CYBER SECURITY IN LOCAL GOVERNMENT.

RAY DESJARDINS, CGCIO

IT SENIOR DIVISION MGR, CHARLOTTE COUNTY

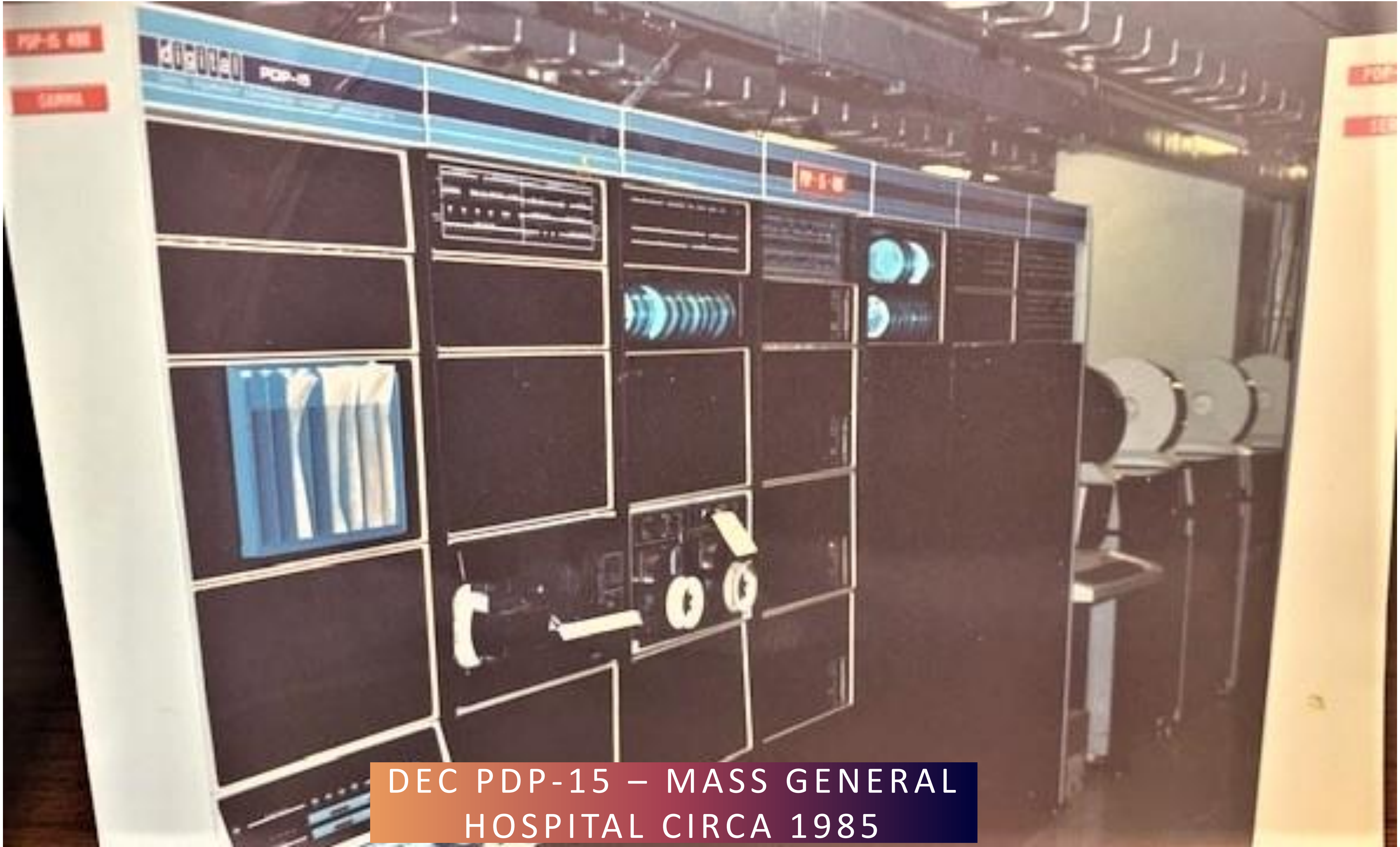
AGENDA

- ➢ INTRODUCTION
- ➢ CURRENT STATE
- ➢ WHAT DOES IT MEAN FOR LOCAL GOVERNMENT
- ➢ WHAT CAN/MUST WE DO

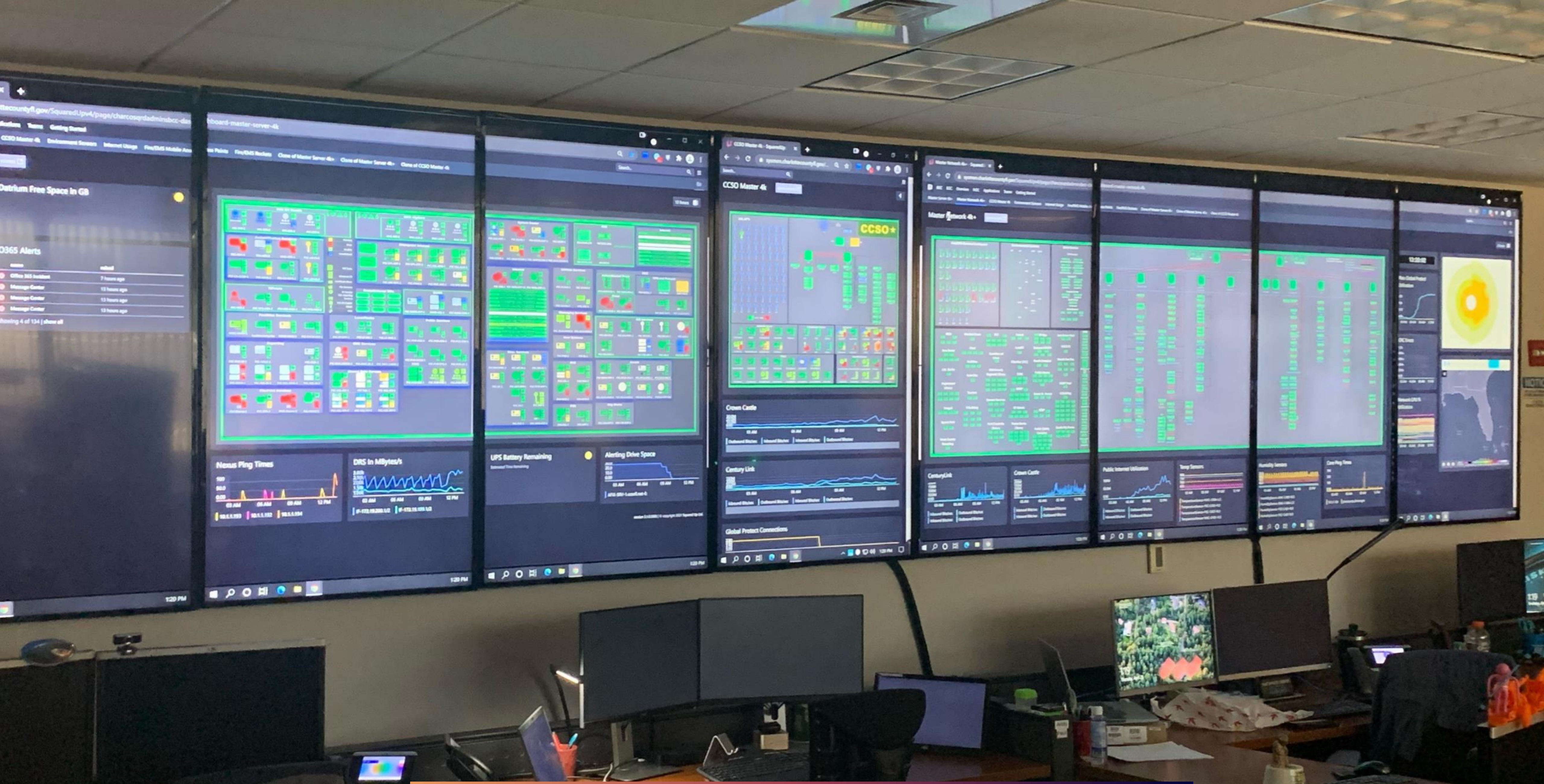
INTRODUCTION

36 Years in the IT Field

- 16 years with Charlotte County
  - Helpdesk Supervisor
  - Operations Manager
  - Sr Division Manager
- Past President – FLGISA
- Testified before Florida Cybersecurity Task Force Dec 2019
- Manatee County
  - Systems Analyst
  - Security Analyst
- Bridgewater State University (College)
  - Systems Manager
- Mass General Hospital
  - Computer Operator



DEC PDP-15 – MASS GENERAL HOSPITAL CIRCA 1985



CHARLOTTE COUNTY NETWORK OPERATIONS CENTER (NOC)

CURRENT STATE

LANDSCAPE

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- Metropolitan Transportation Authority attacked by suspected Chinese hackers – NY
- JBS – Meat distributor - Ransomware

TYPES OF CYBER ATTACKS

- Ransomware and Extortion
- Theft of PII/PHI
- Business Email Compromise (BEC)
- Fraud
- DDOS
- Doxing
- Website Defacements
- Theft of IP

CURRENT STATE

COMMON TACTICS

- Phishing/Spear-Phishing
- Watering-hole Domains
- Credential Gathering
- Open Source and Network Reconnaissance
