IoT: Risks and Rewards

Mike Hartree | harttree@cisco.com
Chris Cressy | ccressy@cisco.com
January 2017

Agenda

The IoT

Use Case: My Dog

Manufacturing:
German Smelter

How Cisco Can Help

© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

The IoT

Objects, not data

Gathering, analytics, and remote control

Object Interaction

New threat vectors to secure

© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

IoT is an Opportunity

Number of smart objects expected to **double** to

50 billion by **2020**

From 25 billion in 2014.

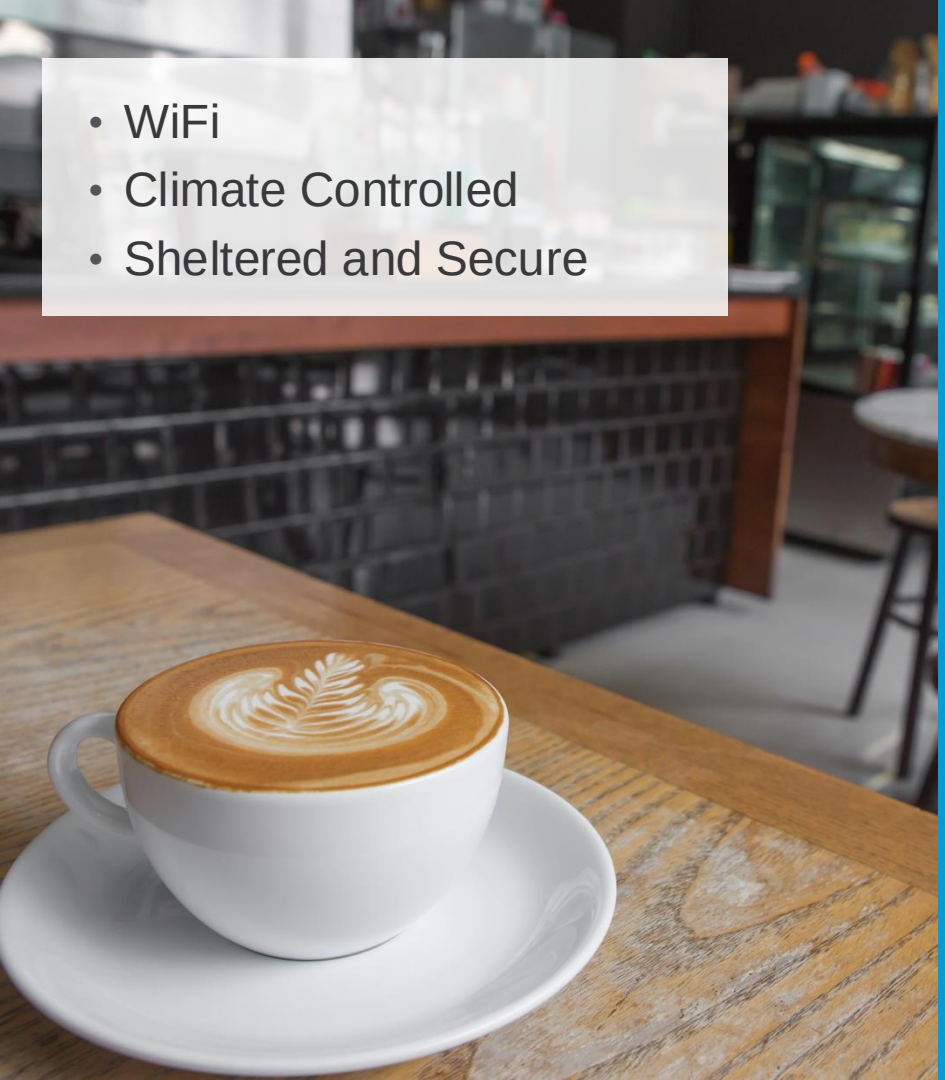
ADOPTION RATE OF DIGITAL INFRASTRUCTURE

World population expected to rise to

7.6 billion by **2020**

From 7.2 billion in 2014.

5X faster than electricity and telephony



- WiFi
- Climate Controlled
- Sheltered and Secure

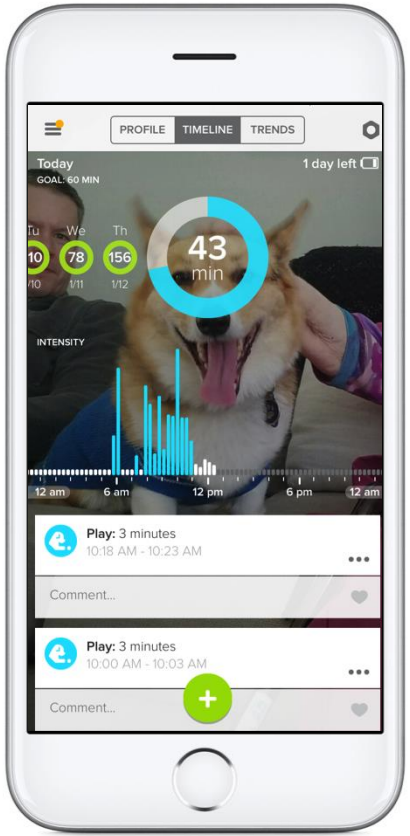
- No network
- Exposed to the elements
- Open to intruders

Use Case:

My Dog

MORE ABOUT MY DOG

The Whistle: GPS for Your Dog



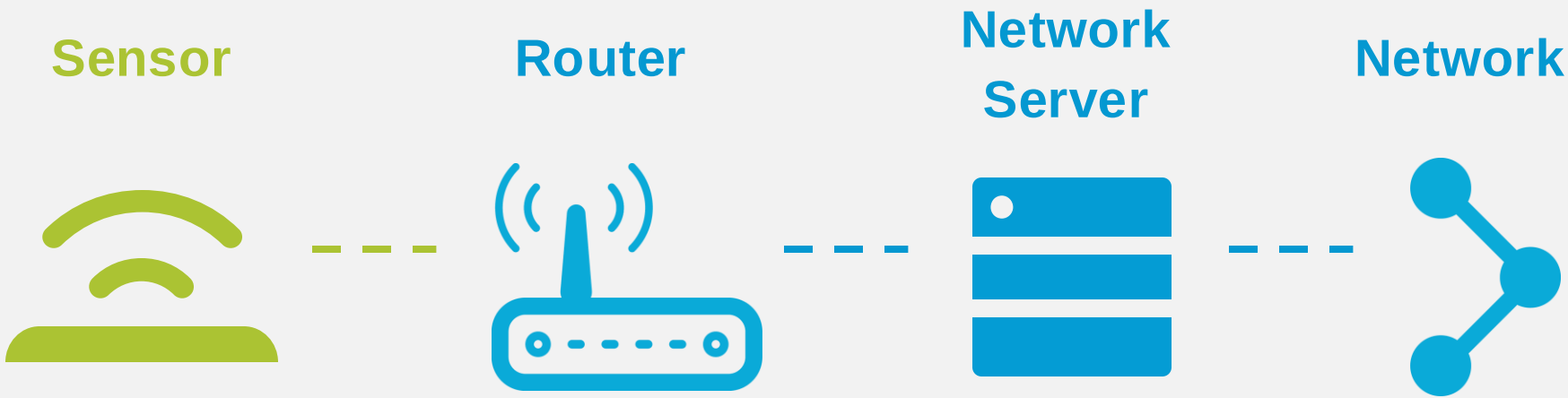
© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

The Cisco IoT System Portfolio

An Extensive Set of Solutions for Network Connectivity and Security

© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

LoRa



© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

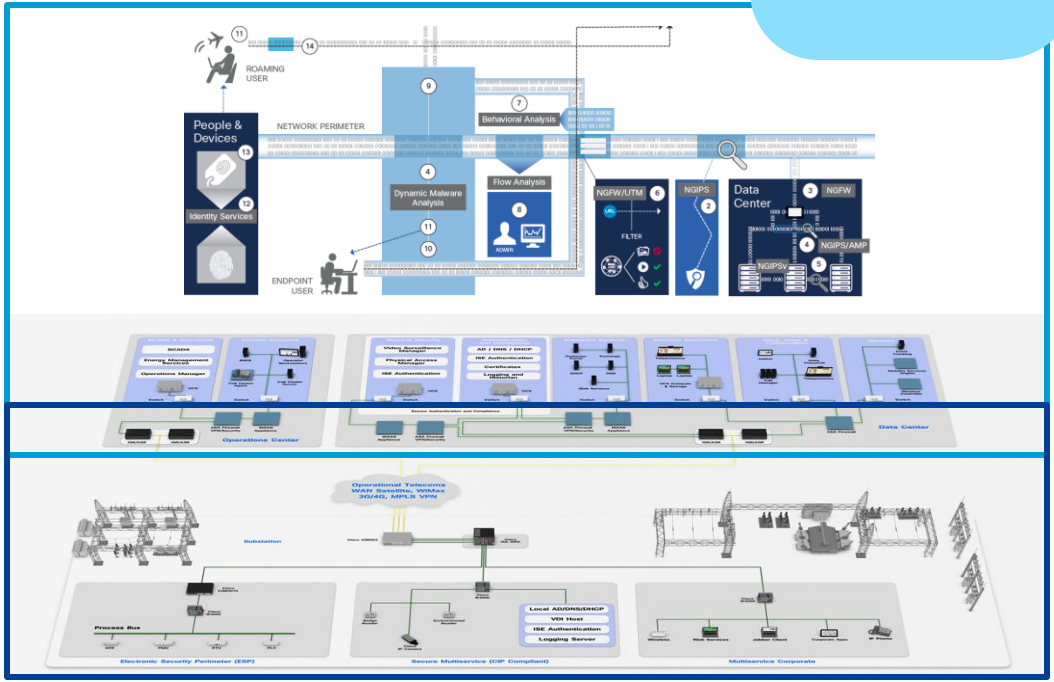
Manufacturing: German Smelter 2014

© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Kill Chain – ICS Variant

Intrusion Phase

- Reconnaissance
- Targeting
- Weaponization: Develop / Test
- Delivery / Exploit / Persist
- Install
- Modify Systems
- Command and Control
- Attack
- Anti-Forensics



