Transforming cities securely

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"Shaping Smarter and More Sustainable Cities: Striving for Sustainable Development Goals"
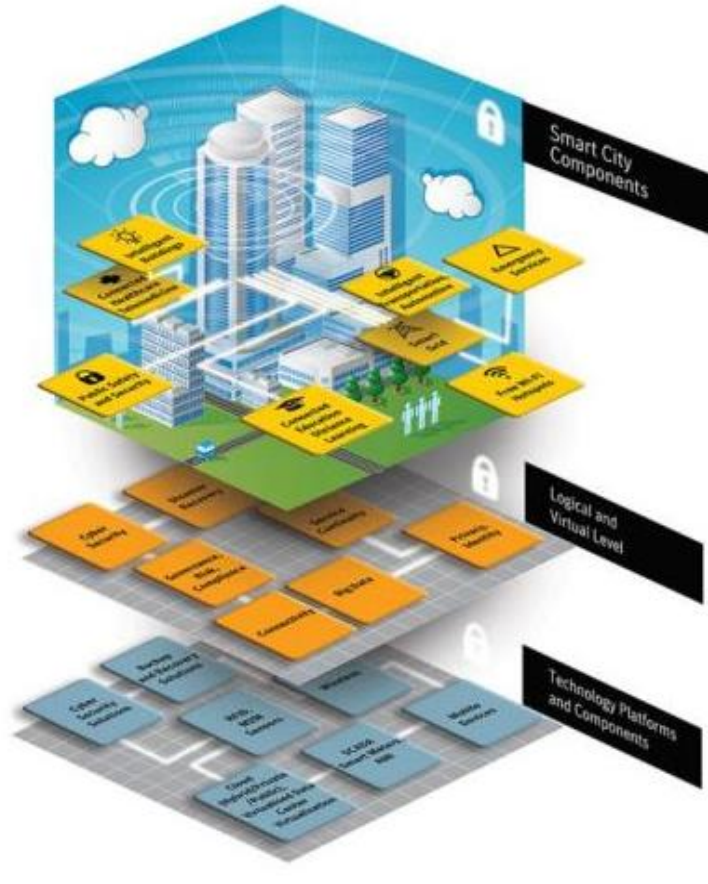18-19 May 2016 - Rome, Italy

EXECUTIVE REPORT: SMART CITIES

Transformational 'smart cities':
cyber security and resilience

Towards the century of **smart cities**

Confidence in a connected world.

The Smart City equation

Smart City Components
- Intelligent buildings
- Public Safety & Security
- Connected Healthcare, Telemedicine, Education, Distant Learning
- Free Wi-Fi hotspots
- Emergency services
- Intelligent transportation
- Smart Grid

Logical & Virtual Level
- Cyber Security
- Governance, Risk, Compliance
- Connectivity, IoT
- Big Data
- Disaster recovery
- Privacy, Identity
- Service continuity

Technology Platform & Components
- Cyber Security solutions
- Backup and recovery solutions
- IoT, RFID, M2M, Sensors
- SCADA, Smart meters
- Mobile devices
- Wireless
- Cloud, Virtualized Data Centre
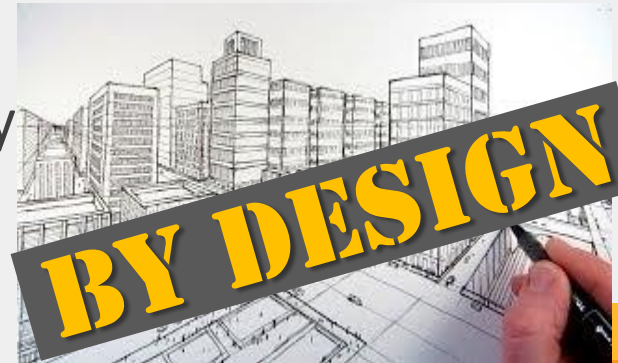
The Smart City equation
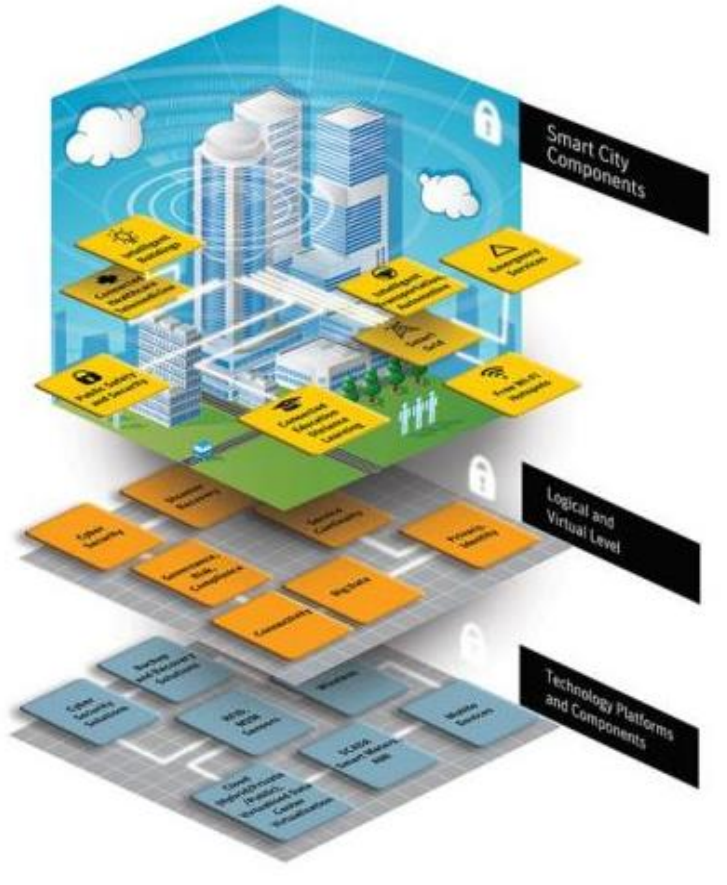
High-Connectivity +

High-Complexity +

High-Volume of data =

High-Vulnerability

- Cyber security
- Integrity
- Availability
- Reliability
- Privacy
- Resilience

BY DESIGN

ISTR Vol 21: 2015 Key Findings

- **~1,179,000** new pieces of unique malware discovered…
…per day. (i.e. **430 Million** over the year)

- **~500 Million** identities exposed

- **9 mega breaches** (a record) occurred in 2015

- **55% increase** in the number of spear-phishing campaigns attacks in 2015

- **3 out of every 4** legitimate websites have unpatched vulnerabilities

- **125% increase** in the number of zero-day vulnerabilities discovered

- **35% increase** in crypto-ransomware, as it spread to businesses and hospitals

- **Less than half** of data breaches are due to hackers.