- Host-based exploitation
- Targeting Industrial Control Systems (SCADA)
- Supply Chain Compromise

CURRENT STATE

COVID-19

Bizjournals.com: "Cyberattacks on the rise during the Covid-19 pandemic"
•***Government Technology***: "How Is Covid-19 Creating Data Breaches?"
•***BBC***: "Coronavirus: How the world of work may change forever"
•***Interpol.int***: "INTERPOL report shows alarming rate of cyberattacks during COVID-19"
•***Techxplore.com***: "Ransomware surge imperils hospitals as pandemic intensifies"
•***PR Newswire***: "Top Cyber Security Experts Report: 4,000 Cyber Attacks a Day Since COVID-19 Pandemic"
•***ZDNet***: "COVID-19 pandemic delivers extraordinary array of cybersecurity challenges"

Govtech.com

CURRENT STATE

LOCAL GOVERNMENT LANDSCAPE

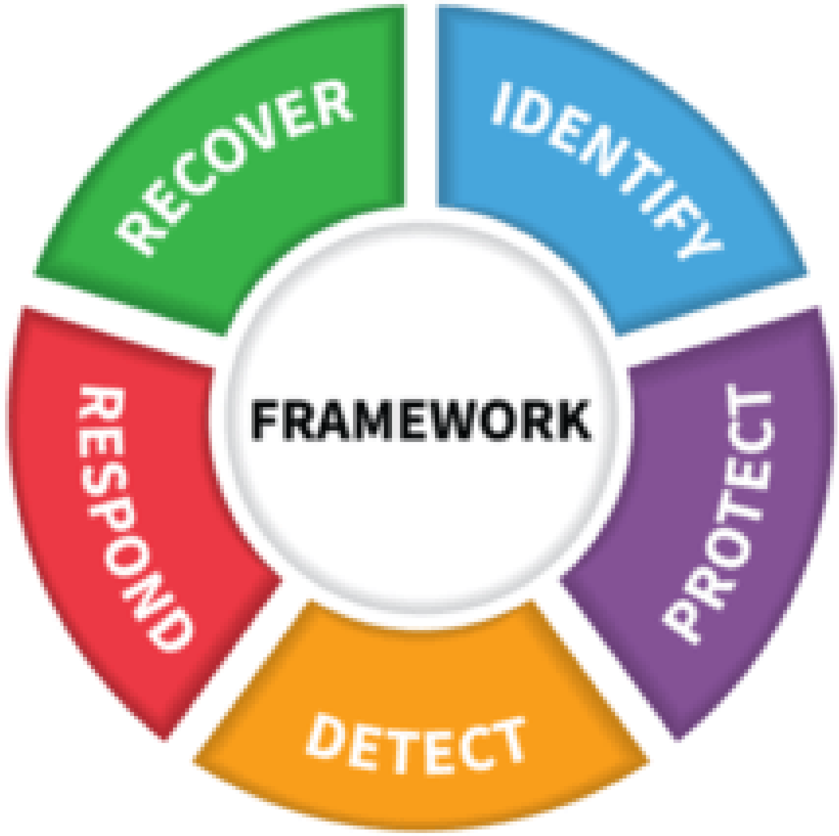
- Three-fourths of ransomware attacks in Florida over the last 3 years targeted public sector*
  - 78%, involve a local-government victim.*
- Several cases of government vendors being hit, Tyler, BillTrust, Superion, Solarwinds
- Ransomware Attack Affects Computers In 22 Towns In Texas ...
- Oldsmar Water Plant
- Ohio County Computer System Recovers from Malware Attack
- In 2020, at least 2,500 U.S. government entities, health care facilities and schools were victimized by ransomware. (Emsisoft)

