

FORTINET AND GDPR

RECONCILING REGULATORY WITH TECHNOLOGY.

- Adrian DANCIU
- Regional Director – South Eastern Europe

What Are We Talking About

Data Protection vs. Cyber Security

Data Protection...



...is the process of protecting data and involves the relationship between the collection and dissemination of data...It aims to strike a balance between individual privacy rights while still allowing data to be used for business purposes.

Cyber Security...



...is the body of technologies, processes and practices designed to **protect** networks, computers, programs and **data from attack, damage or unauthorized access.**

Two Key Aspects of GDPR

1. Consequences for GDPR violations

- Empowers supervisory authorities to assess fines that are “effective, proportionate and dissuasive.”
- Two tiers of maximum fines depending upon severity of violation
 - » **2% or €10M, whichever is higher**
 - » **4% or €20M, whichever is higher**
- Allows data subjects to seek monetary damages in court from controllers who violate their rights and from processors as well.



LET'S PLAY
“WHAT IF” ...

Tesco Bank (UK) Data Breach

The Numbers

EARLY
NOVEMBER
2016

£25M
STOLEN FROM
9,000
ACCOUNTS

4
POSSIBLE
EXPLANATIONS

- INSIDER THREAT
- MOBILE APP
- INSUFFICIENT INTERNAL PROCESSES
- REACHED THROUGH 3RD PARTIES

What We Could Expect in the Future...

**TESCO COULD FACE
FINES OF UP TO “£1.9B”
IF GDPR HAD BEEN
IN EFFECT AT THE TIME***

Two Key Aspects of GDPR

2. Data Breach notifications

- A personal data breach” is “a breach of security leading to the accidental or unlawful destruction, loss, alteration, unauthorized disclosure of, or access to, personal data transmitted, stored or otherwise processed.”
- Data controllers must notify the supervisory authority "competent under Article 55“
- Notice must be provided “without undue delay and, where feasible, **not later than 72 hours** after having become aware of it.”

- Notification to the authority must consist of at least:
 - » Describe the nature of the personal data breach, including the number and categories of data subjects and personal data records affected;
 - » Provide the data protection officer’s contact information;
 - » Describe the likely consequences of the personal data breach
 - » Describe how the controller proposes to address the breach, including any mitigation efforts
 - » If data processor experiences a breach, it must notify the controller
- Notice **is not** required if “the personal data breach is unlikely to result in a risk for the rights and freedoms of natural persons,”

Looking to the Future - What GDPR Requires



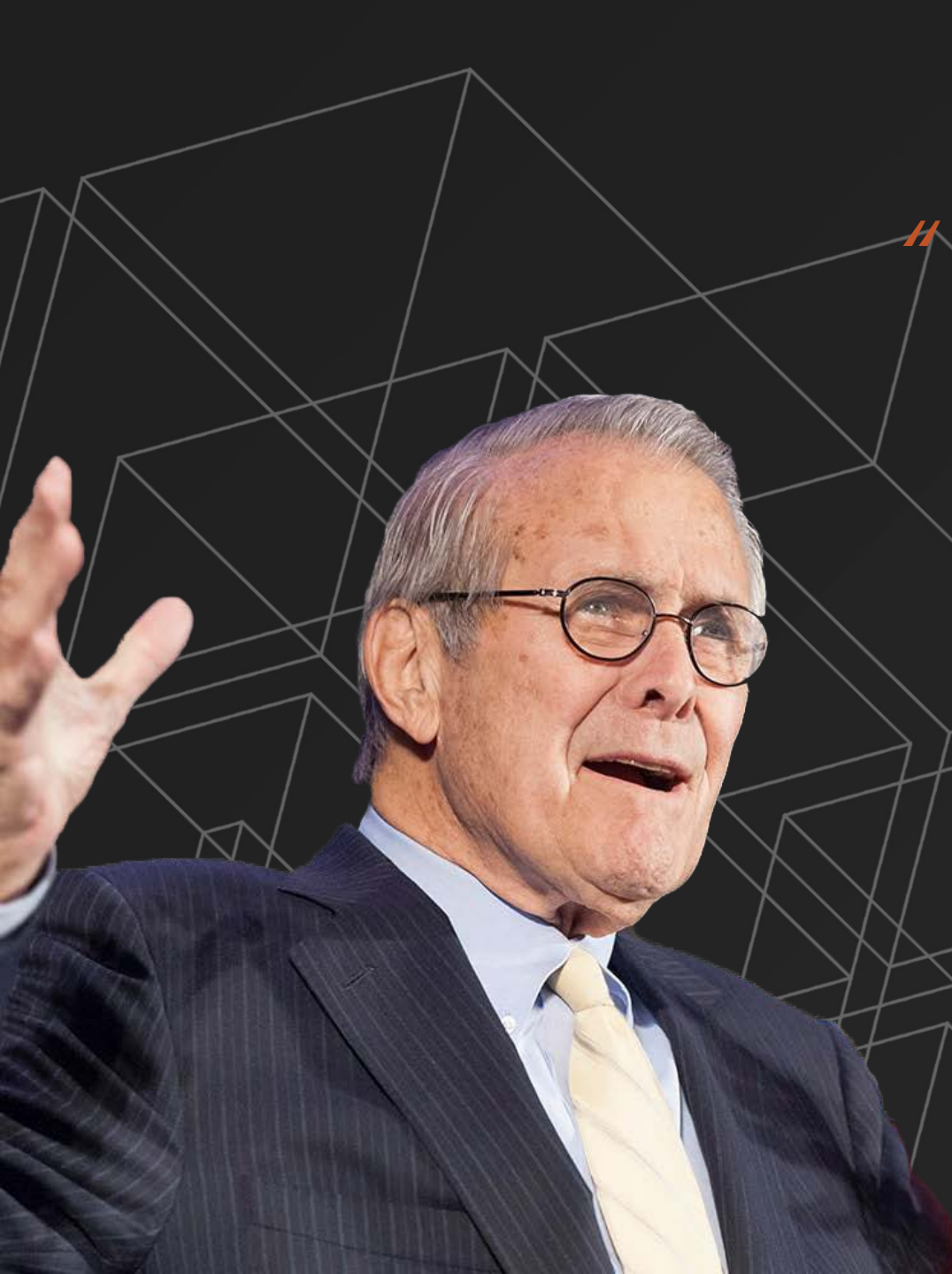
DATA BREACH
DETECTED!



