
- Types of data generated: Anomalous event reports
- Data storage: Secure state database
- Data sharing:

Financial Details:

- Lifecycle Cost: \$780K
- Cost Savings:
- Funding Sources: ADS Allocation

VMWare **vRealize Operations**, an AI to Optimize performance and cost of State network and infrastructure that intends to improve efficiency and lower cost.

In use by: ADS

Decisions Made or Supported:

- Supported decisions: Incident response, device configuration
- Impact of Decision on Vermonters: Indirect
- Decision Impact: Can adjust specs on servers and network components
- Decision Type: Support

Capabilities:

- In use: Monitor network health, recommend improvements in configuration
- Not in use: Automatically make improvements in configuration
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Computer usage data
- Data source process: Monitored in real time on machines
- Types of data generated: Recommendations for better configurations
- Data storage: Vendor stored
- Data sharing:

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

VMWare **CloudHealth**, an AI to Optimize the performance and cost of State networks and infrastructure that intends to improve efficiency and lower cost.

In use by: ADS

Decisions Made or Supported:

- Supported decisions: Incident response, device configuration
- Impact of Decision on Vermonters: Indirect
- Decision Impact: Can adjust specs on servers and network components
- Decision Type: Support

Capabilities:

- In use: Monitor network health, recommend improvements in configuration
- Not in use: Automatically make improvements in configuration
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Computer usage data
- Data source process: Monitored in real time on machines
- Types of data generated: Recommendations for better configurations
- Data storage: Vendor stored
- Data sharing:

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

Apptio **Cloudability**, an AI to Optimize performance and cost of State network and infrastructure that intends to improve efficiency and lower cost (will replace CloudHealth this year).

In use by: ADS

Decisions Made or Supported:

- Supported decisions: Incident response, device configuration
- Impact of Decision on Vermonters: Indirect
- Decision Impact: Can adjust specs on servers and network components
- Decision Type: Support

Capabilities:

- In use: Monitor network health, recommend improvements in configuration
- Not in use: Automatically make improvements in configuration
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Computer usage data
- Data source process: Monitored in real time on machines
- Types of data generated: Recommendations for better configurations
- Data storage: Vendor stored
- Data sharing:

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

VMWare **SecureState**, an AI to Identify misconfigurations of cloud components that intends to Improve the security posture of the state's IT infrastructure.

In use by: ADS

Decisions Made or Supported:

- Supported decisions: Cloud resource configuration
- Impact of Decision on Vermonters: None
- Decision Impact: None
- Decision Type: Support

Capabilities:

- In use: Monitor cloud service configurations
- Not in use:
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Configuration files
- Data source process: Extracted from connected resources
- Types of data generated: Recommendations for better configurations
- Data storage: Vendor stored
- Data sharing:

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

Hyland **Brainware**, an AI to Detect document types and extract data from them that intends to Improve the efficiency of document management.

In use by: ADS

Decisions Made or Supported:

- Supported decisions: Document classification
- Impact of Decision on Vermonters: Indirect
- Decision Impact: Can classify and route documents
- Decision Type: Final

Capabilities:

- In use: Not yet in use
- Not in use:
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Documents routed to Brainware queues
- Data source process: Scanned or digital documents are routed to Brainware based on the expected type
- Types of data generated: Structured document content
- Data storage: Secure state database
- Data sharing: None

Financial Details:

- Lifecycle Cost: \$250K Annually
- Cost Savings:
- Funding Sources: Agency License SLA consumption

Hyland **OnBase OCR**, an AI to Digitize scanned documents that intend to Improve the efficiency of document management.

In use by: ADS, AOT, AHS

Decisions Made or Supported:

- Supported decisions: Document classification
- Impact of Decision on Vermonters: Indirect
- Decision Impact: Converts images of documents into searchable, indexable documents
- Decision Type: Support

Capabilities:

- In use: Optical Character Recognition
- Not in use: In use in multiple agencies
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Scanned documents queued for OCR
- Data source process: Documents like project design "magic boxes" are scanned and routed for OCR
- Types of data generated: Searchable document content
- Data storage: Secure state database
- Data sharing: None

Financial Details:

- Lifecycle Cost: included in Tier 2 licensing per user.
- Cost Savings:
- Funding Sources: Agency License SLA consumption

Okta **Okta Adaptive Authentication / Multifactor Authentication**, an AI to Provide secure identity and access management that intends to Make robust authentication mechanisms less cumbersome for users.

In use by: ADS

Decisions Made or Supported:

- Supported decisions: MFA prompt
- Impact of Decision on Vermonters: Direct
- Decision Impact: Prompts for MFA less frequently if the user is following known patterns.
- Decision Type: Final

Capabilities:

- In use: Adaptive Security, Bot detection
- Not in use:
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: User interactions
- Data source process: Authentication workflows
- Types of data generated: None
- Data storage: Vendor stored
- Data sharing:

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

UVM Land Cover Change Detection, an AI to Identifies locations where land usage changes between surveys that intends to Track changes in impervious surface and land use.

In use by: VCGI

Decisions Made or Supported:

- Supported decisions: Production of maps and land use statistics, policy making
- Impact of Decision on Vermonters: Direct
- Decision Impact: None
- Decision Type: Final

Capabilities:

- In use: Image processing, feature detection
- Not in use:
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Aerial Imagery
- Data source process: Images are collected through annual surveys and processed
- Types of data generated: Spatial data representing land areas
- Data storage: Secure state database
- Data sharing:

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

LIDAR Processing, an AI to Turns point clouds into 3d models of human and natural landscapes that intends to Improve mapping and project planning.

In use by: VCGI, AOT

Decisions Made or Supported:

- Supported decisions: Project planning
- Impact of Decision on Vermonters: Direct
- Decision Impact: None
- Decision Type: Final

Capabilities:

- In use: Point cloud processing, feature detection
- Not in use:
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: LIDAR point clouds
- Data source process: LIDAR units are used to collect distance data
- Types of data generated: Imagery and 3d spatial data
- Data storage: Secure state database
- Data sharing:

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

Tenable **Lumin and Exposure.ai**, an AI to Enrich data about vulnerabilities with risk evaluation that intends to Improve the security posture of the state's IT infrastructure..

In use by: ADS

Decisions Made or Supported:

- Supported decisions: Priority of vulnerabilities and systems for deeper review and remediation
- Impact of Decision on Vermonters: None
- Decision Impact: None
- Decision Type: Final

Capabilities:

- In use: Predicts potential risk to IT assets from security threats
- Not in use:
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Security Vulnerabilities
- Data source process: Collected through scans of machines and configuration
- Types of data generated: Recommendations and priorities for remediation
- Data storage: Vendor stored
- Data sharing:

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources:

Palo Alto **Wildfire**, an AI to detect malware that intends to Identify and stop malware in real time..

In use by: ADS

Decisions Made or Supported:

- Supported decisions: Identification and prevention of malware spread
- Impact of Decision on Vermonters: Indirect
- Decision Impact: Containment of malware
- Decision Type: Final

Capabilities:

- In use: implement newly detected malware signatures in network monitoring tools
- Not in use: Classifies malicious features and suspicious behaviors of malware files and produces signatures for future identification
- Makes independent decisions? Yes
- 3rd party bias test results: Not tested

Data Used and Produced:

- Types of data inputs: Potential malware files
- Data source process: Collected through scans of machines and network traffic from other users of Palo Alto systems
- Types of data generated: Malware detections
- Data storage: Vendor stored
- Data sharing: Vermont is not currently using the data sharing capabilities

Financial Details:

- Lifecycle Cost:
- Cost Savings:
- Funding Sources: