Cyber Resilience

Risk & Resilience Festival 2021

Richard Bliek

Overview

Part I - Resilience

Part II - Cyber Resilience

Part III - Cyber Recovery

Food for Thought

Who am I?

Richard Bliek

1996
Computer Science (ir.)

*"Experimental Evaluation
of
Connection Management Protocols"*

2016
Risk Management (MSc, cum laude)

"Change Impact Analysis in Cloud"

It all started…   *… October 13th 2008*

What is Resilience?

Overview

NIST Cybersecurity Framework

Restore
any capabilities or services that were impaired due to a cybersecurity incident.

Oorganizational Understanding
to manage cybersecurity risk to systems, people, assets, data, and capabilities.

RECOVER

IDENTIFY

CYBERSECURITY FRAMEWORK VERSION 1.1

RESPOND

PROTECT

DETECT

Safeguards
to ensure delivery of critical services.

Activities
to take action regarding a detected cybersecurity incident.

Activities
to identify the occurrence of a cybersecurity event.

Quiz

DETECT   PROTECT   RESPOND   RECOVER
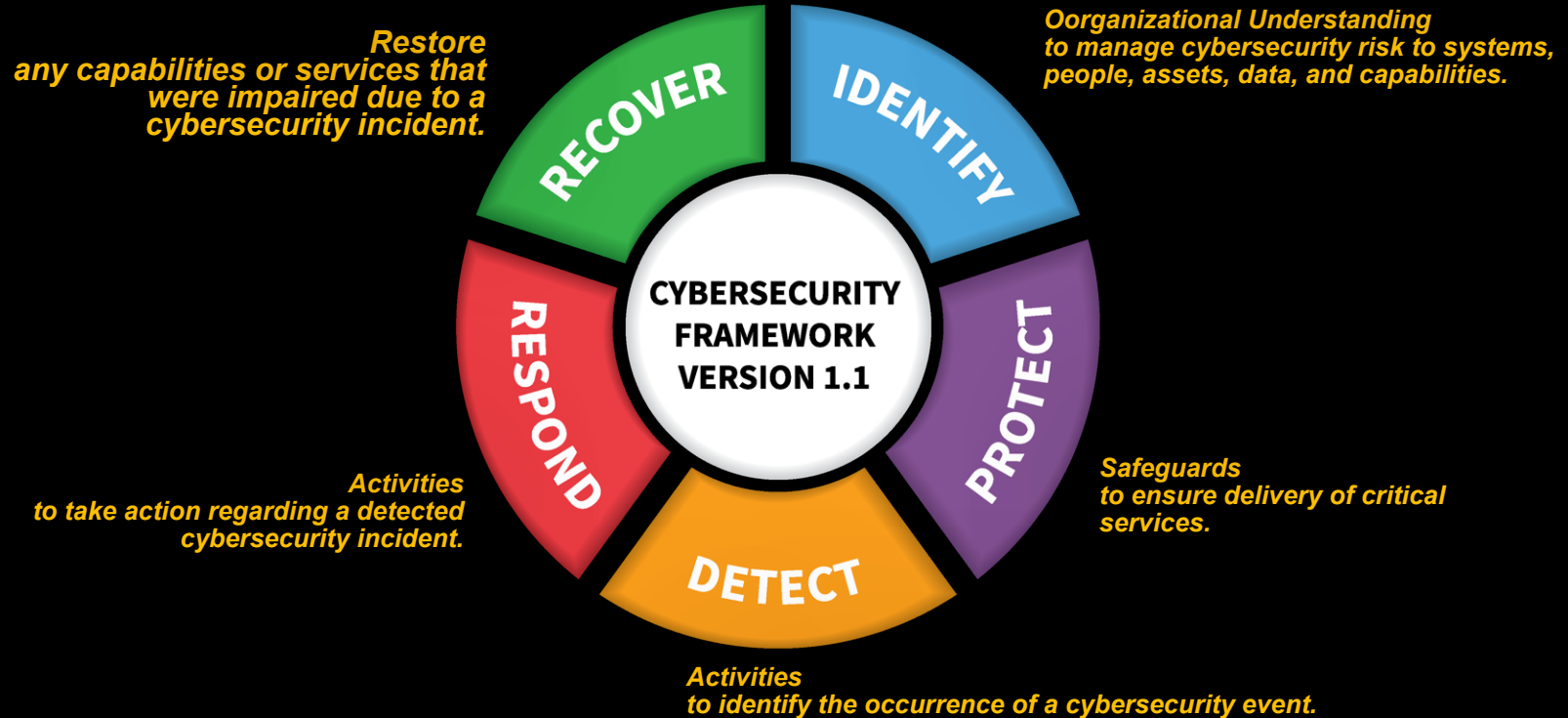
Hardening

Virus Scanner

Security Operations Center

Awareness Training

Backup / Restore

Data Leakage Prevention

Insurance

Quiz

	DETECT	PROTECT	RESPOND	RECOVER
Hardening		X		
Virus Scanner	X			
Security Operations Center	X	X	X	
Awareness Training	X	X		
Backup / Restore		X	X	X
Data Leakage Prevention		X	X	
Insurance		B.E.S.		

