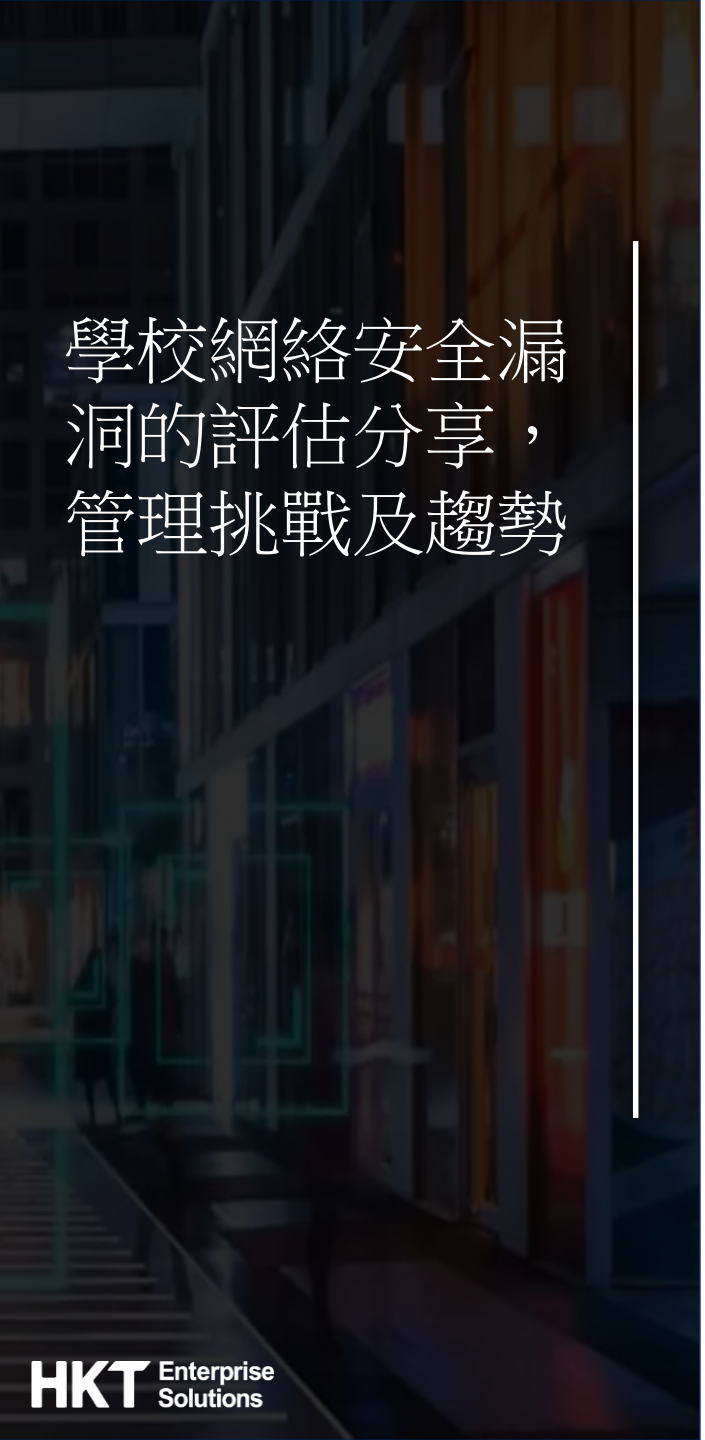
學校網絡安全漏洞的評估分享，管理挑戰及趨勢

香港電訊有限公司
商業客戶業務總處
潘震宇先生

13th Jan, 2020



Agenda

1. Introduction
2. Assessment Result Sharing and Insight
3. Challenges in Security Management
4. Trends in Security Management
5. Q &A

School IT Security Risk Assessment

Introduction

Objectives

- Create awareness – Privacy issues
- Identify vulnerabilities in local primary & secondary schools
- Set the standard (baseline) for the industry
- Vendor to provide service - Qualified security experts should be appointed for security risk assessment

