State of Alaska
Department of Administration

State of Alaska Cyber Security
Presentation to (S) Finance Committee
Bill Smith, Office of Information Technology
4/26/2022

Agenda

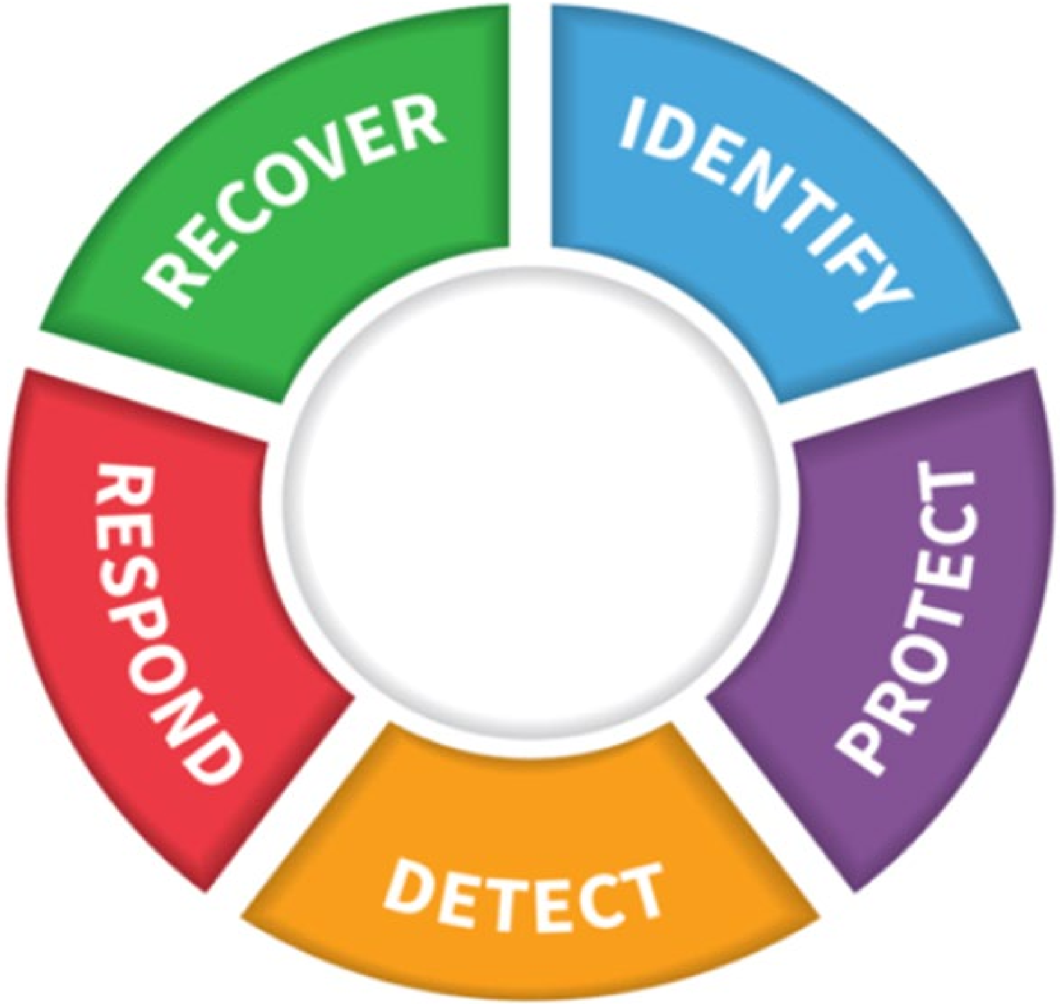
Cyber Threat Landscape

Cyber Security Incident Cost

FY23 Cyber Security Requests

Cyber Security Ecosystem
- **People**
- **Technology**
- **Processes**

Questions



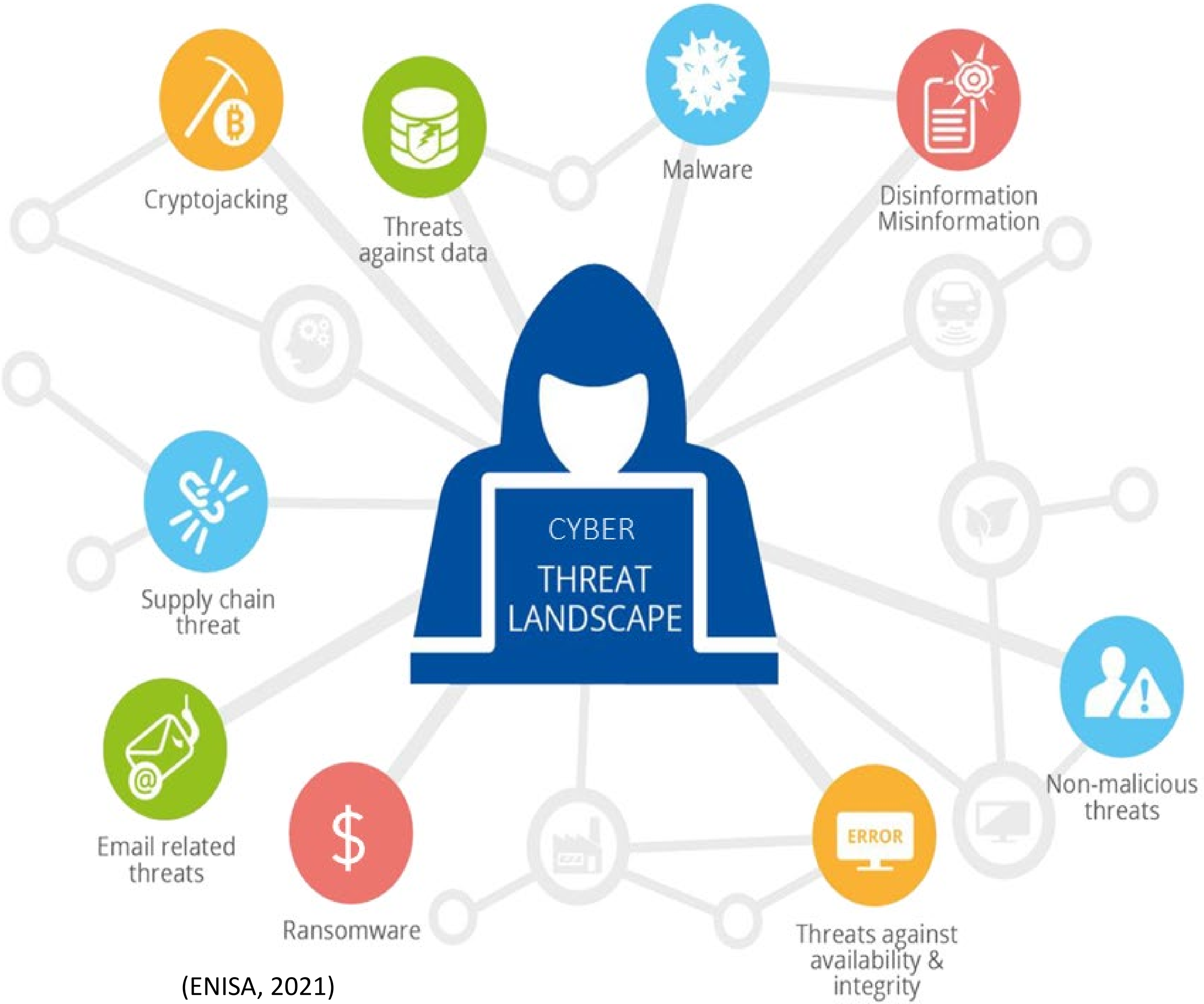
(NIST, 2018)

Cyber Threat Landscape

Threat activity drivers:

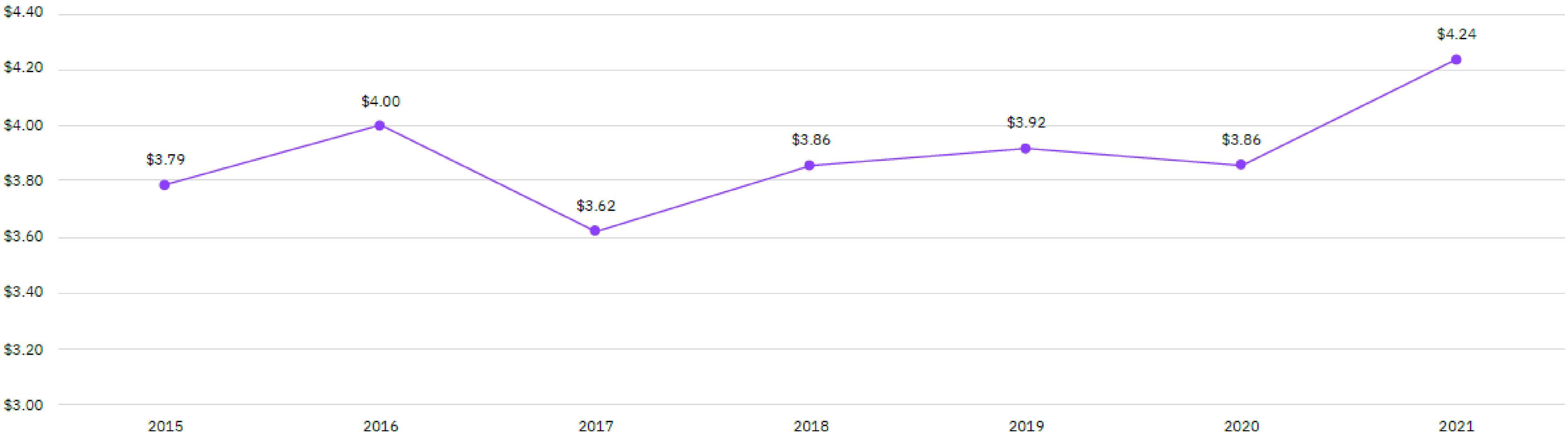
- Cybercrime is a $6 trillion annual industry (Security Magazine, 2021)
- Industrialization and automation of cyberattack capabilities
- Nation state threats
- Supply chain activity
- Pre-existing vulnerabilities

Breaches are no longer just a technical problem...threat awareness is the responsibility of the whole organization.(Gartner, 2021)



(ENISA, 2021)

Cyber Security Incident Cost



Average total cost of a data breach

Measured in US$ millions

The average total cost of a data breach increased by the largest margin in seven years.

Data breach costs increased significantly year-over year from the 2020 report to the 2021 report, increasing from $3.86 million in 2020 to $4.24 million in 2021.

The increase of $0.38 million ($380,000) represents a 9.8% increase. This compares to a decrease of 1.5% from the 2019 to 2020 report year. The cost of a data breach has increased by 11.9% since 2015.

(Ponemon Institute, IBM Security 2021)

FY23 Budget Cyber Security Requests

- **DOA Azure Adoption to Assist with Cloud Migration – $23,116.0** – Obtain professional assistance with State of Alaska migration to the Cloud.

- **DOA Microsoft Security Upgrade – $1,149.0** – Complete implementation of upgraded State Microsoft licensing to better protect employee accounts and data, reduce security expenditures, and allow the State of Alaska to meet common compliance standards.

- **DOA Initiate a 24/7 Security Monitoring Center and Improve Threat Hunting Capabilities – $1,700.0** – Obtain managed 24/7 Security Operations Center (SOC) coverage for a period of 24 months, evaluate SOC requirements for the State to determine enduring requirements and best path forward, and implement internal and/or external capabilities to meet documented cybersecurity requirements.

- **DMVA Homeland Security State and Local Cybersecurity Grant Program - IIJA Division J, Title VI - $2,404.4**

- **DOH Information Technology Security Program Assessment - $1,900.0**

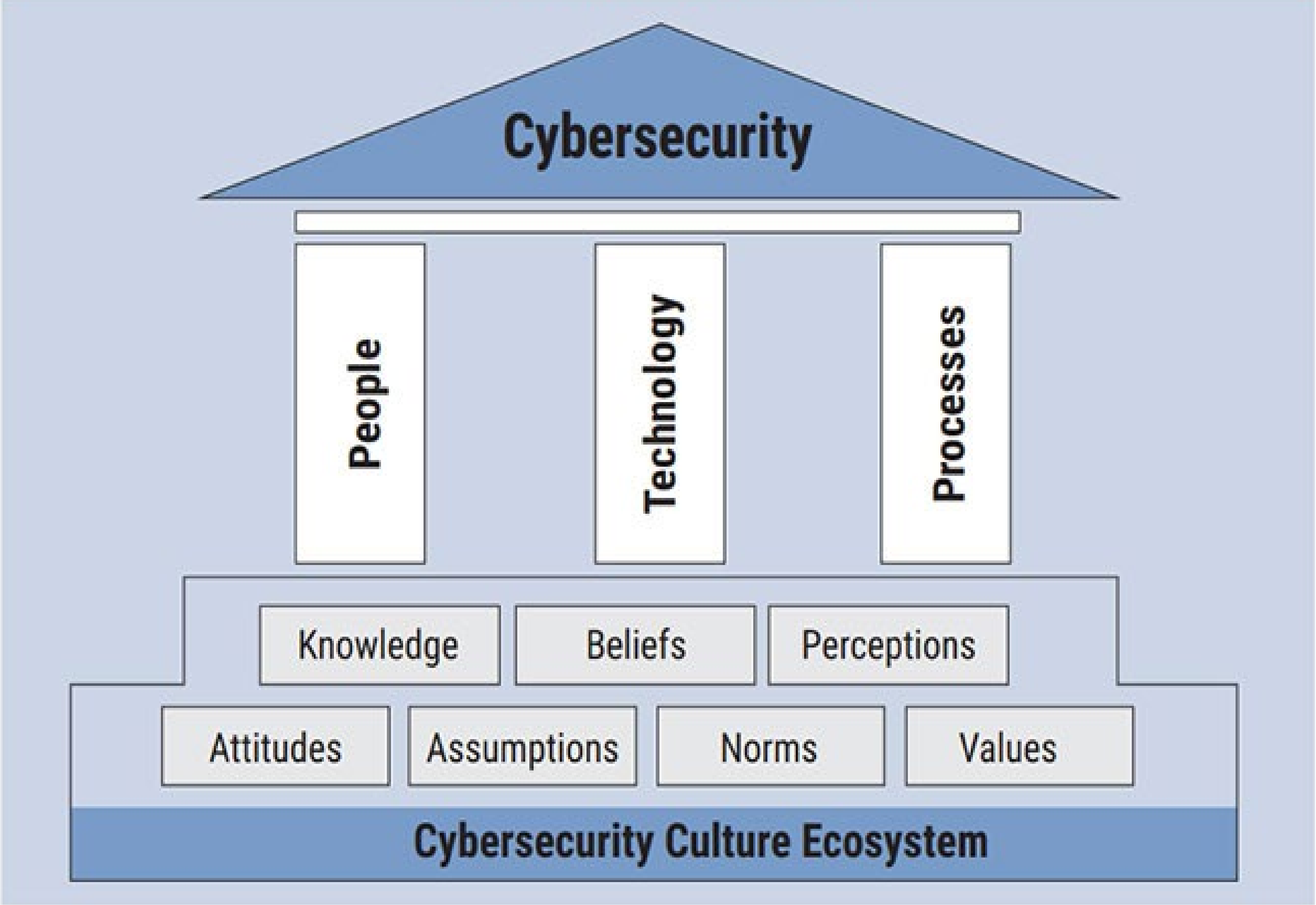
Cyber Security Ecosystem

Cyber security throughout the Information Technology environment:

- **People** - Staff training that creates a culture of security awareness (Annual cyber training)

- **Technology**
  - Network architecture (Cloud Migration)
  - Constantly evolving systems (Security Projects)

- **Processes** - Organization to support compliance and incident response (IT Consolidation)

