



FORTINET

ACCELERATE 18

STR3NGTH IN NUMB3RS



UNLOCKING DIGITAL TRANSFORMATION

PATRICE PERCHE :: SENIOR EXECUTIVE VICE PRESIDENT WORLDWIDE, SALES & SUPPORT

The background of the image is a blurred financial chart. It features a dark blue background with a light blue line graph showing an upward trend. There are several data points marked with small circles and connected by lines. Some of the visible numbers on the chart include '2455' at the top right, '154.175' in the middle, and '15.10' near the bottom. The overall aesthetic is professional and data-driven.

STRENGTH IN NUMBERS

2017 BUSINESS HIGHLIGHTS

BUSINESS GROWTH

\$1.8B BILLINGS
+19% GROWTH

+27% \$500K+
DEALS Y/Y

2,112 SALES PEOPLE
WORLDWIDE

79 COUNTRIES WITH
FORTINET SALES
PRESENCE

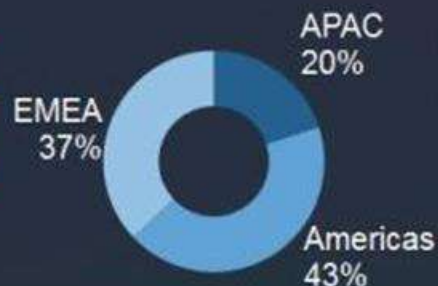
MARKET PENETRATION

#1 IN 12 COUNTRIES
(B2B REVENUES)

+21% ENTERPRISE
Y/Y GROWTH

17,800 NEW CUSTOMERS
ACQUIRED

**2017
REVENUE
BY REGION**



ADOPTION OF FORTINET SECURITY FABRIC

+42% FABRIC
CUSTOMERS Y/Y

+33% FABRIC BILLINGS
Y/Y

+182% PUBLIC CLOUD
GROWTH Y/Y
(ON-DEMAND)

**FABRIC
SOLUTIONS
GROWTH**

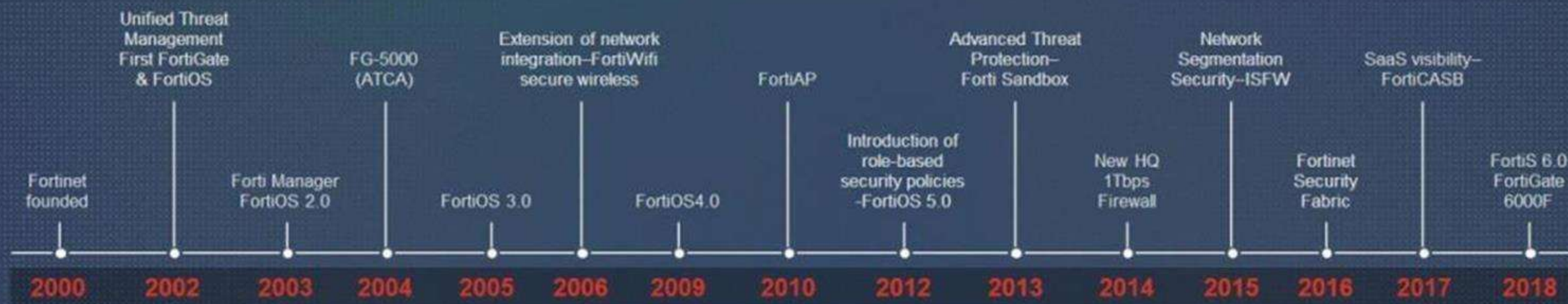
FortiSandbox +34% Y/Y

FortiSwitch +92% Y/Y

FortiClient +83% Y/Y

FortiManager + 31% Y/Y

A HISTORY OF DISRUPTIVE INNOVATION



2002

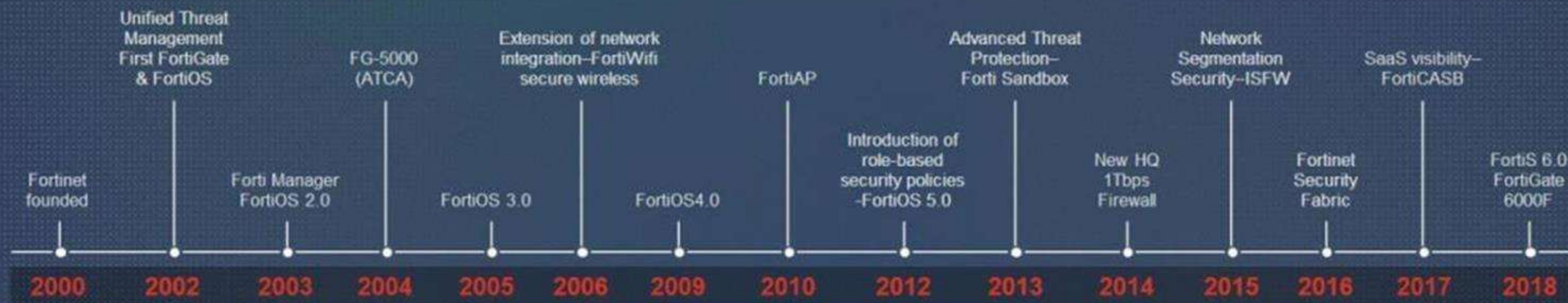
**UNIFIED
THREAT
MANAGEMENT**

First FortiGate
& FortiOS



1.0

A HISTORY OF DISRUPTIVE INNOVATION



2002

**UNIFIED
THREAT
MANAGEMENT**

First FortiGate
& FortiOS



1.0

2016

**FORTINET
SECURITY
FABRIC**



BUSINESS OBJECTIVE

- Leverage technology to drive business and provide competitive differentiation

ISSUES

- Securing cloud expansion

SOLUTION

VPN Between On-Premise and Cloud,
Augment Microsoft/Amazon Security Controls



FortiGate



FortiMail



FortiAP



FortiSwitch



FortiAnalyzer



FortiAuthenticator



FortiClient



FortiWeb



FortiCloud

WHY FORTINET

- Ability to Scale for Multi-Cloud Environments
- Open Connectivity to Security Fabric
- Long-term relationship

COMPETITION

- Check Point
- Cisco
- Palo Alto Networks

ONE ARCHITECTURE TO ADDRESS THE BROADER SECURITY MARKET



FORTINET



THE PERFECT STORM

... DRIVING FORCE OF DX

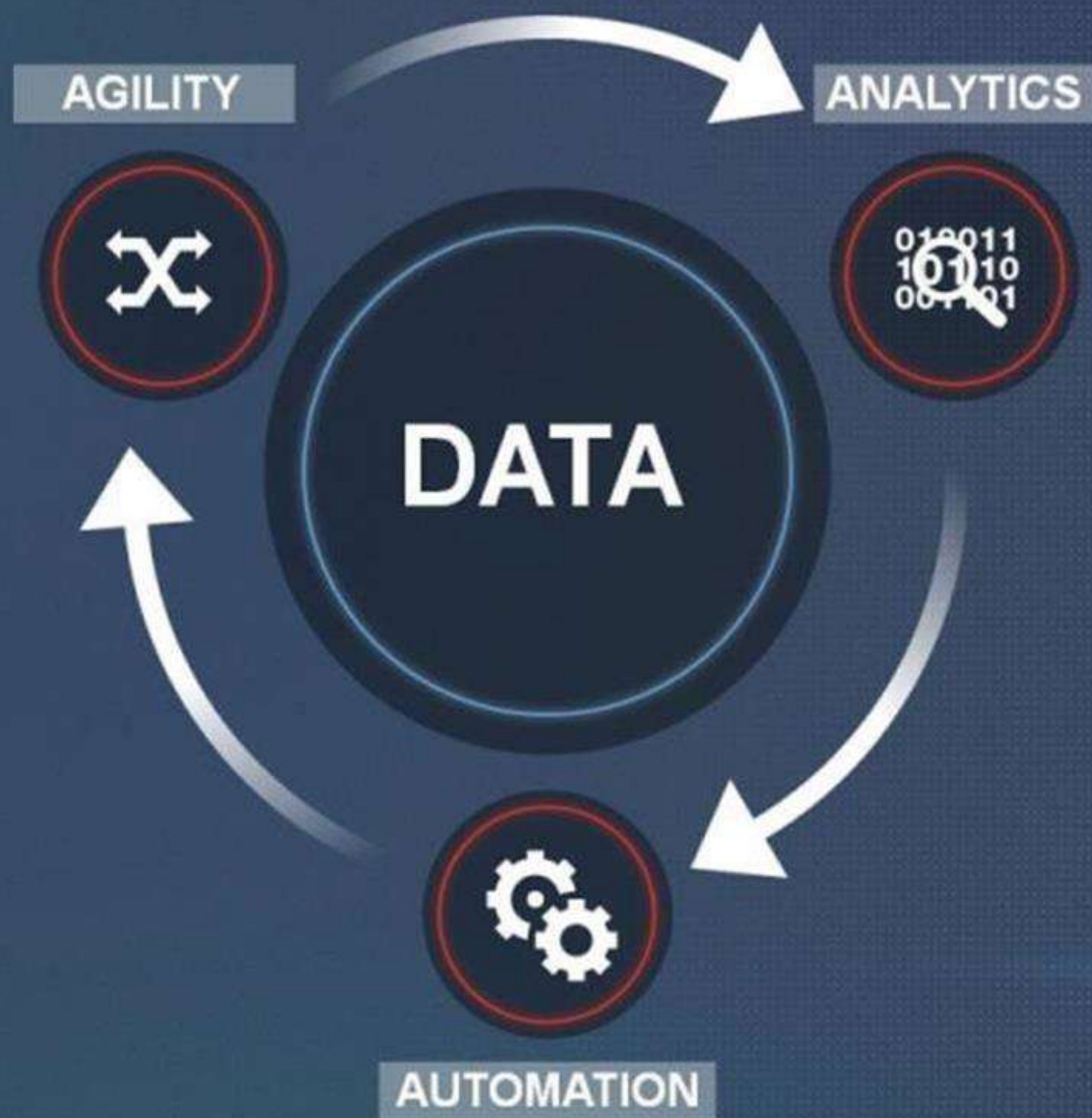


DX

DIGITAL TRANSFORMATION

IS THE INTEGRATION OF DIGITAL TECHNOLOGY INTO ALL AREAS OF A BUSINESS, RESULTING IN FUNDAMENTAL CHANGES TO HOW BUSINESSES OPERATE AND HOW THEY DELIVER VALUE TO CUSTOMERS.

THE ROLE OF DATA IN DIGITAL TRANSFORMATION



SECURING THE DIGITALLY TRANSFORMED ENTERPRISE

“...in the digital era, [security] focus needs to shift from securing network perimeters to safeguarding data spread across systems, devices, and the cloud.”

MIT Technology Review, 2017



Mobile Devices



Augmented Reality/Wearables



IoT Platforms



Smart Sensor



Advanced Human-machine Interfaces



Multi-level Customer Interaction and Customer Profiling



3D Printing



Location Detection Technologies



Cloud Computing



Big Data Analytics and Advanced Algorithms

SECURITY—OBSTACLE TO DIGITAL TRANSFORMATION

“Cybersecurity, one of Top 10 obstacles to Digital Transformation.”

Harvard Business Review 2017

“Security is identified by CEOs as one of the top 3 challenges for providing the ideal infrastructure for digital transformation.”

BT, CEO Report – Leading from the Front – 2017

“Security is the largest factor standing in the way of enterprise digital transformation efforts.”

SoftServe 2017

“Security nearly always tops the list of digital transformation obstacles”.

Marc Cecere, Forrester, ZD Net, 2017

“Some 57% of businesses reported major issues finding and recruiting talented IT security staff—a problem as digital transformation efforts move more data and systems to the cloud, and cyber attacks grow more sophisticated.”

Osterman Research 2017

CYBER SECURITY CHALLENGES TO ADDRESS FOR A SUCCESSFUL DX

PROTECTING DATA



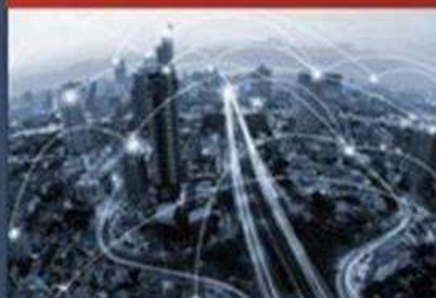
No matter where
it is in the
network or what
state it's in

SECURING OT



Extending IT
security to
Operation
Technology
Networks

FLEXIBLE SECURITY CONSUMPTION



To cover hybrid
in a multi-cloud
environment

ADDRESSING COMPLIANCE



As part of a
broader Risk
Management
Strategy

EXPANDING THREAT LANDSCAPE



Requires
Real-time
security, human
skills and
automation

SX

∴ SECURITY TRANSFORMATION

IS THE INTEGRATION OF SECURITY INTO ALL AREAS OF DIGITAL TECHNOLOGY RESULTING IN FUNDAMENTAL CHANGES TO HOW SECURITY IS ARCHITECTED, DEPLOYED AND OPERATED.

FORTINET SECURITY FABRIC

BROAD

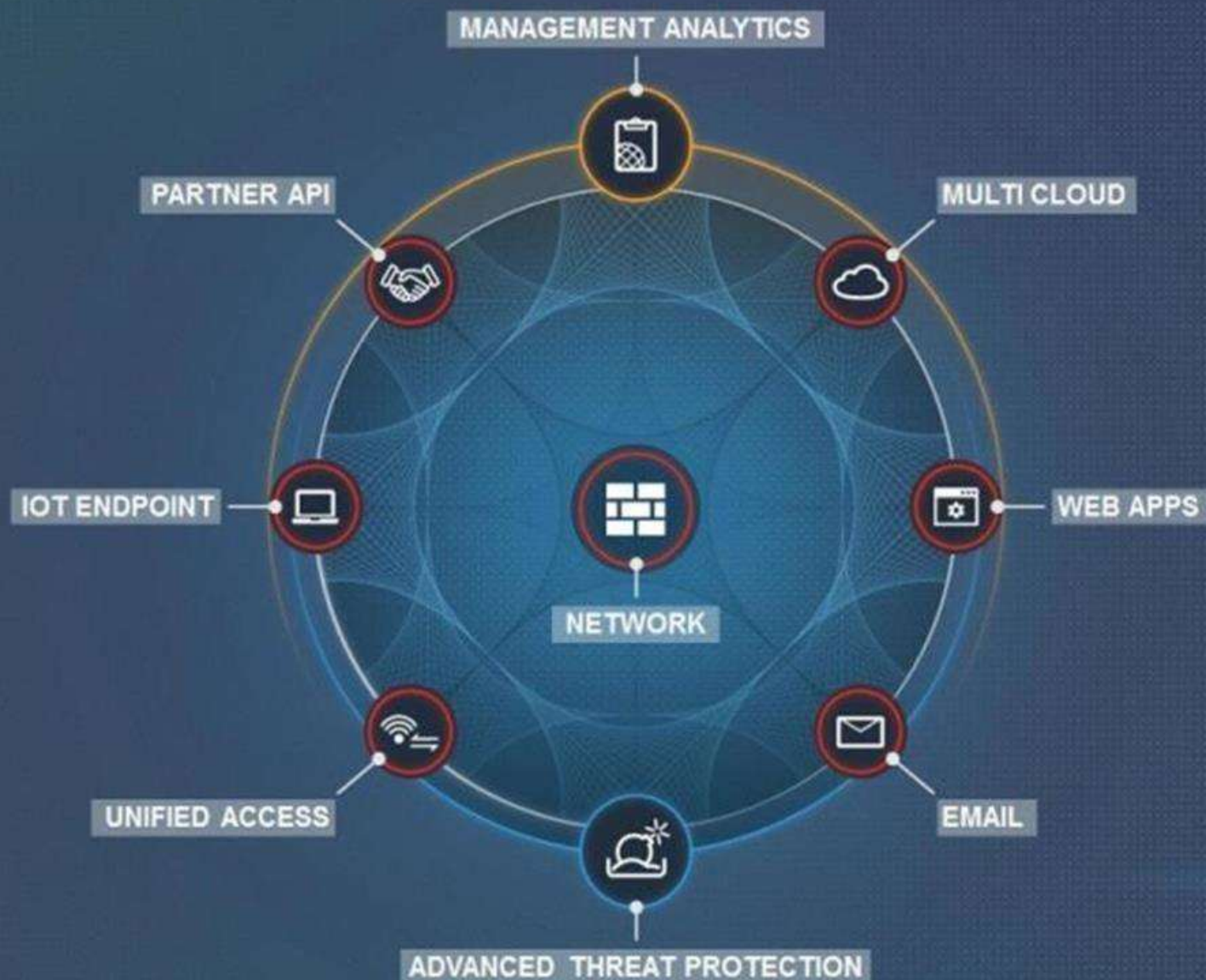
Provides Visibility and Protection Across the Entire Digital Attack Surface

INTEGRATED

Multiple Technologies Working Together for the Detection of Advanced Threats

AUTOMATED

Embedded Intelligence for Automatic Response & Continuous Trust Assessment



FORTINET



STRENGTH IN NUMBERS

THE HUMAN ELEMENT

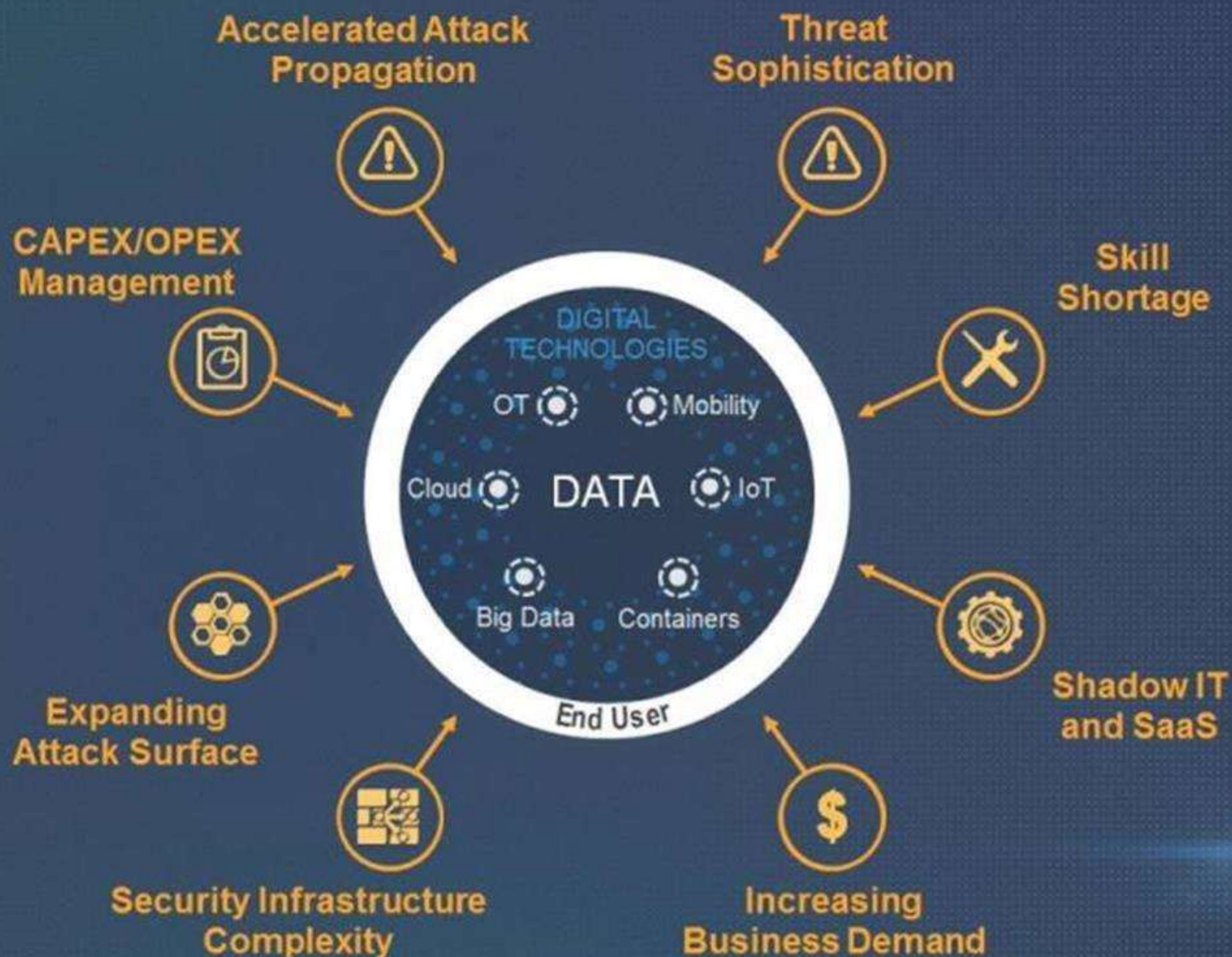
EXISTING CISO CHALLENGES KEEP GROWING

Cyber security has
become too big of
an issue for anyone
to solve



EXISTING CISO CHALLENGES KEEP GROWING

Cyber security has become too big of an issue for anyone to solve



IT TAKES A FULL ECOSYSTEM

Starting with the
Fortinet Security
Fabric powered by
FortiOS 6.0



IT TAKES A FULL ECOSYSTEM

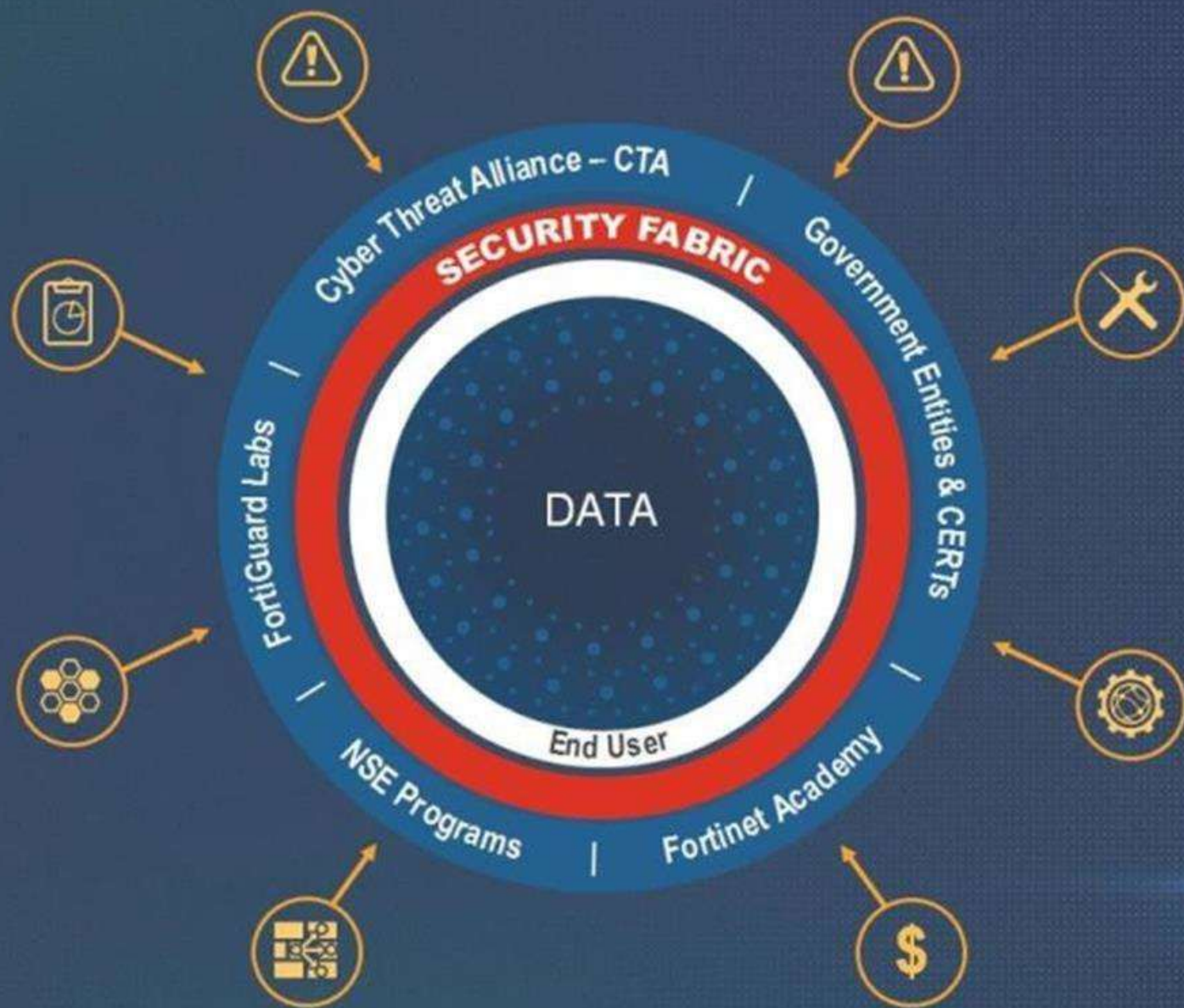
Starting with the
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IT TAKES A FULL ECOSYSTEM

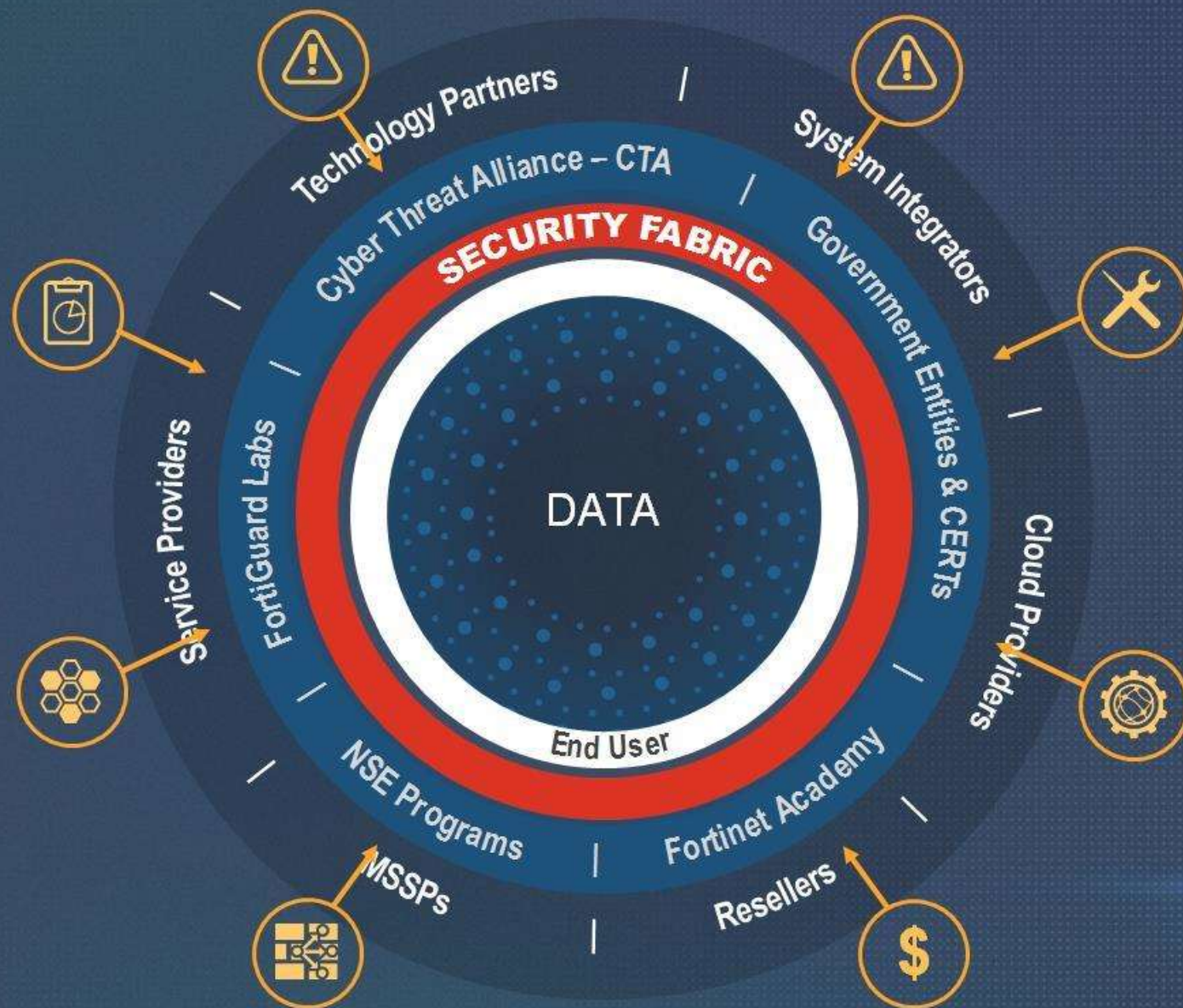
Real-time Threat
Intelligence and
Knowledge Transfer:

- FortiGuard AI
- 100,000+ NSE certifications
- Fabric Xpert Program
- Fortinet Academy: 81 educational institutions



