CHECK POINT™

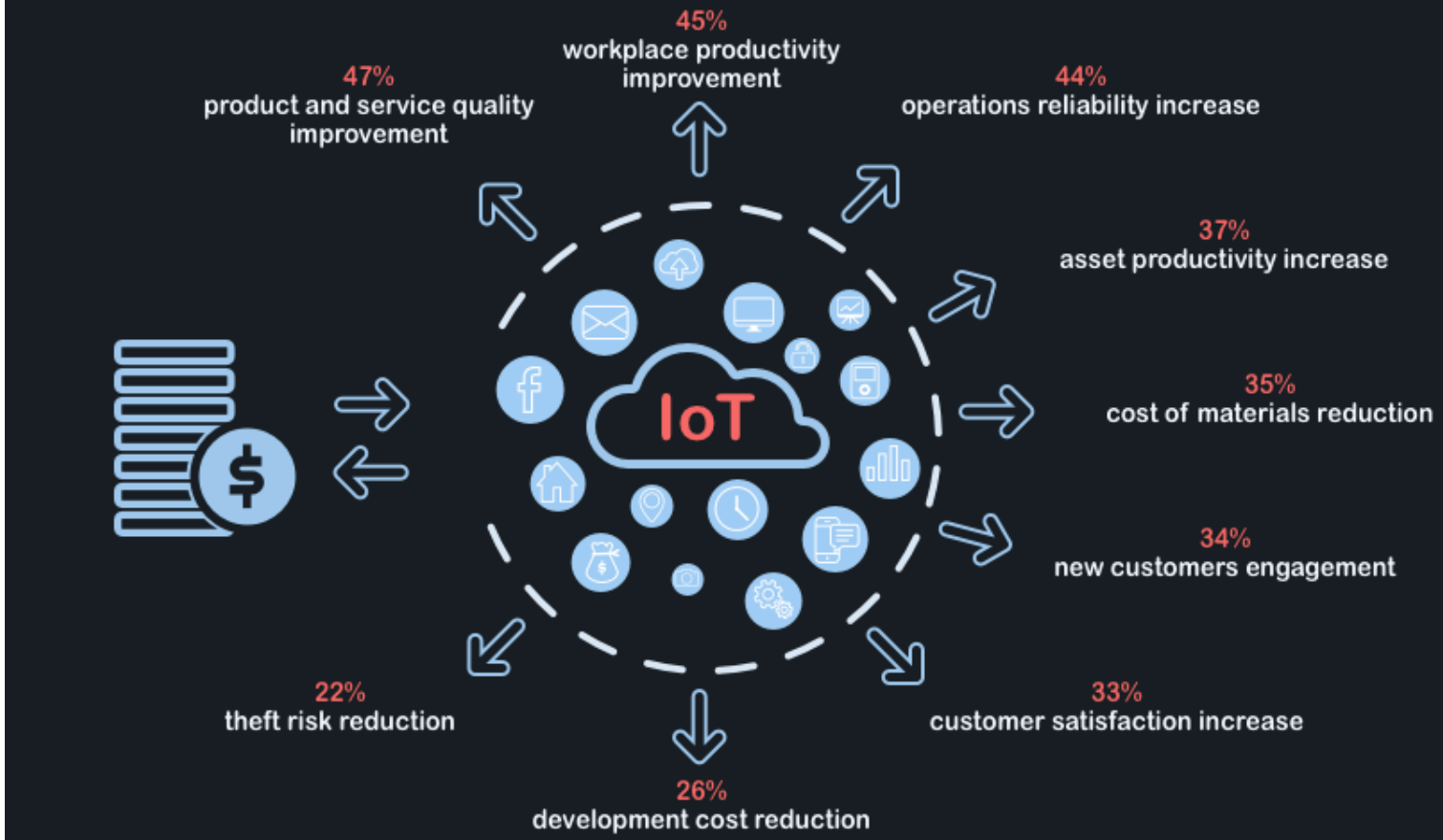
YOU DESERVE THE BEST SECURITY

SECURE BY DESIGN - THE FOUNDATION OF IOT SECURITY

Kev Hau | Head of Security Engineering, North Asia

Cybersecurity Evangelist, Office of CTO

IOT CREATED POSSIBLE IMPACT TO BUSINESSES



Source: Top 7 IoT Business Ideas and IoT Trends in 2019 (cleveroad.com)

