

Risk Management Standards in Practice

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20 March 2018





RISKS



QUALITY GAPS

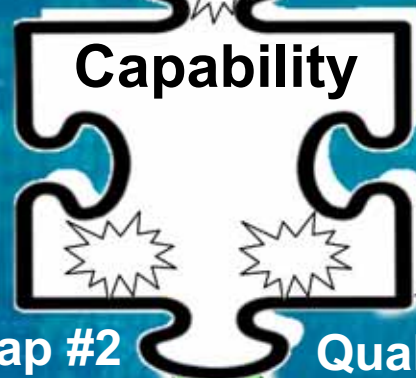


MIND THE GAP

One element of Risk Management is Identifying Quality Gaps in Capabilities Critical to Mission/Business Functions



Quality Gap #1



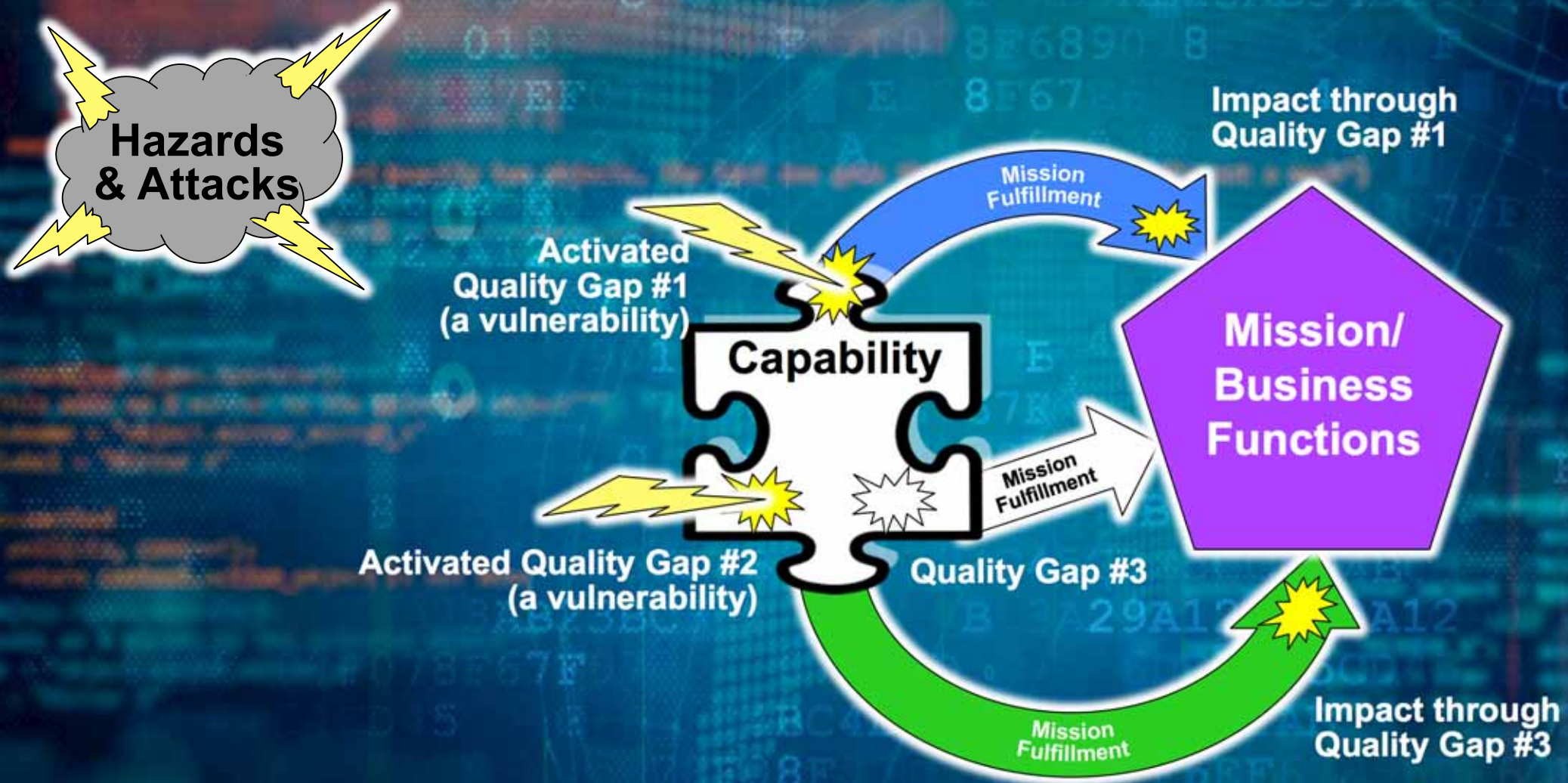
Mission/
Business
Functions

Quality Gap #2

