Thomas Bronack, CBCP

Presentation Topics

- Vulnerability Management
- SBOMs to eliminate know problems
- CSF 2.0 Security Structure and Usage
- Continuous Threat Exploitation Management (CTEM) to identify new problems
- Systems Development from Concept to final Product
- Continuity of Services

DCAG Specializes in:

- Enterprise Resilience,
- Corporate Certification,
- Vulnerability Management,
- Strategic and Tactical Planning,
- Project and Team Management
- CSF 2.0 Cyber Resilience Planning
- Post-Quantum Cryptography
- DevSecOps Planning
- Awareness and Training

Protecting your environment through Vulnerability Management, SBOMs CTEM, and Recovery Management.

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A word from Thomas Bronack

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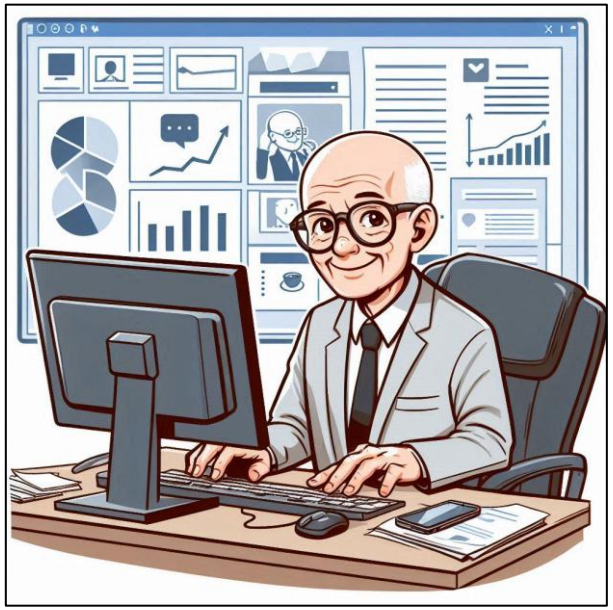
I am a **senior level manager** with in-depth experience in **Enterprise Resilience, Vulnerability Management, and Corporate Certification** for large enterprises in disciplines like: Banking, Brokerage, Finance, Insurance, Pharmaceuticals, Vendors, and Manufacturing which provided me with a solid understanding of the risks faced by companies and how best to safeguard a firm through workflow, compliance, and recovery using SBOMs to eliminate known problems and CTEM (Continuous Threat Exploitation Management) to identify new problems needing mitigation.

The Software Supply Chain is at risk and companies are being hacked by Nation-States and bad actors, as demonstrated by recent events and world turmoil. This document is designed to help company management understand the needs associated with **protecting their organization's** ability to continuously provide services to customers within Service Level Agreements (SLAs), even when vulnerabilities may cause a catastrophic problem requiring recovery plan activation and a Vulnerability Management process in place.

I am presently pursuing an "**Whole of Nation**" approach to providing a "**Secure by Design**" production environment that complies with the **Secure by Design pledge** to produce vulnerability-free components and supplying data the **Software Bill of Materials** (SBOM) needs to identify component owners for corrective action should an error condition be identified. This supports the software supply chain, provides vulnerability-free production application turnover for ATO, and uses CTEM to detect new problems for resolution that supports CATO.



"A strong generalist with extensive IT industry experience, ready to help you".

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A Whole of World approach to Cybersecurity

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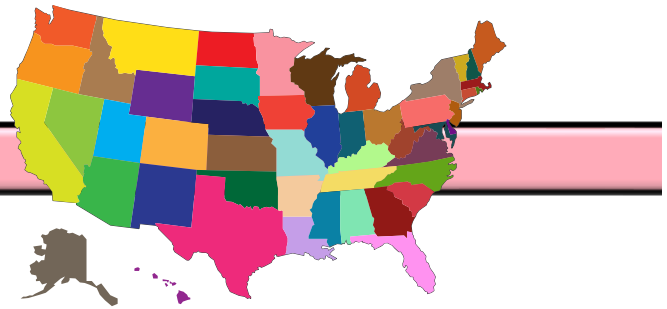
Whole of World Approach

Whole of Nation Approach



Department of Homeland Security

Cybersecurity Infrastructure Security Agency

CISA
CYBER+INFRASTRUCTURE

[Vulnerability Disclosure Policy](#)
[VDP Video](#)

2030 Most Significant Cyber Concerns:

1. Supply Chain Compromises
2. Advanced disinformation campaigns
3. Rise of Digital Surveillance
4. Human error and legacy systems
5. Targeted Attacks
6. Lack of analysis and controls
7. Rise of advanced hybrid attacks
8. Skill shortage
9. Cross-border ICT suppliers as a single-point-of-failure
10. Artificial Intelligence abuse

Vulnerability Management Process:

1. Detect Vulnerability (SBOM)
2. Assess the Risk (CVE)
3. Prioritize Remediation (CVSS, KVE, EPSS)
4. Confirm Remediation
5. Optimize through automation
6. Advance the use of BOMs for Release and Artificial Intelligence

DHS/CISA - Secure by Design principles:

1. Build security considerations into the software requirements specification
2. Address possible abuse cases (e.g., how users may misuse the software).
3. Create and enforce secure code guidelines.
4. Use appropriate security tools.
5. Conduct security audits at multiple stages of the SDLC.
6. Conduct vulnerability testing that includes negative testing and penetration testing.
7. Incorporate security within deployment and maintenance processes.
8. Ensure reused software is from trusted sources and properly evaluated.
9. Provide feedback throughout the process on security effectiveness.
10. Educate developers and QA teams on secure coding techniques.

Vulnerability Laws and Regulations requiring SBOMs

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- Presently, implementing Applications and Services can include vulnerabilities and malware, which can cost your company in lost revenue, brand reputation, fines and penalties, burdening your staff and resulting in high levels of turnover. DHS/CISA has developed a "Secure by Design" approach to responding to these issues.
- A method must be implemented to catch vulnerabilities and malware prior to production acceptance.
- New Laws have been mandated in the United States and Europe to address the problems, including:
  - **Executive Order 14028** – Improving Nation's Software Security Supply Chain and mandating SBOMs
  - **OMB M-22-18** and M-23-16 – Improving the Defense and Resilience of Government Networks
  - **SEC Rule 2023-139** – Disclosure of Material Cybersecurity breaches to protect shareholders
  - **FDA** – Control over medical device supply chain and cybersecurity problems
  - **CRA** – European Cyber Resilience Act – Hardware and Software Components cyber requirements
  - **DORA** – Digital Operational Resilience Act – Strengthen the financial sectors resilience
  - **GDPR** – EU Digital Rights of their Citizens
  - **Deploying AI Security Systems -** joint paper from CISA, NSA, and DOJ on employing AI Security
- Once the development process is upgraded and new Standards and Procedures created, an Awareness Program must be developed and the Staff Trained.
- New Procedures must be integrated into the staff's daily process for new and changed applications and services, with automated support through RPAs whenever feasible.

Vulnerability Disclosure Policy & Form usage

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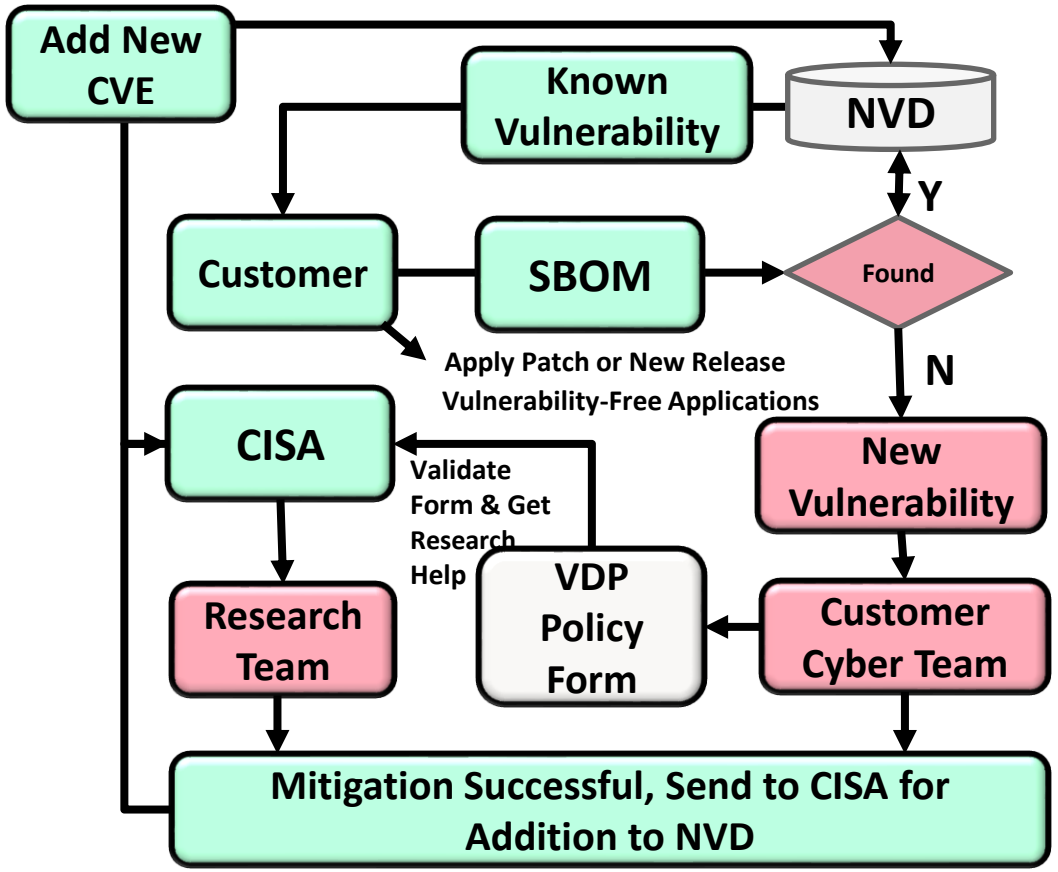
CISA's VDP Platform 2023 Annual Report Showcases Success
Release Date - September 30, 2024

Cybersecurity and Infrastructure Security Agency (CISA) released its Vulnerability Disclosure Policy (VDP) Platform 2023 Annual Report, highlighting the service's remarkable success in 2023, its second full year of operation. Throughout 2023, CISA focused on advocating for the increased agency adoption of the VDP Platform, supporting federal civilian executive branch (FCEB) agencies in identifying vulnerabilities in their systems, and engaging the public security researcher community.

Public security researchers play a vital role in securing our federal government's networks. As part of CISA's persistent and ongoing collaboration with the public security researcher community, CISA issued Binding Operational Directive (BOD) 20-01 in 2020, which requires every FCEB agency to establish a VDP. These VDPs follow industry and community best practices, including giving authorization to participating public security researchers and committing to not pursue legal action for good-faith research.

CISA's VDP Platform complements BOD 20-01 by giving FCEB agencies an easy way to establish a VDP and to engage with public security researchers. CISA appreciates the contributions by thousands of public security researchers to date and looks forward to continuing to further broaden this collaboration in the future.
To learn more about the VDP Platform, please visit the Vulnerability Disclosure Policy (VDP) Platform webpage and view the VDP 101 video on CISA's YouTube channel.



1. Customer runs SBOM to identify and eliminate Known Vulnerabilities to produce vulnerability-free application prior to production environment, then
2. Customer completes VDP Form and submits to CISA, and if a new Vulnerability is identified, the customer submits VDP and gets help solving new vulnerability.
3. CISA updates NVD with newly resolved vulnerability resolution.

Creating a Secure System

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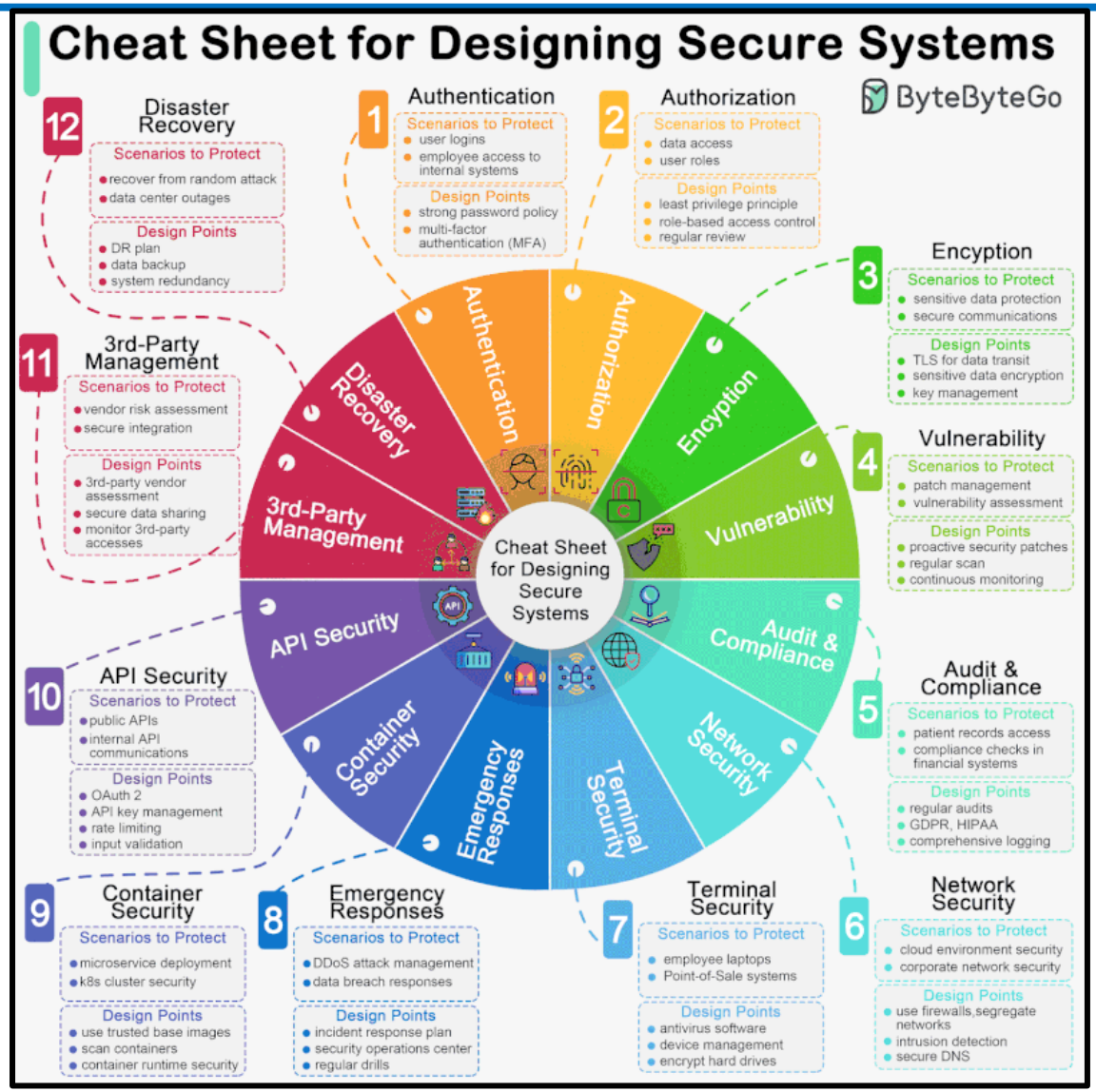
1. Authentication (Identify Management)
2. Authorization (Identify Access Management)
3. Encryption (protecting data in flight and at rest)
4. Vulnerability Management (Topic of this paper)
5. Audit and Compliance (Audit Universe and Audit Schedule to gain Letter of Attestation.
6. Network Security (Network Security Protocols, End Points, etc.)
7. Terminal Security (IP Protection for Terminals and Devices)
8. Emergency Response (Natural and Manmade hazards)
9. Container Security (Scenarios and Protection Points)
10. API Security (Scenarios and Protection Points)
11. Third Party Management (Scenarios and Protection)
12. Business Continuity Management (Disaster, Business, Locations, Crisis, Personnel Protection and Violence Prevention)



Agenda

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1. **Rise in vulnerabilities** is largest threat to enterprises due to increased attacks by Nation-States (i.e., China, Russia, Iran, Korea, etc.) and Hackers, with costs rising every year.

2. The **rate of Vulnerabilities surpasses** the ability of most companies to fix them, leading to undue toil on staff, burnout and turnover. This issue must be addressed through automation and a tool upgrade.

3. **Develop a problem free** environment through Vulnerability Management:
   a. **Eliminate known problems** via **SBOMs,**
   b. **Identify New problems** through Continuous Threat Exploitation Management (**CTEM**),
   c. **Develop and Publish** Standards and Guidelines, and a
   d. **Create a Risk Operation Center** (**ROC**) to assist personnel identify ad resolve potential Risks to the company.

a. **Business Continuity Management** must be enhanced to support Service Level Agreements and a company's ability to continue to supply services and products, even if a disaster occurs

b. **The ability to develop** an idea to a concept that can be engineered, developed, and deployed to production as **vulnerability-free** must be defined and supported via "**Whole of Nation**" and "**Secure by Design**" guidelines for best performance and security. Dovetail with CDM Project for US Government (**see video**).