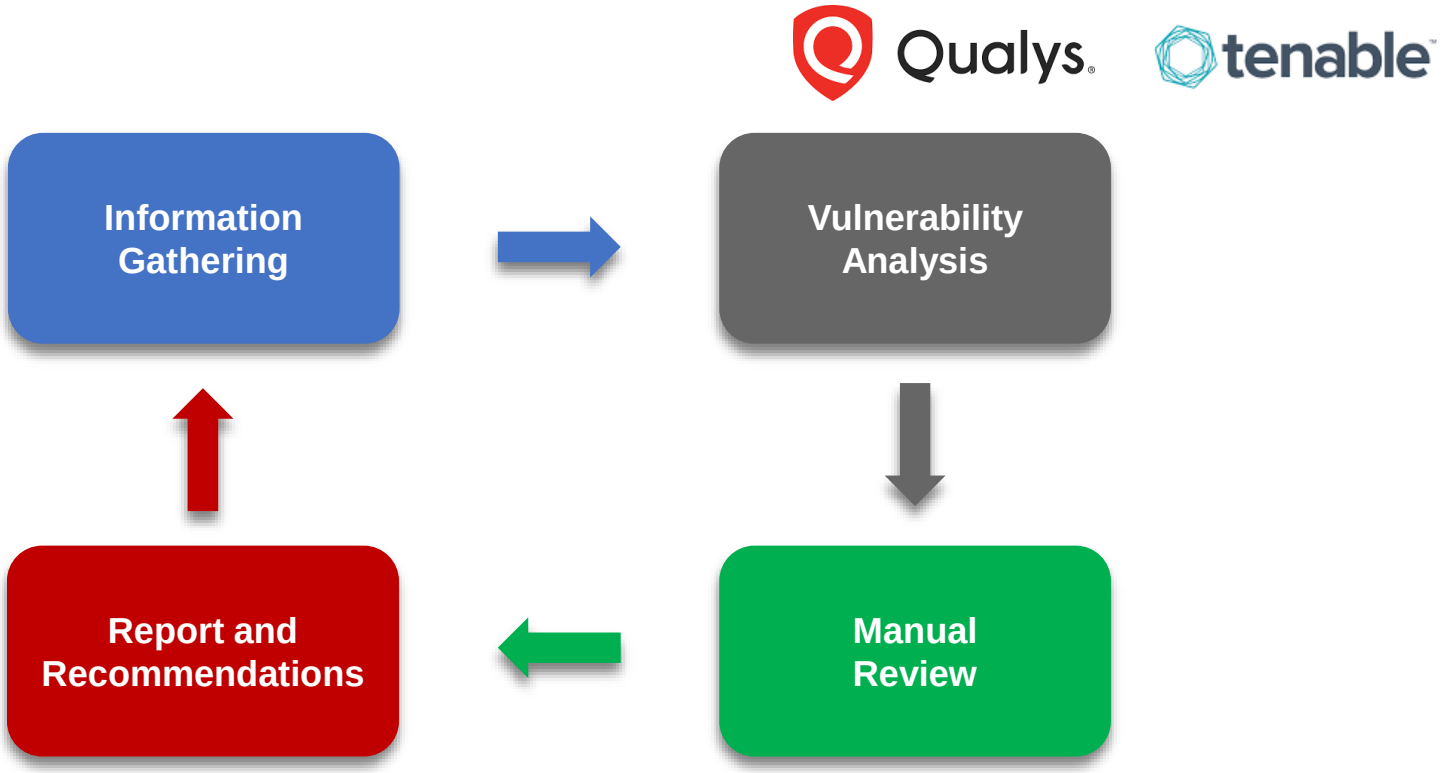
HKT Enterprise Solutions

UDomain

eLEARNING CONSORTIUM 電子學習聯盟

HKT Enterprise Solutions

Web vulnerability assessment lifecycle



HKT Web Vulnerability Assessment Service

HKT Web Vulnerability Assessment Service is performed by a group of security certified engineers

