EATEL Business

ARMA INTERNATIONAL®

Principles of Protection: Cybersecurity Data Protection

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Introductions

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Principles of Protection

Cybersecurity

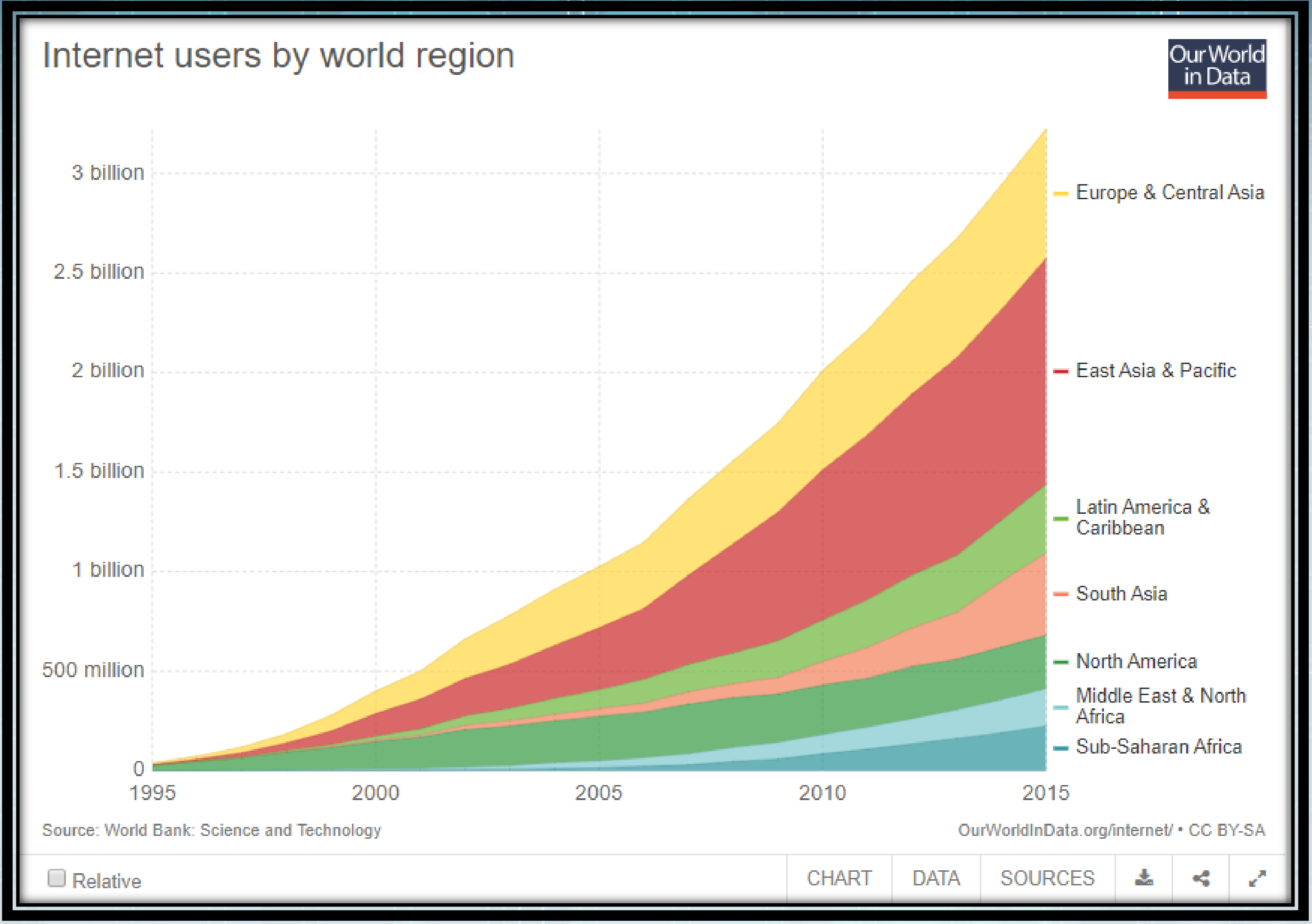
Data Protection (Backups)
Disaster Recovery

EATEL

- EATEL is a regional leader in telecommunications and data center services, operating as a solutions provider to residential customers and businesses of multiple sizes with our corporate headquarters located in Gonzales, LA.

