

SERVER MANAGEMENT AND SECURITY

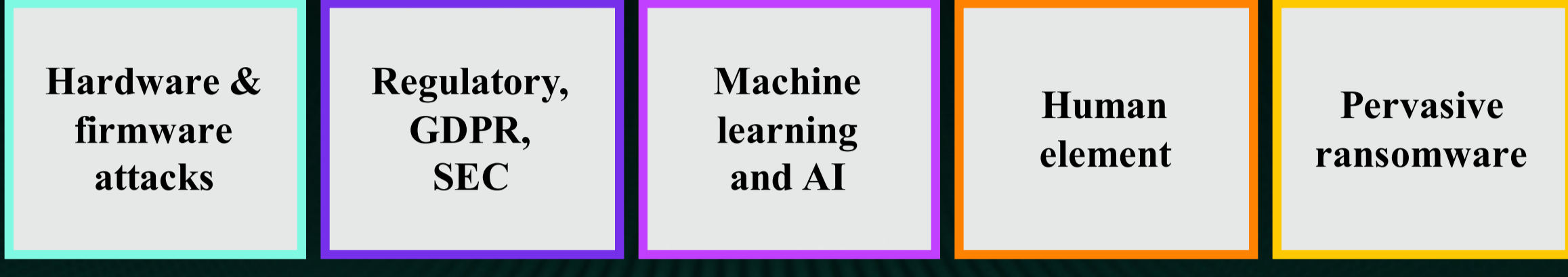
TODAY'S EXISTING SECURITY THREATS

Security Today



- Denial of Service (DOS):**
Make crucial changes to the target's firmware that interfere with its ability to perform key functions.
- Distribution Denial of Service (DDoS):**
Overwhelm the target with bogus requests for information or assistance from multiple sources, tying up resources and hindering its ability to respond to legitimate users.
- Data Theft or Information Theft:**
Malware or compromised code copied directly into the target's firmware renders it completely useless. Sometimes called "bricking" a server, i.e., rendering it as useful as a brick.
- Permanent Denial of Service (PDoS):**
Bricked or permanently disabled servers.
- Ransomware:**
Hostile software that invades a PC or server and locks it permanently, preventing legitimate users from accessing any content unless a ransom payment is made.