Result Highlights

~50

Websites

Internet-facing application of 20 schools

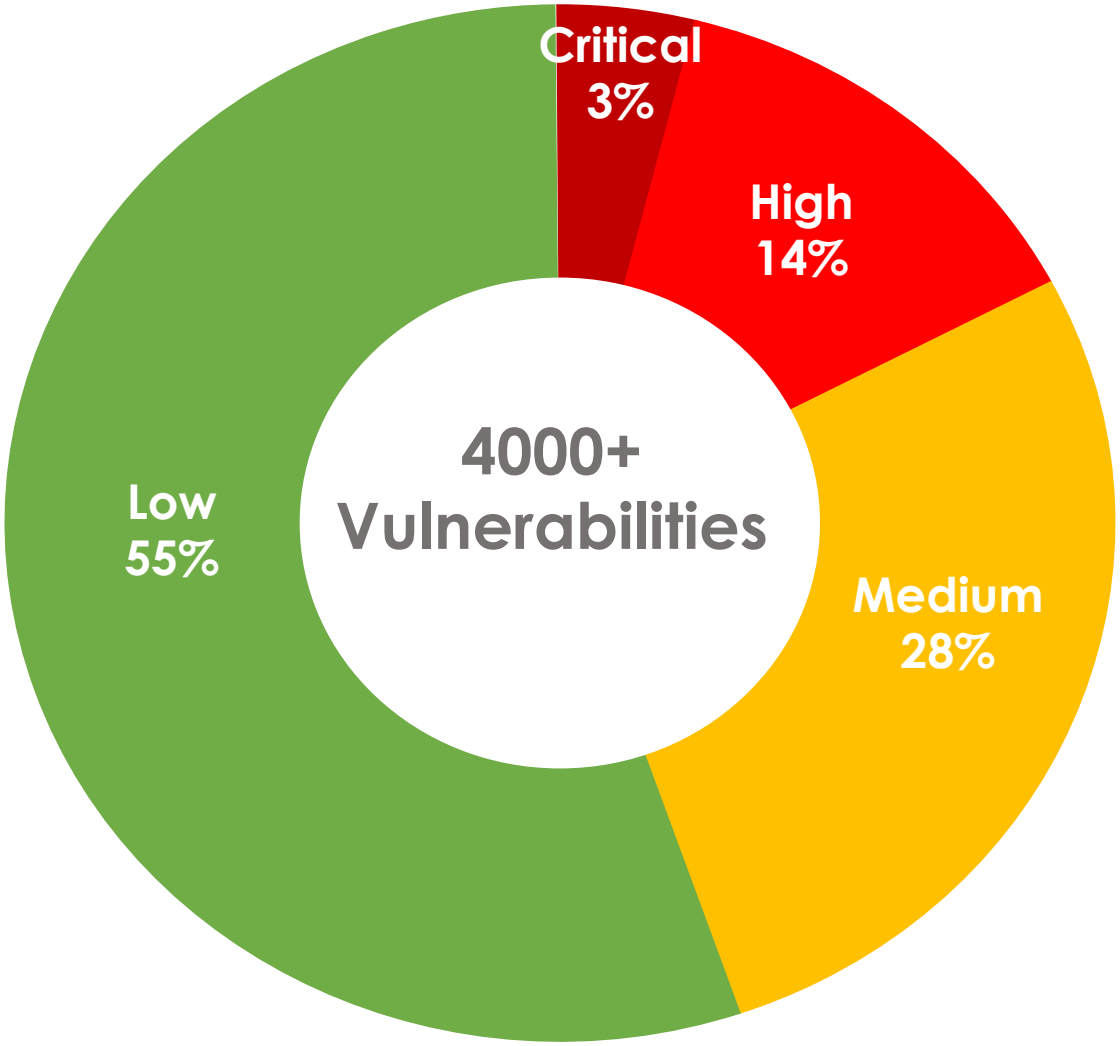
150+

Hours of Scanning

By using different Risk Assessment Tools and manual testing/review

110+

Critical Vulnerabilities



17% of vulnerabilities are Critical / High Vulnerabilities

Among the ~50 scanned systems…

39%

Code (SQL) Injection

Allow an attacker to compromise the application, access or modify data, or exploit latent vulnerabilities in the underlying database.

27%

Cross-site Scripting (XSS)

