IT Strategy Board

March 6, 2020

NCDIT

NORTH CAROLINA
DEPARTMENT OF
INFORMATION
TECHNOLOGY

Board Member Powers and Duties

Tracy Doaks

Secretary and State CIO

NCDIT NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY

Board Member Powers and Duties

(1) To advise the State CIO on policies and procedures to develop, review, and update the State Information Technology Plan.

(2) To establish necessary committees to identify and share industry best practices and new development and to identify existing State information technology problems and deficiencies.

(3) To establish guidelines regarding the review of project planning and management, information sharing, and administrative and technical review procedures involving State-owned or State-supported technology and infrastructure.

(4) To establish ad hoc technical advisory groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs.

Powers and Duties (continued)

(5) To assist the State CIO in recommending to the Governor and the General Assembly a prioritized list of enterprise initiatives for which new or additional funding is needed.

(6) To recommend business system technology projects to the Department and the General Assembly that meet the following criteria:

a. A defined start and end point.

b. Specific objectives that signify completion.

c. Designed to implement or deliver a unique product, system, or service pertaining to business system technology.

(7) To develop and maintain a five-year prioritization plan for future business system technology projects.

Ethics Awareness, Conflict of Interest Reminder, Public Records

Anna Szamosi
Deputy General Counsel

NCDIT

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Ethics Awareness

- Ethics Act
  - As of today, this board is not covered by the Ethics Act
  - If the Commission does determine that this board is covered by the Ethics Act, all members will be required to complete a Statement of Economic Interest (SEI) and Ethics training, if you have not already.
- Regardless, the proposed bylaws also prohibit members from participating in discussions or votes where you may have a conflict of interest

Public Meetings

- All official meetings of public bodies are open to the public
- Official meetings for this board commence when a quorum of members is met
- Meetings can be closed for certain reasons, including when the board needs to discuss confidential information, confidential IT procurement bids, and so forth
- DIT staff will assist with required notice and posting requirements for the board

Public Records

"Public record" or "public records" shall mean all documents, papers, letters, maps, books, photographs, films, sound recordings, magnetic or other tapes, electronic data-processing records, artifacts, or other documentary material, regardless of physical form or characteristics, made or received pursuant to law or ordinance in connection with the transaction of public business by any agency of North Carolina government or its subdivisions.

- Public records are the property of the people of North Carolina
- Unless an exception applies, NCDIT must turn over records to anyone who makes a request
- This includes emails, text messages, voicemail recordings and transcripts, etc.

- Any emails, texts, notes, etc. created in connection with your duties as a member of this board will likely be considered a public record

Exceptions to the Public Records Act

- Communications of an attorney to an agency or board regarding pending litigation or processing where the agency is a party to or is directly affected by the litigation or proceeding
- Trade secrets (intellectual property, vendor customer lists)
- Personally identifying information
- Certain meeting minutes of closed public body meetings
- Network & security features of IT systems
- Procurement information prior to award to a vendor
- Security and risk assessment reports

Applicability to the IT Strategy Board

- Any emails, texts, notes, etc. created in connection with your duties as a member of this board will likely be considered a public record
- This includes records contained in your personal email or on personal devices created while transacting official business for the board
- If you do not already have a state-issued email account, NCDIT can issue you one to use for board purposes

Board Member Service Requirement

- Per the Office of State Human Resources, all members of state boards and commissions are considered temporary state employees, even if they are not paid
- All members who are not already state employees must complete an application form and an Employment Eligibility Verification form (I-9)
  - The I-9 form requires copies of ID, SSN card, etc.
  - Bring documentation to next meeting. A representative from OSHR will be in attendance to collect this information.

Review Draft Bylaws for Consideration

Anna Szamosi

Deputy General Counsel

NCDIT NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY

IT Strategy Board Bylaws

- G.S. 143B-1337 requires that the board establish bylaws that contain rules governing your meeting procedures
- Please review the bylaws that will be provided to you, and provide feedback by the end of March

Overview of the Draft Bylaws

- Article 1:
  - Name
  - Purpose
  - Membership of the Board
- Article 2:
  - Powers & duties
  - Chair & vice-chair
  - Member service
  - Meeting logistics
- Article 3:
  - Committees
- Article 4:
  - Ad hoc technical advisory groups
- Article 5:
  - Amendments

Questions?

