Living on the Edge

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ASSA ABLOY
Zenitel

"Living on the edge" What comes to mind?

01 | To have an adventurous or perilous lifestyle

02 | To behave in a manner which creates risks for oneself.

Stakeholders – Past
("What's their Living on the Edge")

01 | Security Director

02 | Building and Maintenance

03 | Ownership

04 | Risk and Compliance

Industry challenges

01 | Access Control

02 | Visitor Management

03 | Identity Management

04 | Command & Control Center

05 | Video Management

06 | Intrusion Management

07 | Intelligent Communications

08 | Incident & Case Management

"Living on the edge"
What comes
to mind?

Charlie Chapin – Gold Rush-1914

Stakeholders – Present (1 of 3)

- Chief Information Officer (CIO)
- Chief Technology Officer (CTO)
- Director of Technology
- IT Director
- IT Manager
- Cloud Architect
- Cloud Consultant
- Cloud Product and Project Manager
- Cloud Services Developer
- Cloud Software and Network Engineer
- Cloud System Administrator

- Cloud System Engineer
- Computer and Information Research Scientist
- Computer and Information Systems Manager
- Computer Network Architect
- Computer Systems Analyst
- Computer Systems Manager
- IT Analyst
- IT Coordinator
- Network Administrator
- Network Architect

Stakeholders – Present (2 of 3)

- Network and Computer Systems Administrator
- Network Engineer
- Network Systems Administrator
- Senior Network Architect
- Senior Network Engineer
- Senior Network System Administrator
- Telecommunications Specialist
- Data Center Support Specialist
- Data Quality Manager

- Database Administrator
- Senior Database Administrator
- Application Support Analyst
- Senior System Analyst
- Systems Analyst
- Systems Designer
- Management Information Systems Director
- Technical Operations Officer
- Information Security
- Security Specialist
- Senior Security Specialist

Stakeholders – Present (3 of 3)

- Security Director
- Building and Maintenance
- Risk and Compliance
- Legal
- Human Resources
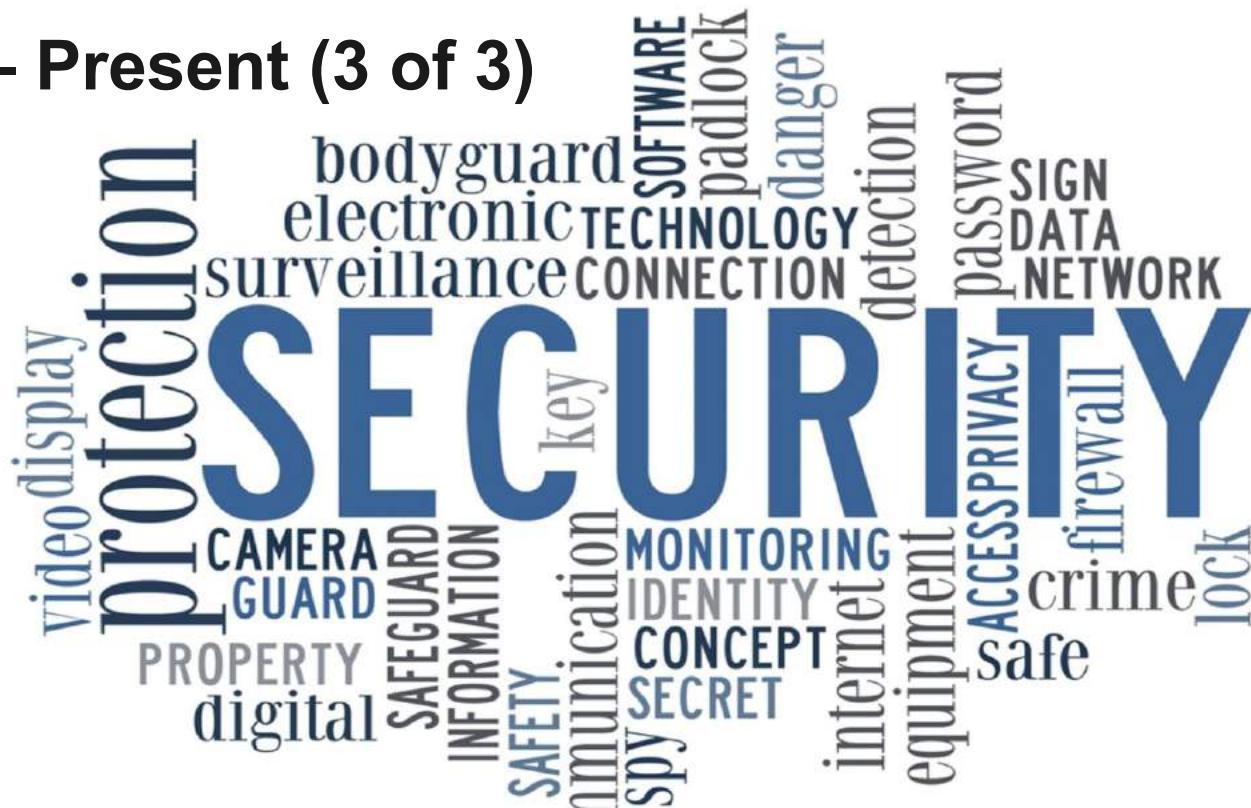
"Living on the edge" – Technology Expert (What comes to mind?)

- Move away from server room centric model for a facility?

- Limit or reducing the amount of Intermediate Distribution Facilities (IDF's)

- More decision making made at the edge device.

- Moving your facility to a IoT

- Cloud Computing

- Being a leader to change the industry model.

What are the Driving forces

- Mobility/Hoteling

  - Employees/Visitor traveling between offices

  - Ability to review, report and respond to events at your fingertips.

What are the Driving forces

- Unification (Physical and Cyber)

    - Devices and systems to be unified under one umbrella for data migration.