SECURITY ATTACK TRENDS



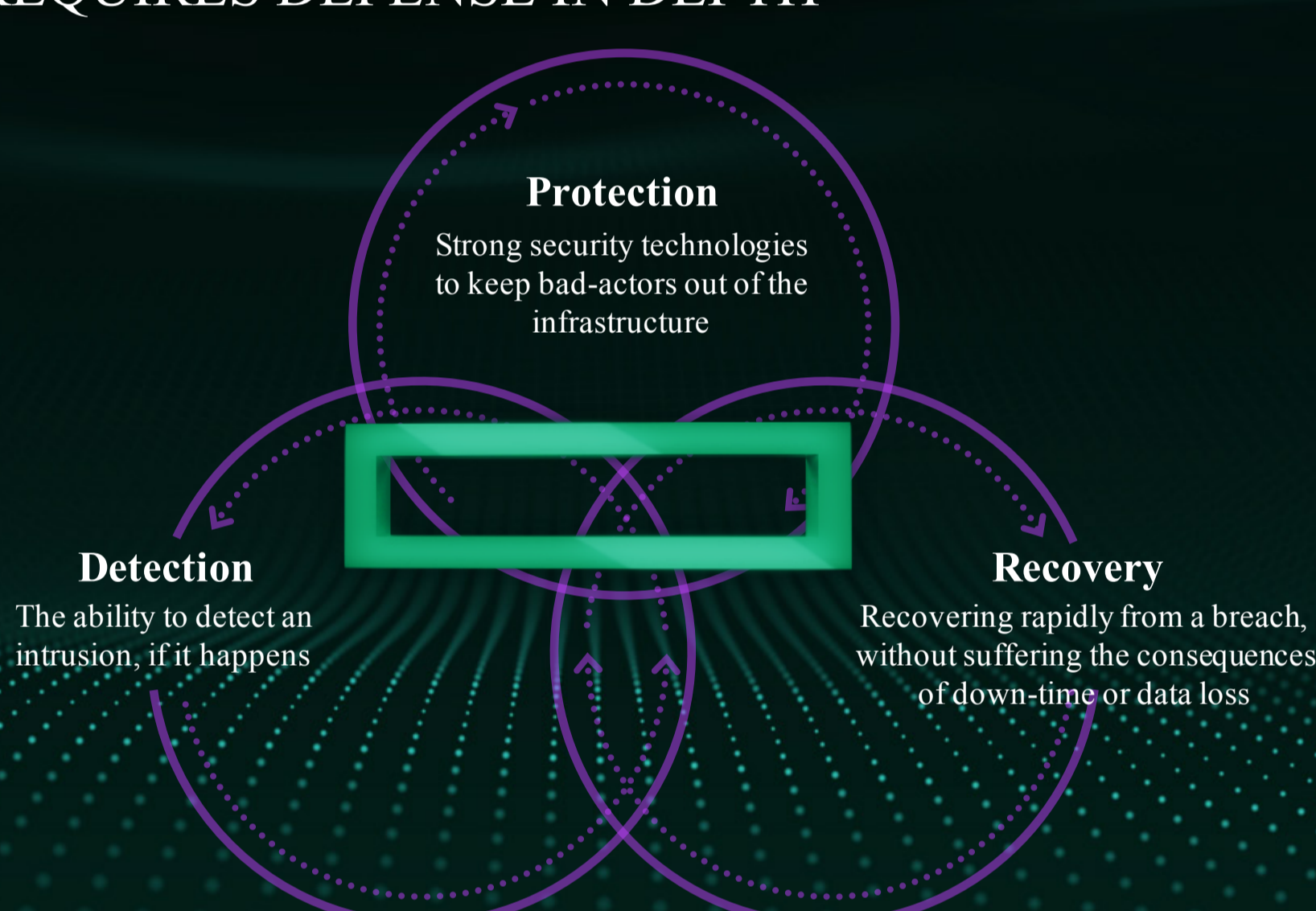
COST OF CYBER CRIME AND THE RISK OF BUSINESS INNOVATION