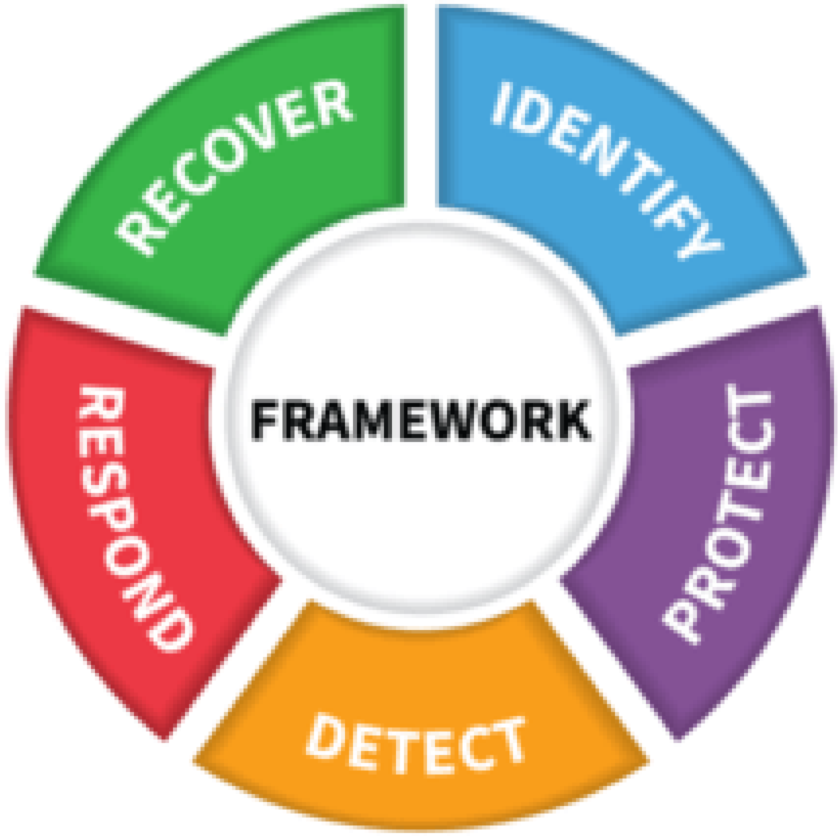
**https://statescoop.com/florida-ransomware-public-sector/*

CHALLENGES

- Limited budgets/Lack of funding
- Lack of IT expertise
- Insufficient cyber awareness
- PII/PHI
- PCI
- Executive buy-in/support
- Culture – convenience & easy access vs security
- More Than Just Monetary Damage - corrupting databases, erasing critical files and wreaking havoc on municipal networks, exfiltration/release of data
  - Reputation

STEPS TO TAKE





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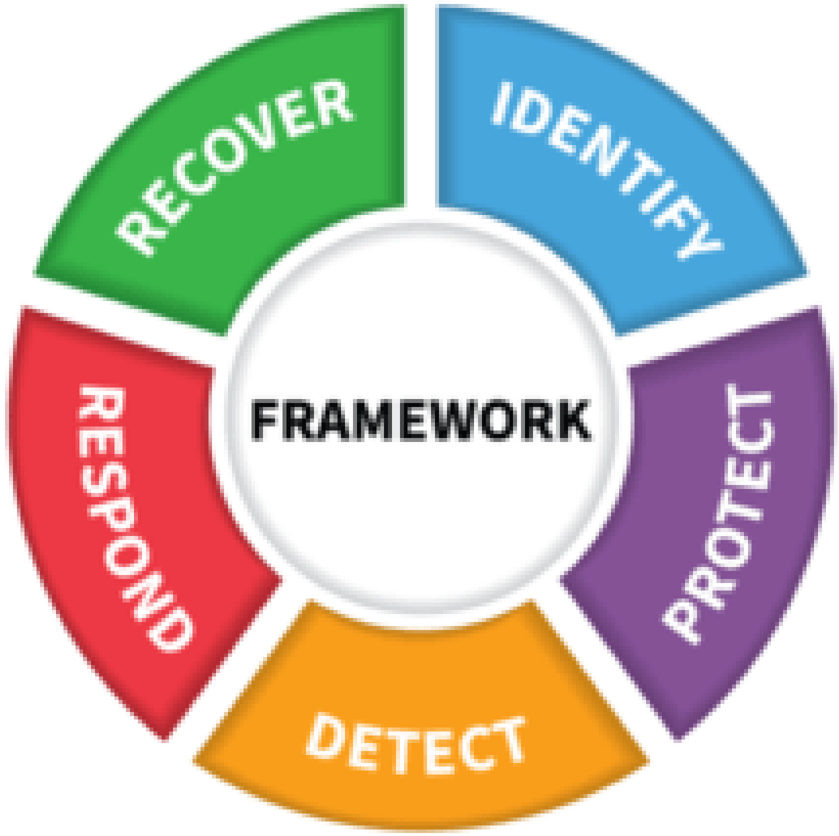