Protecting Organization is more difficult than ever

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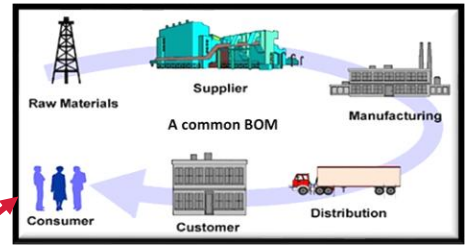
Suppliers
Vendors
Transport
Manufacturing



Builder Concerns
World Concerns
Delivery Concerns

Customers
Organization
Supply Chain

Technical Problems
Secure by Design
Cyber Crimes

Sales
Marketing

Services
Engineering
Products
Development
Applications
Operations

Inventory
Supply Chain
Delivery

Idea
Engineer Solution
Develop Solution
Verify & Validate
Deploy & Continuity
Audit & Compliance
Deliver
Support & Maintain

Product Engineering and Development Life Cycle

Cost of Vulnerabilities, SBOMs, and CTEM

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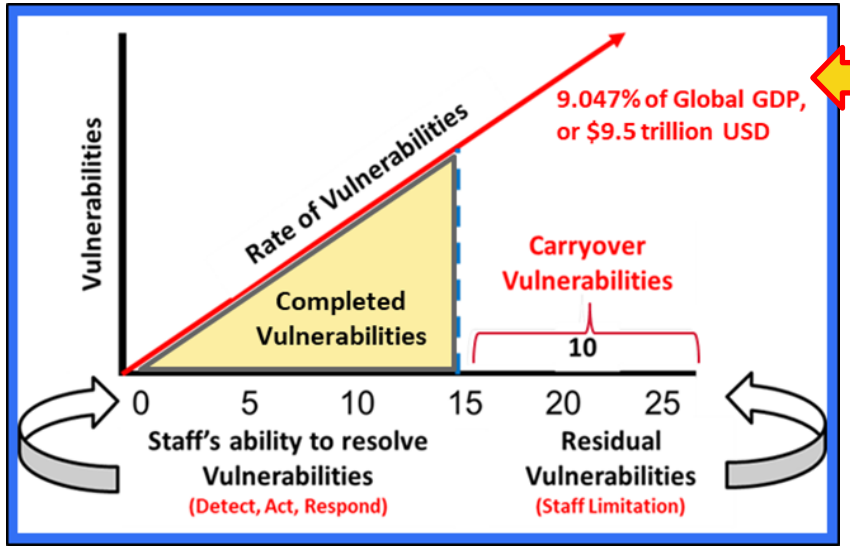
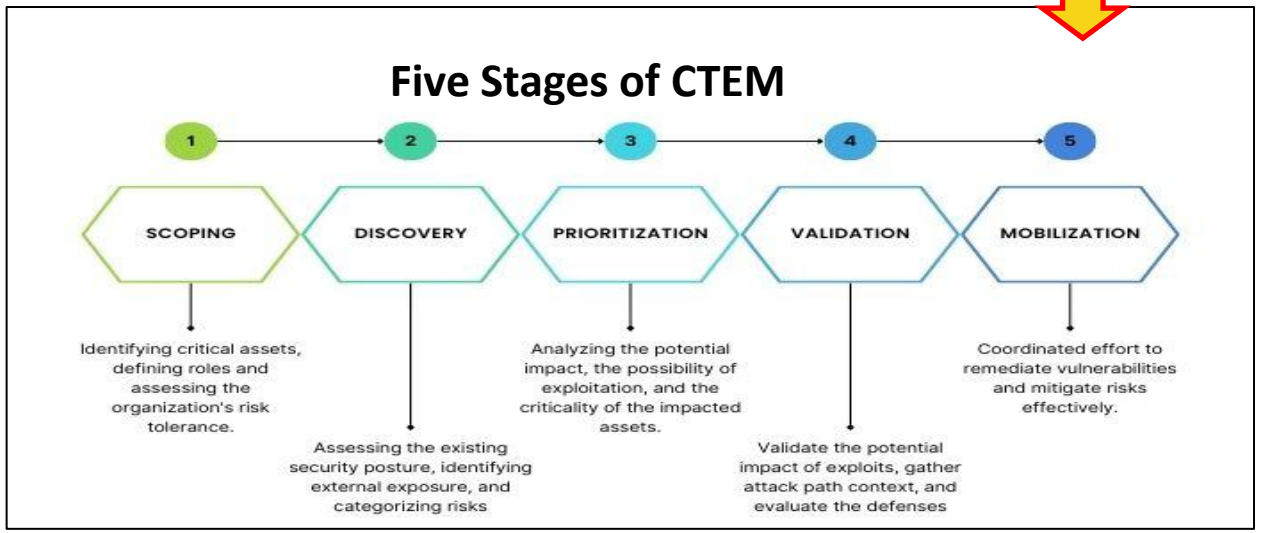


Costs of Vulnerabilities is Rising at a Rapid Rate

SBOMs can identify known problems to be fixed prior to production

CTEM identifies new problems when in Production



Combining disciplines will reduce vulnerabilities, costs, toil on personnel, and turnover.

Getting started with facts and a defined direction

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Know your company:

1. Most Important Applications & Services (**Family Jewels**).
2. Risk Assessment and BIA to Define the damage caused if lost and maximum duration of survival without the application or service.
3. Define Requirements, Scope, Risk, Security, DevSecOps, Testing, Recovery, Acceptance, Deployment, ITSM, ITOM, and ITAM.
4. Define Audit Universe implement legal & auditing functions.
5. Define the Ideation, Brainstorming, Collaboration, Innovation, to Concept process.
6. Implement Systems Engineering Life Cycle (SELC) to respond to new ideas or business opportunities.
7. Implement Systems Development Life Cycle (SDLC) to deploy new products and services.
8. Define Company Organization to respond to cybersecurity and technology problems in a timely manner and to the appropriate authorities (i.e., SEC Rule 2023-139)

Know your Environment:

1. Physical and Data Security (Data Sensitivity & Data Flow).
2. Architecture and engineering process (i.e., TOGAF).
3. Asset Inventory and Configuration Management (ITAM).
4. Identity and Access Management (IAM - ZTA).
5. GRC based compliance and attestation, with CIA based cybersecurity and elimination of viruses and malware, and RMF based Risk Identification and Controls Development.
6. Development and implementation of DevSecOps.
7. Personnel Titles, Job Functions and Responsibilities, and the integration of sensitive and required services within their everyday work tasks.
8. Staff training and development.
9. Continuous Monitoring and Improvement, along with the adoption of new technologies and processes (i.e., SRE).
10. Deploying error-free products and services (see EO 14028 and OBM M-22-18) and utilize the latest technologies to respond to encountered anomalies and verify compliance (i.e., CTEM).

Set your direction:

1. Most efficient, compliant, and secure production environment, capable of recovering from disaster events and providing continuous vulnerability-free products and services to customers. **Continuity of Succession / Delegation of Authority** must be included along with definition of duties.
2. Integrate guidelines, standard Operating Procedures, skill development, and awareness throughout the organization.

TOGAF – ADM Language – Knowing your company

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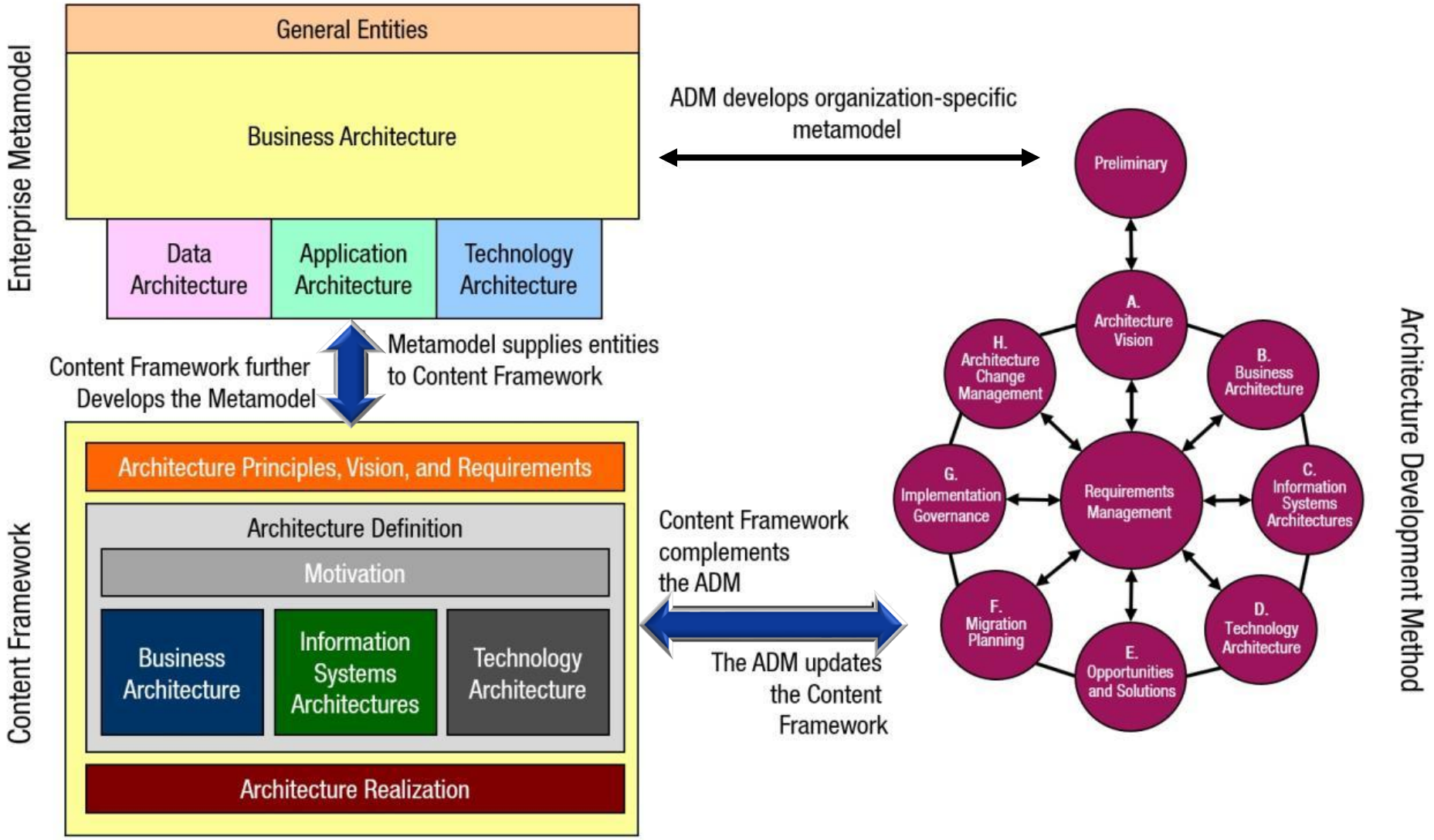

- Know your Company and what services you provide.
- Establish controls, audit crosswalks, audit scripts, schedules, audits, review findings, make improvements, and repeat until error-free.
- Convert to Agile.

CERT – Resilience Management Module

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Engineering	
ADM	Asset Definition and Management
CTRL	Controls Management
RRD	Resilience Requirements Development
RRM	Resilience Requirements Management
RTSE	Resilient Technical Solution Engineering
SC	Service Continuity

Enterprise Management	
COMM	Communications
COMP	Compliance
EF	Enterprise Focus
FRM	Financial Resource Management
HRM	Human Resource Management
OTA	Organizational Training & Awareness
RISK	Risk Management

Operations Management	
AM	Access Management
EC	Environmental Control
EXD	External Dependencies
ID	Identity Management
IMC	Incident Management & Control
KIM	Knowledge & Information Management
PM	People Management
TM	Technology Management
VAR	Vulnerability Analysis & Resolution

Process Management	
MA	Measurement and Analysis
MON	Monitoring
OPD	Organizational Process Definition
OPF	Organizational Process Focus

4 Categories with 26 Process Areas

1. Enterprise Management
2. Operations Management
3. Process Management
4. Engineering

CERT-RMM is a **maturity model** that promotes the convergence of security, business continuity, and IT operations activities to help organizations actively direct, control, and manage operational resilience and risk.

Identifying and Reporting Vulnerabilities

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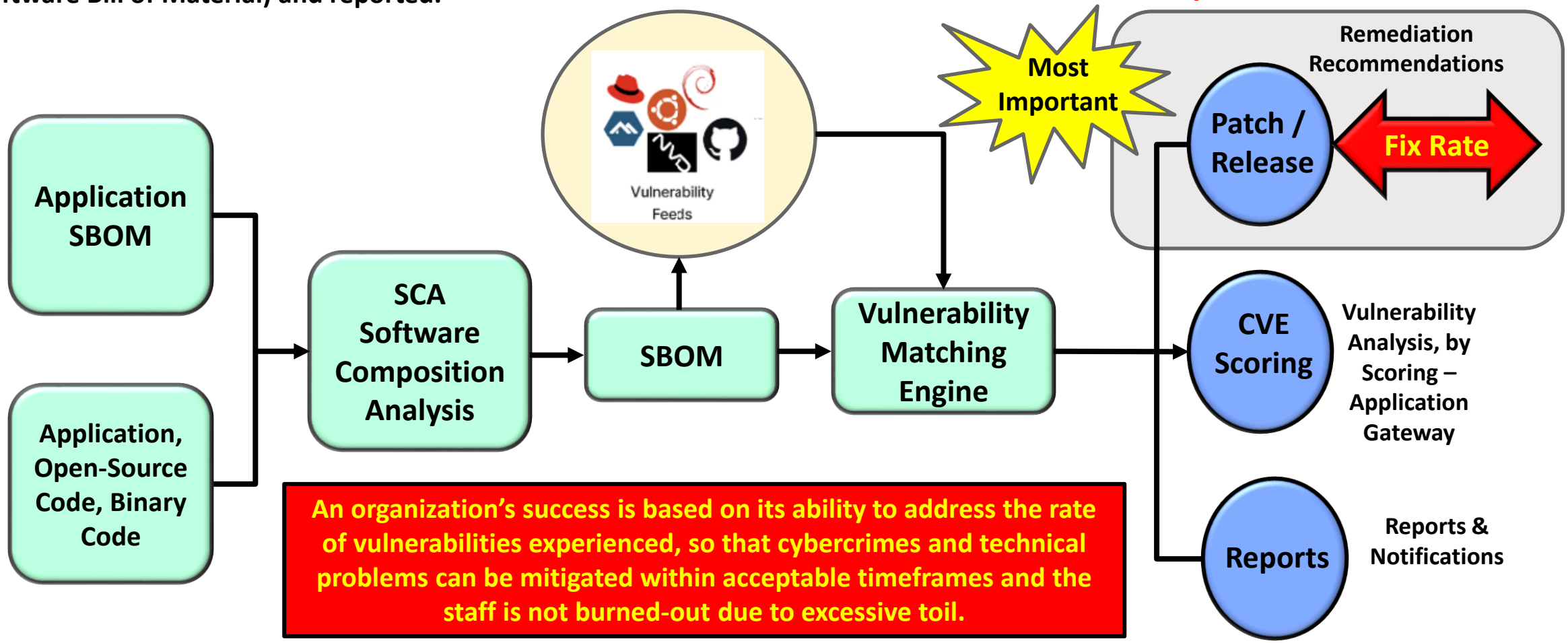
Existing Vulnerabilities are identified within Applications, or existing Application SBOMs (Software Bill of Material) and reported.

The Fix Rate associated with vulnerability repairs (Patch or New Release) should be equal to or higher than the rate of Vulnerability detection.



An organization's success is based on its ability to address the rate of vulnerabilities experienced, so that cybercrimes and technical problems can be mitigated within acceptable timeframes and the staff is not burned-out due to excessive toil.

Vulnerability Management definition and process

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Vulnerability management is a **continuous, proactive, and often automated process** that keeps your computer systems, networks, and enterprise applications safe from cyberattacks and data breaches. As such, it is an important part of an overall security program.

Process:

- **Plan** how to use Vulnerability Management
- **Discover** where your vulnerabilities exist
  - Vulnerability-Free Production Application Programs
  - Continuous Scanning for new Vulnerabilities impacting production applications via Continuous Threat Exploitation Management (CTEM)
- **Scan** applications with **SBOM**s (Software Bill of Materials)
  - Use **CTEM** to scan production environment
- **Report** vulnerabilities, their symptoms, and mitigations via patches and new releases
- **Remediate** through patches and new releases to mitigate known vulnerabilities, or correcting new anomalies

Performing an Audit and Risk Assessment

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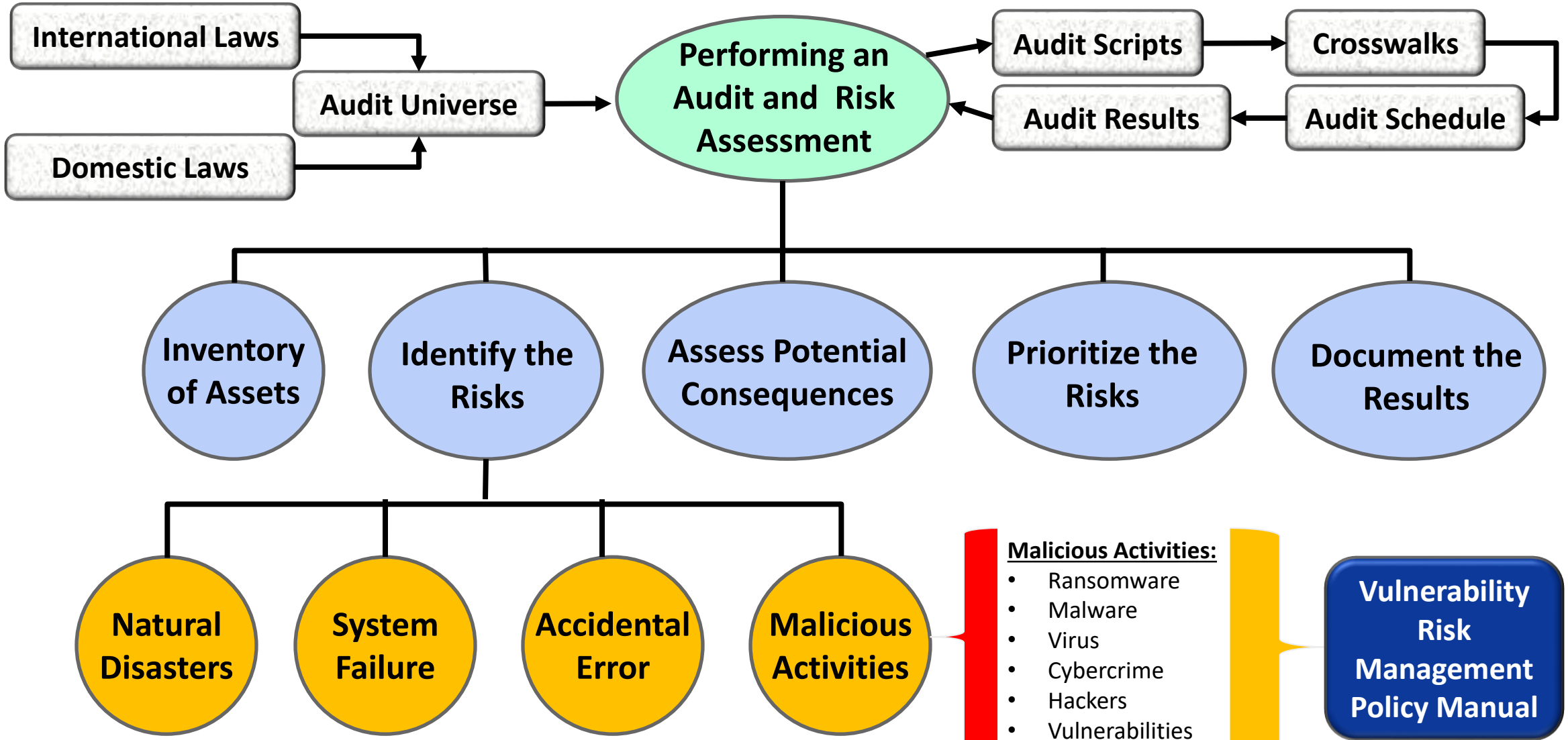

Vulnerability Management Maturity Lifecycle

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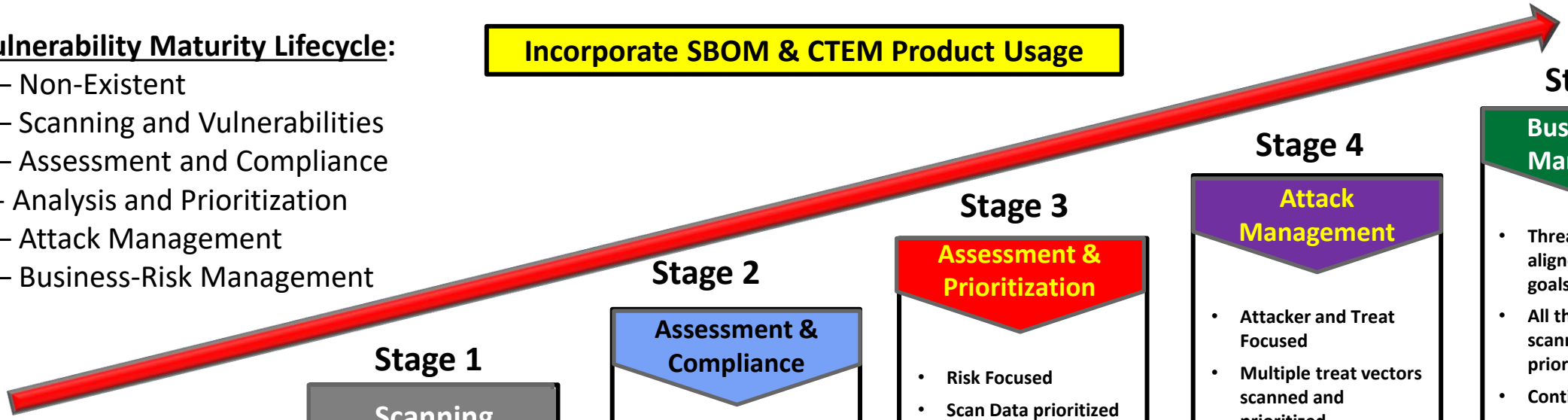
Vulnerability Maturity Lifecycle:
0 – Non-Existent
1 – Scanning and Vulnerabilities
2 – Assessment and Compliance
3 - Analysis and Prioritization
4 – Attack Management
5 – Business-Risk Management

Incorporate SBOM & CTEM Product Usage



Stage 0
Non-Existent
- No vulnerability Scanning
- Manual Vulnerability Assessments
- Haphazard Patching
- No processes / metrics

Needs Analysis

Stage 1
Scanning
- Vulnerability Assessment Solution in place/ metrics
- Ad-Hoc Vulnerability Scanning
- Basic Patching, Processes, and Metrics identified

Proof of Concept

Stage 2
Assessment & Compliance
- Driven by Regulatory Framework
- Scheduled Vulnerability Scanning
- Scan to Patch Lifecycle
- Emergency Processes
- Little measurability, metrics need to be developed and monitored
- GRC adherence

Contract

Stage 3
Assessment & Prioritization
- Risk Focused
- Scan Data prioritized through analytics
- Vulnerability Scoring
- Patching is Data Driven by priority
- Measurable Processes
- Emerging metrics and trends detected and reported
- Extended protect and reduction in vulnerability workload

Tailoring

Stage 4
Attack Management
- Attacker and Treat Focused
- Multiple treat vectors scanned and prioritized
- Pathing bases on risk to critical assets
- Efficient metrics-based processes
- Threat driven metrics and trends
- Protection over vulnerabilities, network, and endpoints achieved

Integration

Stage 5
Business-Risk Management
- Threat and Risk aligned with business goals
- All threat vectors scanned and prioritized
- Continuous patching
- Unified business and IT processes
- Measurement integrated to enterprise risk
- Executive Dashboard for organizational and continuity of services
- Documentation, Awareness and Training

Fully Deployed

Global Vulnerability Management Policy generation

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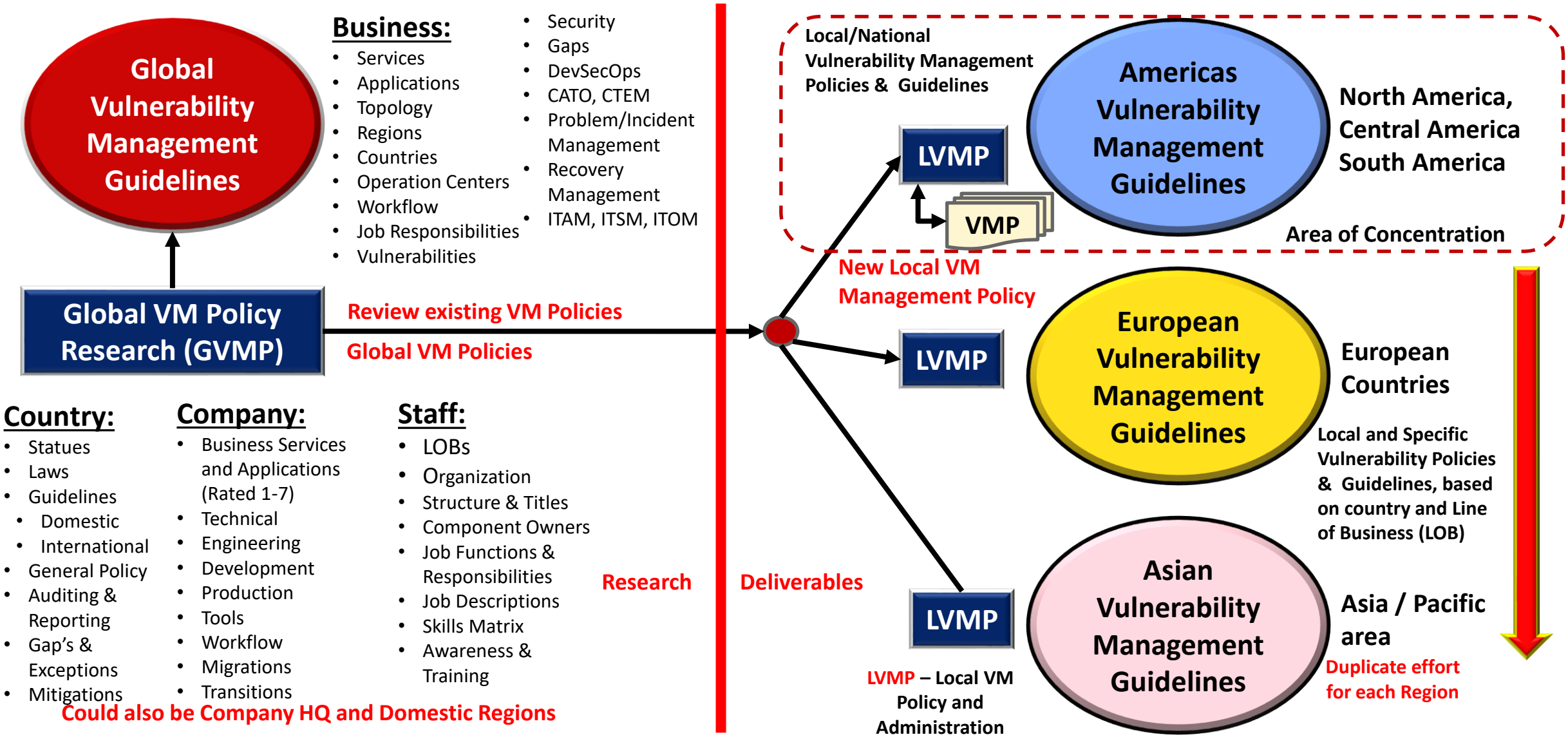

Resiliency Operations Center (ROC)

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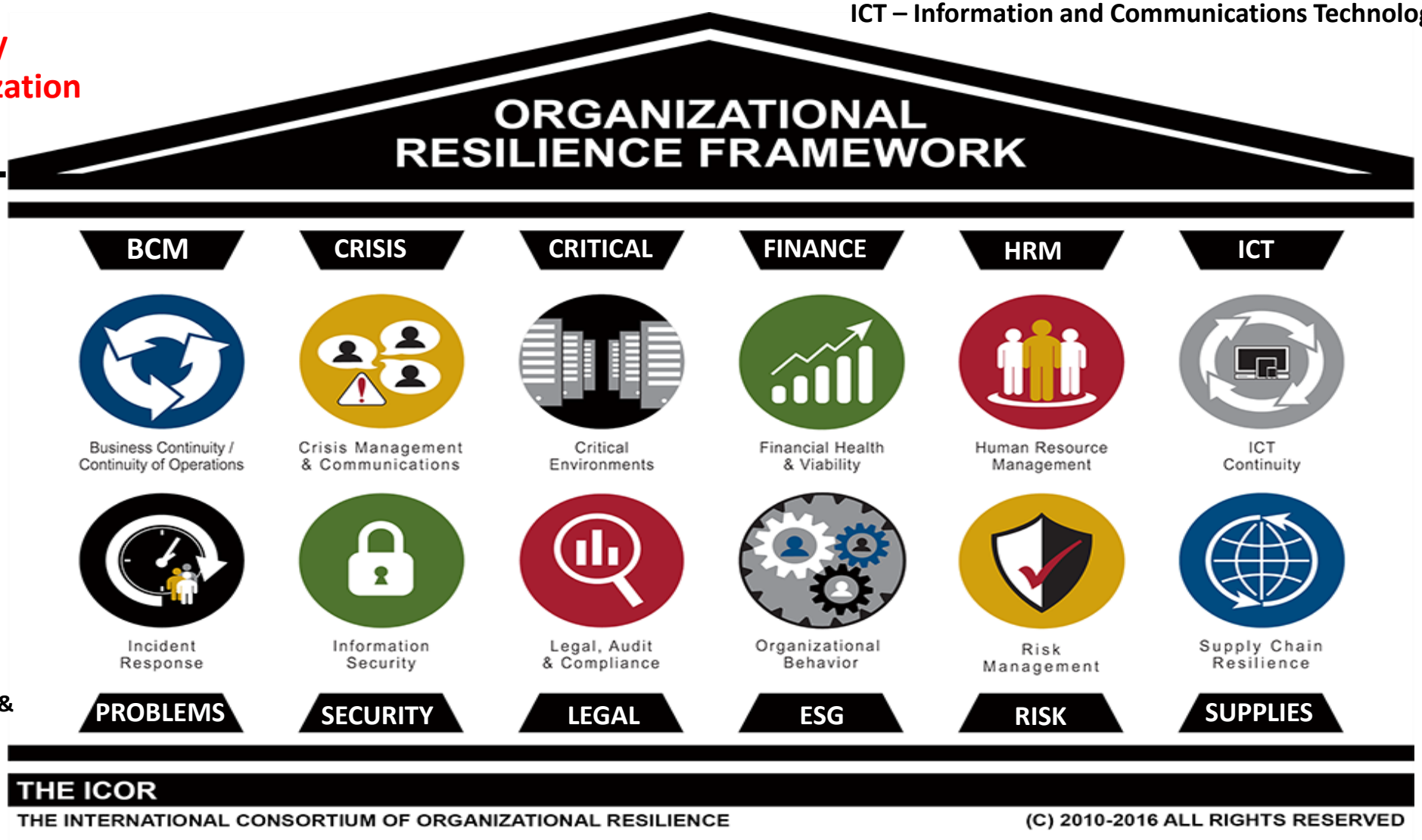
ICT – Information and Communications Technology

Coordinating Resiliency throughout the organization

Resiliency Operations Center (ROC)

- Meet Departments,
- Understand needs,
- Vulnerability Management,
- Comply & Protect
- Define Recovery Actions
- Continuity of Business
- Document Action Plans and provide Awareness, Training & Exercise, Enactment.
- Optimize Workflow
- Continuous Improvement.