Introduction to NCDIT

Tracy Doaks
Secretary and State CIO

NCDIT
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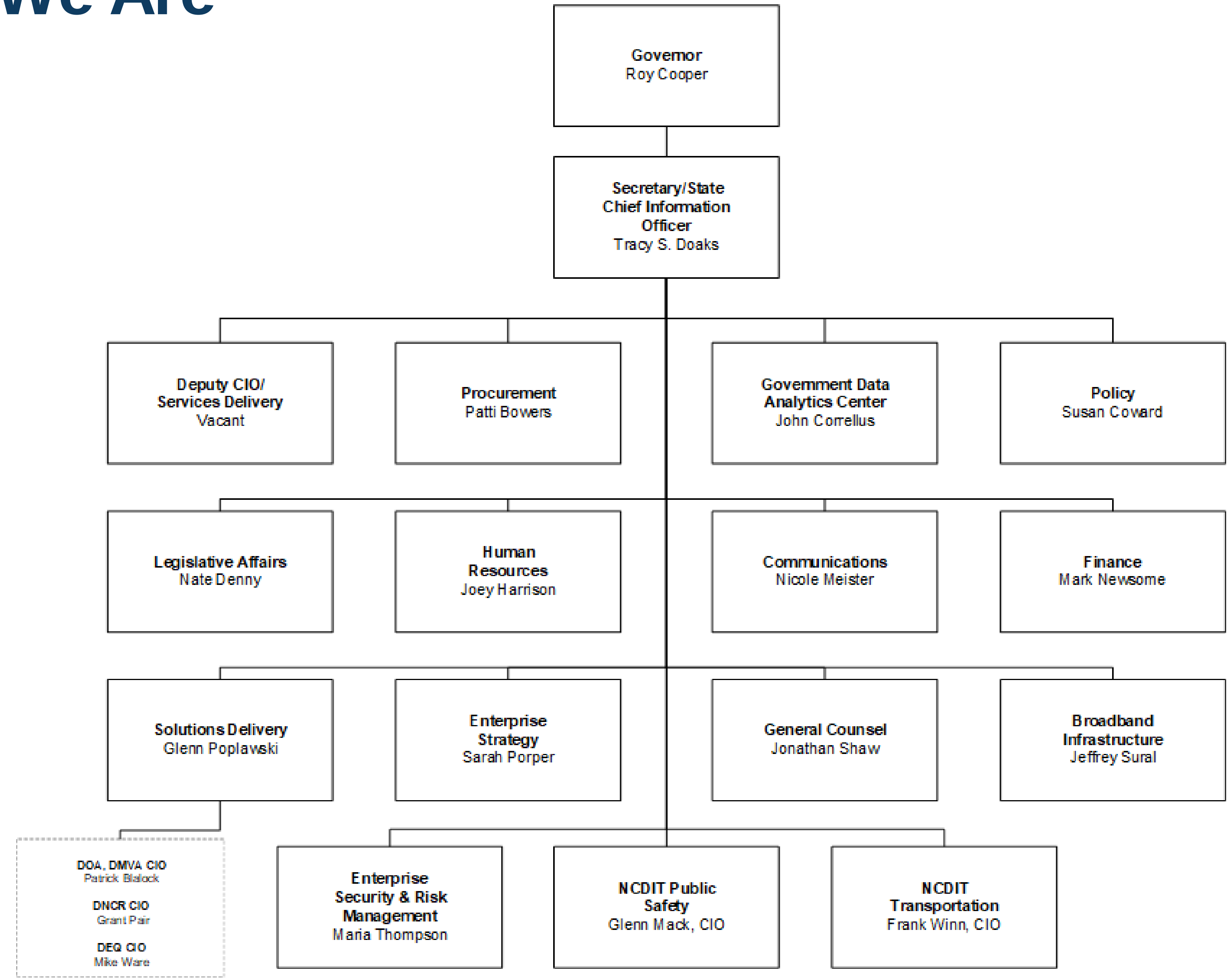
Who We Are

Mission: To promote a stronger North Carolina that connects customers, citizens, business, education and government

Purpose: To innovatively unite business and IT to meet the needs of our citizens by delivering shared services to state agencies, local governments, and educational institutions across the state