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- Identify, Protect, Detect, Respond, Recover
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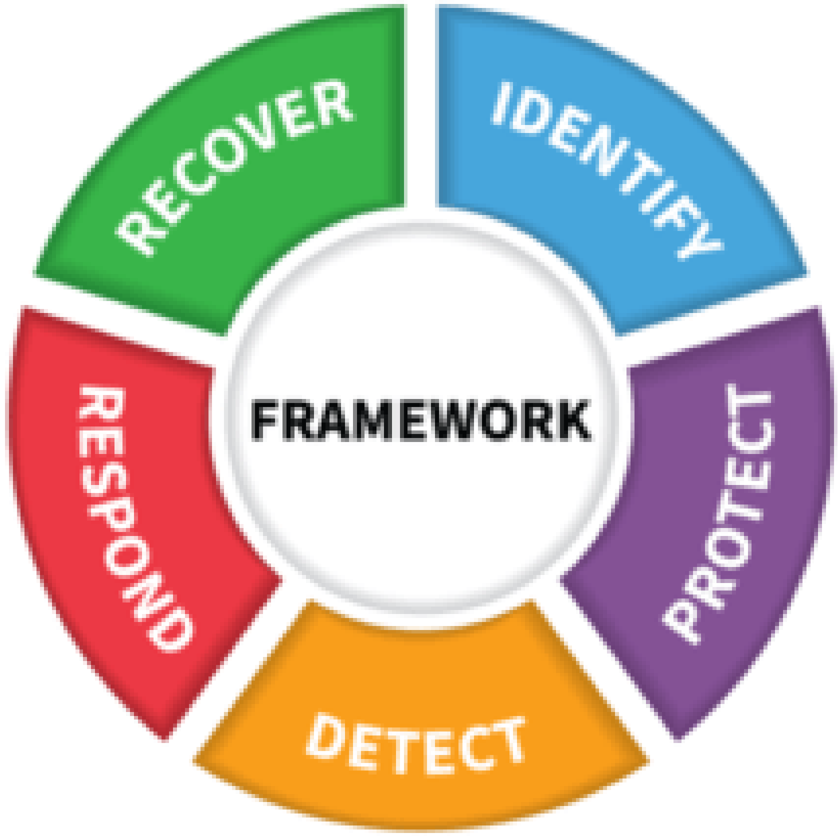

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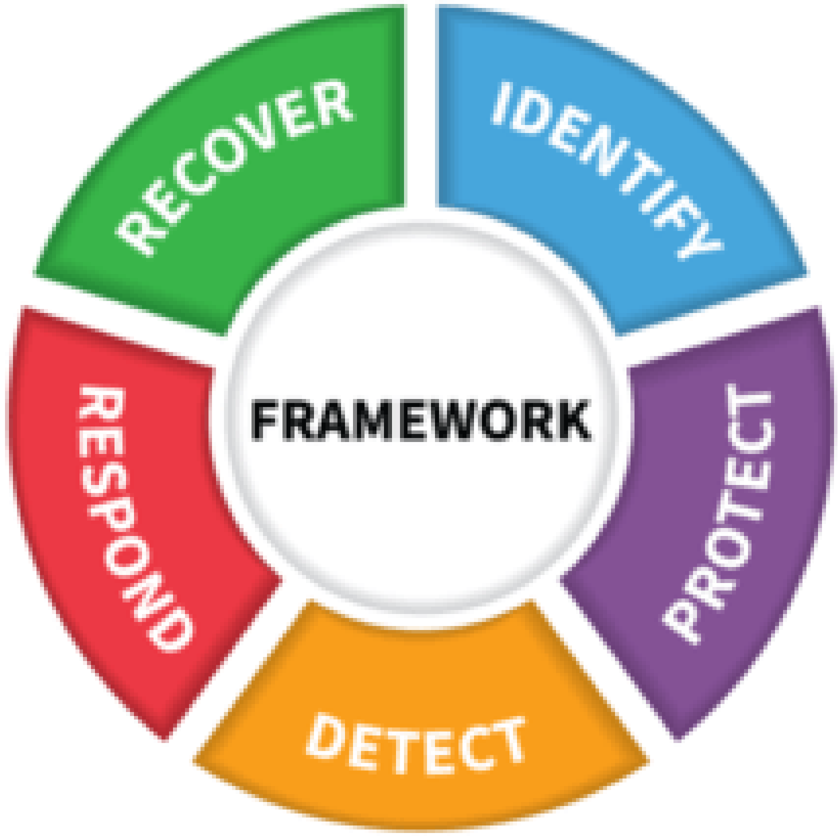

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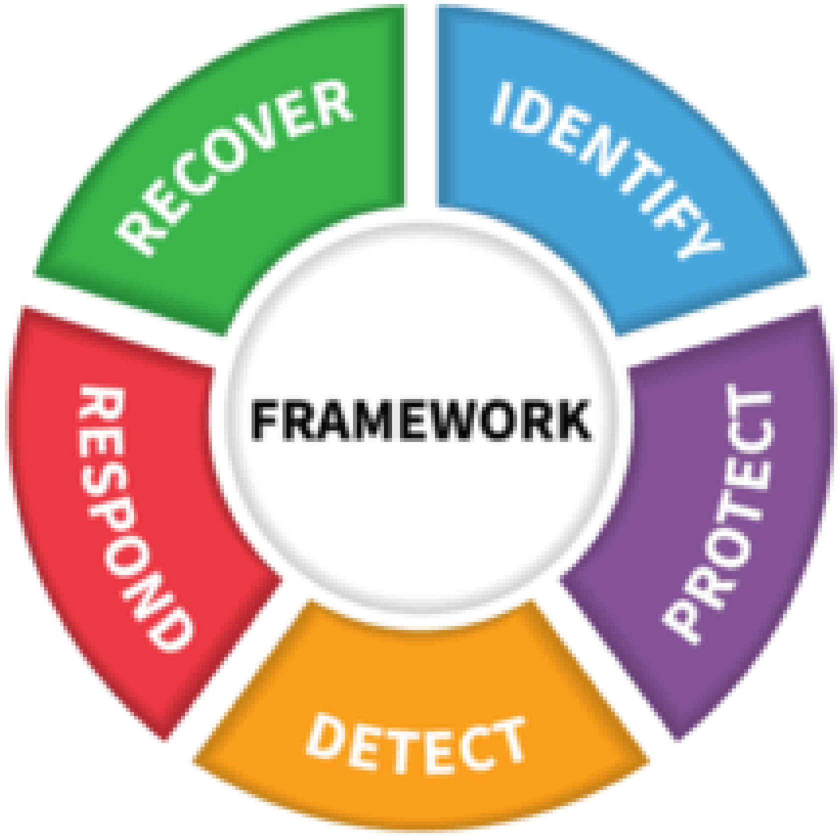