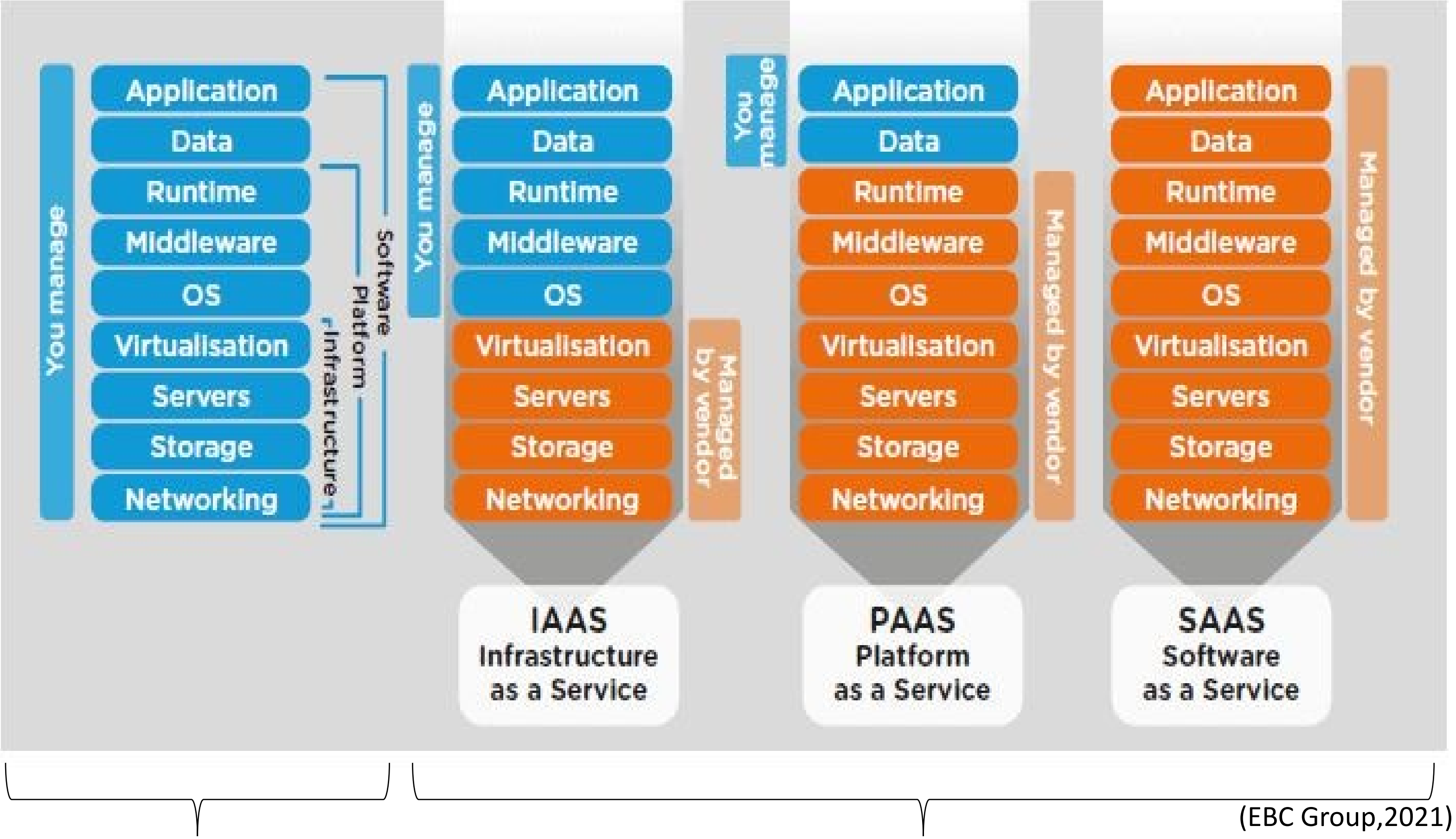


(ISACA, 2019)

Technology - Cloud Migration

Cyber security benefits of cloud migration:

- **Shared Security**
  - Provider secures infrastructure
  - We focus on account and access security
- **Secure Foundation**
  - Modern, continuously updated infrastructure
  - Distributed Denial of Service (DDoS) resistant
- **Built-in security controls**
  - Managed identity and access
  - Always on encryption (data at rest/in transit)
- **Global threat intelligence**



(EBC Group,2021)

'On Premise'

'In the Cloud'

Technology - Cloud Migration

Capital Supplemental Request - $23,116.0 (HB284/SB165)

Project scope

Assess and migrate ~3000 executive branch servers located throughout the state.

- Discovery, development of SOW/timeline, migration services
- Phased large-scale lift-and-shift approach to achieve significant cloud benefit in shortest amount of time
- Complex modernizations deferred until after migration
- Disaster Recovery, Cloud Storage and Operational costs
- Network costs specific to cloud operations

ROI Implications

- **Experience to date:** 93 servers in SOA Azure, with an average cost per server of $1,812/year (25% less than current chargeback rates to departments).
- Industry trends indicate total cost of ownership ROI in 4 to 5 years with an average 21% savings (Gartner, 2021)
- Complexity (1,800+ applications across 60+ locations) and cloud-based options adds significant variability

