



Introduction to Cybersecurity

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Cybersecurity Fundamentals



Learning Objectives

- Explain the fundamentals of cybersecurity Identify



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Fundamentals of Cybersecurity

What Is Cybersecurity?

A set of technologies used for protecting systems, networks, and programs from digital attacks, damage, and unauthorized access.



Why Cybersecurity?



Information Security and Cybersecurity

Information Security

Refers to processes and tools designed to protect sensitive information

Encompasses paper documents and digital and intellectual property



Cybersecurity

Is a set of techniques used to protect the integrity of networks, programs, and data

Is a component of information security



Cyber Crime Statistics

25+ million records
exposed everyday in
2018

Cyber Crime to cost
\$6 trillion in 2022

Healthcare:
Ransomware attacks
will quadruple



300 billion passwords
exist worldwide in 2021

24,000 malicious
mobile apps blocked
daily

60% of fraud
originates from
mobile devices

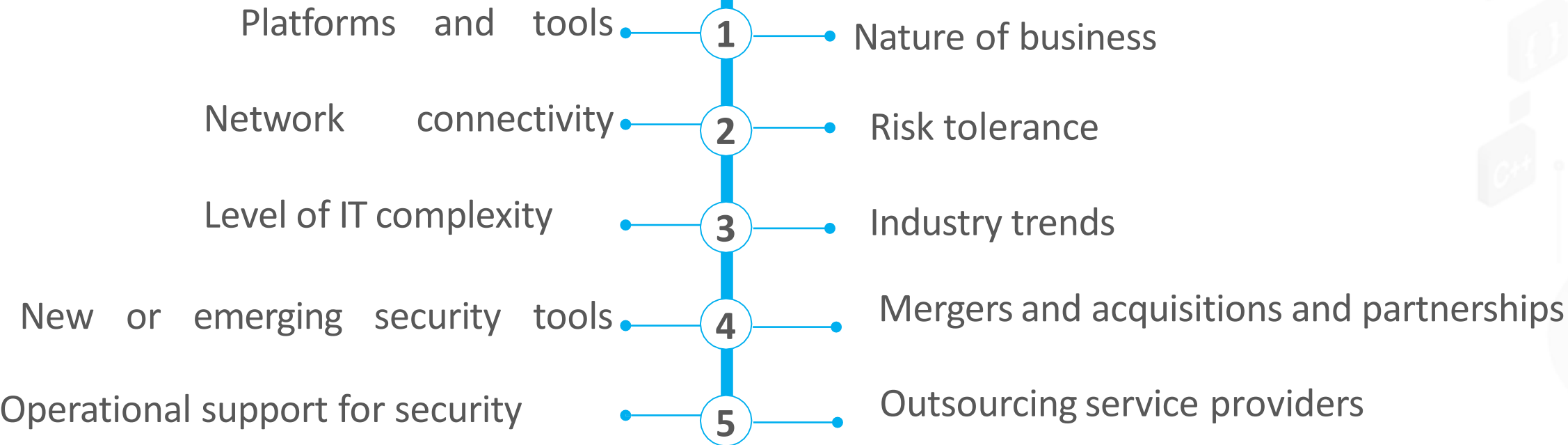
Factors Affecting Cybersecurity



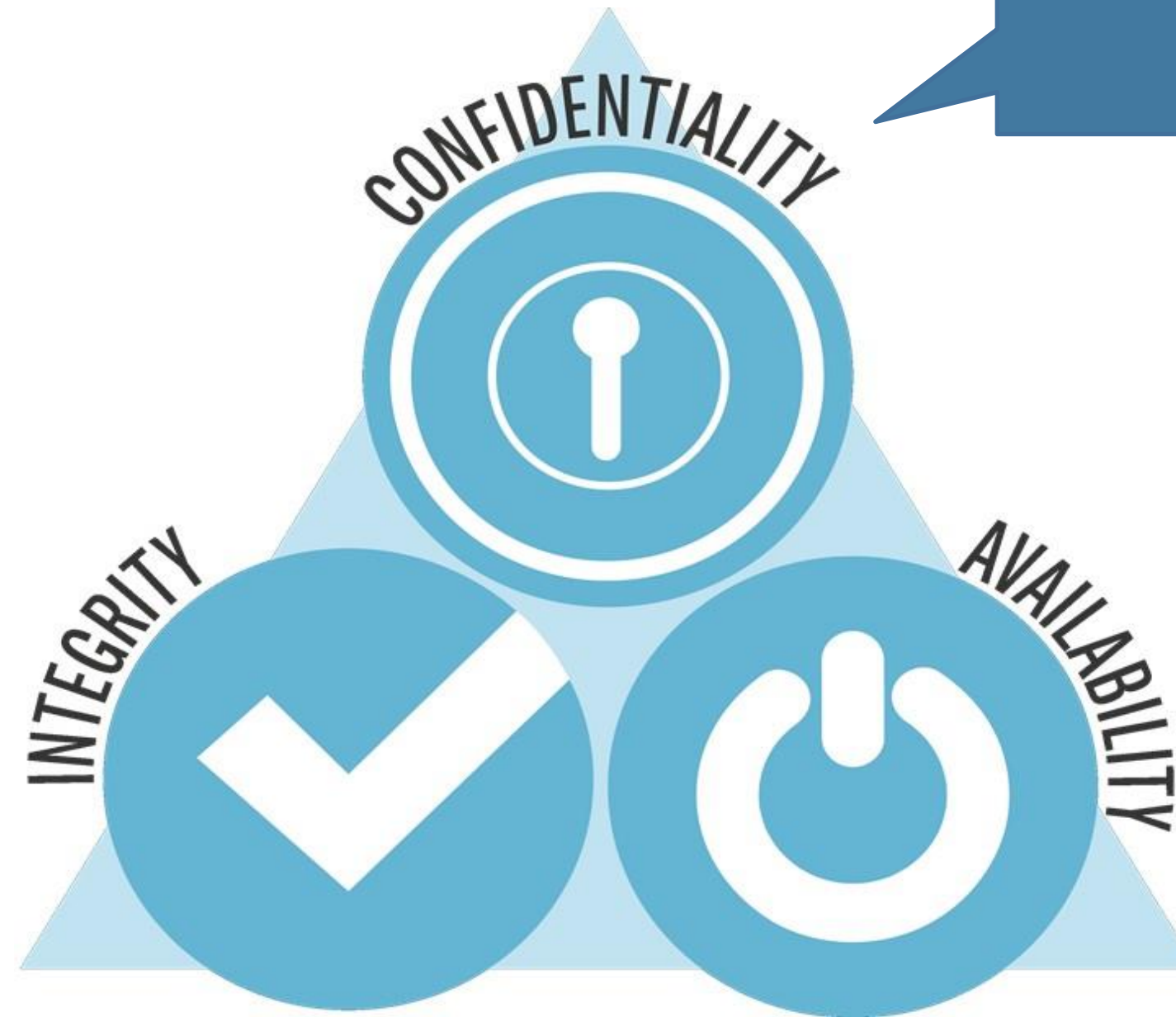
Technology



Business Plans



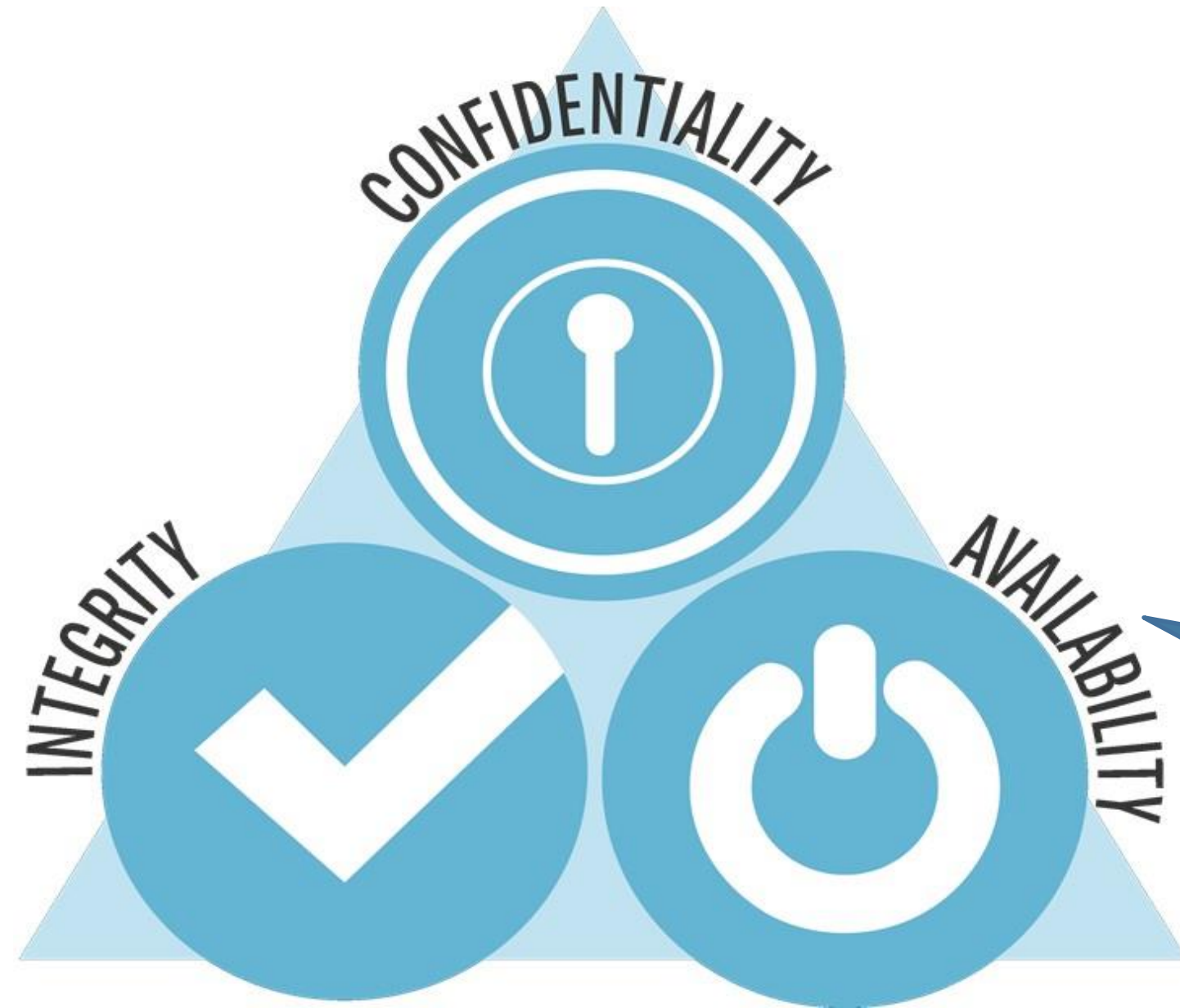
CIA Triad



Information must be available on demand`



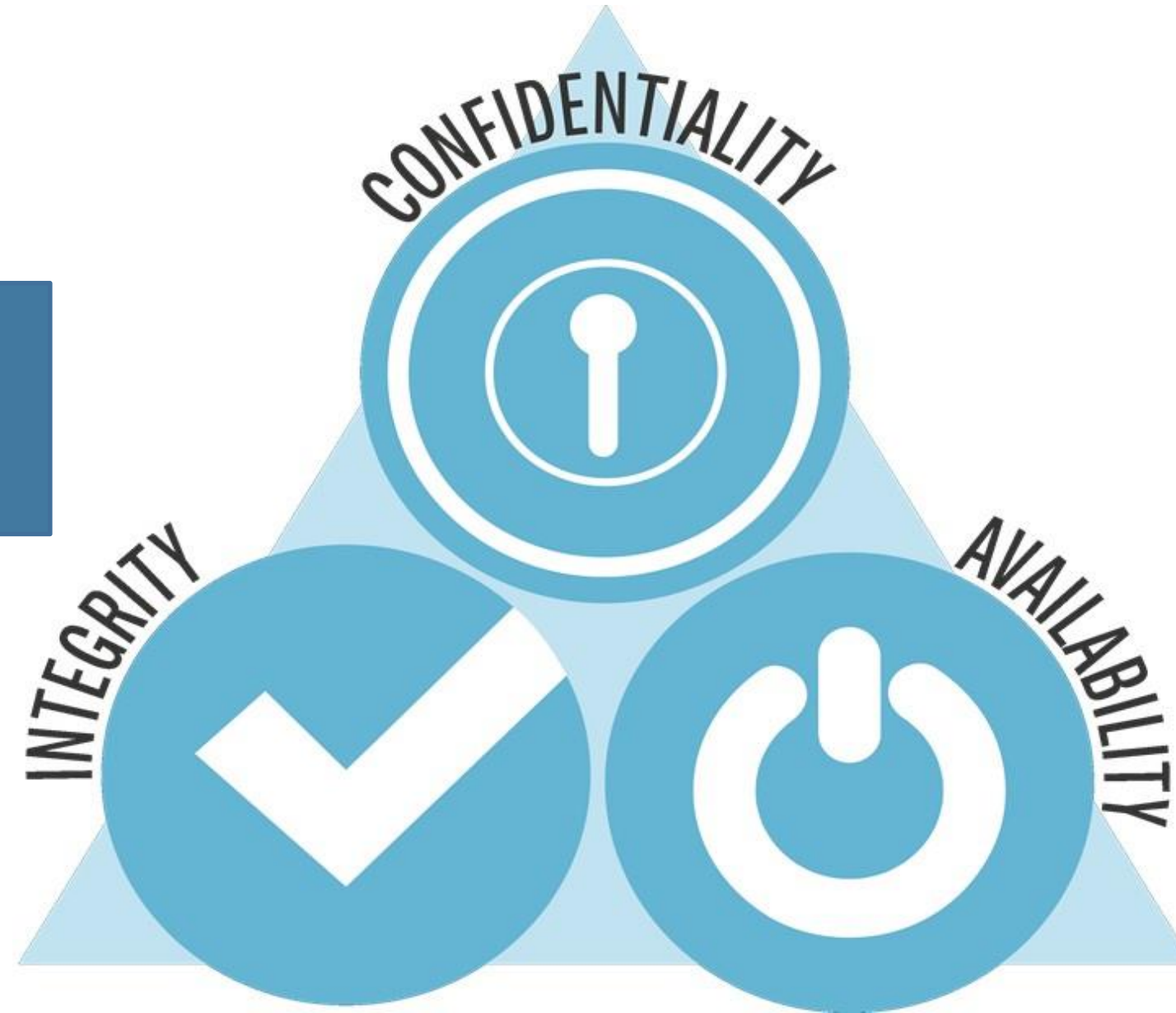
CIA Triad



Authorized parties can access the information

CIA Triad

Authorized people can add, remove, or alter information



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Governance, Risk Management, and Compliance (GRC)

Scope of GRC

Governance, Risk Management, and Compliance of every organization is different and varies based on the type of organization.

It depends on organization mission, size, industry, culture, and legal regulations.



