Gartner Security & Risk Management

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Building Incident Response Scenarios for Insider Threats

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We Are Told the Insider Threat Looks Like This …

In reality It’s the Good Natured yet Error Prone…

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… And for Nine Companies It's a $100M+ Loss …

- U.S. Securities and Exchange Commission
  - Securities Exchange Act of 1934
  - Release No. 84429/October 16, 2018
- Nine companies combined for $100M loss
  - All companies lost > $1M
  - Two of nine lost > $30M

… Because of Insider Threats and Impersonators

Fake Executives

Fake Vendors

Key Issues

1. How do we define an insider threat?
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3. What are recognized practices for incident scenario development?

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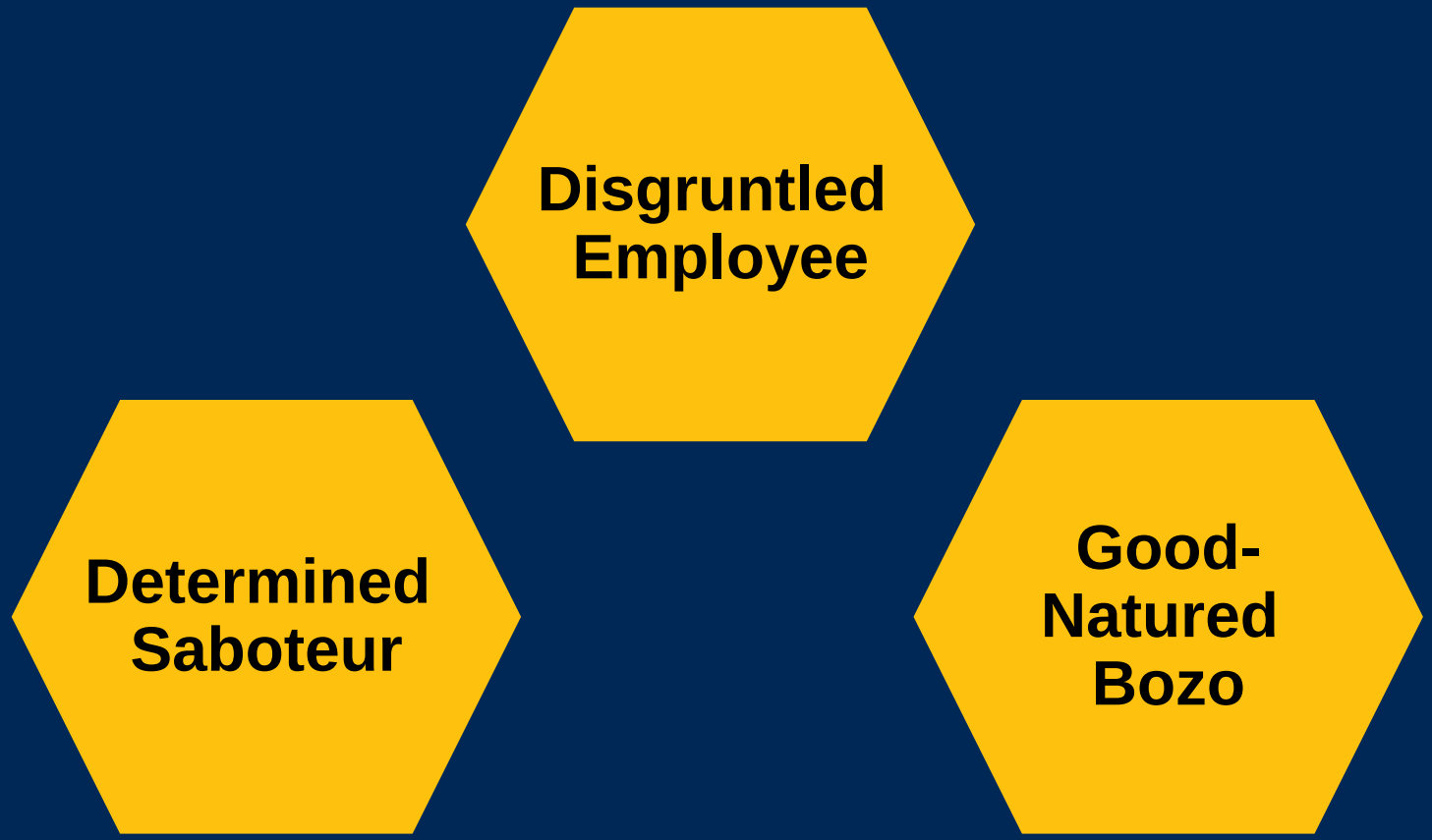
Many Types of Insider Threats



Insider Threats Are a Part of Working Life

- There is always the trade-off with collaboration and information sharing that some will misuse their privileges.
- Often many organizations do not account for temporary or role-based privilege escalation, and do not follow well-defined plans to reduce or remove access.
- This can help foster an environment where the barrier of success for a motivated insider is low.