On Premise alternative

~$39 M over 5 years + Migration Services

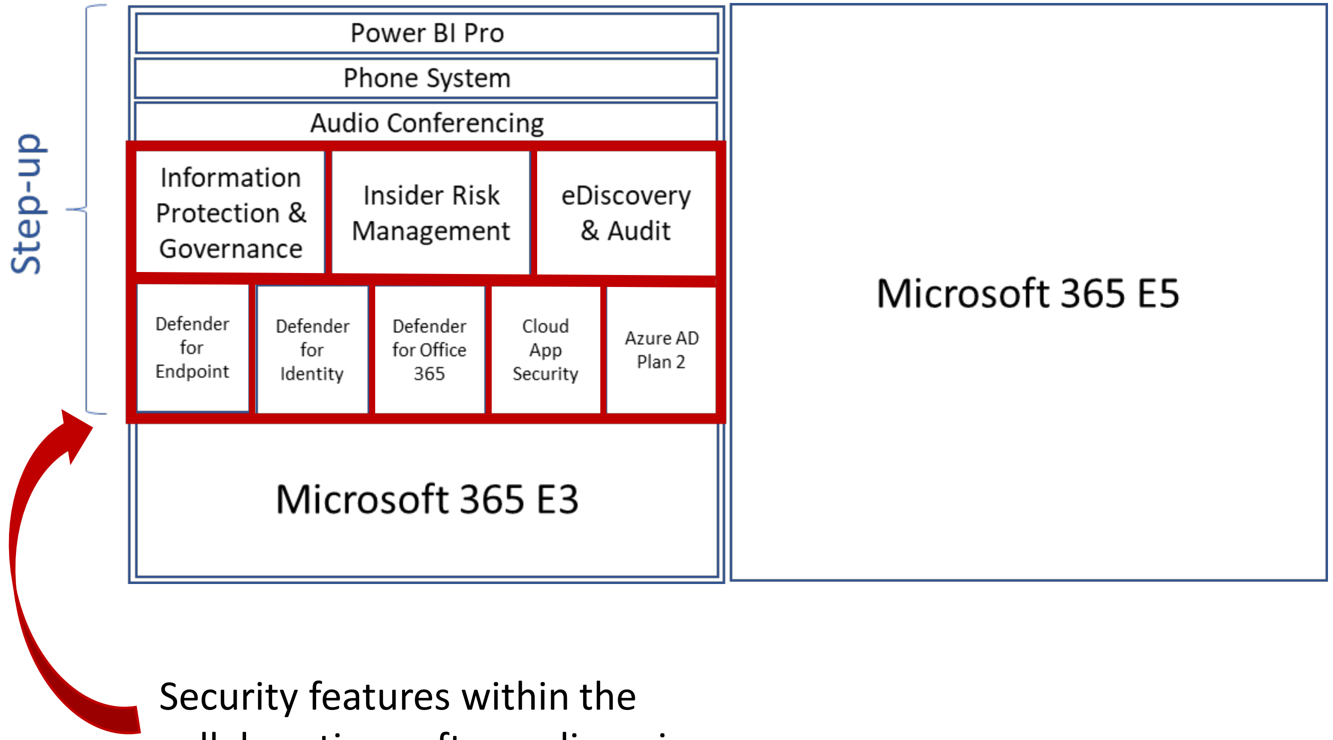
- Consolidate remaining servers (~50%) into primary datacenters
- Update aged infrastructure (expand primary datacenters)
- Procure security systems similar to those offered in cloud environment
- **Does not provide all cloud-based security benefits (DDoS, shared responsibility, etc.)**

Technology – Enterprise Systems

Cyber security benefits of enterprise systems:

- **Microsoft Licensing**
  - Multi-factor Authentication & Conditional Access
  - Endpoint/Mobile Device Management and patching
  - Defender Suite (desktop, email, identity)
  - Identity management

- **Managed Security Operations integration**
  - Common system avoids one off solutions
  - Fully integrated suite of products informed by worldwide intelligence
  - Creates capacity within SOA security professionals