A few examples...

… destructive Cyber Scenario's do happen!

Overview

Cyber Recovery Plan

Focus…

- **Destructive Cyber Attack**
- **Recovery (i.e. in case Prevention and Protection were not successful)**

Knowing what to do when…

**PROTECT, DETECT, RESPOND
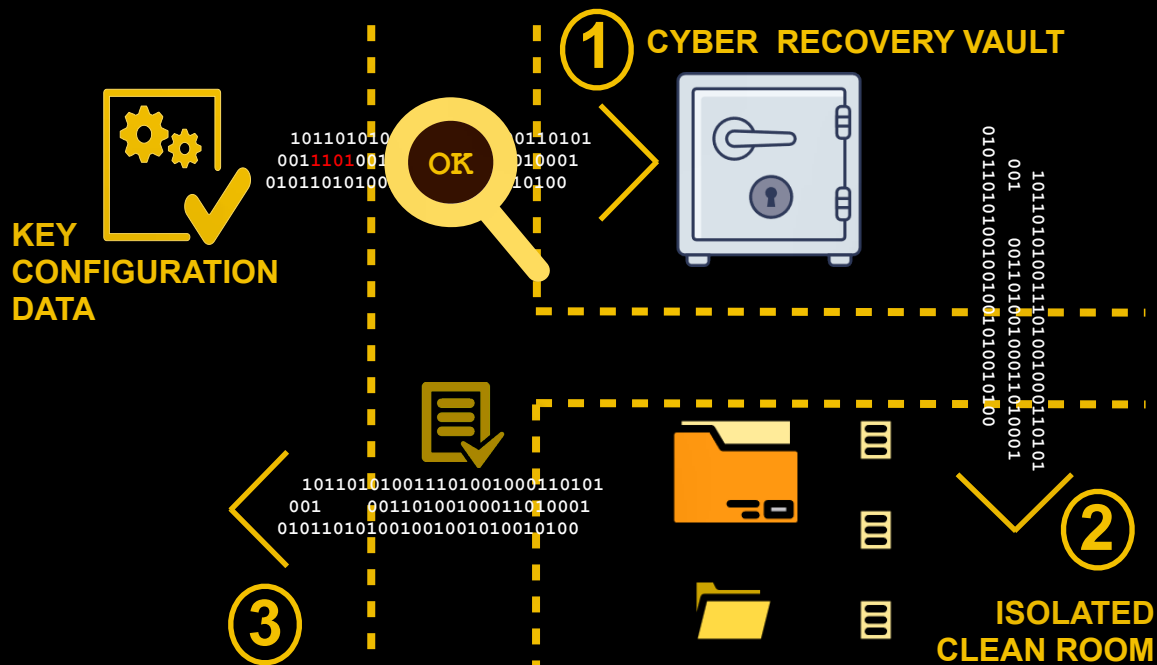Have FAILED**

Minimum Viable Company

Data
- **Platform Data (*)**
- **Platform Services Data (*)**
- **Application / Functional Data**

Approach
- **Application / Functional Data -> restore**
- **Platform Services -> ...**
- **Platform Data -> ...**

(*) ... The IT environment has been compromised

Basic Cyber Recovery Capabilities

KEY CONFIGURATION DATA

OK

1 CYBER RECOVERY VAULT

2 ISOLATED CLEAN ROOM

3

Simple Resilience Assessment Model

Overview

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Part III - Cyber Recovery

Food for Thought

Books 'n Stuff

ANTIFRAGILE — Nassim Nicholas Taleb — THINGS THAT GAIN FROM DISORDER
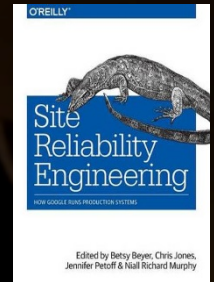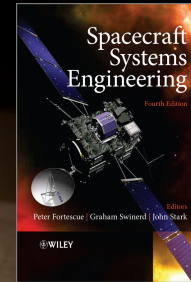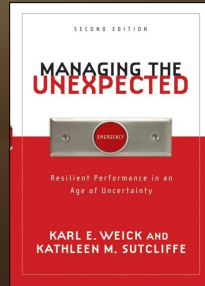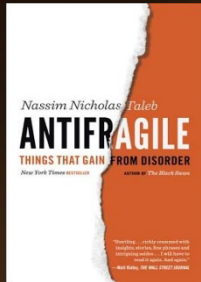
MANAGING THE UNEXPECTED — SECOND EDITION — Resilient Performance in an Age of Uncertainty — KARL E. WEICK AND KATHLEEN M. SUTCLIFFE

Normal Accidents — Living with High-Risk Technologies — Charles Perrow

Spacecraft Systems Engineering — Fourth Edition — Peter Fortescue | Graham Swinerd | John Stark — WILEY

Site Reliability Engineering — HOW GOOGLE RUNS PRODUCTION SYSTEMS — Edited by Betsy Beyer, Chris Jones, Jennifer Petoff & Niall Richard Murphy — O'REILLY