The attacker's hostile data can trick the interpreter into executing unintended commands or accessing data without proper authorization.

63%

Using Outdated Components with Known Vulnerabilities

- SSL/TLS version
- OS version
- PHP version
- Apache version

…etc

Security Risk Impact

Code (SQL) Injection

Cross-site Scripting (XSS)

Using Outdated Components with Known Vulnerabilities

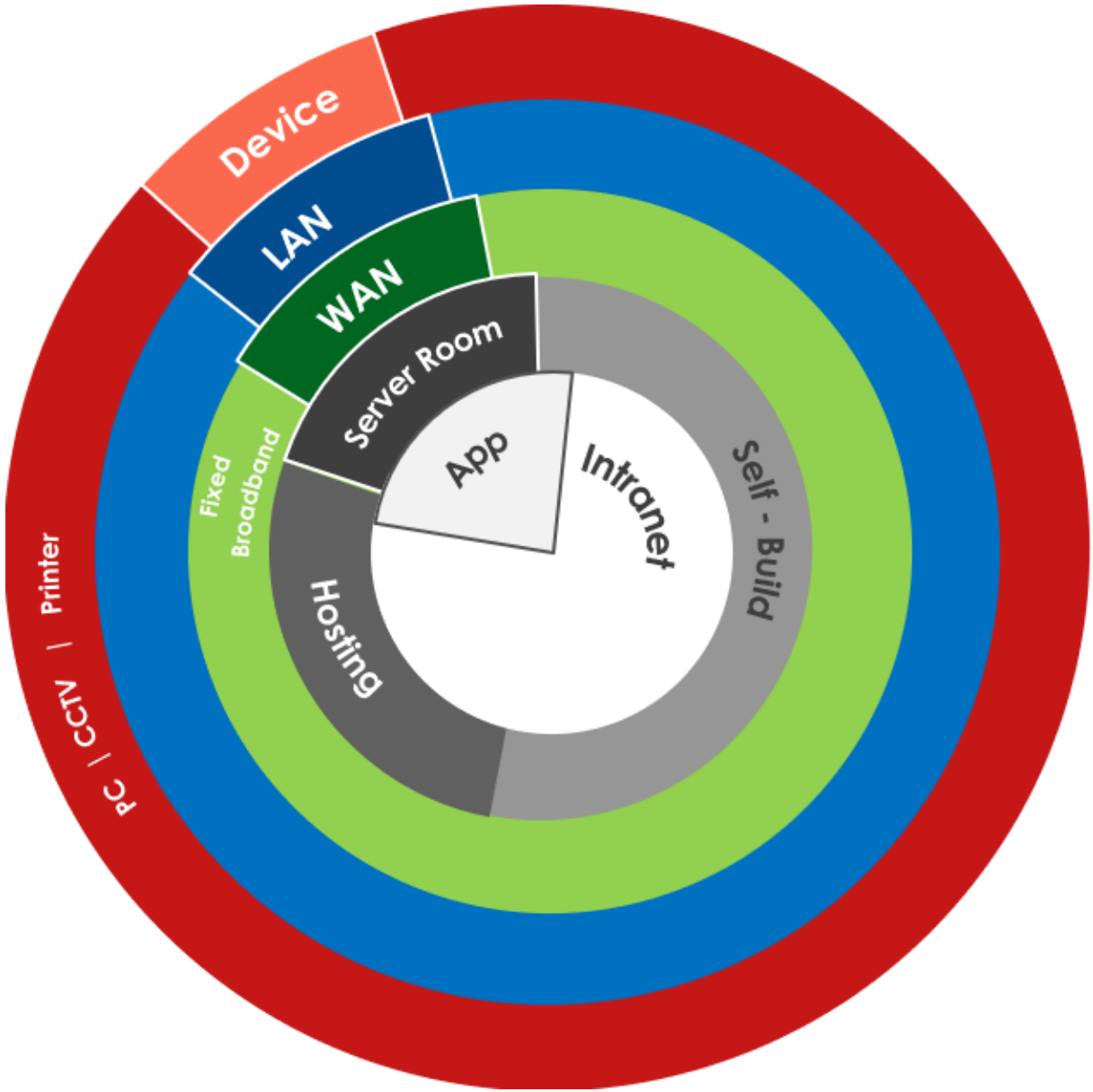
- Data Leakage / Loss
- Content Defacement
- Malicious code injection
- Malware / Ransomware Infection