    - Advancement of Ethernet/Data transmission and collection

    - Machine Learning, Artificial Intelligence.

What are the Driving forces

- Costs

  ○ Real estate is at a premium. (Owners want to reduce back of house space for useable space).

  ○ Construction Costs. (Owners want to reduce, and get more value for their dollars).

  ○ Equipment and Maintenance Costs (Reduce the amount of equipment and the costs to run and maintain equipment on prem).

  ○ Employee's, Staffing (Time = Money, (Reduce Time * Reduce Costs) = Savings)

"Cloud computing, artificial intelligence and machine learning with edge IoT are blurring the lines between logical and physical environments. Traditional security risk management and threat detection are quickly becoming obsolete. Security leaders who do not embrace a digital mindset risk becoming business irrelevant."

– Michael Foynes, Senior Director, Microsoft Global Physical Security Operations

"We find ourselves at a crossroads. The convergence of physical and cyber, of people and things… all intersect at the Digital Transformation. Will you seize the opportunity to lead and disrupt, or lag and be disrupted?

– Philip Halpin, Senior Vice President Global Security, Brown Brothers Harriman & Co.

"Digital transformation is a new opportunity to provide clarity and solutions to problems in security.

– Jeff Spivey, President of Security Risk Management

www.asisonline.org/globalassets/internal/future-of-physical-security.pdf

IoT Spending to Hit $745 Billion in 2019, IDC Says

Worldwide IoT spending will reach $745 billion this year, a 15.4 percent increase over the $646 billion spent in 2018, and surpass the $1 trillion mark in 2022, according to IDC's latest forecast.

The firm's Worldwide Semiannual Internet of Things Spending Guide says IoT spending will maintain a double-digit annual growth rate throughout the 2017-2022 forecast period. The insurance industry will see the fastest compound annual growth rates (CAGR) over the five-years at 17.1 percent, followed by federal/central government (16.1 percent), and healthcare (15.4 percent).

In terms of technology, IoT services will be the largest category in 2019 with $258 billion going toward traditional IT and installation services as well as non-traditional device and operational services. Hardware spending will be close behind at $250 billion led by more than $200 billion in module/sensor purchases. Meanwhile IoT software spending will total $154 billion in 2019 and see the fastest growth over the five-year period with a CAGR of 16.6 percent. Services spending will also grow faster than overall IoT spending with a CAGR of 14.2 percent. IoT connectivity spending will total $83 billion in 2019.

https://www.sdxcentral.com/articles/news/iot-spending-hit-745-billion-2019-idc/2019/01/

AMAG Solutions challenges by...

01	**|**	Access Control
02	**|**	Visitor Management
03	**|**	Identity Management
04	**|**	Command & Control Center
05	**|**	Video Management
06	**|**	Intrusion Management
07	**|**	Intelligent Communications
08	**|**	Incident & Case Management

SYMMETRY

Symmetry Blue Transition Reader

- Available in: Wiegand, RS485, F2F (Casi Rusco Retrofit) & MCLP (AMAG Secure Protocol)

- OSDP Transition Reader

- Admin app only allows phones with a common passcode to be set in the card.

- Native phone fingerprint login to enable offering the credential

Symmetry M4000 Control Panel

- Reducing the cost of deployment and ownership - monitoring and support via a separate application with option to monitor by AMAG - automated code deployment to appliance and cardreader

- Server-less operation – Peer to Peer messaging, Hosted, Encompass PKI card   authentication

- Monitored dual redundant power supply, switched mode

- API available for independent developers

- Launched with V9 Symmetry
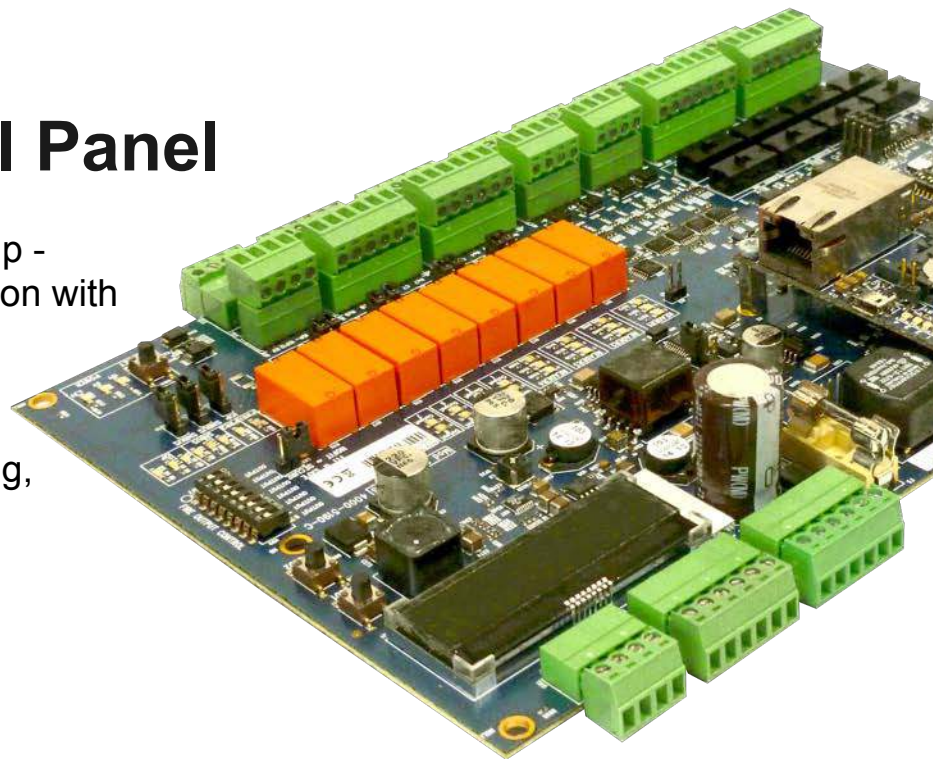
To Network or Not To Network… that is the Question