DATA BREACH
REPORTED!

JANUARY 2019

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |



*" WE DON'T KNOW
WHAT WE DON'T
KNOW."*

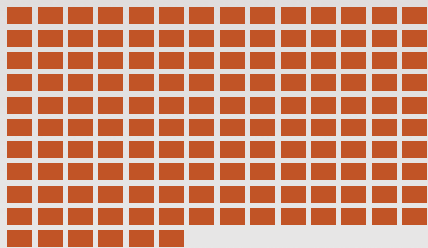
Donald Rumsfeld
Former US Secretary of Defense

What Your Network Requires



INITIAL
INTRUSION!

Average time between
intrusion and detection =



146 DAYS*

AUGUST 2018

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |



The Hacker's Advantage:

Window of Opportunity



INITIAL INTRUSION



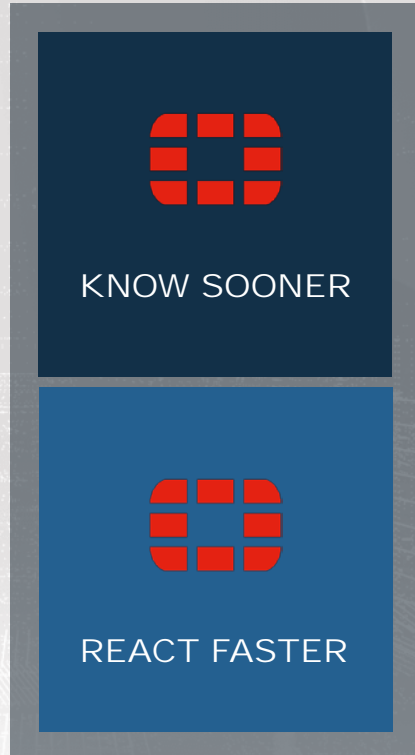
"WINDOW OF OPPORTUNITY"



BREACH DETECTION

The Fortinet Objective:

Close the Window of Opportunity








THE ROAD TO GDPR COMPLIANCE

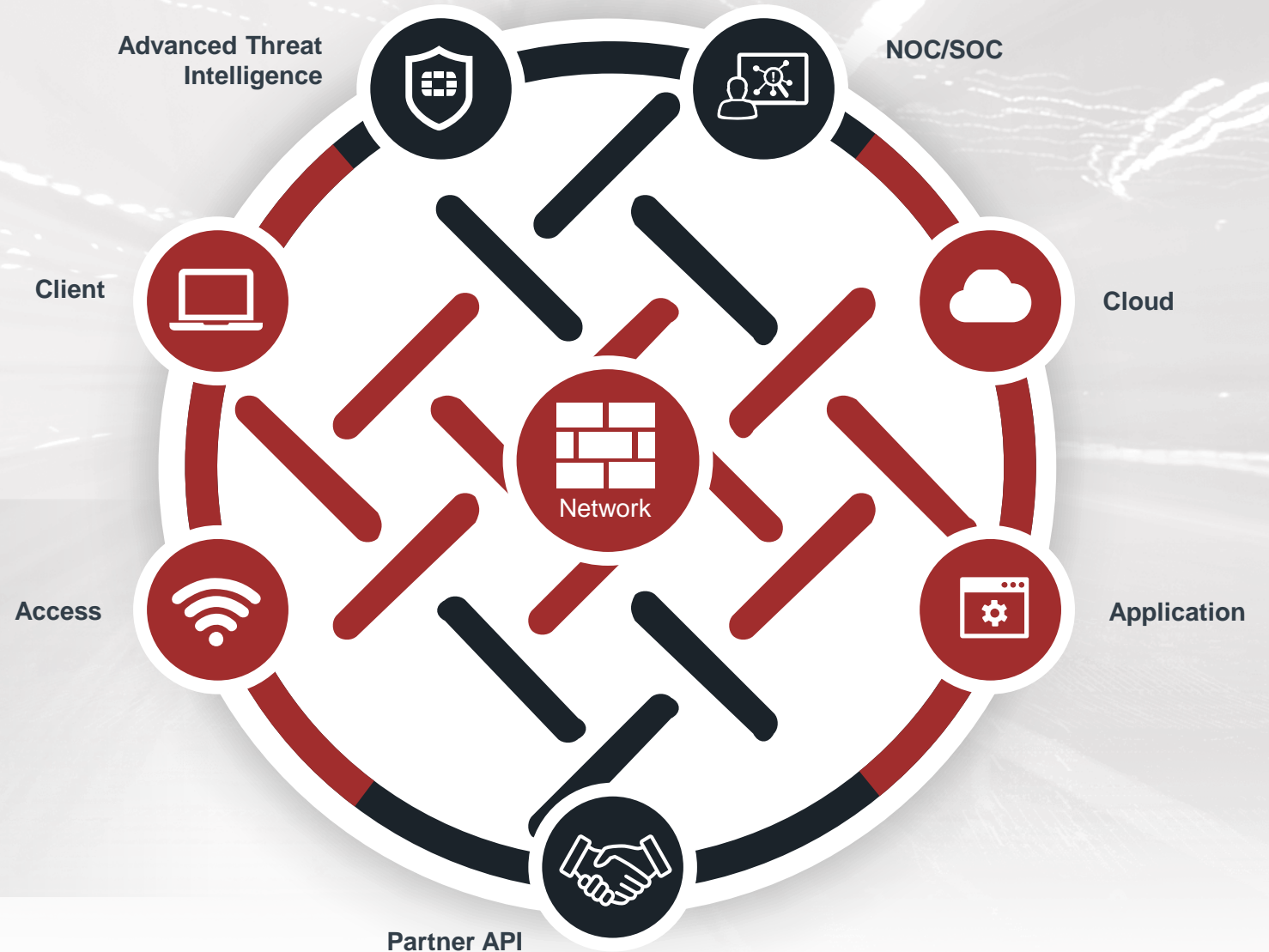
The First Step...

...towards GDPR Compliance



**FORTINET
SECURITY
FABRIC**

-  BROAD
-  POWERFUL
-  AUTOMATED



Technology Integration and Collaboration



APPLICATION SECURITY

- FortiMail
- FortiWeb
- FortiADC
- FortiDDoS
- FortiWAN
- FortiCache



SECURE ACCESS

- FortiAP
- FortiWiFi
- FortiSwitch
- FortiAuthenticator
- FortiToken
- FortiExtender



ENTERPRISE FIREWALL

- FortiGate
- FortiWiFi



CLOUD SECURITY

- FortiGate VM (Virtual FW)
- FortiGate VMX (SDN Virtual FW)
- FortiGate VM for Public Cloud
 - » AWS
 - » Microsoft Azure
 - » OpenStack



ADVANCED THREAT PROTECTION

- FortiSandbox
- FortiMail
- FortiWeb
- FortiClient



SECURITY OPERATIONS

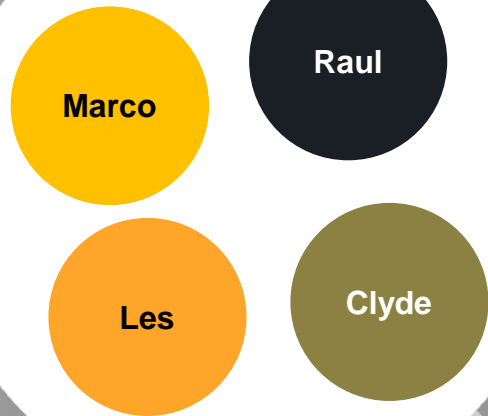
- FortiManager
- FortiAnalyzer
- FortiSIEM

The background features a light gray hexagonal grid pattern. Within the grid, several padlock icons are scattered, some appearing as faint outlines and others as more prominent white icons. The overall aesthetic is clean and technical, suggesting themes of security and data protection.

PSEUDONYMIZATION AND SEGMENTATION

Pseudonymization versus Anonymization

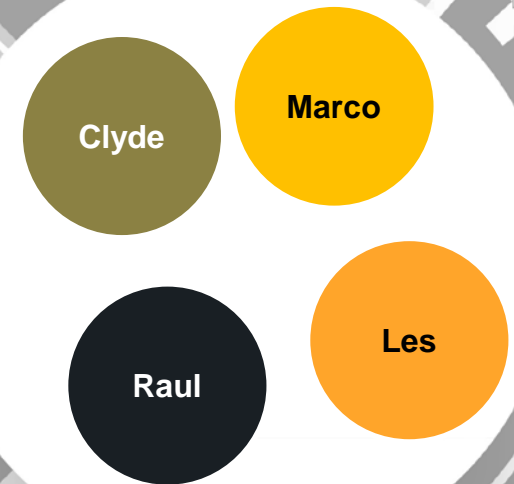
| Name | Token/Pseudonym | Anonymized |
|-------|-----------------|------------|
| Clyde | qOerd | xxxxx |
| Marco | Loqfh | xxxxx |
| Les | Mcv | xxxxx |
| Les | Mcv | xxxxx |
| Marco | Loqfh | xxxxx |
| Raul | BhQl | xxxxx |
| Clyde | qOerd | xxxxx |



