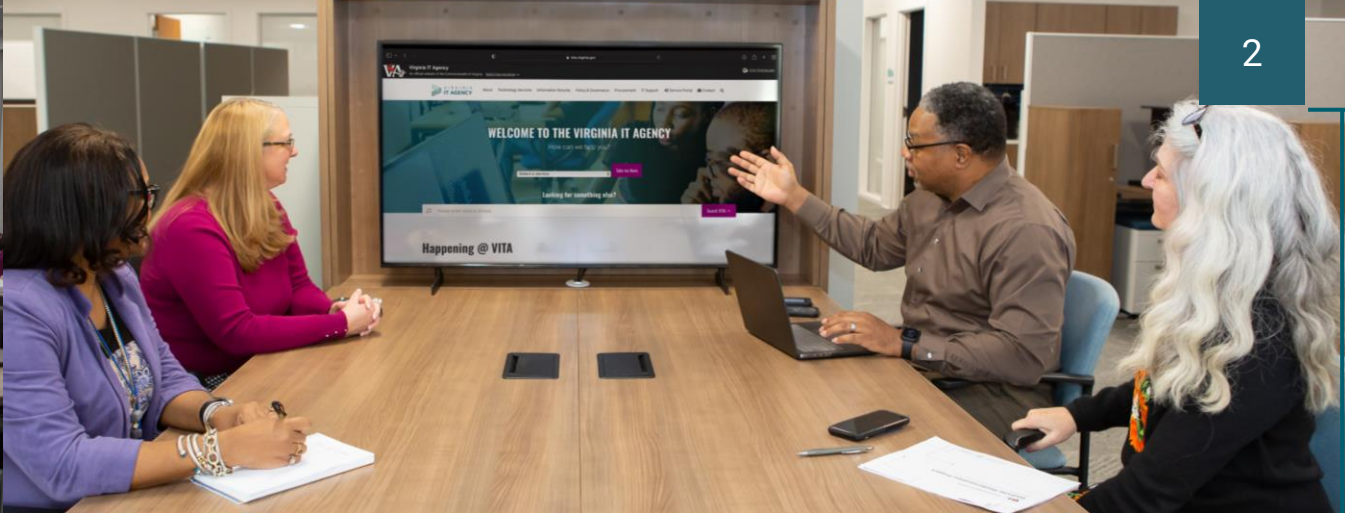




# JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION BRIEF

Robert (Bob) Osmond  
Chief Information Officer of the Commonwealth

November 2024



## Who we are and what we do

VITA is comprised of about 290 professionals who connect, protect and innovate for Virginia, as part of four main statutory roles.

We provide services to agencies with General Assembly oversight and reporting.

1. **Cybersecurity:** Protect people, assets and information from loss, damage and misuse
2. **Infrastructure:** Ensure the operating environment is efficient, secure, available, and delivers the best value
3. **Governance:** Provide policy and standards for technology, best practices, cybersecurity, project management, and enterprise optimization
4. **Procurement:** Develop value-driven statewide IT contracts that enable Commonwealth public bodies to obtain the best value for their organizations (\$1B+ annually with ~ 1/3 being used by localities)



# VITA'S LEADERSHIP AND STAFF



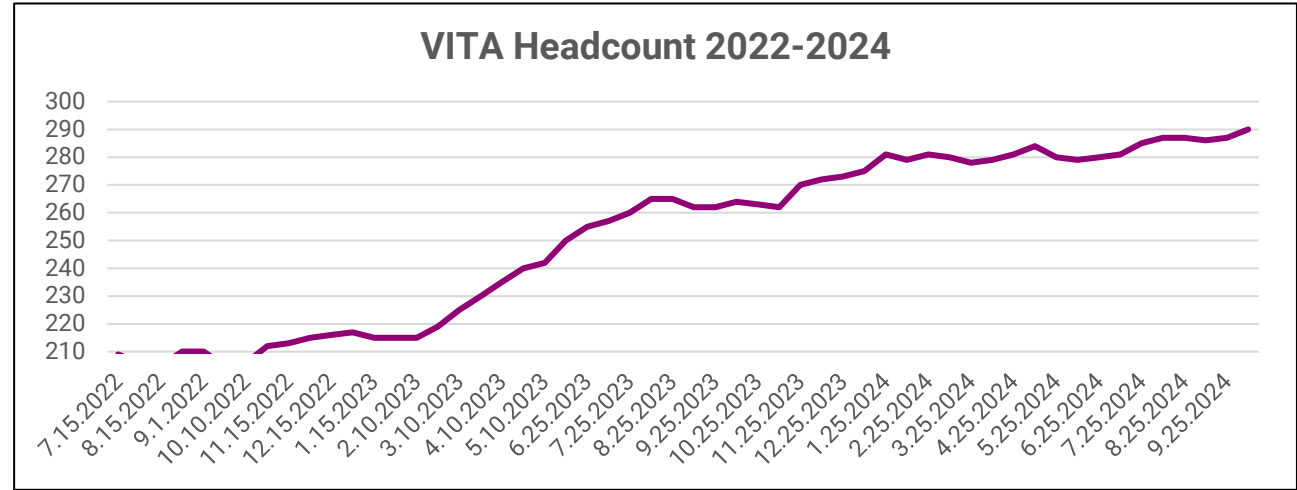
**Robert (Bob) Osmond**  
Chief Information Officer  
of the Commonwealth