- Black Listing ←→ SCHOOL OPERATON / REPUTATION

Challenges in Security Management

IT Support

10+ years ago



Challenges in Security Management

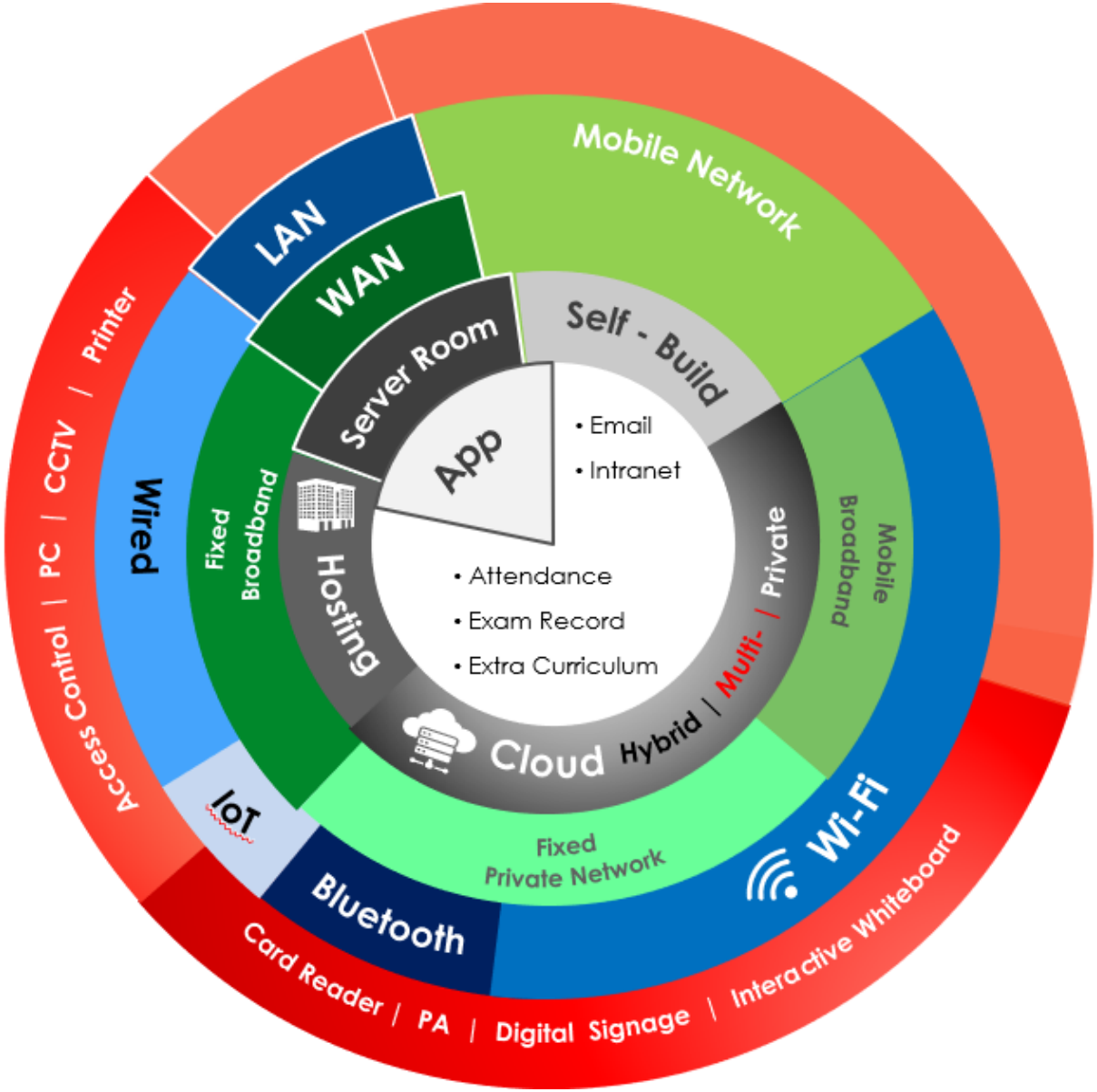
More User Touch Point

More System

More Data (More Security Risk)