OWASP Vulnerability Management Cycles

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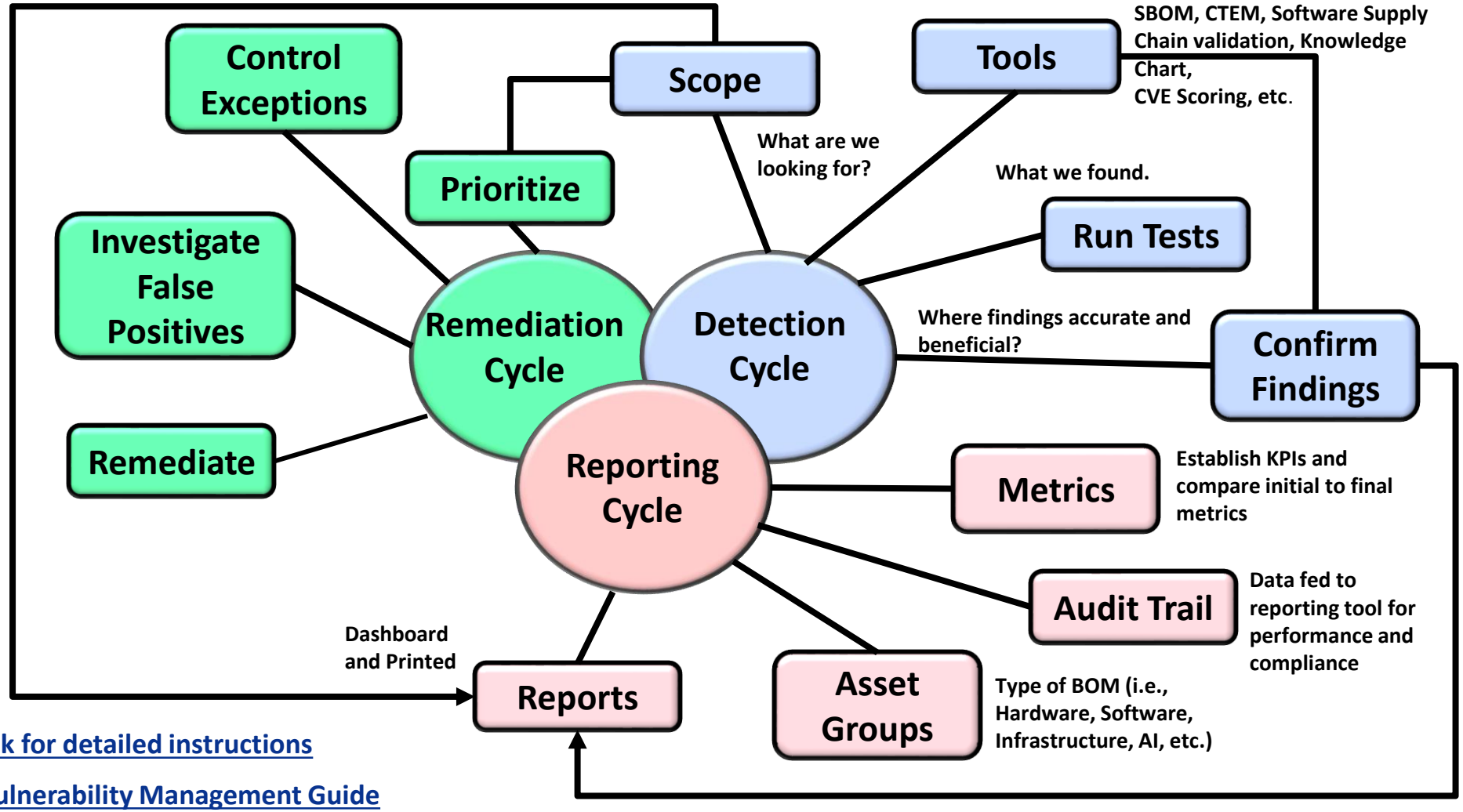
Sequence:

1. **Detection Cycle**
    1. Define Scope
    2. Select Tools
    3. Run Tests
    4. Confirm Findings
2. **Reporting Cycle**
    1. Metrics
    2. Audit Trai
    3. Asset Groups
3. **Remediation Cycle**
    1. Prioritize Scope
    2. Define Controls and Exceptions
    3. Investigate False Positives
    4. Remediate



[Follow Link for detailed instructions]

[OWASP Vulnerability Management Guide]

What is an SBOM and how does it work

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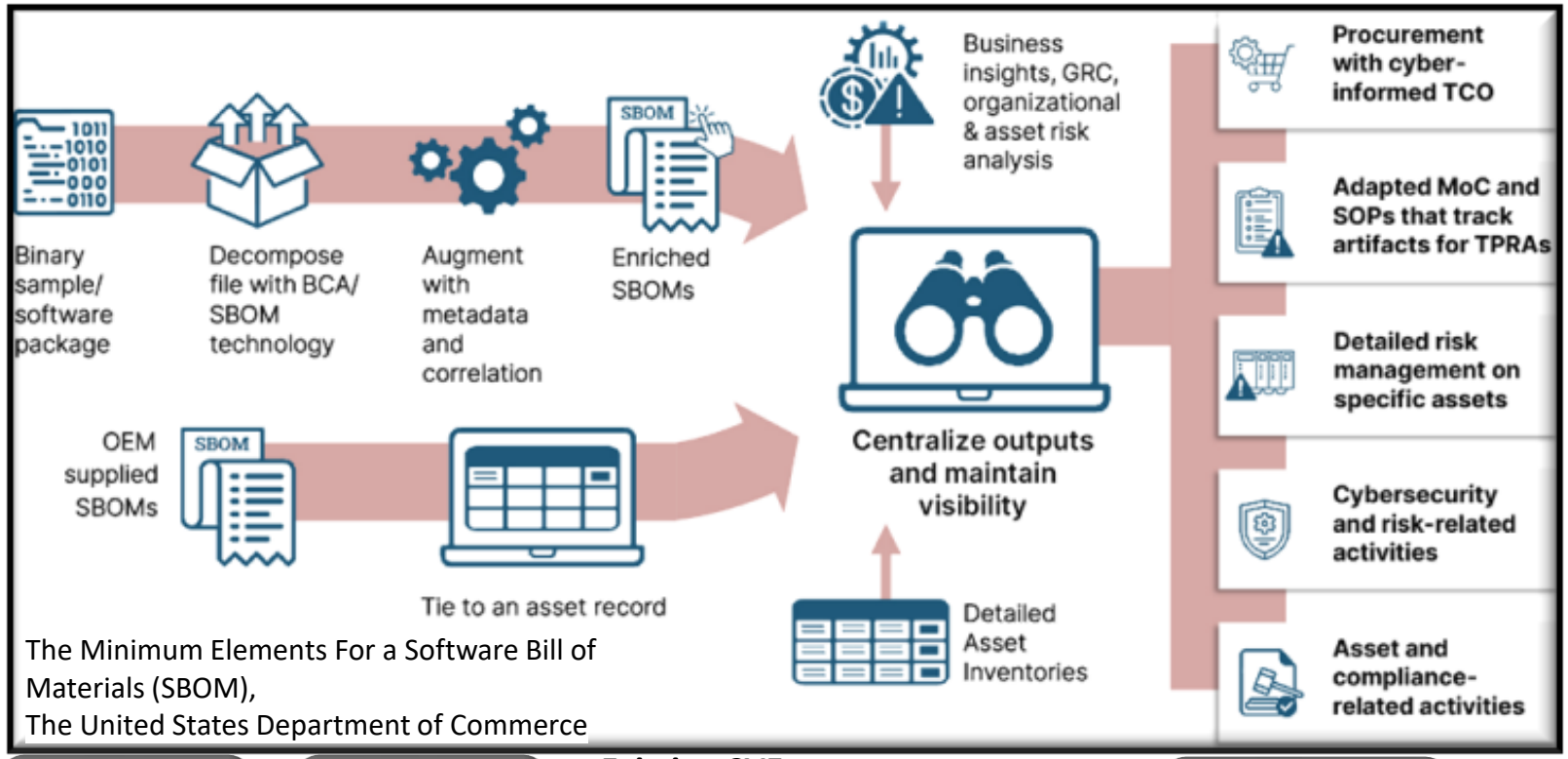
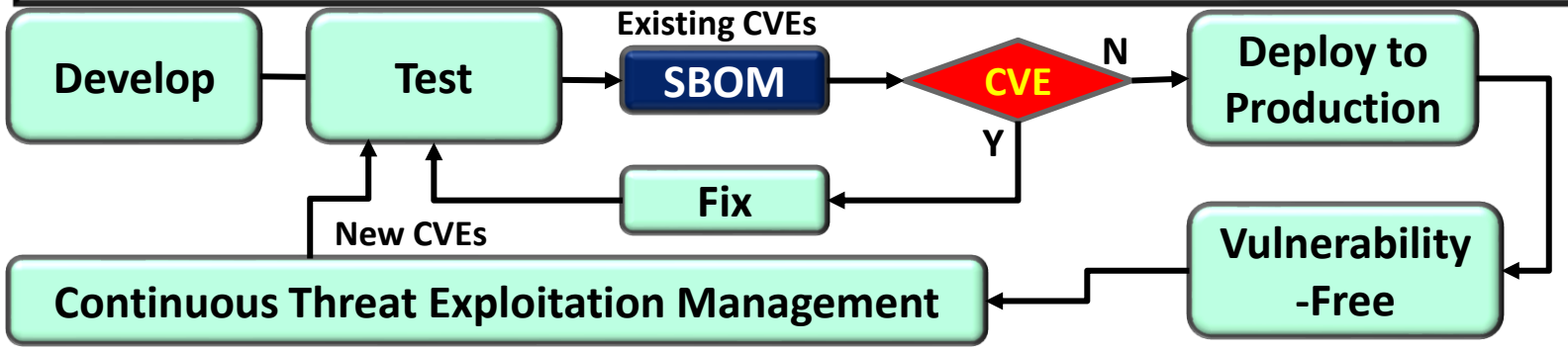
Software Bill of Materials (SBOMs) are used to validate program components used to create applications by scanning the application code and identifying program components (Open-Source Code, Vendor Code, and other Binary software products).

It then searches public vulnerability data bases to determine if active vulnerabilities are associated with the program product and any recommending changes that should be made prior to the product being introduced to the production environment (Patches, New Releases, etc.).

Integrating SBOMs within the testing environment will reduce your exposures to vulnerabilities and malware, so It is highly recommended and, in some cases, mandatory to adhere to laws (FDA, EO 14028, etc.).



The Minimum Elements For a Software Bill of Materials (SBOM),
The United States Department of Commerce



From Idea to Product, with Support and Recovery

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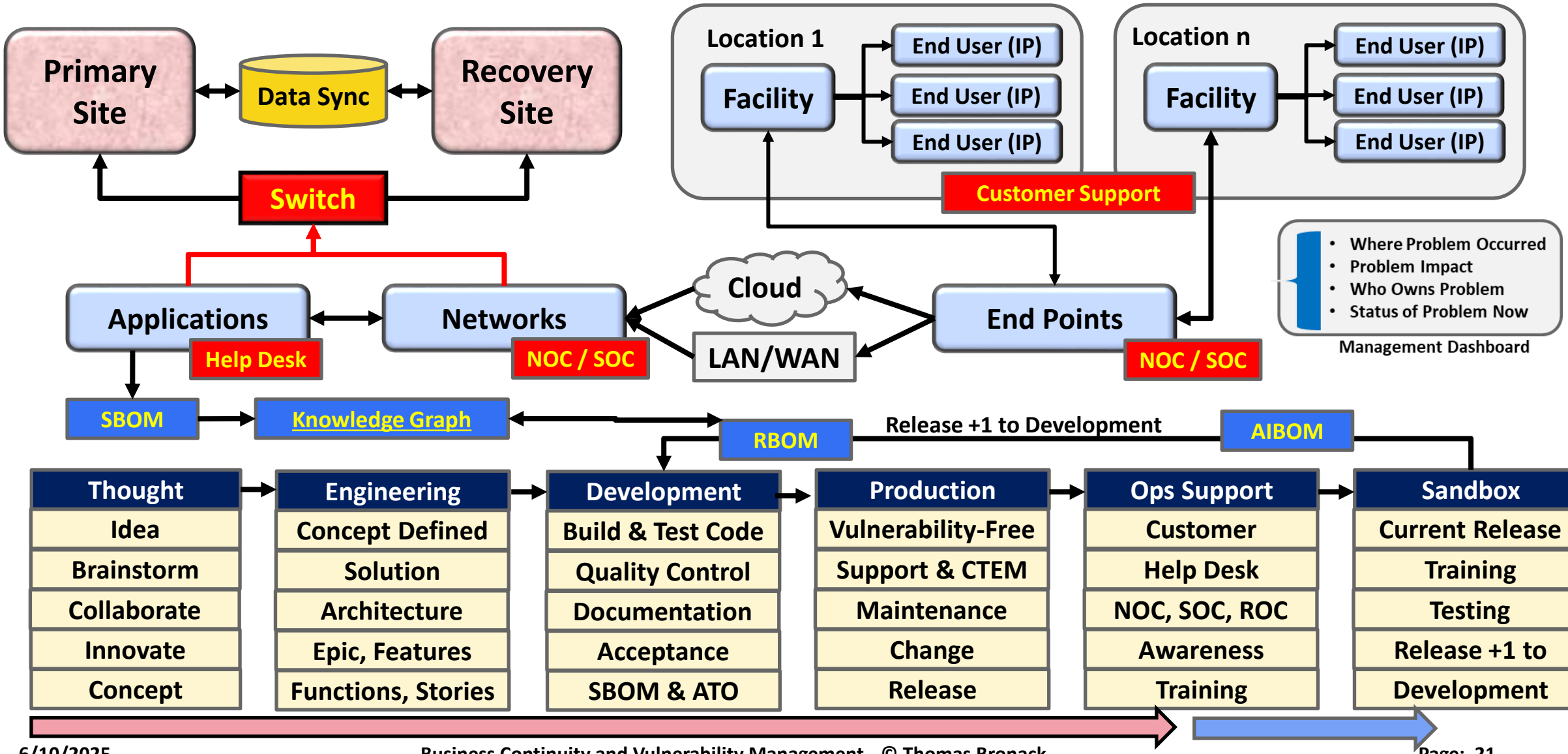

Addressing Threats

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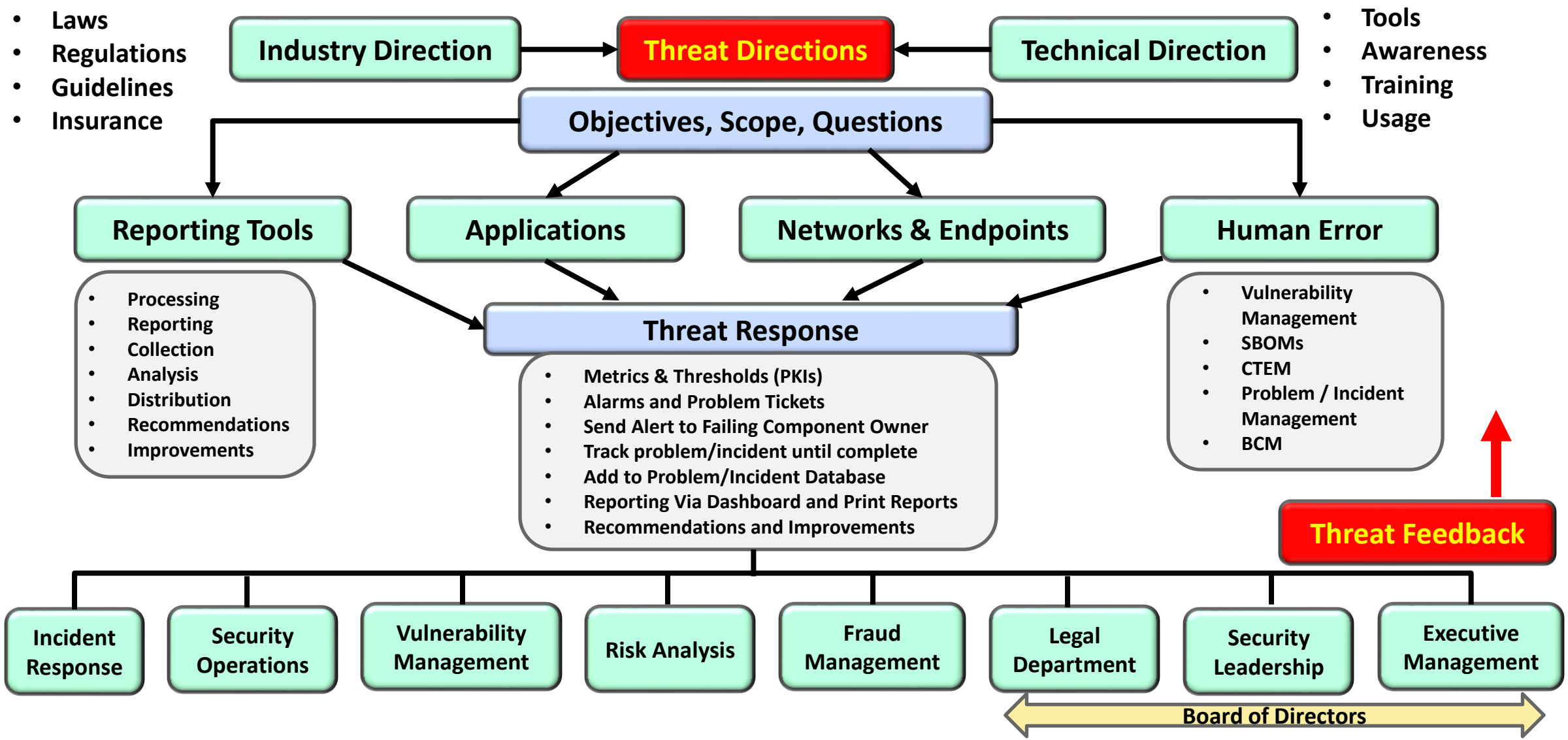

