ALSO
Akadeemia

Hewlett Packard
Enterprise

Microsoft

IBM®

nexetic

vmware®

kemp

cisco

hp

noSpam proxy®

SECURITY DAY

HPE Aruba 360 Secure Fabric

- MIRJA AIMO, HPE & SIMO MÄKINEN, HPE

Hewlett Packard Enterprise

ALSO Akadeemia

SECURITY DAY

aruba

a Hewlett Packard
Enterprise company

Aruba 360 Secure Fabric

SECURING THE EXPERIENCE EDGE

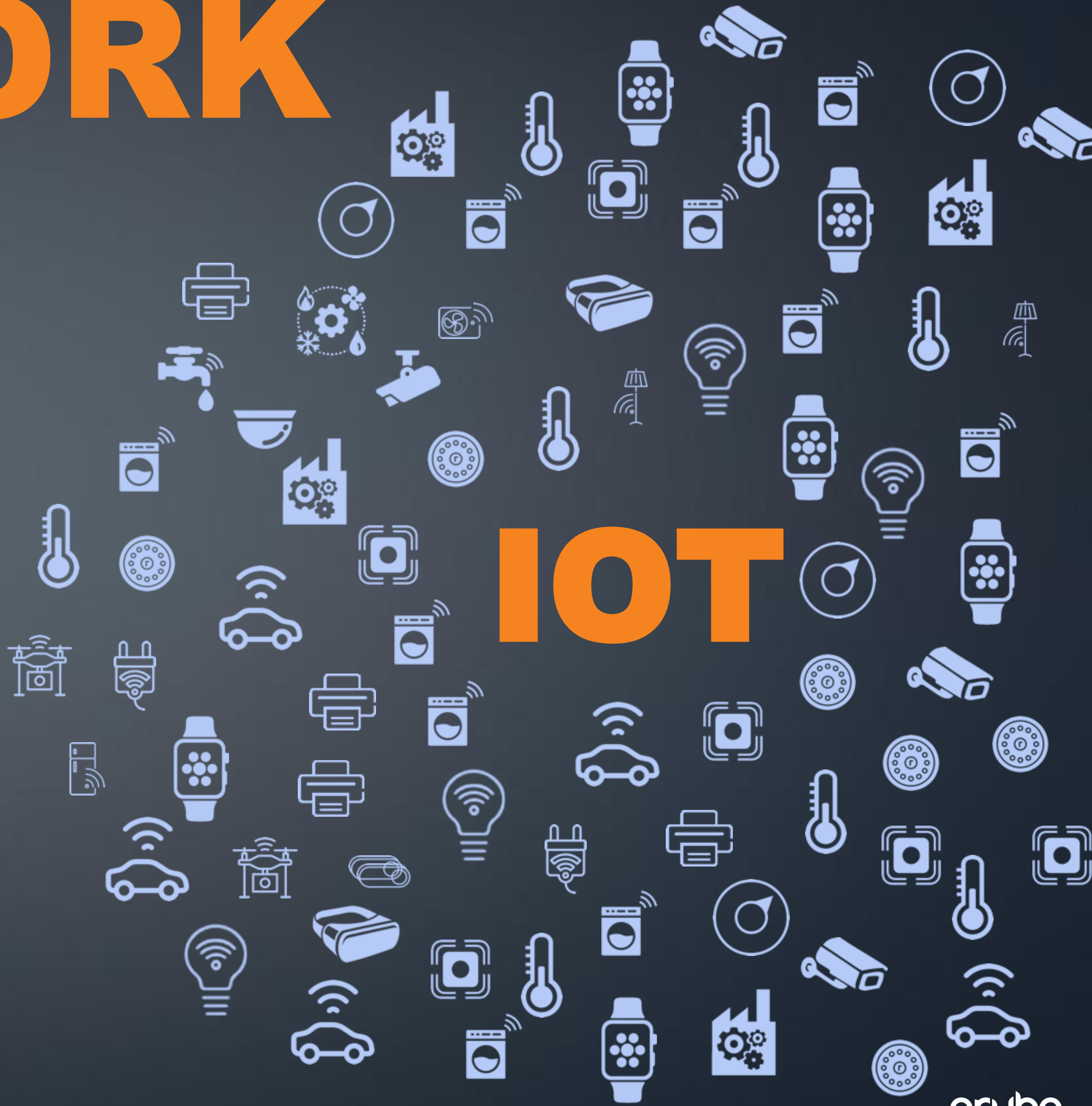
Also Security Day 17.10.2019
Mirja Aimo, HPE Aruba
Simo Mäkinen, Also