Quora — 100 million

MyFitnessPal — 150 million

Exactis — 340 million

Marriott Starwood Hotels — 500 million

Aadhar — 1.1 billion

NOT just a product …
but a system of many systems

Server Room

Access Control

Video

IT Network Security

Light Control

Elevator Control

Guard Station

HVAC

Fire Alarm

Communications

Intrusion Control

HR Attendance

Not Your Father's Access Control Solutions

Commercial Wireless Choices

WiFi
- Lowest Total Infrastructure Cost
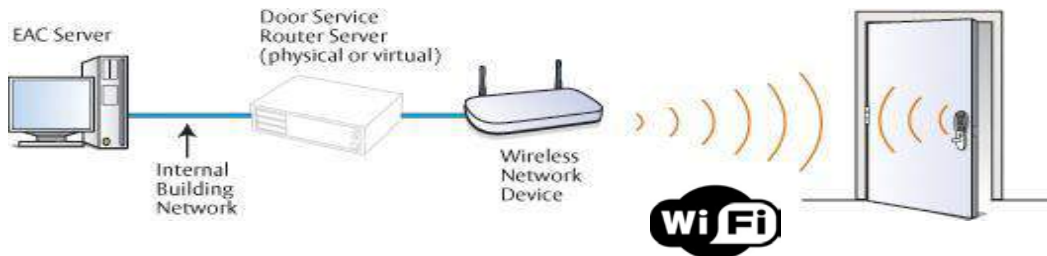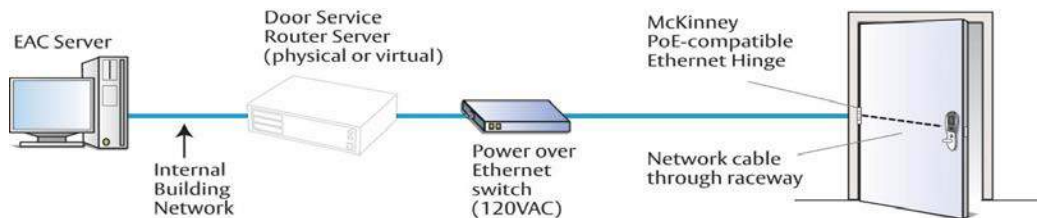- Ideal Retrofit Solution

Aperio®
- Broadest Range of Locking Devices
- Global Solution

ASSA ABLOY PoE & 802.11 WiFi System Architectures

Vulnerability Reduction on Customer Networks

IP Enabled (WiFi / PoE)

- The IP Enabled platform focuses on keeping up with industry standard with respect to network encryption.
- The current generation of locks support most standard WiFi encryption types, as well as 802.1X Enterprise Encryption types such as WPA(2) PEAP, EAP-TTLS, EAP-TLS.
- Additionally, IP Enabled locks can be set up to use certifications on custo networks.

The IP Enabled locksets, LCT (The Lock Configuration Toolset) and the DSF (Door Service Router) have all undergone third-party Penetration Tests.

PoE
Power over Ethernet

Product Introductions: 2019

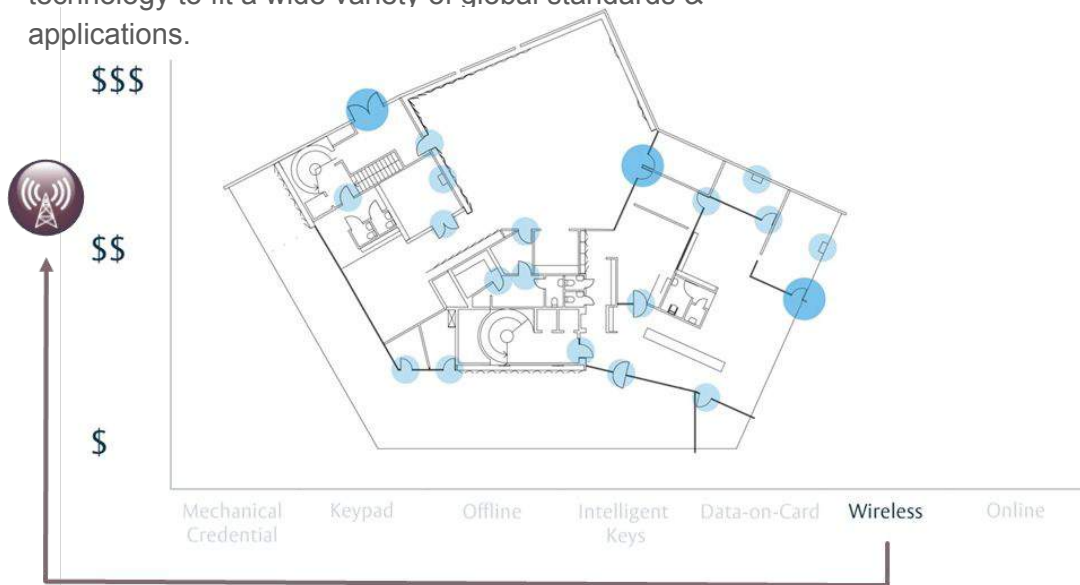PN120 / 220 w/ Keypad   IN120 / 220 w/ Keypad   Solar Assisted IN120

aperio™

Aperio® Wireless Technology

Aperio is a global family of products that use the same wireless technology to fit a wide variety of global standards & applications.

$$$

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Mechanical Credential | Keypad | Offline | Intelligent Keys | Data-on-Card | **Wireless** | Online