Who We Are



Governor
Roy Cooper

Secretary/State Chief Information Officer
Tracy S. Doaks

Deputy CIO/ Services Delivery
Vacant

Procurement
Patti Bowers

Government Data Analytics Center
John Correllus

Policy
Susan Coward

Legislative Affairs
Nate Denny

Human Resources
Joey Harrison

Communications
Nicole Meister

Finance
Mark Newsome

Solutions Delivery
Glenn Poplawski

Enterprise Strategy
Sarah Porper

General Counsel
Jonathan Shaw

Broadband Infrastructure
Jeffrey Sural

DOA, DMVA CIO
Patrick Blalock

DNCR CIO
Grant Pair

DEQ CIO
Mike Ware

Enterprise Security & Risk Management
Maria Thompson

NCDIT Public Safety
Glenn Mack, CIO

NCDIT Transportation
Frank Winn, CIO

February 2020

Our History

- 1983 - created as the State Information Processing Services in the Office of State Controller
- 1997 - moved to the Department of Commerce, then to the Office of the Governor as the Office of Information Technology Services.
- 2015 - established in legislation as a cabinet-level department to unify state IT resources to gain efficiencies

Unifying IT Resources

- Completing in two phases
- **Phase I**
  - Transition IT employees under the operational control of NCDIT
  - Employees will remain in their current physical locations
  - HR actions, activities and decisions are responsibility of NCDIT upon the date of transfer

Unifying IT Resources

- Nine agencies transferred to date
  - Transportation
  - Public Safety
  - Environmental Quality
  - Military and Veterans Affairs
  - Administration
  - Cultural and Natural Resources
  - Office of the Governor
  - Budget and Management
  - Human Resources

Unifying IT Resources

- **Phase II**
  - Will focus on analysis of business operations and processes to ensure the most effective and efficient use of IT resources
  - NCDIT will also assume full budgetary authority of the positions through the implementation of a new fiscal model

NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY

VISION: A CULTURE OF INNOVATION AND OPERATIONAL EXCELLENCE

COLLABORATION BETWEEN STATE AND LOCAL GOVERNMENT

Forge strong partnerships with local governments and build awareness of available NCDIT resources, including IT procurement, shared services and cybersecurity tools.

DIGITAL TRANSFORMATION

Leverage digital technology to make government services more accessible and interactive to achieve better outcomes for our customers and residents.

BROADBAND

Ensure all North Carolinians have access to an affordable high-speed internet connection anytime, anywhere.

CYBERSECURITY

Continue to be a leader in cybersecurity through a whole-of-state approach that protects the state, its residents and their data.

WORKFORCE

Invest in our people to ensure we have the necessary skills to be agile and adapt to changing technology and business needs.

This investment also will allow us to recruit and retain talented people with a passion to innovate and serve.