IT Support

Nowadays



Enterprises need to keep investing in Cyber Security

Success factors that can strengthen your organization's cybersecurity posture in the next three years

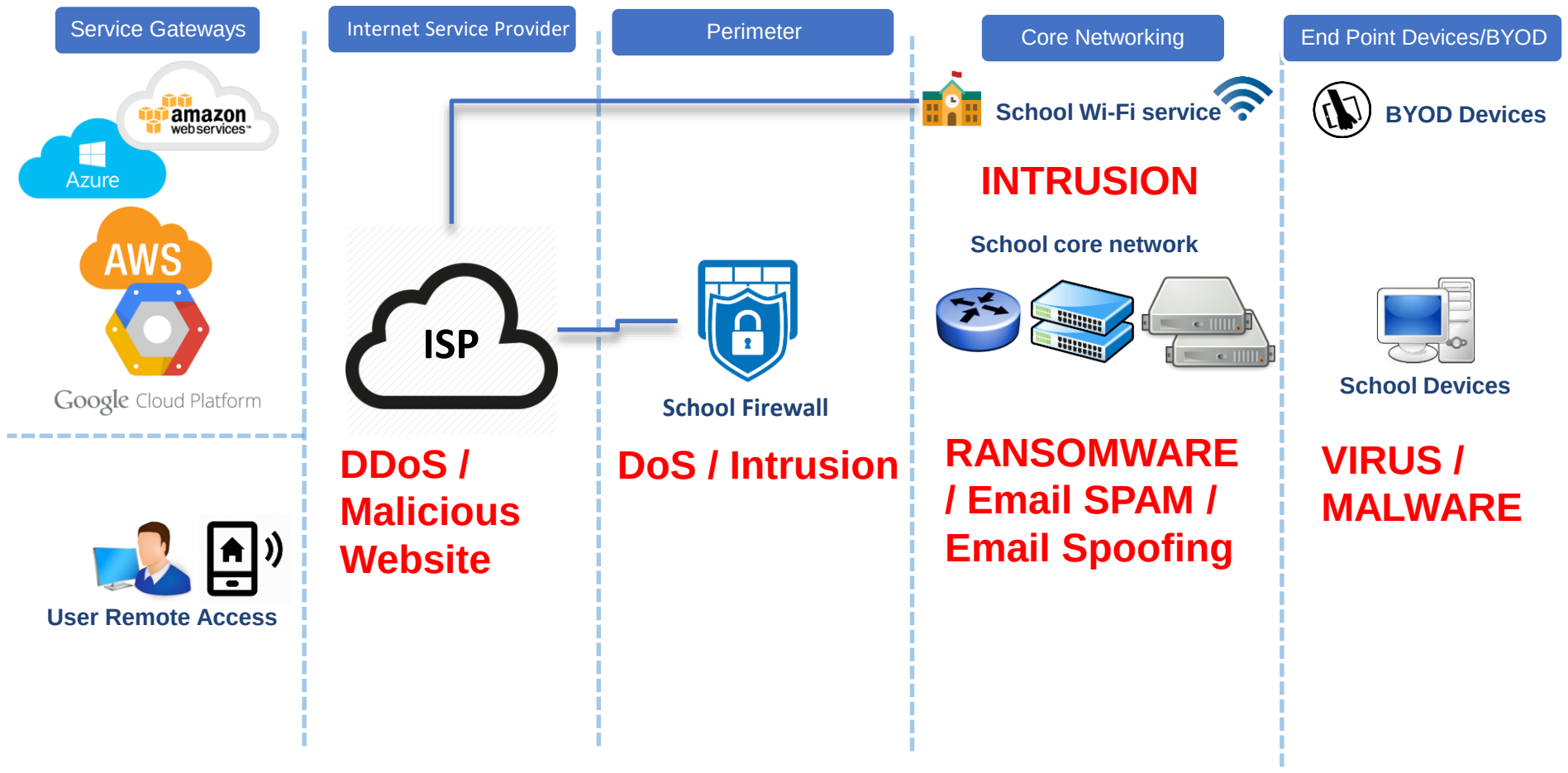
Ponemon Institute Research Report, 2018

Trends in Security Management