IOT HELP WITH ESG PERFORMANCE

Improve safety

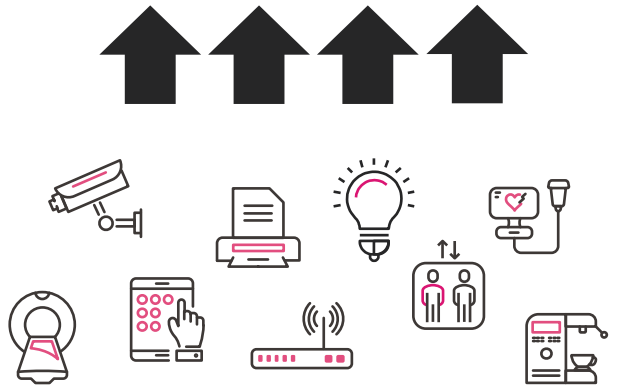
Reduce energy use

Reduce carbon

Reduce pollution

Waste reduction

Environmental Social Governance



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IOT DEVICES ARE EASY TO HACK INTO

- Run on Legacy OS
- Difficult to Patch
- No Built-in Security
- Unchanged Password
- Physically accessible

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CHECK POINT RESEARCH

2017

LG ROBOT VACUUM

- HomeHack vulnerability
- Account takeover
- Spy on users' home activities

2018

ALL IN ONE PRINTER

- Fax number
- Device takeover
- Network backdoor

2019

CANON DSLR CAMERA

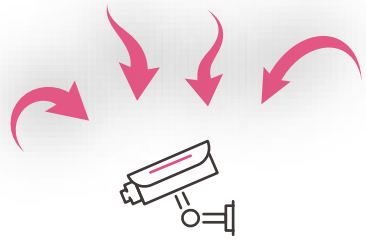
- PTP
- Buffer overflow vulnerability
- Malicious firmware install
- Encrypt the pictures

2020

PHILIPS HUE LIGHT BULB

- ZigBee protocol
- Remote exploit
- Device (bridge) takeover
- Network backdoor

EXPLOIT
IOT VULNERABILITIES



Risk to IOT Devices

Manipulation, Downtime, Damage

Network Backdoor

Lateral movement to other network elements

INDUSTRIAL

SMART OFFICE

IOT SECURIY REPRESENT A NEW FRONTIER

HEALTHCARE

SMART BUILDING

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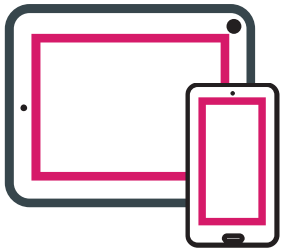
CUSTOMER'S SECURITY PROTECTION ON THEIR DEVICES

- Antivirus is a baseline
- Use disk encryption
- Host based IPS
- NGAV enhancement
- EDR enhancement



- Mobile device management
- Secure container
- Mobile threat defense requirement is growing

Missing Piece

Log4j

Spring Framework

Microsoft Print Nightmare

A lot more vulnerabilities on the Windows and Linux OS

50% devices are protected

How about another 50% or even more?

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PROTECT IOT FROM INFRASTRUCTURE PERSPECTIVE

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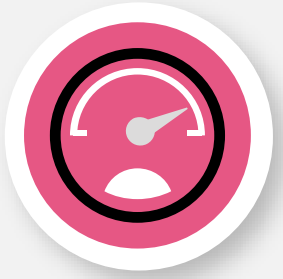
VISIBILITY

Extensive visibility of your environment including the devices detail, security flaw, communication flow, and malicious intent activities

ENFORCEMENT

Automated access control and threat prevention applying zero-trust control with minimal effort