IT TAKES A FULL ECOSYSTEM

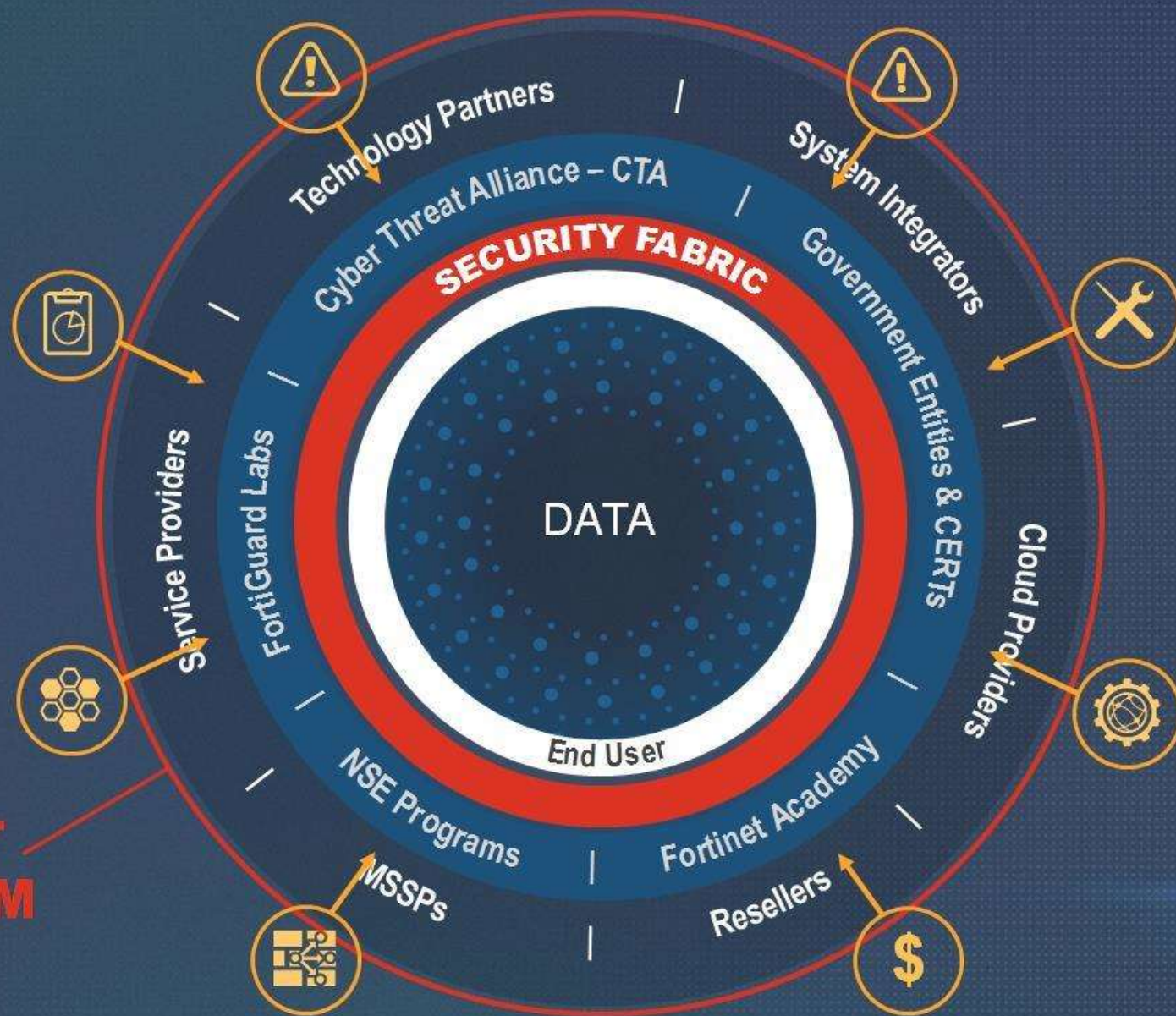
Supporting new
security
consumption models
with widest range of
platforms and
licensing options



IT TAKES A FULL ECOSYSTEM

Fortinet empowers
a strong
ecosystem to drive
security
transformation

FORTINET ECOSYSTEM



FORTINET—UNLOCKING YOUR DIGITAL TRANSFORMATION



**SECURITY TRANSFORMATION
TAKES A FULL ECOSYSTEM**

FORTINET
PARTNER
END USER



**FORTINET SECURITY FABRIC
IS THE SECURITY VISION**

BROAD
INTEGRATED
AUTOMATED

SX
POWERED BY FORTINET

**UNLOCKING YOUR DIGITAL
TRANSFORMATION THROUGH SX**

FOR TODAY AND FOR YOUR FUTURE
PLANS

FORTINET®



FORTINET

ACCELERATE 18

STR3NGTH IN NUMB3RS

LEADING THE CHANGE
IN INTERNET SECURITY
TRANSFORMATION

KEN XIE :: FOUNDER & CEO





▲ **75%** Annual WW
security spend
2011 vs. 2018

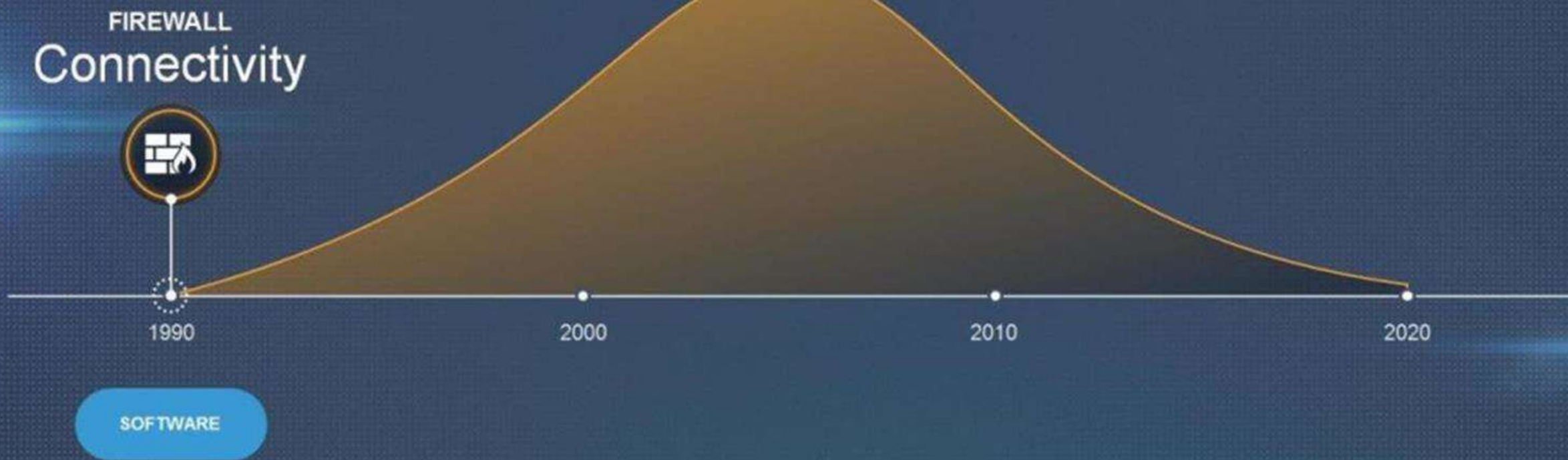
More data has been
created in the past
TWO YEARS
than in the **entire**
previous history of
the human race

The digital universe
of data will grow from
4.4 zettabytes today to
44 ZETTABYTES
by 2020

By 2020, we
will have over
6 BILLION
smartphone
users globally

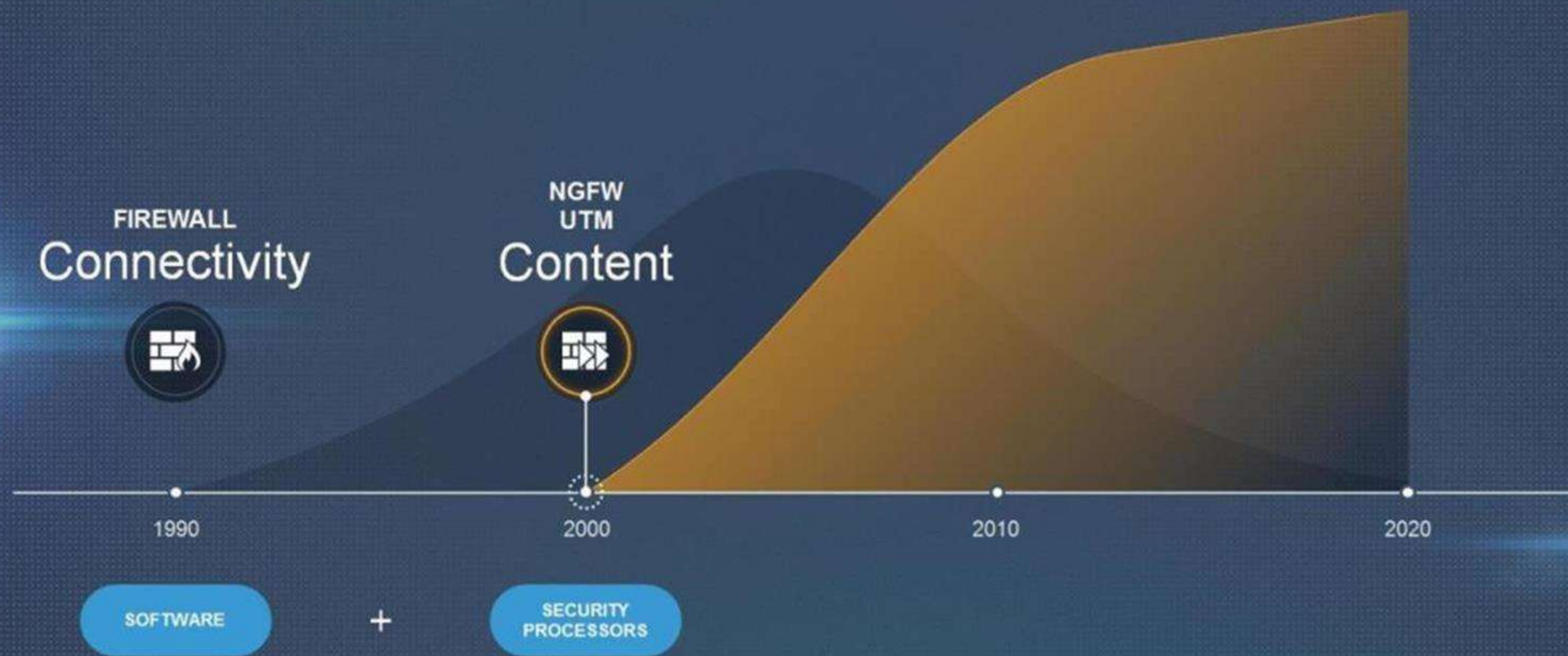
IoT will represent
more than
50%
of global devices and
connections by 2021

EVOLUTION OF NETWORK SECURITY



EVOLUTION OF NETWORK SECURITY

CONTINUED GROWTH IN THE SECOND GENERATION

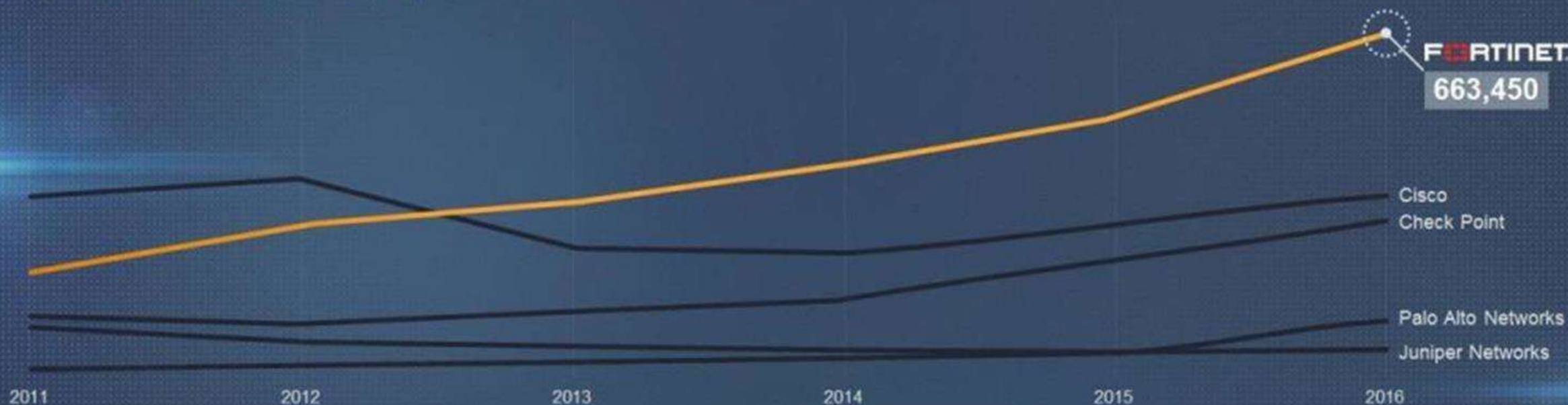


GROWING FASTER THAN THE MARKET

REAL APPLIANCES SHIPPED

#1 Top Vendor with 2X the
Number of Appliances Shipped

Based on annual unit shipments (IDC)



Source: IDC Worldwide Security Appliances Tracker, April 2017 (based on annual unit shipments)

FORTINET SPU – 10X THE PERFORMANCE

A NEW GENERATION OF CUSTOM ASICS



CPU & Serial Processing-based

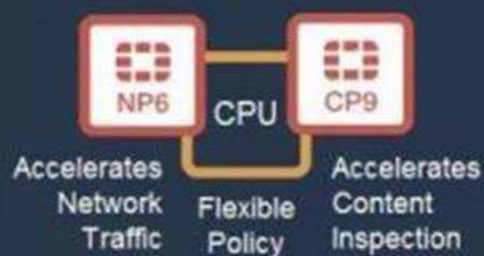


Slow, Not Scalable
& Poor TCO

FW → 6Gbps
VPN → 2Gbps
IPS → 3.5Gbps

VS

Fortinet SPU-based Parallel Path Processing



FW → 40 Gbps
IPsec VPN → 25 Gbps
SSL VPN → 28 Gbps
IPS → 20 Gbps

6X - 12X performance

Fortinet System-on-a-Chip



Optimized for entry-level
form factors

5X FW
8X / 11X SSL/IPsec VPN
5X IPS
5X Concurrent Sessions
3X Power efficiency
vs. similarly-priced offerings



More Performance



Less Latency



Less Space

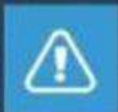


Less Power

ONLY FORTINET CAN REACH THE HIGHEST LEVELS OF SECURITY

SIGNIFICANT ENGINEERING INVESTMENT REQUIRED FOR PERFORMANCE AND VALUE

Detection



1,000+

FORTINET

Prevention & Remediation



<50

FORTINET

Integration



<5

FORTINET

Performance & Value



1

FORTINET

1st Generation

2nd Generation

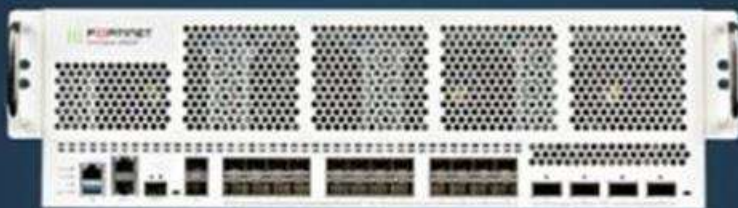
3rd Generation

FORTIGATE 6000 SERIES

THE INDUSTRY'S FIRST 100GBPS+ NEXT-GEN FIREWALL

FORTIGATE 6300F

60 Gbps



FORTIGATE 6500F

100 Gbps

Threat Prevention
(FW + App Control + IPS + AV)



1st Generation



2nd Generation



3rd Generation

FASTEST NGFW APPLIANCE ON THE MARKET

- NGFW
- TP
- SSL



FORTINET

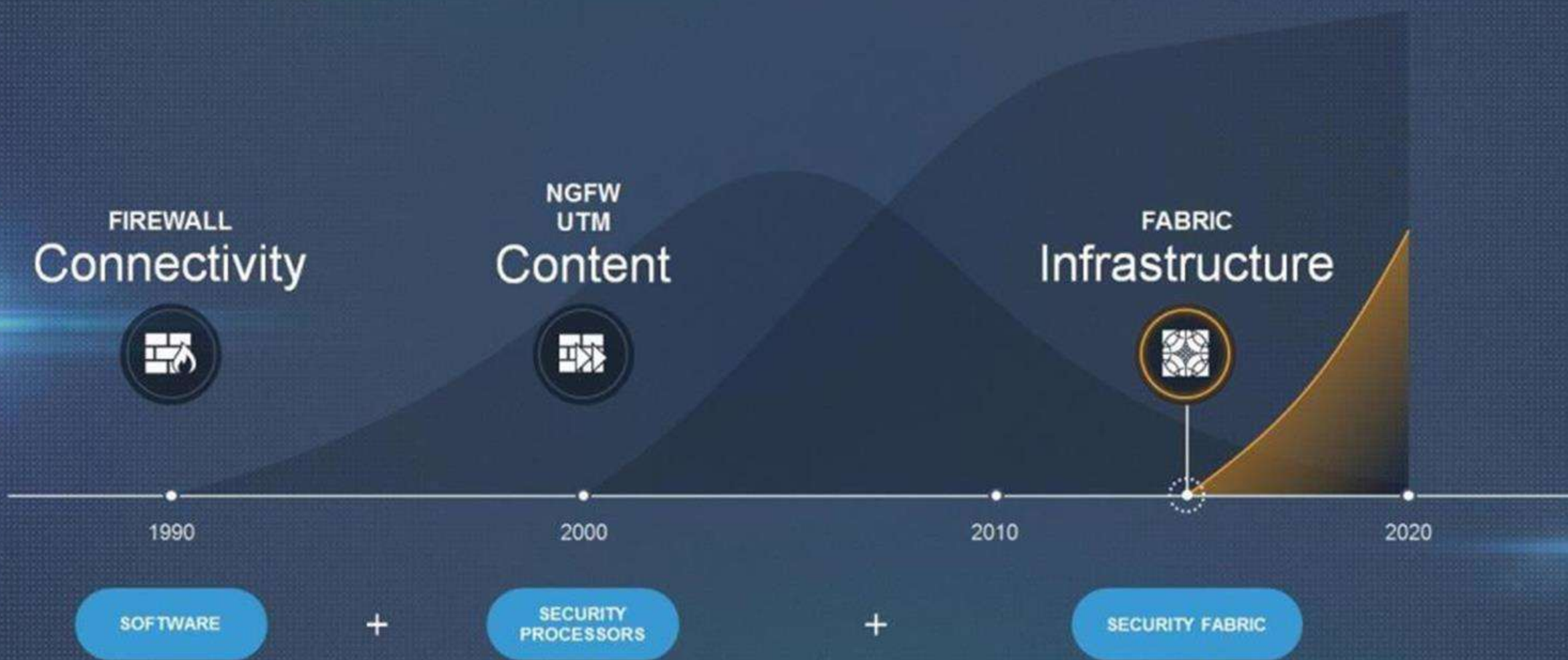
WE PIONEERED AND
ARE LEADING THE
3RD GENERATION

... POSITIONED TO WIN



EVOLUTION OF NETWORK SECURITY

WE ARE IN THE EARLY STAGES OF THE THIRD GENERATION

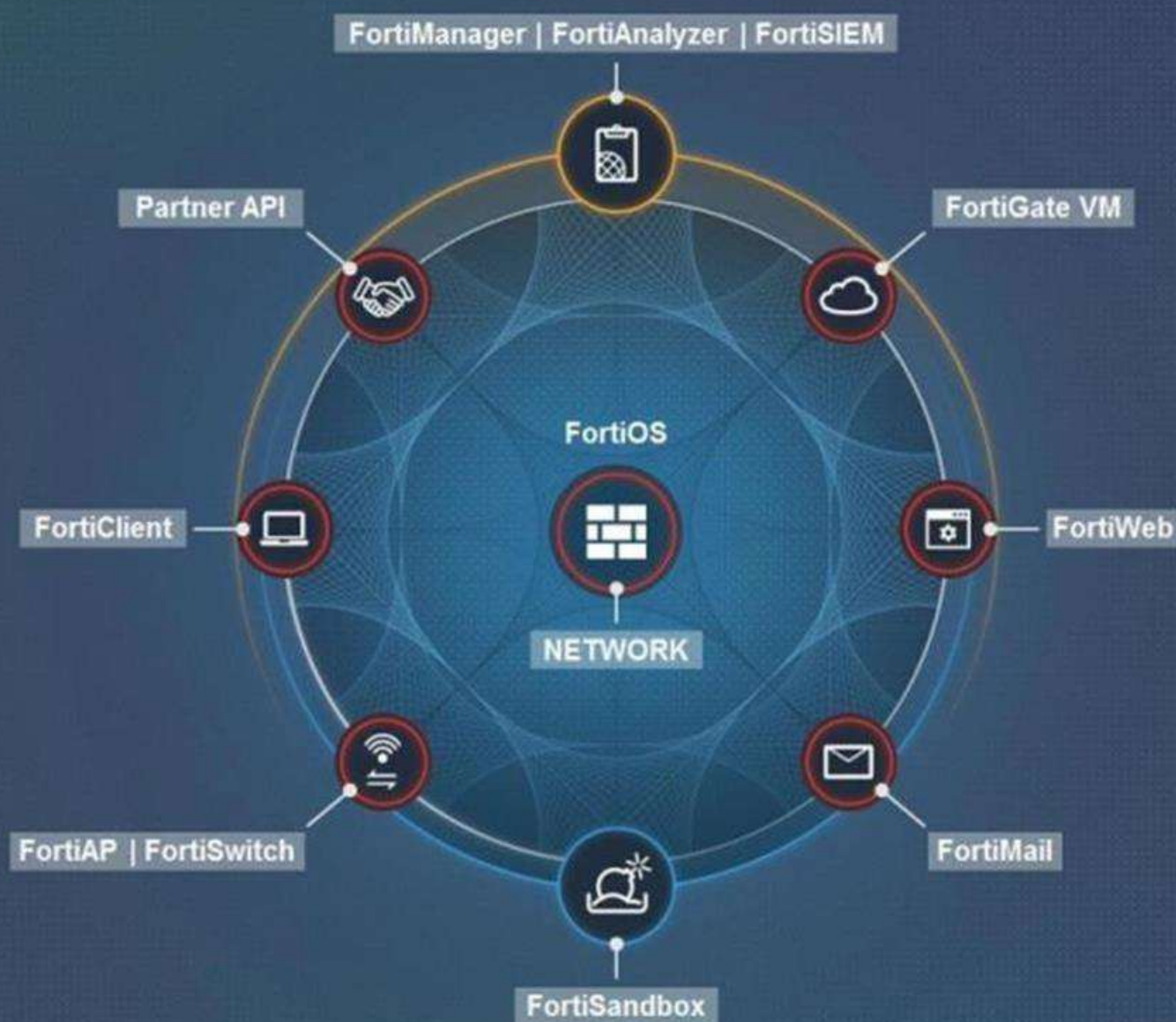


THE POWER OF FORTINET SECURITY FABRIC

BROAD

INTEGRATED

AUTOMATED



FORTINET END-TO-END PROTECTION

Network Security



SWG



VPN

Multi-Cloud Security



FortiCASB

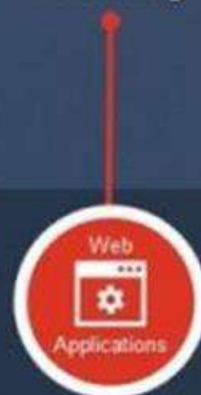
Endpoint Security

FortiClient
EPP

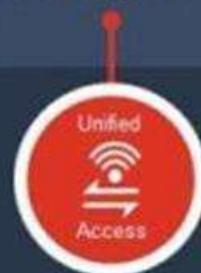
Email Security

FortiMail
Secure Email
Gateway

Web Application Security

FortiWeb
Web Application
Firewall

Secure Unified Access

FortiAP
Wireless
InfrastructureFortiSwitch
Switching
Infrastructure

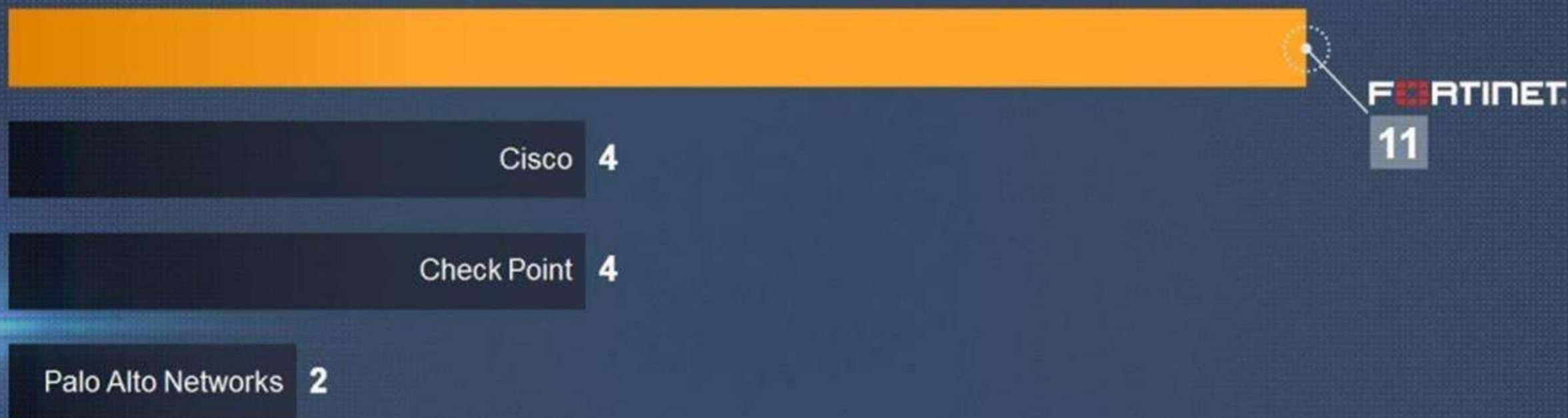
Advanced Threat Protection

FortiSandbox
Advanced Threat
Protection

Management & Analytics

FortiAnalyzer
Central Logging / ReportingFortiManager
Central Security ManagementFortiSIEM
Security Information &
Event Management

UNEQUALED INDEPENDENT INDUSTRY CERTIFICATION



11
Recommendations



RECOGNIZED BY GARTNER IN 6 MAGIC QUADRANTS

3RD GENERATION OF NETWORK SECURITY

CHALLENGES

LEADERS

Magic Quadrant for
Endpoint
Protection
Platforms

NICHE PLAYERS

VISIONARIES

CHALLENGES

LEADERS

Magic Quadrant for
Security Information
and
Event Management

NICHE PLAYERS

VISIONARIES

CHALLENGES

LEADERS

Magic Quadrant for
Wired and Wireless
LAN Access
Infrastructure

NICHE PLAYERS

VISIONARIES

CHALLENGES

LEADERS

Magic Quadrant for
Web Application
Firewalls

NICHE PLAYERS

VISIONARIES

UNPARALLELED THIRD-PARTY VALIDATION

Magic Quadrant for Enterprise Network Firewalls



Magic Quadrant for Unified Threat Management



THE MOST DEPLOYED NETWORK SECURITY OPERATING SYSTEMS

200+ NEW FEATURES

FORTIOS 6.0

Cloud
Connectors

CASB

SD-WAN

Fabric
Integration

FortiGuard

WE PROTECT 90% OF THE GLOBAL S&P 100

330,000+ CUSTOMERS WORLDWIDE

CONSUMER / RETAIL



SERVICE PROVIDER



MANUFACTURING



GOV'T / EDUCATION



FINANCE



HEALTHCARE



OIL / GAS



TECH



WE PROTECT 90% OF THE GLOBAL S&P 100

330,000+ CUSTOMERS WORLDWIDE



Fortune
Telecommunications
Companies

10 OF THE TOP 10



Fortune Retail and
Commercial Banks

9 OF THE TOP 10



Aerospace
and Defense

7 OF THE TOP 10

8 OF THE TOP 10

Fortune Companies
in EMEA

7 OF THE TOP 10

Fortune Companies
in America

9 OF THE TOP 10

Fortune Companies
in APAC

GROWING BEYOND THE FIREWALL

FOUR GROWTH AREAS



INFRASTRUCTURE SECURITY

\$47B



CLOUD SECURITY

\$2B

NETWORK
SECURITY
\$25B

IOT & OT SECURITY

\$9B



1st Generation

2nd Generation

3rd Generation

IOT – A \$9B OPPORTUNITY

EXTENDING SECURITY INTO CONNECTED CAR THE CONNECTED CAR

Information
In Motion



Information
At Rest

WE LEAD THE INDUSTRY IN INNOVATION

4X AS MANY PATENTS ISSUED THAN OUR COMPETITORS

#1 Security Innovator

Based on patents issued as listed by the US Patent and Trademark Office





1st Generation



2nd Generation



3rd Generation

WE WILL CONTINUE TO INNOVATE AND INVEST IN R&D

BURNABY (CANADA)



SOPHIA, FRANCE



SUNNYVALE HQ (CALIFORNIA)