Pseudonymized
Data Record

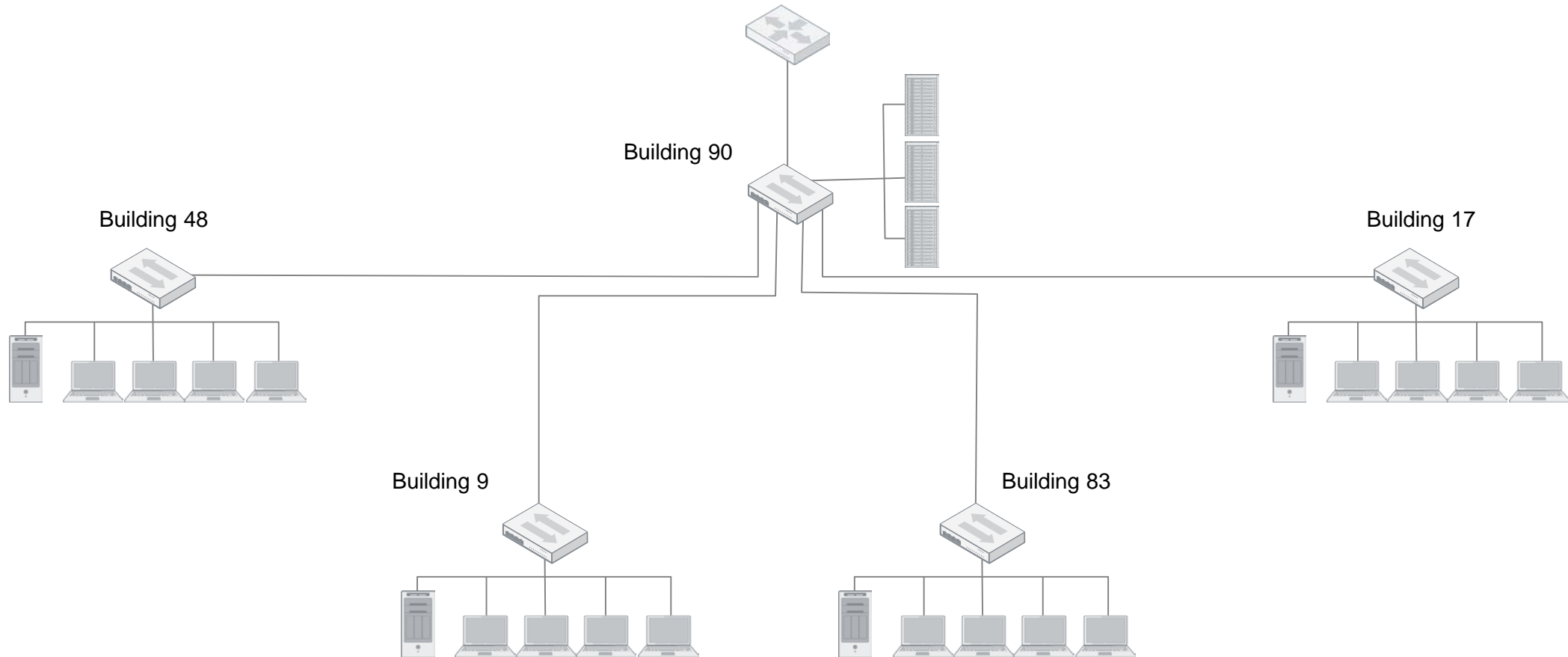
“Pseudonymization is a method to substitute identifiable data with a reversible, consistent value.”

Anonymization is the destruction of the identifiable data.”