RESPONSE

Automated response processes that dramatically reduce your response times

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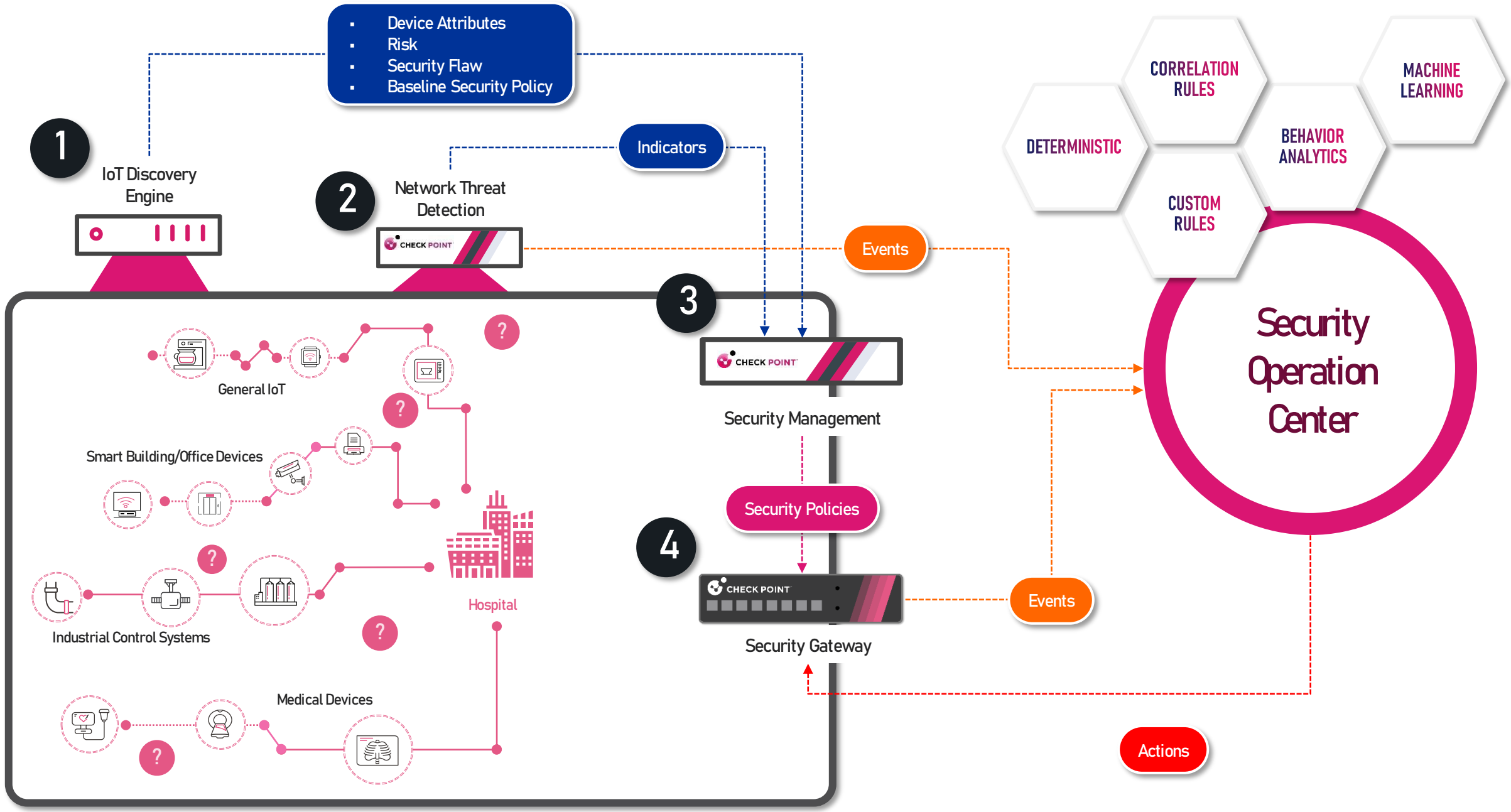