Evolution of the NETWORK

FIXED

MOBILE

CLOUD ENABLED



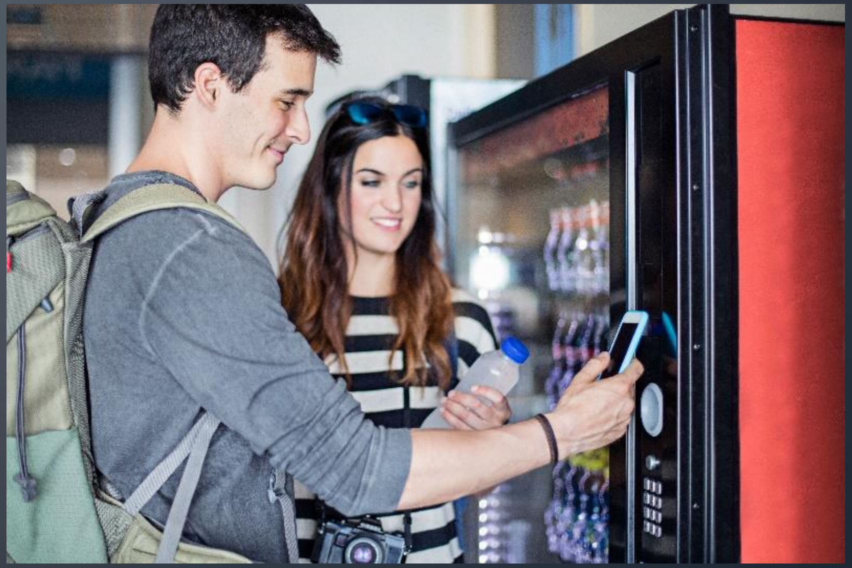
IOT

Key campus network CHALLENGES

Enhancing user (and device) experience

Policy administration complexity

Security concerns with the growth of IoT



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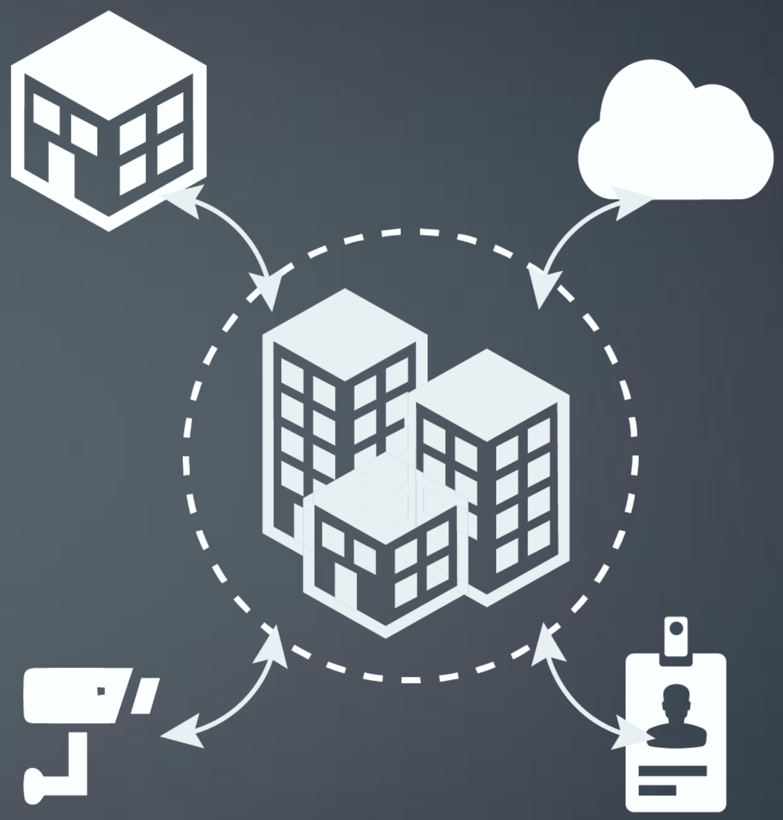
New Attack Environment: No Walls, New Threats