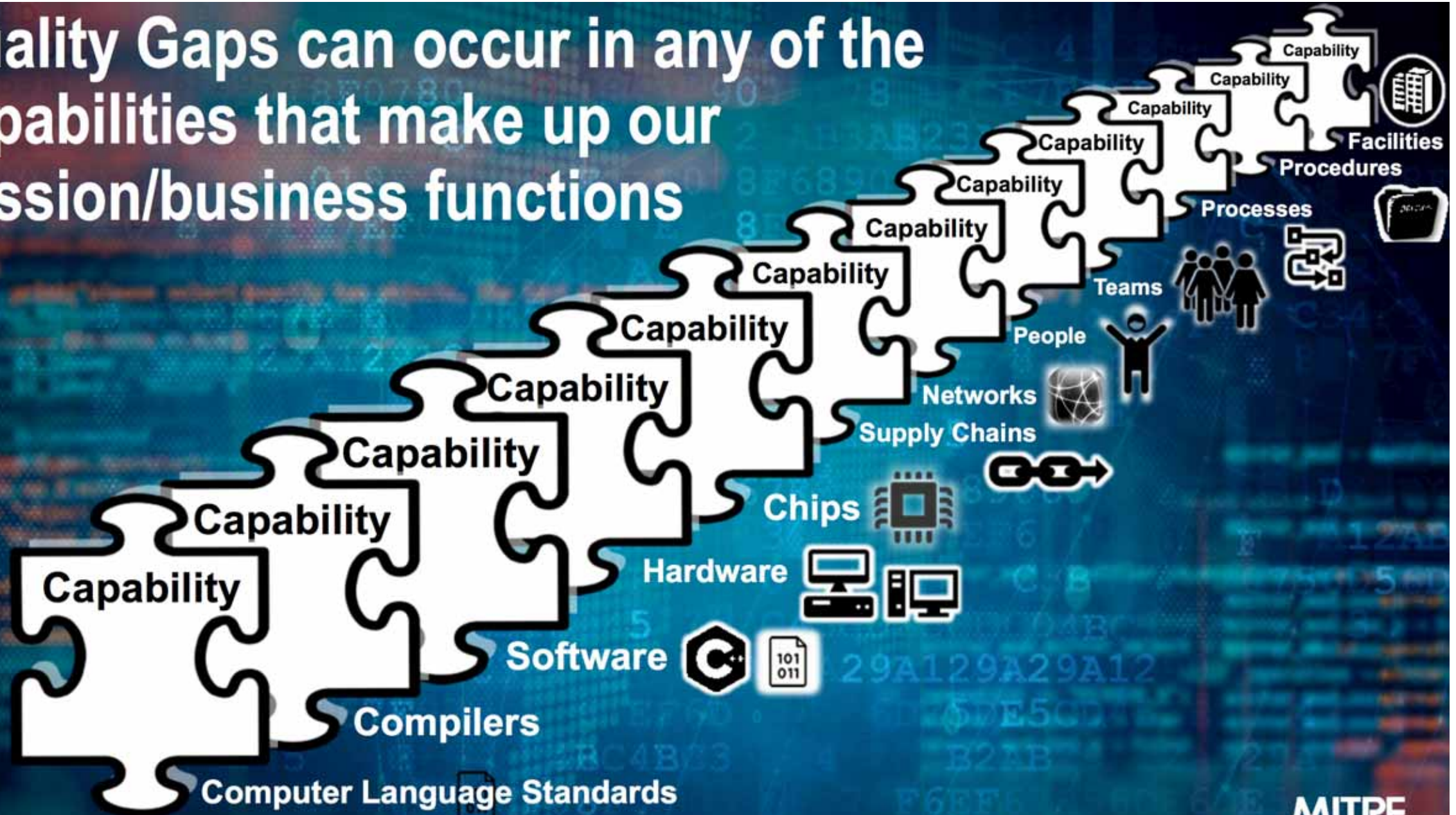
Quality Gap #3



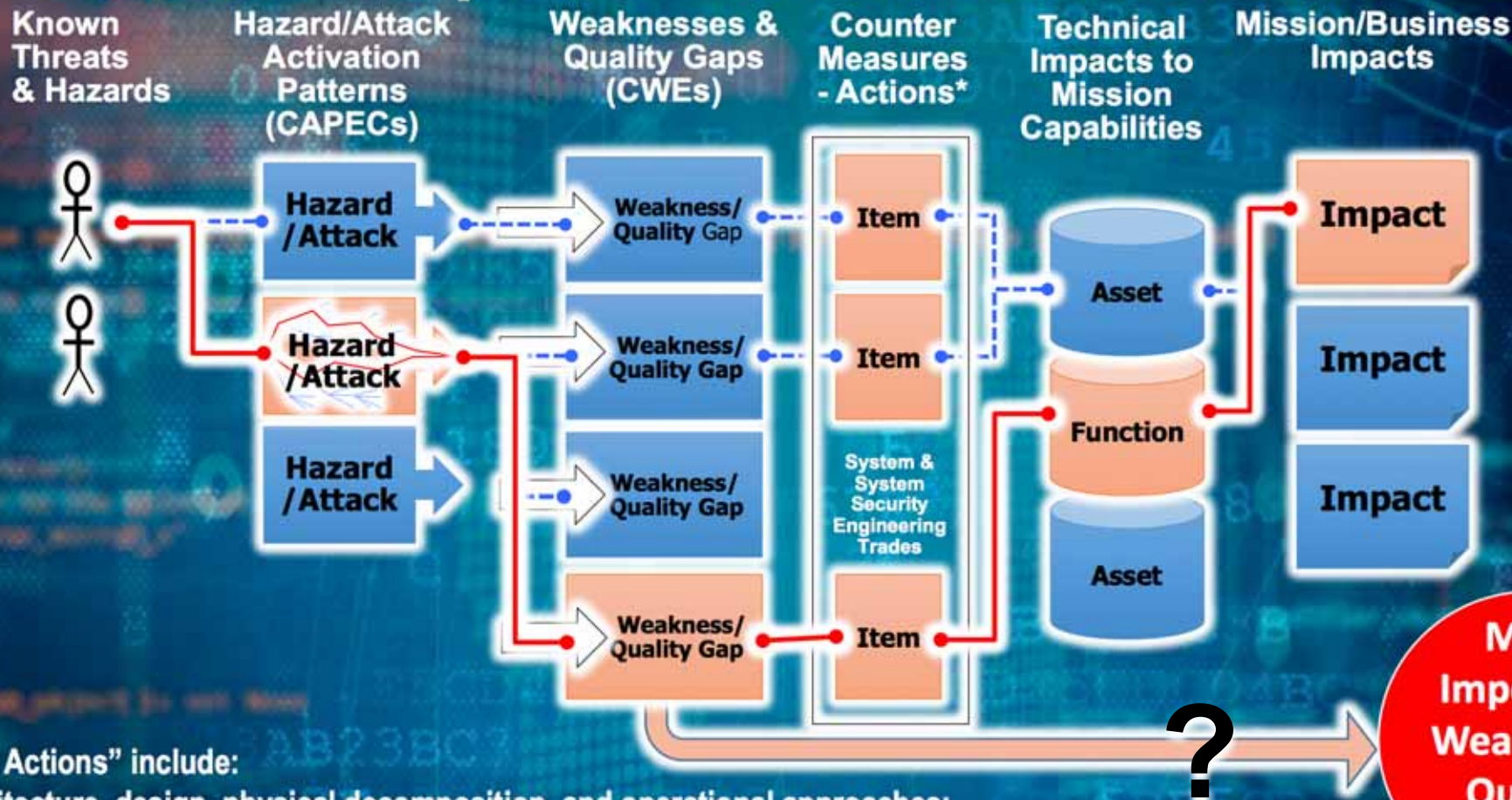
One element of Risk Management is Identifying Quality Gaps in Capabilities Critical to Mission/Business Functions