Cabinets **K100**

Server Cabinets **KS100**

Commercial **IN100**

Aluminum & Glass Doors **A100**
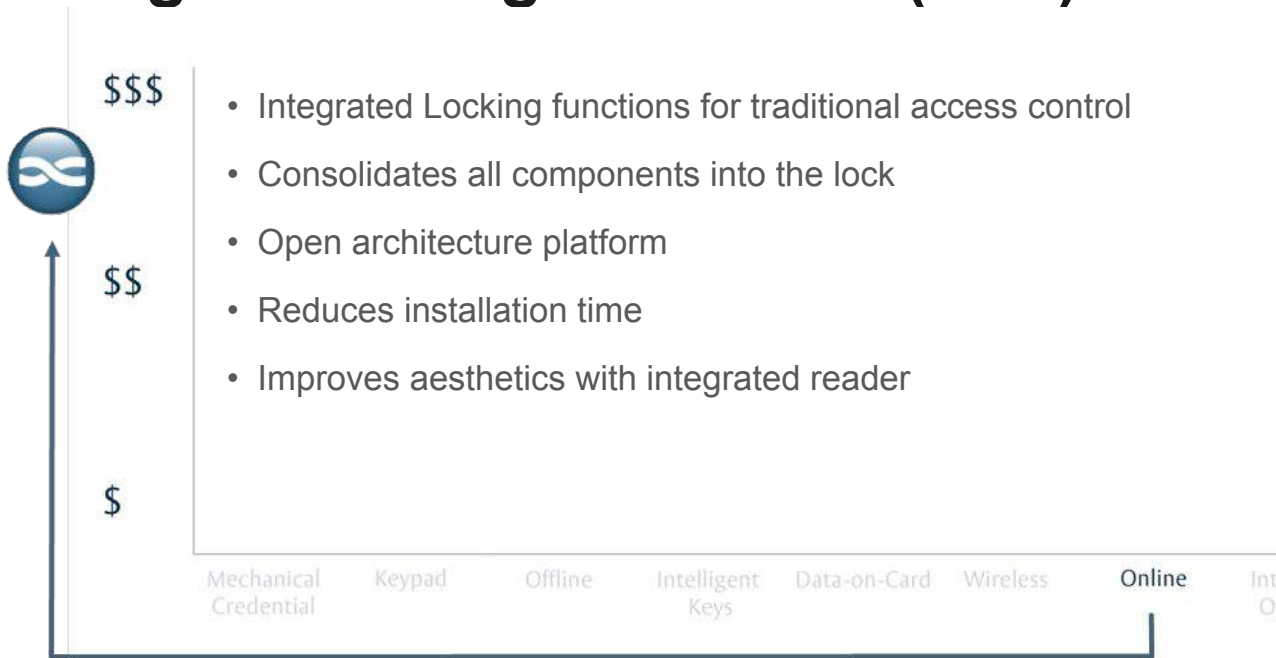
Institutional **PR100**

Glass Doors **R100**

Vulnerability Reduction on Customer Networks

APERIO

- Leverages an encrypted proprietary protocol between the lockset and the hub to ensure secure wireless communication.

- Undergone a third party security assessment.

- Including penetration test of lock units, the hub device, the Ethernet connection between the hub and external access control system, wireless communication protocol employed by the devices, as well as the Aperio PAP programming application.

aperio™

Integrated Wiegand Locks (IWP)

- Integrated Locking functions for traditional access control
- Consolidates all components into the lock
- Open architecture platform
- Reduces installation time
- Improves aesthetics with integrated reader

$$$

$$

$

Mechanical Credential | Keypad | Offline | Intelligent Keys | Data-on-Card | Wireless | **Online** | Inte... Op...

Vulnerability Reduction on Customer Networks

Integrated Wiegand

- ASSA ABLOY is actively working on adding OSDP compliant Integrated Wired readers to our portfolio.

- Currently the Integrated Wiegand portfolio supports AES-128 Encryption which is required for FIPS201-2 Applications.

- Y/E 2019 anticipated launch of SELP10 OSDP with Keypad.

Differentiate….Discover and Provide Solutions
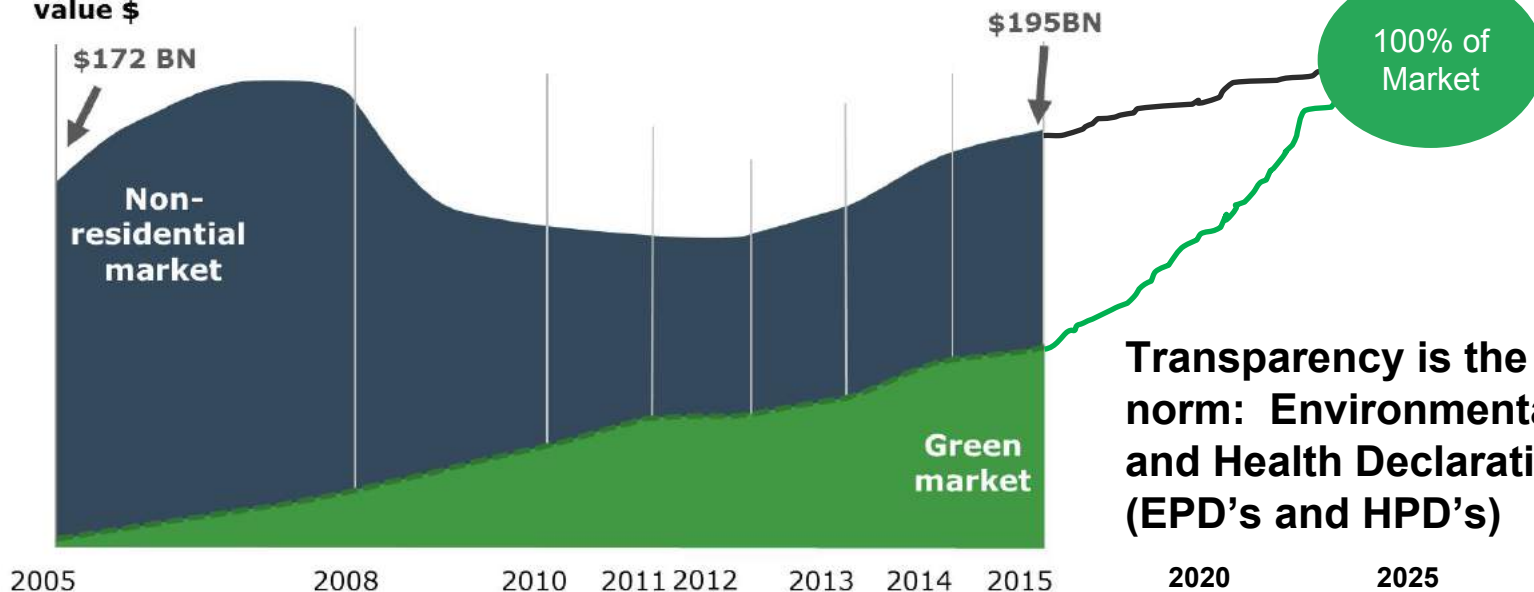
Security Consultant Relations Program

➢ Dedicated team focused on serving the security specifier community

❏ Many services available to meet the demands of your project needs and site locations

- On-site meetings
- Coordination between Divisions 08 & 28
- Proof of concepts
- Site Surveys
- Aid in channel partner coordination

- Contact: Donna Chapman – Director of Security Consultant Relations at donna.chapman@assaabloy.com
Phone: (860) 461-5597

Sustainability will continue to Grow

Sustainability will continue to Grow

Construction value $

$172 BN

$195BN

Non-residential market

100% of Market

Green market

Transparency is the new norm: Environmental and Health Declarations (EPD's and HPD's)

2005   2008   2010   2011 2012   2013   2014   2015   2020   2025

Solar Array, ASSA ABLOY Berlin, CT

Consultative Services + Comprehensive Products = Complete Solutions

The Future of Intelligent Communication

Internet of Things and **Smart Devices** – powered by intelligent platforms that allow for safe & secure places and buildings

Human Interfaces and the growing importance of voice as an interface to devices allowing for **voice** recognition and authentication

Connected Systems, **Big Data** and **Artificial Intelligence** – the ability to connect to new data platforms and networks, enriching and fueling machine intelligence across devices, buildings and vehicles

Intelligent Communications

"Intelligent Communications" refers to communication <u>between systems</u> and <u>within business processes</u>, and encompasses all forms of communications, not just voice.

What does that mean?
All comprehensive security strategies should incorporate audio, video, and command & control into a closely integrated solution to increase response time, situational awareness, and accountability.

intelligibility

Clarity of data, voice, or image –

So that incoming information can be easily UNDERSTOOD, and immediate action can be taken.

intelligibility

Communication in all its forms is critical to business operations. When thinking about voice communications, INTELLIGIBILITY is the most important consideration.

What does that mean?
If you cannot hear, be heard, and be understood, any money spent on voice communications is wasted.

THE IT MANDATE
- No more proprietary servers
- IT to service and maintain IP infrastructure
- Move to virtual
- Increased Service Level Agreement

THE PROBLEM:
Virtual is not ideal for voice communications

OVER SIMPLIFY WITH P2P

SACRIFICE OPTIMIZATION

- ☐ Intelligibility
- **X** **INTEROPERABILITY**
- X The "Ilities" – scalability, availability, maintainability.

THE SECURITY PROFESSIONAL'S EVOLVING NEEDS:

- Increase the value of security.
- More seamless integration to create efficiency and optimize processes.
- A reliable scorecard for evaluating solutions.

THE SCORECARD FOR CRITICAL COMMUNICATIONS

- ☐ Intelligibility
- ☐ **INTEROPERABILITY**
- ☐ The "Ileitis" – scalability, availability, maintainability.

Cutting the cord

Zenitel is "cutting the cord to the server" by developing advanced technology embedded entirely on edge devices, bypassing the IT mandate for consolidation of server functionality onto virtual servers.

Practical translation:
Communications need server-type functionality, but virtual servers are too expensive and too unpredictable to support live voice communications, which must be "always-on". Our PULSE system today, and future systems tomorrow, are pushing enterprise capability out to the edge devices, supporting large deployments and soon - full integration to Symmetry.
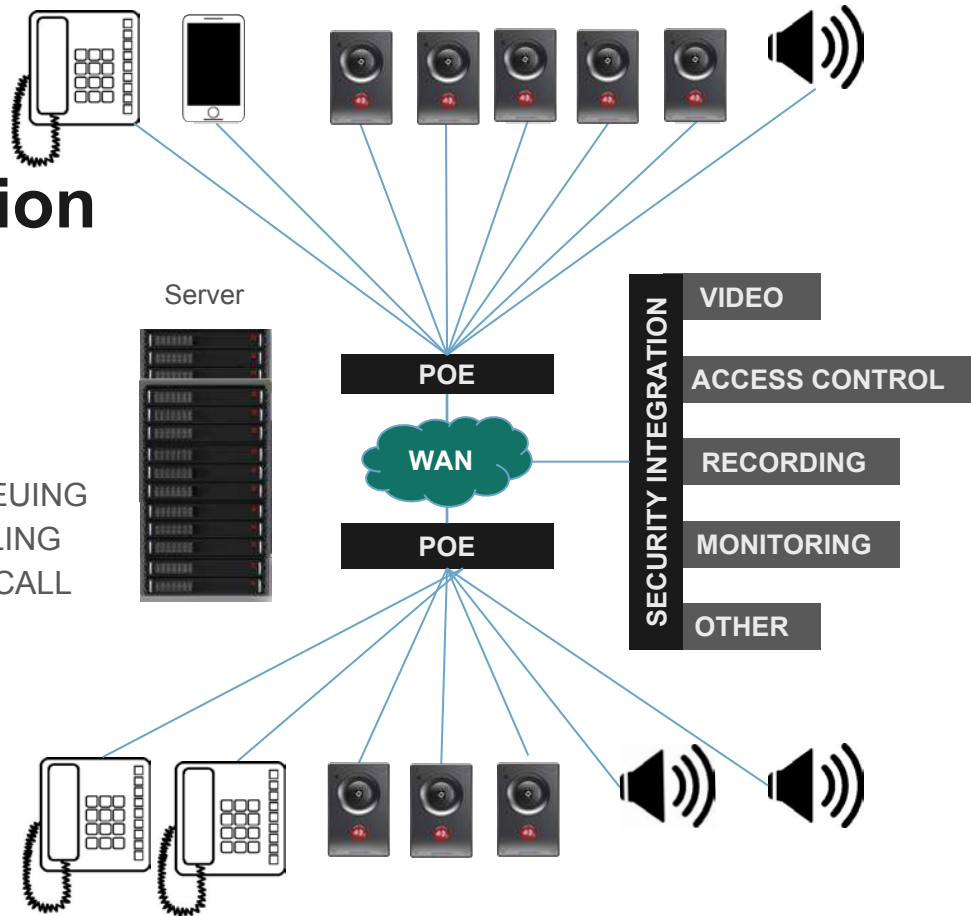
Intelligent Communication at the Edge