Tracking Problems through a Dashboard

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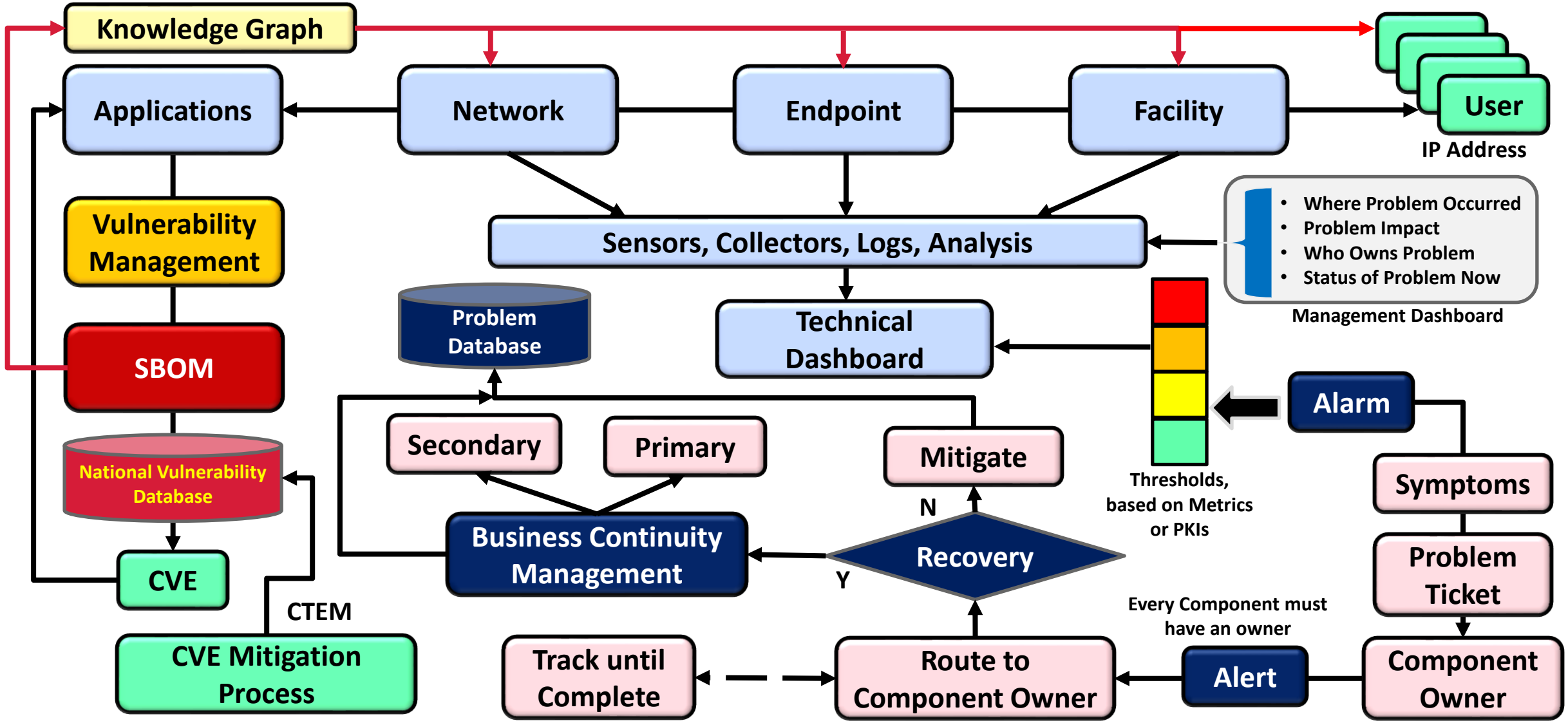

Problem / Incident Recognition, Reporting, and Resolving

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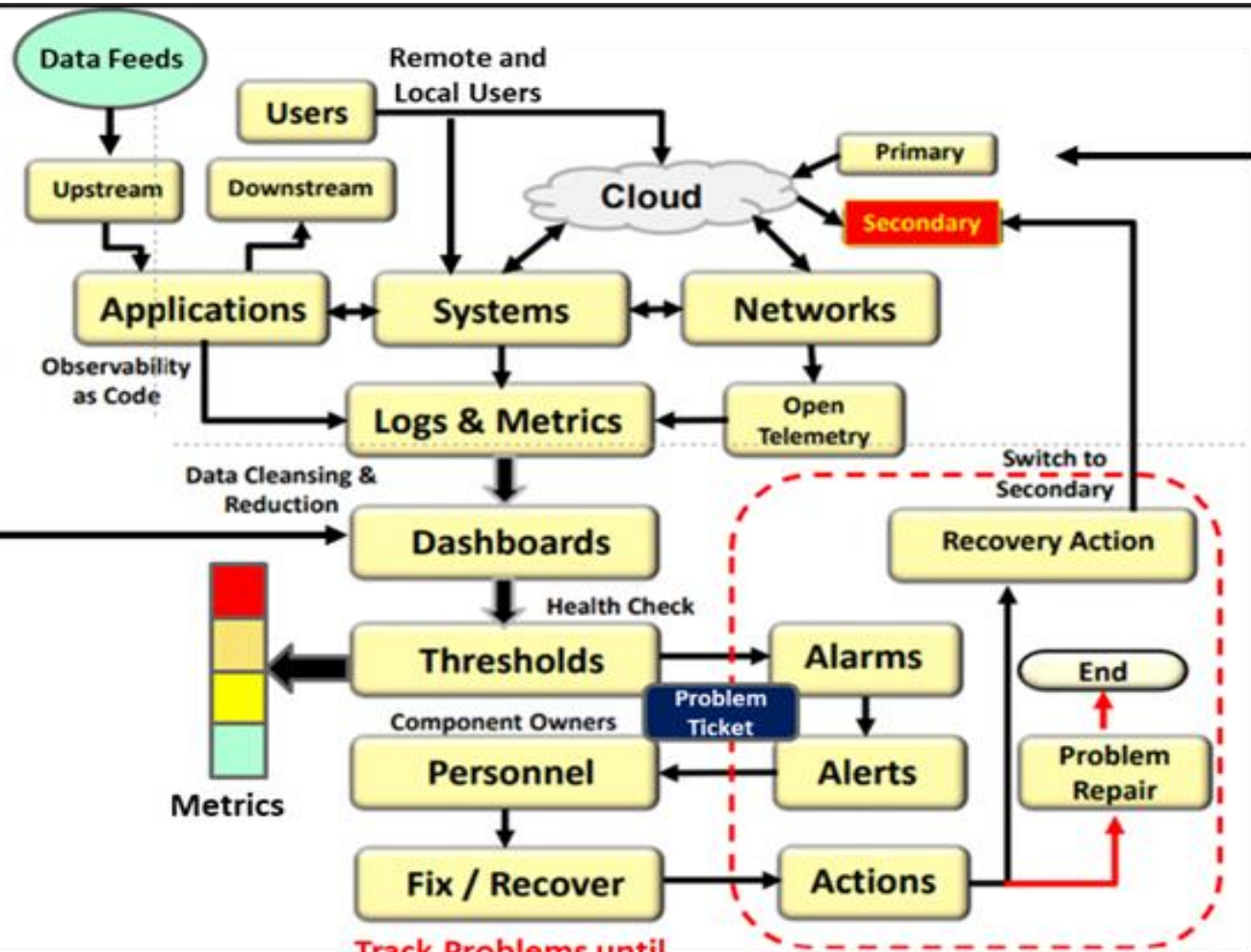
"Secure by Design" and "Continuous Threat Exposure Monitoring (CTEM)" are new concepts introduced to address the need for Continuous Authorization To Operate (cATO) to ensure the protection of IT Organizations from Cyber Attacks and Technical Problems.

Review applications and define Component Owners and Metrics, for each component define their various application functions and features (i.e., response times, alarms, pending actions, etc.). To establish thresholds and durations to be displayed on Dashboards to support rapid problem identification and resolution.



If the problem cannot be resolved within the applications RTO, then a recovery action is initiated, and the Recovery Plan is exercised by the application Recovery Coordinator and Team

1. When the Dashboard monitor senses, a threshold is crossed, an Alarm is generated, and a problem report completed.

2. The Alarm and problem ticket are delivered to the component owner as an Alert (SMS text message, or email)

3. Actions are taken by the component owner, or an escalation path is taken to resolution, and the problem is tracked until resolved.

Ten Step Process to establish BCM/DR Practice

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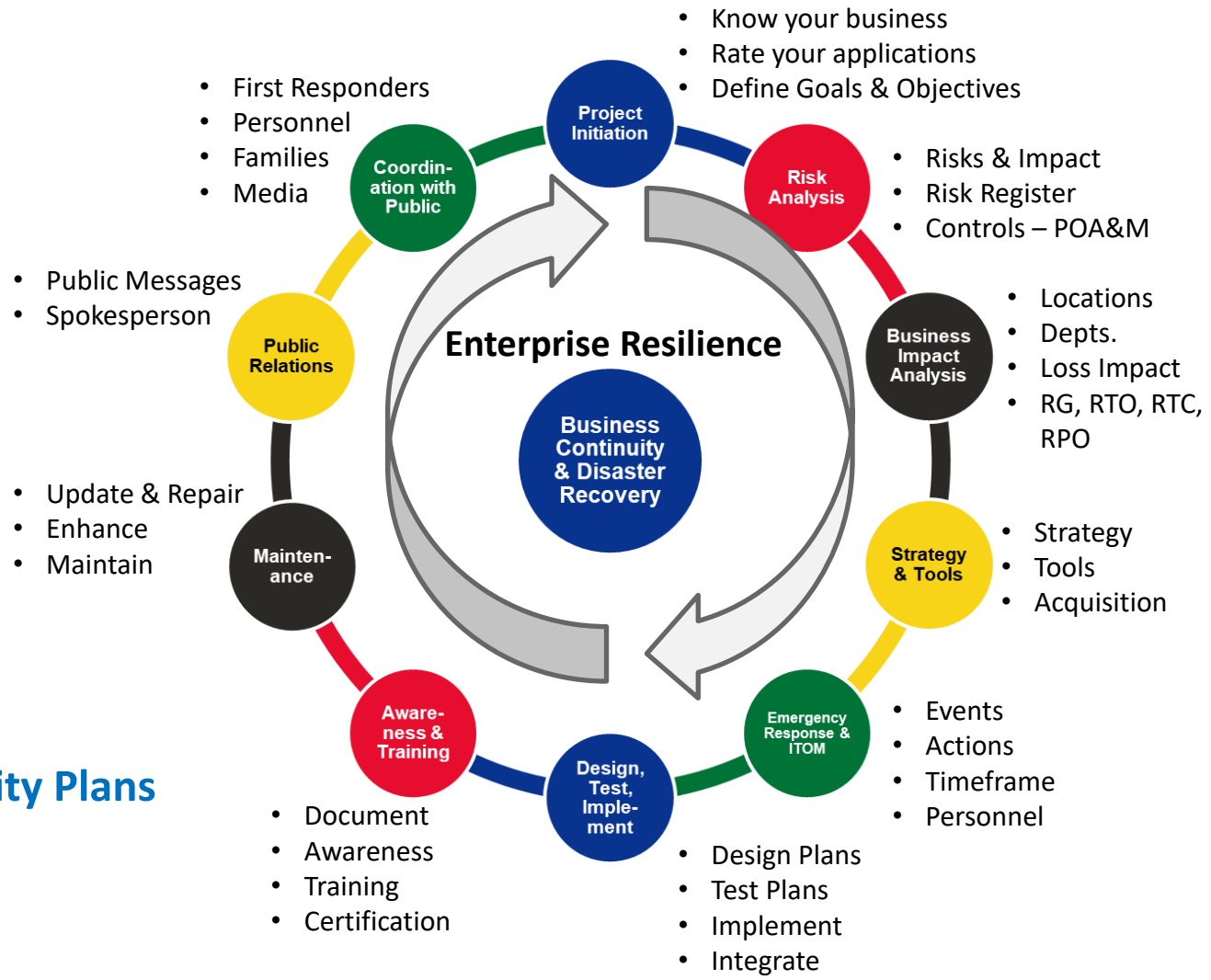
1. Project Initiation and Management
2. Risk Evaluation and Controls Improvement
3. Business Impact Analysis
4. Developing Business Continuity Strategies
5. Emergency Response and Operations Restoration (Backup, Vaulting, Restoration)
6. Designing and Implementing Business Continuity Plans
7. Awareness and Training
8. Maintaining and Exercising Business Continuity Plans
9. Public Relations and Crisis Communications
10. Coordinating with Public Authorities



AWS DR Strategies

Link to AWS Disaster Recovery Strategies

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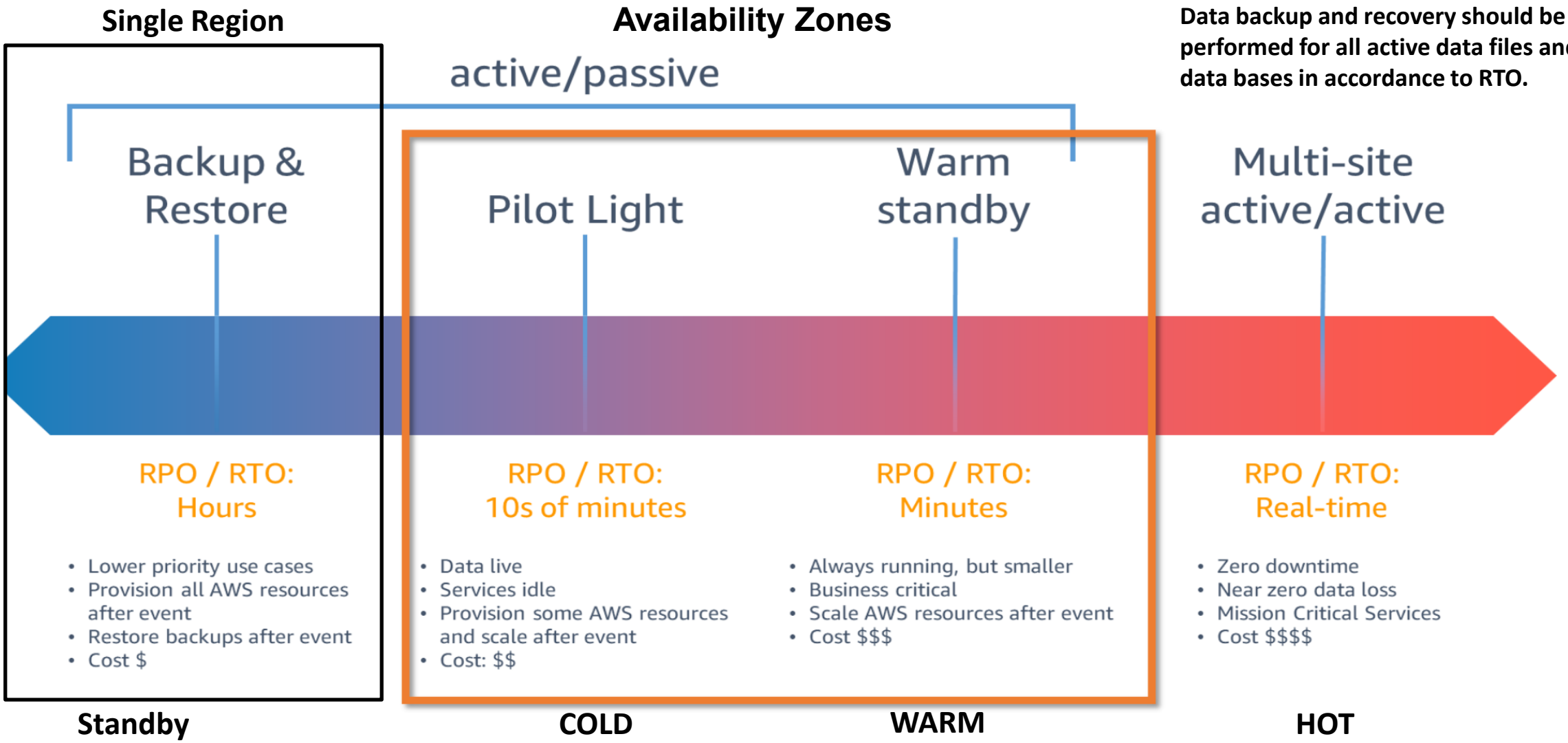
Data backup and recovery should be performed for all active data files and data bases in accordance to RTO.