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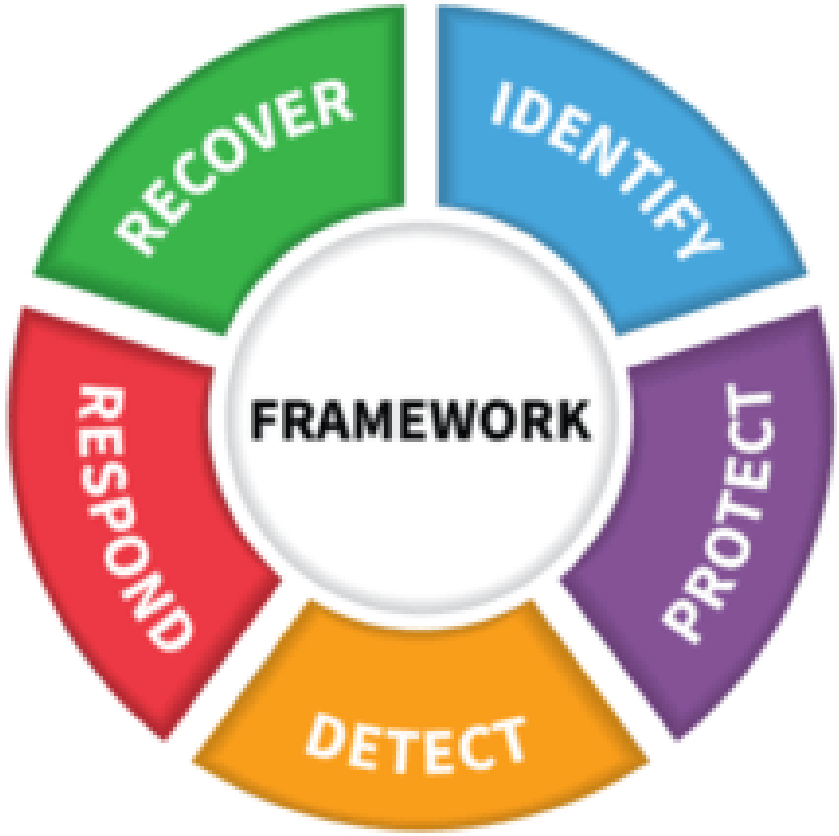

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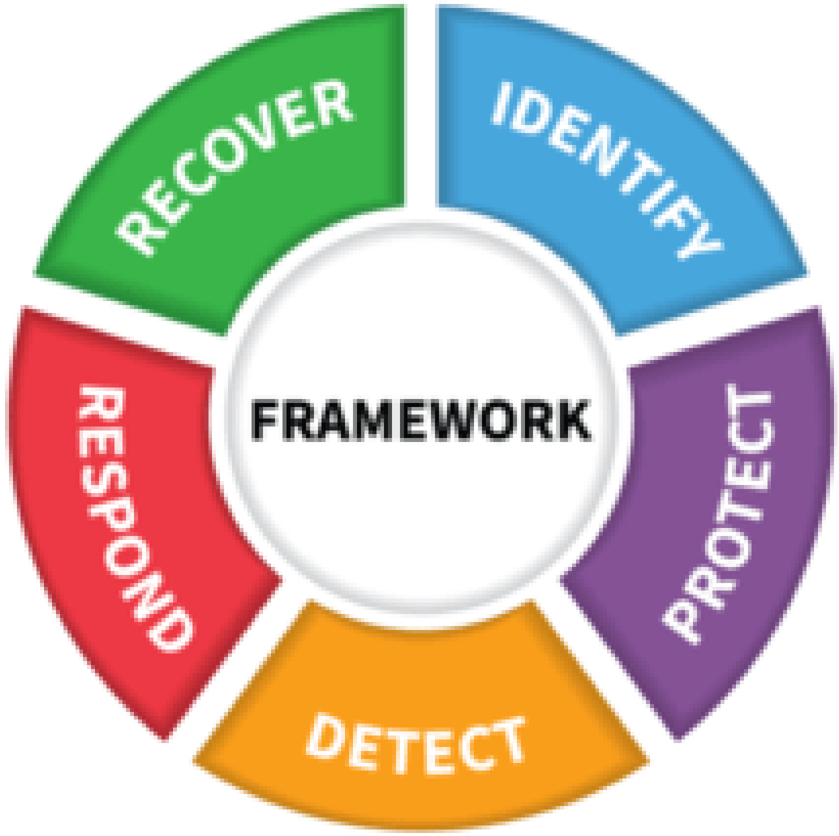

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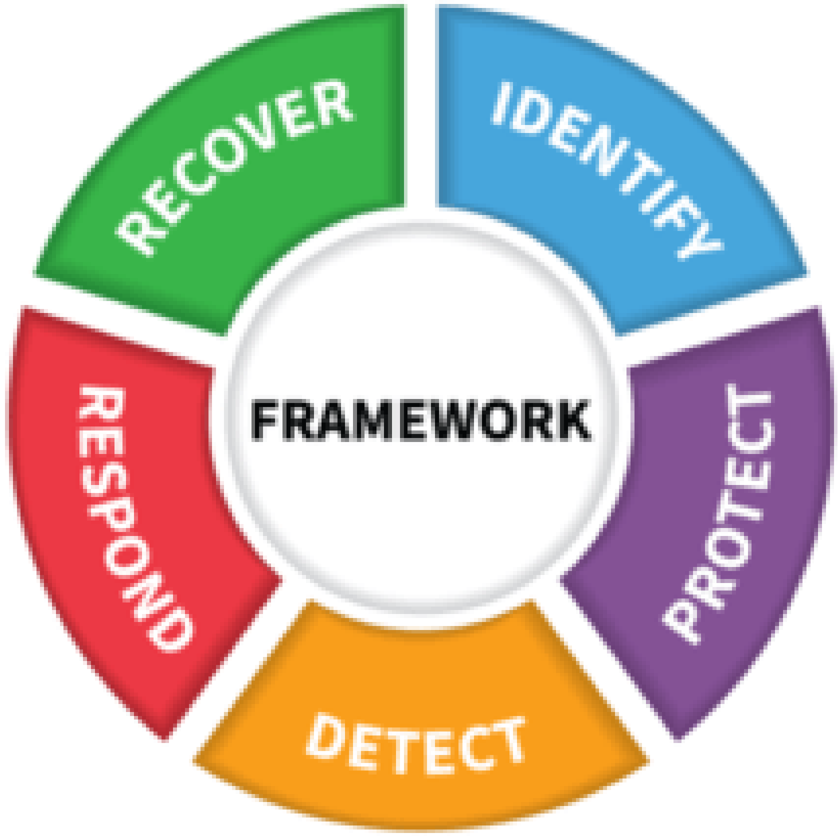