**Naveen Abraham**  
Chief of Infrastructure  
Services



**Cynthia Cordova-Edwards**  
Chief Financial Officer



**Michael Watson**  
Deputy CIO and  
CISO of the  
Commonwealth

**Under Recruitment**

Chief of Enterprise  
& Cloud Solutions



**Jason Brown**  
Chief Administrative  
Officer



**Richard Matthews**  
Chief Customer  
Experience Officer

## Staff levels, as of Oct. 18

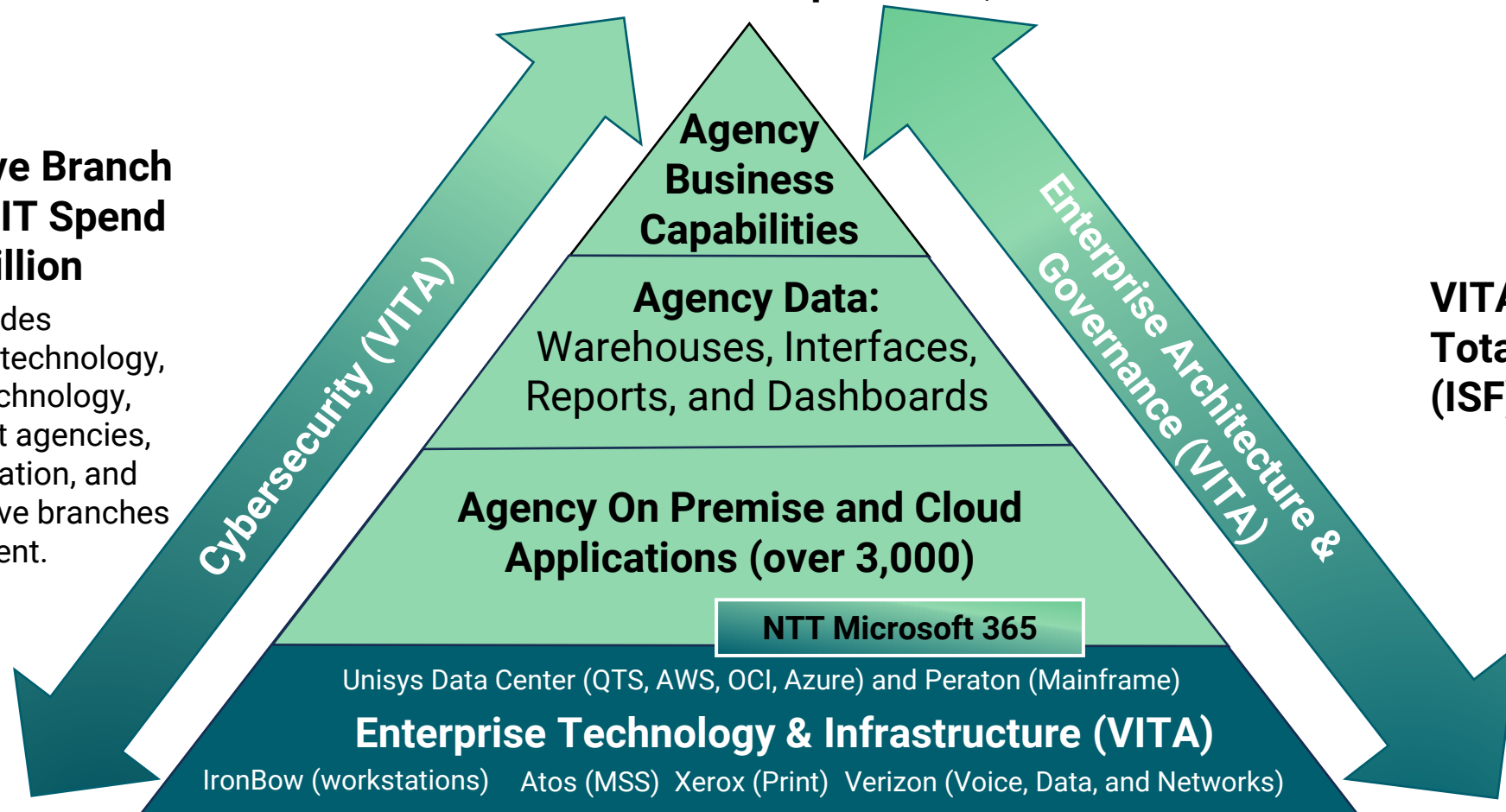
- 290 employees
- Current maximum employee level (MEL) 337.4
- Recruiting vacant positions
- Increased staffing by 38% over the last two years
- Between 10-15% of VITA's workforce includes entry talent

# 2024 COV INFORMATION TECHNOLOGY IS DECENTRALIZED AMONG AGENCIES AND SUPPORTED WITH ENTERPRISE INFRASTRUCTURE

Total Executive Branch IT Spend: \$1,048 Million

**Executive Branch Agency IT Spend \$653 Million**

Note: Excludes operational technology, business technology, independent agencies, higher education, and non-executive branches of government.



**VITA Portion of Total IT Spend (ISF) \$395 Million**

## Commonwealth Technology Strategy



## Data Centers

Physical data centers

QTS Ashburn

QTS Sandston

Virtual data centers

Amazon web services (AWS)

Azure

Oracle cloud infrastructure (OCI)