- EATEL employs approximately 350 personnel across our operating divisions and across a geographically diverse region.

Why Cybersecurity?



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Cybersecurity Statistics

- According to the 2017 Verizon Breach Report, 81% of hacking related breaches leveraged either a stolen/weak password.

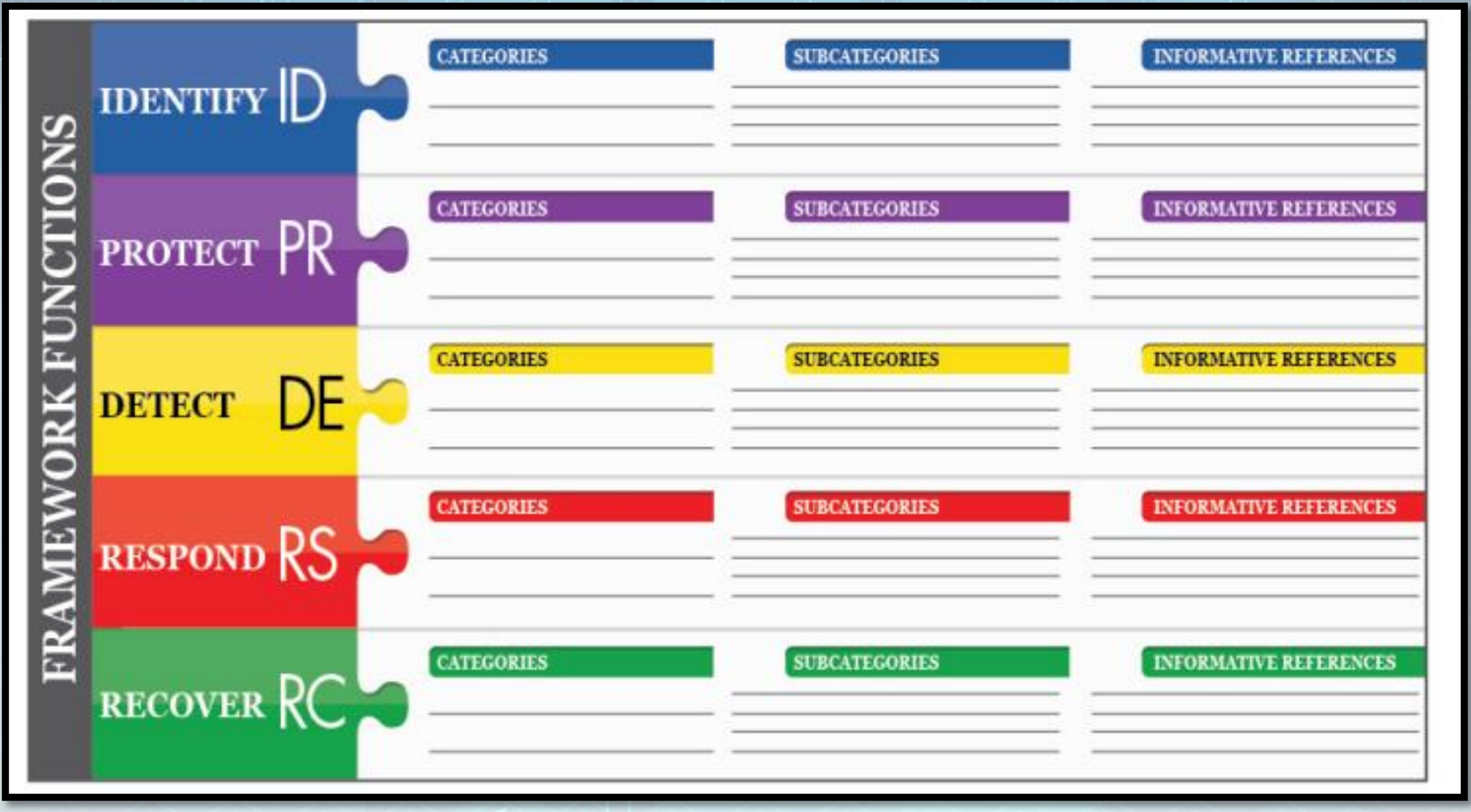
- 66% of malware was installed via malicious email attachments.