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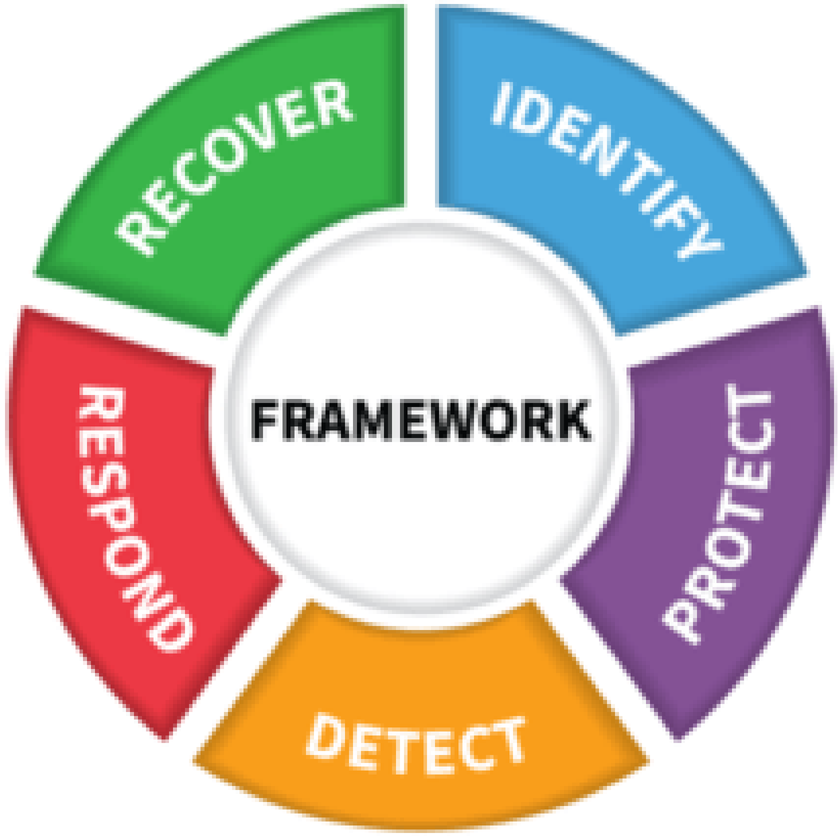

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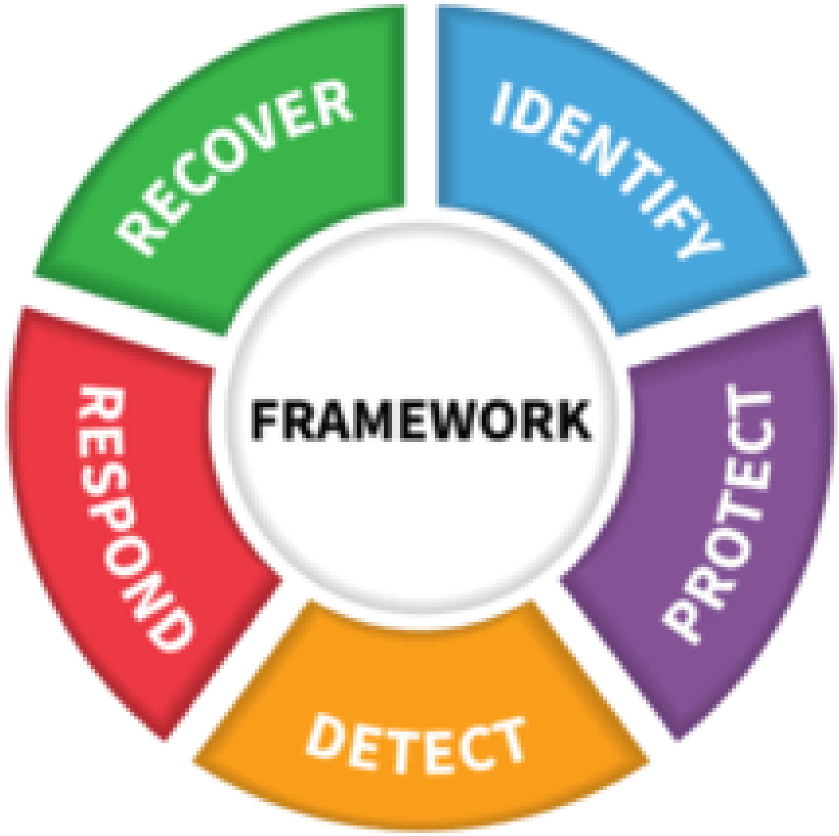

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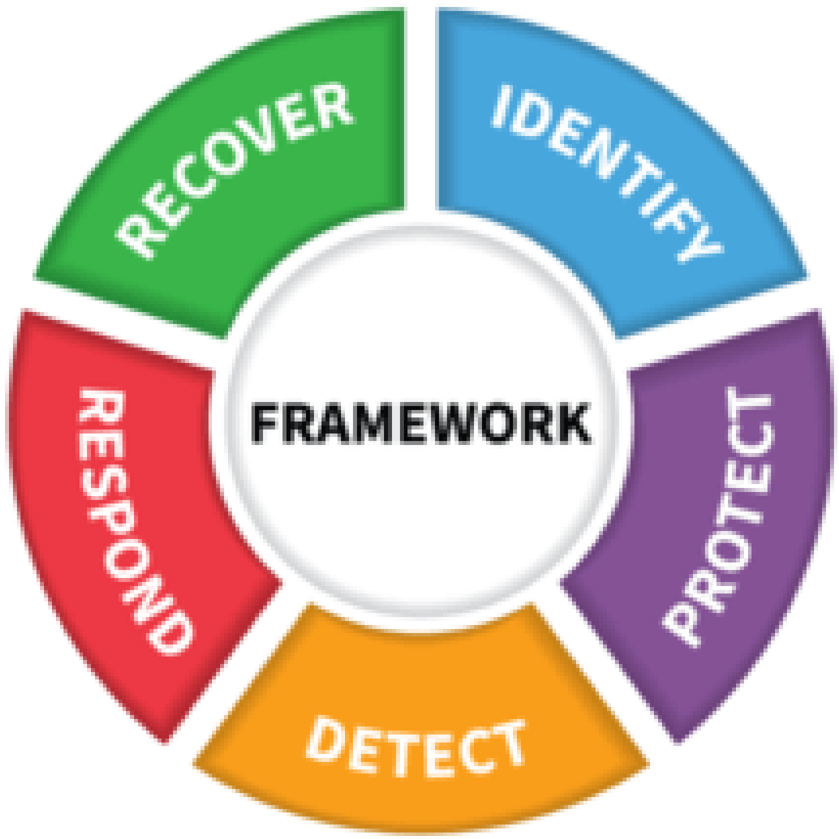