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SECURE BY DESIGN

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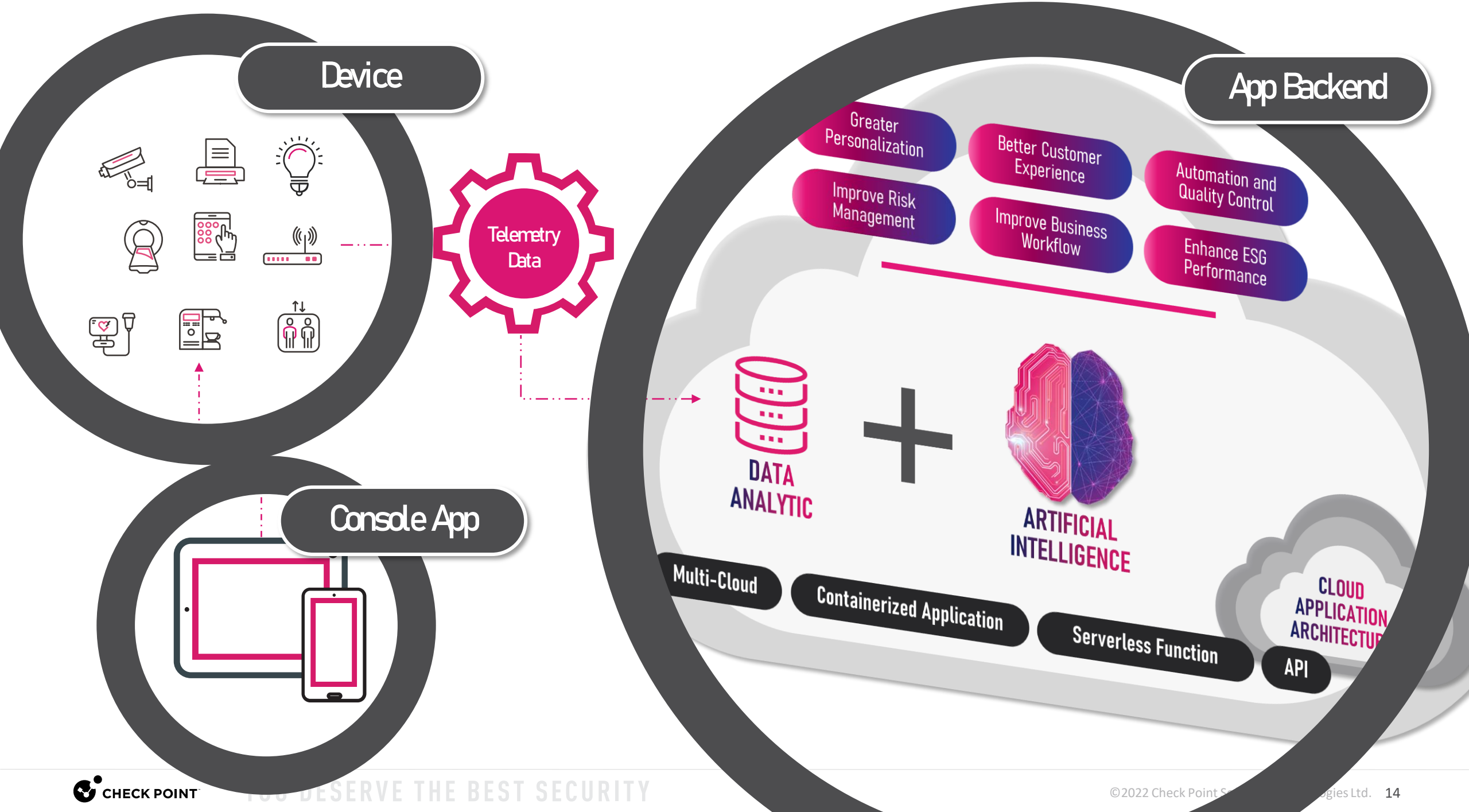
Software and hardware development that seeks to make systems as free of vulnerabilities and impervious to attack as possible

YOU DESERVE THE BEST SECURITY



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DEVICE

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UNCOVER DEVICE-SPECIFIC SECURITY RISKS