OTTAWA, CANADA



WE ARE BUILDING THE BEST INTERNET SECURITY COMPANY IN THE INDUSTRY

FROM THE GROUND UP AND END-TO-END



FORTINET®



FORTINET

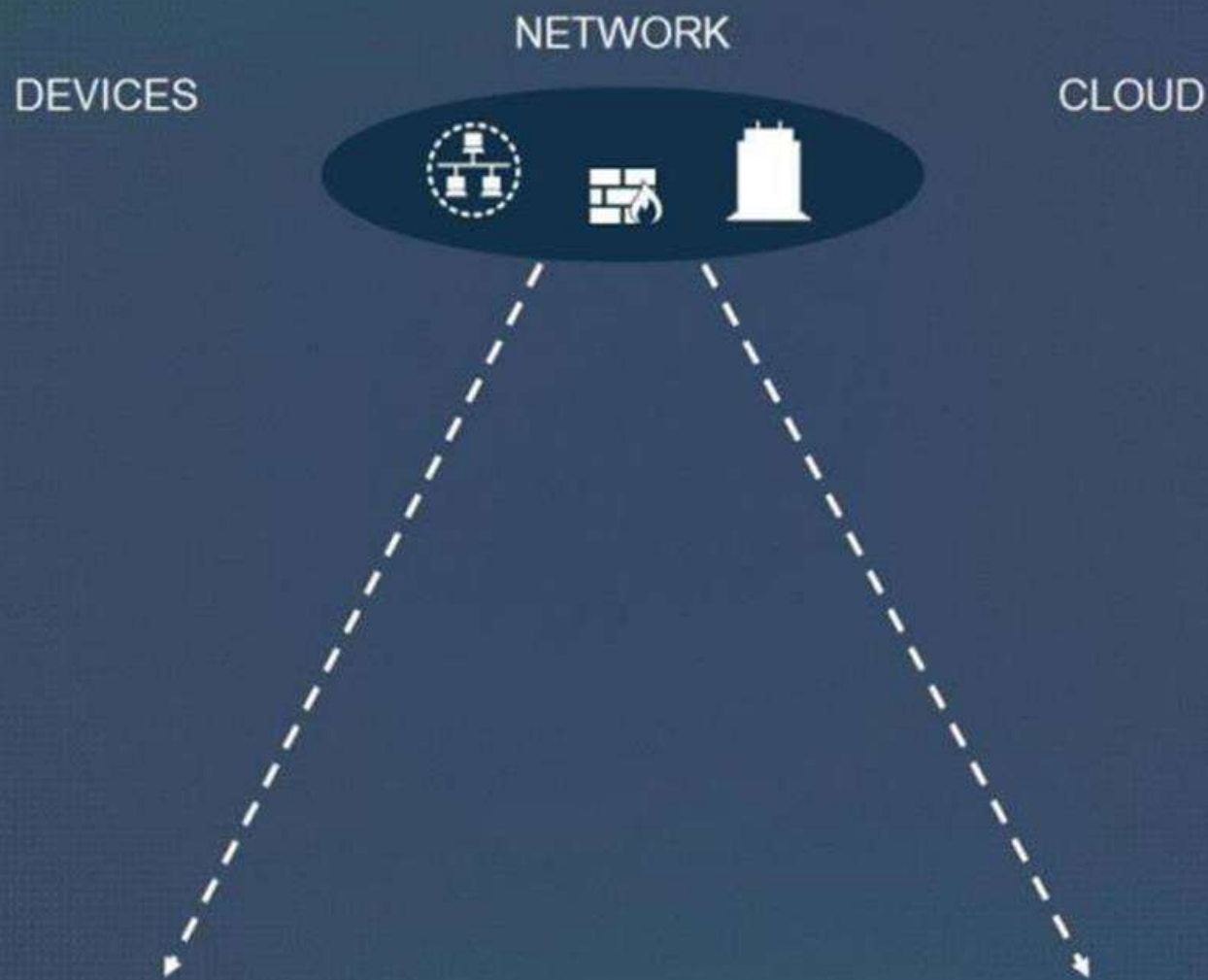
ACCELERATE 18

STR3NGTH IN NUMB3RS

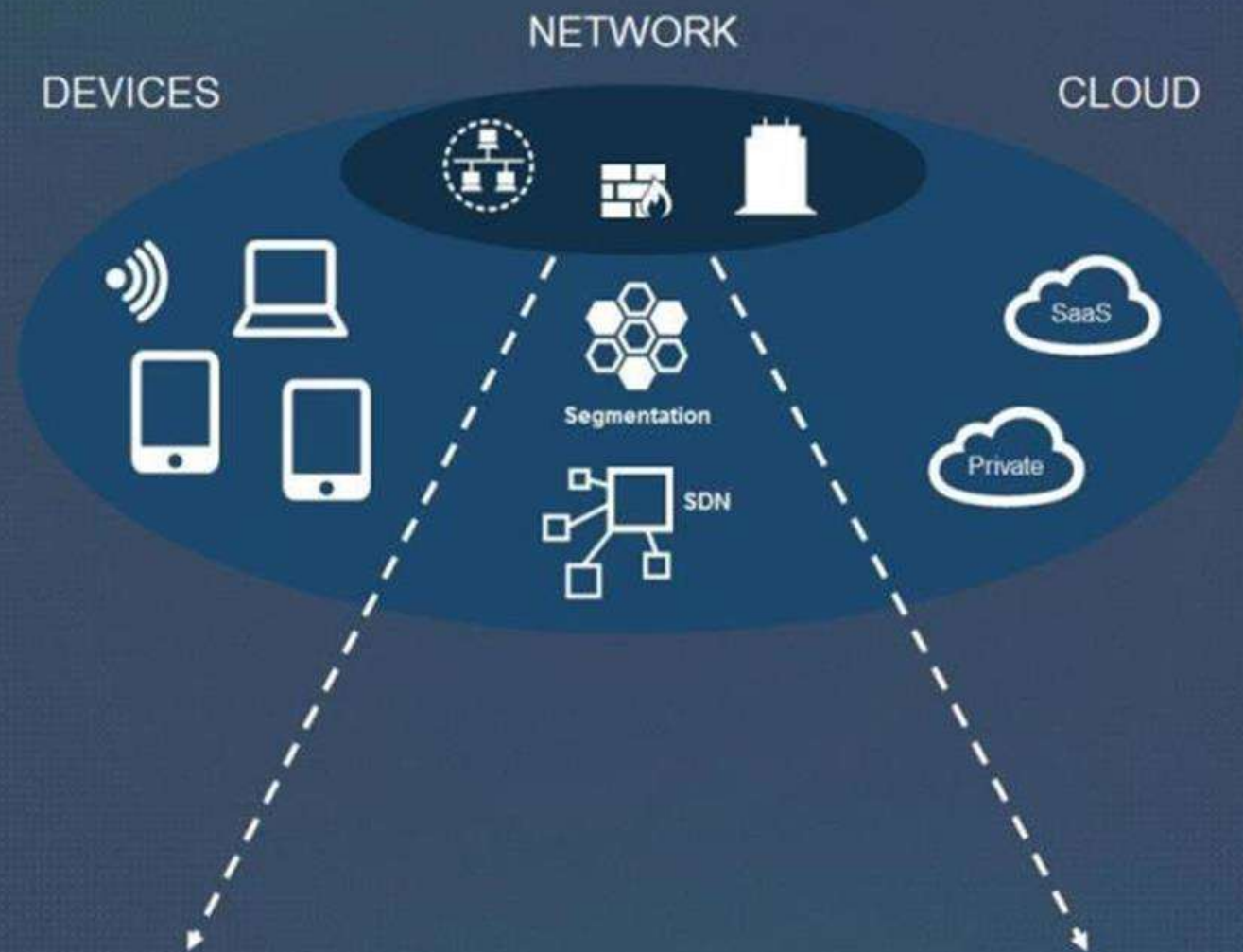
FORTINET
SECURITY FABRIC
PROTECTING THE DIGITAL
ATTACK SURFACE

JOHN MADDISON :: SVP PRODUCTS AND SOLUTIONS

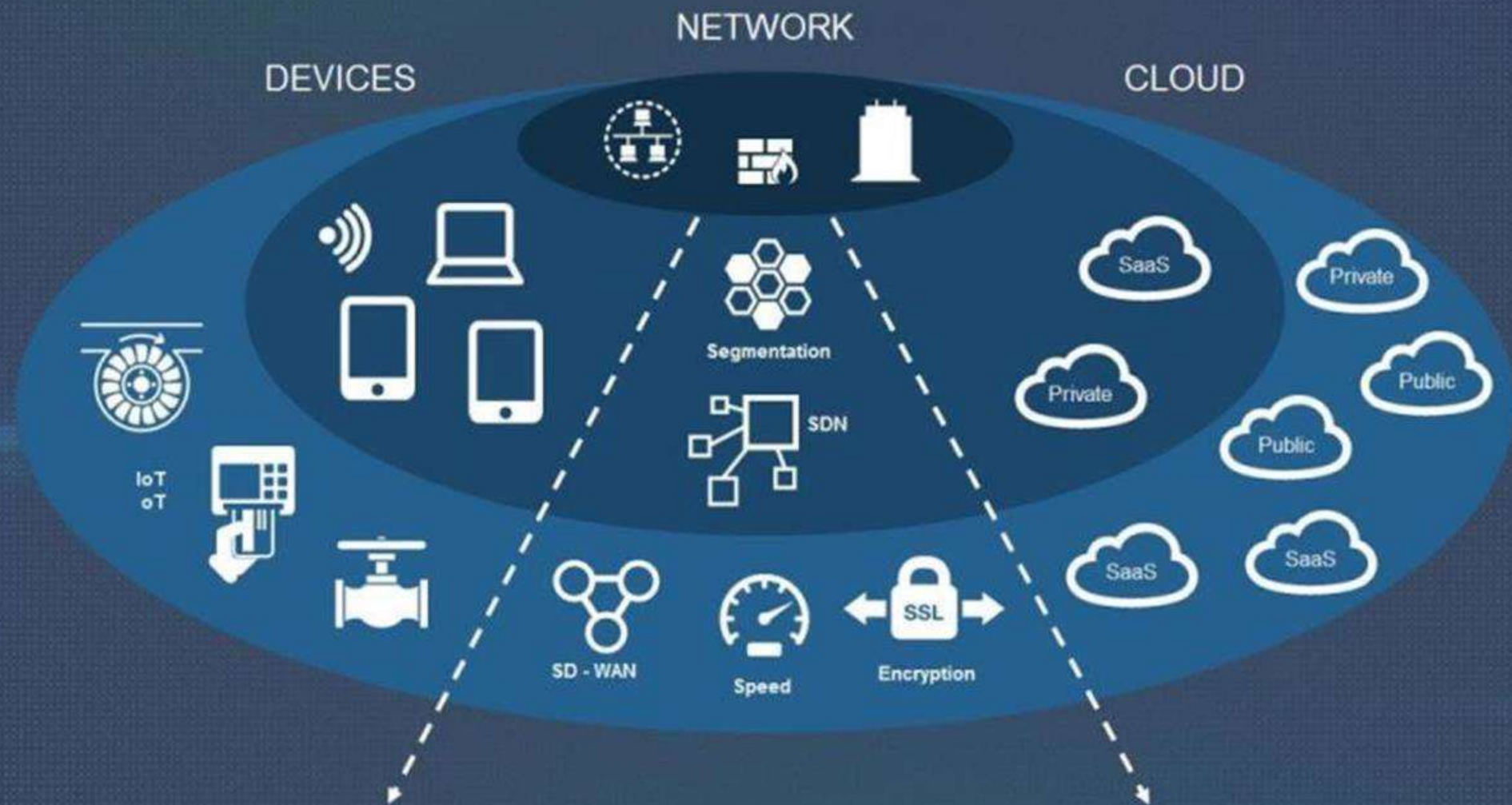
DX CREATES A DIGITAL ATTACK SURFACE WHICH IS MUCH LARGER



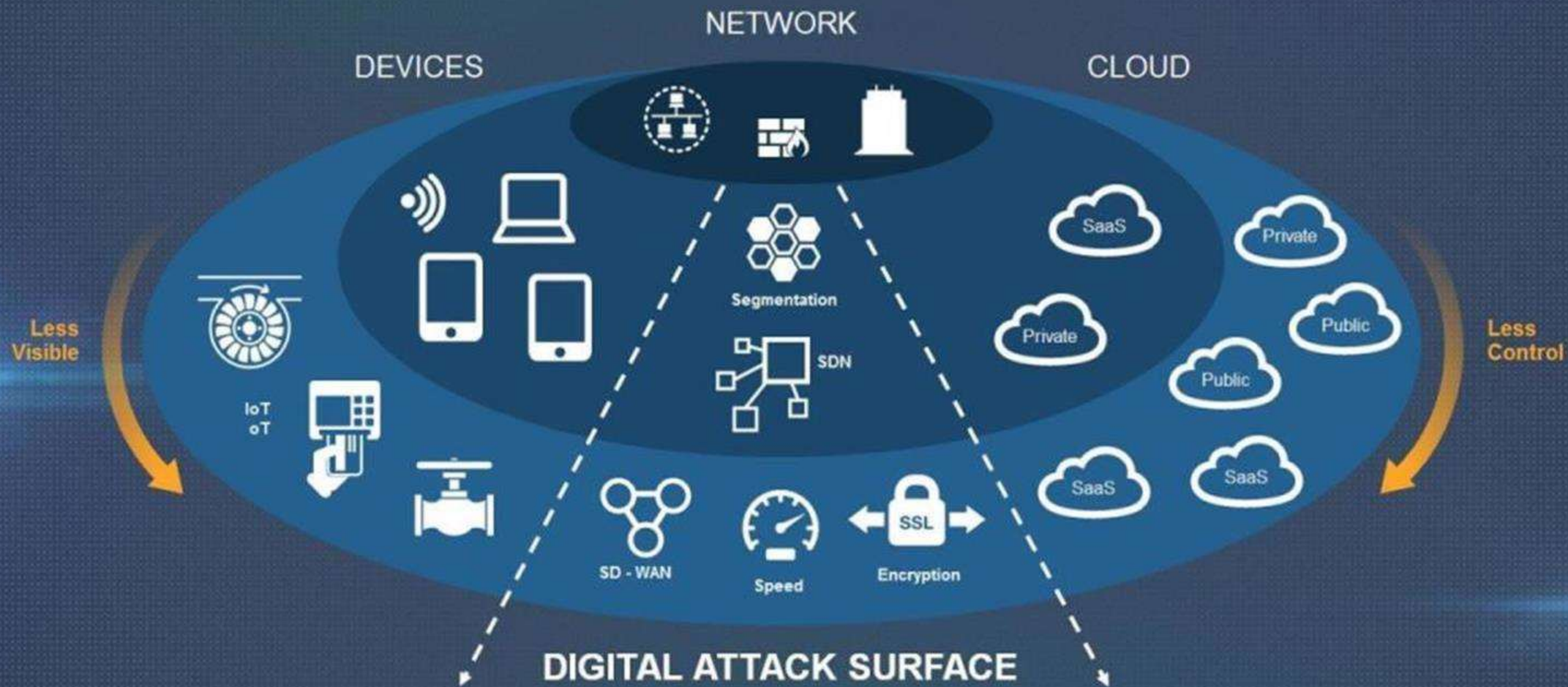
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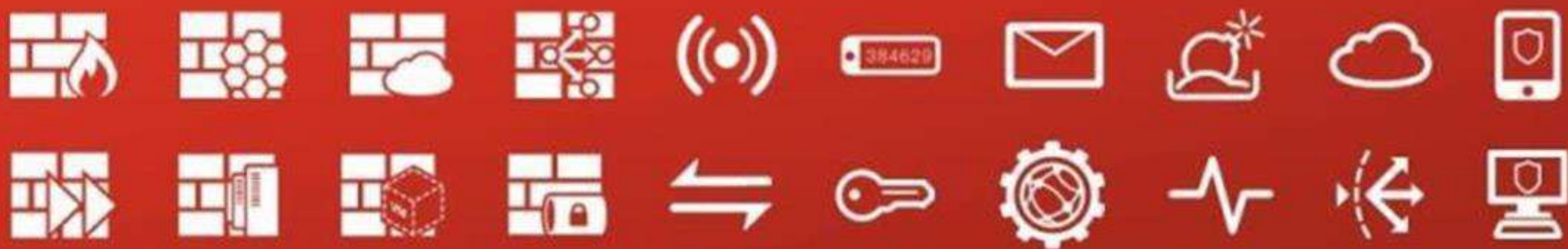


DX CREATES A DIGITAL ATTACK SURFACE WHICH IS MUCH LARGER



CAN YOU KEEP ADDING MORE SECURITY VENDORS?

TOO MANY SECURITY VENDORS



CAN YOU KEEP ADDING MORE SECURITY VENDORS?

TOO MANY SECURITY CONSOLES



Form
Factor

TOO MANY SECURITY VENDORS



CAN YOU KEEP ADDING MORE SECURITY VENDORS?

ORCHESTRATOR 1

ORCHESTRATOR 2

ORCHESTRATOR N



TOO MANY SECURITY CONSOLES

Skill Set

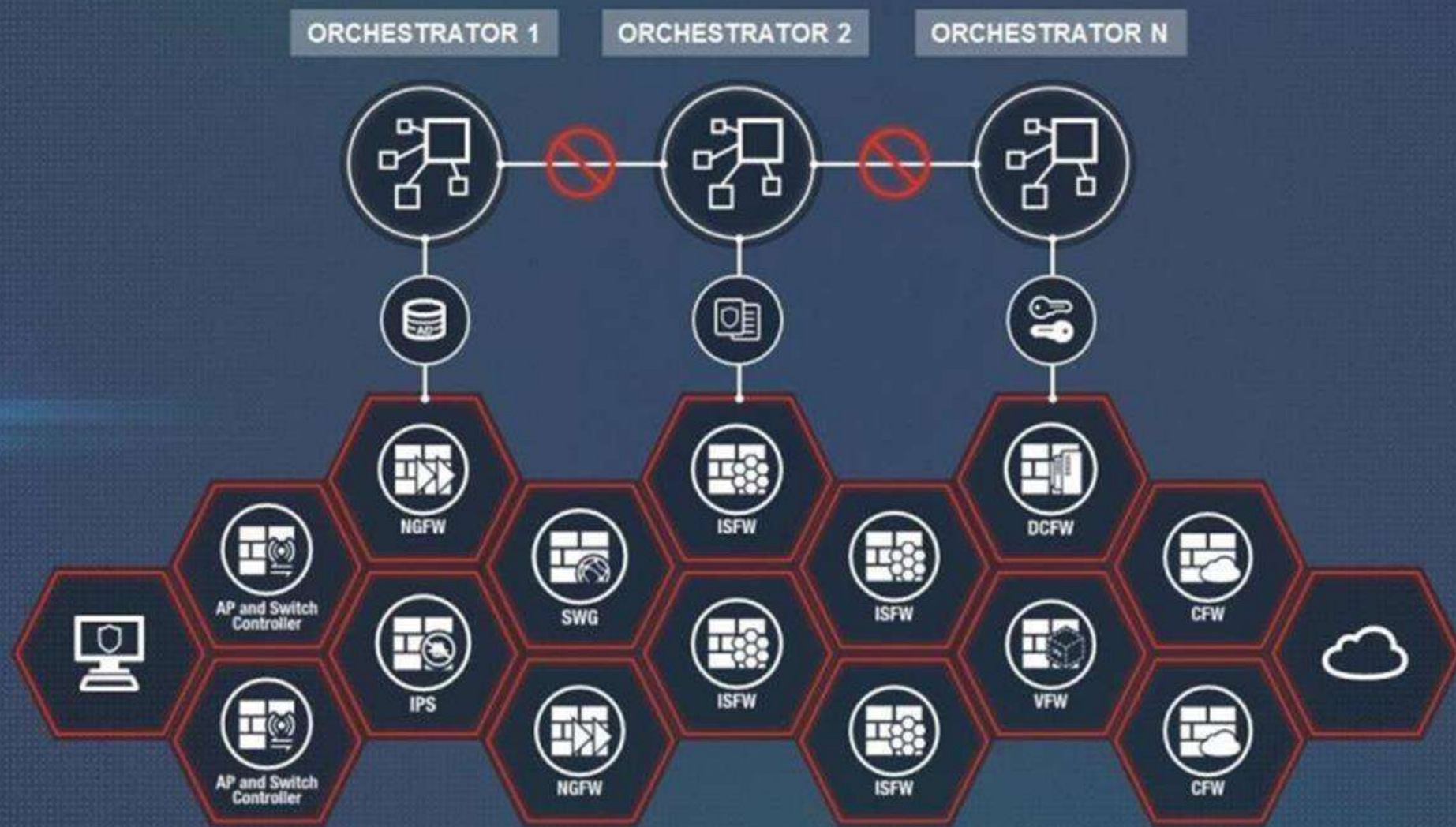


Form
Factor

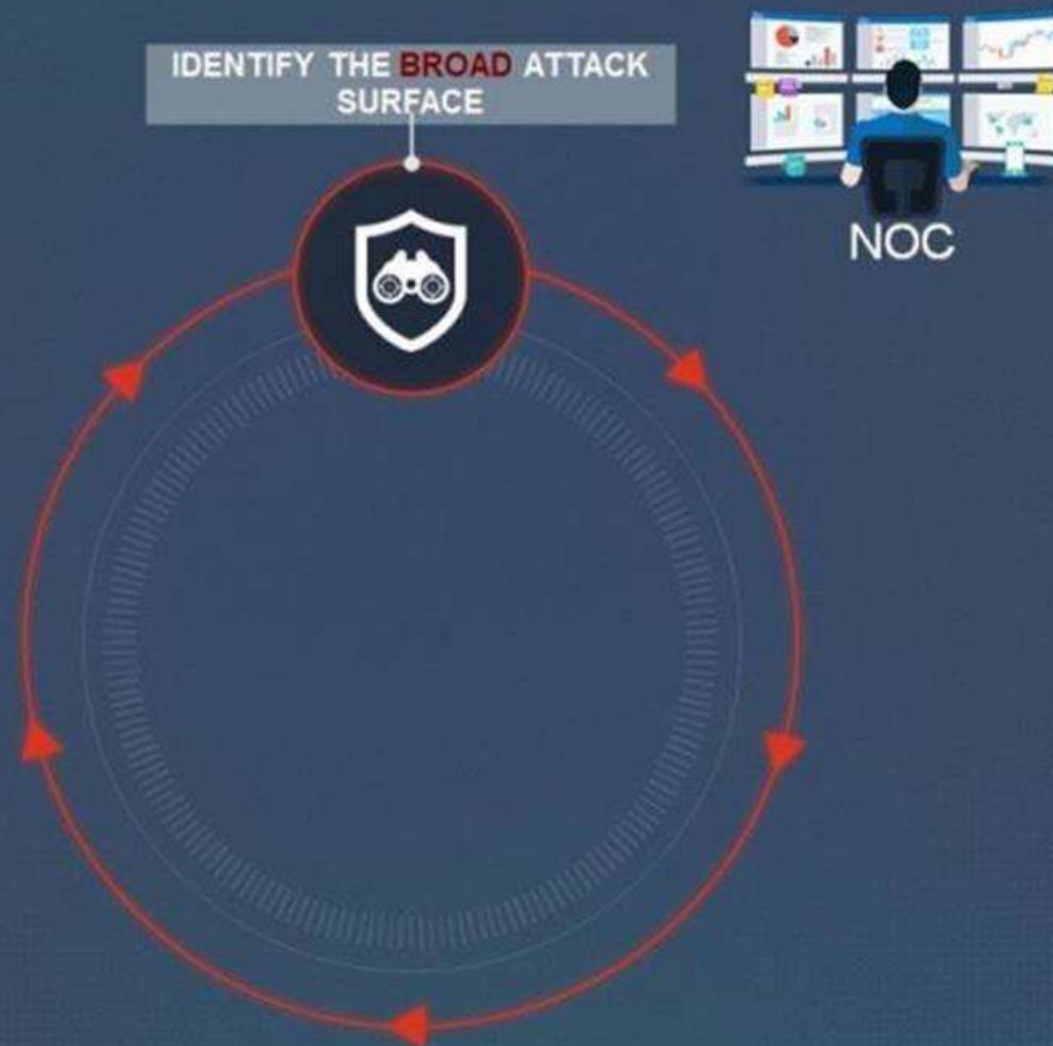
TOO MANY SECURITY VENDORS



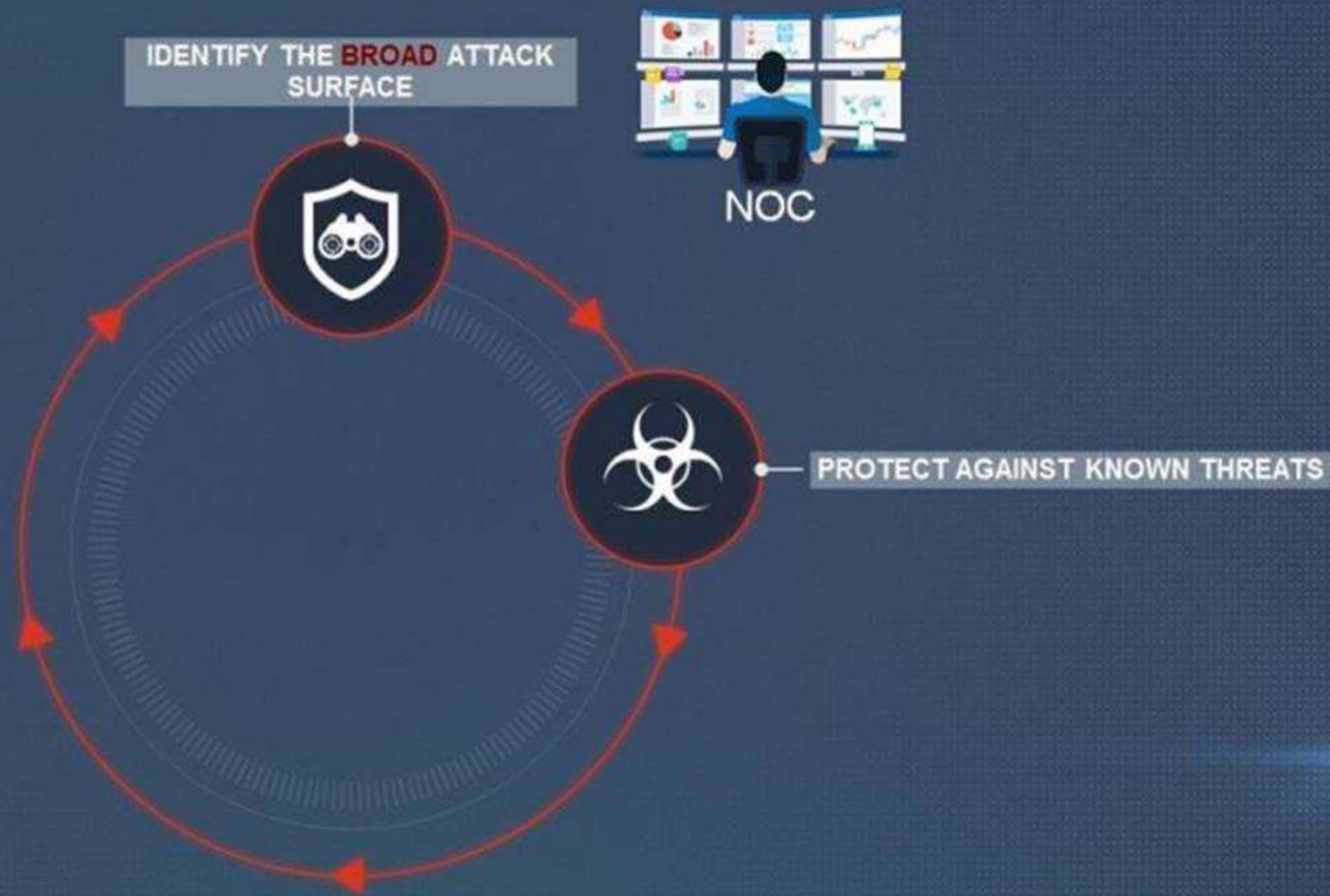
END-TO-END SEGMENTATION VIA SECURITY FABRIC