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The Cost of Insider Threats

ObserveIT 2018 Cost of Insider Threats:

- 159 Global Organizations surveyed
- Insider Threats caused by:
  - Negligence (64%); $3.81M USD
  - Criminal insider (23%); $2.99M USD
  - Credential Theft (13%): $1.96M USD
- Average of **73** days to contain an incident
  - 16% contained in < 30 days

observe it

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Insider Incidents Are Based Upon Abuse of Role

… Not Always Hacking!

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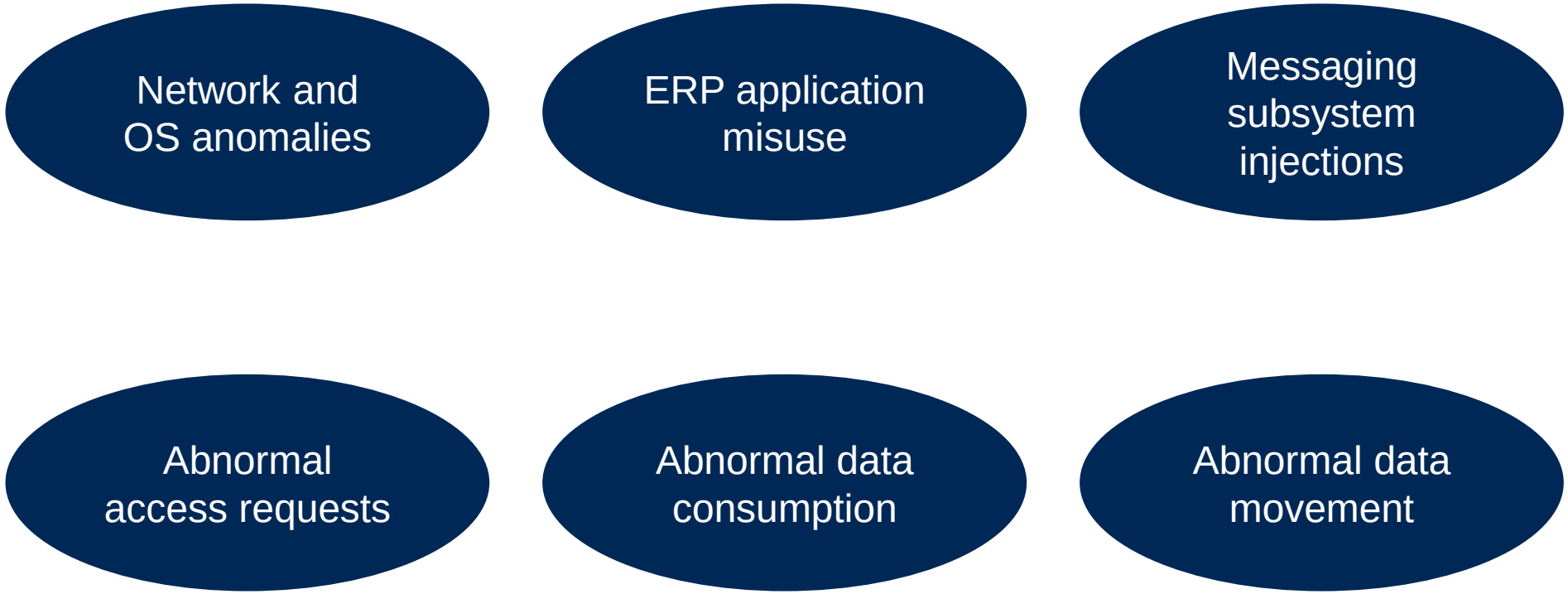
We Depend Upon Event Detection Capabilities



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There Are a Variety of Insider Threat Personas







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Employees Jumping Ship

Looking for or Just Accepted a New Job

Warning Signs:

Frequent absences, unexplained disappearances or unexpected medical appointments.

Workers who accept a new job are the most likely to give data to a competitor, especially in positions such as sales, product development and business intelligence.

Behavioral Clues:

Dissatisfaction with current position

Negative attitude

Trash talking about company goings-on

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The Unhappy Camper

Poor Performance Review, Passed Over for Promotion or Placed on Performance Improvement

Warning Signs:

Employee may be consistently out sick the day after receiving news of poor performance or reprimand. Employee keeps score and shows a propensity toward revenge or vindictive behavior.

Behavioral Clues:

Negative affect

“Out-to-get-me” attitude

Quick to point the finger and shift blame

Poisons the well

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The Spendthrift

Experiences Acute or Chronic Financial Problems

Warning Signs:

Employee talks excessively about money and how much everything costs. Always seems to be in a financial jam, may get calls from collection agencies at work or talk about taking a second job or freelancing.

Behavioral Clues:

Admission of financial problems

Talking about new sources of income

Lifestyle does not match income level

Borrowing money from coworkers

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The Charmer

Poor Performance Review, Passed Over for Promotion or Placed on Performance Improvement

Warning Signs:

Often a fast talker who brags about gaming the system at work and in personal life. No qualms about breaking the rules or
cutting corners to get ahead.

Behavioral Clues:

Inappropriately charming, fast talker

Tendency to take things just too far

Willing to break the rules to get ahead

Always on the lookout for a new angle

The Uploader

Saves All Work to a Personal Cloud Account, Regardless of Company Policy

Warning Signs:

Whether deliberate or unintentional, the uploader saves **everything** to a personal cloud account
He or she **refuses** to use company sanctioned network drives or cloud stores

Behavioral Clues:

Lacks trust in corporate systems and software

Virtually no files saved to computer or personal network storage

Hesitant to share work

The Ex

Romantically Involved With a Co-Worker and Has Experienced Difficulties (or the End)

Warning Signs:

Constantly obsesses about a co-worker in a former relationship. May attempt to access business accounts or personal files of the former paramour, often triggering multiple failed password attempts.

Behavioral Clues:

Stalker-like behavior

Propensity toward revenge or vindictive behavior

Rage-filled commentary e.g., “they’ll be sorry”

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The Lone Worker

Role Requires Working Solo Often in a Remote Location

Warning Signs:

Failure to check in to home base.
Inaccessible via normal contact methods (email, mobile phone)

Failure to make scheduled appointments

Behavioral Clues:

None. Because the role requires lone working, we need to take proactive steps rather than waiting for a crisis situation