The Internet of Things

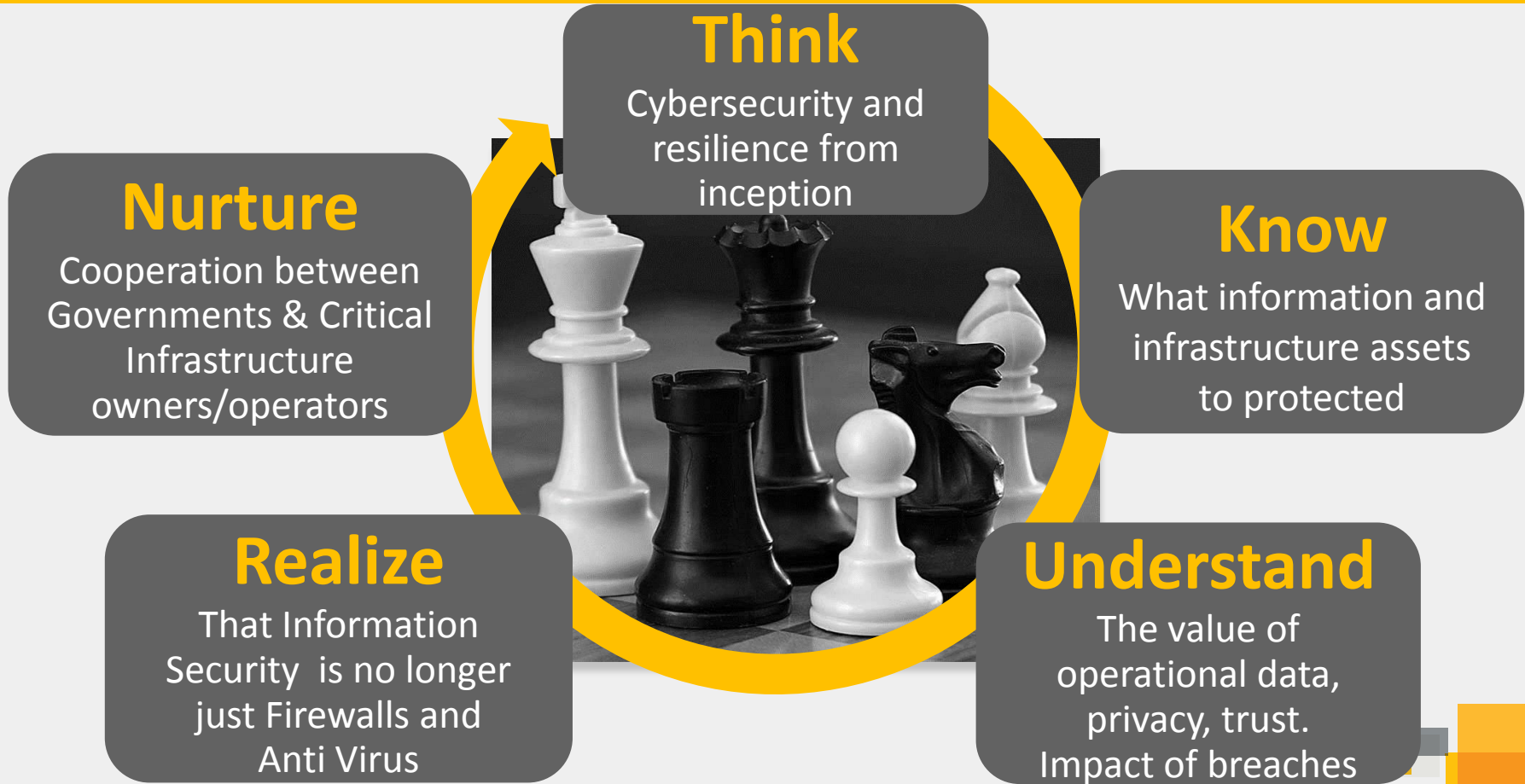| **Things**	**Data**	**People**	**Standards**	**Legislation**

- The next big digital transformation.
- Connect devices and sensors with data, processes and people.
- Will provide the foundational infrastructure for a smarter planet.

However…

- **Billions of devices on the market with little or no provisions for cyber security or privacy**
- **A ticking time bomb**

Security Technology Trends

Cyber Security Services

Monitoring, Incident Response, Simulation, Adversary Threat Intelligence

Threat Protection

ENDPOINTS **DATA CENTER** **GATEWAYS**

Information Protection

DATA **IDENTITIES**

Advanced Threat Protection

• On-Premise, Virtual, and Cloud

• Integrated Data and Identity Protection
• Cloud-based Encryption and Key Management

Unified Security Analytics Platform

Conclusions

Smart City implementations imply vulnerability

- Diverse stakeholders
- Emerging technology, hyper-connectivity, hyper-complexity, heterogeneous ICT implementations, IoT, Big Data, Cloud, Mobility, fragmented boundaries ➡ increasing vulnerability
- Increasing attacks, attackers, motivations, sophistication, persistence, success

Cyber-attacks and data breaches are costly

- Data loss, financial loss, reputation & credibility loss ➡ Human lives?

Conceive the resilient smart city with cyber-security & data protection in mind

- Acquire intelligence
- Organise processes
- Educate people
- Equip with appropriate technological tools

Grazie!

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