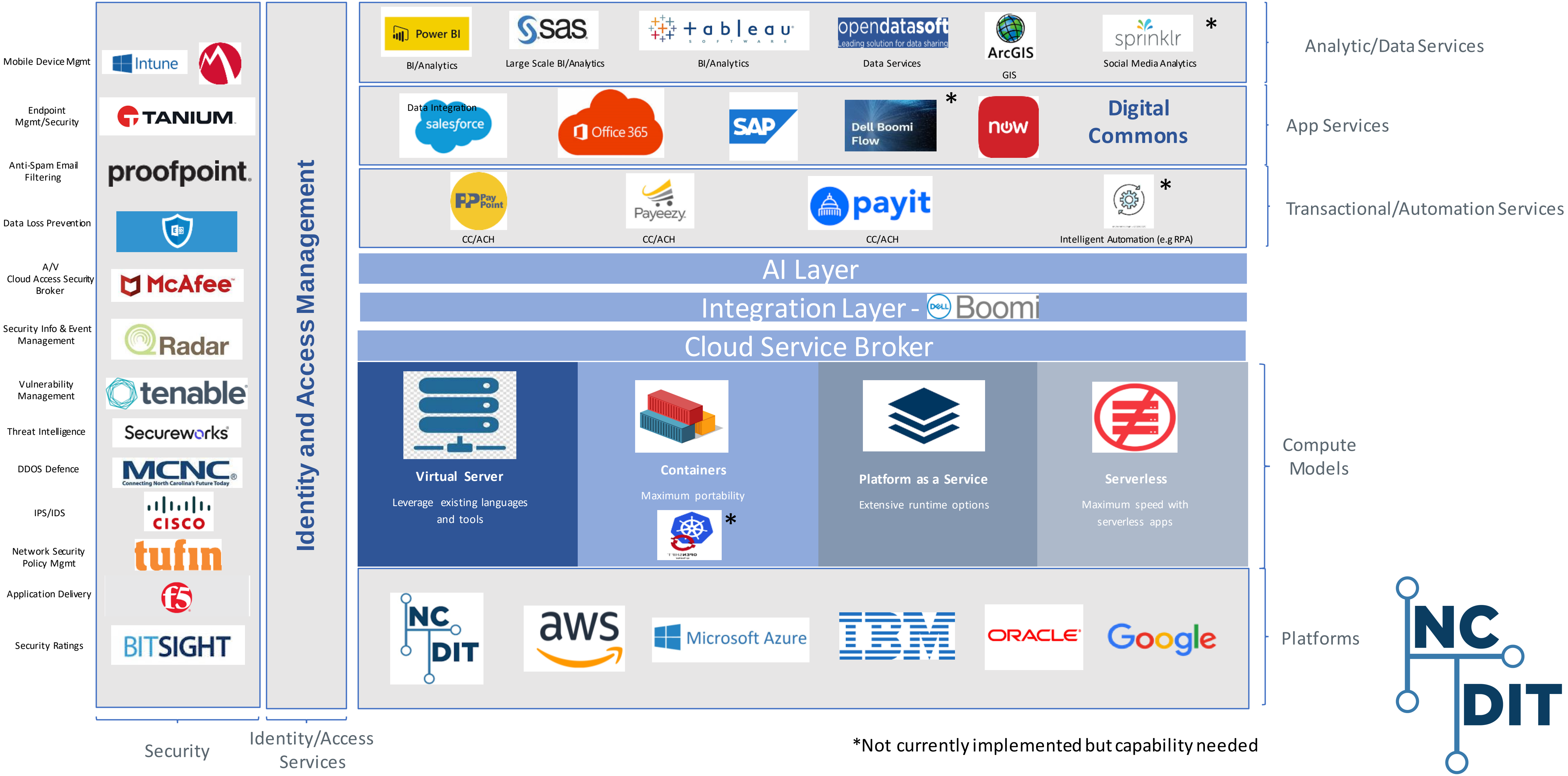
Service Delivery and IT Solutions

Glenn Poplawski

State Solutions Director

NC DIT

Digital Technology Ecosystem



Common Interoperable framework

Mobile Device Mgmt	Intune
Endpoint Mgmt/Security	TANIUM
Anti-Spam Email Filtering	proofpoint.
Data Loss Prevention	
A/V Cloud Access Security Broker	McAfee
Security Info & Event Management	Radar
Vulnerability Management	tenable
Threat Intelligence	Secureworks
DDOS Defence	MCNC Connecting North Carolina's Future Today
IPS/IDS	cisco
Network Security Policy Mgmt	tufin
Application Delivery	f5
Security Ratings	BITSIGHT

Identity and Access Management

Analytic/Data Services:
- Power BI – BI/Analytics
- sas – Large Scale BI/Analytics
- tableau software – BI/Analytics
- opendatasoft Leading solution for data sharing – Data Services
- ArcGIS – GIS
- sprinklr – Social Media Analytics *

App Services:
- Data Integration salesforce
- Office 365
- SAP
- Dell Boomi Flow *
- now
- Digital Commons

Transactional/Automation Services:
- PayPoint – CC/ACH
- Payeezy – CC/ACH
- payit – CC/ACH
- Intelligent Automation (e.g RPA) *

AI Layer

Integration Layer - DELL Boomi

Cloud Service Broker

Compute Models:
- **Virtual Server** – Leverage existing languages and tools
- **Containers** – Maximum portability *
- **Platform as a Service** – Extensive runtime options
- **Serverless** – Maximum speed with serverless apps