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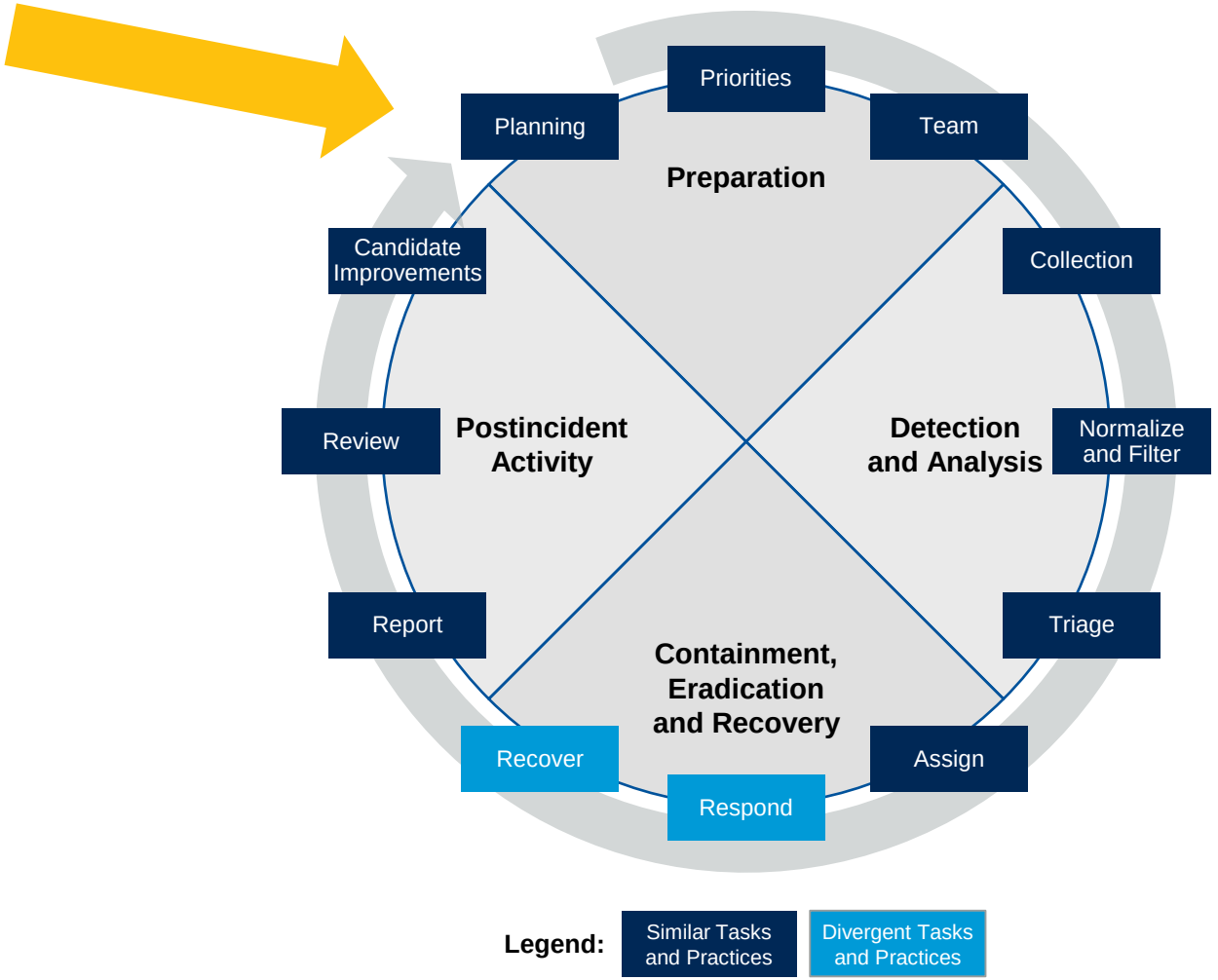
Look at Your Own Past Incidents

- Can you relate to any of these personas?
- Have you had personas like these (or others) be the cause of security incidents (or a full blown crisis)?
- Are you taking lessons learned from the past, making them candidate improvements for your future IR preparations?
- Have you ever run a table-top exercise to simulate an insider threat (data exfiltration, whistleblower, IP theft, extortion/blackmail)?

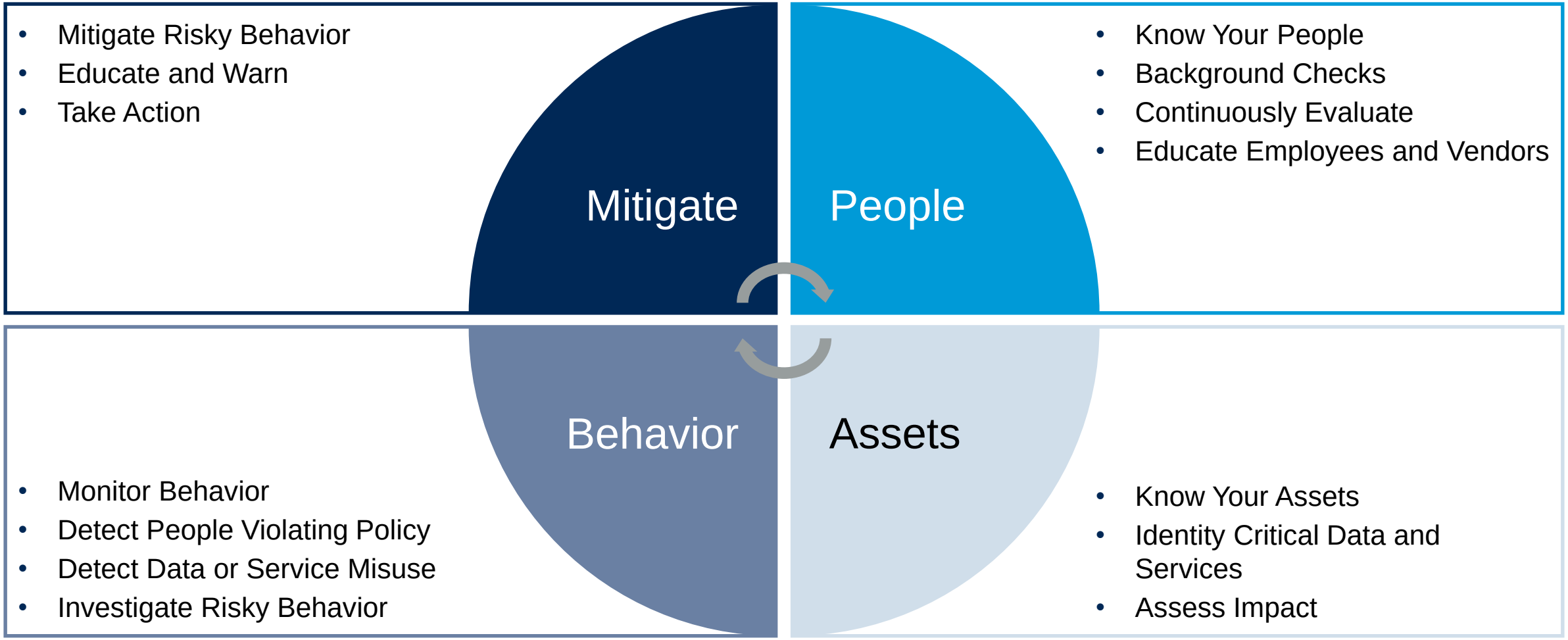
Where to Start?