- 61% of data breach victims in this year’s report are business with under 1,000 employees.

- 88% of the breaches fall into the nine patterns first identified in 2014.

- Average cost of data breach per record was $138 in 2006 and was $225 in 2017. That means a 1,000 record breach in 2017 will cost you $225,000!

NIST Cybersecurity Framework (CSF)



FRAMEWORK FUNCTIONS

IDENTIFY ID	CATEGORIES	SUBCATEGORIES	INFORMATIVE REFERENCES
PROTECT PR	CATEGORIES	SUBCATEGORIES	INFORMATIVE REFERENCES
DETECT DE	CATEGORIES	SUBCATEGORIES	INFORMATIVE REFERENCES
RESPOND RS	CATEGORIES	SUBCATEGORIES	INFORMATIVE REFERENCES
RECOVER RC	CATEGORIES	SUBCATEGORIES	INFORMATIVE REFERENCES

NIST CSF v1.1 (Proposed)

- New section to discuss measuring and demonstrating the correlation of business results to cybersecurity risks.
- Greatly expanded responsibilities related to Supply Chain Management.
- Changed “Access Management” to “Identity Management and Access Control” which further expands on authentication, authorization, and identity proofing.

EATEL's Approach to Cyber Security

- EATEL approaches cyber risks from two fronts:
  - 1) Cyber risk threats to internal corporate data.
  - 2) Cyber risk threats to our customer data.
- Why?
  - Defining our scope allows us to better prioritize resources and measure success.

Challenges of Cyber Risk Management

- Who? (Ownership)
  - Who is going to be responsible for cyber risk management? Who has the expertise to manage this process?

- When? (Timelines)
  - When are we going to have time to do this? When will we be required to comply with cybersecurity regulation?

- How and What? (Expertise)
  - How are we going to get to best practices? What will it take to meet all of the requirements?

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Cyber Risk Management

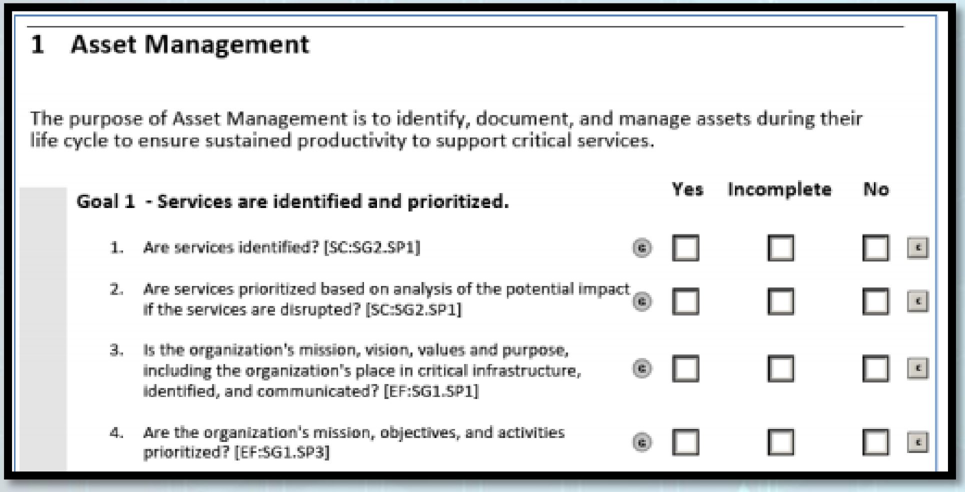
Addressing Challenges and First Steps to Cyber Risk Management