Platforms:
- NC DIT
- aws
- Microsoft Azure
- IBM
- ORACLE
- Google

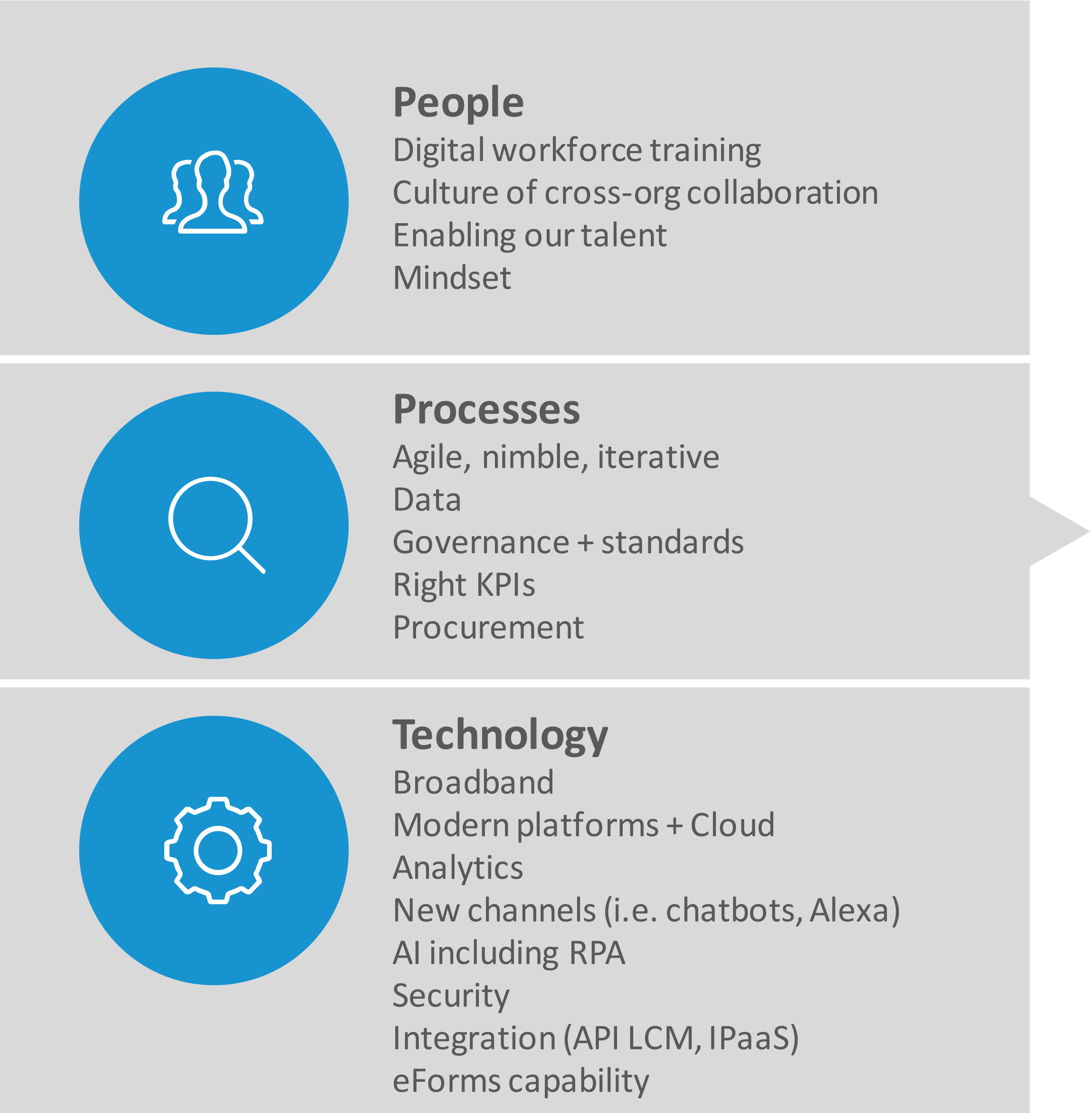
Security

Identity/Access Services

*Not currently implemented but capability needed

NC DIT

Enabling Digital Transformation



People
Digital workforce training
Culture of cross-org collaboration
Enabling our talent
Mindset

Processes
Agile, nimble, iterative
Data
Governance + standards
Right KPIs
Procurement