A Harmonized View of Incident Handling

Incident Handling



Mitigating Insider Threats

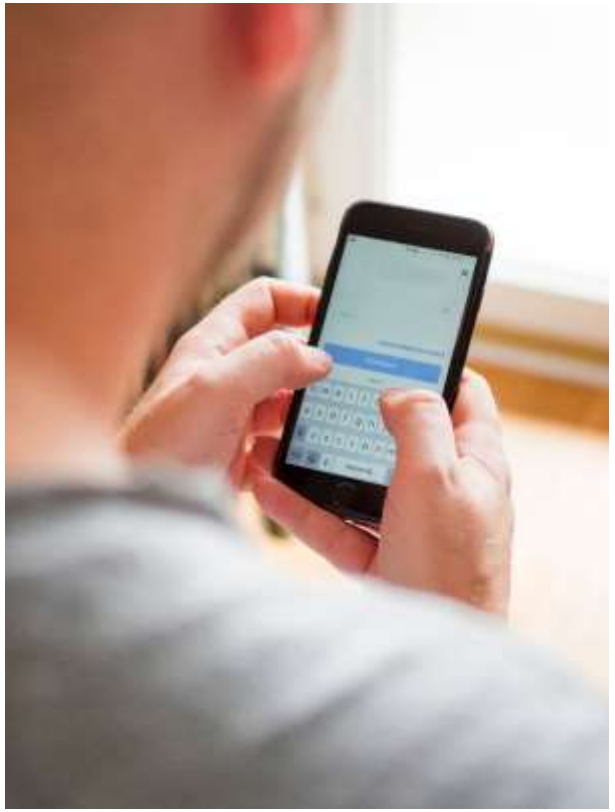


Scenario 1: Compromised Credentials

Scenario 1: Compromised Credentials

Questions to Ask:

- How are you monitoring privileged access?
- What thresholds raise awareness to a potential incident?
- How are you monitoring failed login attempts?
- Do you adjust failed login thresholds differently based on higher-risk systems or users?



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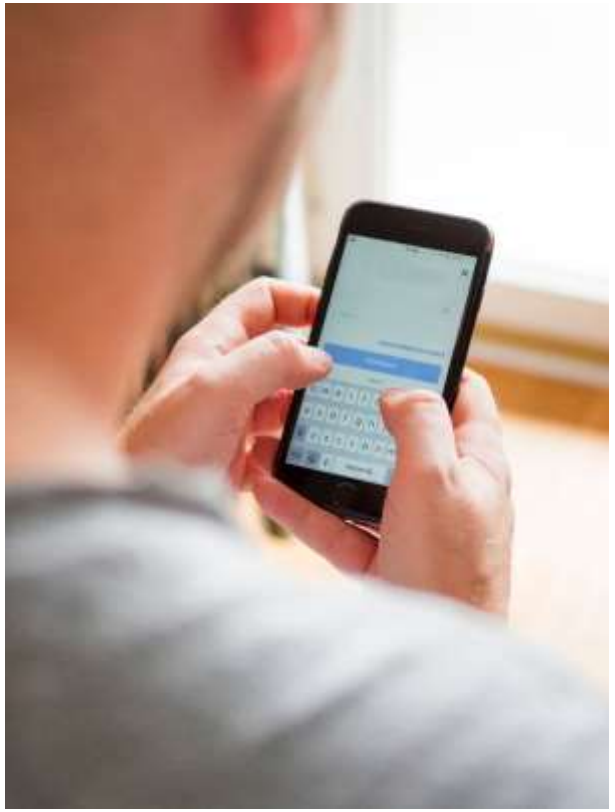
Scenario 1: Compromised Credentials