BENEFITS
SCALABILITY
DEFENSIBILITY
VULNERABILITY
DECENTRALIZED
EDGE AUDIO PROCESSING
TOTAL COST OF
OWNERSHIP (TCO)
DEPLOYMENT
MANAGEMENT
FALL BACK TO P2P

OPTIMIZATION
INTEGRATION
CALL ROUTING/QUEUING
MESSAGING HANDLING
GROUP CALL / ALL CALL

Server

POE

WAN

POE

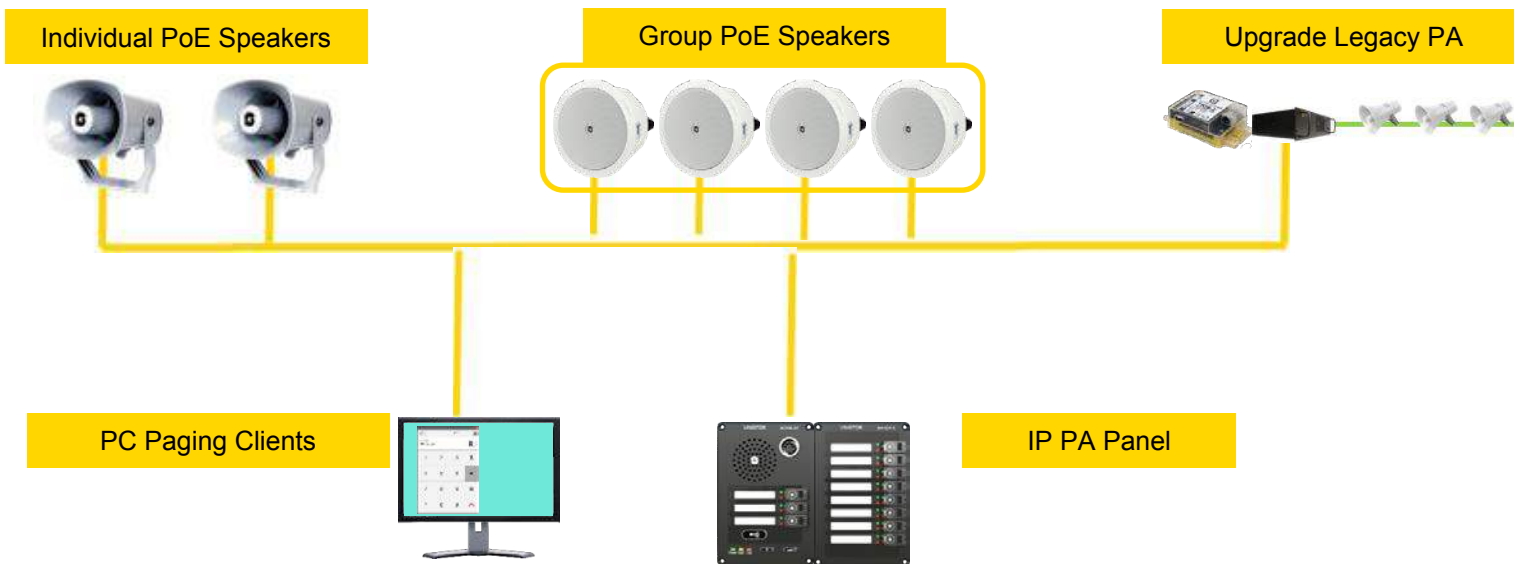SECURITY INTEGRATION

VIDEO

ACCESS CONTROL

RECORDING

MONITORING

OTHER

Full VoIP Intercom Platform