- Commitment from the Board for Cyber Risk Management
- Plan of Action
- Buy-In from Executives and Staff

Self Assessment Tool

DHS Cyber Resilience Review (CRR) Self Assessment Tool

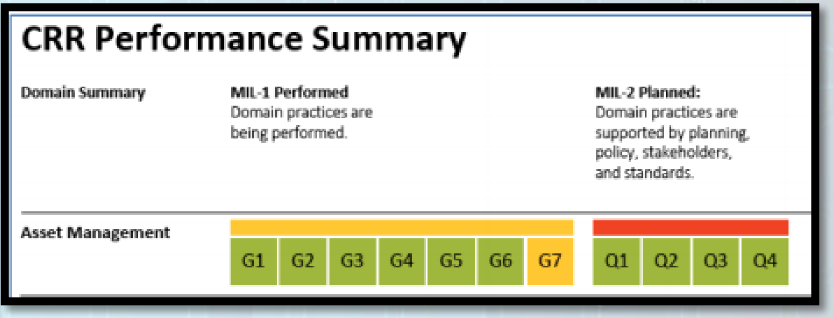
- https://www.us-cert.gov/ccubedvp/assessments



1 Asset Management

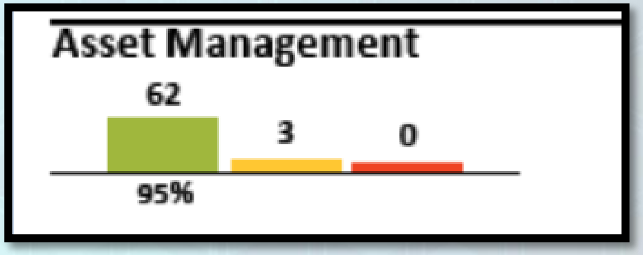
The purpose of Asset Management is to identify, document, and manage assets during their life cycle to ensure sustained productivity to support critical services.

Goal 1 - Services are identified and prioritized.	Yes	Incomplete	No
1. Are services identified? [SC:SG2.SP1]	□	□	□
2. Are services prioritized based on analysis of the potential impact if the services are disrupted? [SC:SG2.SP1]	□	□	□
3. Is the organization's mission, vision, values and purpose, including the organization's place in critical infrastructure, identified, and communicated? [EF:SG1.SP1]	□	□	□
4. Are the organization's mission, objectives, and activities prioritized? [EF:SG1.SP3]	□	□	□



CRR Performance Summary

Domain Summary	MIL-1 Performed Domain practices are being performed.	MIL-2 Planned: Domain practices are supported by planning, policy, stakeholders, and standards.
Asset Management	G1 G2 G3 G4 G5 G6 G7	Q1 Q2 Q3 Q4



Asset Management

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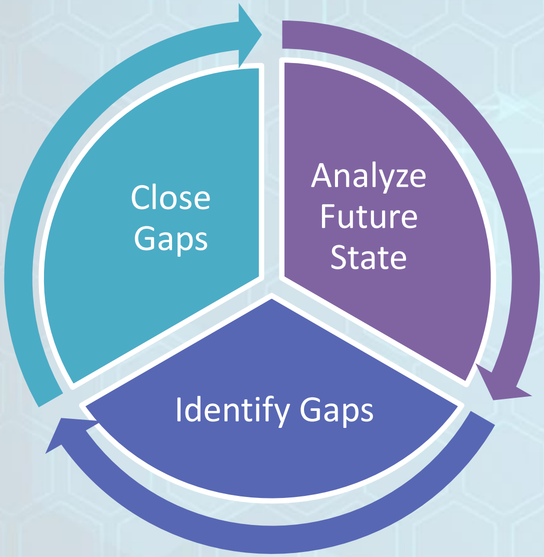
Self Assessment Tool

Why is DHS CRR Successful for EATEL?