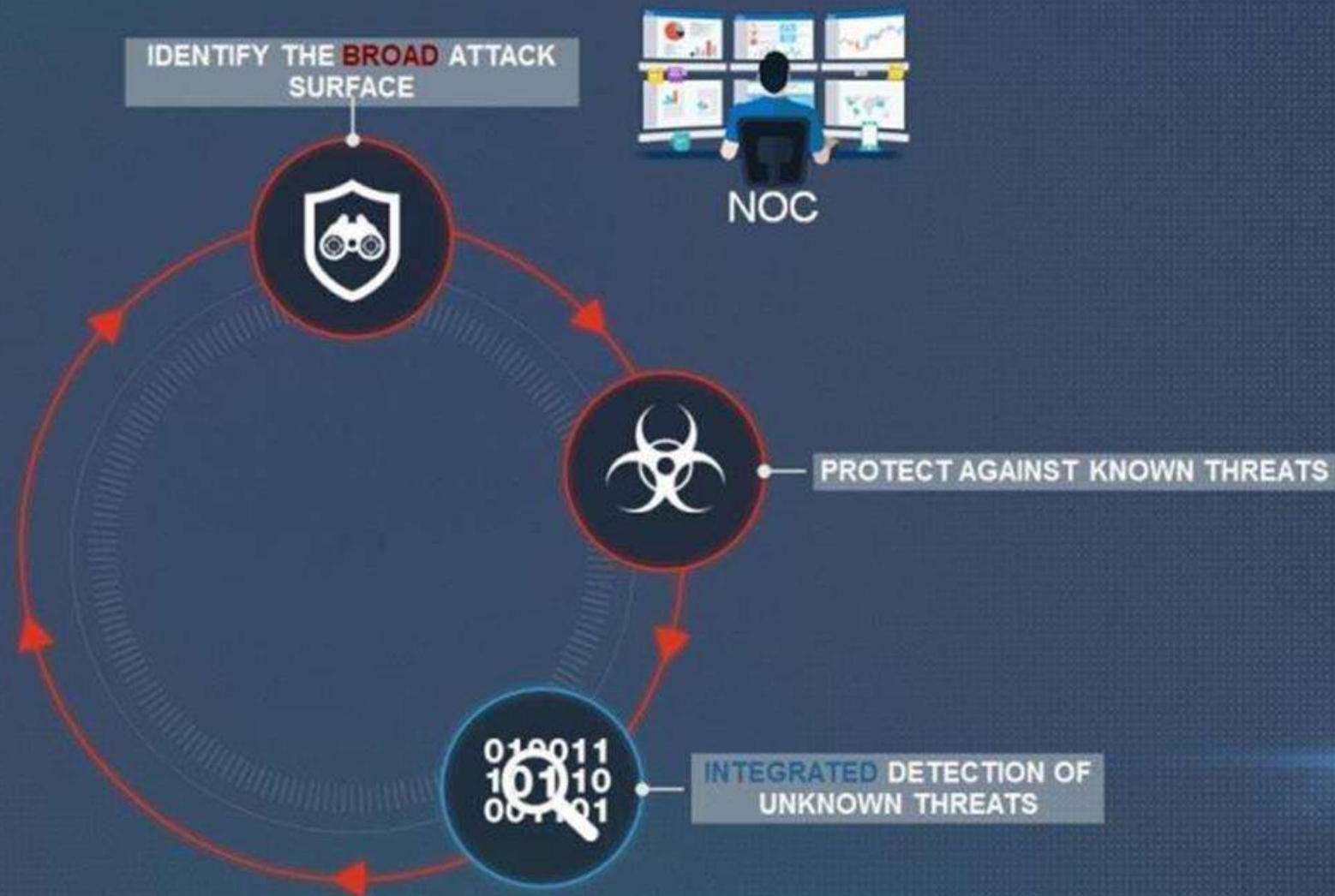
DIGITAL ATTACK SURFACE REQUIRES AN ADAPTIVE SECURITY FRAMEWORK



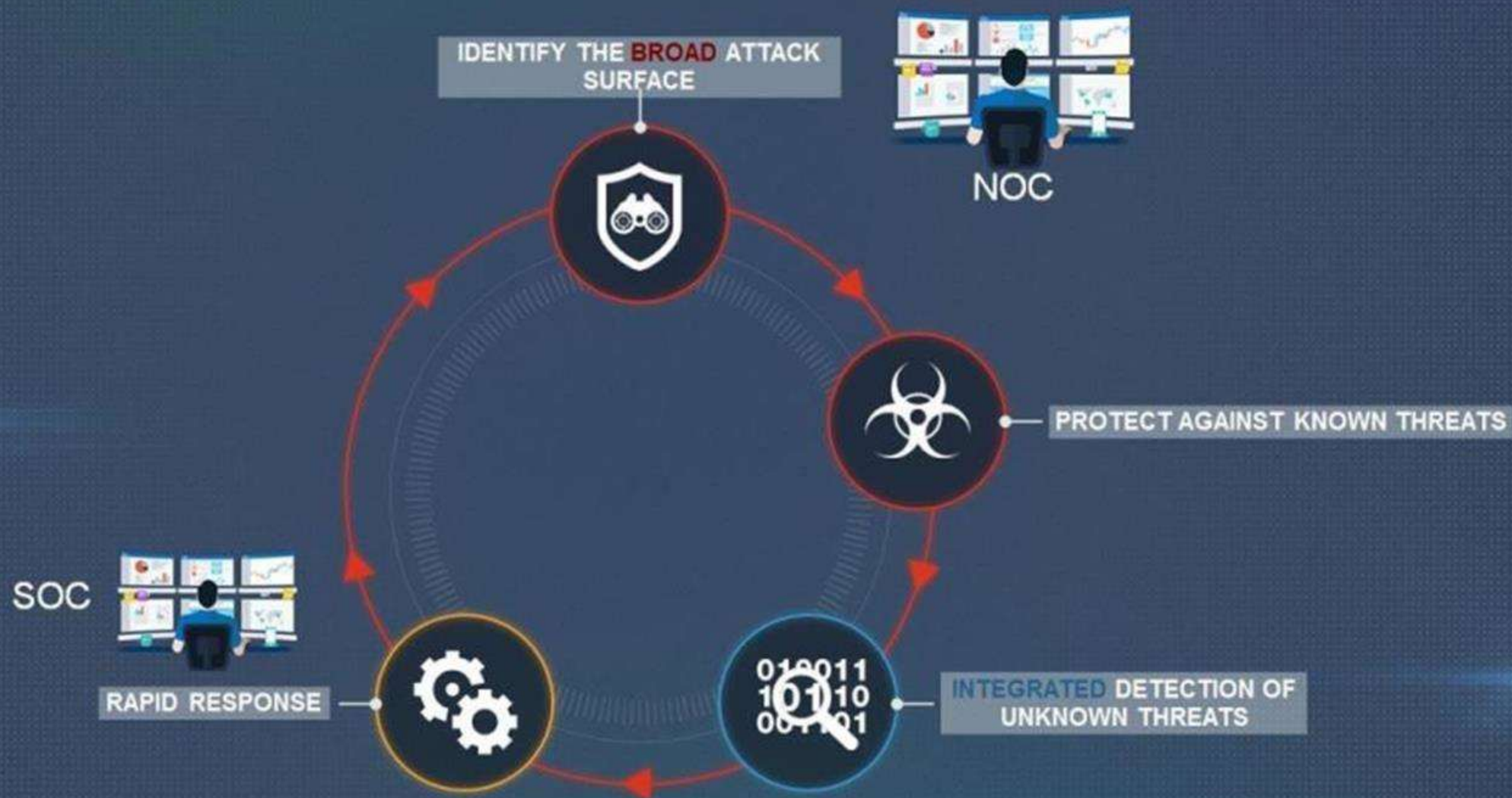
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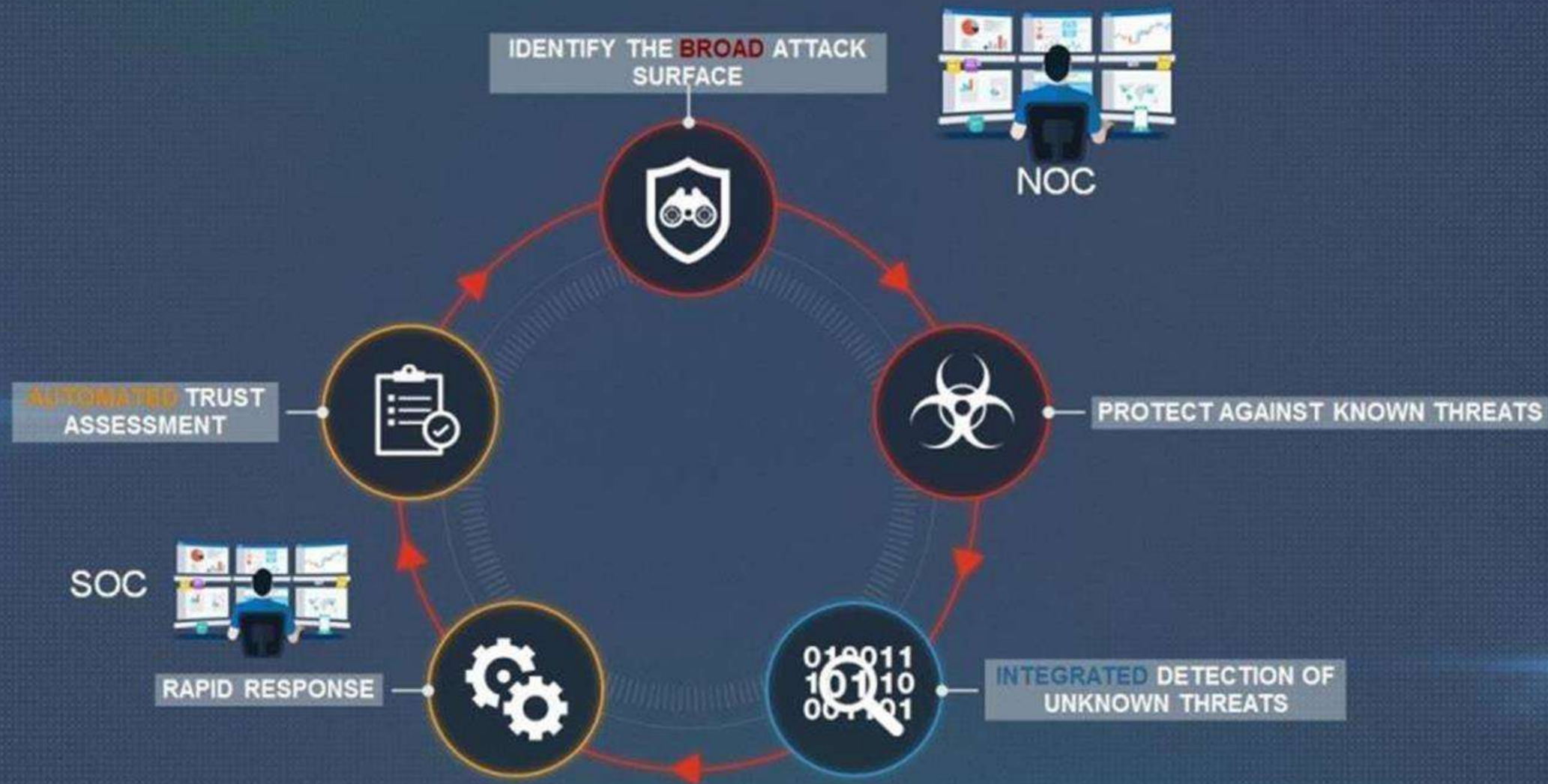
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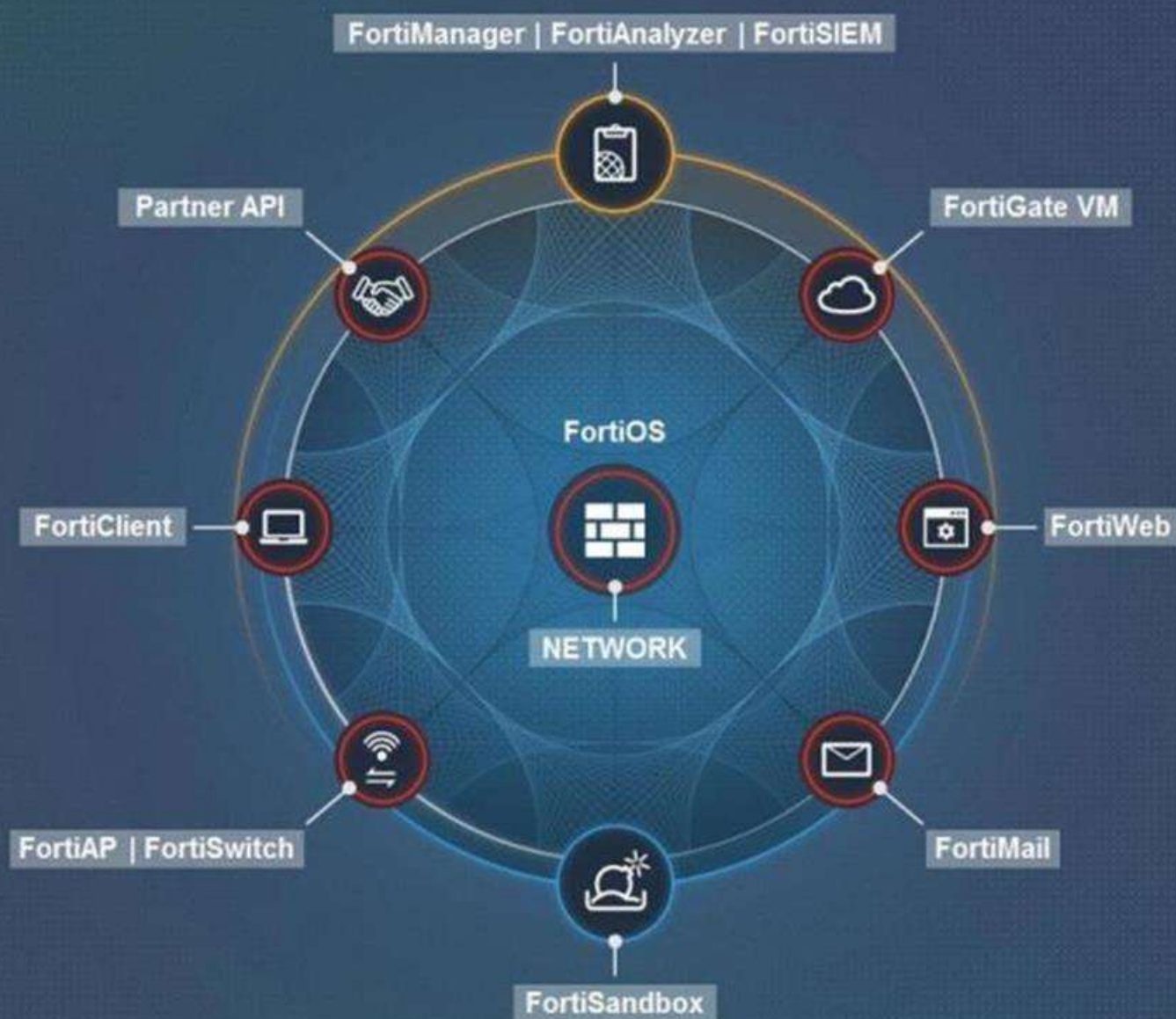
FOR

FOR

INTRODUCING THE INDUSTRY'S LEADING NETWORK SECURITY OPERATING SYSTEM

2018 FORTINET SECURITY FABRIC

BROAD
INTEGRATED
AUTOMATED



FORTIOS 6.0 KEY FEATURES



FABRIC INTEGRATION CHECKLIST

	NETWORK	ENDPOINT	UNIFIED ACCESS				EMAIL	WEB APPS		MULTICLOUD
	FORTIGATE	FORTICLIENT	FORTISWITCH	FORTIAP	FORTIWLC	FORTIWL	FORTIMAIL	FORTIWEB	FORTIADC	FORTICASB
TELEMETRY DEVICE LEVEL API	✓	✓	✓	✓	2018	✓	✓	✓	✓	2018
FORTIVIEW TOPOLOGY MAP	✓	✓	✓	✓	2018	2018	2018	✓	✓	
FORTIMANAGER	✓	✓	✓	✓				✓		
FORTIANALYZER	✓	✓		✓			✓	✓	2019	Q1 2018
SECURITY RATING AUDIT	✓			✓			2019	2018		
AUTOMATION STITCHES	✓	✓	✓	2018			2018	✓		
VULNERABILITY SCAN		✓						✓		
ADVANCED THREAT PROTECTION SANDBOX	✓	✓					✓	✓	✓	
FORTISIEM	✓	✓	2018	✓			✓	✓	2018	

SECURE SD-WAN

Features	SD-WAN Vendors	Security Vendors	Combinations	Fortinet
SD-WAN				
Security				
Cost				

FORTIGATE – ENABLE BEST OF BREED SD-WAN TODAY !

HIGHLY SCALABLE AND EASY TO DEPLOY

Application
Aware

Path
Awareness
Intelligence

Multi
Broadband
Supported

Enable
Cloud App
Adoption

Lowest
TCO

INTEGRATED PROVEN NGFW SECURITY

LARGE SD-WAN DEPLOYMENT

... JONATHAN MERRELL – CIO - ALORICA



JONATHAN MERRELL

Chief Information Officer
ALORICA

MULTI-CLOUD SECURITY CONNECTORS



Virtual Security

Applications

Data

O/S

Virtualization

Servers

Networking



SDN CONNECTORS



vmware



openstack

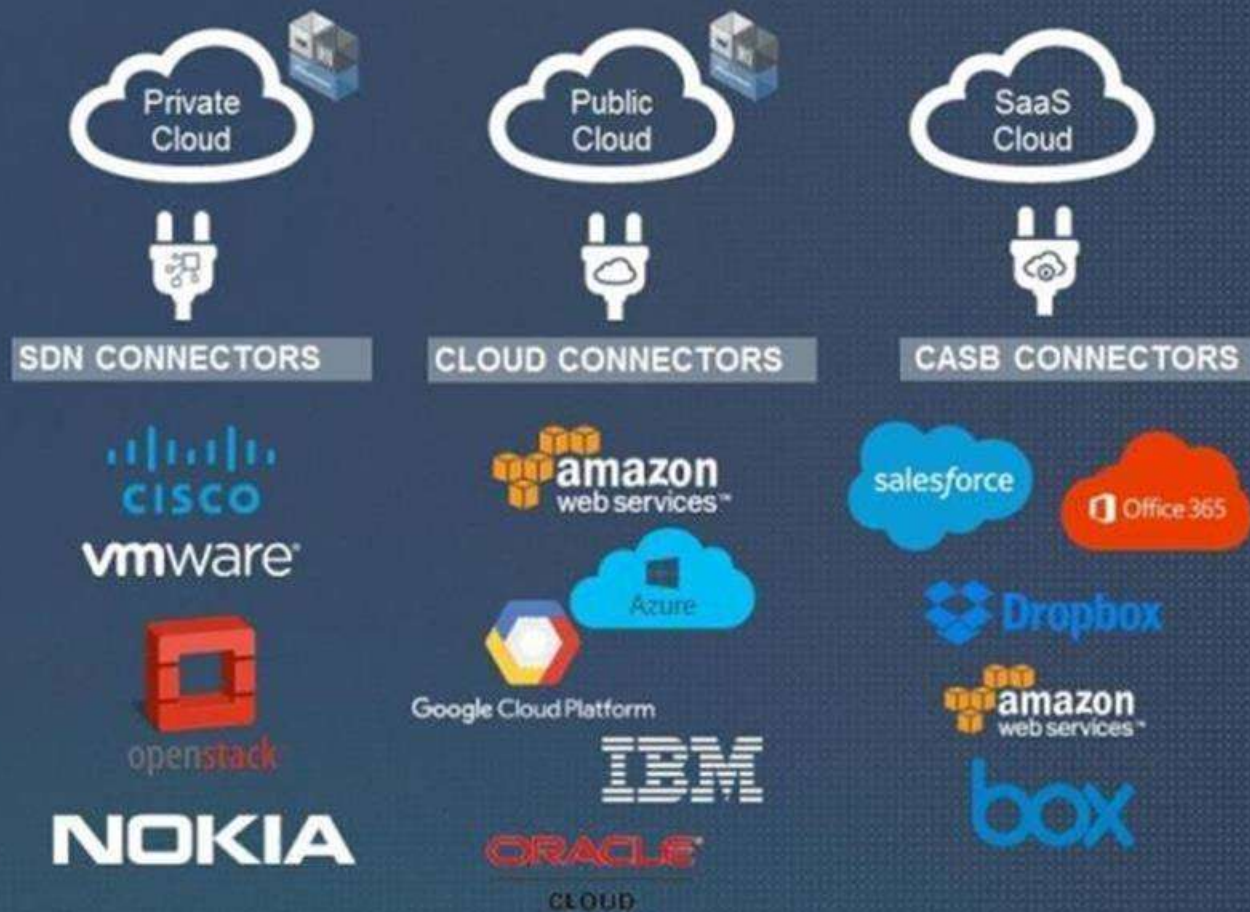
NOKIA

MULTI-CLOUD SECURITY CONNECTORS



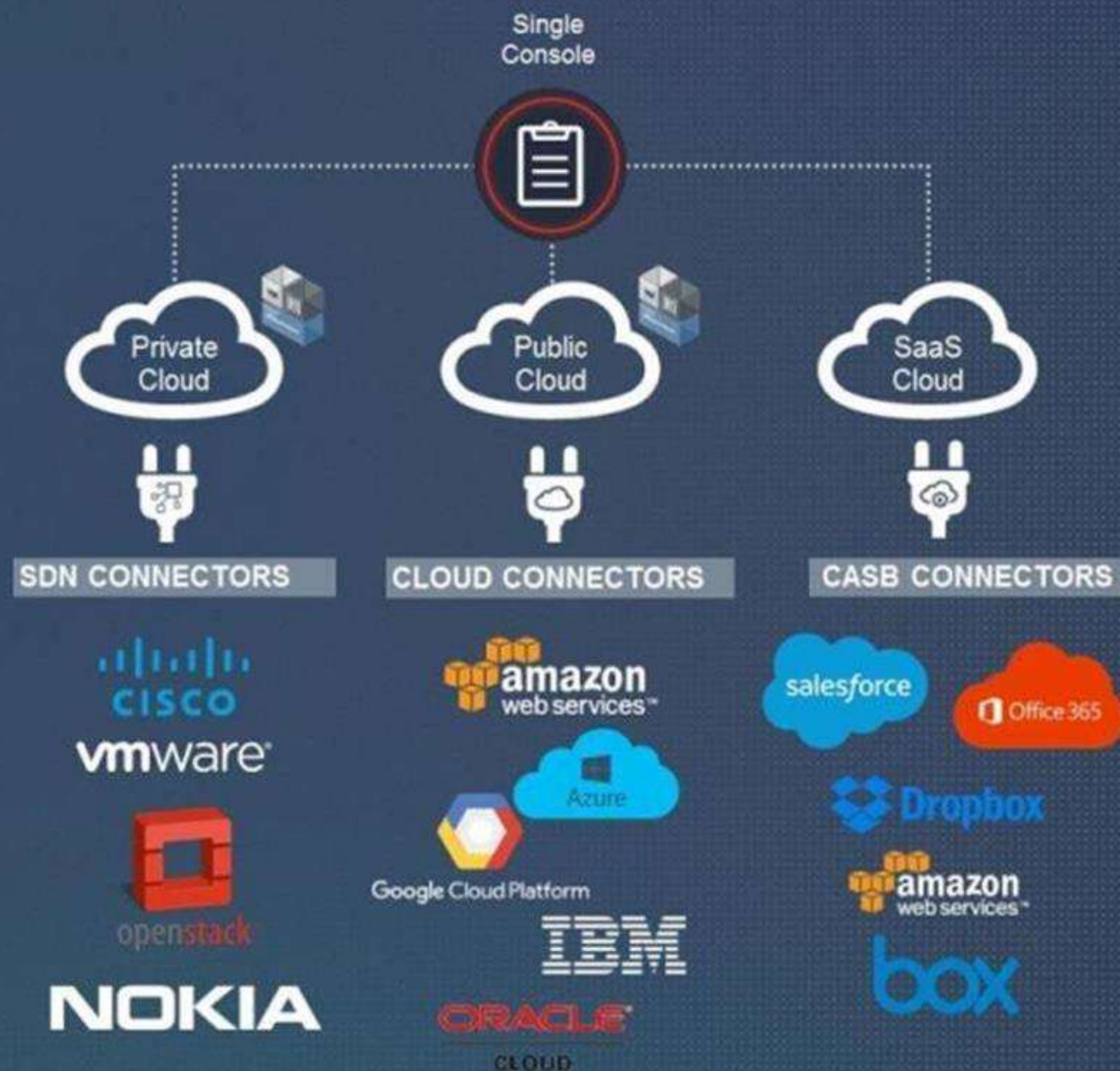
MULTI-CLOUD SECURITY CONNECTORS

Private	Public	SaaS
Virtual Security	Cloud Security	API
Applications	Applications	Applications
Data	Data	Data
O/S	O/S	O/S
Virtualization	Virtualization	Virtualization
Servers	Servers	Servers
Networking	Networking	Networking

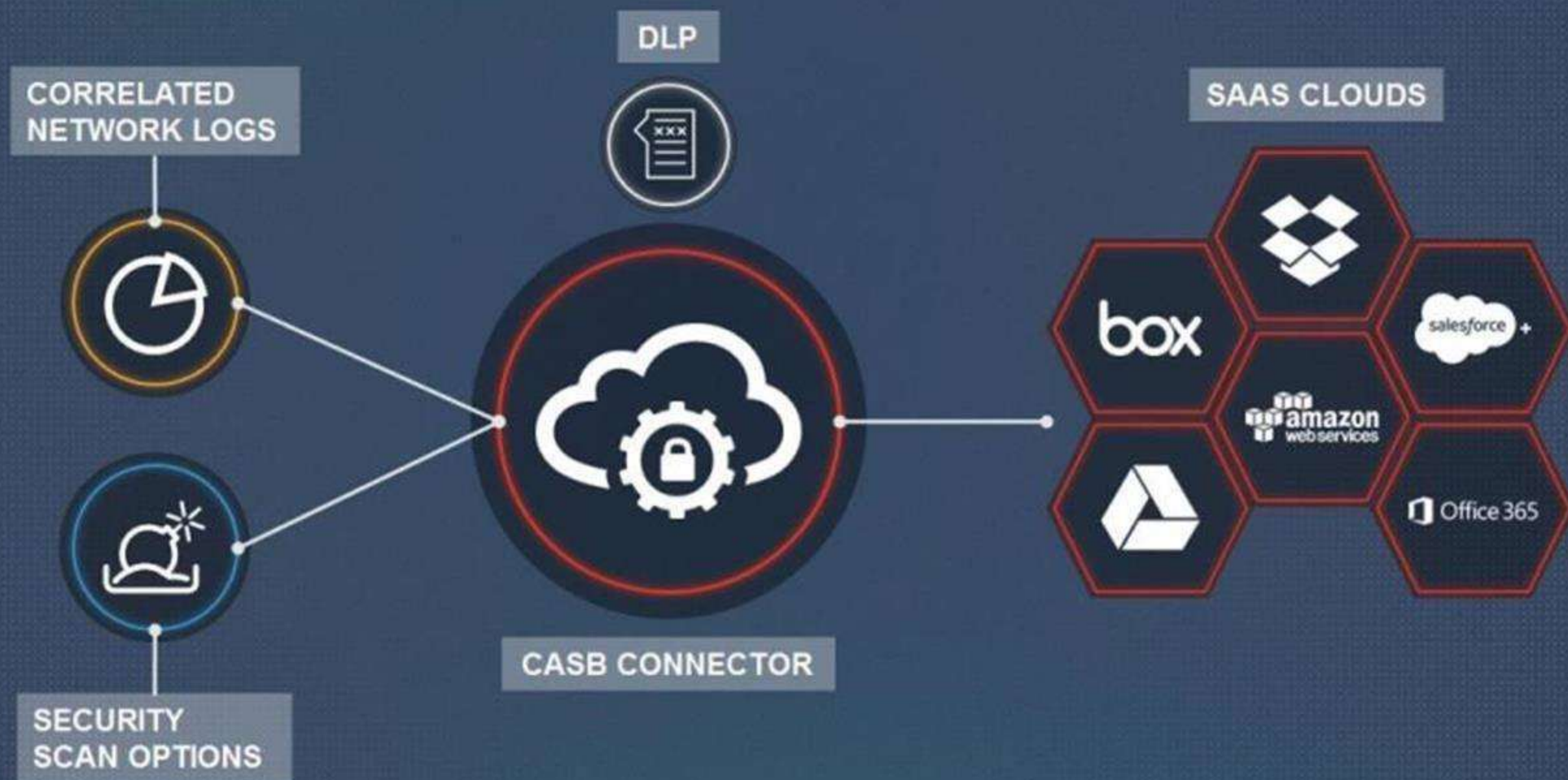


MULTI-CLOUD SECURITY CONNECTORS

Private	Public	SaaS
Virtual Security	Cloud Security	API
Applications	Applications	Applications
Data	Data	Data
O/S	O/S	O/S
Virtualization	Virtualization	Virtualization
Servers	Servers	Servers
Networking	Networking	Networking