| Unpack | Configure | Go! |

Full VoIP Public Address Platform

Individual PoE Speakers

Group PoE Speakers

Upgrade Legacy PA

PC Paging Clients

IP PA Panel
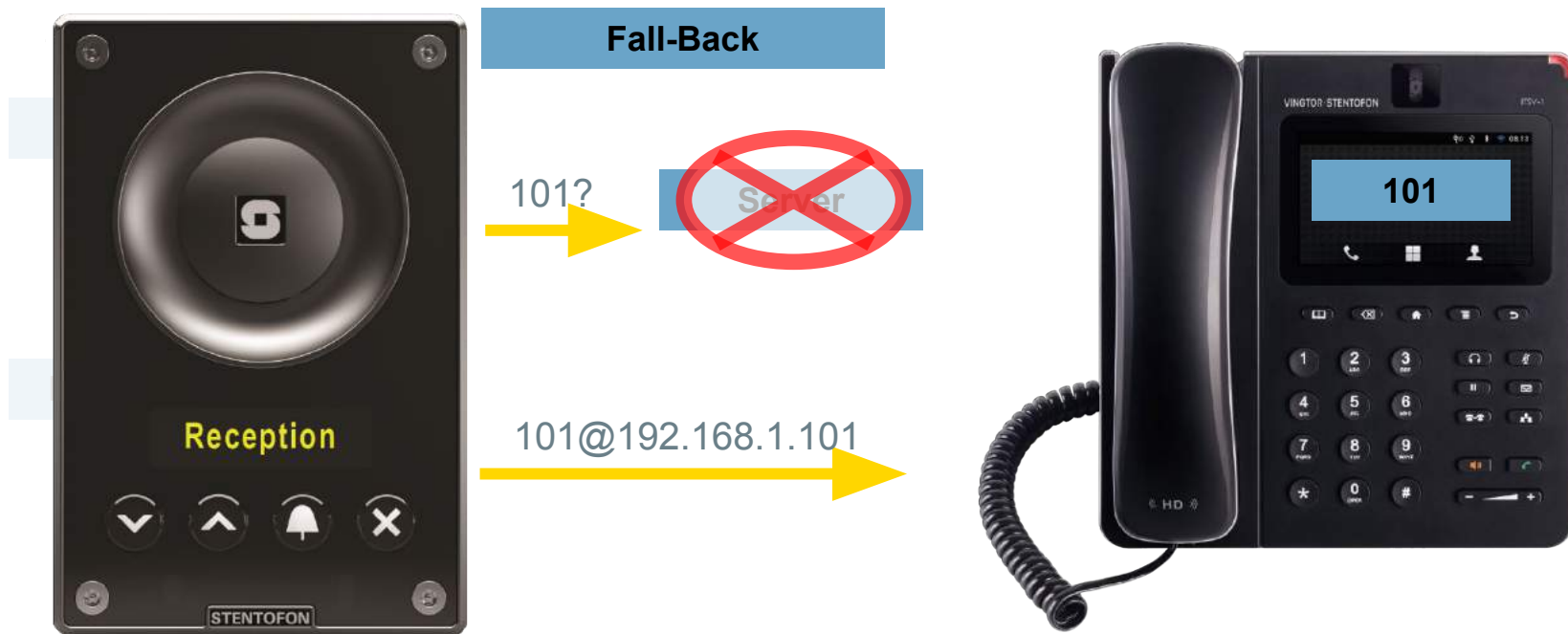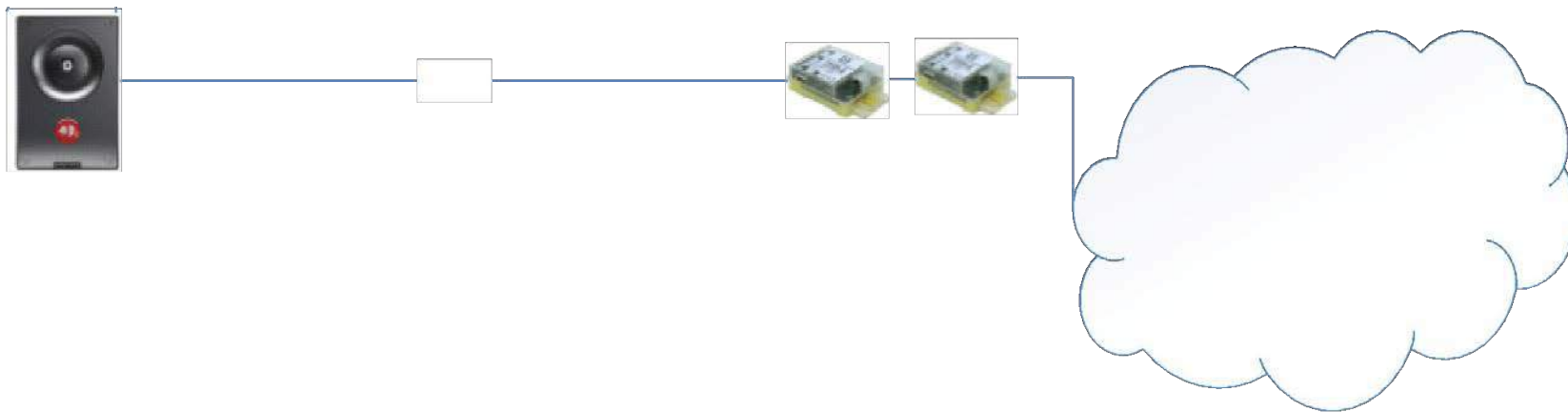
Securing access to doors & gates

DTMF

Virtual

What to do with the devices that are out in the open?

- Move network port to protected area, with hardened device outside.