- Weak/Known Credentials
- Known Vulnerabilities (CVEs)
- SWM sconfigurations
- Suspicious Listed Domains
- Unsecured Private Key

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ON DEVICE RUNTIME SELF-PROTECTION
NANO AGENT SECURITY

Any Linux OS
- ARM32 / ARM64
- X86 64bit

Cloud Based Management

Security Built into Device
Storage & RAM Starting at 1MB

- Access Control
- Memory corruption
- Shell injection
- Import table hijacking
- Control flow hijacking

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CONSOLE APP

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MOBILE APPLICATION SECURITY TEST

Analyze and Identify Ricks in the Mobile App

SECURITY & VULNERABILITIES ANALYSIS

PRIVACY ISSUE ANALYSIS

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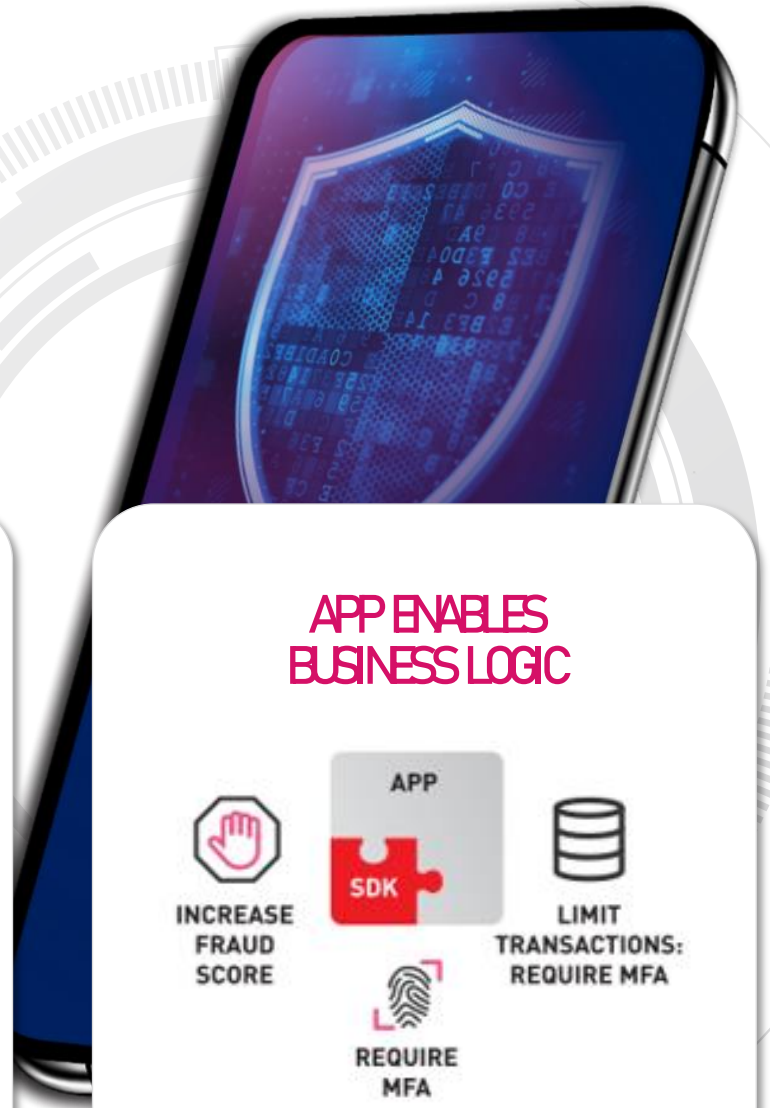
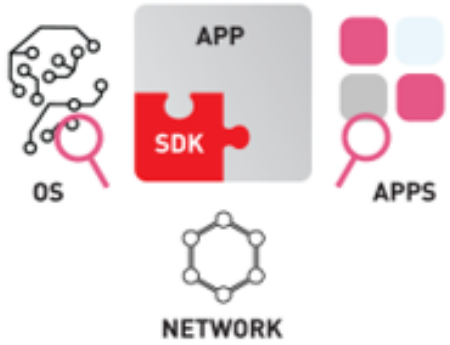
RUNTIME PROTECTION