# 67

## Executive branch agencies



# 1,700

## Locations served in Virginia



## Enterprise services and solutions

Microsoft Power Platform

Website modernization tools and contracts

Application integration services

Business process automation/robotic process automation

Box: enterprise content management

COV Apps and Virginia permit transparency

# Cybersecurity in everything



## Managed storage ~66 petabytes

## Mainframe IBM

## VITA MANAGES



### Computers

66,519 PCs

4,377 Servers



### Communications

31,652 VOIP phones

3,200 Circuits

1,406 Managed network devices



### Printers

2,410 Network



### Mailboxes

72,120 Accounts



### Procurements

Over 200 state contracts

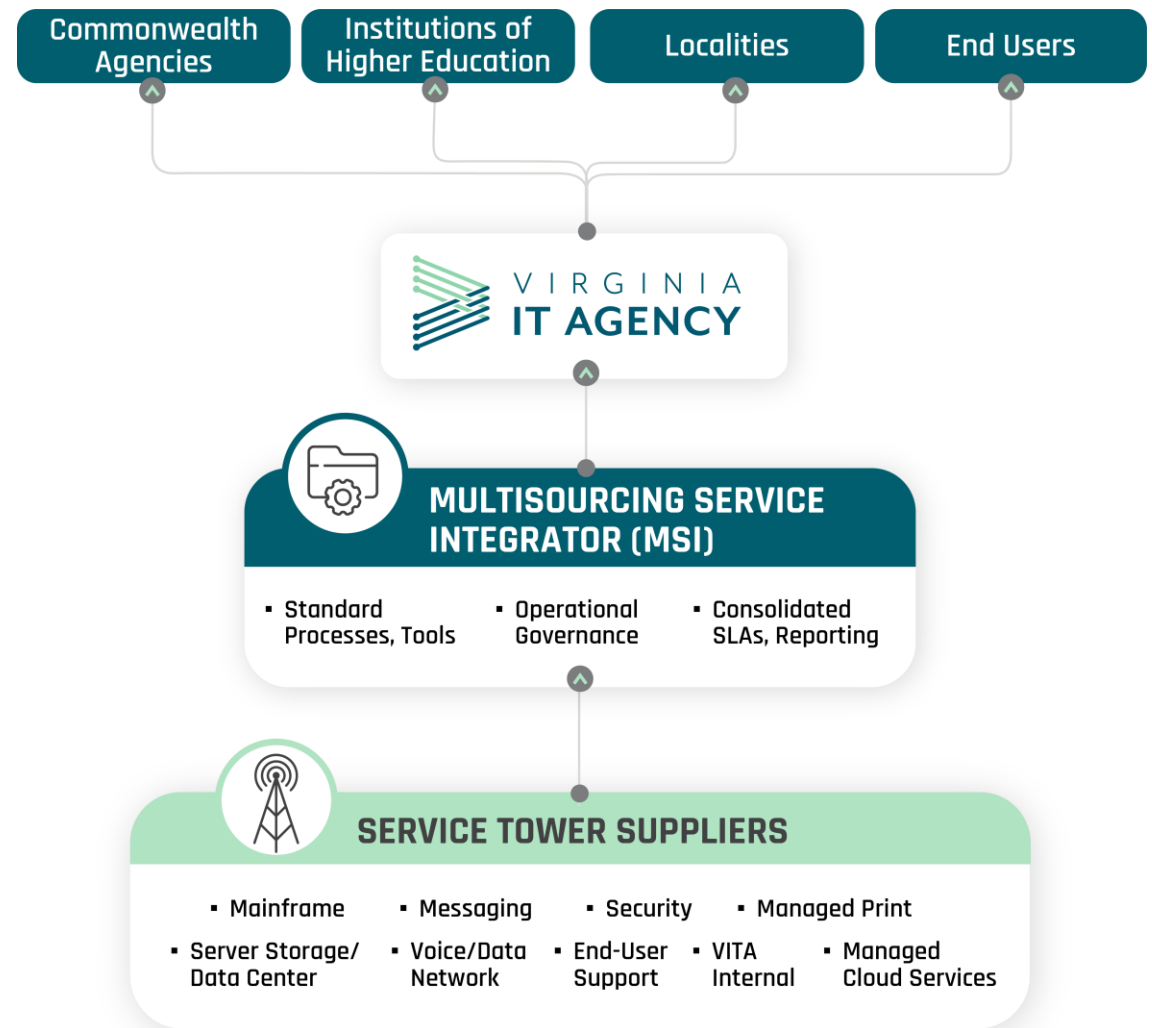
8 Suppliers

400 COV Ramp solutions

\$1 Billion of contract spending

# VITA'S OPERATING MODEL: MULTISUPPLIER

- We have one multi-sourcing integrator (MSI) and supplier areas ("towers") of services
  - All contracts are directly with VITA
  - COV-owned, Vendor-supported
- Tower changes since 2021:
  - Messaging (awarded to NTT DATA)
  - Mainframe (re-awarded to Peraton)
  - Managed print (insourced to VITA)
  - Cloud – Azure (awarded to NTT DATA)
  - Managed Security (pending)
- Future Recompetes:
  - End user compute (CY25)
  - Server/Storage (CY25)
  - Multisourcing service integrator (CY26)
  - Voice, Data, Network (CY26)



# A MATURE MSI MODEL IS WORKING TO DRIVE COST EFFICIENCY

% CHANGE TO CHARGEBACK RATES FY24 TO FY25	
Tower	Average Chargeback Change
Microsoft Email	Decrease by 1.4%
Archive, Record Management	Decrease by 57.1%
End User Computing	Increase by 2-11%
Windows Servers	Decrease by 3-15%
Storage	Decrease by 2-5%
Public Cloud Instances	Decrease by 48-60%
Disaster Recovery	Decrease by 15%
Voice and Data Network	Decrease by 2-5%
Managed Security	Decrease by 3%
Mainframe	Decrease by 32%
Managed Print	Conversion to VPS
MSI	Decrease by 1%
VITA Services	Varies

- VITA operates on a break-even, chargeback model.
- VITA billing includes fixed enterprise components and per unit, consumption-based fees.
- Fixed fees stayed the same from FY24 to FY25, except for a correction of FY23 under-recovery.
- Most consumption fee rates were reduced in FY25.
- Overall industry cost trend of IT goods and services (along with consumer prices in general) is increasing (3% in 2024, 4% in 2023, and 9% in 2022).
- VITA increased costs are primarily due to increased agency consumption.



# MAJOR ACCOMPLISHMENTS OVER THE PAST TWO YEARS

Focusing on continuous improvements and shared accomplishments with our customers:

## Completed in FY23

(details in [2023 VITA presentation](#))

- Messaging migration
- Data center & office moves
- Initial cybersecurity initiatives
- Web Modernization

## Highlights in FY24

- Network improvements
- Commonwealth cybersecurity, moving toward zero trust
- State and Local Cybersecurity Grant Program (SLCGP)
- COV Cloud on Amazon Web Services (AWS)
- Application Innovation (Virginia Permit Transparency)
- Artificial Intelligence in the MSI
- COV Technology Strategy & Roadmap





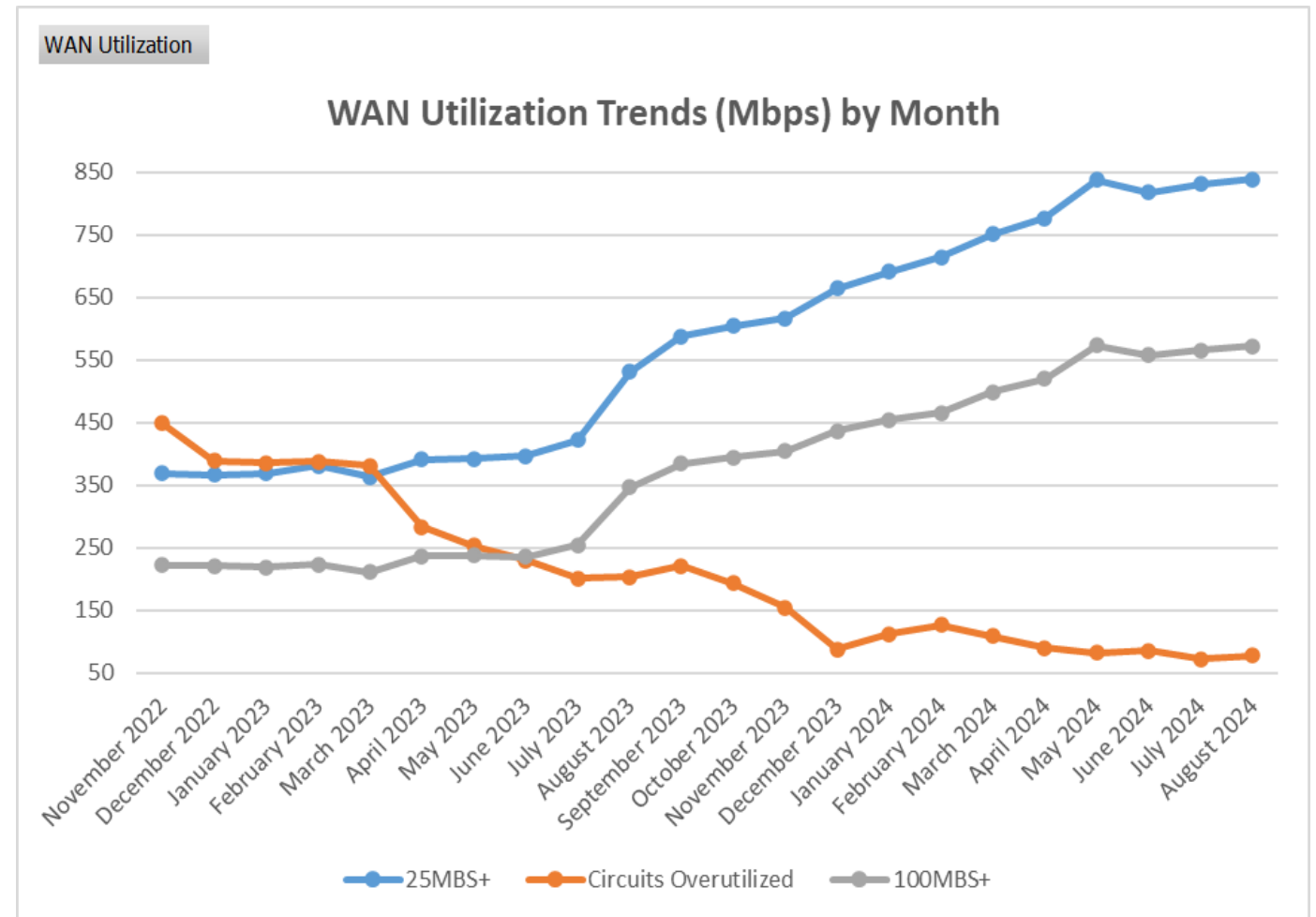
# SPOTLIGHT: COV NETWORK IMPROVEMENTS

## Network capacity improvements:

- Deployed software-defined wide area network (SD-WAN) to over 1,000 sites
- We have almost tripled the number of sites with broadband and reduced by 85% the number of overutilized network sites
- Increased network capacity by 1,300% and growing!

## Network performance tuning (optimization):

- Eliminated non-essential third-party network traffic
- Removed duplicate protocol paths and obsolete firewall rules



# SPOTLIGHT: VITA'S CYBER PROGRAM

## Cyber threats continue to rise (CY2023)

- 106 million attack attempts (55M in 2022)
- 63,000 pieces of malware blocked

## Agency Cyber Program Improvements

- Further developed zero trust posture:
  - Created a strategic plan and subsequently prioritized investments in key areas for immediate benefits, including:
    - Identity and access management
    - Vulnerability management (from 90 days to 30 days for critical/high vulnerabilities)
    - Orchestration and automation
    - Cybersecurity asset management
    - Micro-segmentation
- Presented the 11th annual COV-wide Security Conference
- Hired 30 cybersecurity professionals over the last two years



## Proof Point

For the second year in a row, the COV cybersecurity insurance policy decreased (rate by 19%; deductible by 25%) while maintaining the same level of coverage. The COV is counter to the industry trend.

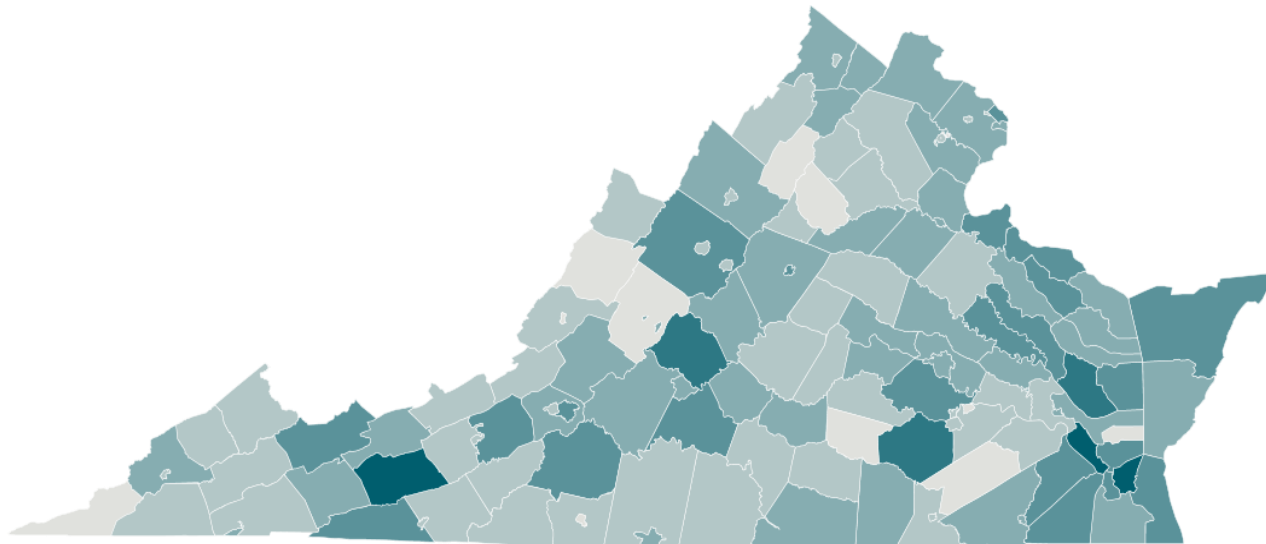
User and system access attempts (suspicious)



# SPOTLIGHT: WHOLE OF COMMONWEALTH CYBERSECURITY

## SLCGP assessments project (June – Oct. 2024):

- Assesses entities' maturity level against Virginia Cybersecurity Plan priorities
- Provides a baseline and data that forms a foundation for subsequent grant program projects and expenditures



91% of cities and counties in the Commonwealth are included via applications from 170 participating entities (as of 8/20/2024)



## 2022

- Incident reporting requirement enacted for all public bodies, state and local (see [reportcyber.virginia.gov](https://reportcyber.virginia.gov))
- [State & Local Cybersecurity Grant Program \(SLCGP\)](#): COV-run, overseen by CISA & FEMA

## 2022-23

- [Virginia Cybersecurity Planning Committee](#) (comprising state and local experts) meets
- [Virginia Cybersecurity Plan](#) approved by feds

## 2024

- Begin disbursing federal and state matching funds for cybersecurity improvements (80% to localities, at least 25% to rural)
- State contracts facilitate rapid locality adoption / deployment



# SPOTLIGHT: COV CLOUD ON AWS

## Scope:

VITA launched a consumption AWS cloud service to enable agencies to rapidly deploy cloud servers, storage, and functions in a "pay for what you use" model.



## Outcomes:

- Agencies now have a modern Commonwealth platform to modernize their applications on AWS.
- We have accelerated the server delivery time for an AWS server from 2-3 weeks to 2 hours. Using automation, the new server is fully provisioned and meets Commonwealth cybersecurity standards.
- The new servers on AWS are consumption billed to agencies, so they only pay for what they use. Over 50% of Commonwealth servers are for non-production (sandbox, development, test) and can be idled when not needed.

## Looking ahead:

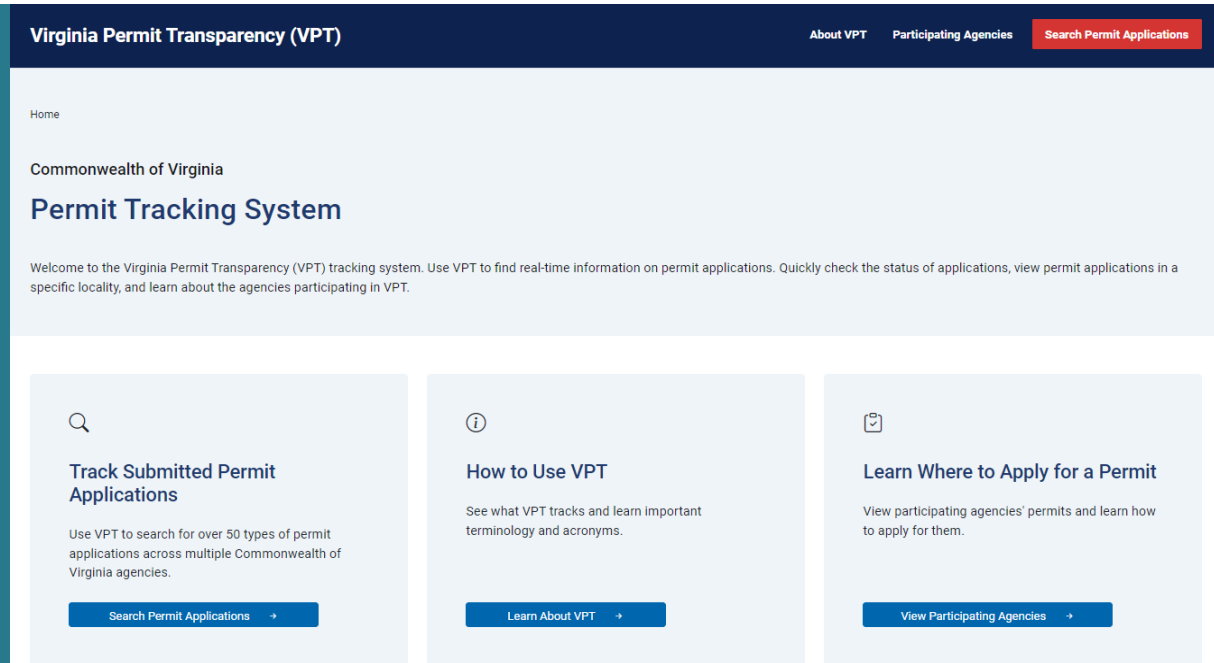
- COV Cloud on Microsoft Azure will launch early 2025, with Oracle and Google Clouds intended later in 2025.

**Scope:** Virginia Permit Transparency (VPT) is a centralized web-based platform that brings openness and transparency to every step (daily status, timelines, etc.) of permitting processes for multiple state agencies.