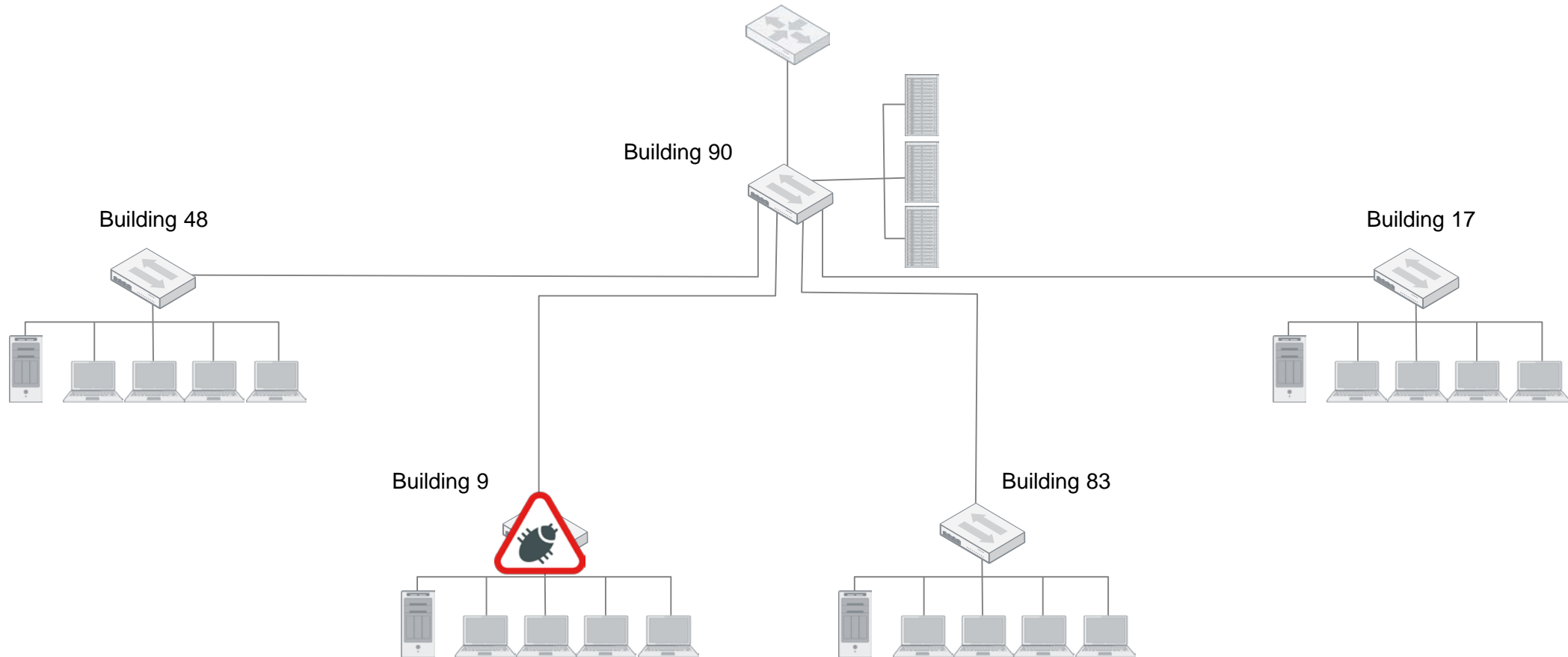


Anonymized Data
Record

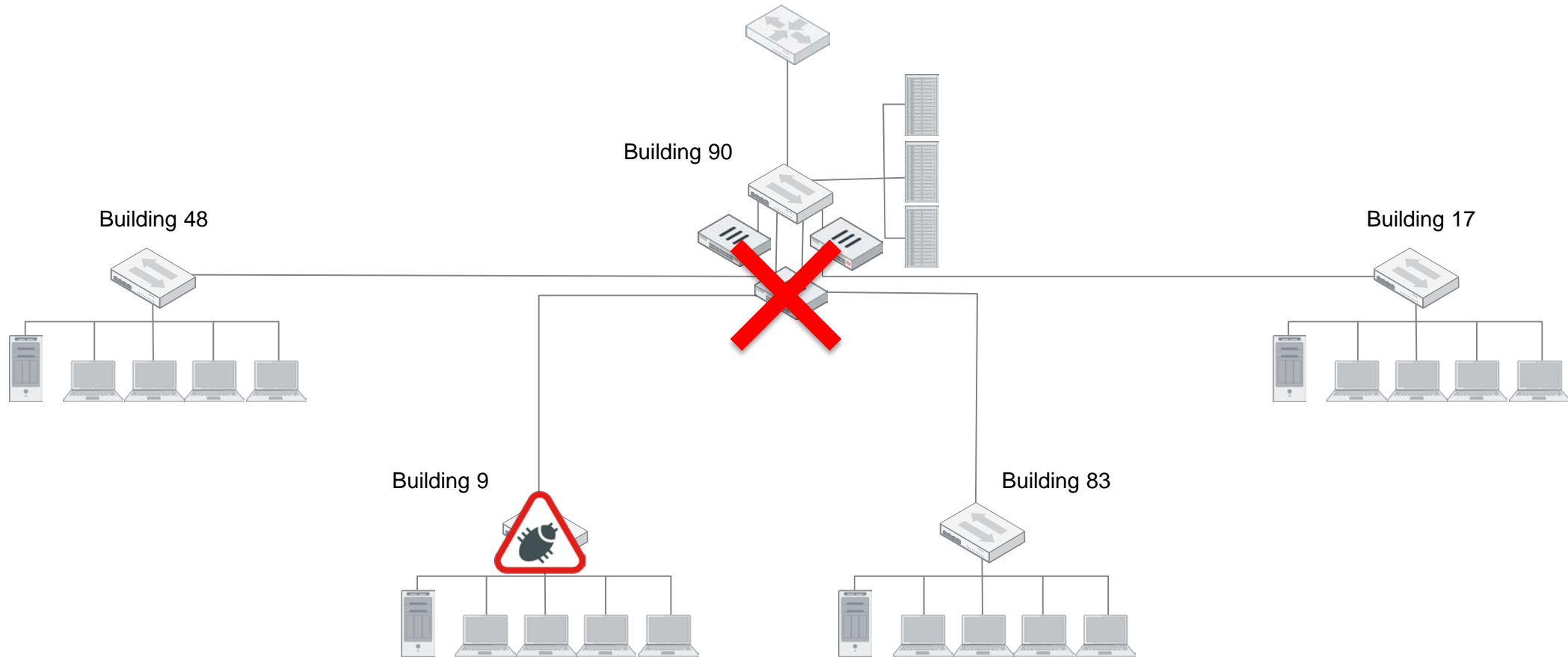
Internal Segmentation For Greater Control