CASB IS A FEATURE OF NETWORK SECURITY - FORTICASB 1.2



CLOUD SECURITY MIGRATION

DOMINIC ASLAN – VP IT OPERATIONS - SHIPSERV



DOMINIC ASLAN

VP of IT Operations
SHIPSERV

FORTINET

FORTIGUARD ARTIFICIAL INTELLIGENCE

INTRODUCING NEW THREAT DETECTION TECHNOLOGIES

ANTIVIRUS TECHNOLOGY EVOLUTION

FROM PROTECTION TO DETECTION

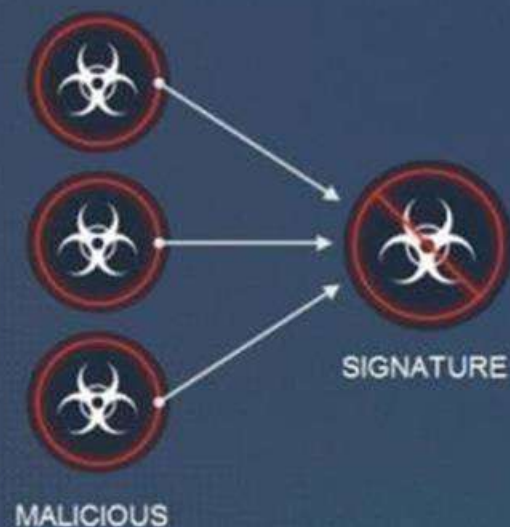
Known Protection

Unkown Detection

ONE TO ONE
SIGNATURE



ONE TO MANY
SIGNATURE



BEHAVIORAL
ANALYSIS



MACHINE
LEARNING



FORTIGUARD AI 4-LAYER ARCHITECTURE



FORTIGUARD AI 4-LAYER ARCHITECTURE

INPUT

MALICIOUS

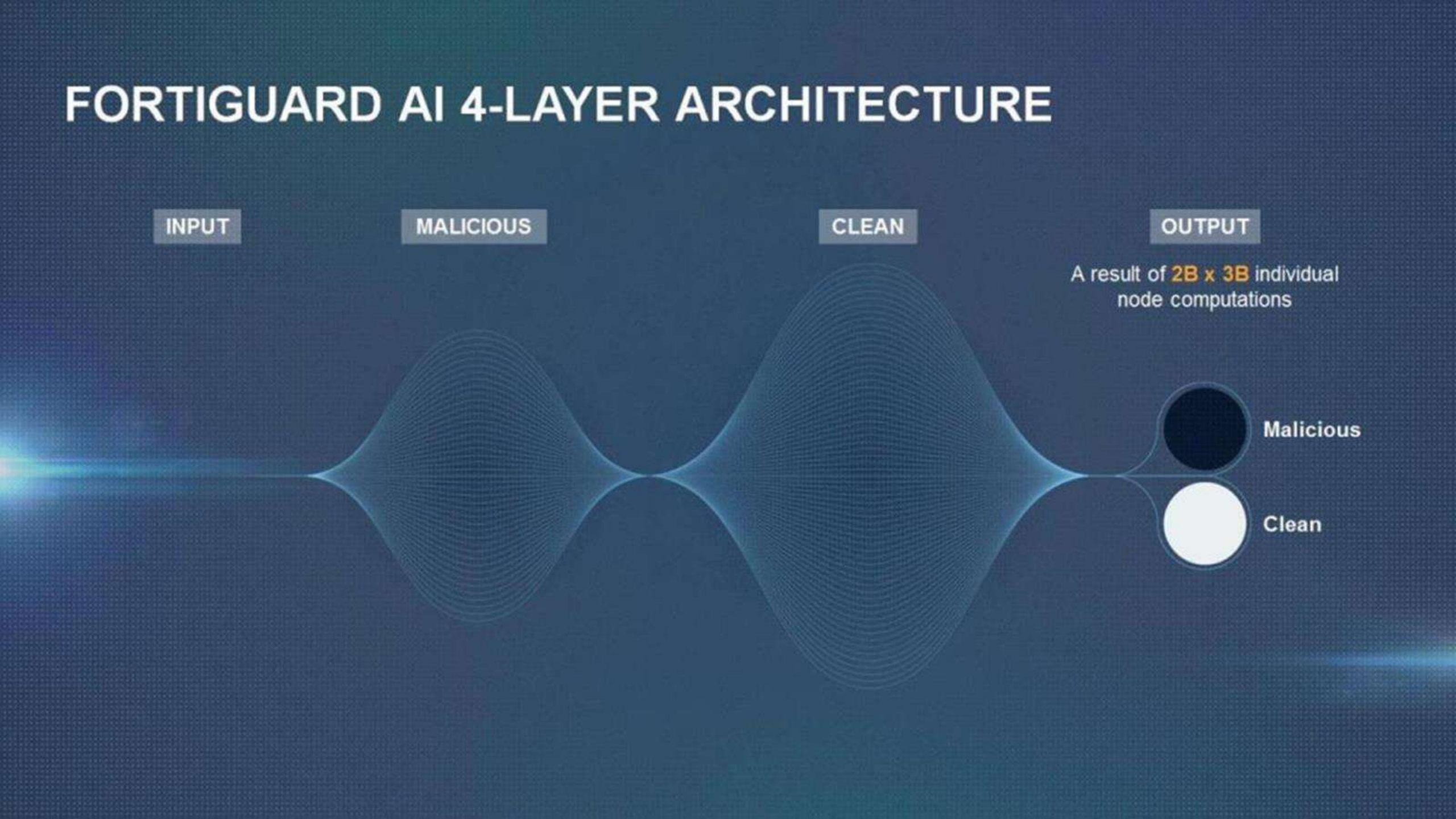
CLEAN

OUTPUT

A result of **2B x 3B** individual
node computations

Malicious

Clean



FORTIGUARD AI 4-LAYER ARCHITECTURE

INPUT

MALICIOUS

CLEAN

OUTPUT

A result of **2B x 3B** individual
node computations

Malicious

Clean



FORTIGUARD AI 4-LAYER ARCHITECTURE

INPUT

MALICIOUS

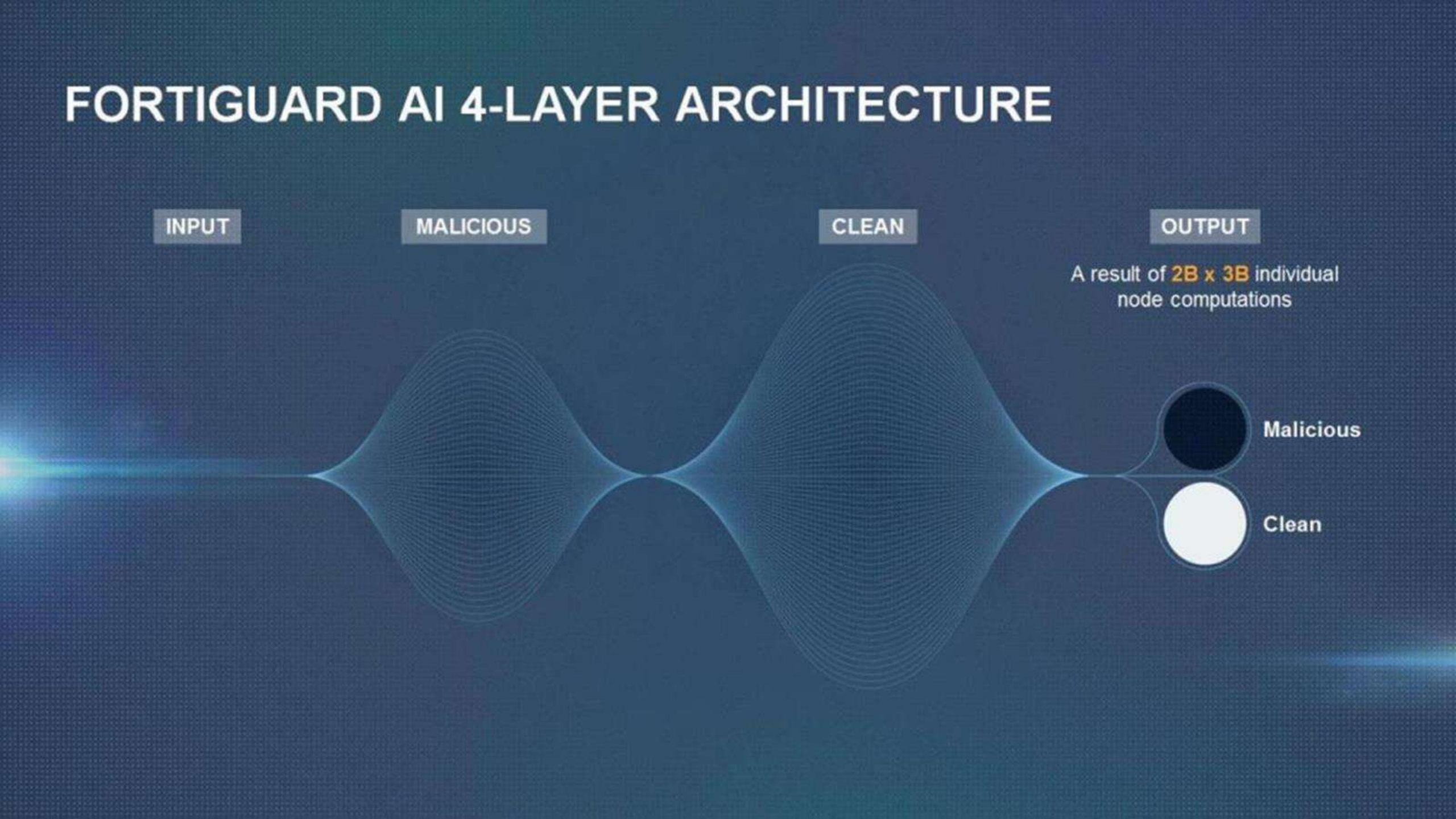
CLEAN

OUTPUT

A result of **2B x 3B** individual
node computations

Malicious

Clean



FORTINET

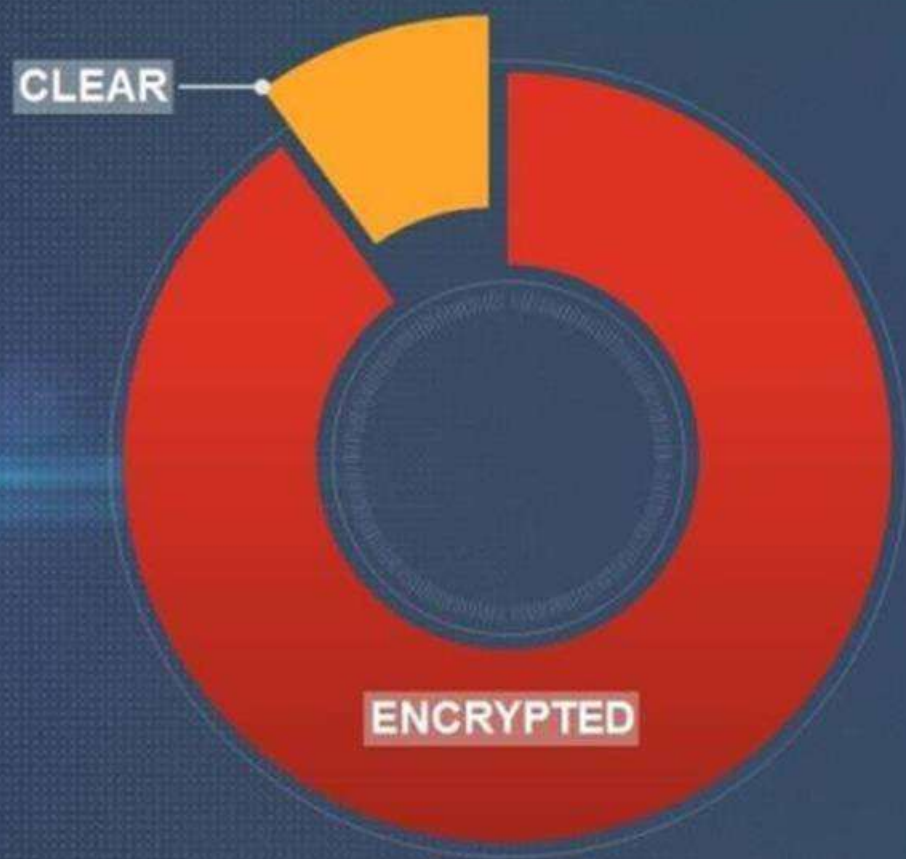


FortiGate 6000 SERIES

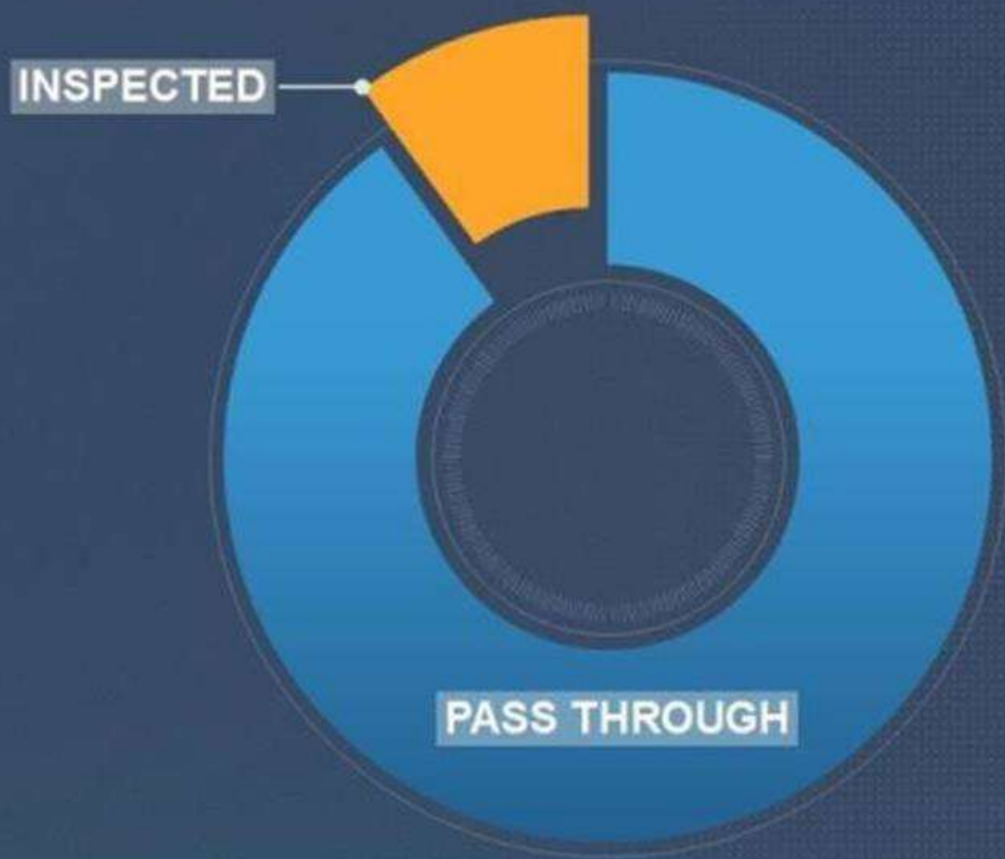
INTRODUCING THE INDUSTRY'S LEADING NGFW APPLIANCE

ENCRYPTION

... A GIANT HOLE IN ENTERPRISE SECURITY



Source: Encrypted Traffic Across Google Report



Source: Gartner 2017 Enterprise Firewall
Magic Quadrant : Adam Hills

CONTINUED INCREASES IN SPEED

5G WILL PUSH ENTERPRISE GATEWAY THROUGHPUT 2X

Ethernet



100 MB

1 G

10 GE

40 GE

100 GE

400 GE

WiFi



Cellular



CONTINUED INCREASES IN SPEED

5G WILL PUSH ENTERPRISE GATEWAY THROUGHPUT 2X

Ethernet



100 MB

1 G

10 GE

40 GE

100 GE

400 GE

WiFi



802 a

802 b

802 g

802 n

802 ac

802 ax

Cellular



CONTINUED INCREASES IN SPEED

5G WILL PUSH ENTERPRISE GATEWAY THROUGHPUT 2X

Ethernet



100 MB

1 G

10 GE

40 GE

100 GE

400 GE

WiFi



802 a

802 b

802 g

802 n

802 ac

802 ax

Cellular



1G

2G

3G

4G

5G

FASTEST NGFW APPLIANCE ON THE MARKET



NSS LABS SECURITY VALUE MAP™

NEXT GENERATION FIREWALL (NGFW)

FORTINET

Cisco

Security Effectiveness

NOTE

At the completion of testing, NSS notified the vendors whose products failed to properly handle evasions. The following vendors developed fixes, which NSS has subsequently verified address the identified issues:

- Barracuda Networks
- Check Point Software Technologies
- Palo Alto Networks
- SonicWall

For more information please see the individual product Test Reports, or contact NSS Labs.

TCO per Protected Mbps

DATA CENTER SECURITY GATEWAY (DCSG)

NSS was unable to measure the effectiveness and determine the suitability of data center products from these vendors and therefore cautions against their deployment without a comprehensive evaluation

LEGEND

- IPv4 Performance
- IPv6 Performance

TCO per Protected Mbps

Security Effectiveness

FORTINET



FABRIC READY ALLIANCE

... INTEGRATION WITH KEY PARTNERS

THE FABRIC READY PROGRAM

WE CONTINUE TO ADD NEW TECHNOLOGY ALLIANCE PARTNERS



NEC

vmware®



servicenow

HUGHES
An EchoStar Company



BACKBOX | BACKUP
RECOVERY
AUTOMATION



FABRIC ALLIANCE ECOSYSTEM

CLOUD



SDN



ENDPOINT



MANAGEMENT



Security/SIEM



IOT/OT/NAC



IDENTITY



TECHNOLOGY



FORTINET



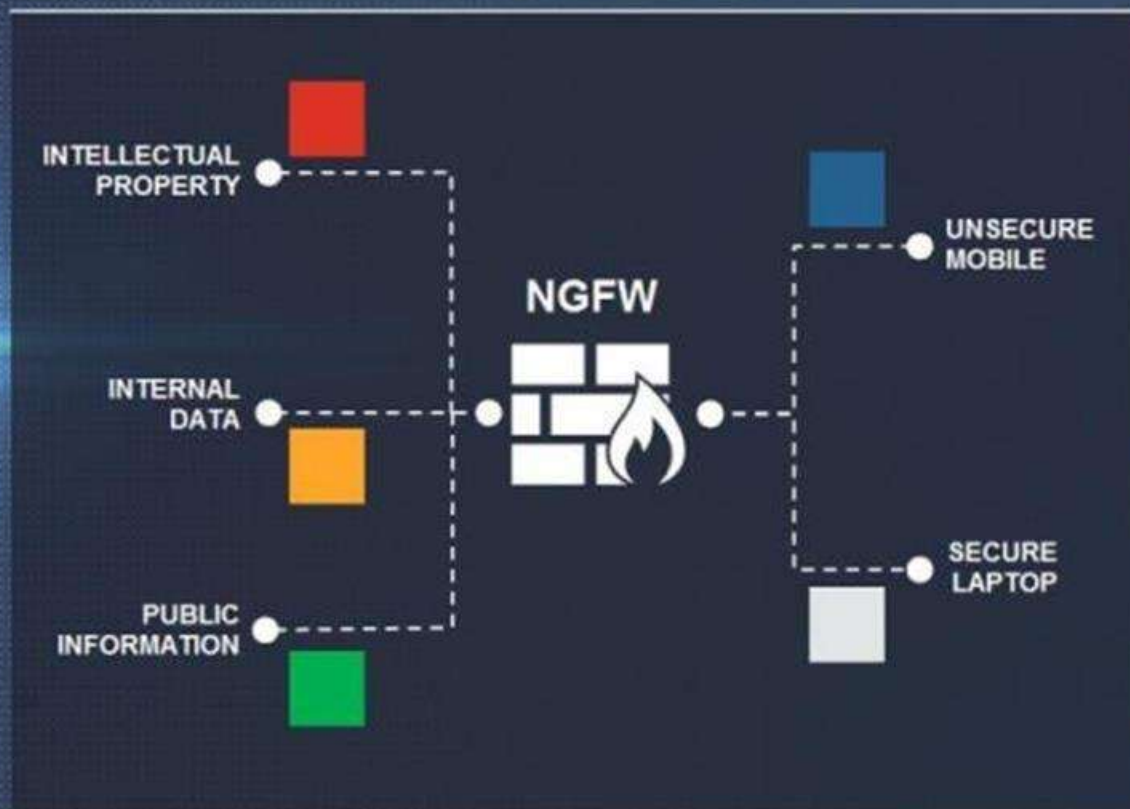
INTENT BASED NETWORK SECURITY

... FORTINET'S LONG TERM VISION

MAKING PROGRESS ON OUR VISION

BUSINESS AWARE TAGGING

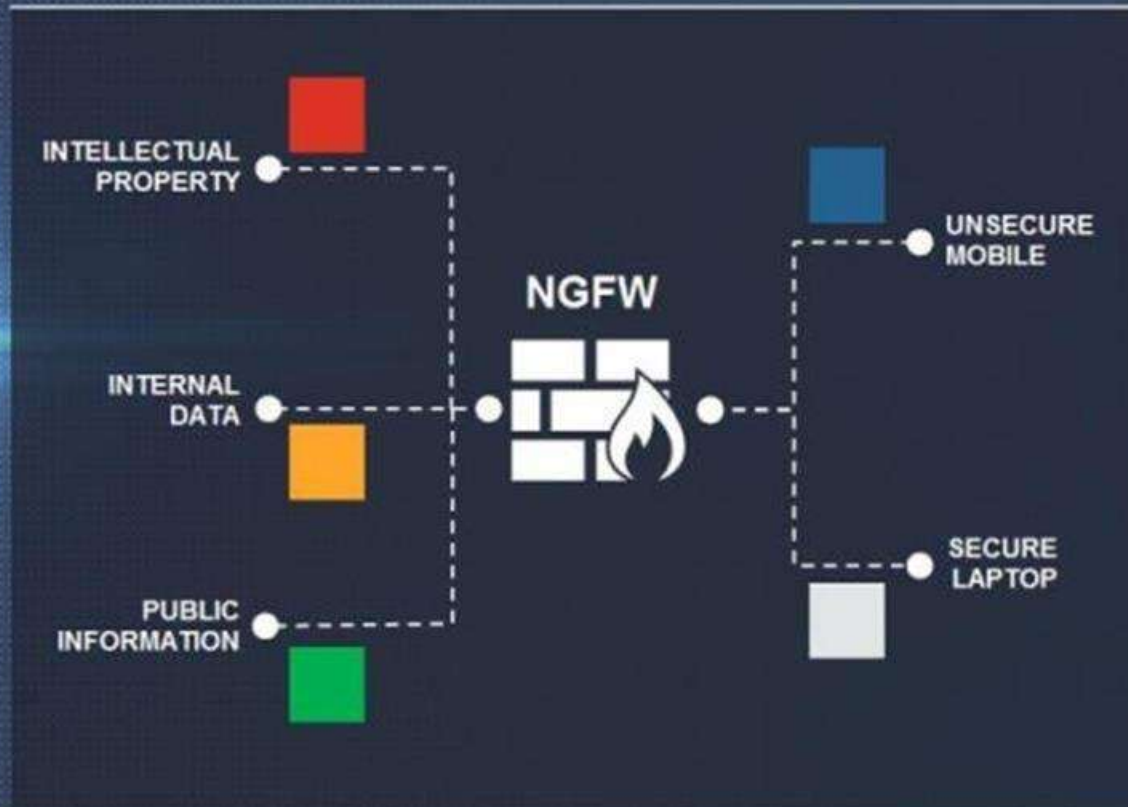
TAGGING (DEVICES, INTERFACES, OBJECTS)



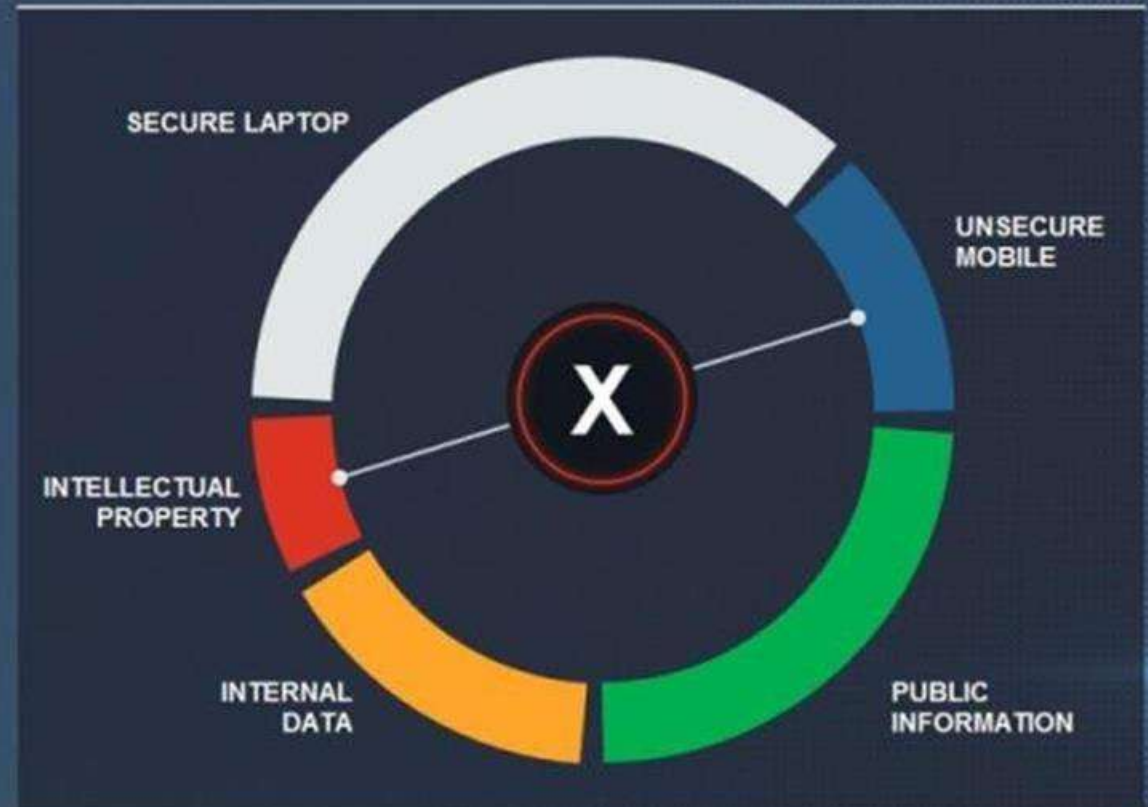
MAKING PROGRESS ON OUR VISION

BUSINESS AWARE TAGGING

TAGGING (DEVICES, INTERFACES, OBJECTS)



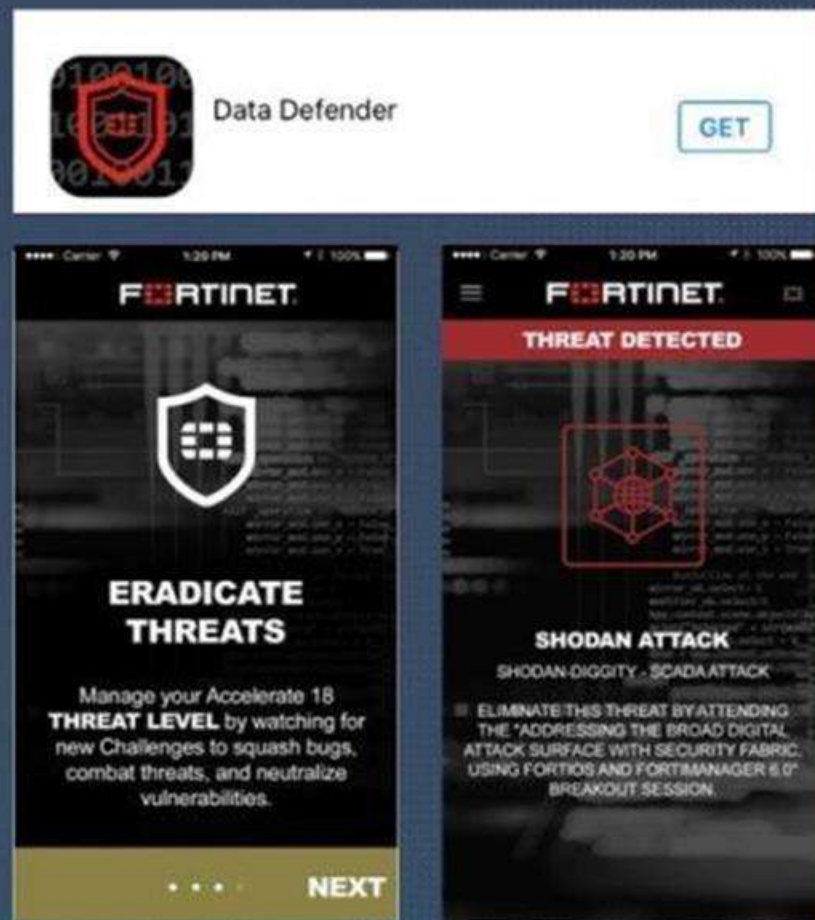
GLOBAL POLICY



DATA DEFENDER APP

ACCELERATE 18 GAMIFICATION EXPERIENCE

- 1) Go to the app store(s)
- 2) Search for Data Defender
- 3) Download and wait for "Threat Alerts"
- 4) Complete the challenges
- 5) Earn fun prizes from the FortiStore!
- 6) Remember my name and face...John Maddison.