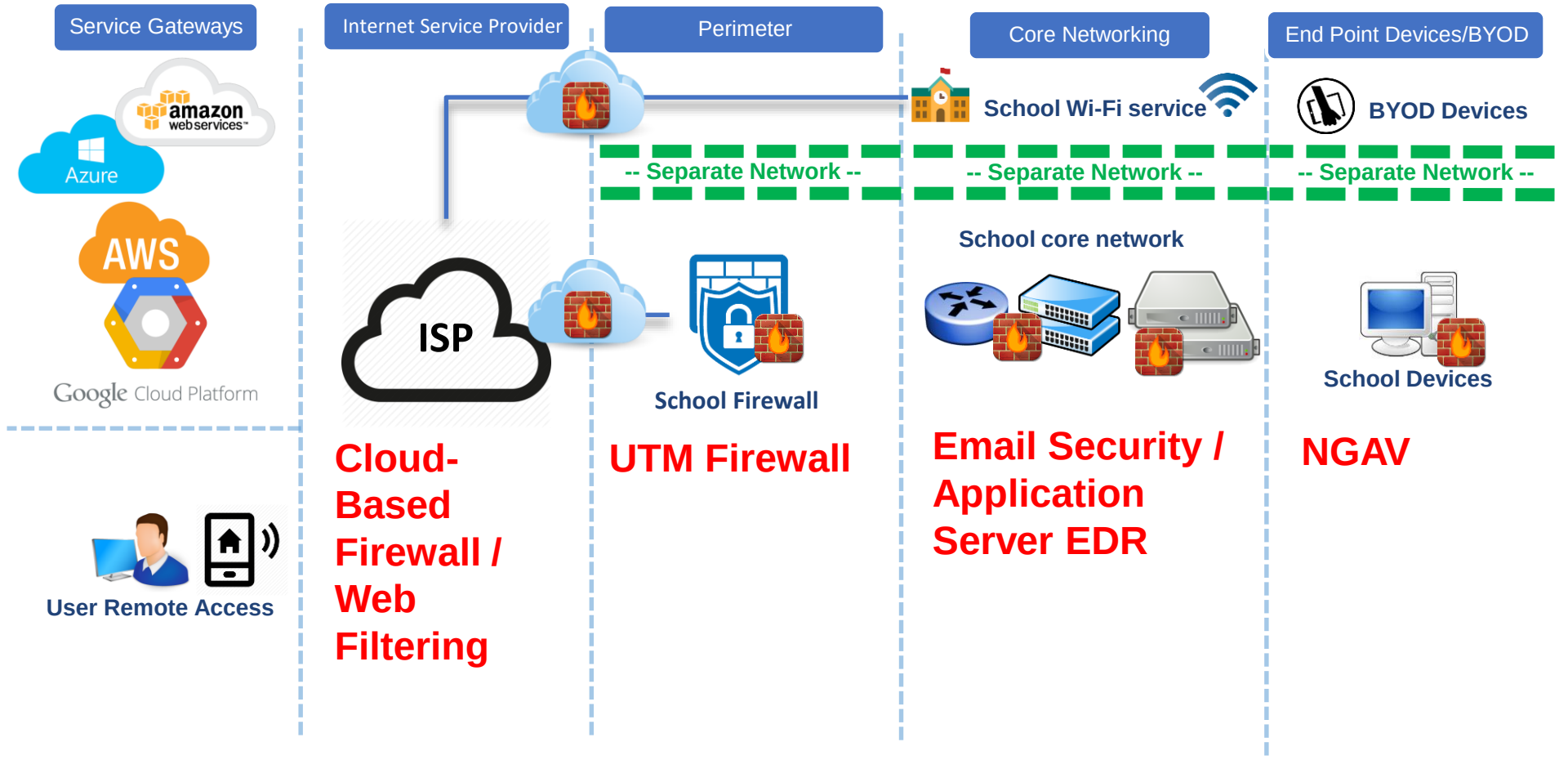
How to Survive in the challenging Security Management?

You CANNOT do it all by yourself, find a TRUSTED PARTNER for Security Management

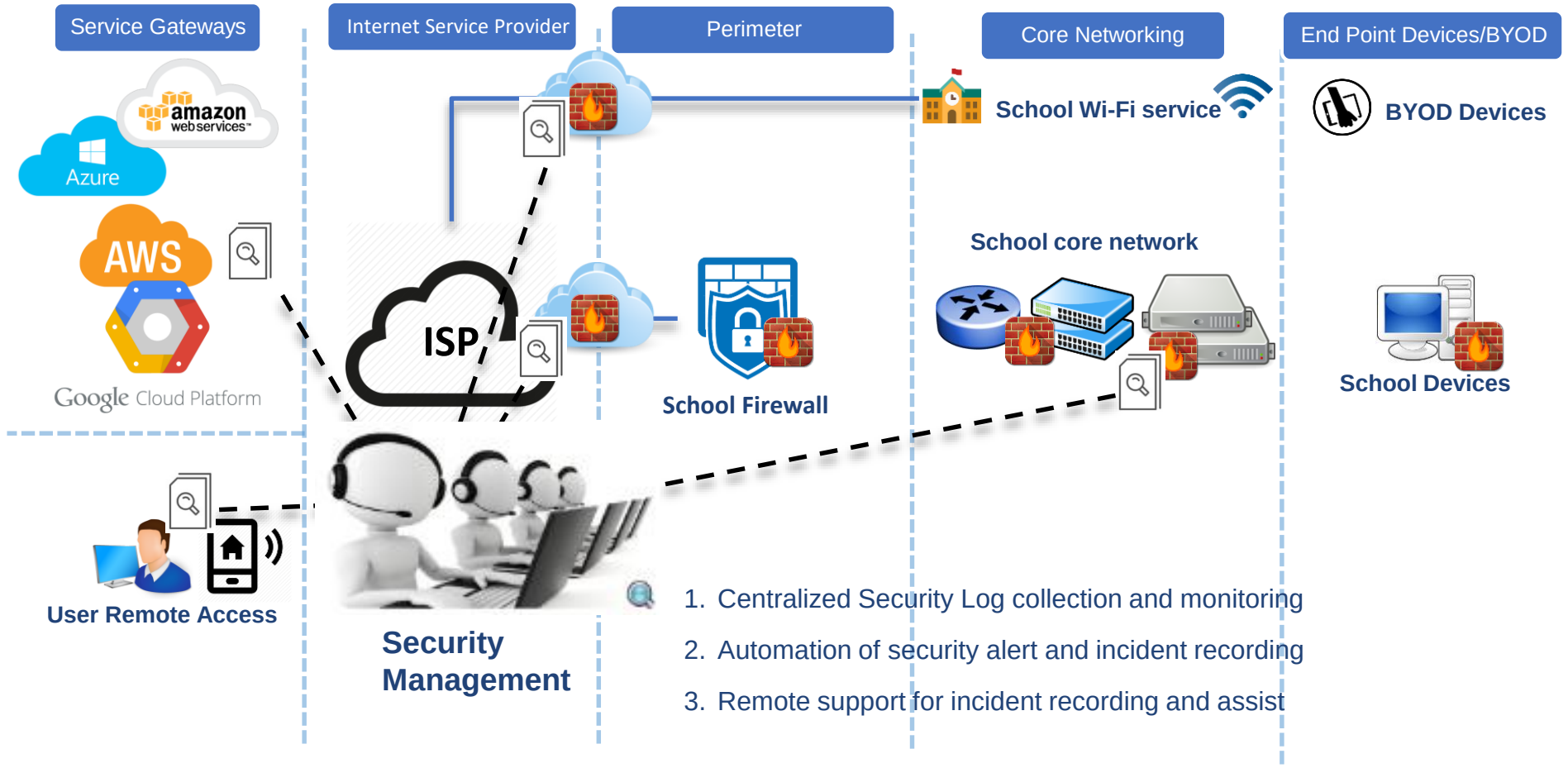
Potential Security Threat is everywhere!!