**Benefits:** Single statewide system for data consolidation, increased efficiency, enhanced user experience, transparency and accessibility

**Outcomes:**

- Since launching the new portal, Virginia end users can review over 100 different types of permits and see the documentation of more than 100,000 permit applications.
- Using both VPT and the predecessor PEEP dashboard, DEQ has managed to reduce average permit processing time by over 70%. VITA led the effort to scale DEQ's solution into a statewide application.
- The Office of Regulatory Management (ORM), VITA, and Agency teams anticipate that other participating agencies will also be able to achieve significant reductions in permit processing times as more permit types are added to the platform.



# SPOTLIGHT: ARTIFICIAL INTELLIGENCE IN THE MSI

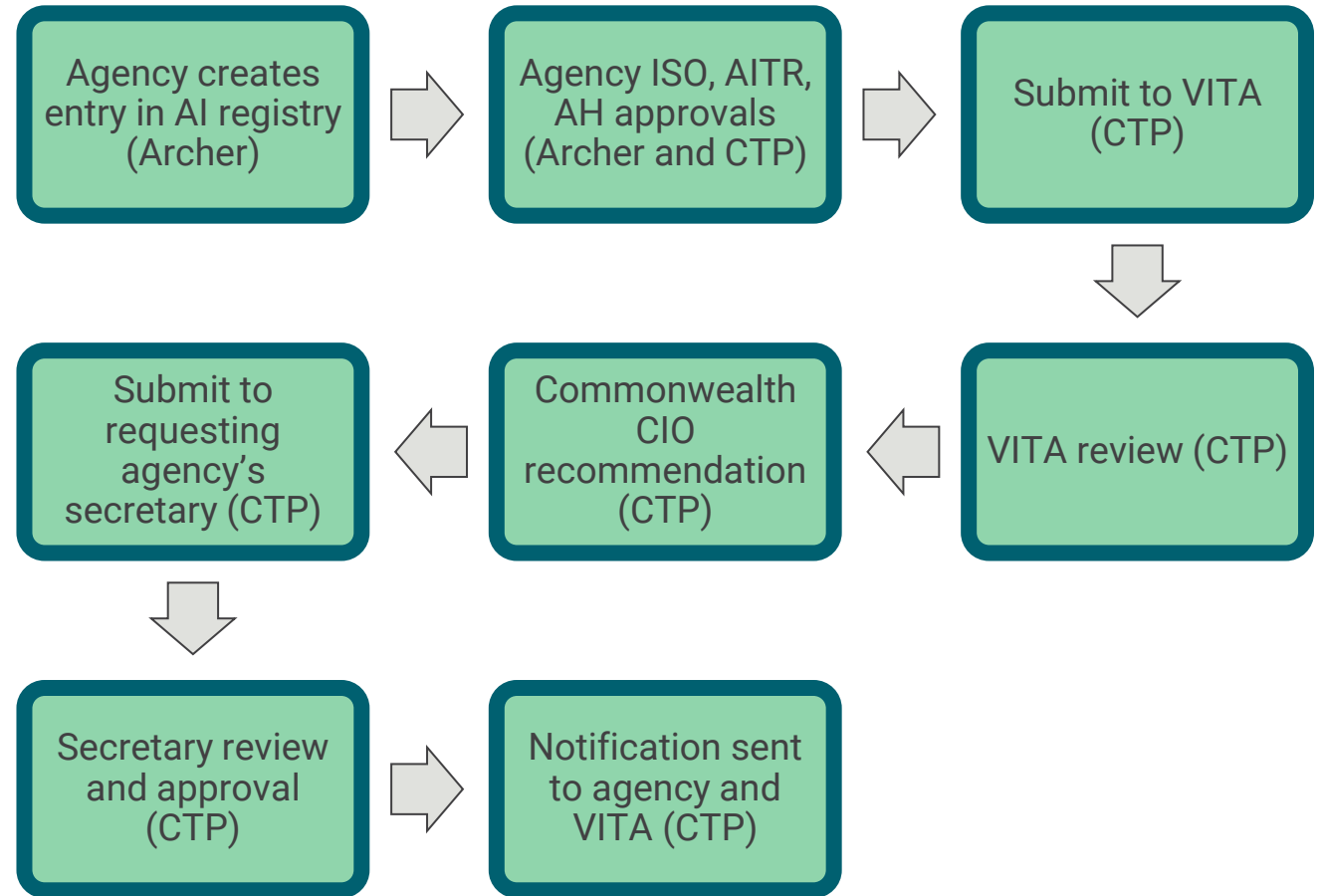
## Definition of AI:

- Systems can adapt and learn on their own using machine learning algorithms that can analyze large volumes of training data to make predictions or recommendations based on future data inputs.

## Registered AI Uses in the MSI Model:

- We currently use several cybersecurity tools with AI-embedded capabilities such as threat countermeasures and data loss prevention. (Splunk, Nessus, Trellix, etc.)
- We use virtual agents on VITA's service management portal (Keystone Edge)
- Our enterprise tools (Microsoft, AWS) have embedded AI capabilities for eDiscovery (MS Purview) and many future functions.

## The COV AI Registry Process





# SPOTLIGHT: CROWDSTRIKE OUTAGE RESPONSE

CrowdStrike issue began; VITA and suppliers worked around the clock throughout the response.

Nearly every remaining server remediated; and focus shifted to individuals' computers for manual fixes.

Friday, July 19

Saturday, July 20

Sunday, July 21

Friday, July 26

Nearly every production server remediated; agencies could return to business.

All workstations remediated. Response complete, return to steady state.

## VITA & Supplier Team:

- remediated 1,700 servers in three days (two of those days over the weekend),
- prioritized key servers to support critical agency functions on Friday,
- temporarily opened a dozen statewide computer clinics (supported by VDOT and DBHDS),
- manually repaired ~ 20,000 affected computers and other assets,
- responded to 4,100 help desk tickets, and
- worked around the clock for days on end to collaborate and communicate about the issue.