Step-up

Power BI Pro

Phone System

Audio Conferencing

Information Protection & Governance

Insider Risk Management

eDiscovery & Audit

Defender for Endpoint

Defender for Identity

Defender for Office 365

Cloud App Security

Azure AD Plan 2

Microsoft 365 E3

Microsoft 365 E5

Security features within the collaboration software licensing bundle

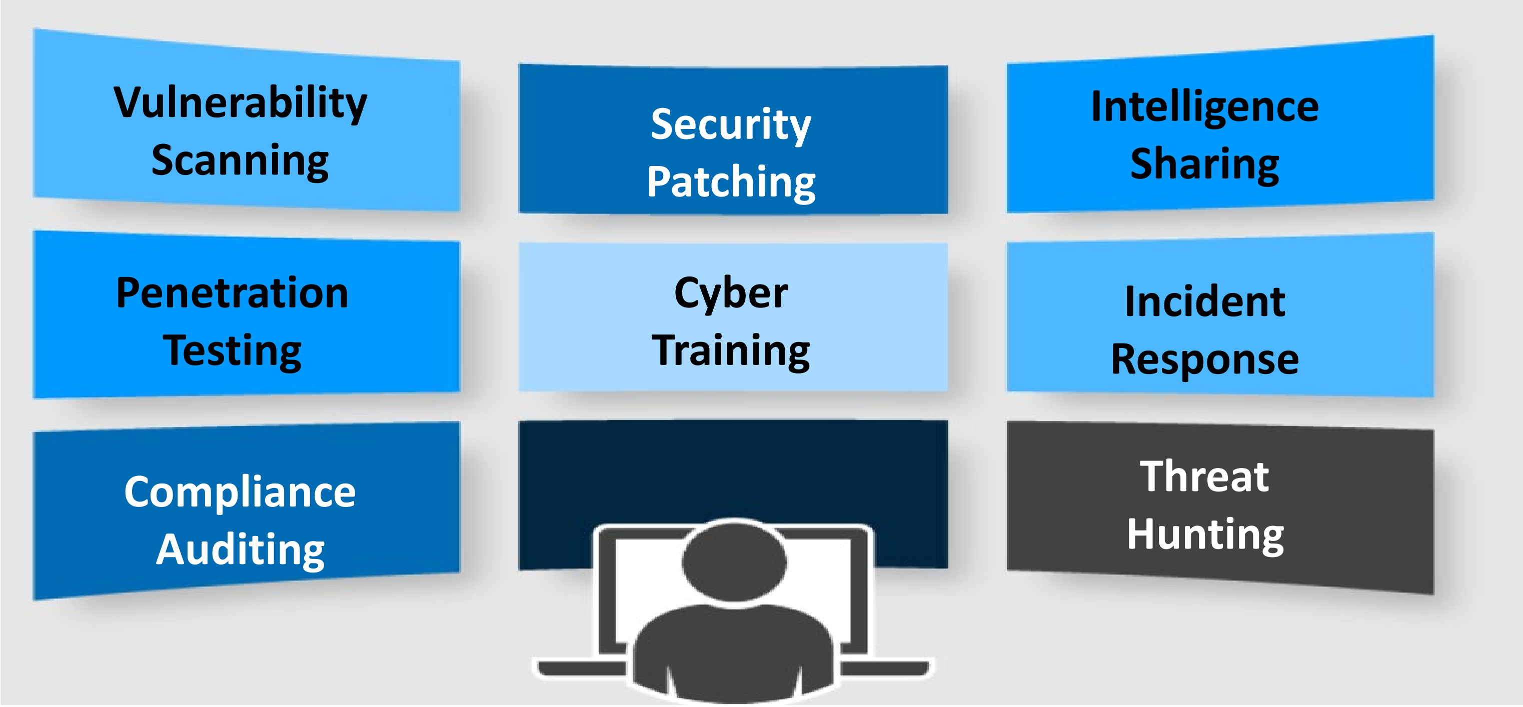
Infrastructure Bill Requests:

- Security tool implementation - $1,149.0
- Managed Security Operation Center - $1,700.0

Processes – IT Consolidation

Single, focused approach to cyber security

- **Execute basic protocols well**
  - Practice good cyber hygiene
  - Ensure Compliance
  - Enhance response capabilities
  - Immediate threat hunting against security threats
- **Simplify the enterprise security environment**
  - Speed and efficiency of incident response
  - Integrated systems avoid gaps in coverage
- **Continue the path to Zero Trust**
  - Assume breach
  - Verify explicitly
  - Least privileged access



(EfficentIP,2020)

Most states indicate that a **centralized** operating model can best reduce cybersecurity risk (Deloitte & NASCIO,2020)

Questions

Department of Administration

Championing improvement in the State’s performance and results.

For more information, please contact Ken Truitt at ken.truitt@alaska.gov

Background Slides

References

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2. Security Magazine. The new threat economy: A guide to cybercrime’s transformation – and how to respond, Brown, L., 2021

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4. ENISA, Threat Landscape 2021, ENISA,2021

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8. Deloitte & NASCIO, “2020 Deloitte–NASCIO Cybersecurity Study States at risk: The cybersecurity imperative in uncertain times”, 2020.