Technology
Broadband
Modern platforms + Cloud
Analytics
New channels (i.e. chatbots, Alexa)
AI including RPA
Security
Integration (API LCM, IPaaS)
eForms capability

Benefits for Citizens

- Simpler, faster, more intuitive experiences with state government.
- Transparent, open, accessible government
- Security and privacy

Benefits for State Government

- Cost savings and efficiencies
- Decreased call center volume and fewer office visits
- Engaged, productive staff
- Better positioned for workforce of the future

Learn more: DIT IT Plan:
https://it.nc.gov/roadmap

NC DIT

Cybersecurity

Maria Thompson

State Risk Officer

Enterprise Security and Risk Management Office (ESRMO)

Mission

Provides leadership in the development, delivery and maintenance of an information security and risk management program that safeguards the state's information assets and the supporting infrastructure against unauthorized use, disclosure, modification, damage or loss.

ESRMO

- Supports a comprehensive statewide program that encompasses information security implementation, monitoring, threat and vulnerability management, cyber incident management and enterprise business continuity management.
- Works with executive branch agencies to help them comply with legal and regulatory requirements, the statewide technical architecture, policies, industry best practices, and other requirements.
- Works with state agencies, federal and local governments, citizens and private-sector businesses to help manage risk to support secure and sustainable IT services to meet the needs of North Carolinians.

Why is Cybersecurity Important?

Key component of any risk management strategy

- State and local government IT struggle with obtaining and building it into business requirements
- Shadow IT activities are prevalent throughout the state
- State agencies, local government and academia are resource constrained – lack of manpower
  - Local county networks host critical services for the state
    - Critical infrastructure, e.g. elections, water, power etc.
    - Life and safety services, e.g. 911, health, public safety
- Current decentralized cyber practices, ad hoc cyber budgeting and lack of accountability for cyber risks leads to inconsistent cyber approach and poor risk management
  - Limited network visibility
  - Legacy systems with no maintenance or patch support
  - Ineffective identity, credential and access management
  - Slow incident response capabilities

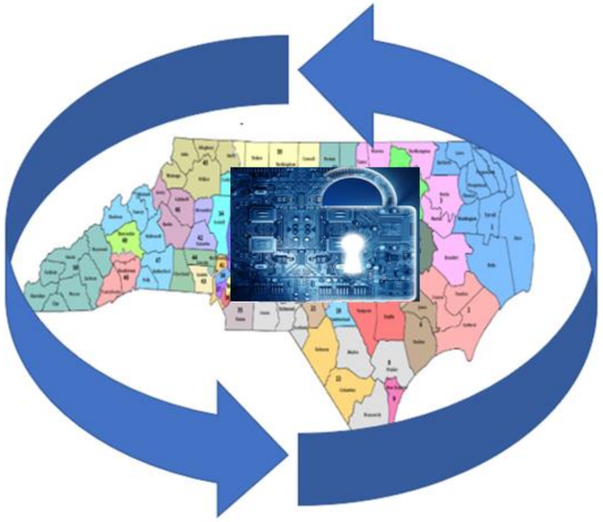
Strategic Objectives

Key Initiatives

- Develop, implement and fund a statewide cyber incident response capability to support secure citizen engagements
- Reduce the risks to the state’s critical infrastructure by collaborating with local government
- Advance the state’s cyber workforce through education and collaboration with K-12 and higher education
- Protect and secure statewide government and academic networks
- Assess, trend and evaluate emerging cyber risks to the state
- Support federal and state partners in combatting cybercrime targeting citizens and small businesses
- Establish a statewide privacy program to address growing concerns on data management practices

Whole-of-State Cyber Approach

Eliminating all risks is virtually impossible— unifying cyber, managing risks and building resilience will be the key to a more secure state!