Quality Gaps can occur in any of the capabilities that make up our mission/business functions



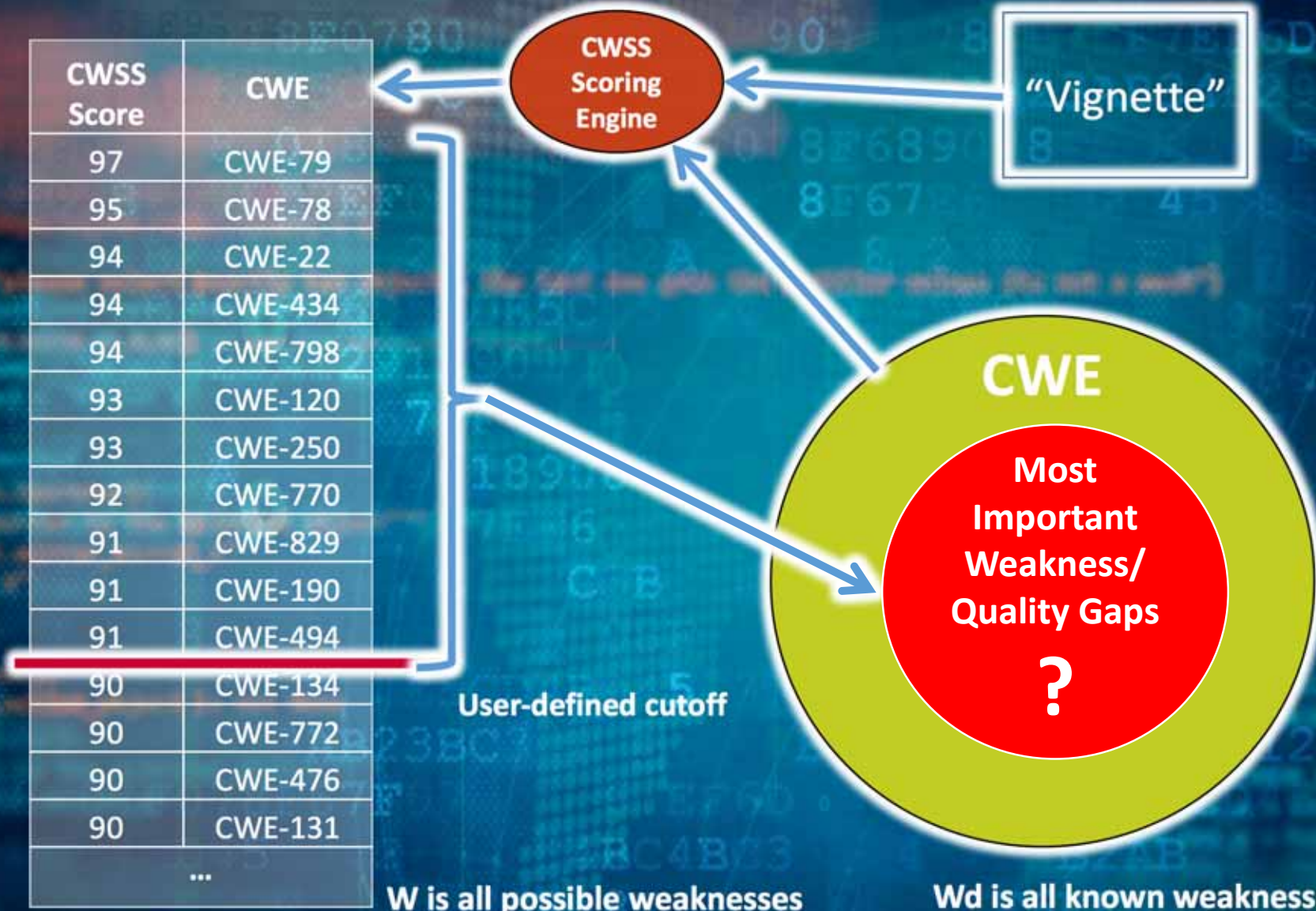
Risk Management is about addressing the Hazards & Attacks that can impact Mission/Business Functions