Resilience Patterns and Recovery Groups

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Resiliency Patterns	Single Region	Multiple Regions		
	In-Region	Active Standby (Pilot Ligt)	Active-Passive (Warm Stendby)	Active-Active (Multi-Site)
Pattern Profile	**1. TRANSACTIONAL TRAFFIC** - handled by primary region only 2. No multi-region **INFRASTRUCTURE** 3**. APPLICATION** code only available in single region 4. Multi-region **RECOVERY** not supported	**1. TRANSACTIONAL TRAFFIC** - handled by primary region only 2. **INFRASTRUCTURE available on stand-by** 3**. APPLICATION** provisioned, but in shutdown state	**1. TRANSACTIONAL TRAFFIC** - handled by primary region only 2. **INFRASTRUCTURE available on standby** 3**. Minimal APPLICATION** footprint running in 2nd rerion (all components are spun up and available with min. capacity, where application)	**1. TRANSACTIONAL TRAFFIC** - handled by primary region only 2. **INFRASTRUCTURE always available in both regions** 3**. APPLICATION** stack running active/active multi-region
Reserve Capacity			Required **RESERVE CAPACITY**	Required **RESERVE CAPACITY**
Cross-Region Maintenance	None	1. Maintain **PERSISTENT DATA REPLICATION** infrastructure 2. **APPLICATION CODE** maintaned for currency in **BOTH REGIONS** 3. Operate Production from stand-by region periodically	1. Maintain **PERSISTENT DATA REPLICATION** infrastructure 2. **APPLICATION CODE** maintaned for currency in **BOTH REGIONS** 3. Operate Production from stand-by region periodically	1. Maintain **2-WAY PERSISTENT DATA REPLICATION** 2. **APPLICATION CODE** maintaned for currency in **BOTH REGIONS** 3. Operate Production from stand-by region periodically
Recovery Steps	1. **ACQUIRE INFRASTRUCTURE** 2**. BUILD OUT** infrastructure 3. **DEPLOY** application 4. **RECOVER / RECREATE DATA** 5. **REDIRECT TRAFFIC** to region 2	1. **SCALE INFRASTRUCTURE** 2. **STARTUP** application 3. **FAILOVER TRAFFIC**	1. **AUTO- SCALE INFRASTRUCTURE** 2. **FAILOVER TRAFFIC**	1. **RECOVERY** acieved through automated redirect of traffic
Recovery Group (RG)	**RG7**	**RG 4-6**	**REG 1-3**	**RG 0**
Recovery Time Design (RTD)	**Days+**	**Hours (<8 hrs)**	**Minutes (<15 mins)**	**Real-Time (<5mins)**
Recovery Point Design (RPCD)	**Hours (<8 Hrs)**	**Minutes (<15 mins)**	**Minutes (<15 mins)**	**Real-Time (< 0 mins)**
Cloud Based Recovery Group Specifications		**Preferred Patterns**		

Sequence of Events to enact a Recovery Operation

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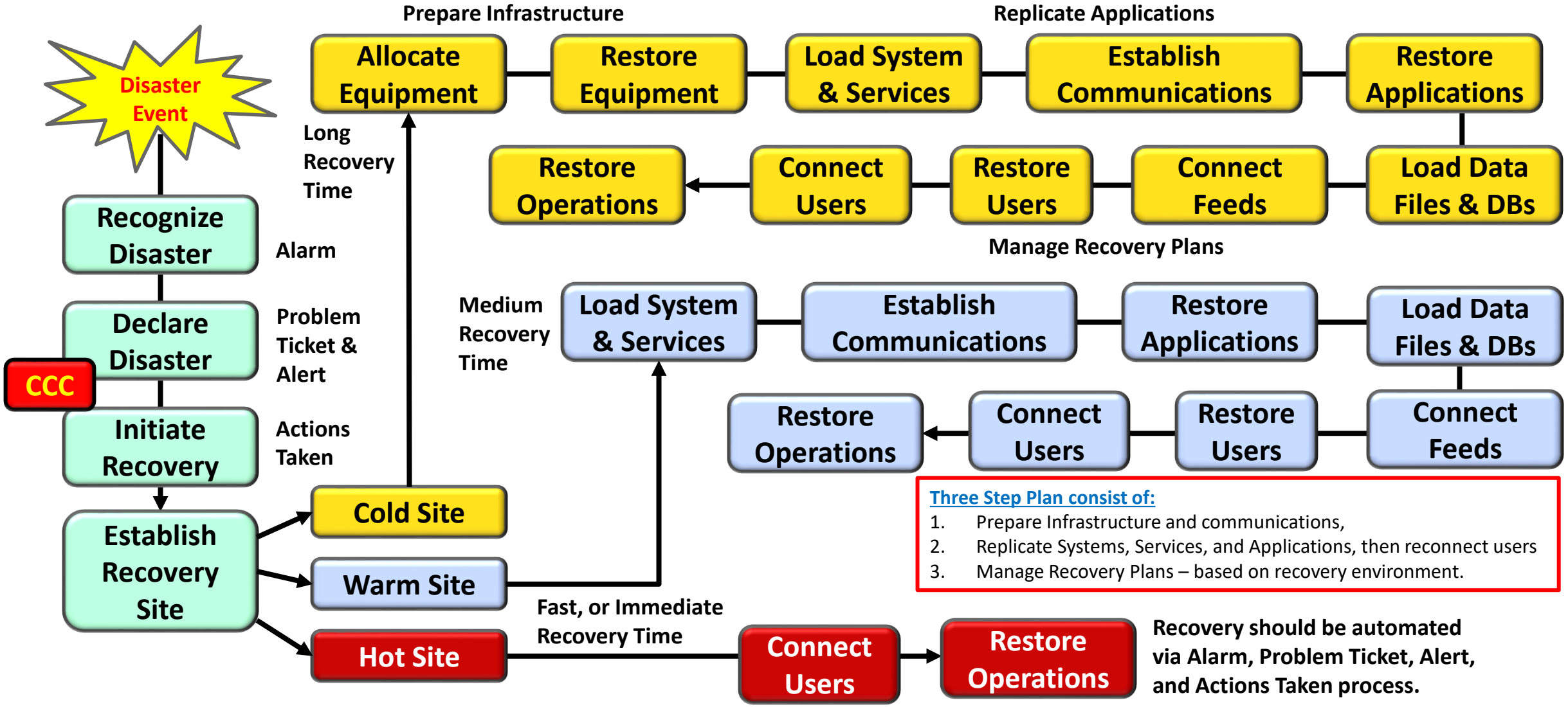

Ensuring Compliance via GRC and Risk Assessment

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Governance

- Laws
- Statutes
- Regulations

Statutory and Regulatory

- ISO
- NIST

Standards

- Organizational
- Info Technology
- Info Security

Policies

- PCI/DSS
- Customer Contracts
- B2B Agreements

Contract Commitments

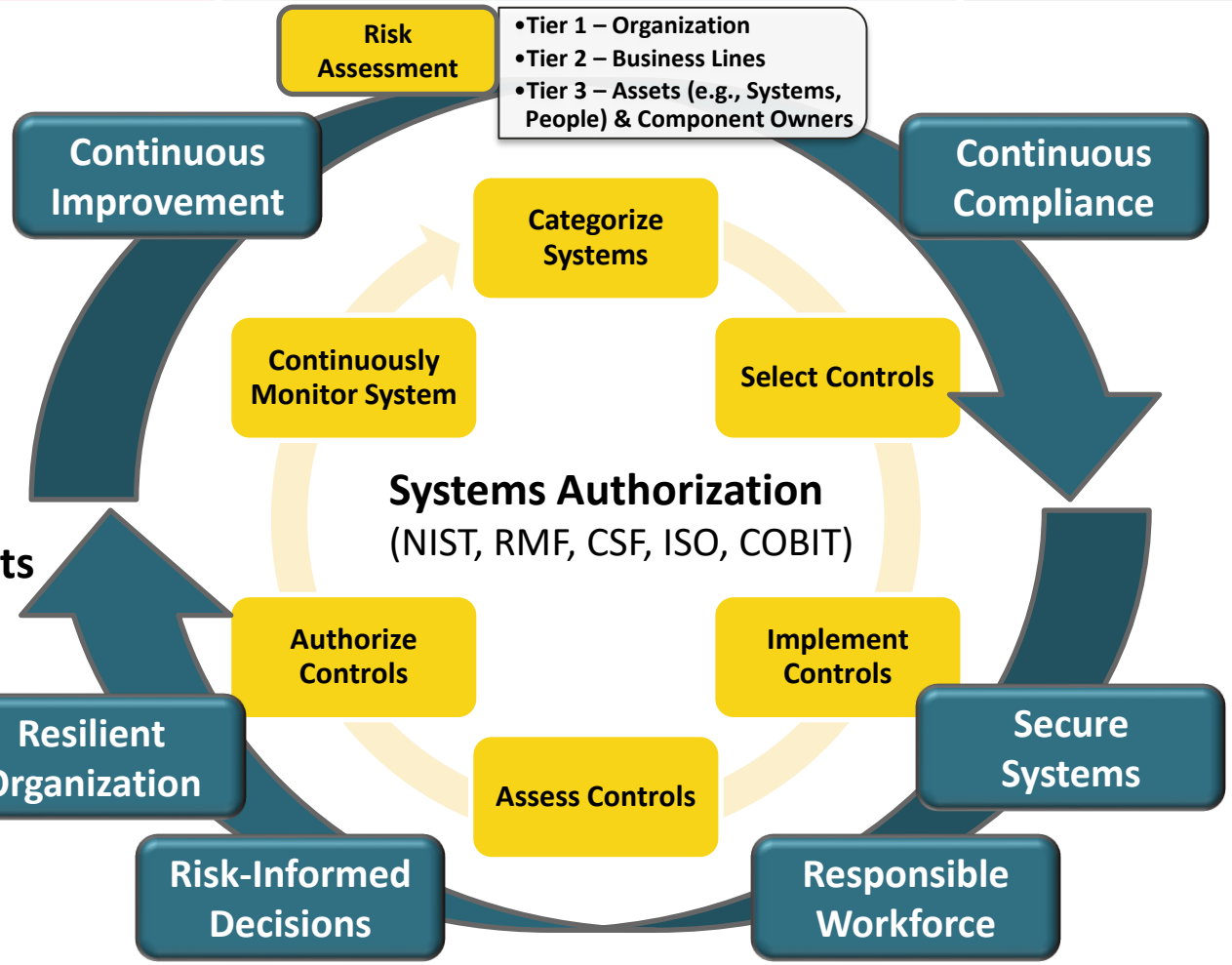
- Administrative
- Physical
- Technical

Contracts

- NIST, CSF, RMF
- ISO
- Organizational

Processes and Procedures

Risk



Compliance

Monitor

- Threat Landscape
- Implemented Controls
- Insider Behavioral Analysis

Self Assessment

- Systems
- Practices
- Audit Preparations

External Audits

- Regulatory Audits
- Standards Audits (e.g., ISO)
- Contractual Audits (e.g., PCI)

Reporting

- Internal
- Regulatory Bodies
- Customers

Risk Management with ISO 27000: 2022

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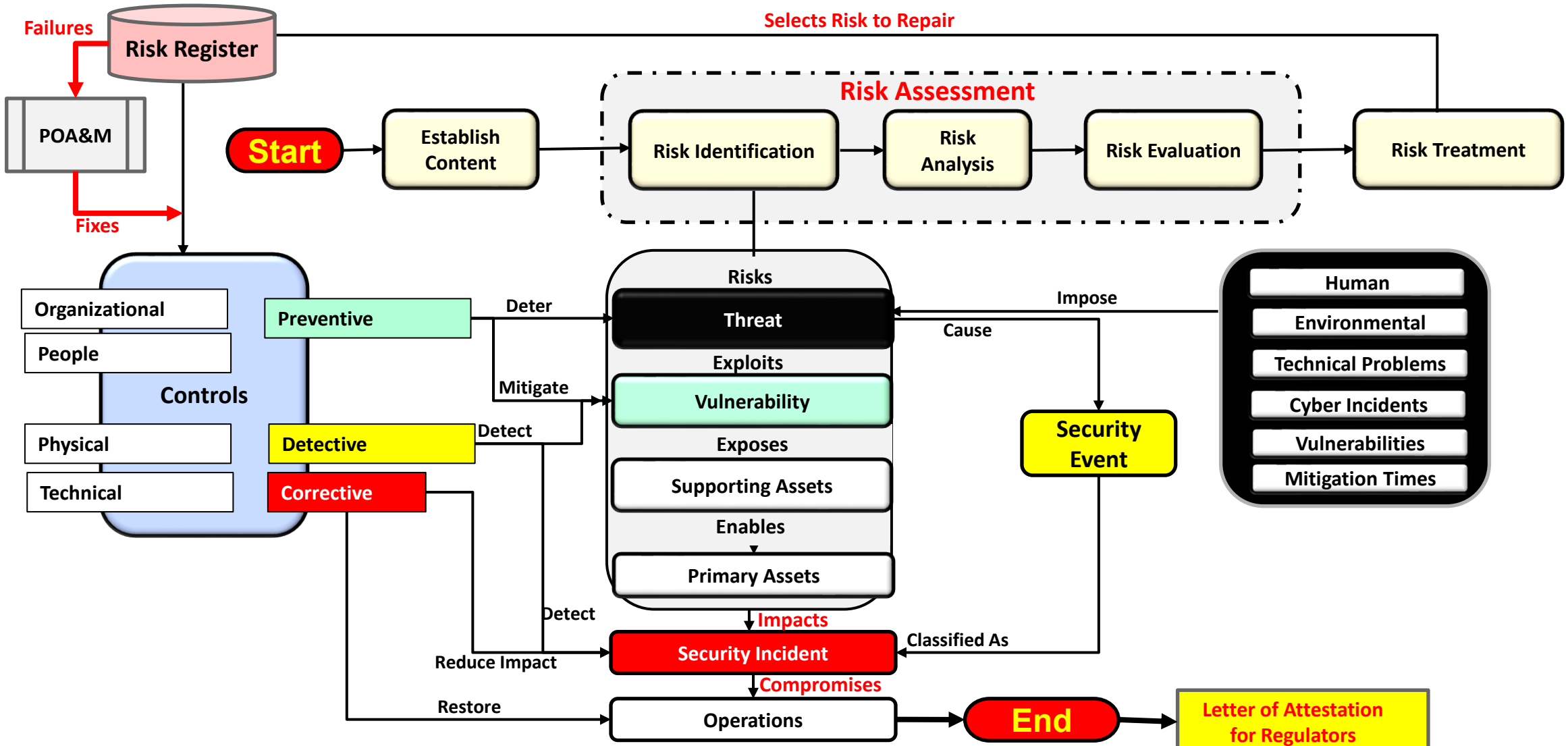

IT Security – Physical & Data

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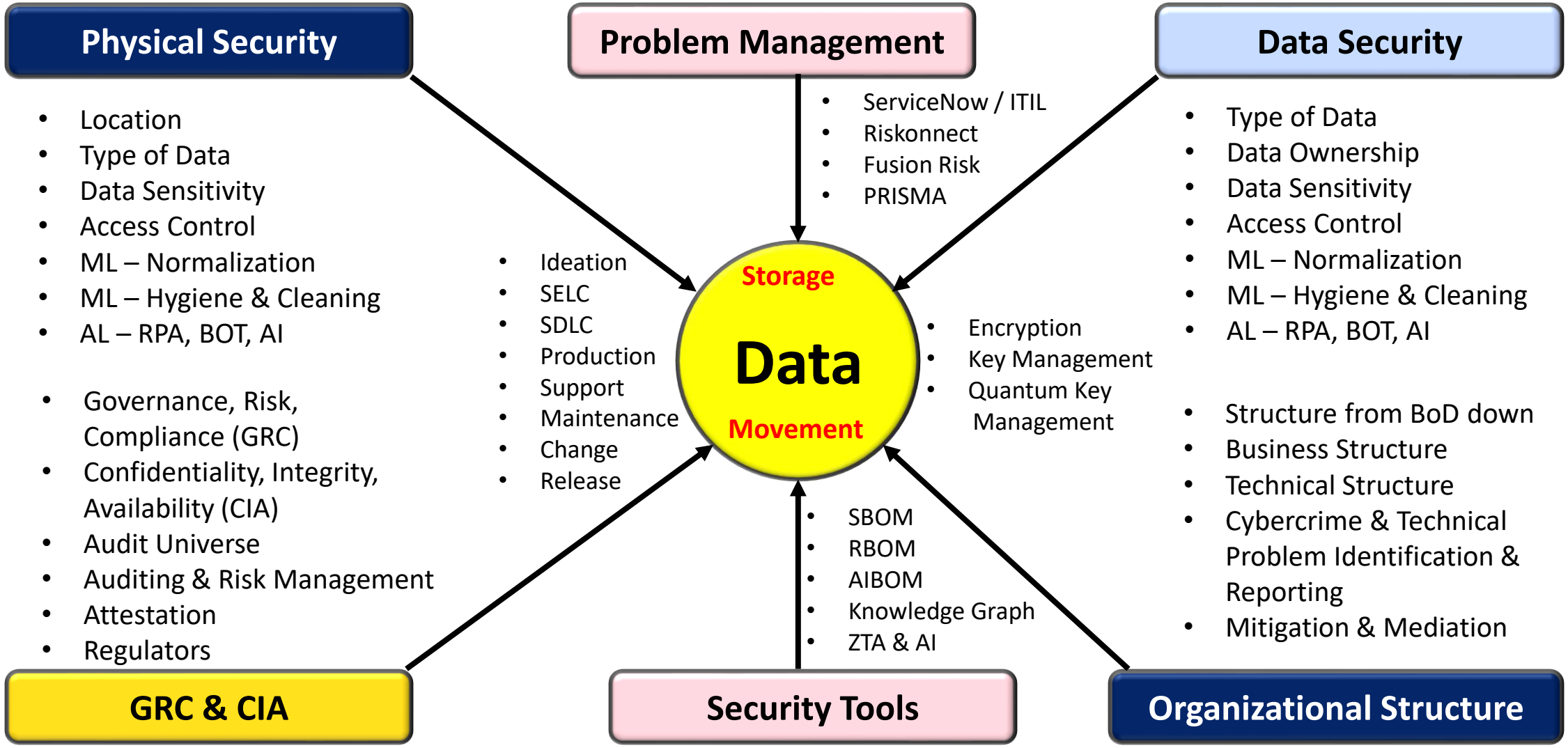