FORTINET®



FORTINET

ACCELERATE 18

STR3NGTH IN NUMB3RS

SECURITY
STRATEGY RENAISSANCE
FOR THE AGE OF DIGITAL
TRANSFORMATION

PHIL QUADE :: CISO



CYBER ON CYBER



Hunter-Gatherer



CYBER ON CYBER



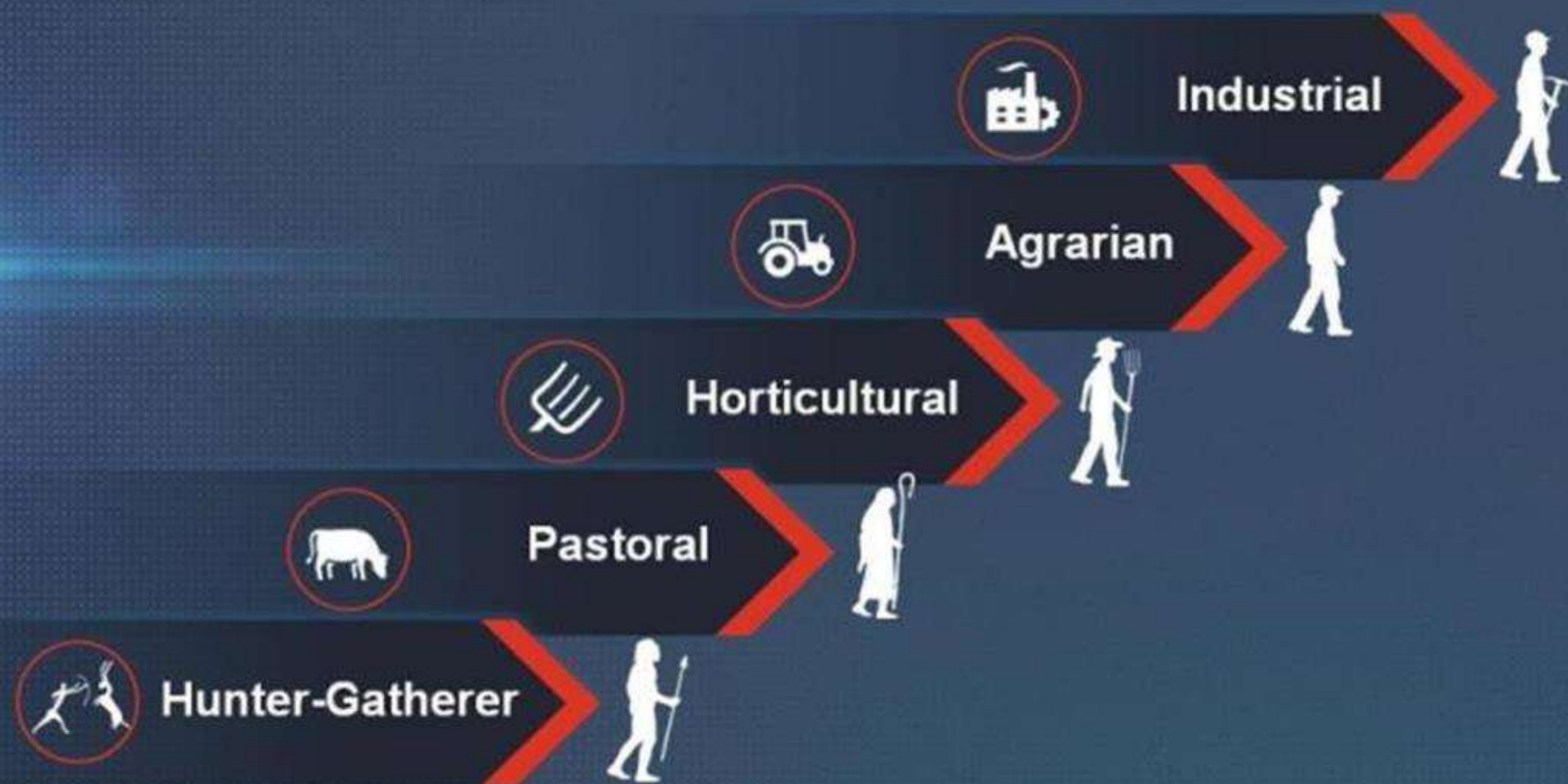
CYBER ON CYBER



CYBER ON CYBER



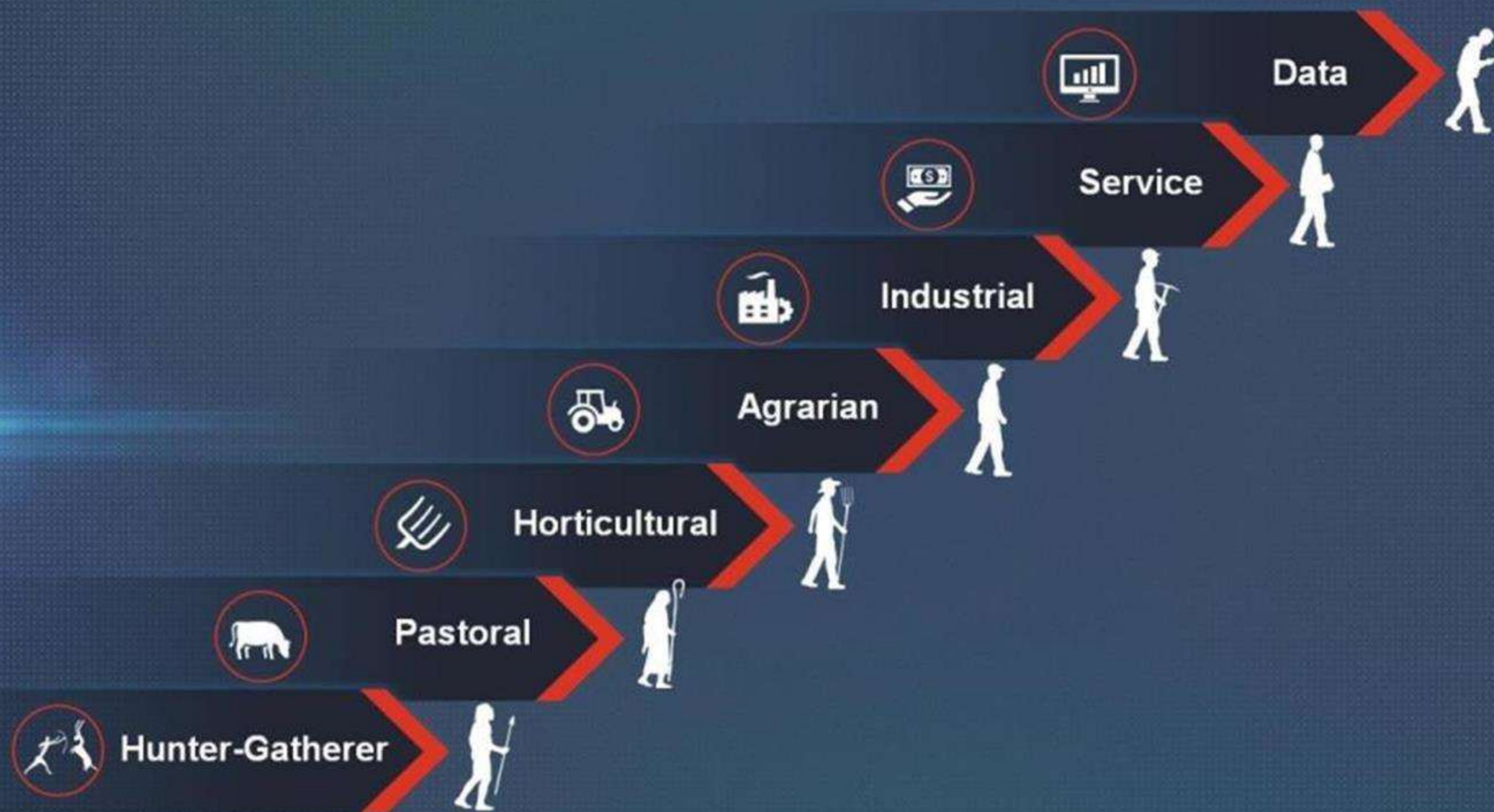
CYBER ON CYBER

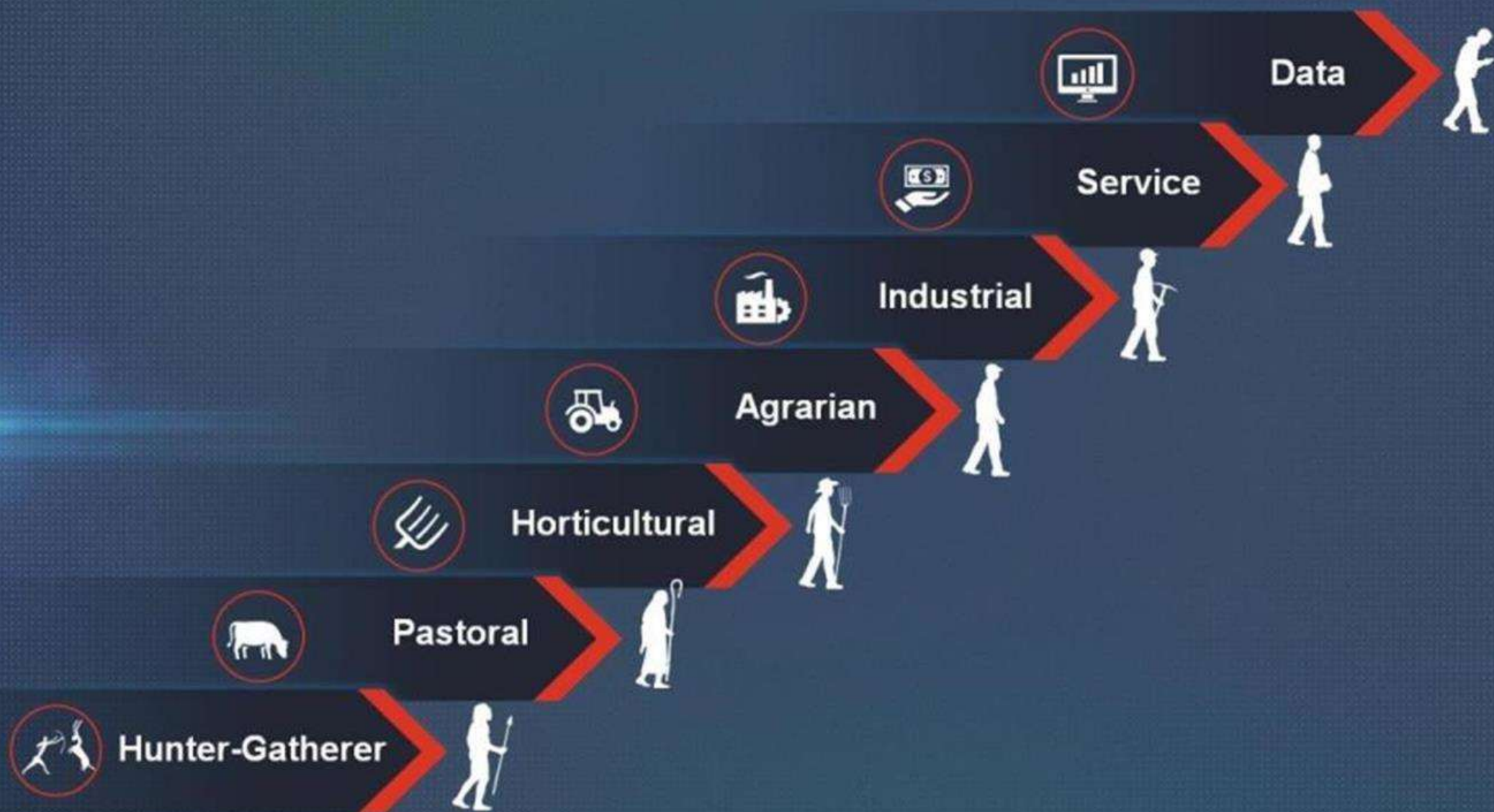


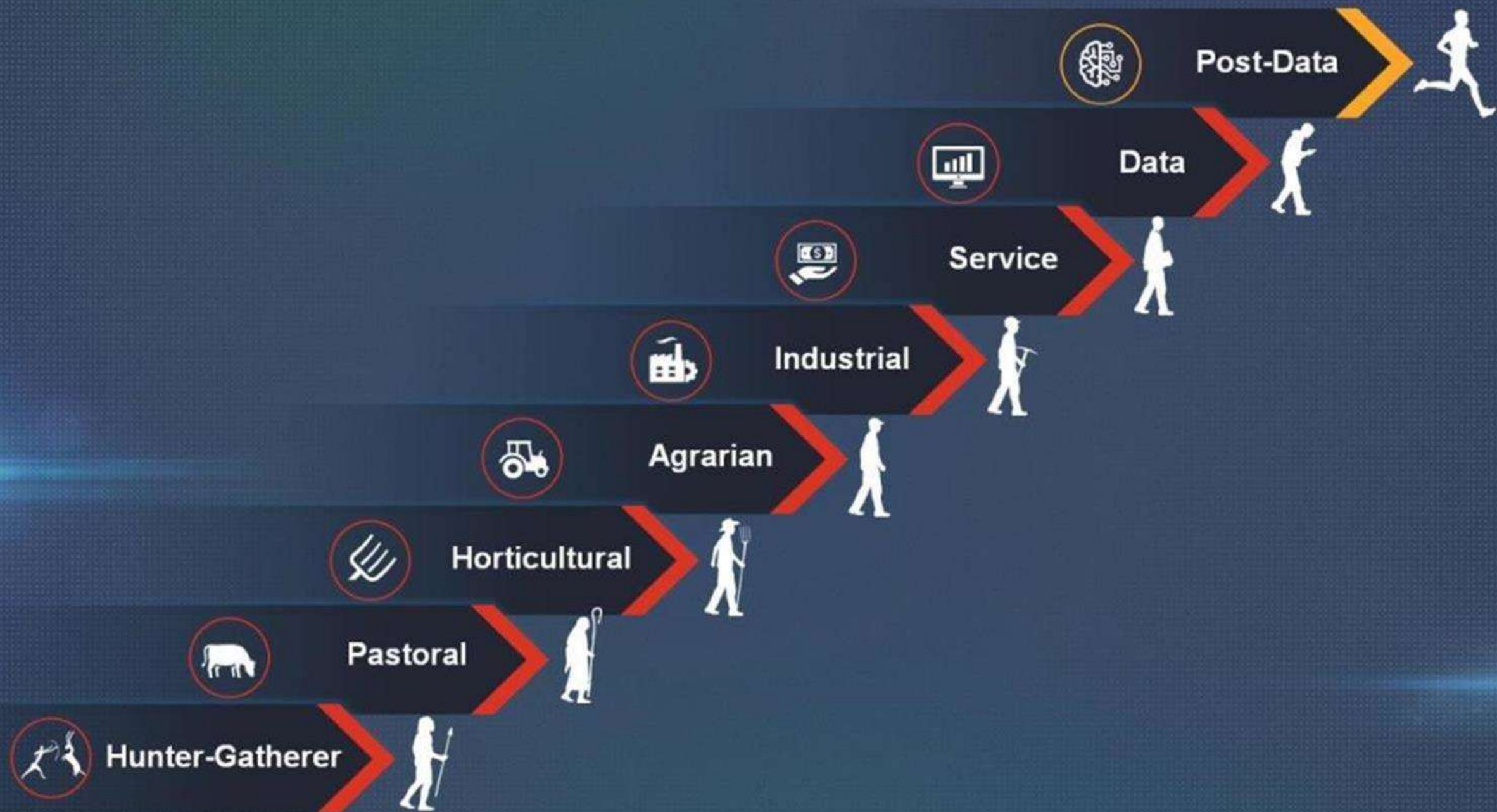
CYBER ON CYBER



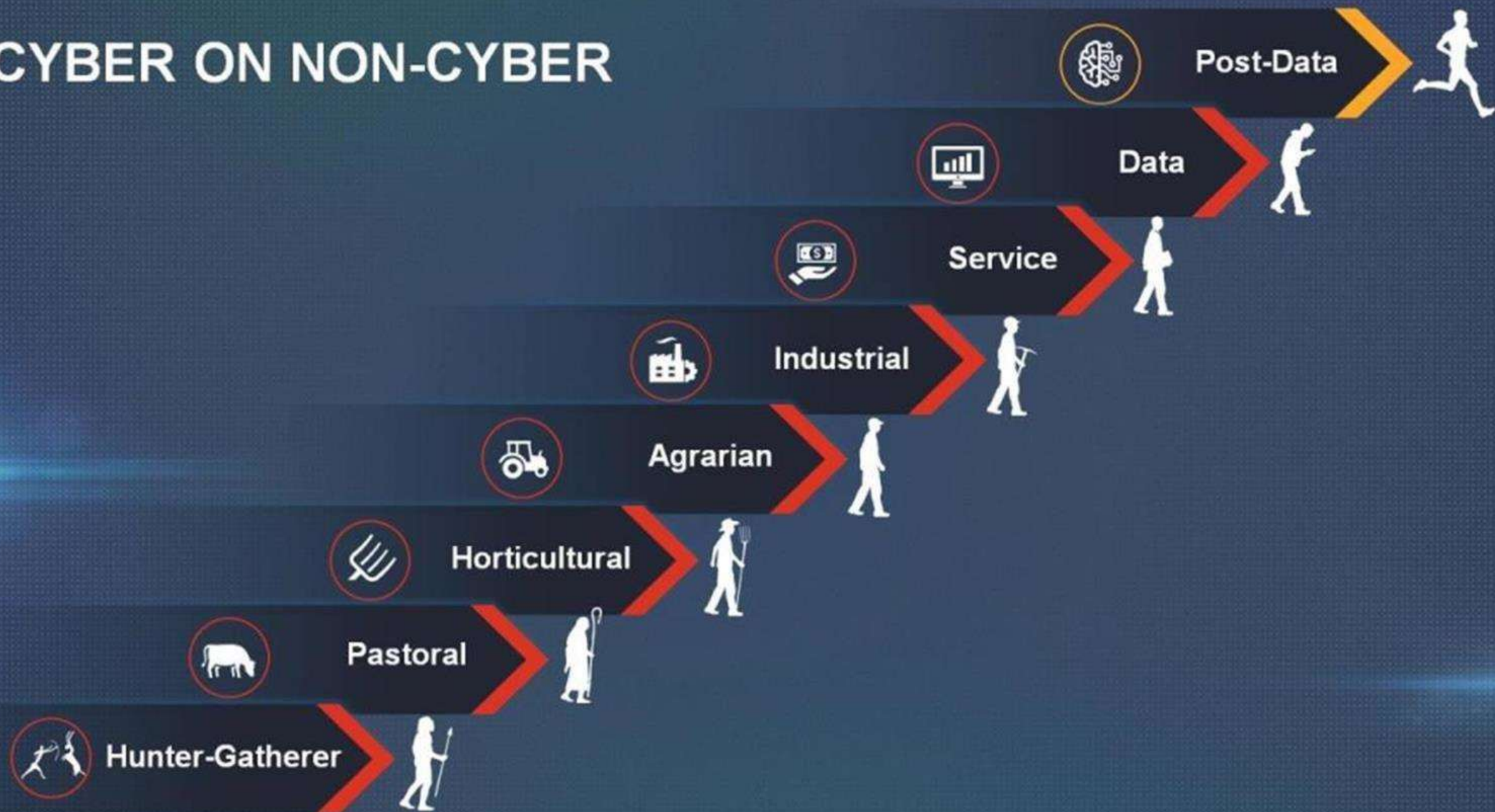
CYBER ON CYBER



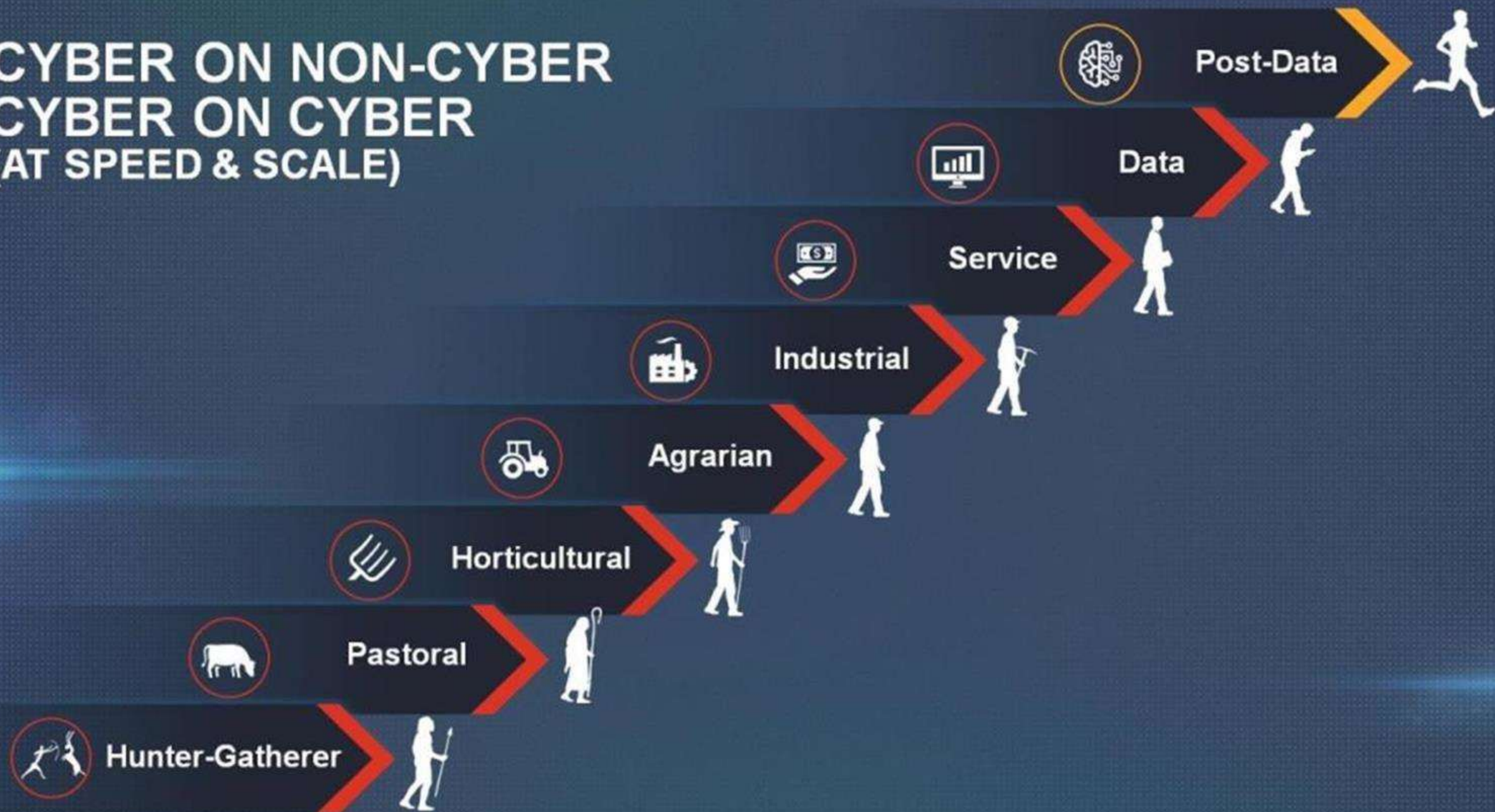




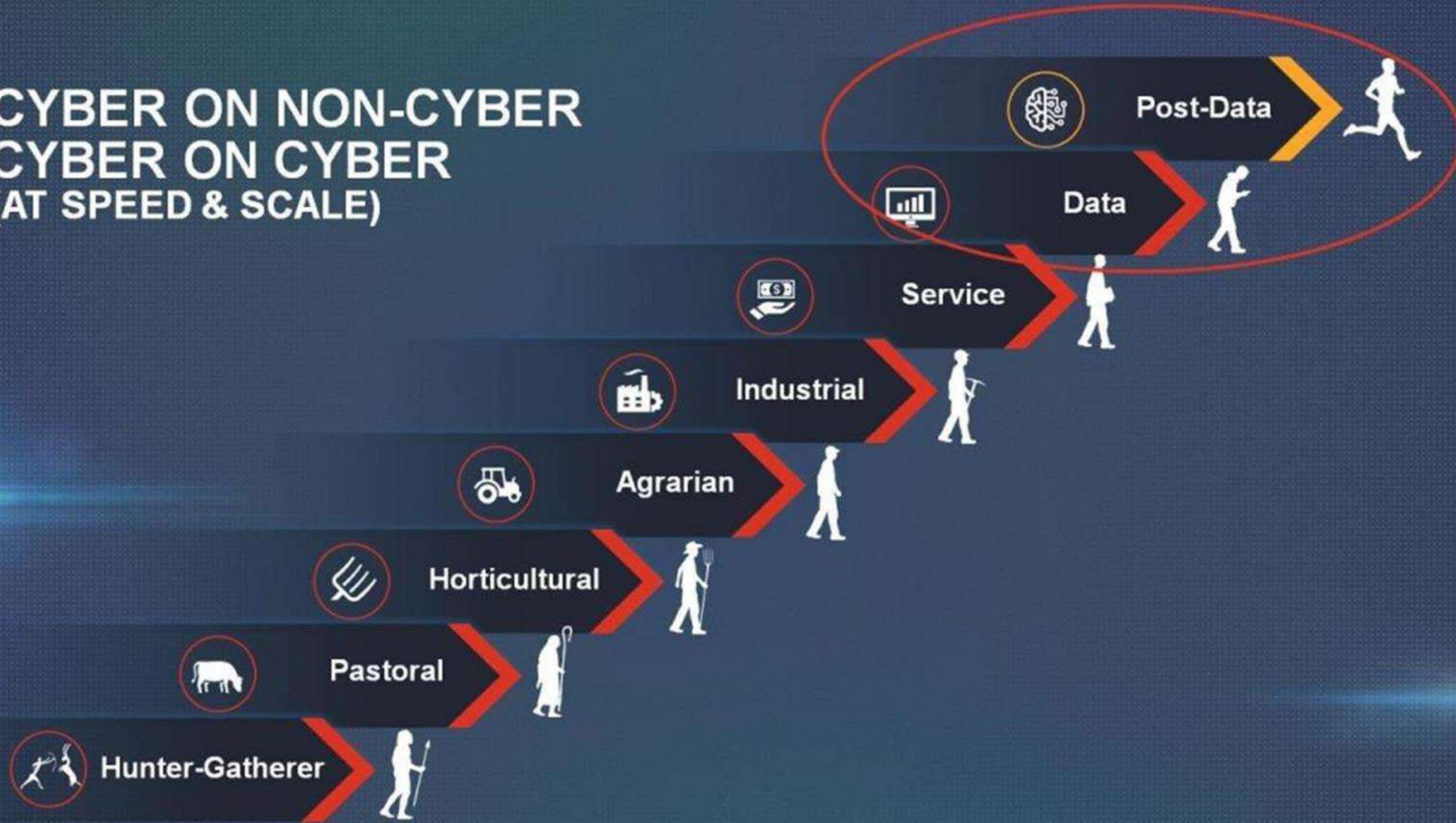
CYBER ON NON-CYBER



CYBER ON NON-CYBER CYBER ON CYBER (AT SPEED & SCALE)



CYBER ON NON-CYBER CYBER ON CYBER (AT SPEED & SCALE)



OPERATIONAL TECHNOLOGY, USED FOR...

MONITOR, CONTROL, OPERATE



INDUSTRIAL AUTOMATION



Safely and Reliably manipulating physical things and processes

OPERATIONAL TECHNOLOGY, USED BY...

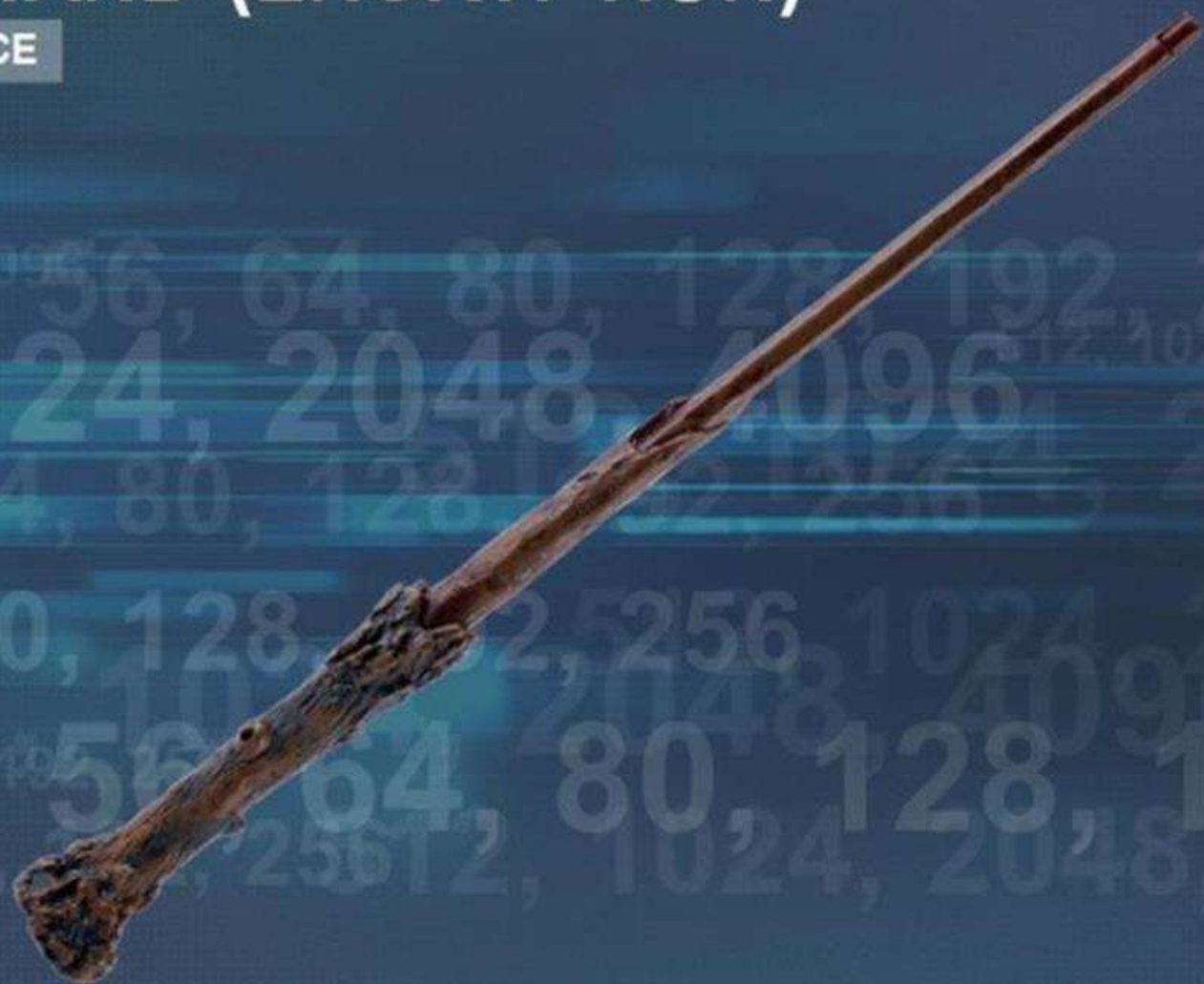


Diverse industries
Often "critical" infrastructures

All environmental conditions
Harsh (heat, moisture, vibration); Office

I.T. MAGIC WAND (ENCRYPTION)

THEORY VS. PRACTICE



O.T. MAGIC WAND (AIR GAP)

THEORY VS. PRACTICE



O.T. MAGIC WAND (AIR GAP)

THEORY VS. PRACTICE



O.T. MAGIC WAND (AIR GAP)

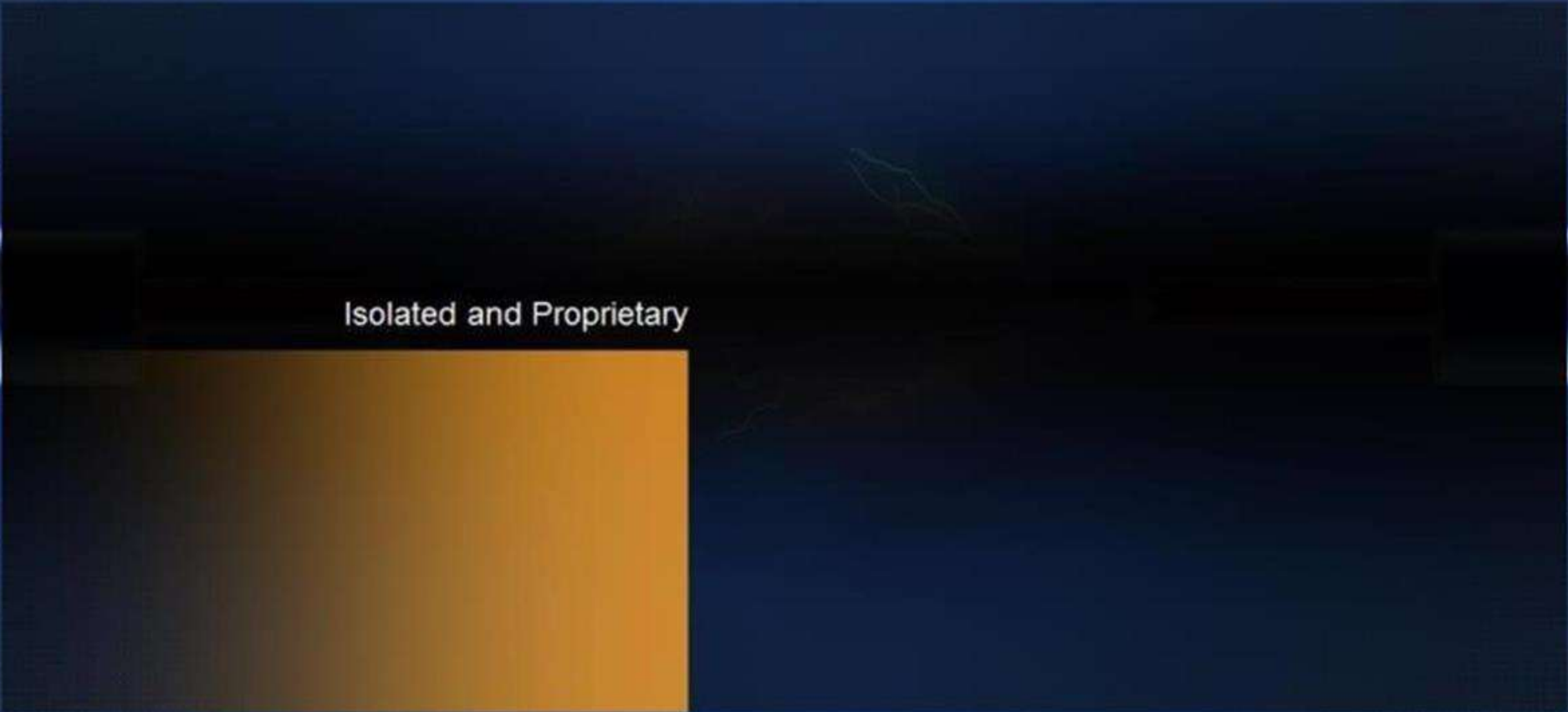
THEORY VS. PRACTICE



O.T. MAGIC WAND (AIR GAP)

THEORY VS. PRACTICE

Isolated and Proprietary

The image is a dark, abstract composition. It features a large, dark blue/black rectangular area that occupies most of the frame. In the bottom-left corner of this dark area, there is a smaller, solid orange rectangle. The text "Isolated and Proprietary" is centered within the dark area, slightly above the orange rectangle. The overall aesthetic is minimalist and high-contrast.