Internal Security Segmentation For Greater Control

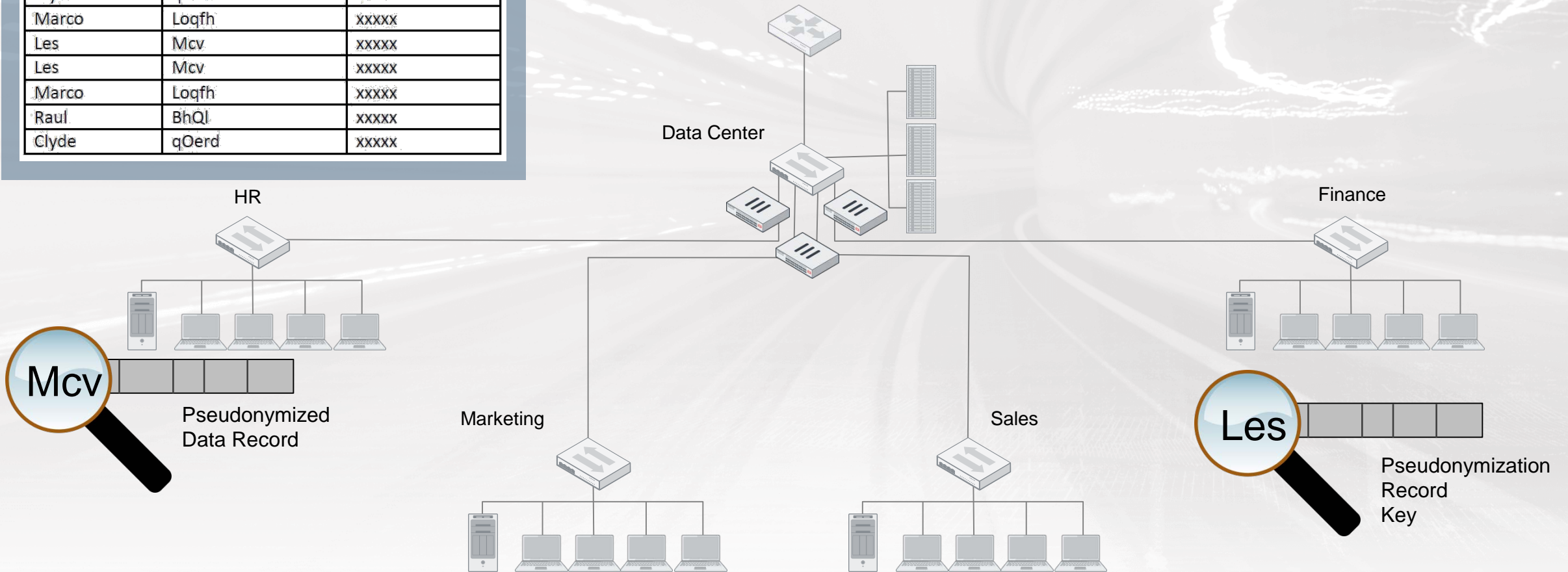


Internal Segmentation For Greater Control



Segmentation for Increased Data Protection

| Name | Token/Pseudonym | Anonymized |
|-------|-----------------|------------|
| Clyde | qOerd | XXXXX |
| Marco | Loqfh | XXXXX |
| Les | Mcv | XXXXX |
| Les | Mcv | XXXXX |
| Marco | Loqfh | XXXXX |
| Raul | BhQI | XXXXX |
| Clyde | qOerd | XXXXX |



state of the art

/ˌsteɪt əv ðɪ ˈɑːt/ 

phrase of **state**

/ˌsteɪt əv ðɪ ˈɑːt/ 

1. the most recent stage in the development of a product, incorporating the newest ideas and features.