Mission



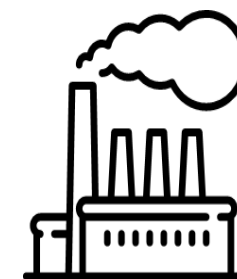
Regulations



Size



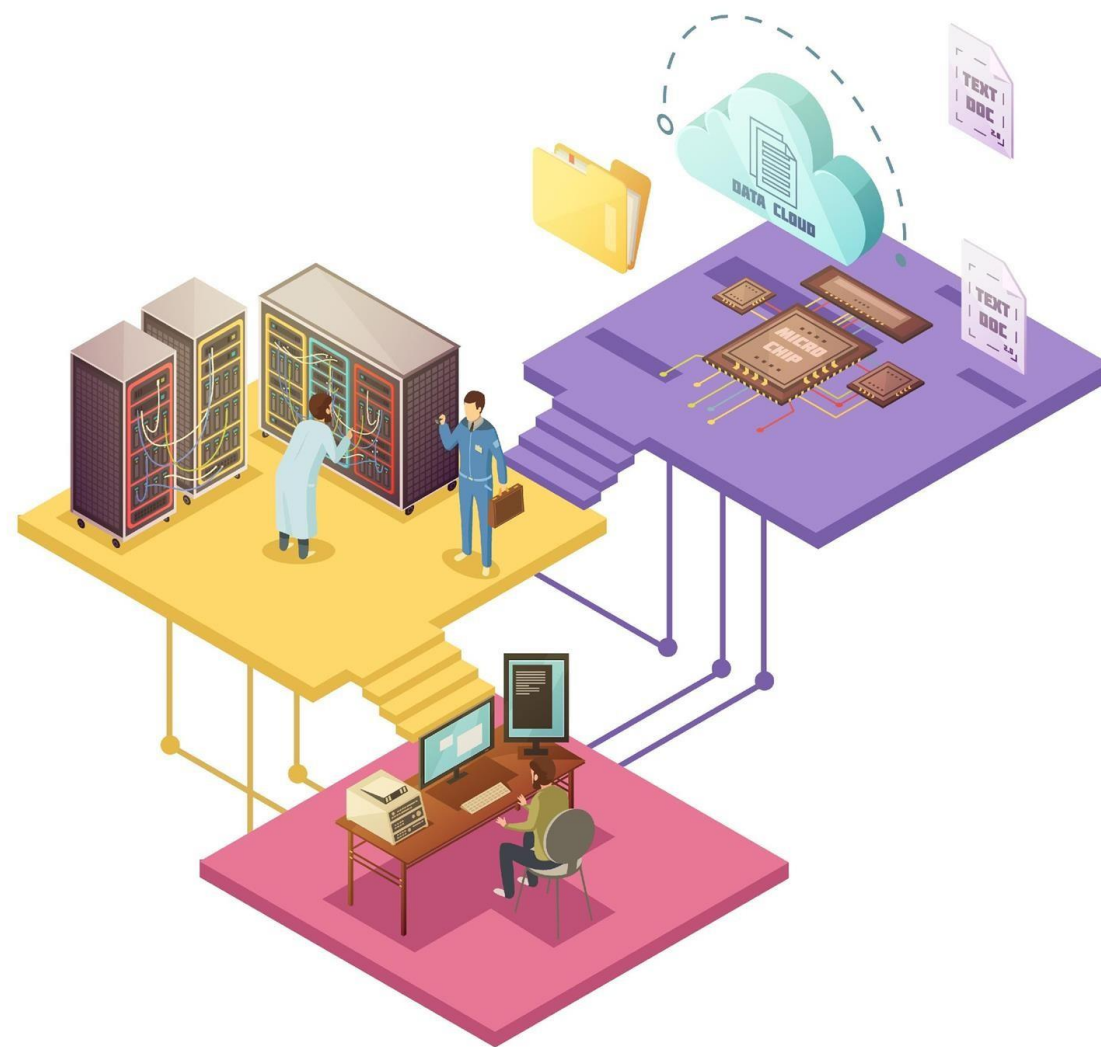
Culture



Industry

Responsibility of GRC

The ultimate responsibility of the GRC program is to protect their assets and operations IT, including their infrastructure and information.