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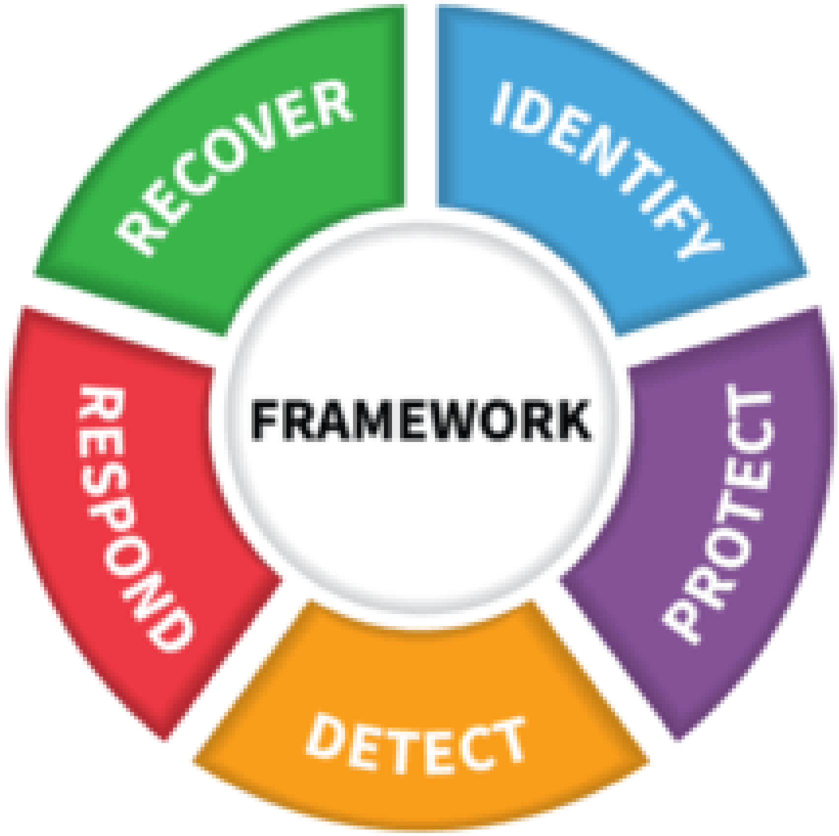

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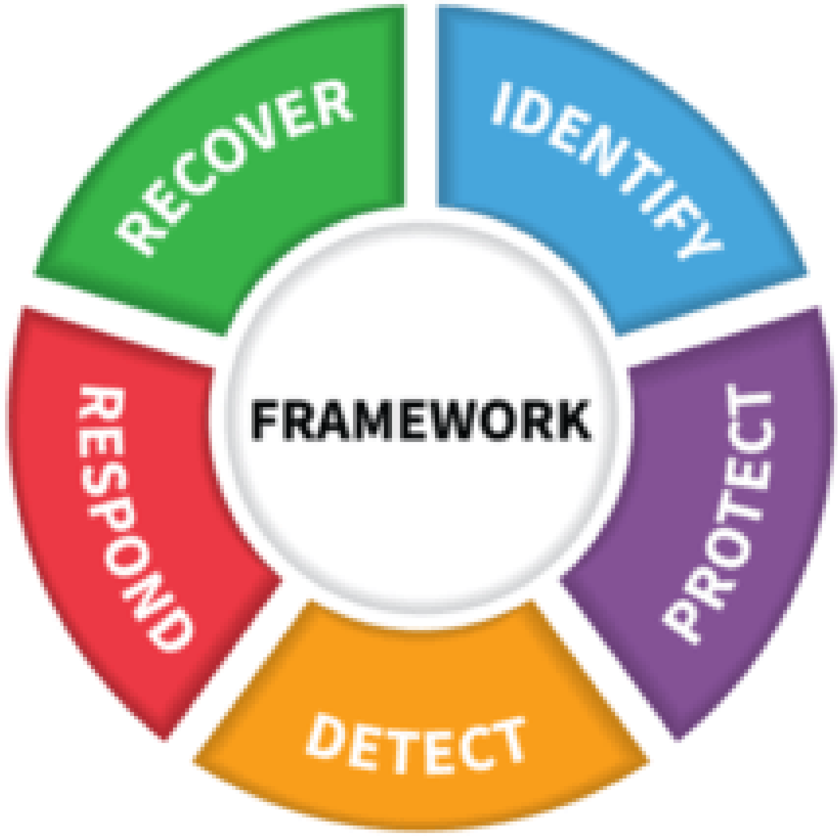