STATE OF THE ART

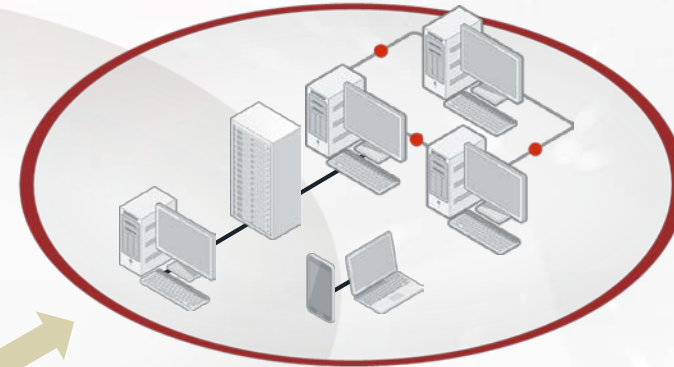
Data – In All of Its States

King of the GDPR Jungle

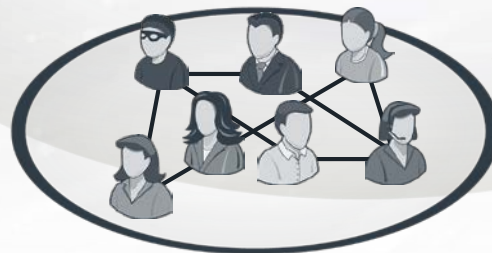
At Rest



In Motion



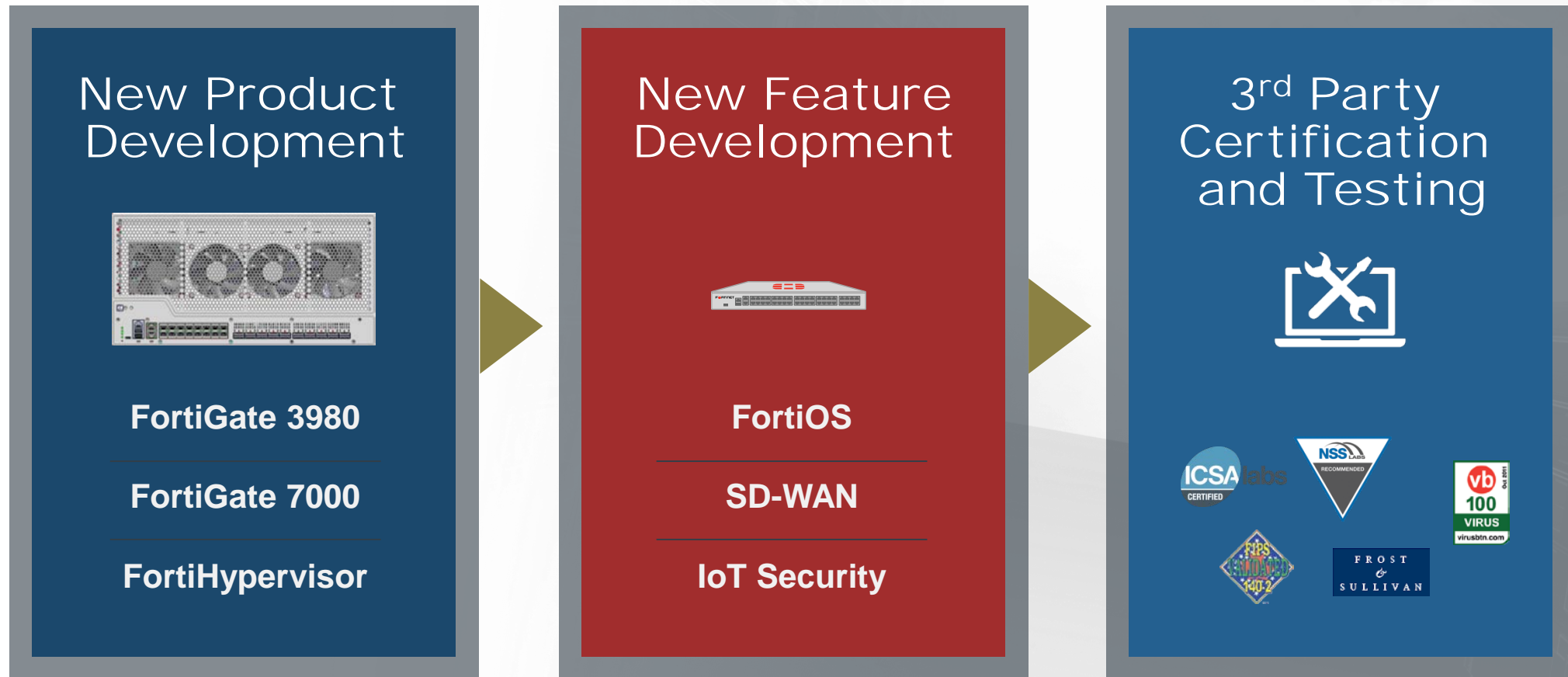
NETWORK



In Use

Fortinet and State of the Art

Continuous Innovation and Development



The background features a light gray hexagonal grid pattern. Within this grid, several white padlock icons are scattered, some appearing slightly more prominent than others. The overall aesthetic is clean and technical, suggesting a focus on security and risk management.