GRC

The board of directors and senior management of an organization are responsible for Governance.

Governance

Risk Management

Compliance

Provides strategic direction

Ensures that the objectives are achieved

Ascertains whether **risk** is being managed appropriately

Verifies that the organization's resources are being used responsibly



GRC

It is the process by which the organization manages risks to acceptable levels. These risks may include investment risk, physical risk, and cyber risk.



GRC

It is the act of adhering to mandated requirements defined by laws and regulations.



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Roles of Cybersecurity

Cybersecurity Roles

The success of a cybersecurity role is ultimately the responsibility of the board of directors.



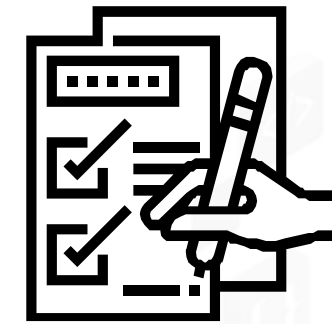
Approaches to Cybersecurity



Compliance-based security

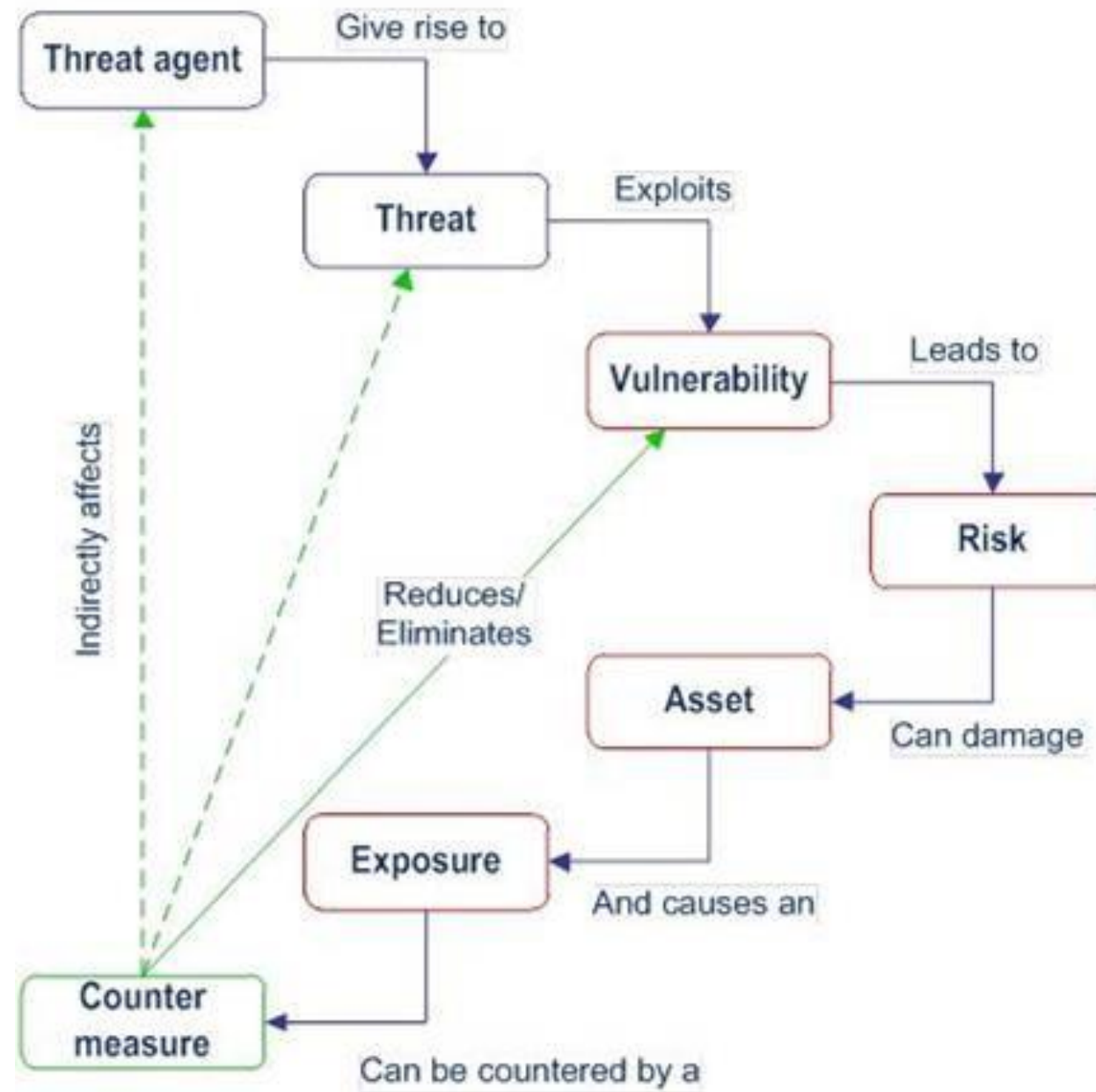


Risk-based security



Ad-hoc approach

Cybersecurity: Key Terms



Cybersecurity: Key Terms

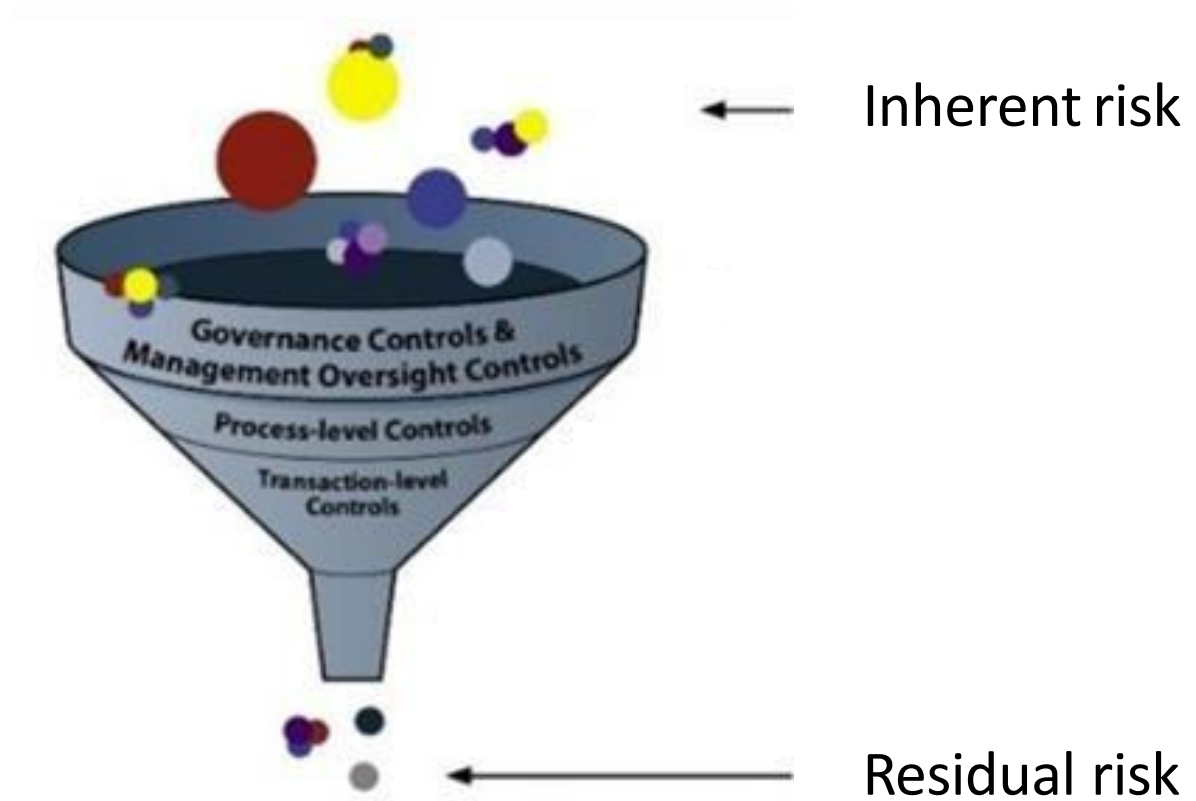
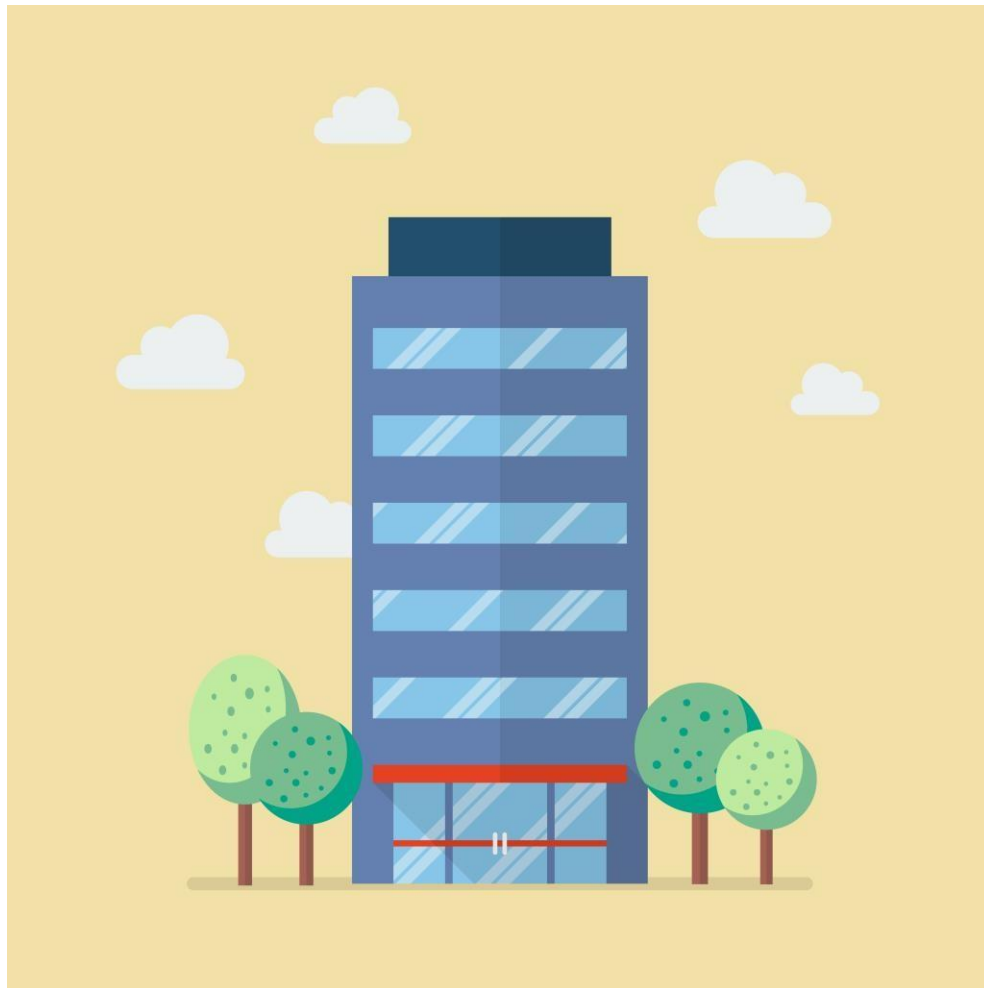


Illustration: Basics of Cybersecurity



Key Takeaways

- Cybersecurity refers to a set of techniques used to protect the integrity of network programs and data from attack, damage, and unauthorized access.