NIST CSF 2.0 Categories and Application

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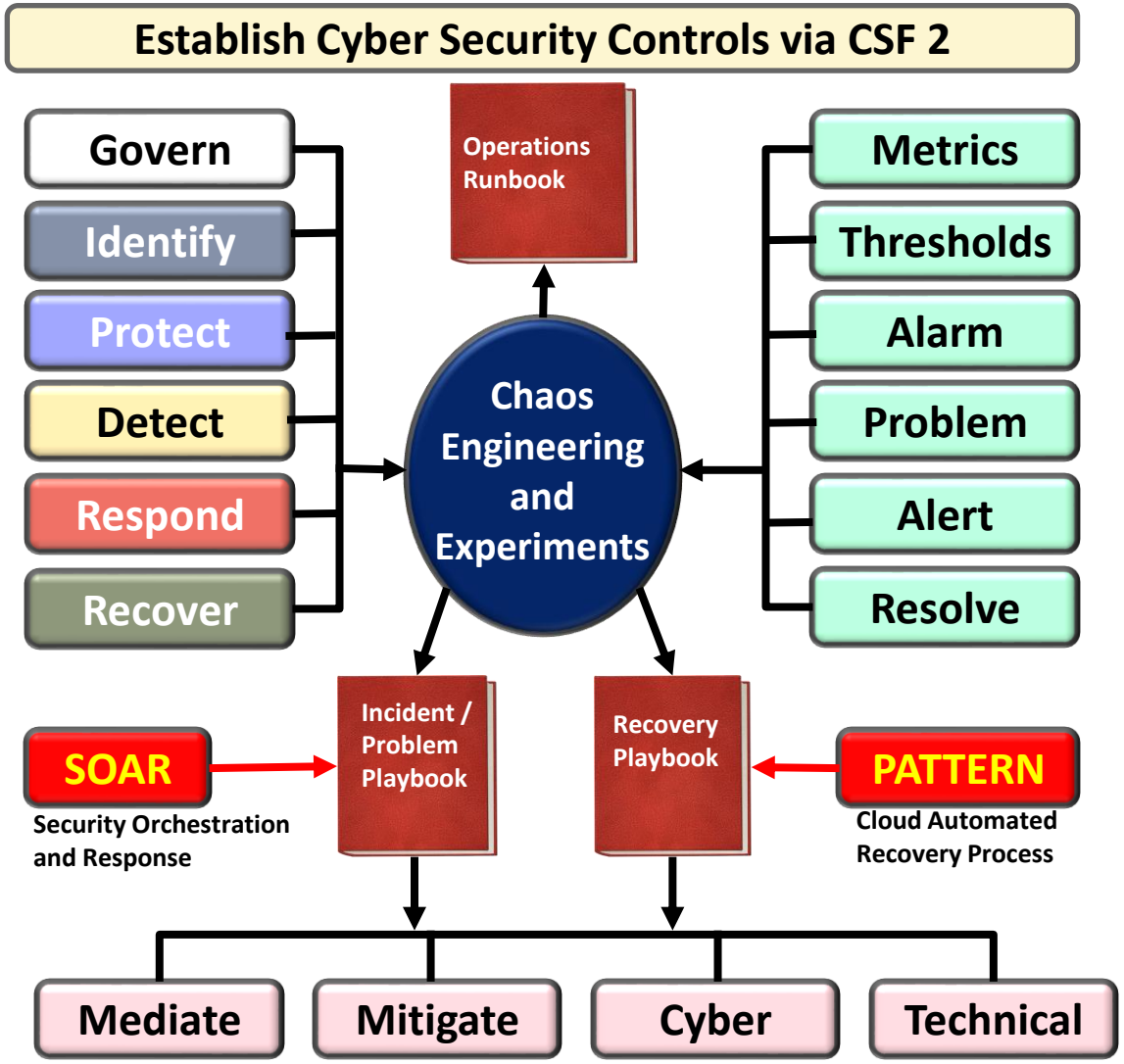
NIST Cybersecurity Framework 2.0		
CSF 2.0 Function	**CSF 2.0 Category**	**CSF 2.0 Category Identifier**
Govern (GV)	Organizational Context	GV.OC
	Risk Management Strategy	GV.RM
	Roles and Responsibilities	GV.RR
	Policies and Procedures	GV.PO
Identity (ID)	Asset Management	ID.AM
	Risk Assessment	ID.RA
	Supply Chain Risk Management	ID.SC
	Improvement	ID.IM
Protect (PR)	Identity Management, Authentication, and Access Control	PR.AA
	Awareness and Training	PR.AT
	Data Security	PR.DS
	Platform Security	PR.PS
	Technology Infrastructure Resilience	PR.IR
Detect (DE)	Adverse Event Analysis	DE.AE
	Continuous Monitoring	DE.CM
Respond (RS)	Incident Management	RS.MA
	Incident Analysis	RS.AN
	Incident Response Reporting and Communication	RS.CO
	Incident Mitigation	RS.MI
Recover (RC)	Incident Recovery Plan Execution	RC.RP
	Incident Recovery Communication	RC.CO



Application Security Testing – Dev/Sec/Ops

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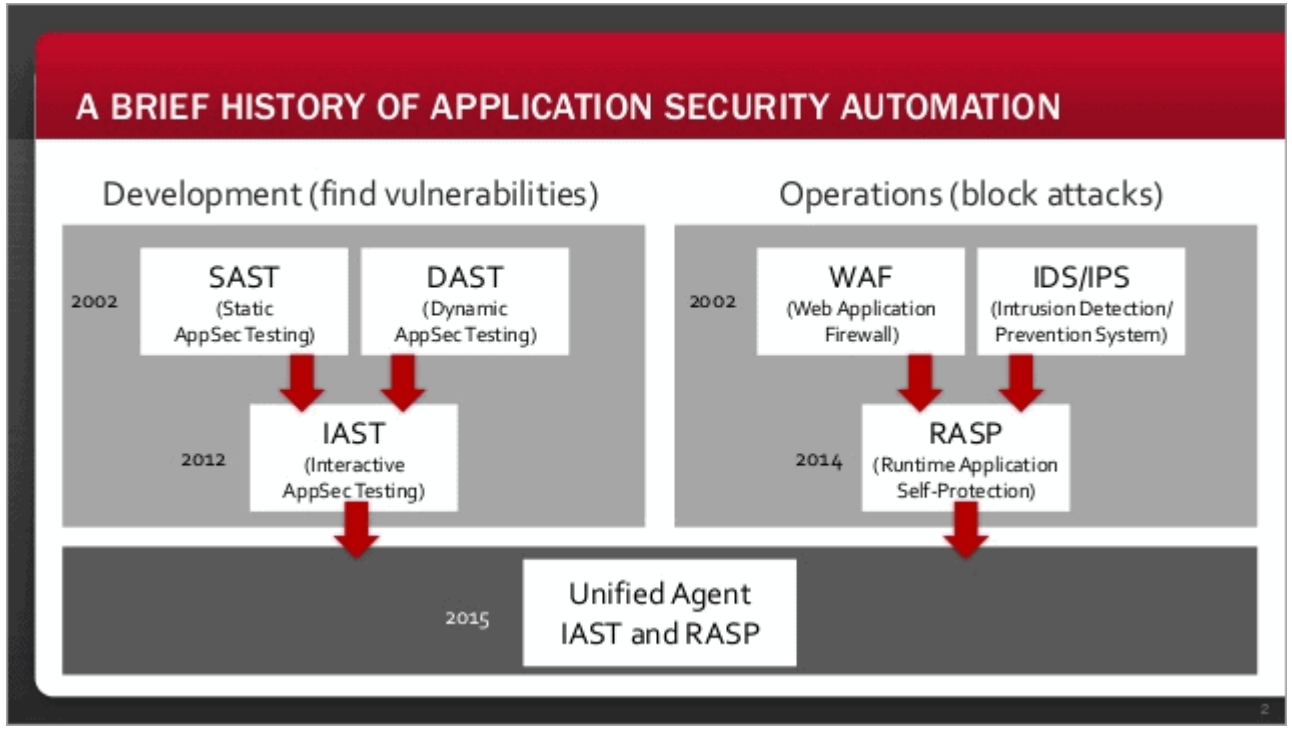
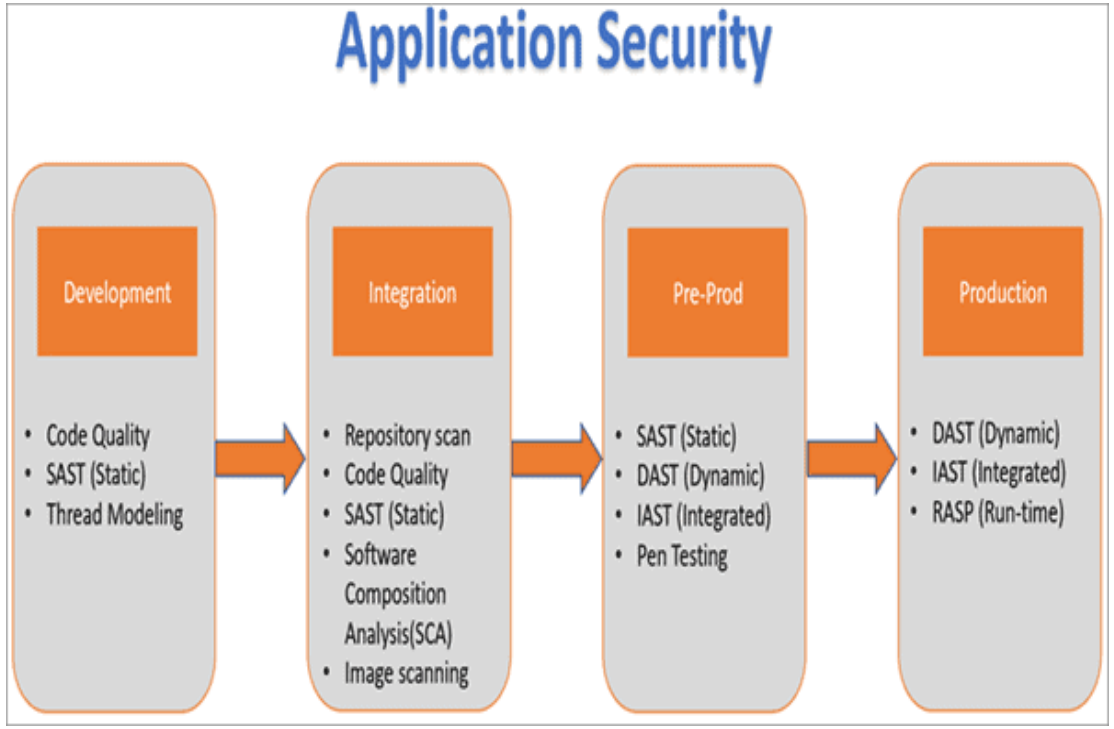
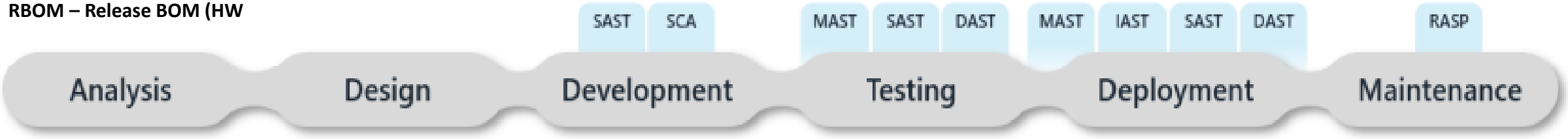




SCA – Software Composition Analysis
SAST – Static Application Software Testing
IAST – Interactive App. Software Testing
MAST – Mobile App. Security Testing
RBOM – Release BOM (HW

MAST – Mobile Application Security Testing
RASP – Runtime Application Self-Protection
AIBOM – ML and AI usage
SBOM – Software Bill of Materials (SW)

SBOM, RBOM, CBOM, AIBOM, et al



Design project to achieve goals within desired scope

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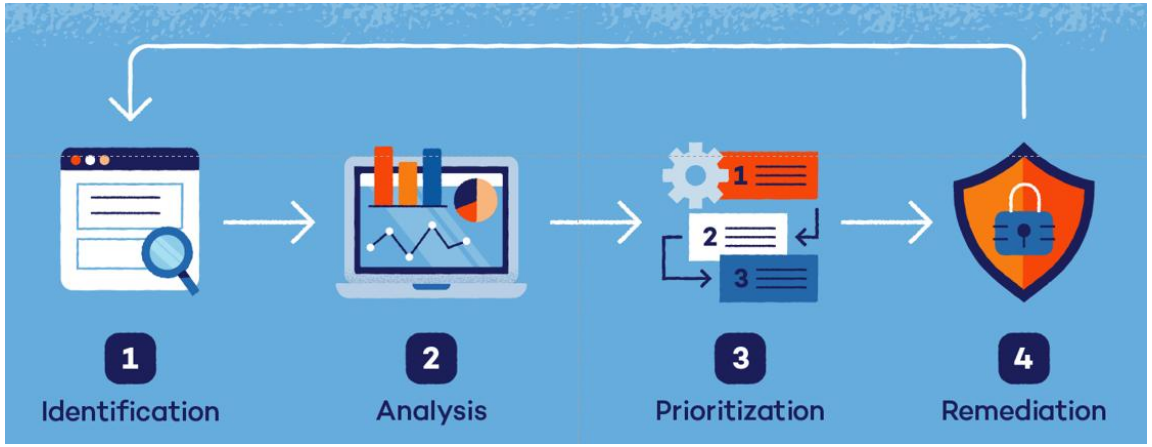
Define Needs

Project Goals:

1. Vulnerability Management Practice understood
2. Tool Assessment and Selection (AoA)
3. Workflow to determine how to use Vulnerability Management Tools
4. Vulnerability-Free Production Environment
5. Compliance to all required laws and regulations
6. Vulnerability Management Maturity Cycle
7. Continuous Threat Exploitation Management
8. Business Continuity Management
9. Awareness and Training.

Create a POA&M

1. Identify your needs and assess your weaknesses, exceptions, and gaps.
2. Define your goals and scope, then conduct an analysis of your environment and workflow.



Define project concept, actions, and deliverables within POA&M

3. Prioritize located weaknesses and develop a Statement of Work (SOW) to resolve issues.
4. Devise a Remediation POA&M, gain approval, formulate team, and commence work.