# SPOTLIGHT: COV TECHNOLOGY STRATEGY 2023–2027



1. Transform the Virginian experience



2. Deliver with a Commonwealth mindset



3. Protect Virginians through cybersecurity



4. Drive better, faster decision-making through data



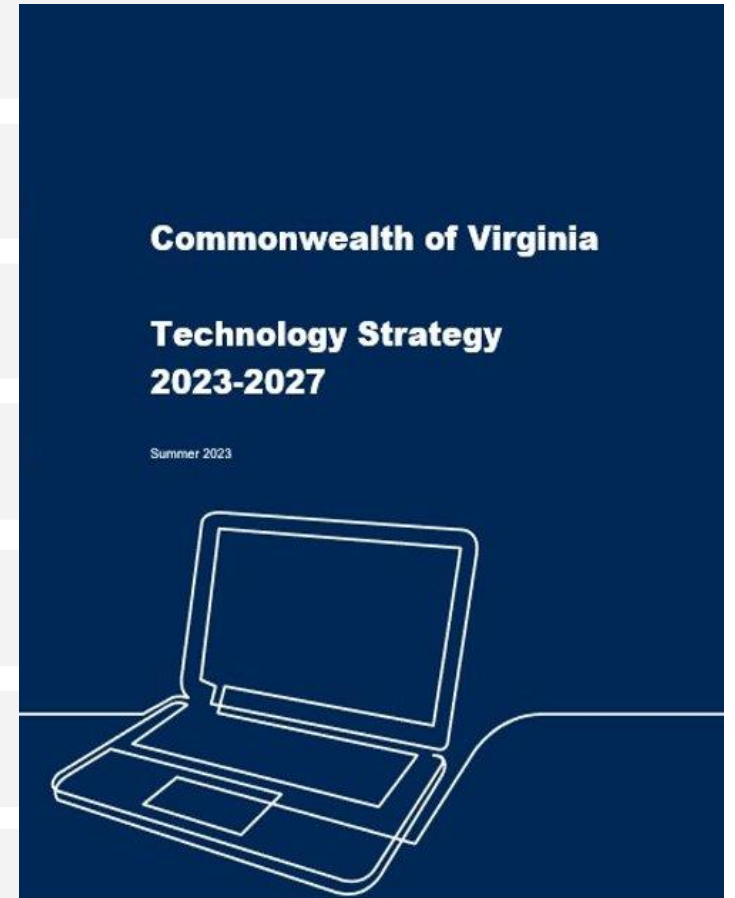
5. Advance government excellence and adaptability



6. Optimize partner ecosystem



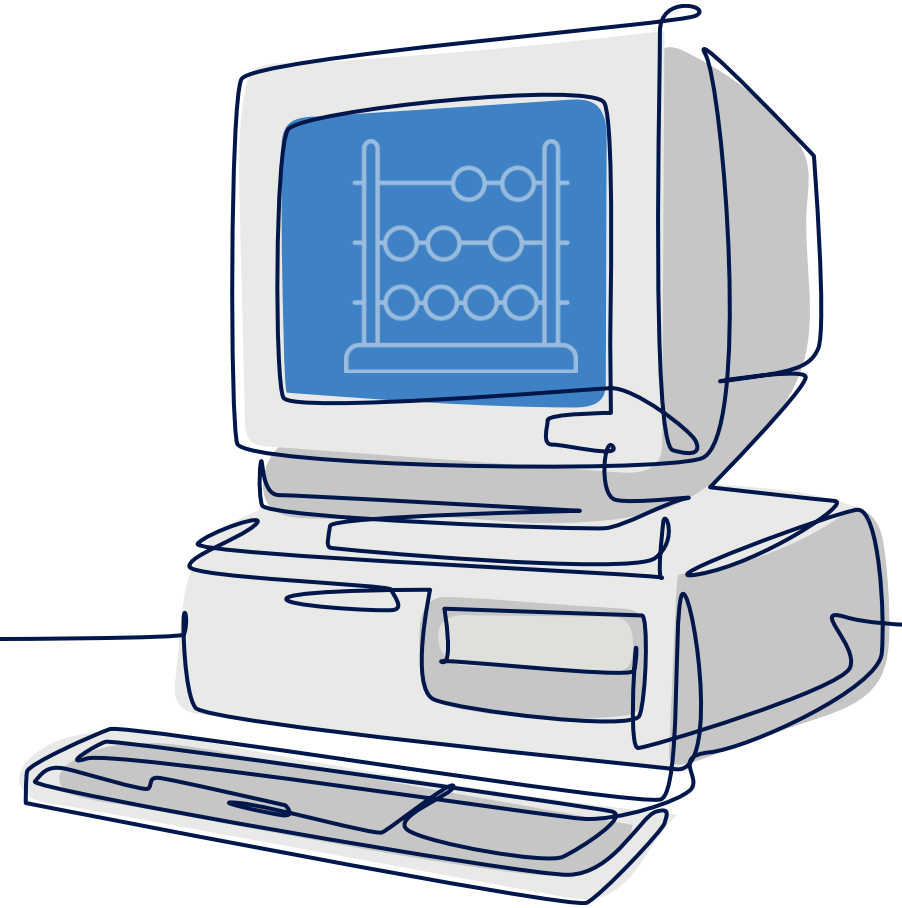
7. Cultivate statewide IT talent capability



[COV-Technology-Strategy-Summer-2023.pdf \(vita.virginia.gov\)](https://vita.virginia.gov/COV-Technology-Strategy-Summer-2023.pdf)