ATTACKERS

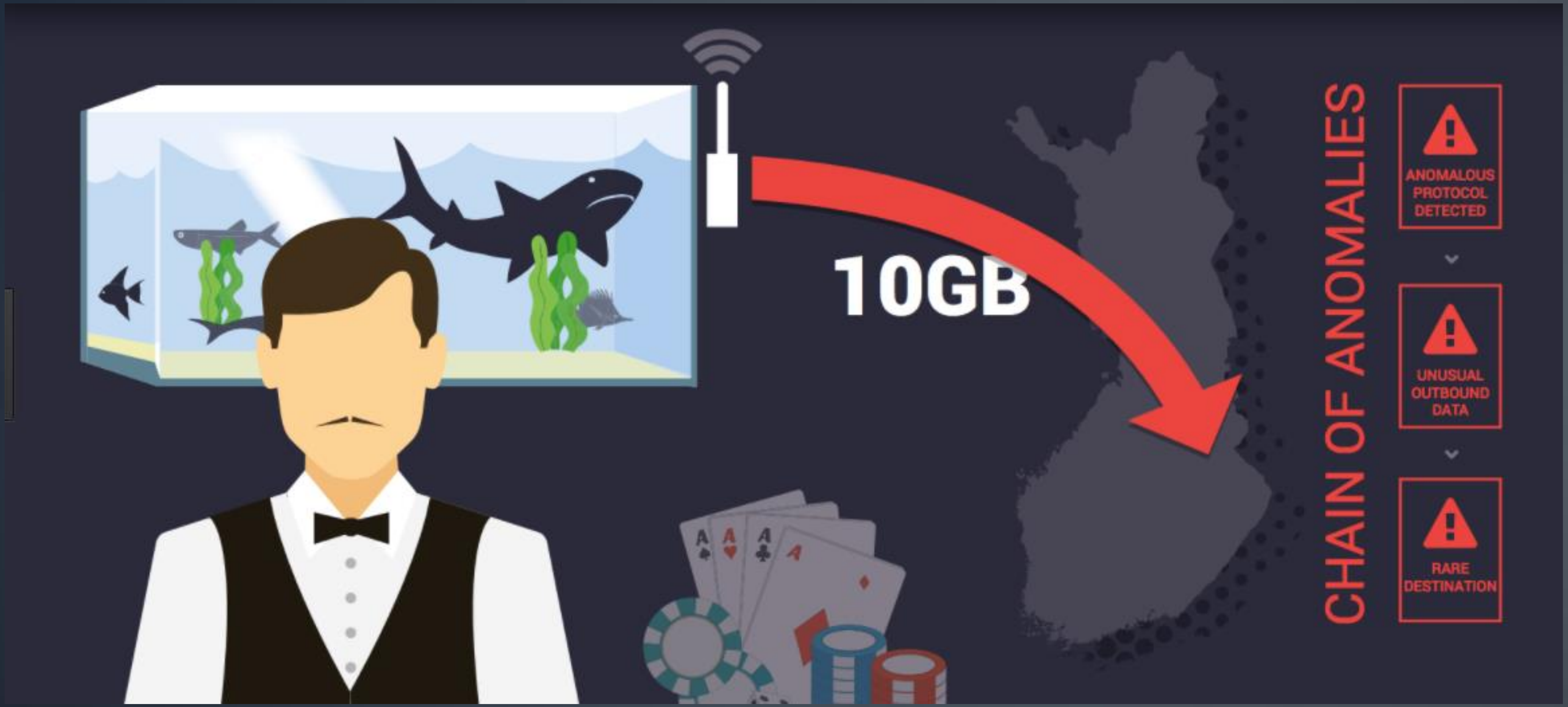
ARE QUICKLY INNOVATING & ADAPTING



BATTLEFIELD

WITH IOT AND CLOUD, SECURITY IS BORDERLESS

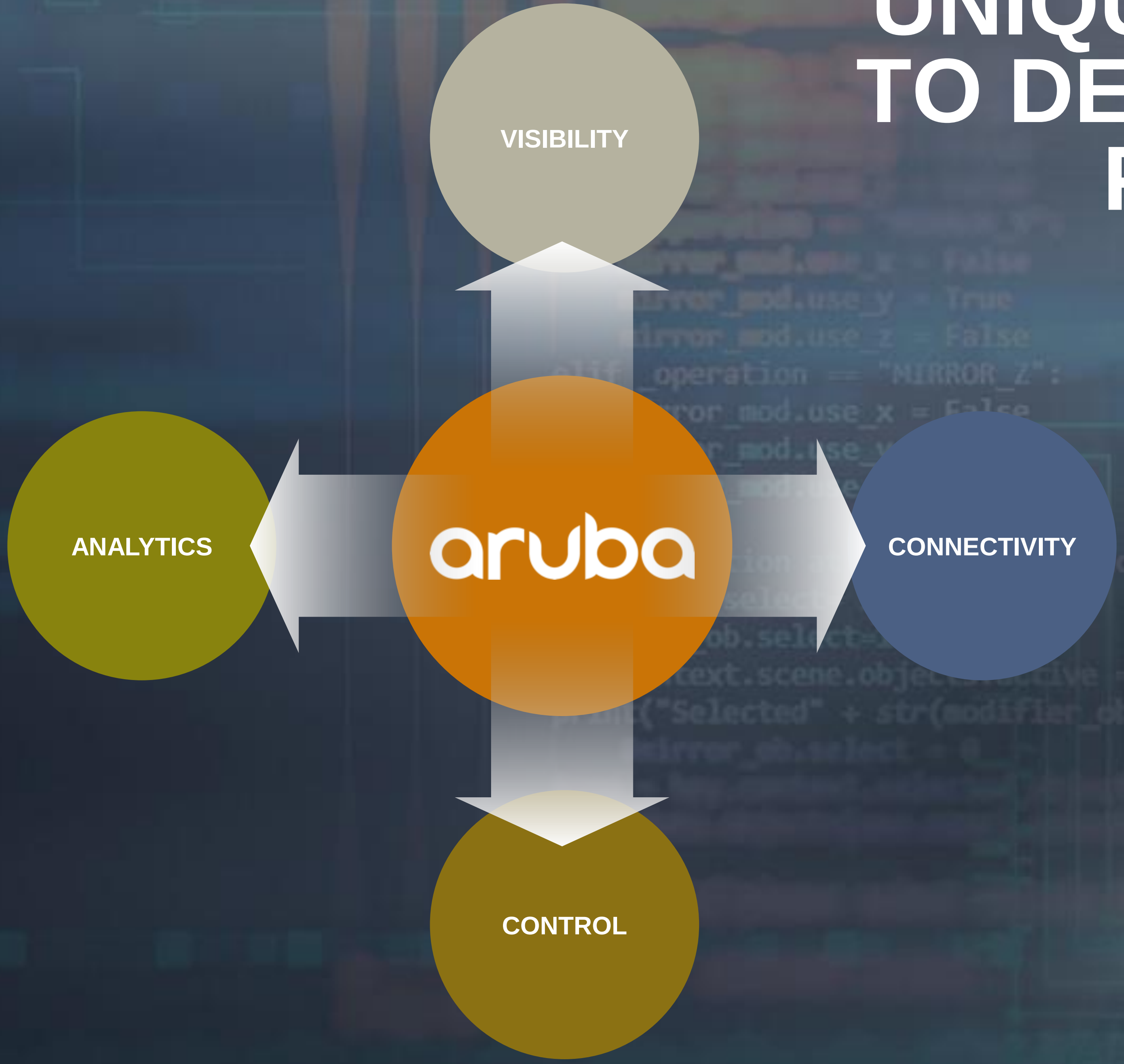
…another example…



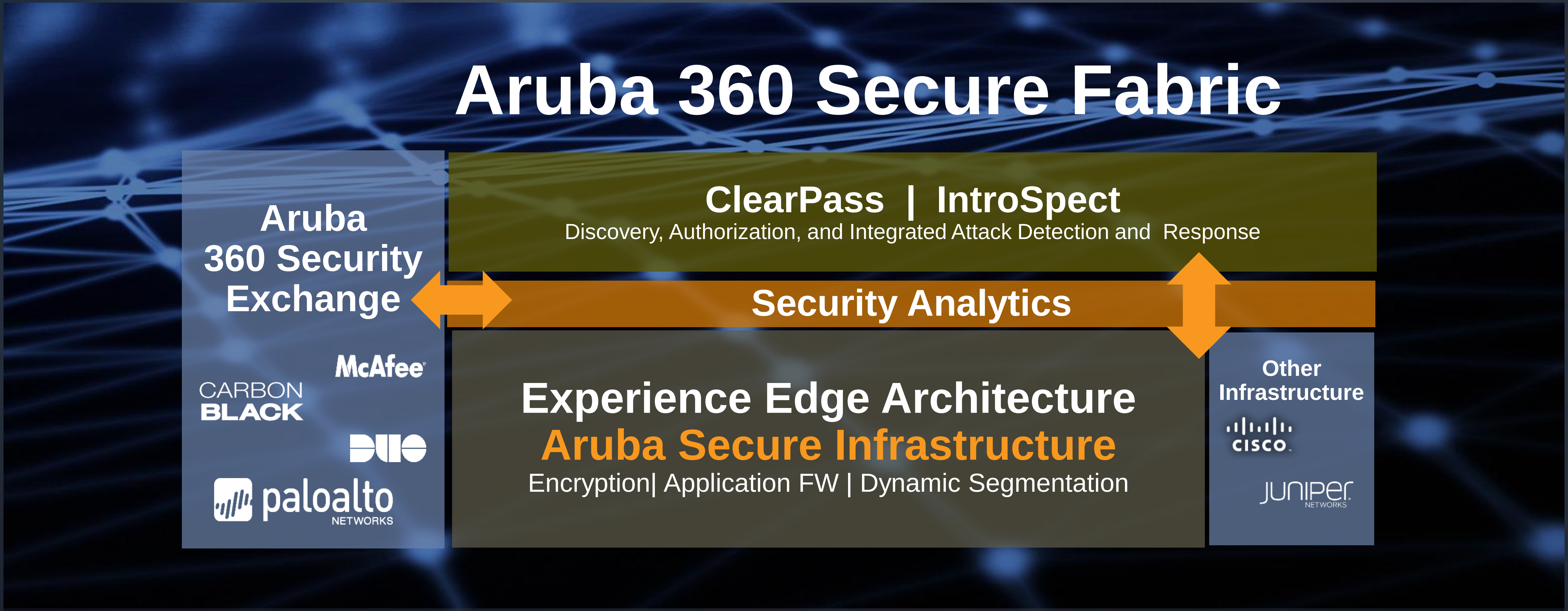
8 out of 10 organizations have experienced an IoT-related security breach.[3]

[3] www.engage.arubanetworks.com/LP_REG_510245507_510245507_ARUBA_WW_EN-US
https://www.washingtonpost.com/news/innovations/wp/2017/07/21/how-a-fish-tank-helped-hack-a-casino/

UNIQUELY POSITIONED TO DELIVER ADVANCED PROTECTION



Visibility, Detection and Control



Aruba 360 Secure Fabric

Aruba
360 Security
Exchange

McAfee

CARBON BLACK

DUO

paloalto NETWORKS

ClearPass | IntroSpect
Discovery, Authorization, and Integrated Attack Detection and Response

Security Analytics

Experience Edge Architecture
Aruba Secure Infrastructure
Encryption| Application FW | Dynamic Segmentation

Other
Infrastructure

cisco

JUNIPER NETWORKS

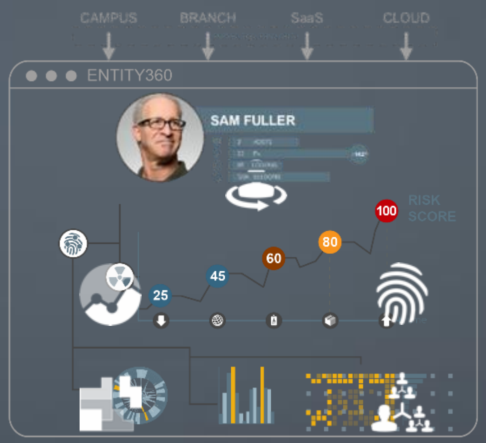
CLEARPASS + INTROSPECT = INTEGRATED PROTECTION

1. Discover and Authorize

User/Device Context

ClearPass
Secure Access Control

2. Monitor and Alert



Entity360 Profile
with Risk Scoring

IntroSpect UEBA

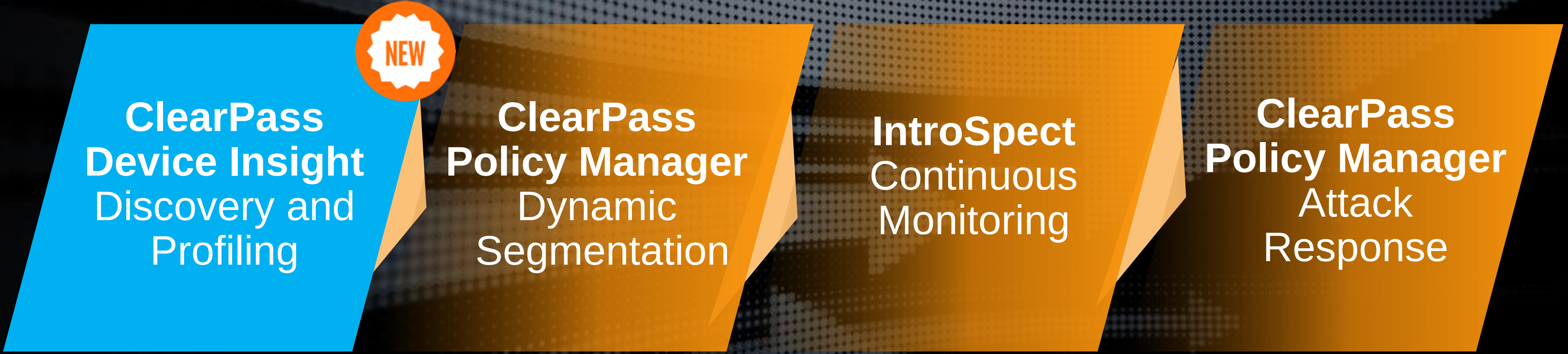
Actionable Alerts

3. Decide and Act

- Real-time Quarantine
- Re-authentication
- Bandwidth Control
- Blacklist

ClearPass
Adaptive Response

AUTOMATED, CLOSED-LOOP SECURE CONNECTIVITY



NEW

ClearPass Device Insight
Discovery and Profiling

ClearPass Policy Manager
Dynamic Segmentation

IntroSpect
Continuous Monitoring

ClearPass Policy Manager
Attack Response

ClearPass Family: From Visibility to Control

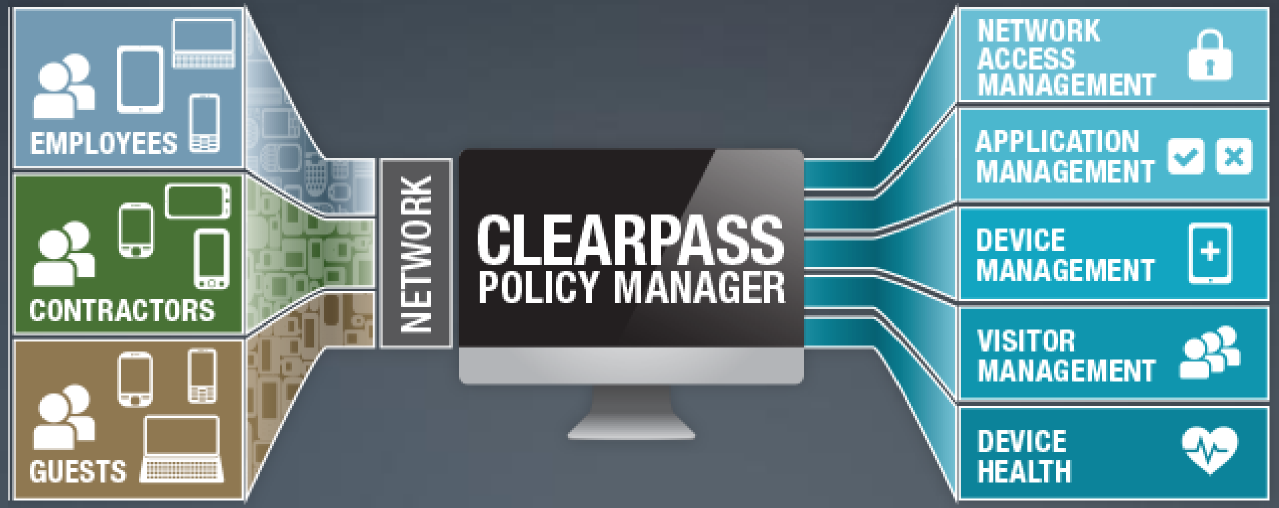
Guest/ Captive Portal	Policy Engine	Reporting	3rd Party Integrations	TACACS+

Onboard
Self-service BYOD

OnGuard
Device health checks

Device Insight
Total Visibility

What does ClearPass do to help?



Defines **WHO** and **WHAT DEVICES** can connect to:

DEVICES

DATA

INFRASTRUCTURE

APPLICATIONS

Identify – Enforce – Protect

POLICY MANAGER

CONTROL: AUTHENTICATION AND AUTHORIZATION

Full range of RADIUS and non-RADIUS authentication

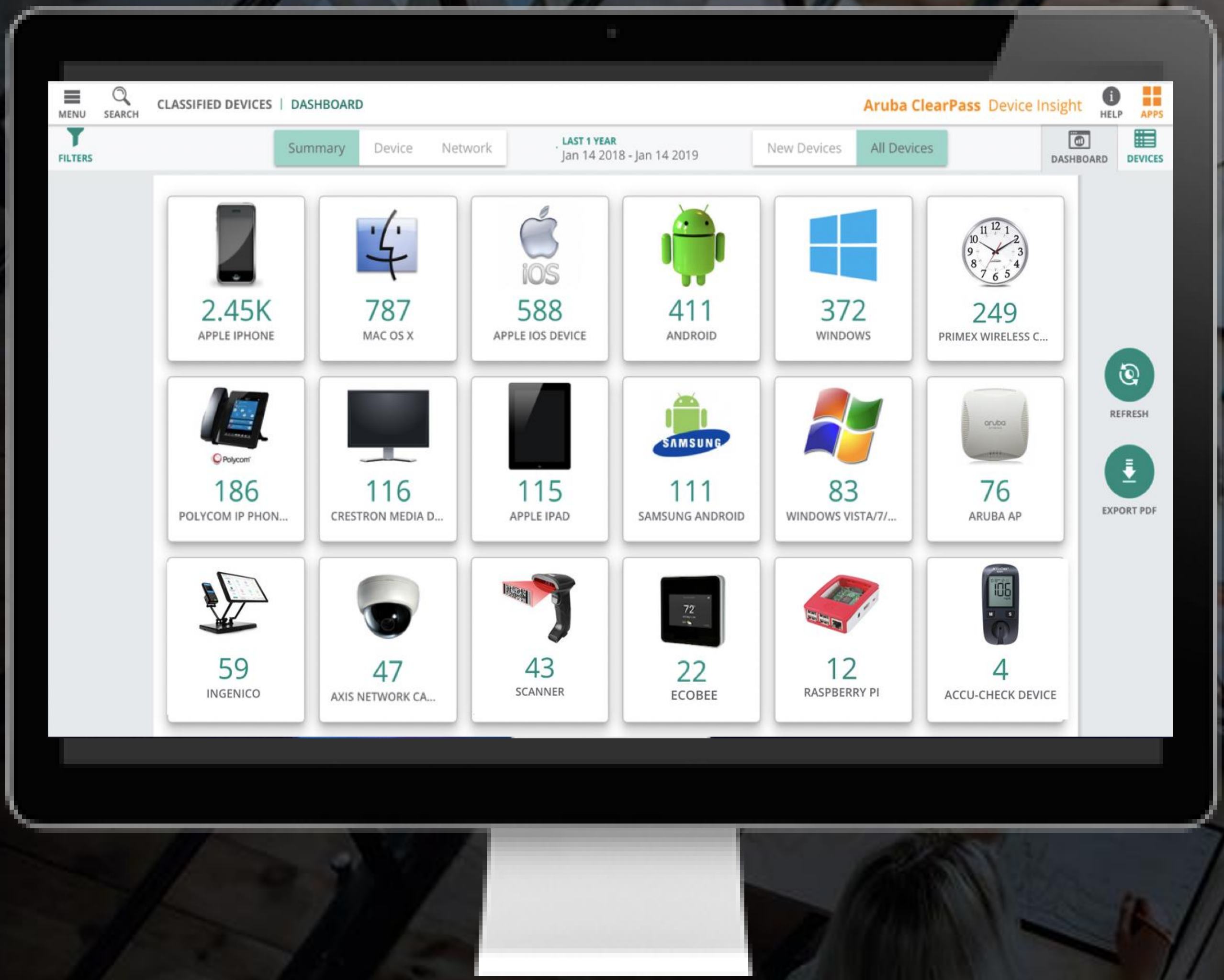
Enterprises define who can access files and applications

Defines **WHO** and **WHAT DEVICES** can connect to:

- Which **DEVICES**
- Which **DATA**
- Which **INFRASTRUCTURE**
- Which **APPLICATIONS**

SECURITY STARTS WITH VISBILITY

CLEARPASS DEVICE INSIGHT



2.45K	APPLE IPHONE
787	MAC OS X
588	APPLE IOS DEVICE
411	ANDROID
372	WINDOWS
249	PRIMEX WIRELESS C...
186	POLYCOM IP PHON...
116	CRESTRON MEDIA D...
115	APPLE IPAD
111	SAMSUNG ANDROID
83	WINDOWS VISTA/7/...
76	ARUBA AP
59	INGENICO
47	AXIS NETWORK CA...
43	SCANNER
22	ECOBEE
12	RASPBERRY PI
4	ACCU-CHECK DEVICE

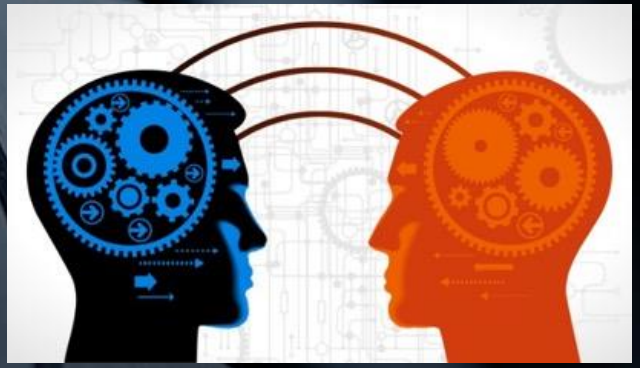
Delivers automated, AI-powered device identification combined with policy-based access control

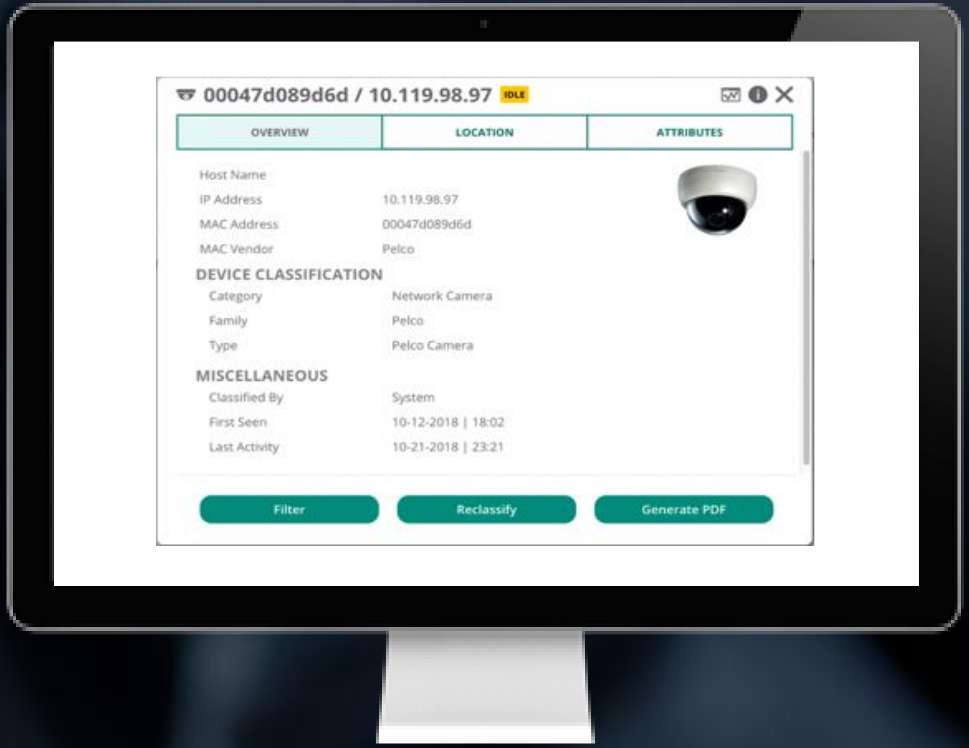
CLASSIFIES UNKNOWN DEVICES

Deep Packet Inspection (DPI)

- Device Attributes
- IP/MAC Address
- Application Access
- Communication Protocols
- Communication Frequency

MACHINE LEARNING





00047d089d6d / 10.119.98.97

Host Name
IP Address 10.119.98.97
MAC Address 00047d089d6d
MAC Vendor Pelco

DEVICE CLASSIFICATION
Category Network Camera
Family Pelco
Type Pelco Camera

MISCELLANEOUS
Classified By System
First Seen 10-12-2018 | 18:02
Last Activity 10-21-2018 | 23:21