Add Security Logic into your Mobile App



SECURITY SDK INTEGRATES WITH APP

SDK SCAN FOR THREATS



APP ENABLES BUSINESS LOGIC

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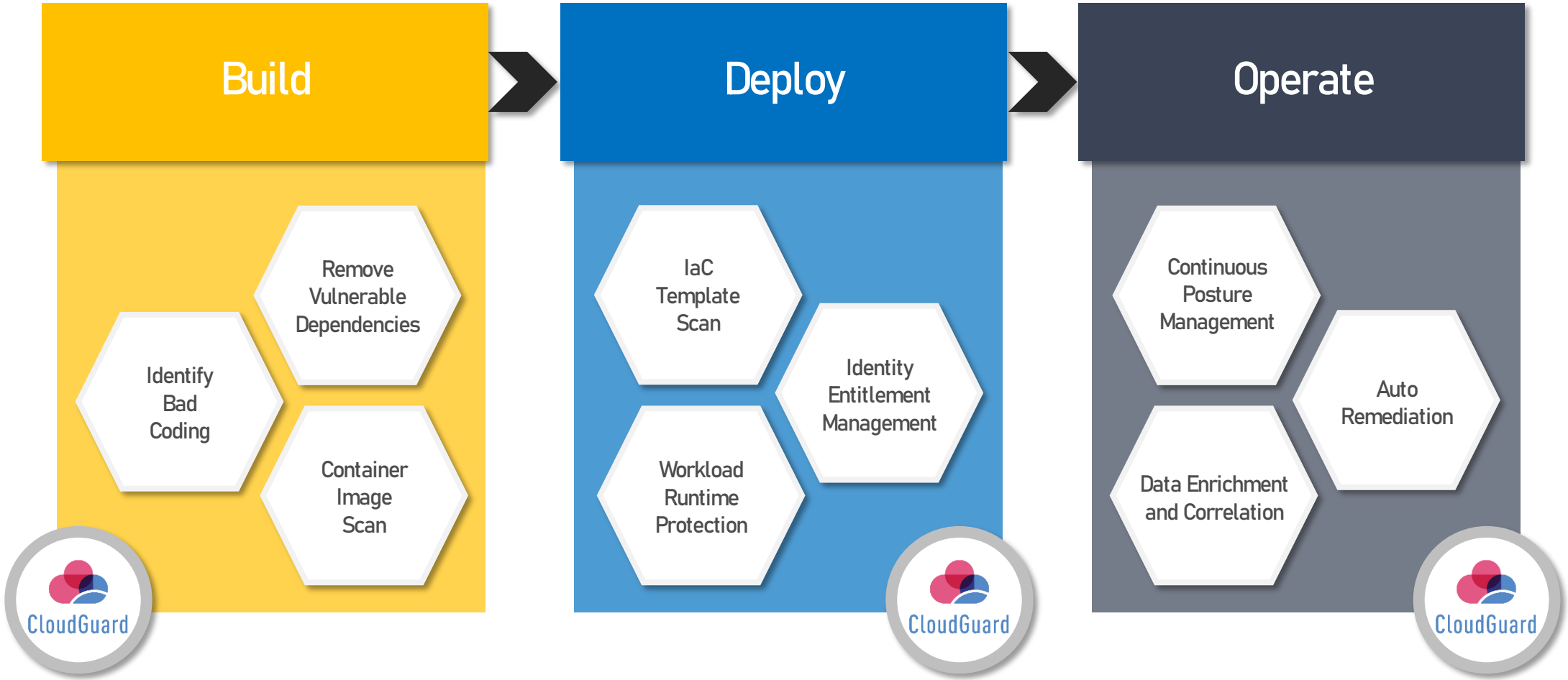
APPLICATION BACKEND

YOU DESERVE THE BEST SECURITY

APPLICATION SECURITY

Security measurement at every stage of SDLC



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CASE SHARING

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CHECK POINT™ | PROVISION ISR®