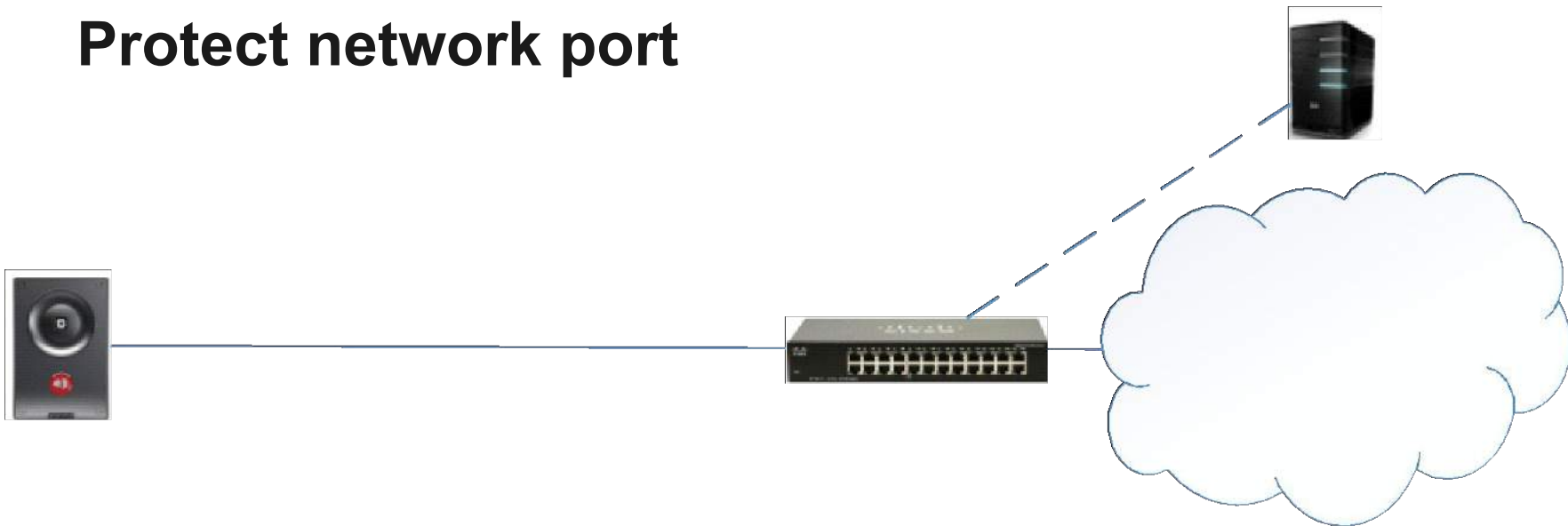- Protect network port through 802.1x authentication
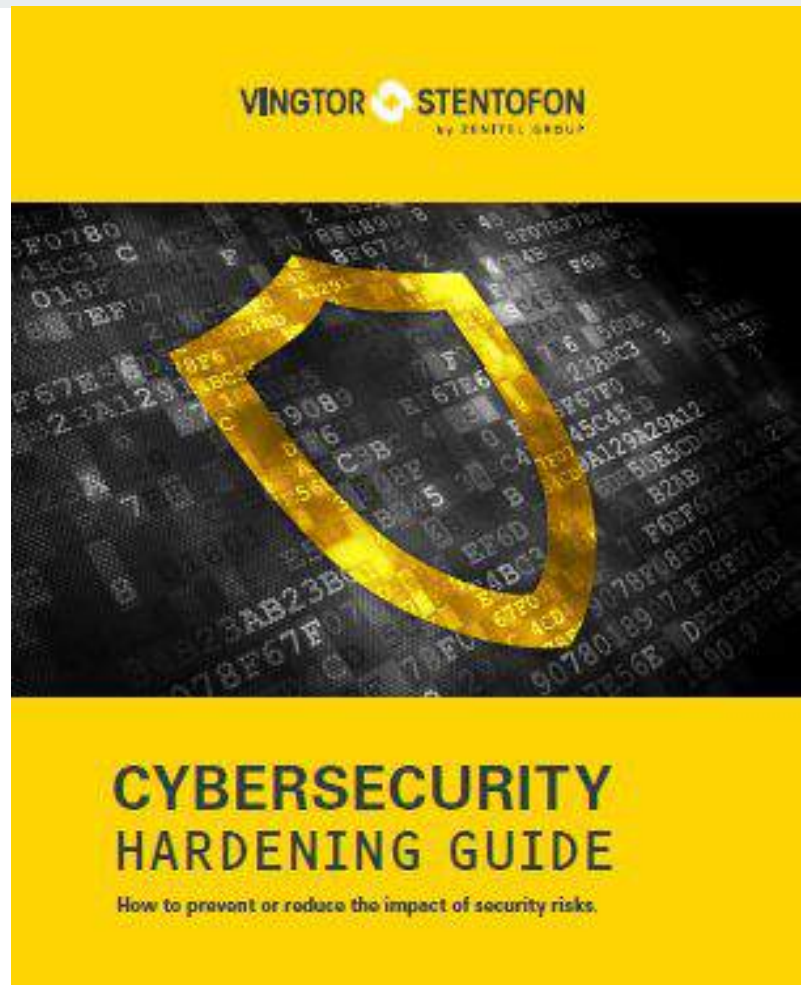
Move network port to protected area

Protect network port

Hardening guide

Zenitel has developed a Cybersecurity Hardening Guide to help planning, based on the CIS Controls

CIS Center for Internet Security®

Living on the Edge

Final Remarks

Disrupting the Business – Road Map

- Continuously evolving to meet the needs of tomorrow.

- Catalyst for change.

- Transition from Cost center to Value creator

Top Challenges for implementing transformation

58%
Not enough budget

31%
Unclear roles & responsibilities

24%
Lack of vision

35%
BUs implementing independently in silos

45%
No sense of urgency

27%
Unclear business case and value

AMAG addresses challenges by...

01	Access Control
02	Visitor Management
03	Identity Management
04	Command & Control Center
05	Video Management
06	Intrusion Management
07	Audio Management
08	Incident & Case Management

SYMMETRY

Symmetry Control Room

Symmetry Control Room captures alarms from all supported systems in a single window allowing users to make better decisions, operate more efficiently and respond to incidents more quickly.

01 | **Operate More Efficiently:** Manage all your systems from a single unified interface.

02 | **Open Architecture:** Integrates with Symmetry Access and CompleteView video, providing unlimited flexibility to communicate with best-of-breed technologies and unify siloed systems.

03 | **Advanced Mapping:** Customizable graphic interfaces and navigation of all sites with option to dynamically geo-locate events.

04 | **Automated Workflows**: Predefined worksflows streamline processes improving overall security.

05 | **Machine Learning**: Predict events, before they happen.

The Future of Physical Security

Physical security leaders indicated that their top investments over the next 3-5 years are big data and analytics, cloud computing and storage, and the Internet of Things (IoT).

" **We're just scratching the surface. The holy grail is being able to predict incidents before they occur and prevent them.**

– Michael Gips, Chief Global Knowledge and Learning Officer, ASIS

www.asisonline.org/globalassets/internal/future-of-physical-security.pdf

Questions?