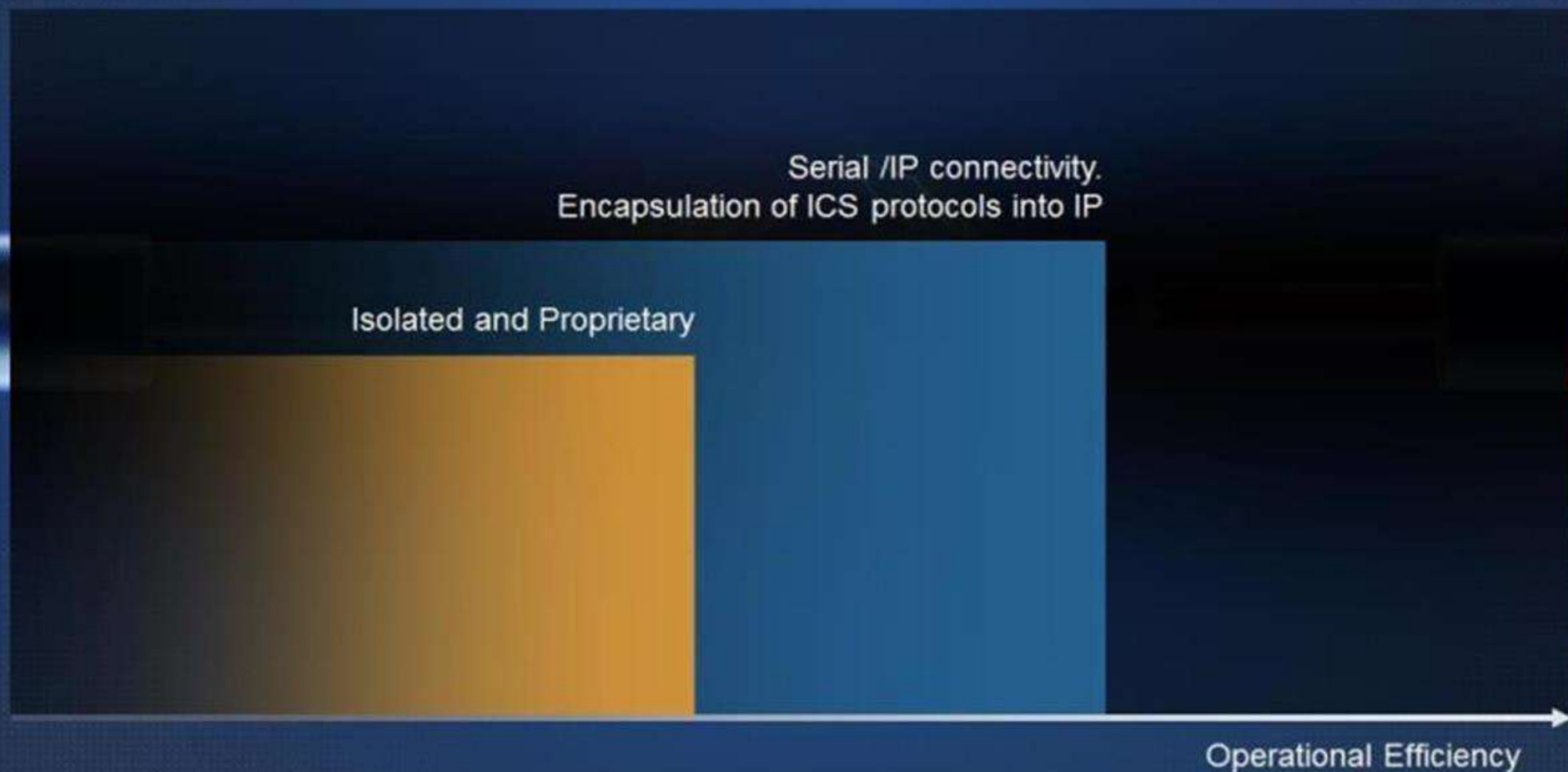
O.T. MAGIC WAND (AIR GAP)

THEORY VS. PRACTICE



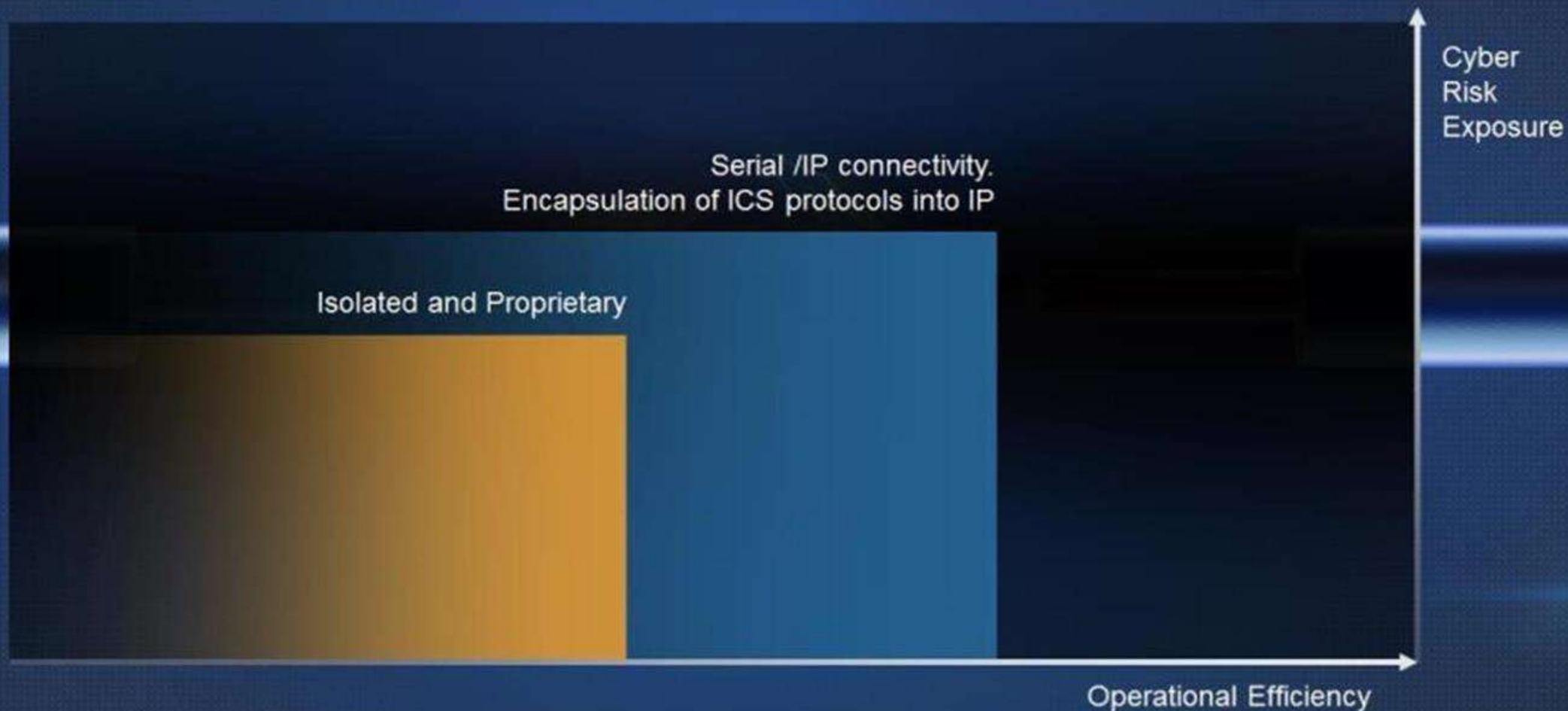
O.T. MAGIC WAND (AIR GAP)

THEORY VS. PRACTICE



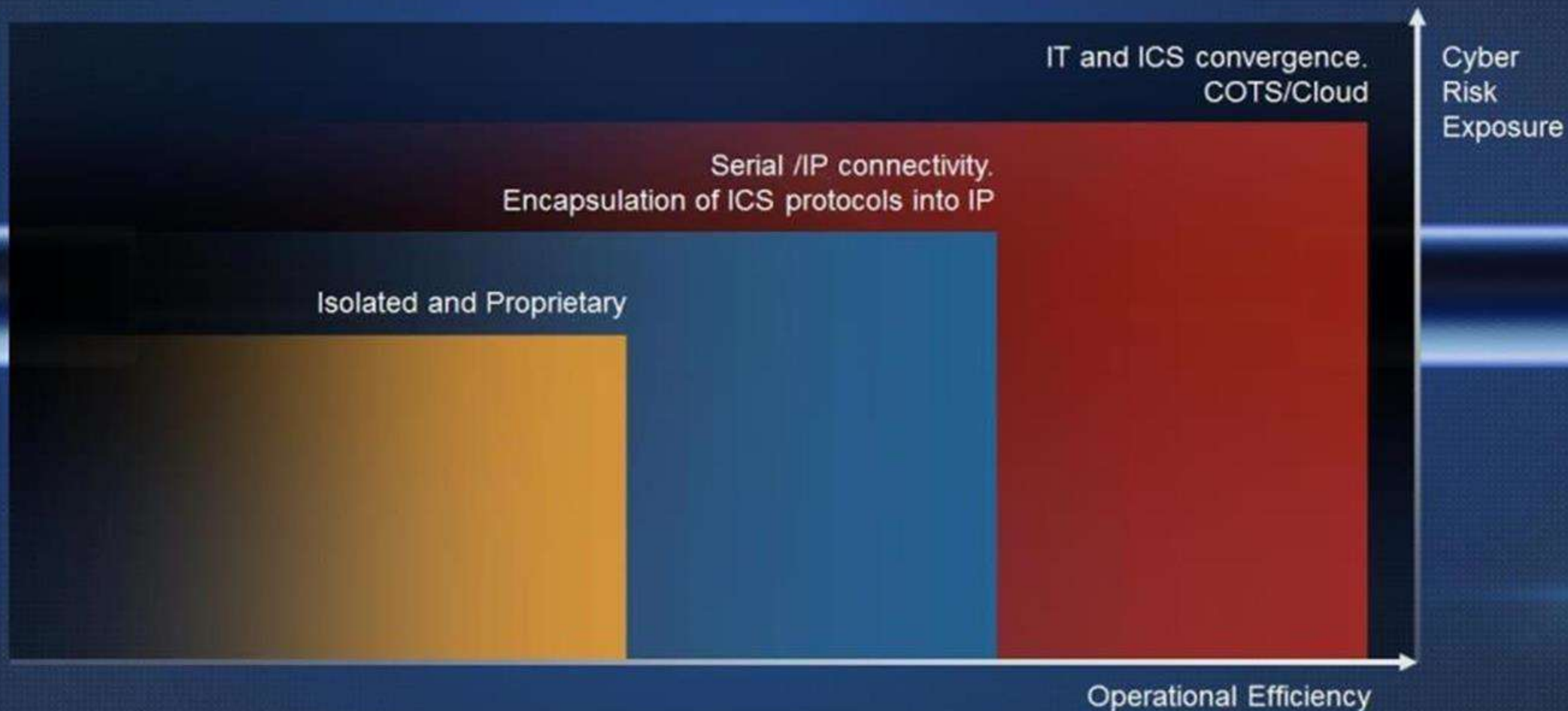
O.T. MAGIC WAND (AIR GAP)

THEORY VS. PRACTICE



O.T. MAGIC WAND (AIR GAP)

THEORY VS. PRACTICE



CONSEQUENCES OF OT FAILURE

2009 SAYANO-SHUSHENSKAYA HYDROELECTRIC POWER STATION ACCIDENT

BEFORE THE INCIDENT



75

Casualties

\$425M

Damages of property
and equipment

\$1.5B

Power station
reconstruction cost

2 years

Power station
reconstruction time

CONSEQUENCES OF OT FAILURE

2009 SAYANO-SHUSHENSKAYA HYDROELECTRIC POWER STATION ACCIDENT

BEFORE THE INCIDENT



AFTER THE INCIDENT



75

Casualties

\$425M

Damages of property
and equipment

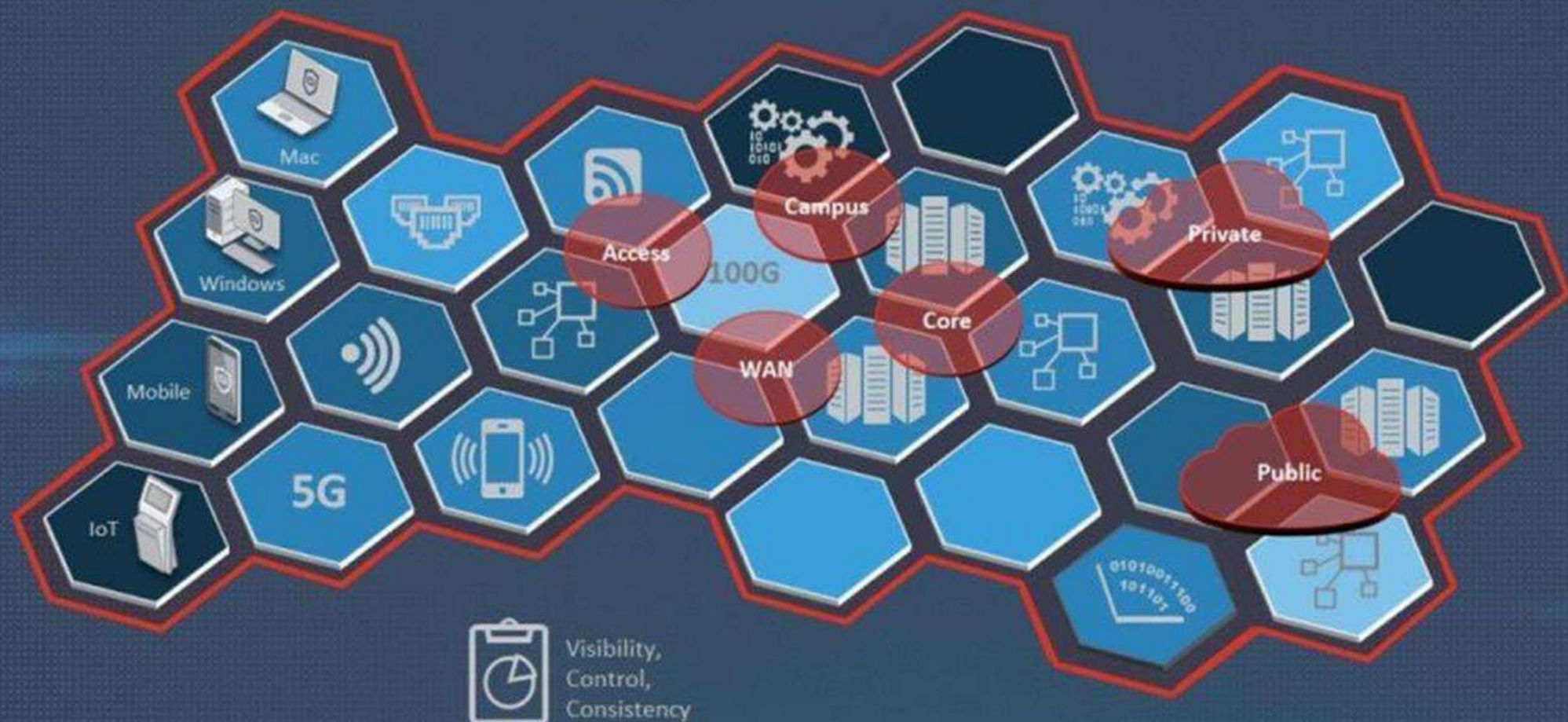
\$1.5B

Power station
reconstruction cost

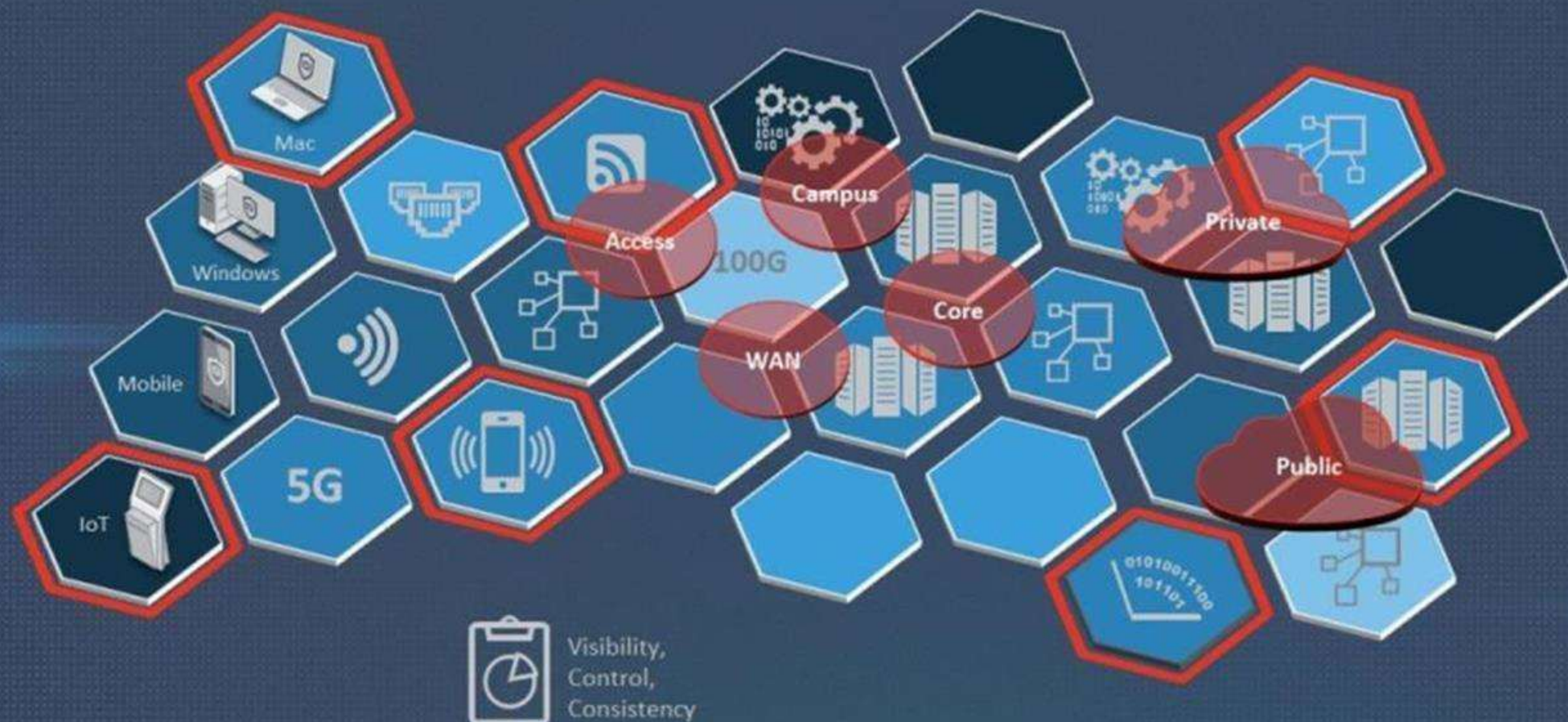
2 years

Power station
reconstruction time

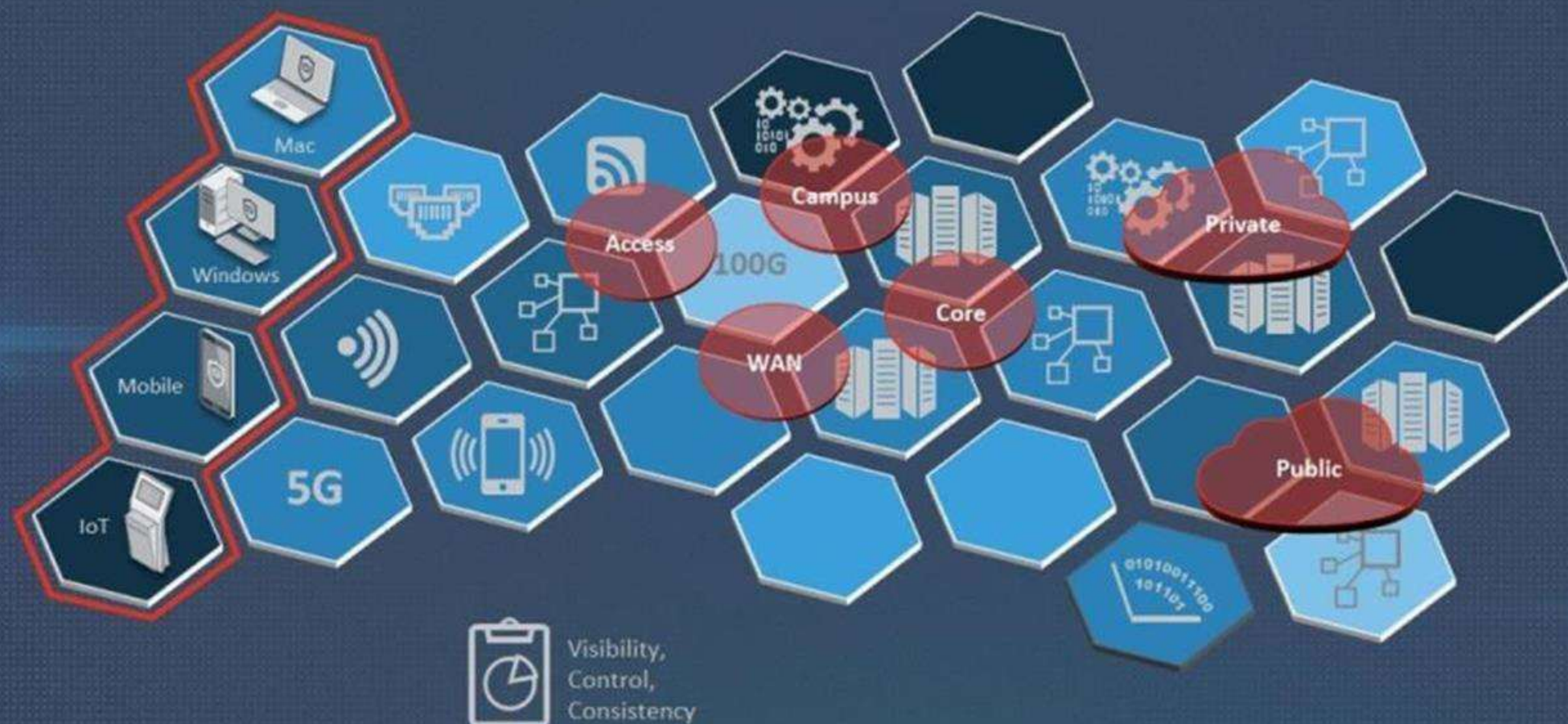
YESTERDAY'S PRIMARY STRATEGY: STATIC BOUNDARY SECURITY



STATE OF THE ART STRATEGY: AGILE MACRO AND MICRO SEGMENTATION



STATE OF THE ART STRATEGY: AGILE MACRO AND MICRO SEGMENTATION



STATE OF THE ART STRATEGY: AGILE MACRO AND MICRO SEGMENTATION



STATE OF THE ART STRATEGY: AGILE MACRO AND MICRO SEGMENTATION



STATE OF THE ART STRATEGY: AGILE MACRO AND MICRO SEGMENTATION



STATE OF THE ART STRATEGY: AGILE MACRO AND MICRO SEGMENTATION



BRING THE RIGHT STRATEGY AND TOOLS

Tools & Techniques to Use		Food 	Pillow 	Knife 
Type of Fight	Food	Yes	No	No
	Pillow	No	Yes	No
	Knife	No	No	Yes
	Cyber	No	No	No

BRING THE RIGHT STRATEGY AND TOOLS

Tools & Techniques to Use		Food 	Pillow 	Knife 
Type of Fight	Food	Yes	No	No
	Pillow	No	Yes	No
	Knife	No	No	Yes
	Cyber	No	No	No

BRING THE RIGHT STRATEGY AND TOOLS

Tools & Techniques to Use		Food 	Pillow 	Knife 
Type of Fight	Food	Yes	No	No
	Pillow	No	Yes	No
	Knife	No	No	Yes
	Cyber	No	No	No

BRING THE RIGHT STRATEGY AND TOOLS

Tools & Techniques to Use		Food 	Pillow 	Knife 	Manual Techniques & Lots of People 
Type of Fight	Food	Yes	No	No	No
	Pillow	No	Yes	No	No
	Knife	No	No	Yes	No
	Cyber	No	No	No	No

BRING THE RIGHT STRATEGY AND TOOLS

Tools & Techniques to Use		Food 	Pillow 	Knife 	Manual Techniques & Lots of People 	Automation & Integration 
Type of Fight	Food	Yes	No	No	No	No
	Pillow	No	Yes	No	No	No
	Knife	No	No	Yes	No	No
	Cyber	No	No	No	No	Yes

BRING THE RIGHT STRATEGY AND TOOLS

Tools & Techniques to Use		Food 	Pillow 	Knife 	Manual Techniques & Lots of People 	Automation & Integration 
Type of Fight	Food	Yes	No	No	No	No
	Pillow	No	Yes	No	No	No
	Knife	No	No	Yes	No	No
	Cyber	No	No	No	No	Yes

TO ADDRESS THE PROBLEMS OF SPEED & SCALE,
USE THE STRATEGIES OF AUTOMATION & INTEGRATION

AUTOMATION

TO TAKE ON THE PROBLEMS OF SPEED & SCALE, EMBRACE THE STRATEGIES OF AUTOMATION & INTEGRATION

To mitigate at cyber-relevant speed
To find 'low & slow' or 'haystack needles'
To separate important from not

TO PLAY DEFENSE AS A TEAM

Integrated sensing, sharing, mitigations

CORE STRATEGY

Connected products, with automatable intent-based Security

OBSERVE, ORIENT, DECIDE, ACT

APPLIED TO CYBERSECURITY

SENSORS

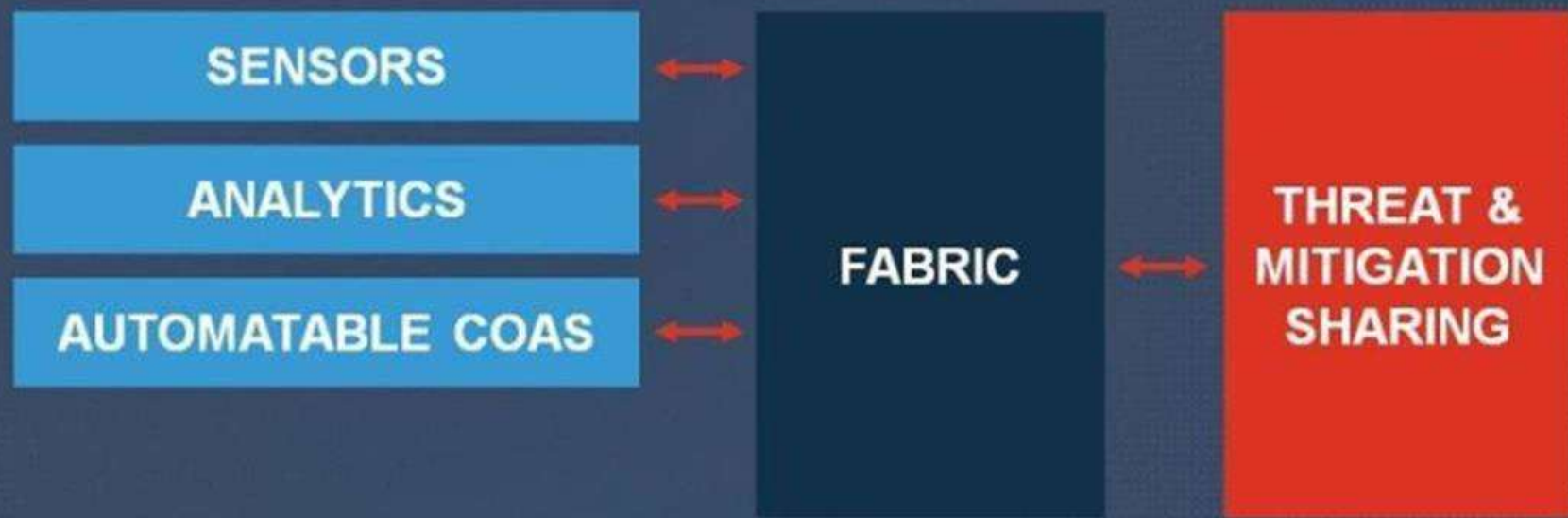
OBSERVE, ORIENT, DECIDE, ACT

APPLIED TO CYBERSECURITY



OBSERVE, ORIENT, DECIDE, ACT

APPLIED TO CYBERSECURITY



OBSERVE, ORIENT, DECIDE, ACT

APPLIED TO CYBERSECURITY



OBSERVE, ORIENT, DECIDE, ACT

APPLIED TO CYBERSECURITY

- Context-enabled defense
- Orchestration
- Intent-based security
- Risk-based decision engines
- Machine learning
- Artificial intelligence



COMPUTER SCIENCE → SCIENCE FICTION

GOAL

Simplicity
(Effectiveness,
Cost Efficiencies)

COMPUTER SCIENCE → SCIENCE FICTION

GOAL

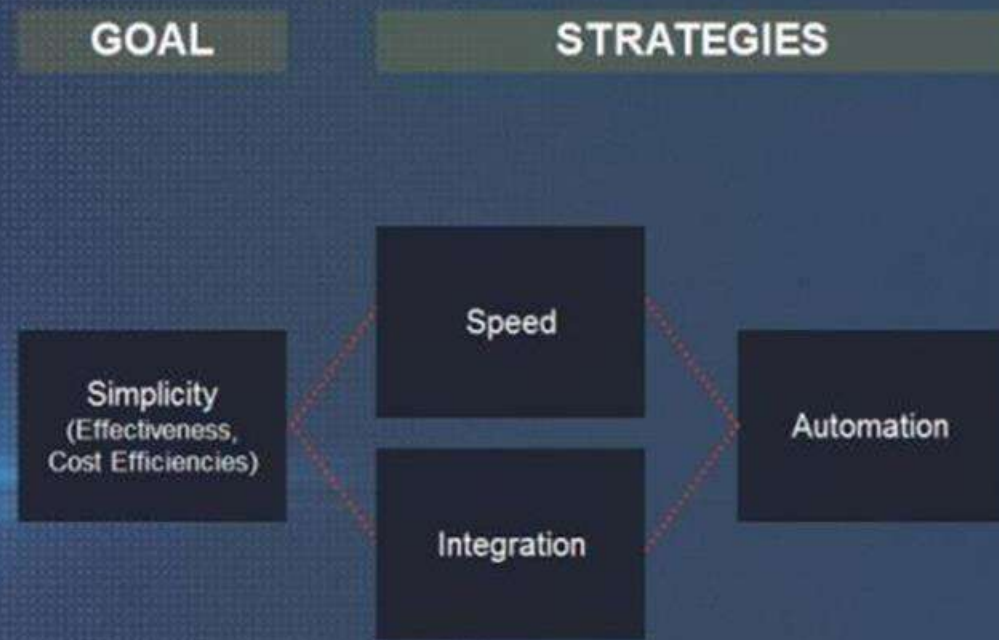
STRATEGIES

Simplicity
(Effectiveness,
Cost Efficiencies)