Multi-Dimension Security Protection



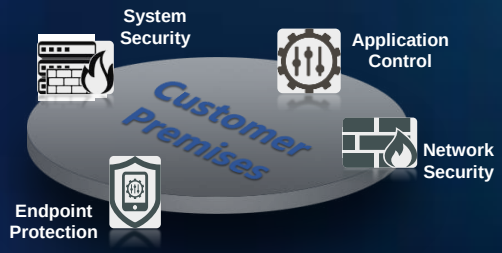
Comprehensive Managed Security Service

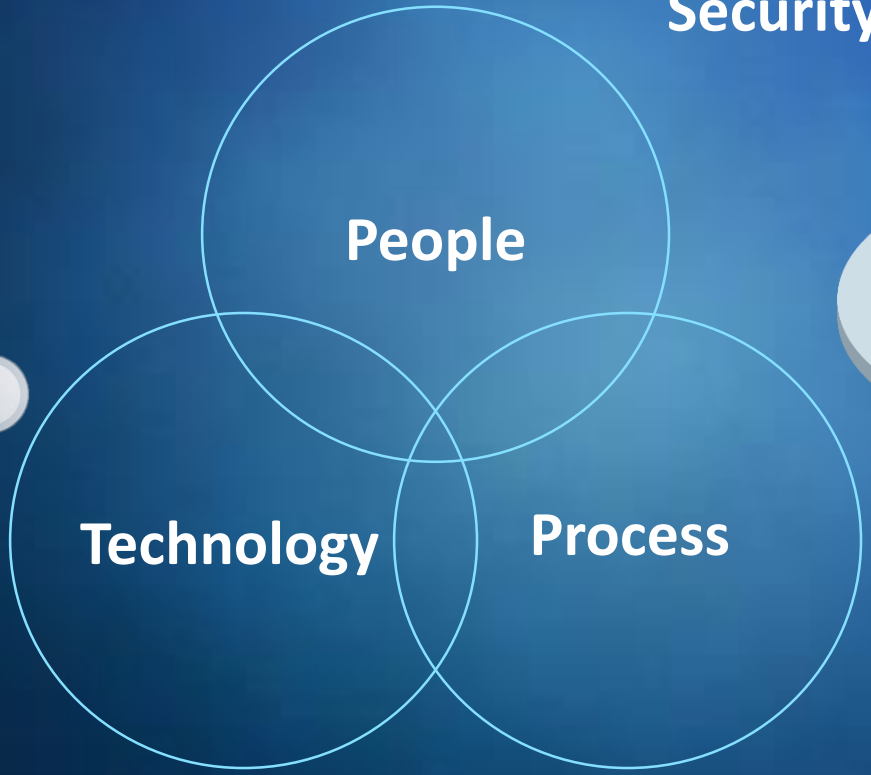


Key components on Security Management

Secure Connectivity

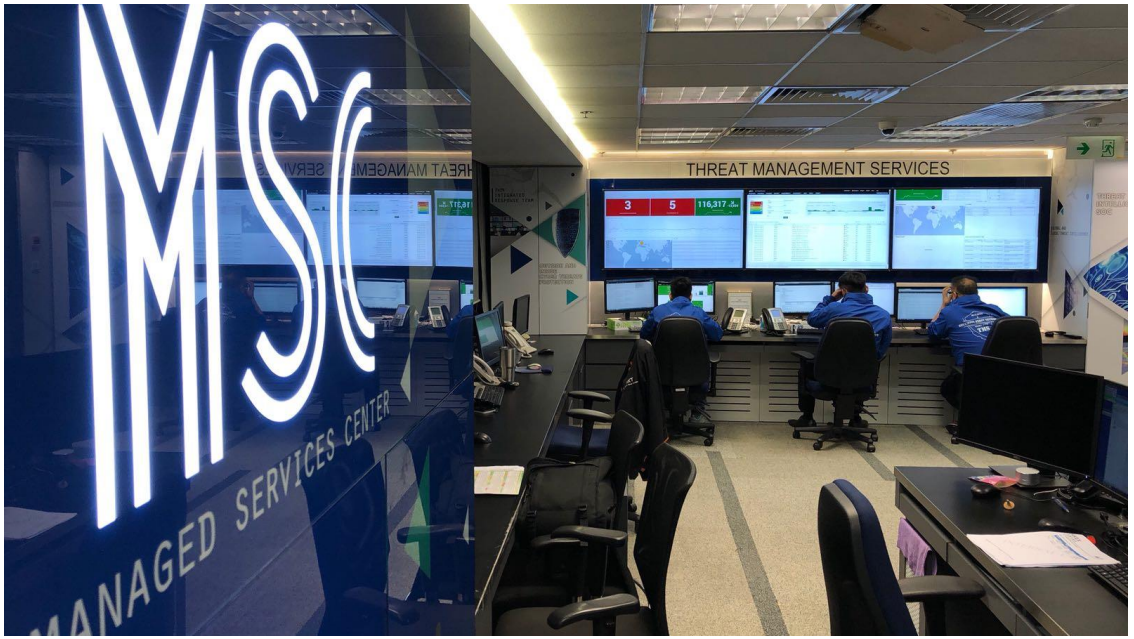
Secure On-Premises Solution





HKT School HelpDesk / Security Operation Center

Security Operation Center



- Security Expert
- Security Intelligence
- Security Management

Tools and Practice

SOC Manager

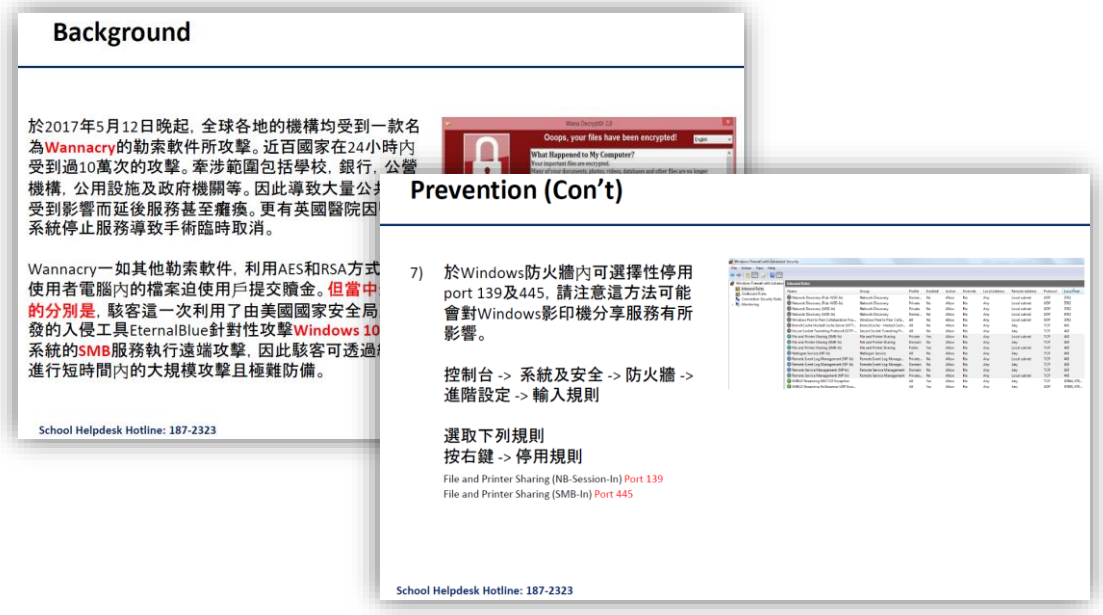
Tier 3

Tier 2

Tier 1

GIAC GCIH splunk> BOSS of the SOC 2017 C|EH Certified Ethical Hacker CISSP Certified Information Systems Security Professional CISA Certified Information Systems Auditor An ISACA Certification

School Helpdesk



- Occurred on 12-May-2017 (Friday night)
- Take action to **disable related firewall TCP ports (139 & 445)** in ALL school wifi circuits
- Completed all school wifi circuits (400+) on 15-May-2017 (Monday)
- Informed schools that HKT already take action to block the TCP ports via Phone & Email
- **Prepare user guide / preventive actions and sent to schools for them to take action on school's ITED network**

Key Takeaways

- **Security Risk will keep EVOLVING**
- **PERIODIC Security Risk Assessment is important**
- **You CANNOT do it all by yourself**
- **Find a TRUTSED PARTNER for security management**

Any Questions?

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Thank You