CHECK POINT + PROVISION-ISR

Simple & Secure IP Surveillance for Any Organization

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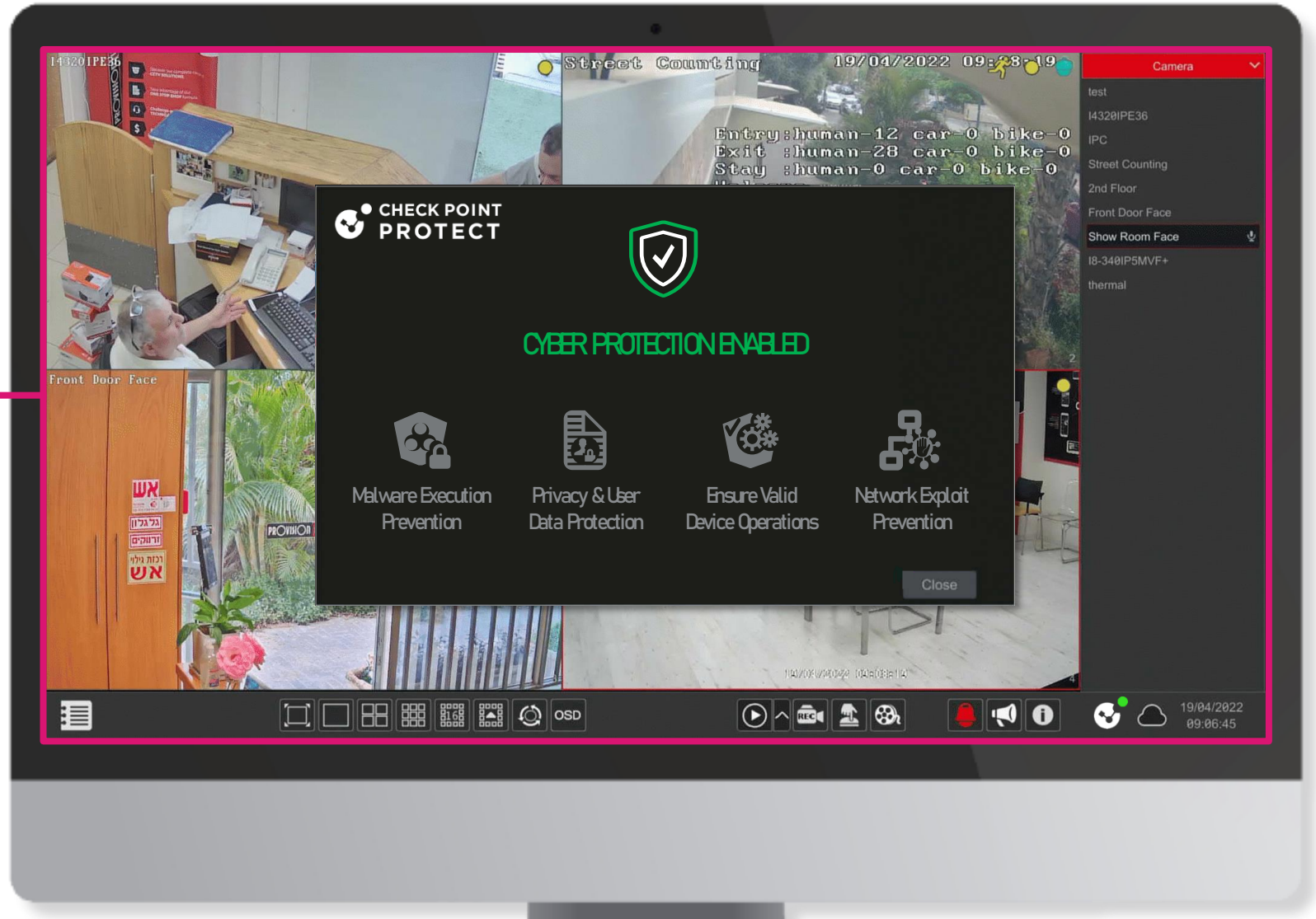
PHYSICAL & CYBER security COMBINED