- Free
- Employee Engagement
- Common Language
- Unbiased Measurement and Reporting Tool

Cybersecurity and Next Steps

Next Steps for EATEL



- Analyze where the organization wanted to be in the future.
- Identify gaps between baseline state and desired future states.
- Prioritize and plan how to close the gaps.

Remediation Plan

- Each year, EATEL management selects 3 to 5 areas of improvement and creates a project plan to meet the defined "end goal".

- Progress of projects are tracked, measured, and presented to the Board.

- Additionally, we use the DHS CRR to track progress every two years to ensure we are steadily improving our cybersecurity.

Cybersecurity

Shifts in Mind Set

- How are we going to do cybersecurity?
- Who is going do to do this?
- How much money/time/effort will it take to reach the end goal?

- Are we getting better?
- Are we seeing a ROI on our security investments?
- Are we reasonably protected?

Data Protection / Disaster Recovery

Data Protection

✚

Disaster Recovery

=

Business Continunity

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Review: RPO and RTO

Recovery Point Objective (RPO):
RPO is the maximum targeted period in which data might be lost from an IT service due to a major incident.

Recovery Time Objective (RTO):
RTO is the targeted duration of time and a service level within which a business process must be restored after a disaster (or disruption) in order to avoid unacceptable consequences associated with a break in business continuity.

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Data Protection

PROS

- Wide Operating System Support
- Wide Application Support
- Granular File-Level Recovery Support
- Support for Servers and Desktops
- Typically best for long-term retention
- Limited Bare-Metal Recovery Support

CONS

- Can sometimes require agents to be installed into the OS
- Limited management when dealing with large number of backup jobs.
- Limited Support for Virtualization
- RECOVERY TIME – Longer RTO

Examples: Carbonite, Evault, Mozy, Dell AppAssure, CommVault, Veeam, Rubrik (Hybrid Backup/Recovery Solutions)

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Disaster Recovery

PROS

- Virtualization Aware
- Extremely low RPO and RTO
- Typically based on replication technology
- LOW or NO Recovery Time
- Instant Recovery Possible
- Assists with Disaster Recovery/Avoidance Planning

CONS

- Typically Virtualization Only
- Requires additional IT infrastructure (Physical/Virtual)
- Requires additional planning and periodic testing
- Makes it easy for IT Staff to overlook common business critical planning.

Examples: Zerto, VMware vSphere Replication + SRM (DA/BC)
Veeam, Rubrik (Hybrid Backup/Recovery Solutions)

What does IT typically forget?

When considering Backup/Recovery, Disaster Recovery, Business Continuity, IT Administrators typically forget to consider the following:

- End User Access / Remote Access / SSL-VPN Access
- Planning for alternative DR locations / Using Business Continuity Centers
- Maintaining Vendor Contact List / License Key Management
- Domain Name Services / Global Traffic Management
- Mapping Business Unit/Users to Business Application
- Application Recovery Priority, based on Business Requirements
- Routinely testing and updating DR Plan

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What Customers Want?

Customers are looking for BOTH Backup/Recovery and Business Continuity --- One technology only solves half of the customers needs.

Business Leaders are looking to solve:

- Recovery / Avoidance from catastrophic disaster events
- Recovery from infrastructure failures
- Negating Malware infection / Ransomware
- Recovery of accidental user error
- *Protecting Business Critical Applications and Assets*

IT Leaders/Administrators are looking to IT Vendors for:

- Disaster Recovery / Business Continuity Consultation
- Business Critical Application Dependency Mapping and Identification
- Assistance in building a formal Disaster Recovery / BC Plan
- Routine testing and updating of a Disaster Recovery / BC Plan

“Consultation BEFORE Remediation”

Want More?

https://www.eatelbusiness.com/podcasts

White Papers

Stay up-to-date with the latest in business and technology with the EATEL Business White Papers.

https://www.eatelbusiness.com/white-papers

Q&A

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Thank You!

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Customized business solutions for any sized business.