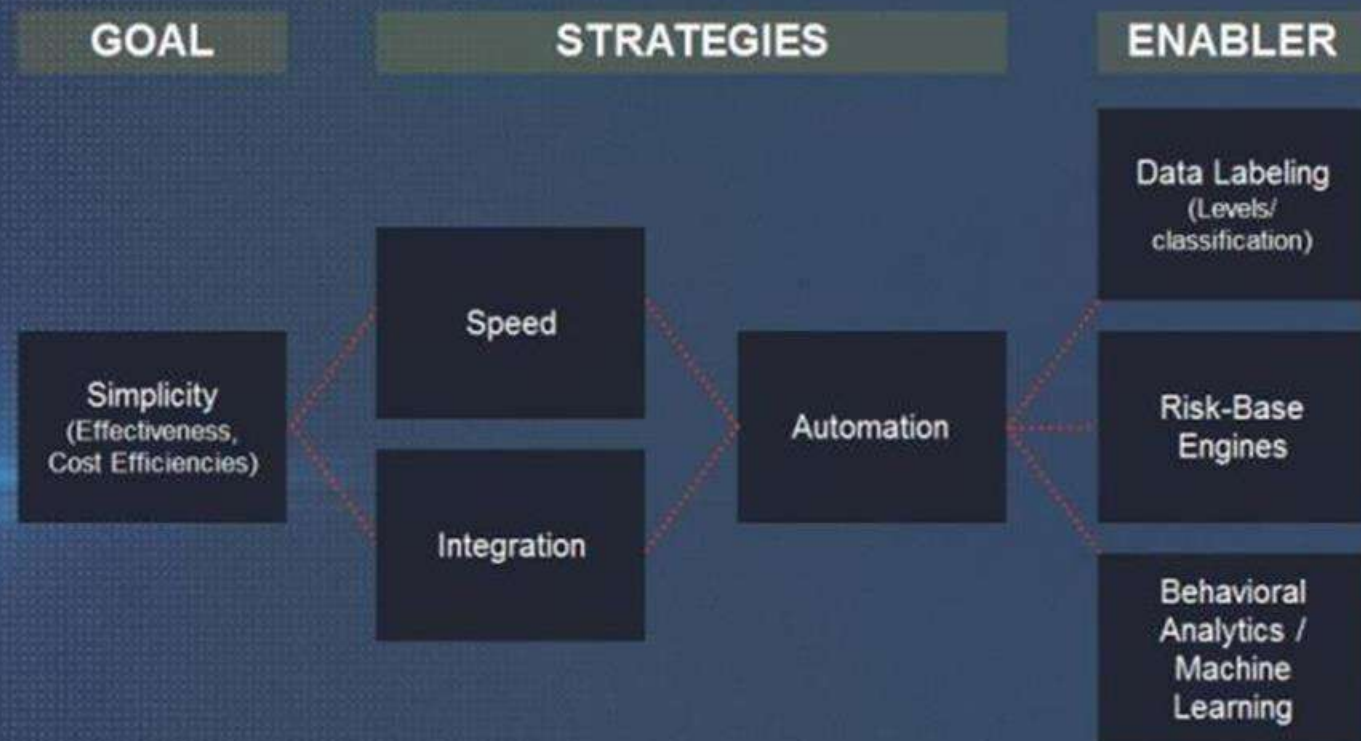
Speed

Integration

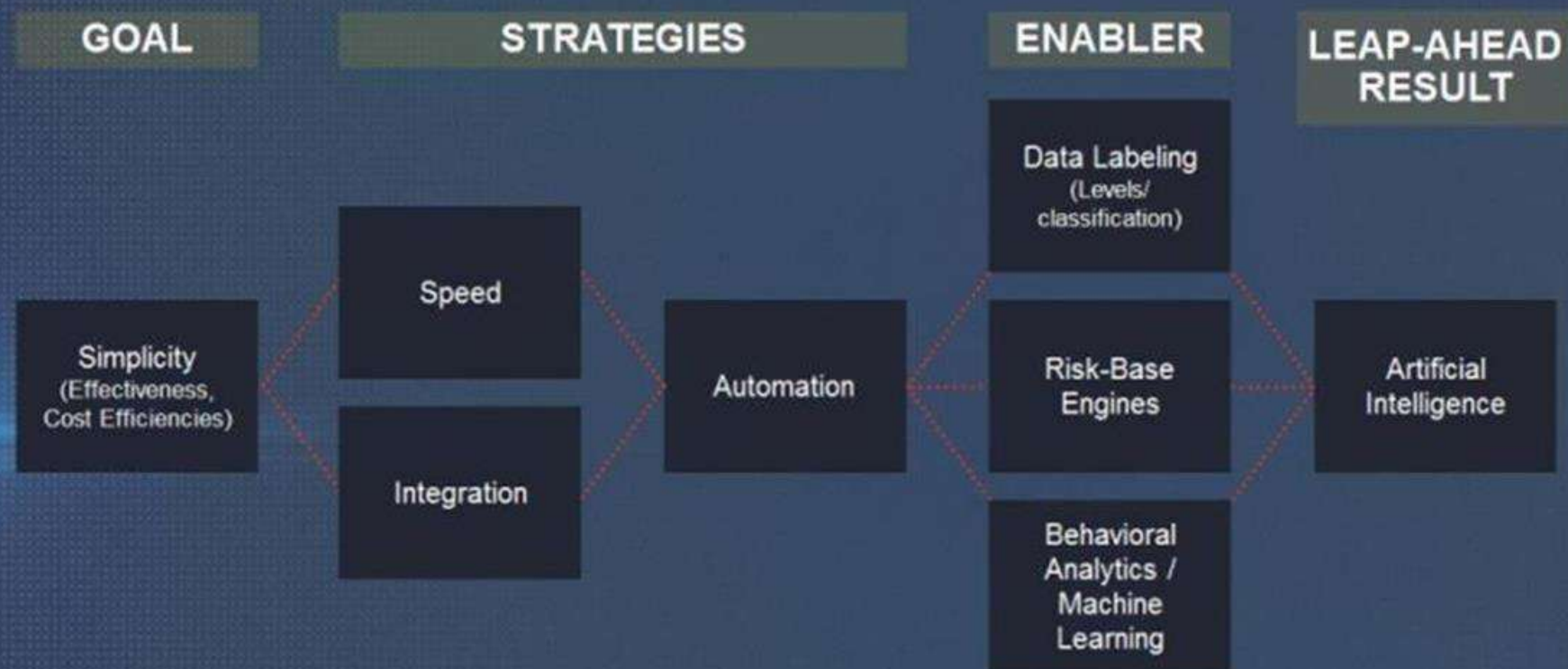
COMPUTER SCIENCE → SCIENCE FICTION



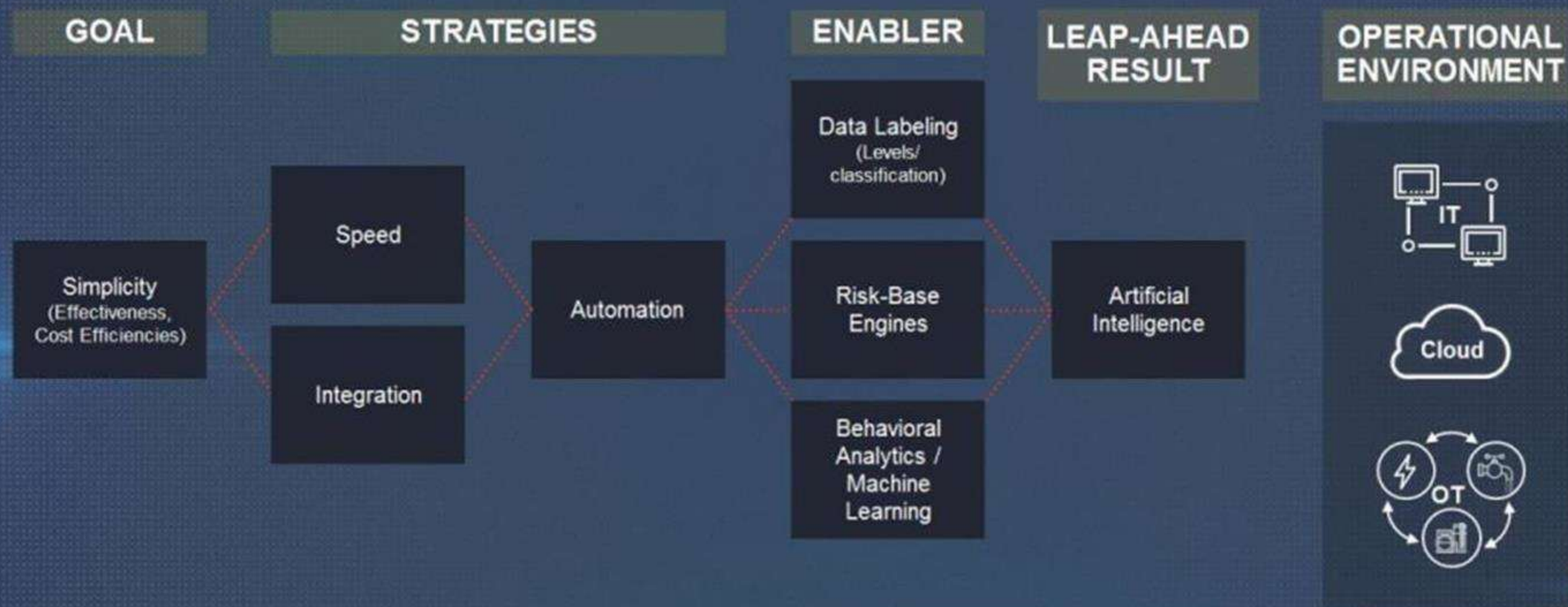
COMPUTER SCIENCE → SCIENCE FICTION



COMPUTER SCIENCE → SCIENCE FICTION



COMPUTER SCIENCE → SCIENCE FICTION



LEFT OF BOOM

... LEVERAGING AUTOMATION AND INTEGRATION

HARDEN

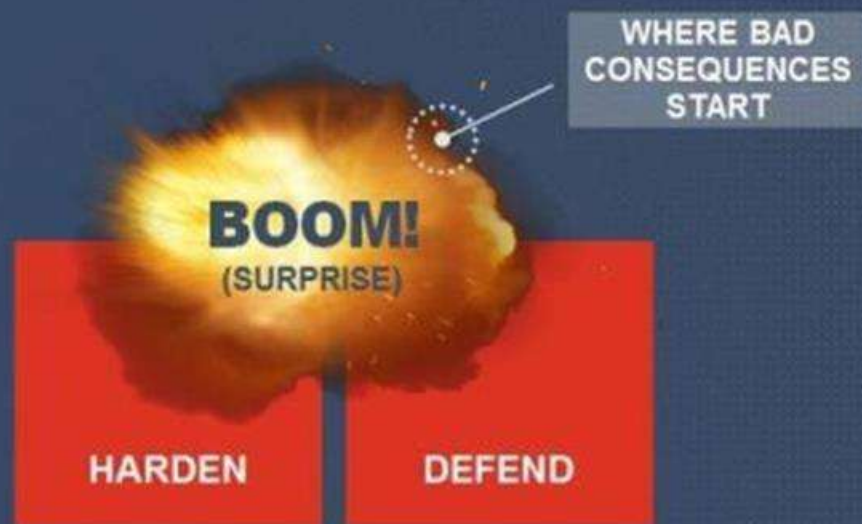
DEFEND

YESTERDAY

Focus on hardening
systems against
attacks

LEFT OF BOOM

... LEVERAGING AUTOMATION AND INTEGRATION



YESTERDAY

Focus on hardening
systems against
attacks

LEFT OF BOOM

... LEVERAGING AUTOMATION AND INTEGRATION



YESTERDAY

Focus on hardening
systems against
attacks

LEFT OF BOOM

... LEVERAGING AUTOMATION AND INTEGRATION



YESTERDAY

Focus on hardening
systems against
attacks

LEFT OF BOOM

... LEVERAGING AUTOMATION AND INTEGRATION



TODAY

Use automation and integration to keep things 'left of boom'

YESTERDAY

Focus on hardening systems against attacks

LEFT OF BOOM

... LEVERAGING AUTOMATION AND INTEGRATION



TODAY

Use automation and integration to keep things 'left of boom'

YESTERDAY

Focus on hardening systems against attacks

LEFT OF BOOM

... LEVERAGING AUTOMATION AND INTEGRATION



TODAY

Use automation and integration to keep things 'left of boom'

YESTERDAY

Focus on hardening systems against attacks

LEFT OF BOOM

... LEVERAGING AUTOMATION AND INTEGRATION



TOMORROW

Be able to quickly regenerate back to a resilient state

TODAY

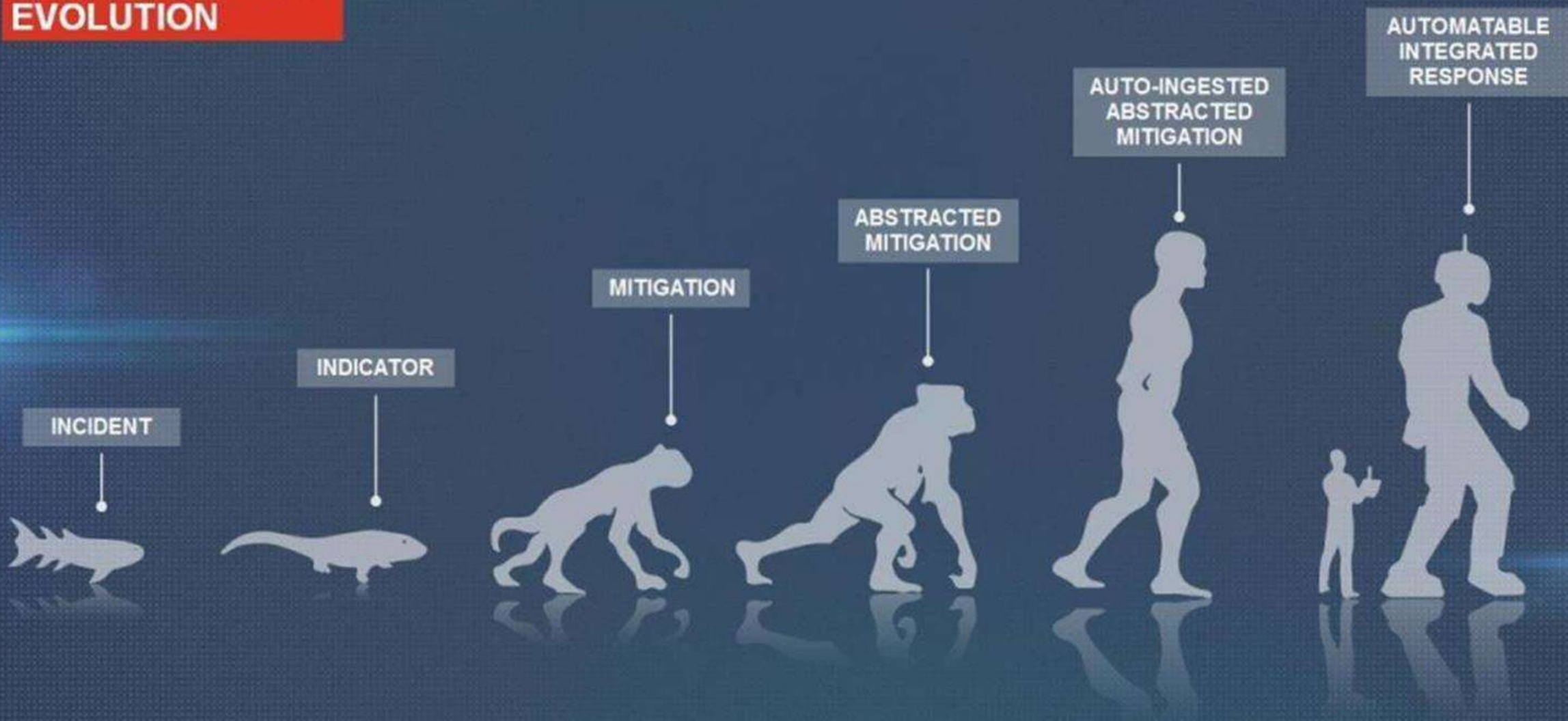
Use automation and integration to keep things 'left of boom'

YESTERDAY

Focus on hardening systems against attacks

RENAISSANCE: EVOLUTION OR REVOLUTION

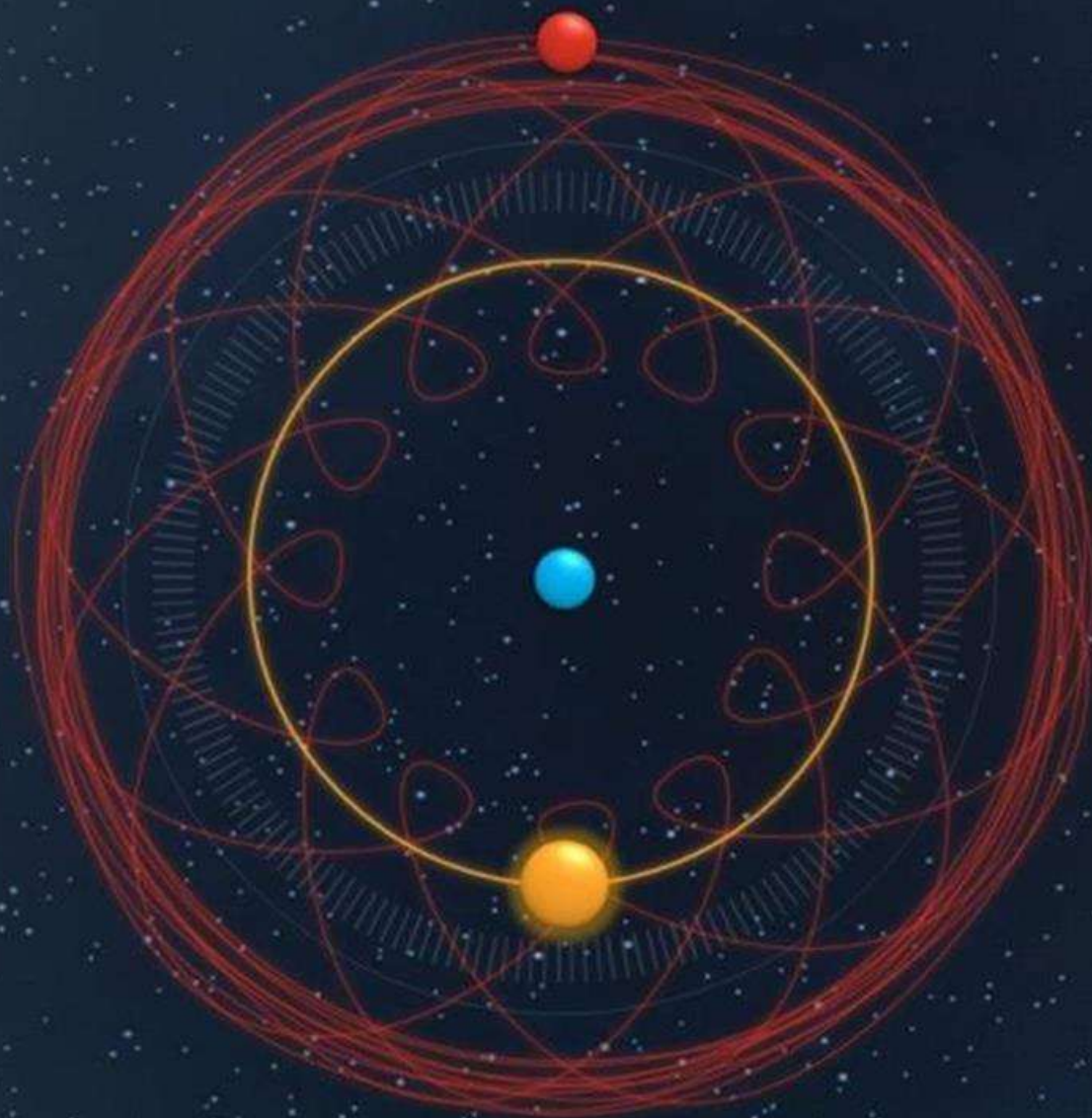
INFORMATION-SHARING:
EVOLUTION



RENAISSANCE: EVOLUTION OR REVOLUTION

DEFENSIVE STRATEGY:
REVOLUTION

CONCLUSIONS
REACHED VIA
INCOMPLETE
CONTEXT



- Sun
- Earth
- Mars

MORE DATA (VIA MORE VISIBILITY)

GALILEO

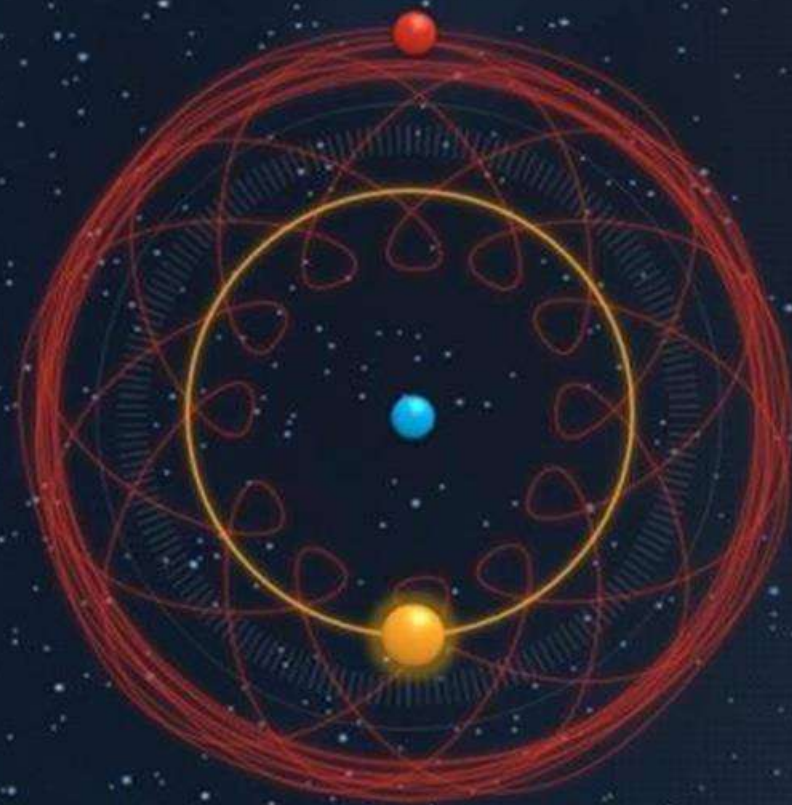
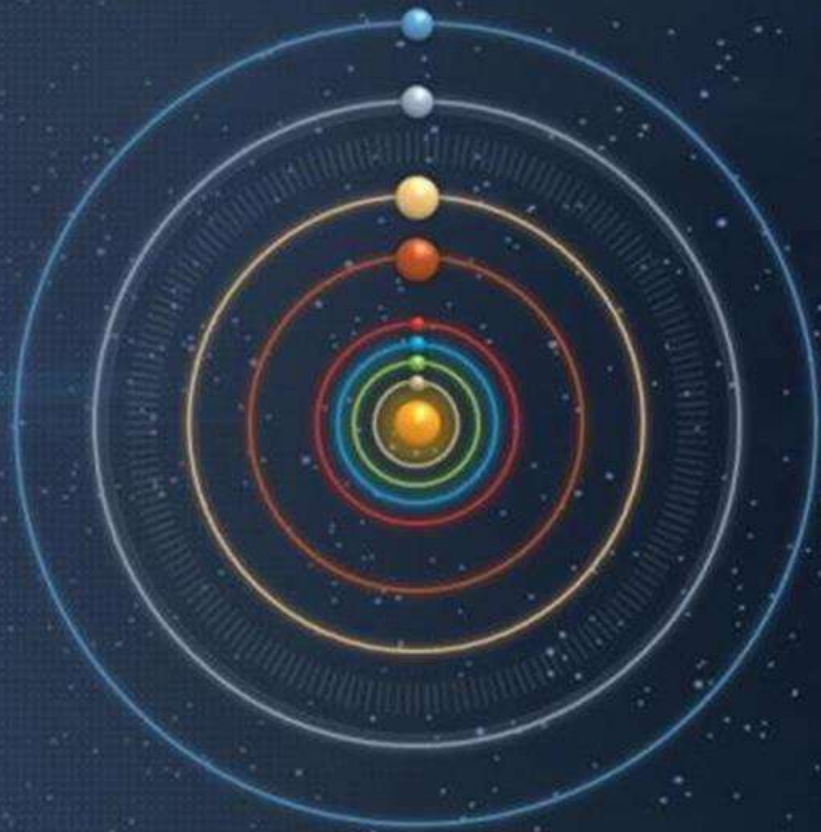


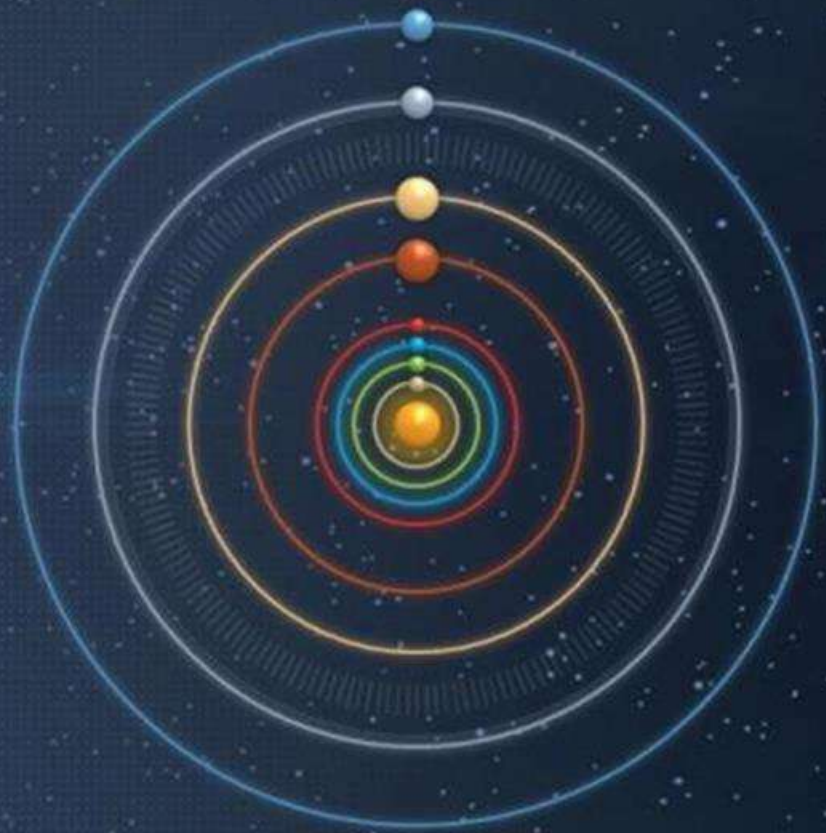
MORE DATA (VIA MORE VISIBILITY)

GALILEO



INSIGHT → SIMPLICITY → SECURITY





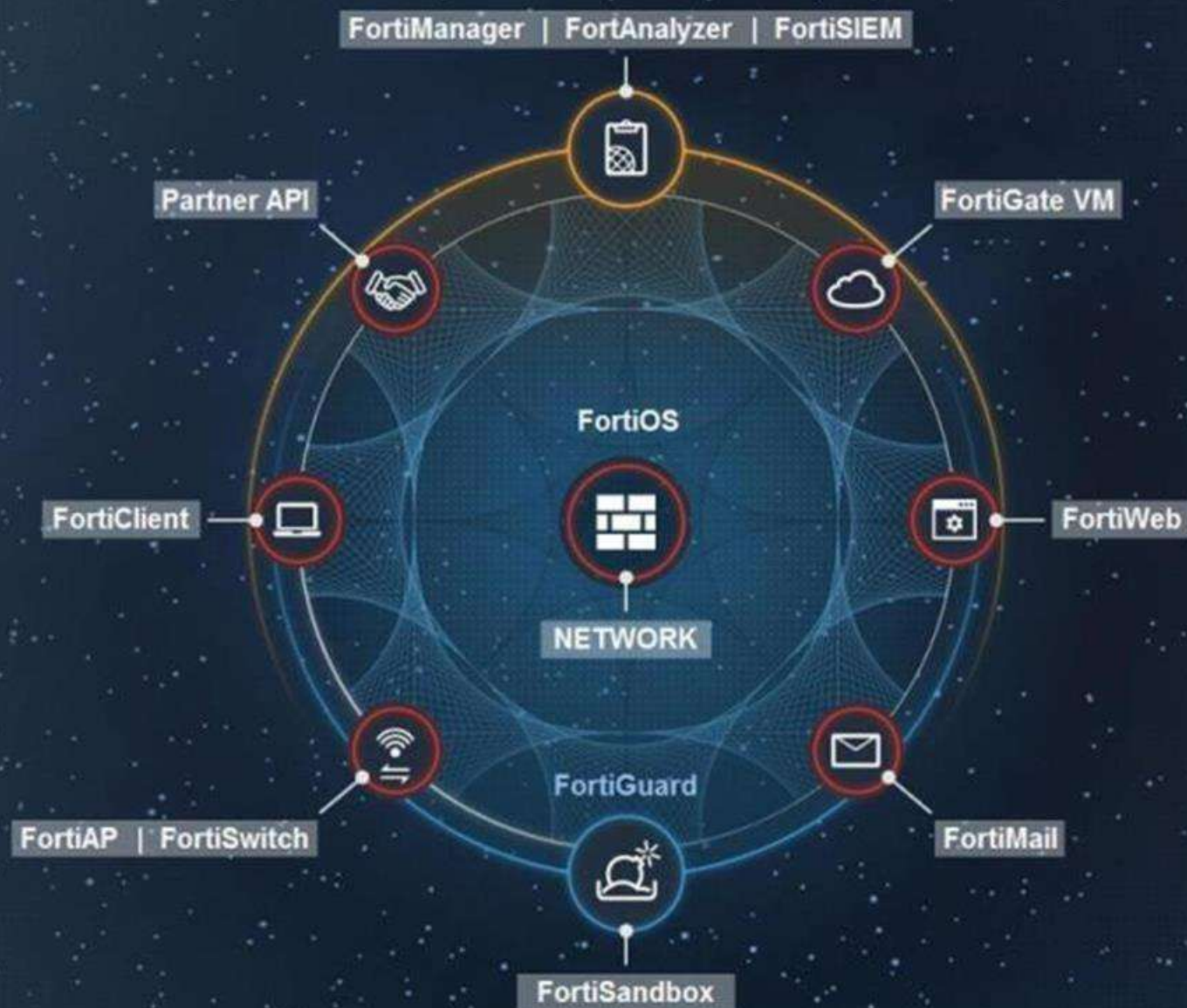


FORTINET SECURITY FABRIC

BROAD

INTEGRATED

AUTOMATED



**DATA IS THE OIL
OF THE 21ST CENTURY**



THE LIMITS OF CONSUMER TOLERANCE, HUMAN CAPACITY



INFRASTRUCTURES & FACILITIES

OT



INFRASTRUCTURES & FACILITIES

OT

MORE SEGMENTATION

Agile, Micro & Macro, Cloud



INFRASTRUCTURES & FACILITIES

OT

MORE SEGMENTATION

Agile, Micro & Macro, Cloud

FABRIC SOLUTIONS

To Defend with the Right Tools
at the Time & Place of Strength



INFRASTRUCTURES & FACILITIES

OT

MORE SEGMENTATION

Agile, Micro & Macro, Cloud

FABRIC SOLUTIONS

To Defend with the Right Tools
at the Time & Place of Strength

FUTURE PROOFING

Speed, Automation, Analytics,
Intent-based Security



INFRASTRUCTURES & FACILITIES

OT

MORE SEGMENTATION

Agile, Micro & Macro, Cloud

FABRIC SOLUTIONS

To Defend with the Right Tools
at the Time & Place of Strength



FUTURE PROOFING

Speed, Automation, Analytics,
Intent-based Security

ADVANCED INFORMATION SHARING

Threat, Mitigations

INFRASTRUCTURES & FACILITIES

OT

MORE SEGMENTATION

Agile, Micro & Macro, Cloud

FABRIC SOLUTIONS

To Defend with the Right Tools
at the Time & Place of Strength



FUTURE PROOFING

Speed, Automation, Analytics,
Intent-based Security

ADVANCED INFORMATION SHARING

Threat, Mitigations

INTEGRATED ECOSYSTEM

Simplicity, Visibility

FORTINET®