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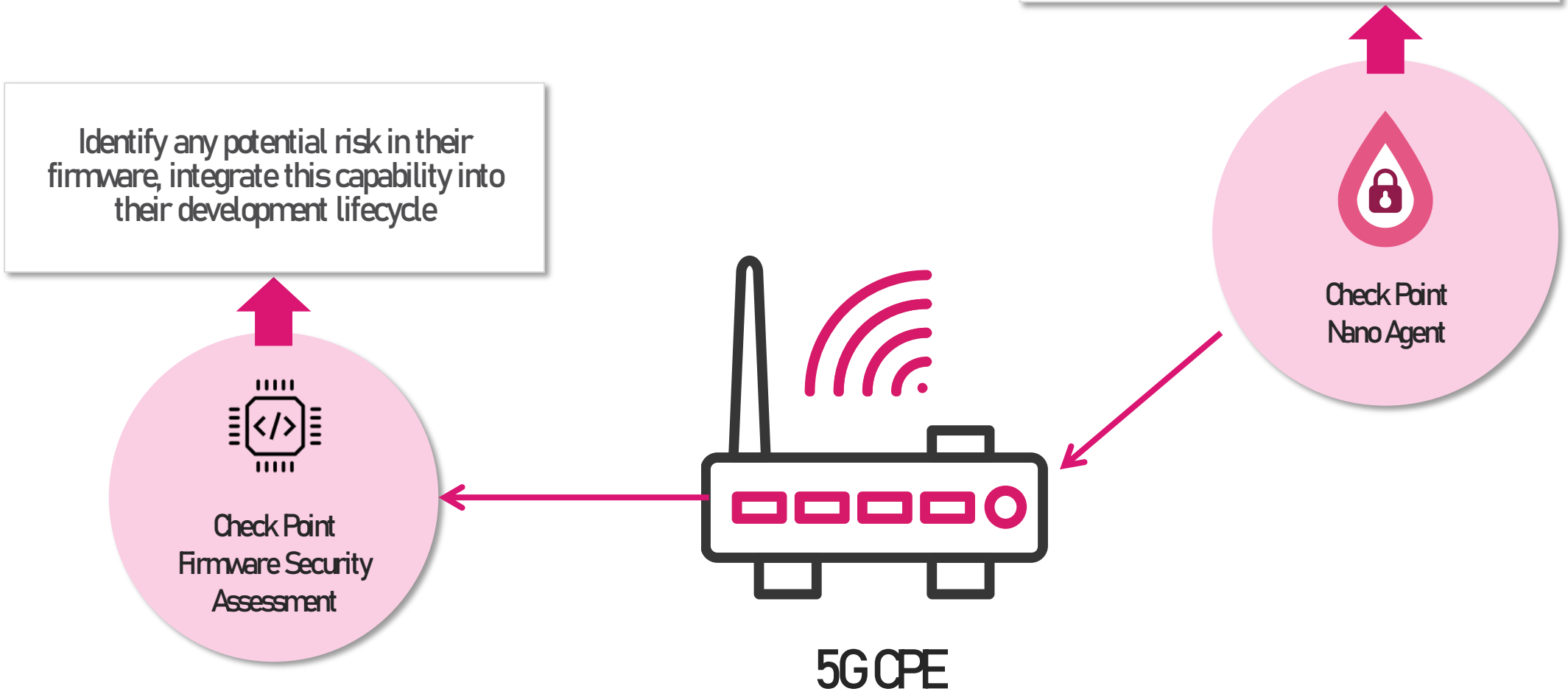
CASE IN HONG KONG:
DEVICE RUNTIME PROTECTION FOR 5G CPE

Device runtime protection (Powered by Check Point), increase their customer confidence to use their product



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intel PATHFINDER FOR RISC-V

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CHECK POINT™

- On-device runtime protection
- Mnimal impact on device performance
- 100% firmware coverage (including 3rd-party components)

CHECK POINT™
THANK YOU
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