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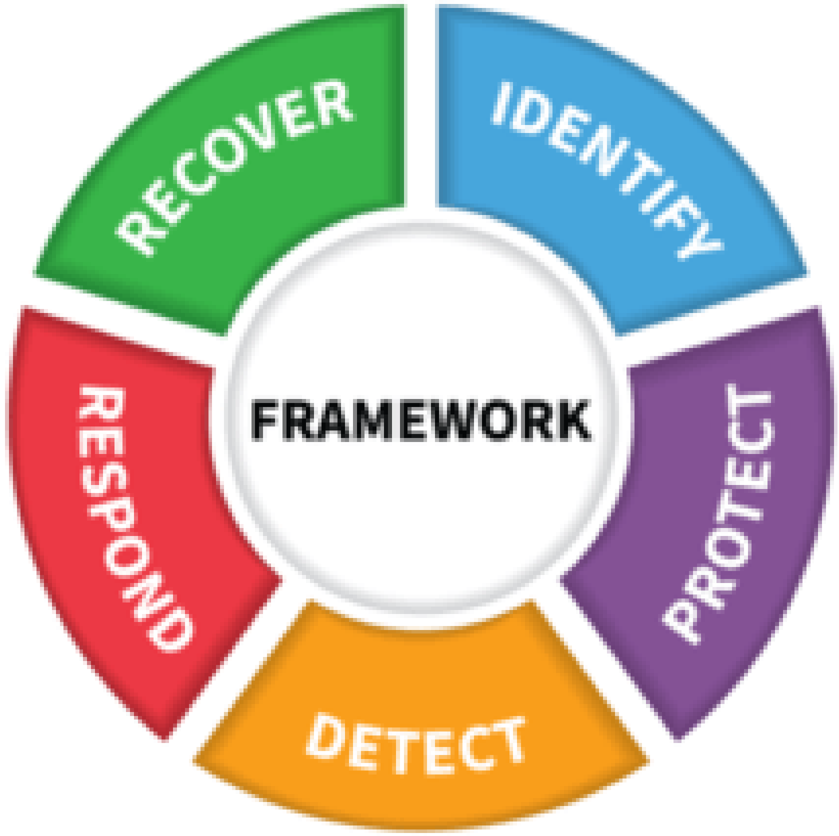
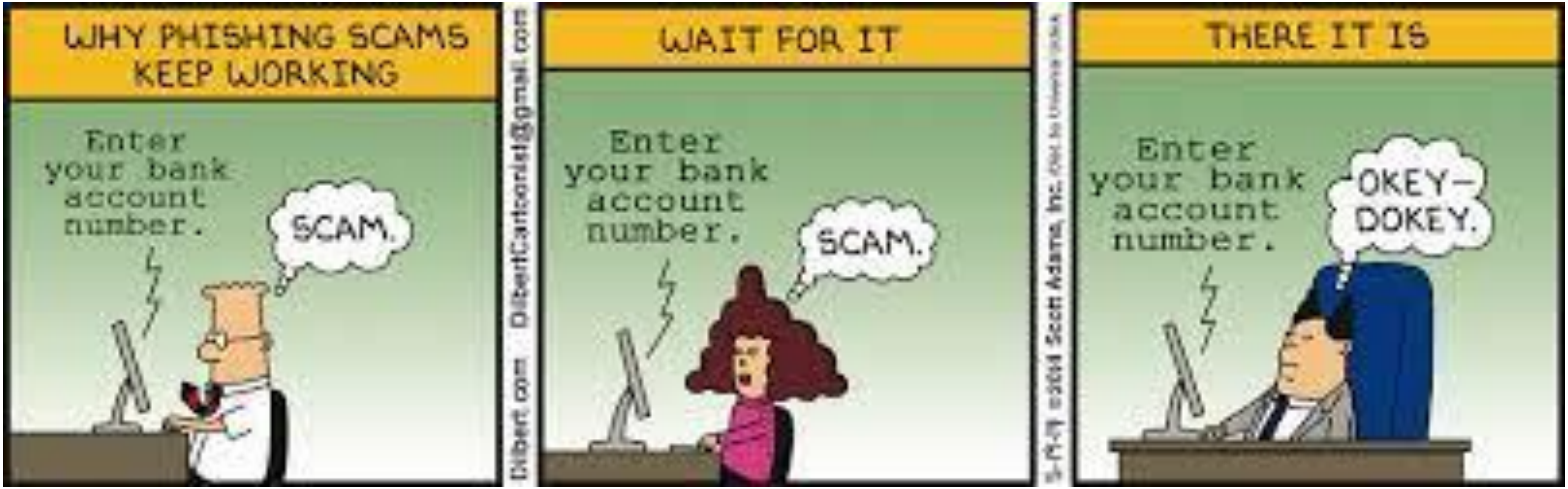


WHAT ELSE IS NEEDED?

- State & Federal Funding/Grants
- Better Communication/Coordination between the state and local government
- Better response to cyber crime from Law Enforcement/Federal Government
- Certification of 3rd Part Providers (FedRamp/Stateramp)
- Educated Workforce



WHY PHISHING SCAMS KEEP WORKING
Enter your bank account number.
SCAM.
WAIT FOR IT
Enter your bank account number.
SCAM.
THERE IT IS
Enter your bank account number.
OKEY-DOKEY.

Dilbert.com DilbertCartoonist@gmail.com

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RESOURCES

- MS-ISAC/EI-ISAC/CIS
  - Multi State & Elections Infrastructure – Information Sharing & Analysis Center
    - https://ms-isac.org https://ei-isac.org

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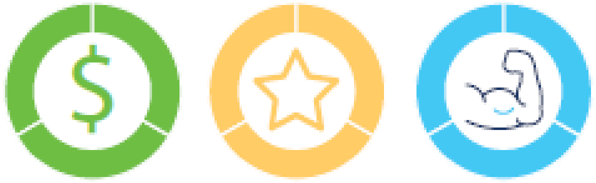
- SANS Institute - https://isc.sans.edu/ https://www.sans.org/

$ **Cost** ☆ **Cyber Defense Impact** **Workload Effort**

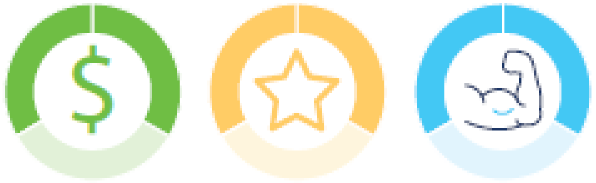
The icons represent the percentage of cost, impact on cyber defenses and workload effort needed to implement the priority. The more complete the outer circle of the icon is, the higher the percentage of cost, impact or workload, but also is dependent on current county circumstances.

MFA (Multi-Factor Authentication)



It is a proven fact that multi-factor authentication significantly decreases the amount of successful cyber-attacks on a county. Depending on the main technology platform that a county has implemented for end user authentication, will determine the cost, as well as time and resources needed. And let us not forget the education with end users. MFA solutions alone can run into hundreds of thousands of dollars, depending on the size of the county.

DMARC (Domain-based Message Authentication, Reporting and Conformance)



DMARC is an email authentication protocol. The percentage of local government implementing this security feature is on the low side. The main cost associated with DMARC is hiring the resource to handle implementation of the feature on a county's existing infrastructure or training current IT staff to do so.

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- MINIMIZE RISK
  - Reduce attack surface

THANK YOU

QUESTIONS?

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FLGISA.ORG