- BitSight monitoring of local county infrastructure
- Pilot program for continuous monitoring of local county network traffic
- Developed of Statewide Significant Cyber Incident Plan
- Established statewide information sharing under HB 217
- Cyber incident response and training support utilizing National Guard Defensive Cyber Operations team and local IT Strike teams

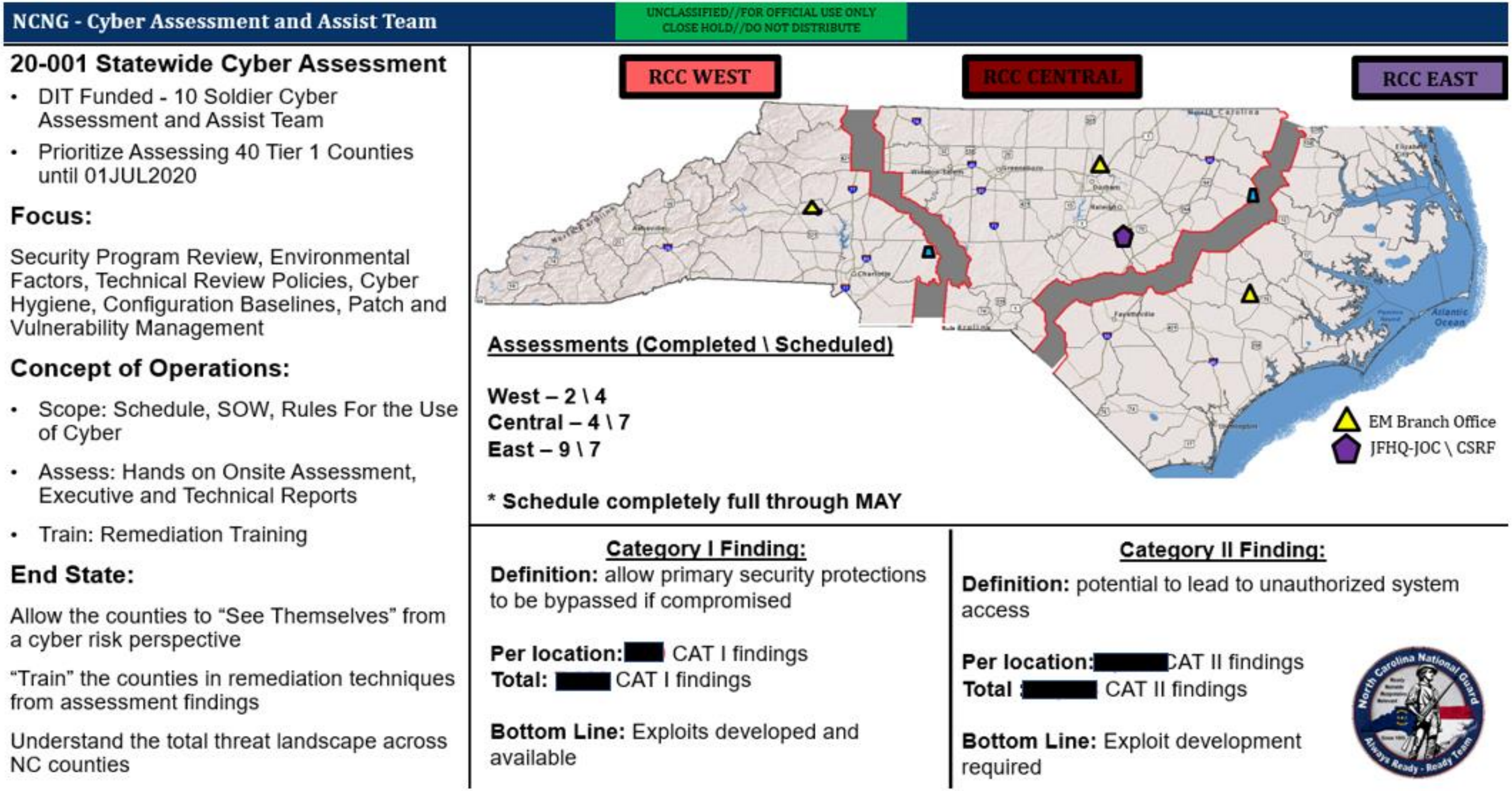
NC DIT

NC Reported Ransomware Attacks

Date	Affected Entity	Ransomware /Malware
Feb. 2016	Durham	Unknown
Dec. 2017	Mecklenburg County	LockCrypt
Feb. 2018	Davidson County	SamSam
May 2018	Pasquotank County	Scarab
Oct. 2018	Onslow County Water and Sewer	Ryuk
Nov. 2018	City of Durham	Unknown
March 2019	Orange County (hit 3 times in 6 yrs)	Ryuk
March 2019	Pasquotank-Camden EMS	Unknown
March 2019	Robeson County	Ryuk
April 2019	City of Greenville	RobinHood
July 2019	Richmond Community College	Ryuk
Aug. 2019	Lincoln County Sheriffs Office/911 (X2)	DopplePaymer
Sept. 2019	NC Wildlife Resources Commission	DopplePaymer
Oct. 2019	NC State Bar	Neshta (dropper)
Oct. 2019	Columbus County School System (x17)	Ryuk
Oct. 2019	ABC Board (x21)	Sodinokibi
Dec. 2019	EBCI	Sodinokibi (Insider Threat)
Jan. 2020	Duplin County	Ryuk

NC DIT

Govt Supporting Govt – NC National Guard



NCNG - Cyber Assessment and Assist Team

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20-001 Statewide Cyber Assessment

- DIT Funded - 10 Soldier Cyber Assessment and Assist Team
- Prioritize Assessing 40 Tier 1 Counties until 01JUL2020

Focus:

Security Program Review, Environmental Factors, Technical Review Policies, Cyber Hygiene, Configuration Baselines, Patch and Vulnerability Management

Concept of Operations:

- Scope: Schedule, SOW, Rules For the Use of Cyber
- Assess: Hands on Onsite Assessment, Executive and Technical Reports
- Train: Remediation Training

End State:

Allow the counties to "See Themselves" from a cyber risk perspective

"Train" the counties in remediation techniques from assessment findings