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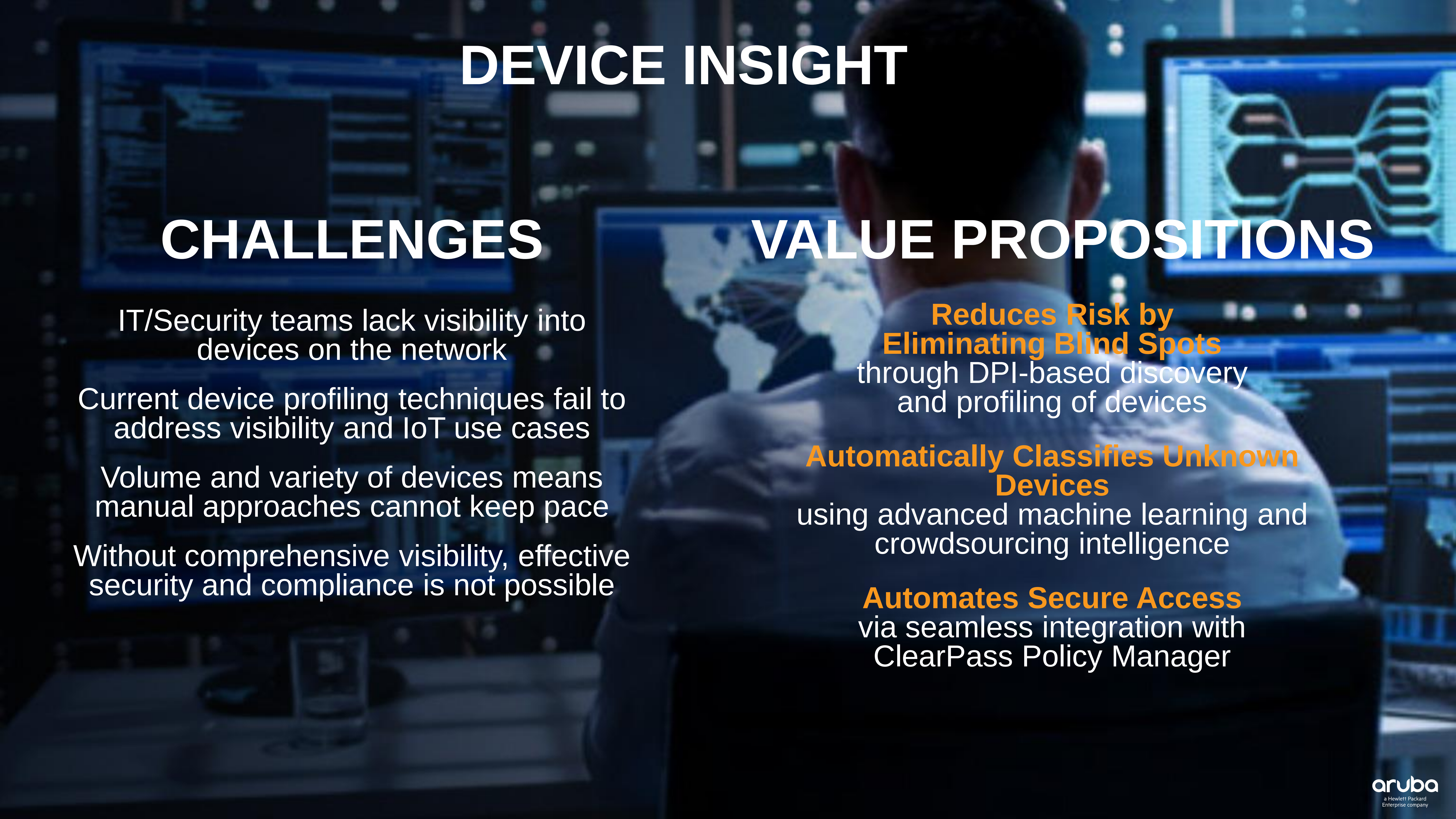

DEVICE INSIGHT

CHALLENGES

IT/Security teams lack visibility into devices on the network

Current device profiling techniques fail to address visibility and IoT use cases

Volume and variety of devices means manual approaches cannot keep pace

Without comprehensive visibility, effective security and compliance is not possible

VALUE PROPOSITIONS

Reduces Risk by Eliminating Blind Spots
through DPI-based discovery and profiling of devices

Automatically Classifies Unknown Devices
using advanced machine learning and crowdsourcing intelligence

Automates Secure Access
via seamless integration with ClearPass Policy Manager

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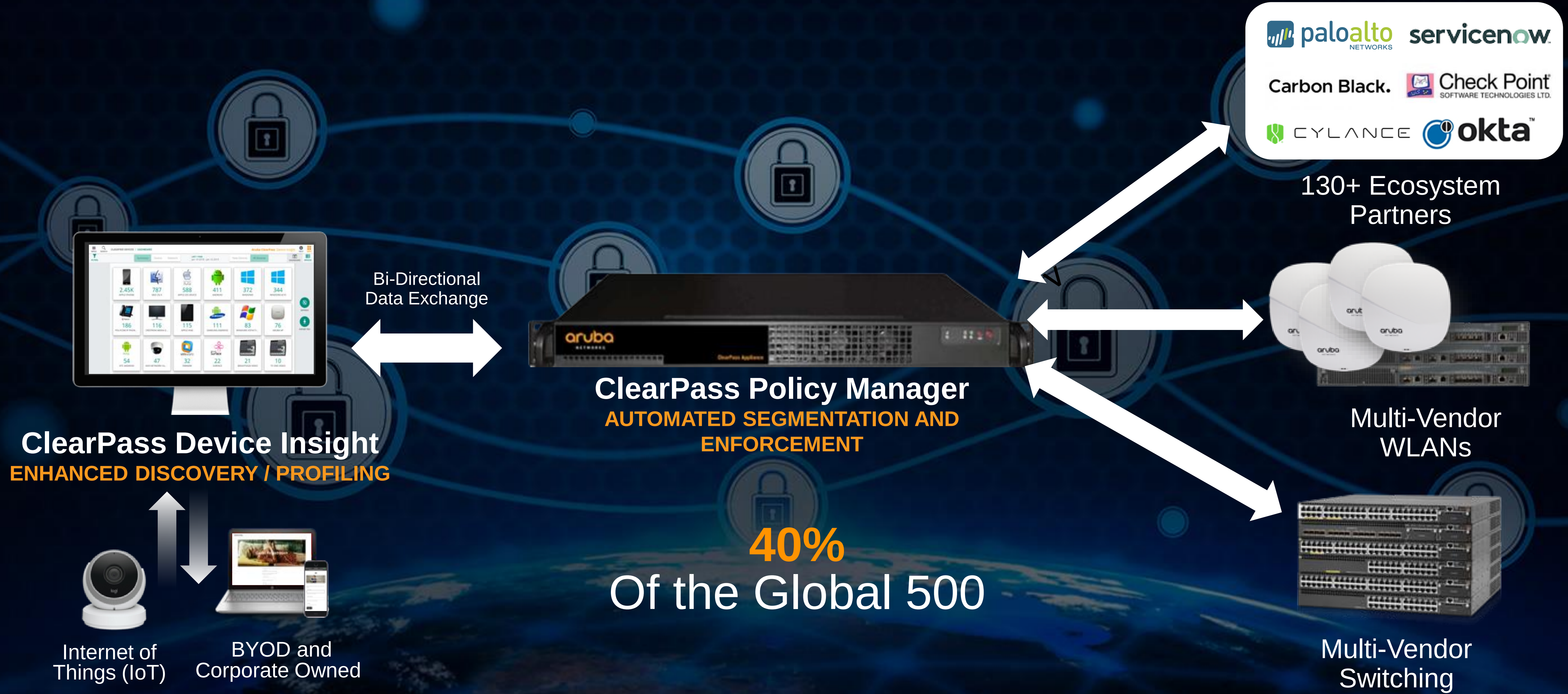
DEVICE INSIGHT + POLICY MANAGER

AUTOMATES SECURE ACCESS



130+ Ecosystem Partners

Bi-Directional Data Exchange

ClearPass Device Insight

ENHANCED DISCOVERY / PROFILING

ClearPass Policy Manager

AUTOMATED SEGMENTATION AND ENFORCEMENT

Multi-Vendor WLANs

Multi-Vendor Switching

Internet of Things (IoT)

BYOD and Corporate Owned

40%

Of the Global 500

AUTHORIZE: CONTEXT-BASED ACCESS

Enterprise Laptop

Internet and Intranet

Authentication	EAP-TLS
SSID	CORP-SECURE

SAP ORACLE box

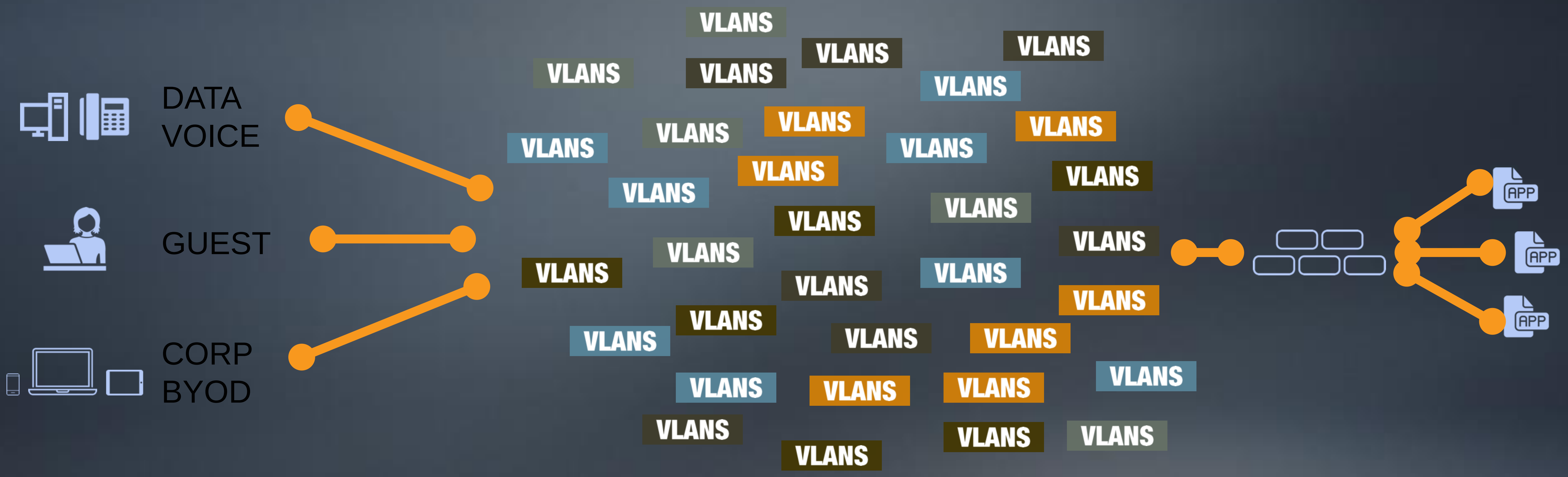
Lync Exchange

BYOD Phone

Internet Only

Authentication	EAP-TLS
SSID	CORP-SECURE

Segmentation brings COMPLEXITY



DATA
VOICE

GUEST

CORP
BYOD

VLANS
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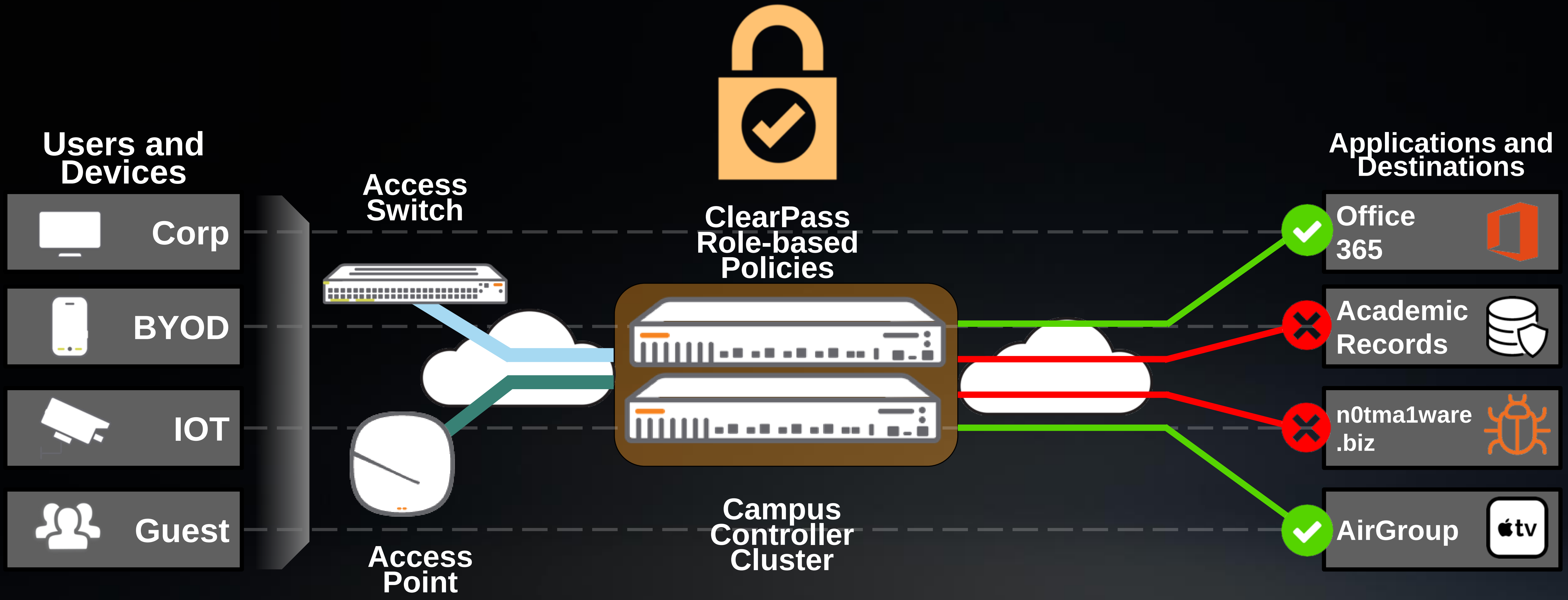
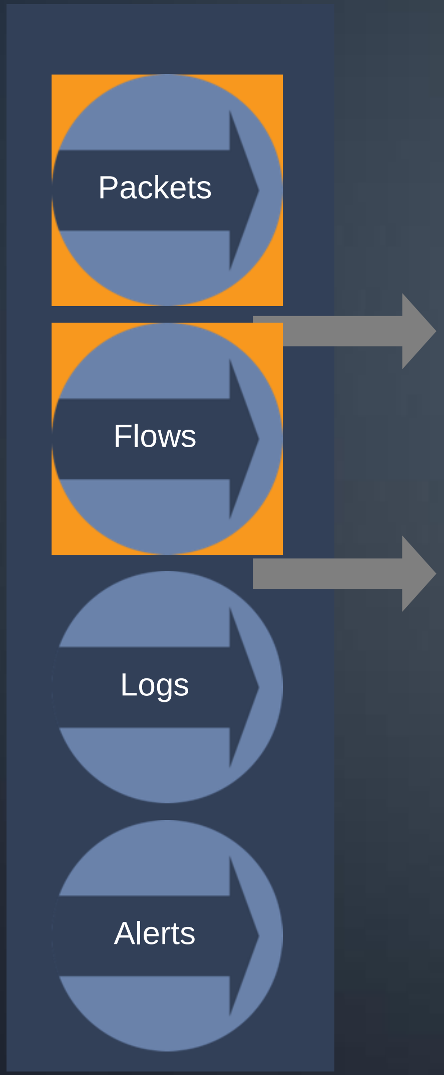
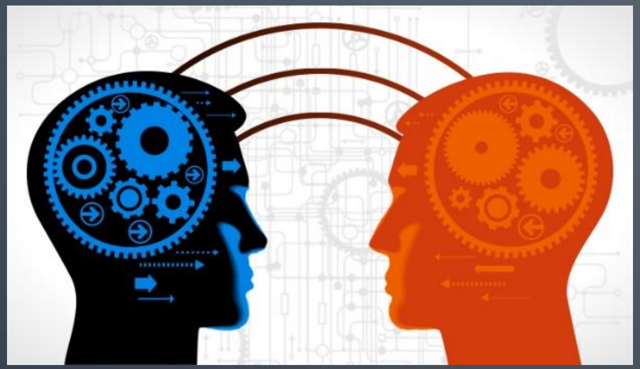
Trust Enforced by Dynamic Segmentation