Application Construction and entry to Production

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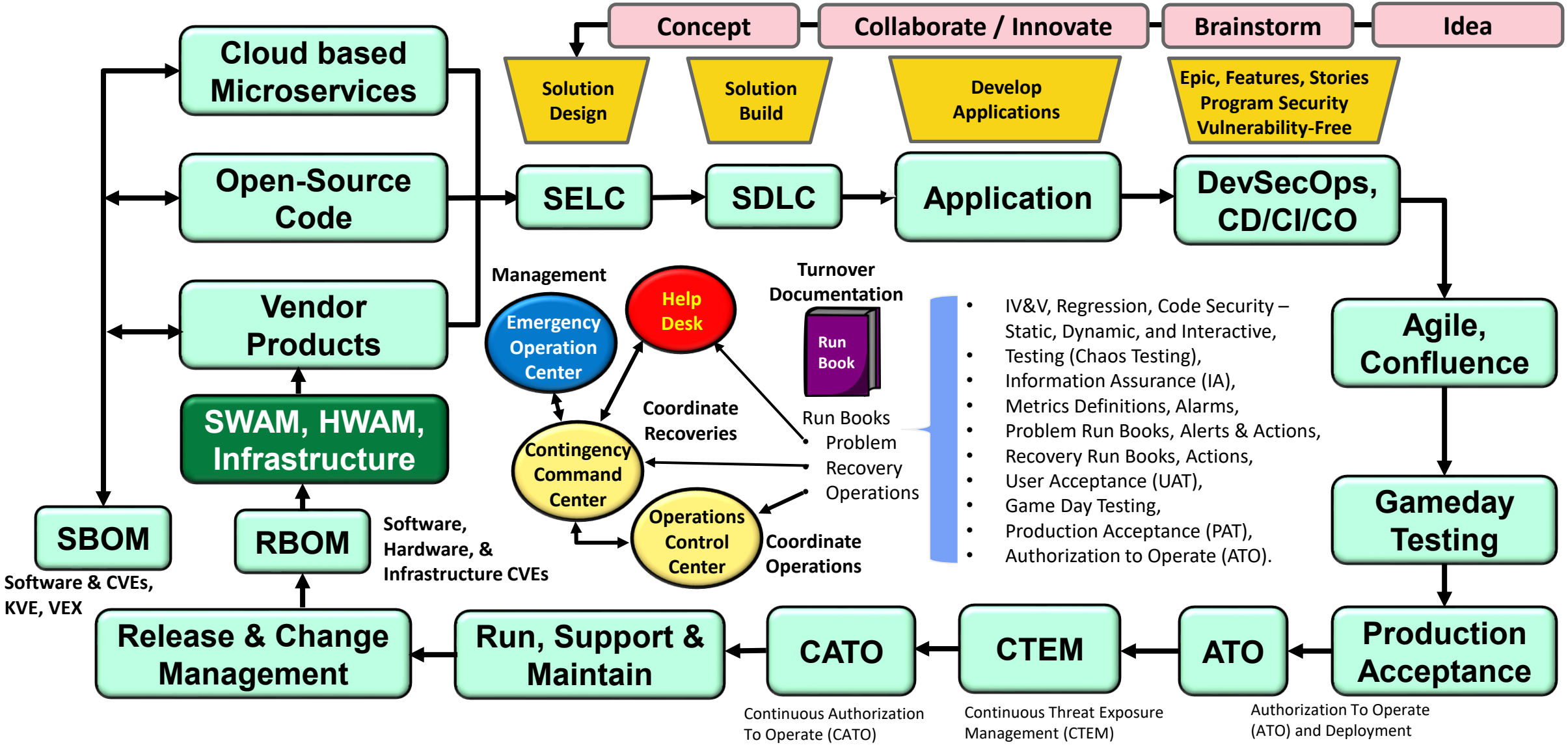

Service deliver/support using Vulnerability Management

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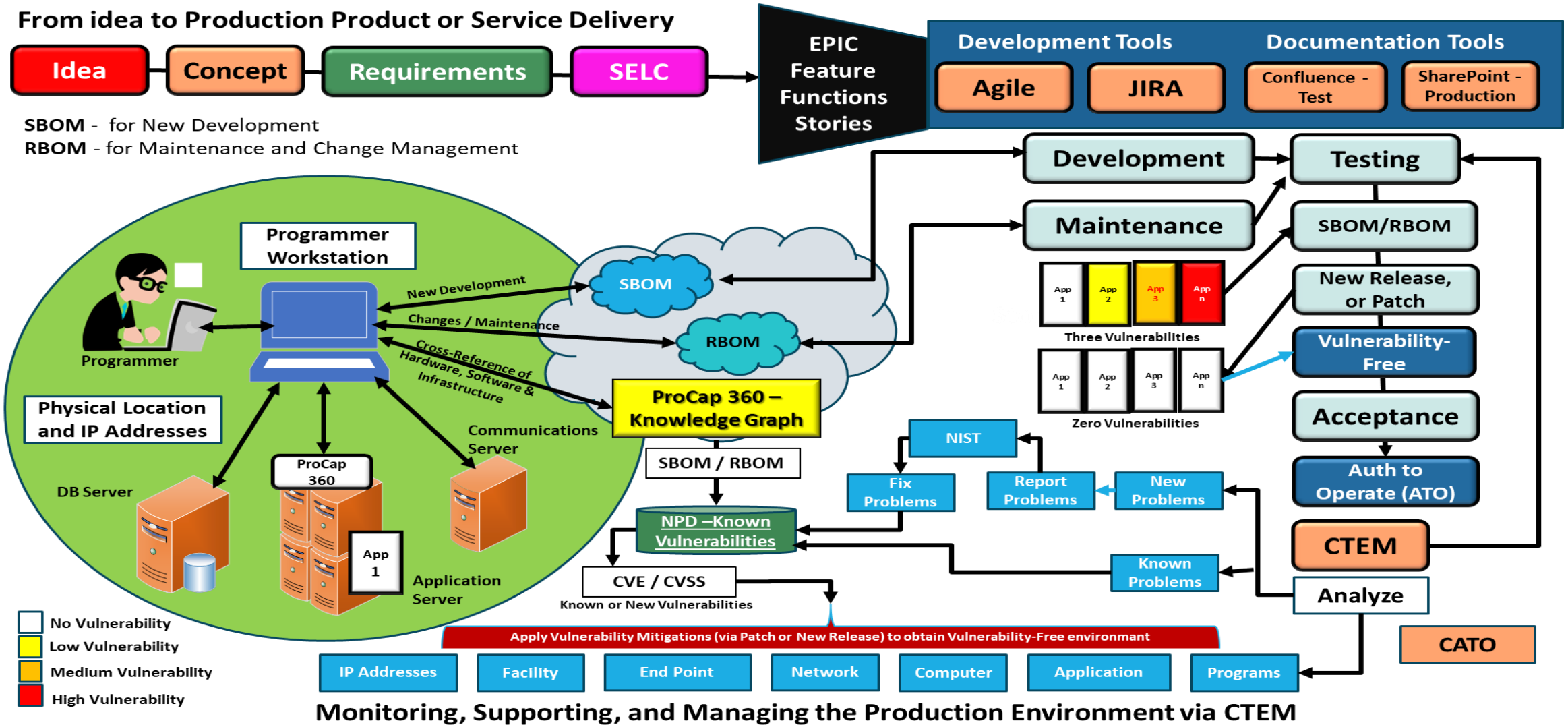

Project Overview

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Introduce Concept to Prospects:

- Vulnerability Assessment
- Tools Review
- Metrics &KPIs
- Provide Recommendation to Management
- Gain Management Approval
- Schedule Start and End Dates
- Contracts and Payment Schedule

Define Project and Scope:

- Vulnerability Assessment
- Data Security and Vital Records Management
- Ransomware Protection
- Incident/Problem Management
- Risk Analysis
- Tools Review
- Tool Testing
- Verify Results
- SBOM Usage
- BCM, DR, EM, CM
- Continuous Threat Exploitation Management (CTEM)
- Awareness and Training

Conduct Needs and Risk Analysis

- Define Weaknesses, Exceptions and Gaps
- Recommend Controls
- Recommend Improvements
- Define Benefits
- Develop Report and Presentation

Provide Report and Presentation

- Review Findings
- Projected Weaknesses
- Benefits to be obtained
- Enhanced security
- Savings
- Provide Statement of Work (SOW)
- Gain Management Approval

Project Initiation

- Initiate Project
- Assemble Team
- Prepare Team
- Assign Tasks
- Commence Work
- Provide Status
- Resolve Issues
- Complete Project
- Metrics Improved
- Costs vs Benefits
- Projected ROI verified
- Recommendations going forward

Overview of ProCap360™

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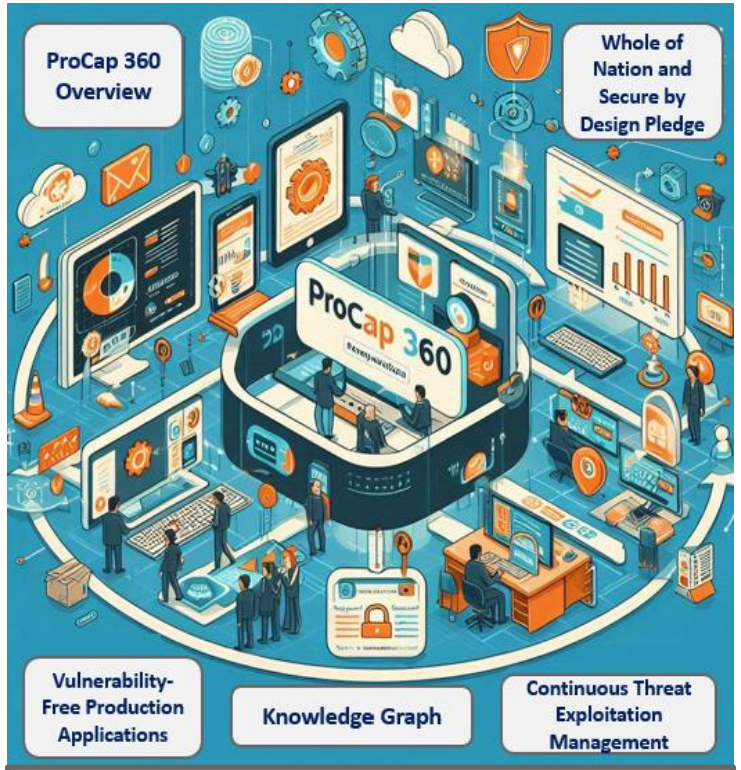

ProCap360™ product from Internet Infrastructure Services Corporation – Website Link and videos at this Link

ProCap360™ is a Vulnerability Management product that uses SBOMs, RBOMs, and AIBOMs to identify vulnerabilities prior to production acceptance and CTEM to protect applications already in production. It secures your environment, reduces costs, improved FinOps and reduces malware and ransomware.

Software applications are like digital bridges that connect us to the world. They enable us to communicate, collaborate, learn, work, and play. But just like physical bridges, they need to be designed, built, and operated with care and quality. Otherwise, they can collapse and cause harm.

That's why we need a solution that can automate the vulnerability management of the software development lifecycle. A solution that can scan, assess, prioritize, and remediate vulnerabilities in the software components and configurations across multiple cloud providers and regions. A solution that can provide a comprehensive and consistent view of the software pedigree, using the Application Software Bill of Materials (SBOM) as a blueprint. A solution that can integrate with the tools and platforms we use to develop, deploy, and operate our software applications. A solution that can comply with the industry standards and regulations that govern our software supply chain.

That solution is ProCap360™.

Installed currently in Azure, AWS and Google cloud providers, and optionally on premise, providing real-time component version, license and vulnerability scores for both SBOM and RBOM release components.

ProCap360™ is a cloud-based vulnerability management solution that leverages the power of Knowledge Graph technology, which provides visual analytics, application DevSecOps, and orchestration capabilities. ProCap360™ can integrate with popular tools and platforms, to streamline your vulnerability management visualization.

ProCap360™ is designed to complement your existing SIEM/SOAR scanning infrastructure. You can use ProCap360™ to perform policy assessments, authenticated code releases, and infrastructure build releases, and . ProCap360™ also supports dynamic, automated compliance reporting, for every non-production and production environment.

With ProCap360™, you can achieve a scalable and effective vulnerability management process for your multi-cloud applications. ProCap360™ helps you reduce your attack surface, improve your security posture, and protect your organization from potential threats and penalties.

ProCap360™ is available today for automating software lifecycle vulnerability management. It is the solution that we, the stakeholders of the digital world, need to support and adopt. It is the solution that will help us build stronger and more "secure by design" digital bridges than ever before.

Knowledge Graph

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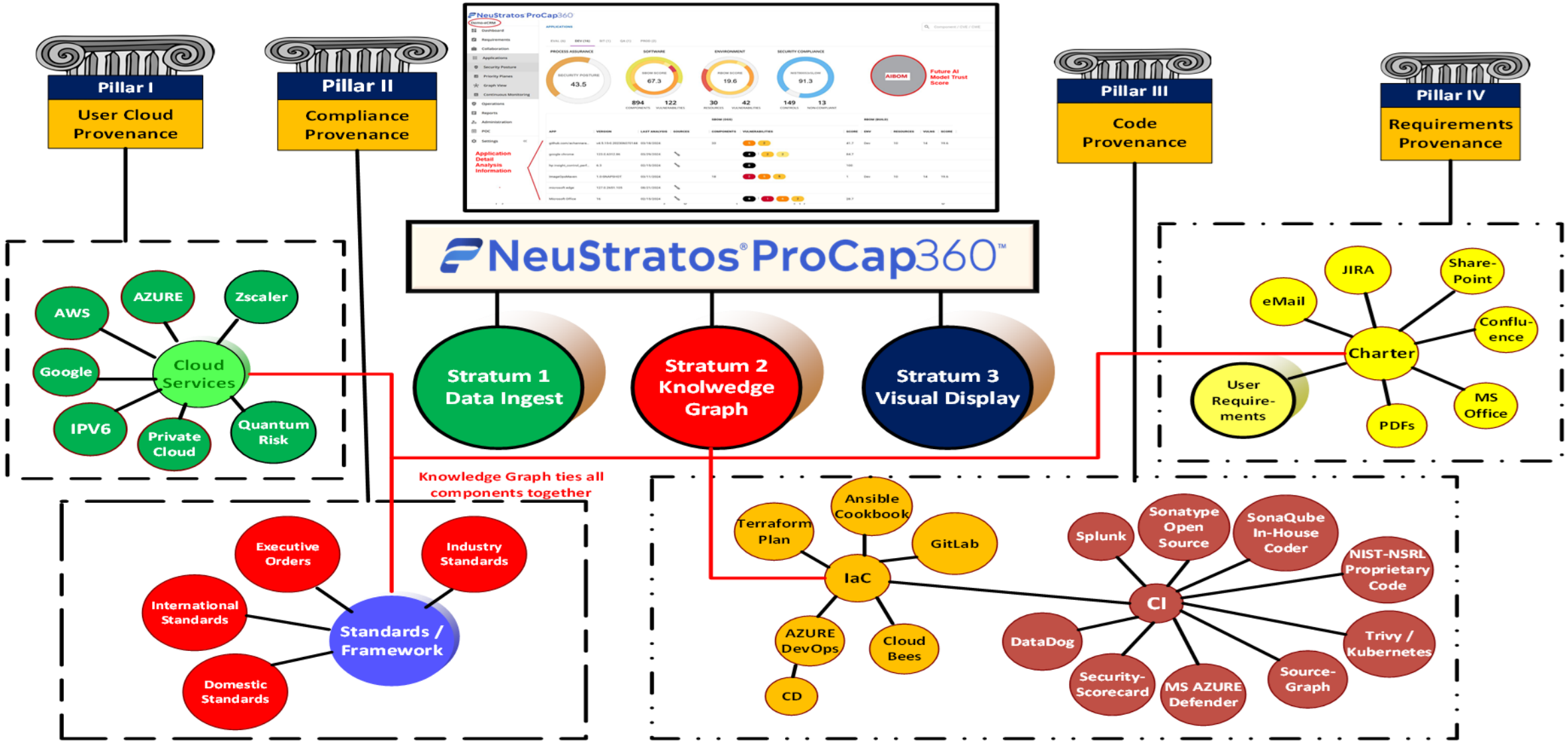

Reaching out to assist our clients

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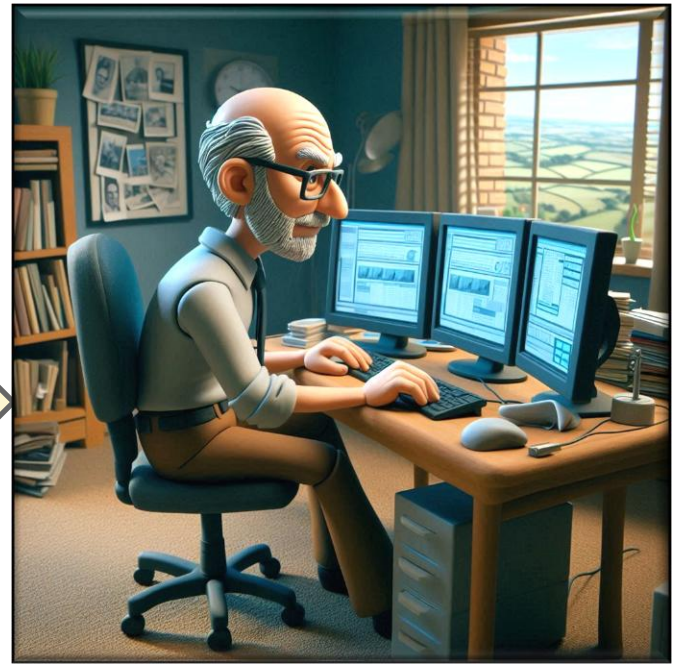
- Discuss
- Define
- Propose
- Achieve

Quality Service at a Reasonable Price

Helping Clients to achieve success



If you find the information included in this presentation and want to explore methods to improve the reliability of your enterprise and IT environment, please contact me to discuss your needs and request our assistance.

We look forward to our future relationship.

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