Understand the total threat landscape across NC counties

Assessments (Completed \ Scheduled)

West – 2 \ 4
Central – 4 \ 7
East – 9 \ 7

*** Schedule completely full through MAY**

Category I Finding:

Definition: allow primary security protections to be bypassed if compromised

Per location: [redacted] CAT I findings
Total: [redacted] CAT I findings

Bottom Line: Exploits developed and available

Category II Finding:

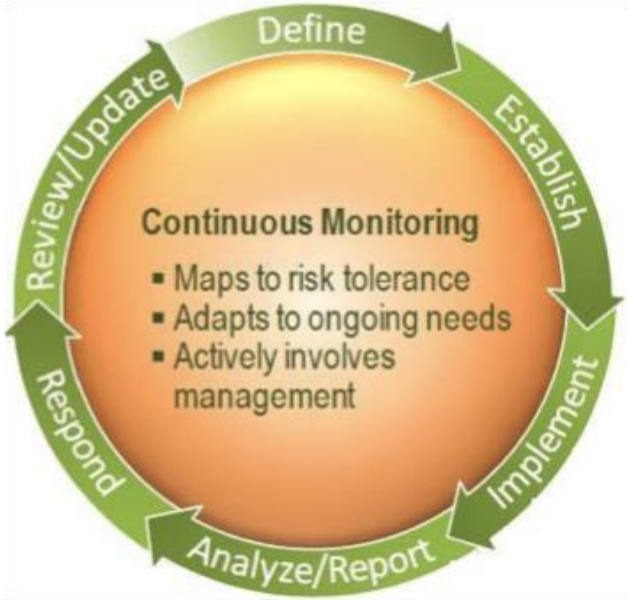
Definition: potential to lead to unauthorized system access

Per location: [redacted] CAT II findings
Total [redacted] CAT II findings

Bottom Line: Exploit development required

Continuous Monitoring & Annual Compliance Reporting

- N.C.G.S. 143B-1376 requires the State CIO to annually assess the ability of each agency and their contracted vendors to comply with the current enterprise-wide set of security standards. The information gathered is used to build out the State IT Plan. These assessments include, at a minimum:
  1. Rate of compliance with the enterprise-wide security standards
  2. Estimate of cost to implement deficient security measures
  3. Assessment of Security Organization
     - Security practices
     - Security industry standards
     - Network security architecture
     - Current expenditures of state funds for IT security



- ESRMO has developed a Continuous Monitoring Plan that requires all agencies to complete an annual risk and security assessment and have ongoing processes in place to assess the current posture of the environment.
  - All critical systems must obtain a third-party assessment within a **3-year cycle**. In the off-years, agencies conduct an annual self assessment..

General Discussion & Q & A

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Let’s Connect!

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@BroadbandIO
@ncicenter

NC Department of Information Technology

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