Security Today



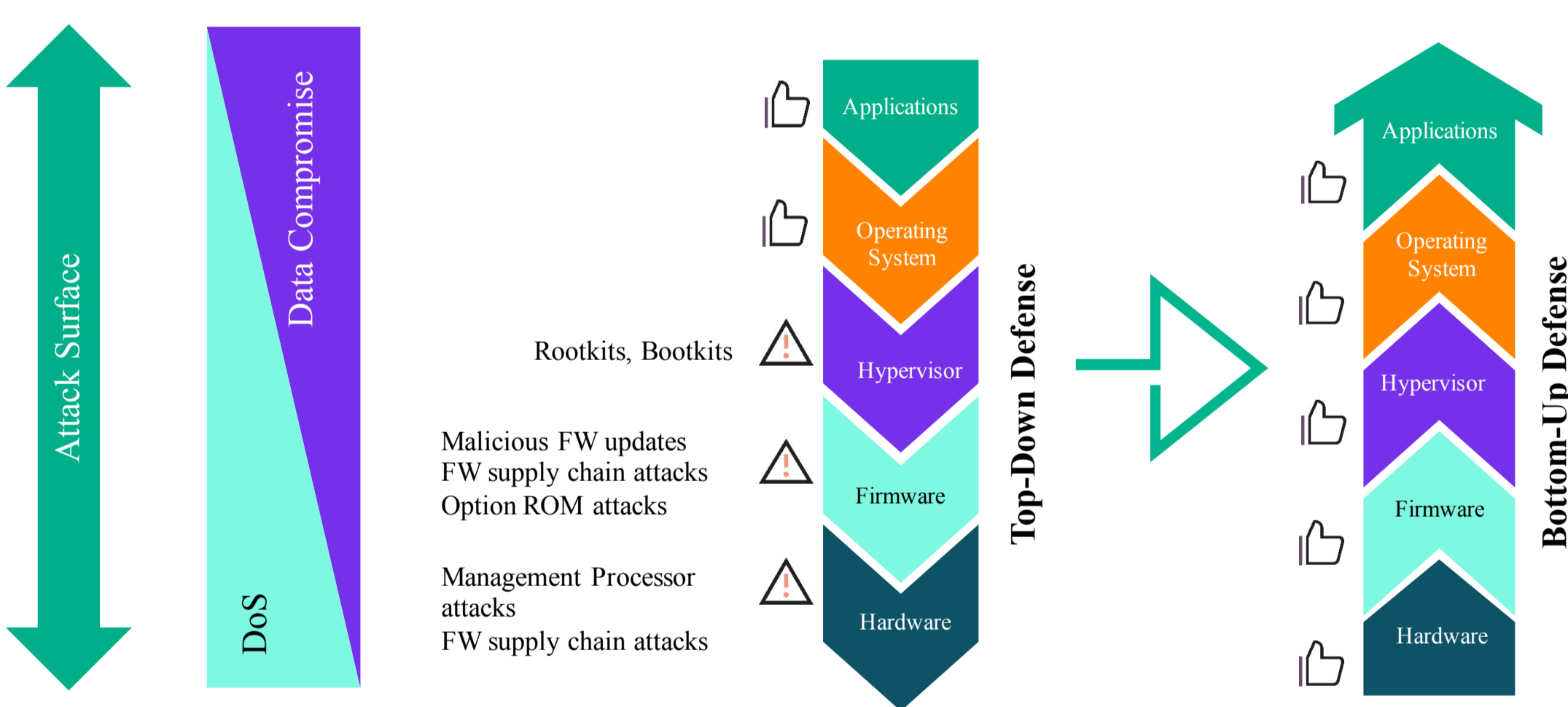
Persistent use of advanced security information and event management (SIEM) results in an average savings of nearly \$3 million.

SECURITY REQUIRES DEFENSE IN DEPTH



HPE SECURITY VISION: SERVER PLATFORM SECURITY

HPE servers comprehensive security approach protects key server infrastructure



HACKERS USE ARTIFICIAL INTELLIGENCE

| Bypassing CAPTCHA | Improving Phishing | Evasive Malware |
|--|---|--|
| Using AI techniques, researchers at Columbia were able to get by Google reCAPTCHA 98% of the time. | A reported 76% of organizations fell victim to phishing attacks in 2017. AI identifies valuable targets and quickly develop a profile of that target based on what they have tweeted in the past. Using this approach targets click on malicious links 30% of the time (compared to the 5-15% success rate of other automated approaches). | AI performs checks to identify hardware configurations and if a human is operating the machine DeepLocker's AI is trained to ensure that its payload only executes when it reaches a specific target, relying on three layers of concealment to prevent security tools from identifying the threat. |

Source: Artificial Intelligence Part 2: Cyber Criminals Get Smart with AI, August 27, 2018, Stephen Helm

SECURITY TODAY - REAL WORLD EXAMPLES

Evolving Threats

Global Security Threats

Cyber crime will cost the world economy

\$6 Trillion

by

2021*

Real World Examples

Large Oil Company

30,000

Systems Destroyed by Malware in Firmware

Large Credit Firm

\$4B

Cost to Company

Cybercriminals try to corrupt a BIOS update...*

*Federal Bureau of Investigation, James Morrison, June 22, 2017

As security software becomes more prolific, hackers continue to make their way down the food chain to computer hardware where it is much more difficult to identify and remove.**

*Cyber security business report, October 19, 2017, by Steve Morgan
**New York Times, Technology Section, Jan 22, 2014, Nicole Perloth

For more information on HPE Gen10 Servers, contact us today: