The IoT Security Challenge

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Introducing Telenor Connexion

Telenor Group

Providing tele, data and media services in the Nordics, Europe and Asia.

- 200 million mobile subscriptions
- 33,000 employees
- Operations in 13 (+17) markets

Telenor Connexion

We design and operate connected business solutions.
+15 years experience.

Late 90's	2003	2005	2008	2011	2013	2015
Telenor is pioneering machine-to-machine.	First large-scale partnerships with Volvo & Securitas.	Large-scale AMR roll-out: Fortum & E.ON.	Telenor Connexion established eSIM patent approved	New service portal. M2M quality program.	New offering introduced - Cloud Connect	**Telenor Connexion** • ~100 employees • Headquarter in Stockholm • US, Japan, UK, Germany, regional offices

In **2009**, John Matherly launched **Shodan**

SHODAN
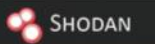
port:"47808" country:"SE"

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TOP COUNTRIES

Sweden   64

TOP CITIES

Stockholm   20
Karlskrona   2
Visby   1
Staffanstorp   1
Landskrona   1

TOP ORGANIZATIONS

                                          28
                                          20
                                           4
                                           2
                                           2

TOP PRODUCTS

PXG3.L   8
Kieback&Peter DDC4000   6
LGR250   3
INSIGHT   3
Excel Web   3

Total results: 64

BACnet ADPU Type: Error (5)

Added on 2016-01-27 00:12:31 GMT
Sweden
Details

BACnet ADPU Type: Error (5)

Added on 2016-01-26 20:46:53 GMT
Sweden, Stockholm
Details

Instance ID: 1050635
Object Name: BNR11
Vendor Name: Siemens Industry, Inc.
Application Software: Jul_01_2013_12_22_44
Firmware: FW=01.15.14.105;SVS-200:SBC=10.15;
Model Name: PXG3.L
Description: PXG Router 11

BACnet Broadcast Management Device (BBMD):
                    ██████████:47808

Foreign Device Tab...

Added on 2016-01-26 15:12:44 GMT
Sweden
Details

Instance ID: 1050625
Object Name: BNR01
Location: Greetings from www, stuxnet is watching U :-O
Vendor Name: Siemens Industry, Inc.
Application Software: Jul_01_2013_12_22_44
Firmware: FW=01.15.14.105;SVS-200:SBC=10.15;
Model Name: PXG3.L
Description: PXG Router 01

BACnet Broadcast Management De...

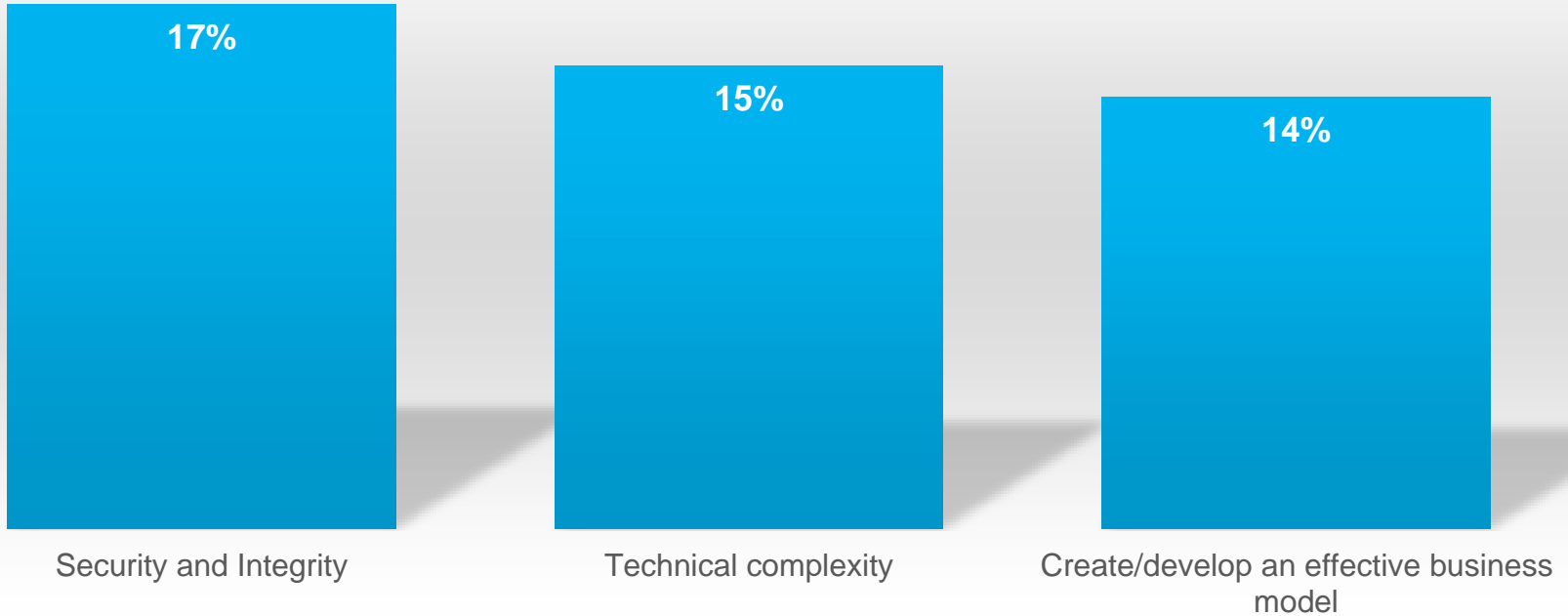Added on 2016-01-26 01:47:37 GMT
Sweden
Details

Instance ID: 1050625
Object Name: BNR01
Location: Greetings from www, stuxnet is watching U :-O
Vendor Name: Siemens Industry, Inc.
Application Software: Jul_01_2013_12_22_44
Firmware: FW=01.15.14.105;SVS-200:SBC=10.15;
Model Name: PXG3.L
Description: PXG Router 01

BACnet Broadcast Management De...

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Building Automation and Control Network (BACnet)

Which is the greatest challenge of implementing IoT/Connected Solutions?

17%	**15%**	**14%**
Security and Integrity	Technical complexity	Create/develop an effective business model

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Security Challenges

Too many build unique and proprietary solutions

- Belief in security by obscurity
- Customer lock-in
- Harder to use the IoT ecosystem

New and often immature technologies are being used

- Flaws in 3rd party HW and SW
- Updates might break the design
- Sudden stop in future updates

Time to market often trumps security and quality

- Hacked shortly after launch
- More expensive to fix afterwards
- Brand damage takes time to heal

Lifecycle Management is not mature enough, or is simply missing

- Risk are not treated properly
- Poor design decisions
- Post-launch patching?

Existing best practices and frameworks are not being used or considered

- Mistakes are repeated
- OWASP top 5 has not changed, at least not much over the years

There is a shortage of security professionals

- Lack of skills and expertise
- Supply and demand
- Slow progress

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IoT inherit existing threats. What is actually new?

Thank You!

Telenor Connexion   🐦 @t_connexion

Jimmy Johansson   🐦 @greatwhitehat