# NEXT: WE ARE FOCUSING MORE ON MODERNIZATION

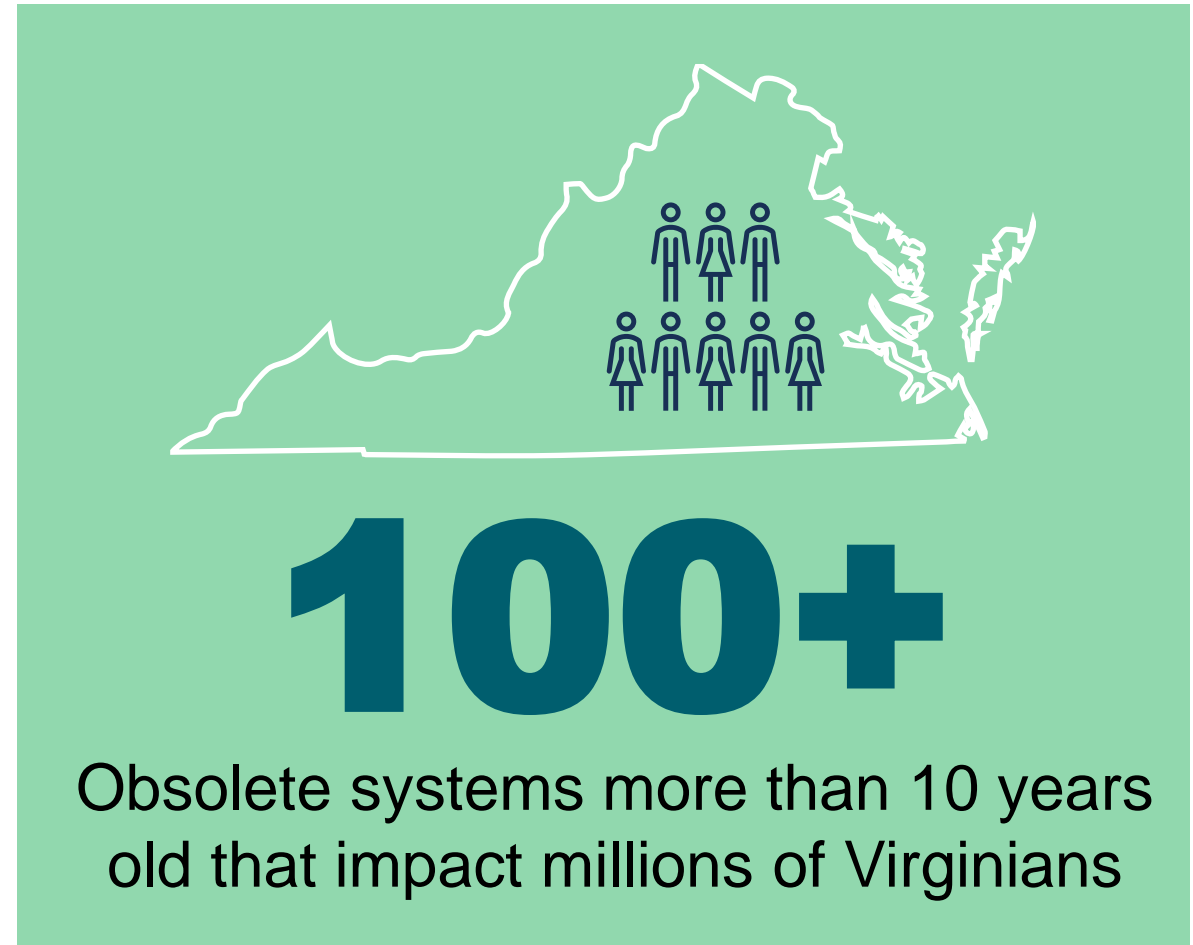
- In the Commonwealth's decentralized model, agencies are responsible for their own agency applications, including securing the funding for maintenance, upgrades and modernization. For agencies supported by VITA, the agency receives IT strategic planning, budget request assistance, and COV project oversight. "Modernized" means:
  - The software is fully supported technically
  - Cybersecurity vulnerabilities are addressed
  - The application meets agency business requirements
  - The system and application sustainability are assured
- Of the ~2,500 systems and applications (VITA supported agencies):
  - 15% are over 20 years old
  - 42% are over 10 years old
  - 66% are over 5 years old
- **With critical improvements completed in the network and cloud infrastructure, agencies can now focus more on the modernization of their applications and data.**





# IDENTIFYING MOST CRITICAL TECHNOLOGY MODERNIZATION NEEDS: AGENCY APPLICATION ASSESSMENT CONDUCTED

- Early 2024, VITA completed a needs assessment with customer agencies to document their most critical system and application modernization priorities.
- The assessment yielded 123 proposed system and application modernization projects from 49 Commonwealth agencies (\$477 million in needed modernization funding over multiple years).
- Obsolete system characteristics include critical security vulnerabilities, twilight or sunset technology, misalignment with agency business needs, and often higher maintenance costs.
- These systems provide capabilities that directly impact public safety, health and education for all Virginians.



## OVER THE NEXT 9-12 MONTHS...



As part of the FY26 budgetary process, VITA has encouraged agencies to submit decision packets for their most critical application modernization needs. The packets should explain the value of the application(s) and reasons for modernization.



VITA is developing a Project Management Center of Excellence to provide stronger and elevated project management governance, coaching, and staffing for high-risk projects (IT projects over \$5M).



The VITA enterprise architecture team is identifying common application capabilities that are used across multiple agencies to create opportunities for state-maintained shared services. Shared services avoid building duplicate agency applications.



VITA is enhancing our enterprise solutions and cybersecurity teams to include more business analysts, solution architects, cybersecurity staff, and software developers. This team will create more shared enterprise applications, remediate cybersecurity risks, and help agency IT teams as needed.

# THANK YOU FOR YOUR SUPPORT AND COMMITMENT

- We are grateful for the General Assembly's continued support for technology in the Commonwealth. Together, we have:
  - Delivered common enterprise security awareness training
  - Enacted Commonwealth-wide incident reporting
  - Established the State & Local Cybersecurity Grant Program
  - Increased cyber staffing and IT resources
  - Expanded network capacity
  - Strengthened cybersecurity confidentiality
  - Modernized many critical applications
- We look forward to our continued partnership to continuously improve our technology and cybersecurity programs. As we look ahead, we invite the General Assembly to receive ongoing briefings on the state of technology and cybersecurity.



Trusted.  
Secure.  
COV-Ready.