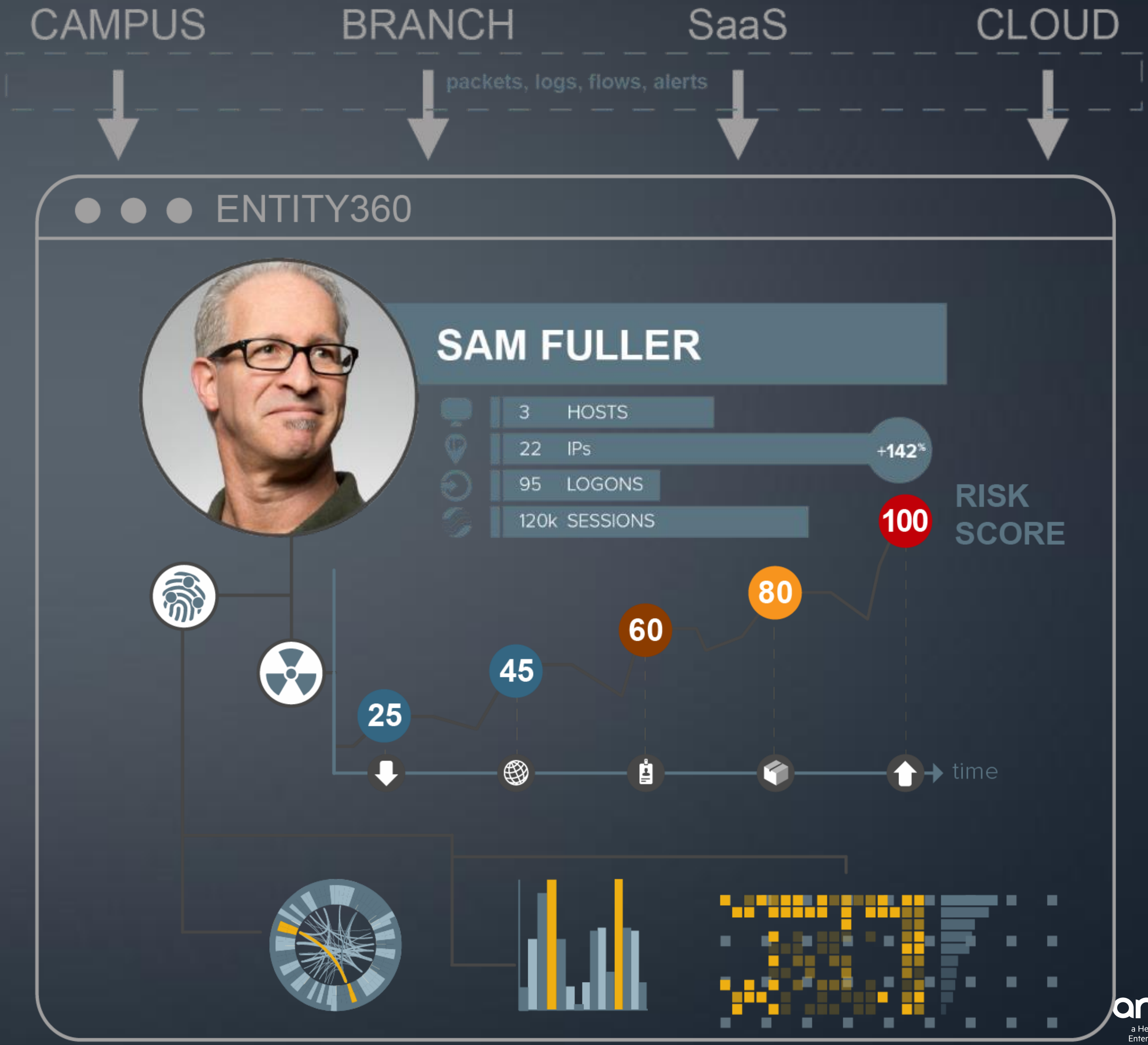


IntroSpect Advanced Analytics and Forensics



MACHINE LEARNING
SUPERVISED
UNSUPERVISED





HOW WE’RE DIFFERENT

CONTINUAL INNOVATION IN IOT CONNECTIVITY, SECURITY, AND AI

COMPLETE VISIBILITY ACROSS THE ENTIRE INFRASTRUCTRE

AUTOMATED, MACHINE LEARNING-BASED, DISCOVERY AND PROFILING

CLOUD-ENABLED, CROWDSOURCED

AUTOMATED, POLICY-BASED SECURE ACCESS

Case Study?

- **https://www.arubanetworks.com/assets/cs/CS_Goliska_UK.pdf**

THANK YOU

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