CONTINUOUS RISK ASSESSMENT

FortiGuard

Since 2000, FortiGuard Labs has provided in-house, industry-leading security intelligence and research, powering the Fortinet Security Fabric and delivering a suite of advanced security services



FortiGuard Research

Zero-Day Research



82 found in 2016

36 still unpatched by vendors

IoT Research



Product vulnerabilities

Protocol weaknesses

Innovation



Finding new ways to solve problems

Dealing with increases in volume, sophistication and breadth of attacks

Collaborative Research



Working with research partners which include national CERTs and law enforcement organisations

FortiGuard Threat Intelligence Projects



CISCP
& NCCIC



MyCERT

Malaysia Computer Emergency Response Team



computer emergency response team
CERT-EU
for the EU institutions, bodies, and agencies



US-CERT

UNITED STATES COMPUTER EMERGENCY READINESS TEAM



The Road to GDPR Compliance

So Much More Than Just Technology

Complex



Potentially long,
complicated
and expensive

Impact



Potential impact across
the whole of the
organization

Product/Service
Process
People

Threat



Think ahead of the
Threat – Close the
“Window of Opportunity”

“Harden” the Network

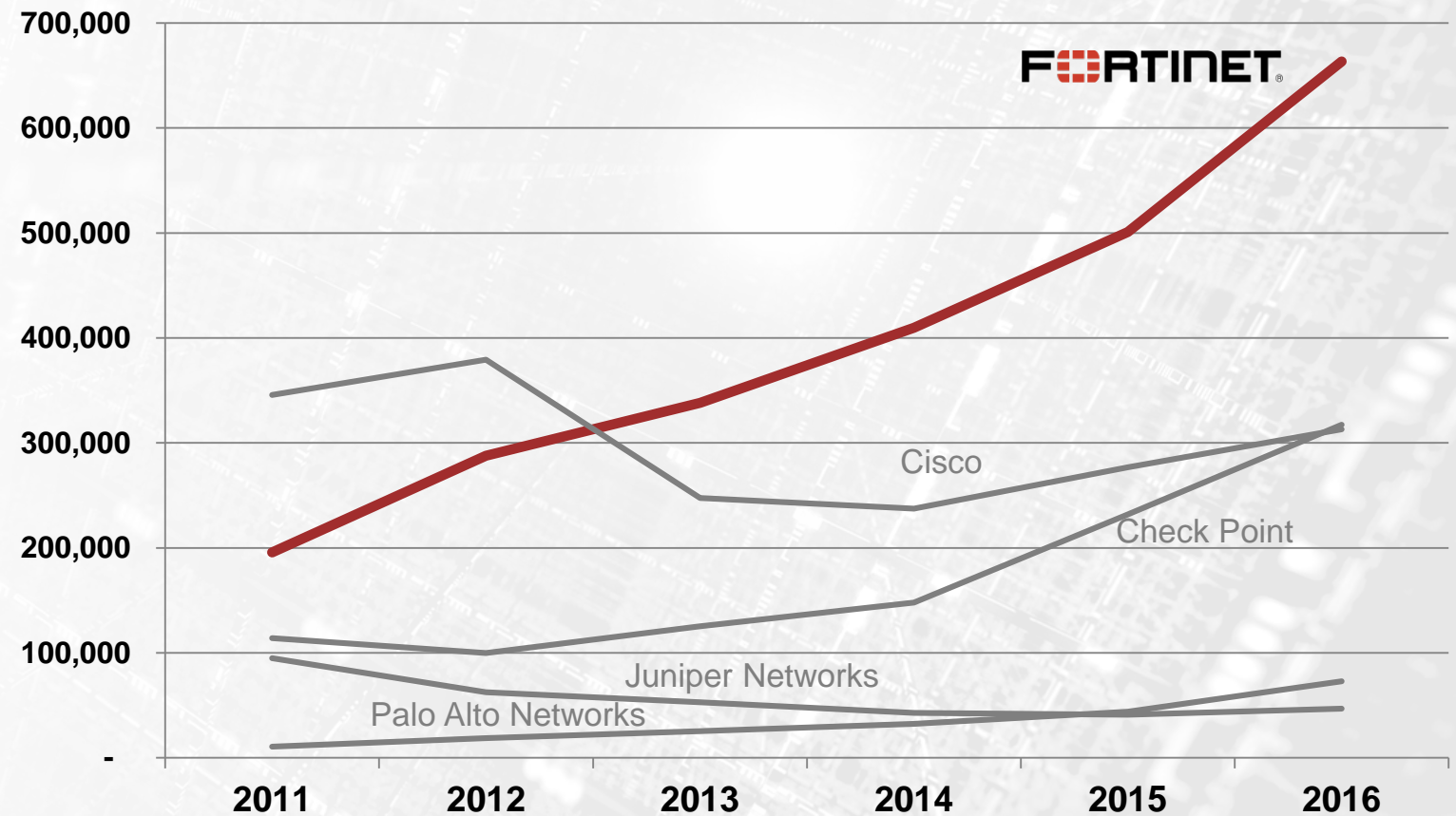
Fortinet: Gaining Share in a Growing Market

Fortinet vs the Competition



Solving a broad range of challenges...

- Fortinet is the largest network security appliance vendor in the world
- Fortinet has developed a visionary suite of security solutions



Source: IDC Worldwide Security Appliances Tracker, March 2016 (based on annual unit shipments)

FORTINET®