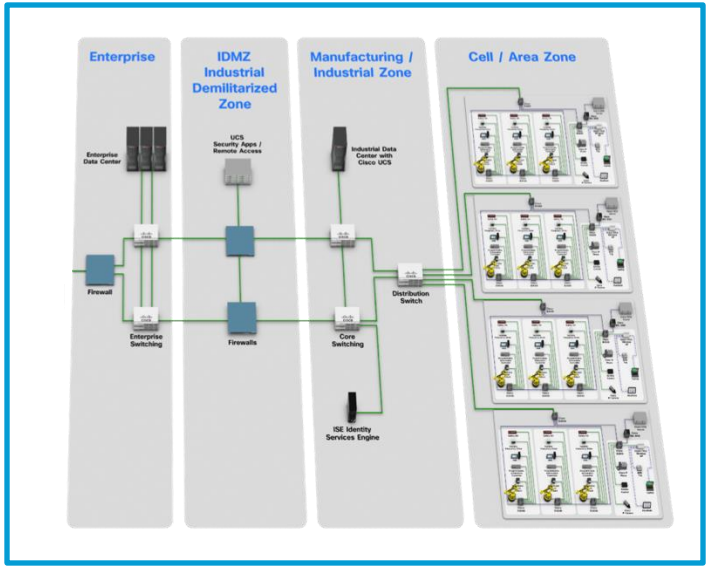
© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

German Smelter Attack: 2014 Attack

What is Known

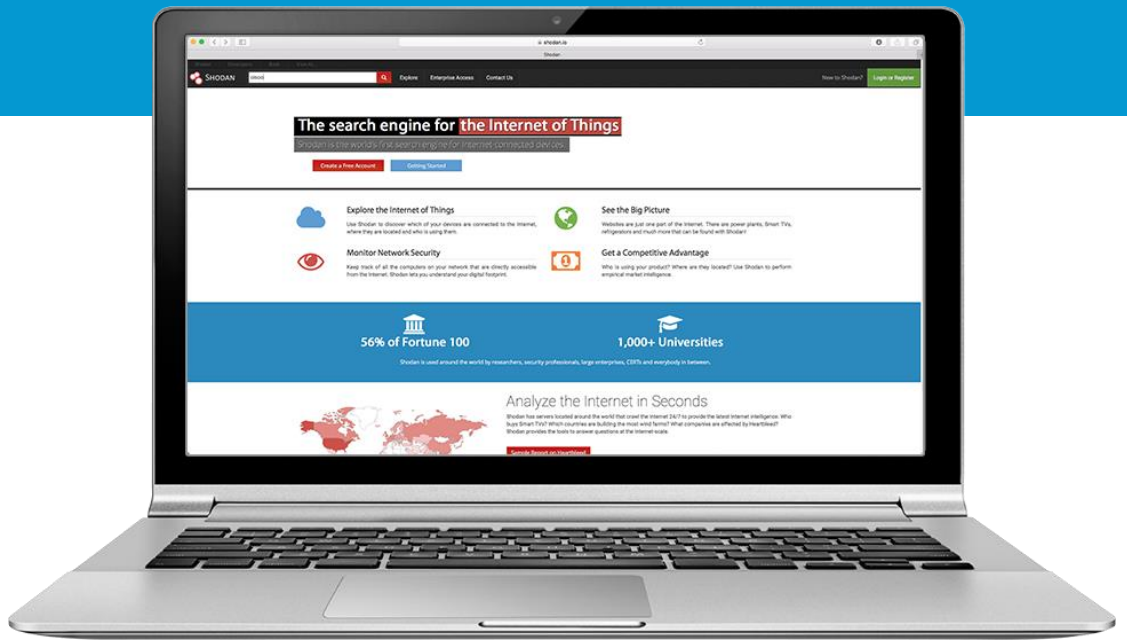
- Phishing Attack
- Malware
- Access to ICS System
- Shutdown commands
- Damaged smelter

* OT Baseline features



© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

shodan.io



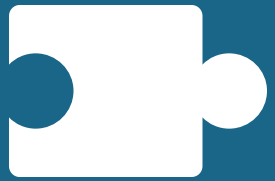
© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

How Cisco Can Help

© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Cisco's Value Proposition

Cisco excels at connecting things that are difficult to connect.



Cisco brings proven expertise and products to your defense.

© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Cisco's Value Proposition (cont.)

Cisco can take IoT network management off your hands.

Cisco brings an architectural approach, not a piecemeal proposition.

Cisco delivers a 'useful, durable and beautiful' implementation.

© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Summary

[Insert Text]

[Insert Text]

[Insert Text]

[Insert Text]

© 2017 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

CISCO