“Counter Measures - Actions” include:

choices about architecture, design, physical decomposition, and operational approaches;
adding/changing security/safety functions, protection schemes, activities & processes;
use of static & dynamic code assessments, dynamic testing, physical testing, and pen testing;
attack surface & fault-tree analysis, architecture and design reviews

CWSS & the Common Weakness Risk Analysis Framework (CWRAF) in a Nutshell



W is all possible weaknesses

Wd is all known weaknesses (CWE)

MITRE

Common Weakness Scoring System (5 Sep 2014)

Base Finding Group

- Technical Impact
- Acquired Privilege
- Acquired Privilege Layer
- Internal Control Effectiveness
- Finding Confidence

Attack Surface Group

- Required Privilege
- Required Privilege Layer
- Access Vector
- Authentication Strength
- Level of Interaction
- Deployment Scope

CWSS

Environmental Group

- Business Impact
- Likelihood of Discovery
- Likelihood of Exploit
- External Control Effectiveness
- Prevalence

Common Weakness Risk Analysis Framework (CWRAF)

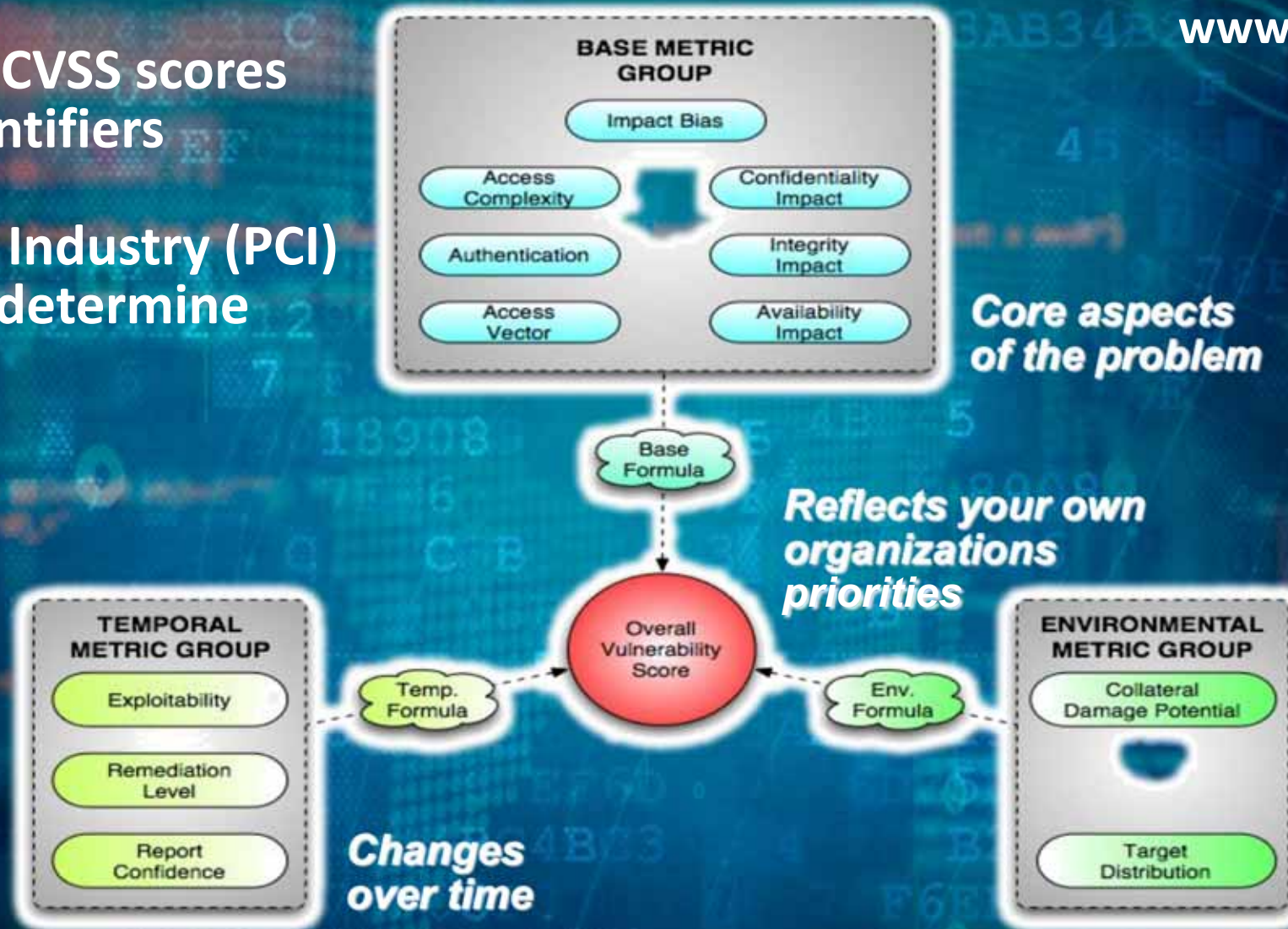
- Vignettes
- Technical Impact Scorecard

MITRE

Common Vulnerability Scoring System

www.first.org/cvss/

- NVD provides CVSS scores for all CVE identifiers
- Payment Card Industry (PCI) using CVSS to determine compliance



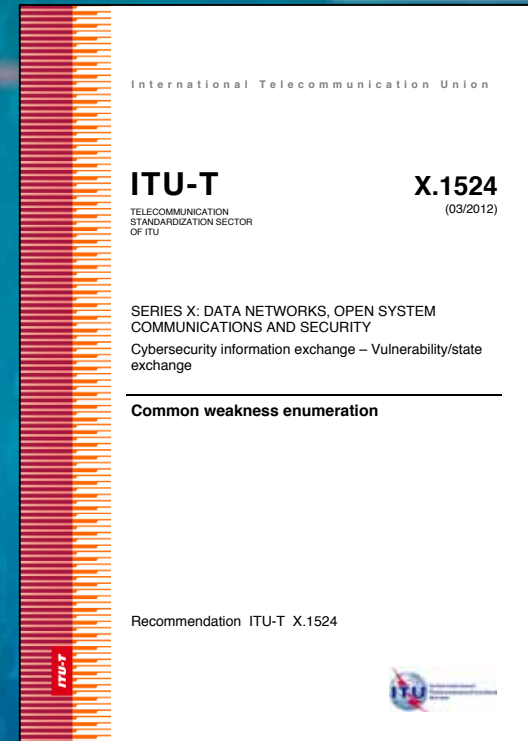
Standards for Inputs and Calculating Risks...



2011 & 2014



2011 & 2016



2012



2015
MITRE

Cyber Risk is Expanding into Physical Risk

IT Risk

Operational Risk



“Back office”

Production

Who's risk is being managed?