Additional Questions to Ask:

- Do you look at where users have logged in from geographically?
- Are you monitoring (or do you allow) users who share credentials?
- Do you track failed login attempts of disabled, non-existent and removed accounts?
- What is your access lockout policy?



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Scenario 2: The Insider Threat

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Scenario 2: The Insider Threat

Insider Threat is multi-faceted:

- Abuse of access or privileged that were never revoked
- Also results from over-privileged users with unchecked data access
- The truly malicious insider threat is a minority case but does happen

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Scenario 3: Ransomware

Scenario 3: Ransomware

Is your Ransomware response different than your malware response?

- Are their scenarios where you might ever pay a ransom?
- If so, keep in mind your likelihood of being added to a "list" and hit again are much higher.
- If you have cyberinsurance, **do not** count on response assistance, and **do not** assume cost recovery on a claim

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Consult With Others to Profile Realistic Personas

- Finance
- Human Resources
- Legal
- Audit and Compliance
- Remote Business Units
- Other Geographies

Learning From Past Incidents

- Ask yourself — can you turn a past incident into a scenario or table-top exercise?
- Make this a checkbox on your post-incident report:
  - Candidate for scenario planning development (Y/N)?
  - What missing defenses could have mitigated this incident?
  - How could we decrease our time to respond, contain and remediate?

Equip Your IR Teams Based on Experience

- If your IR team is unfamiliar or new to insider threats, use this as a secondary part of the main exercise (such as data exfiltration)
- If your team is relatively experienced with insider threats, use a complex example (such as employee under duress from extortion, blackmailed employee, corporate espionage, etc.)

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Data-centric Tools Can Provide Visibility

CASB – monitor cloud data activity

DCAP – monitoring data across multiple data types (DB, Files) and as data changes

DLP – Can be useful for data visibility and monitoring

UEBA – can correlate user account activity with data events

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Compromise Assessments

Proactive assessments of specific systems or networks

You might be able to use proactive hours as part of your IR retainer

Many cyberinsurance carriers also offer limited assessments included with your premiums

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Red Team – Blue Team Exercises

No, this is NOT a political debate.

Comes from military origins, one team attacks (**Red**) and one team defends (**Blue**)

Helps to eliminate psychological barriers such as group think, recency effect and confirmation bias

Run internally or bring in a third-party to help coordinate

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Tabletop Exercises and Scenario Planning

Some Ideas for Tabletop Exercises:

Use an outside party to facilitate:

- IR Retainer, services provider
- Non-IT/non-InfoSec group/person

Use real-world examples:

- Executive credentials stolen and misused
- Disgruntled employee/contractor/third-party
- Negligence and Theft scenarios – will invoke BCMP and other recovery functions

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Recommendations

- If you do not have an incident response plan, put one in place.
- Add organization-specific scenarios to your incident response plan.
- Monitor your risky or high-value employees (not just executives).
- Communicate within your organization to understand what insider threat personas potentially carry the highest amount of risk.
- Document and test your incident response procedures related to insider threats.

Recommended Gartner Research

- **Building Incident Response Scenarios for Insider Threats**
  Brian Reed, Jonathan Care(G00380185)
- **Market Guide for Employee Monitoring Products and Services**
  Jonathan Care (G00353551)
- **Market Guide for Digital Forensics and Incident Response Services**
  Brian Reed, Toby Bussa (G00349347)
- **Toolkit: Security Incident Response Scenario for Phishing Attacks**
  Brian Reed, Neil Wynne (G00380176)
- **Ignition Guide to Building an Insider Threat Management Program**
  CEB Research (G00363867)

For information, please contact your Gartner representative.

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