

IoT: das Provas de Conceito à Realidade

Rodrigo Linhares

Líder de IoT LATAM - Cisco

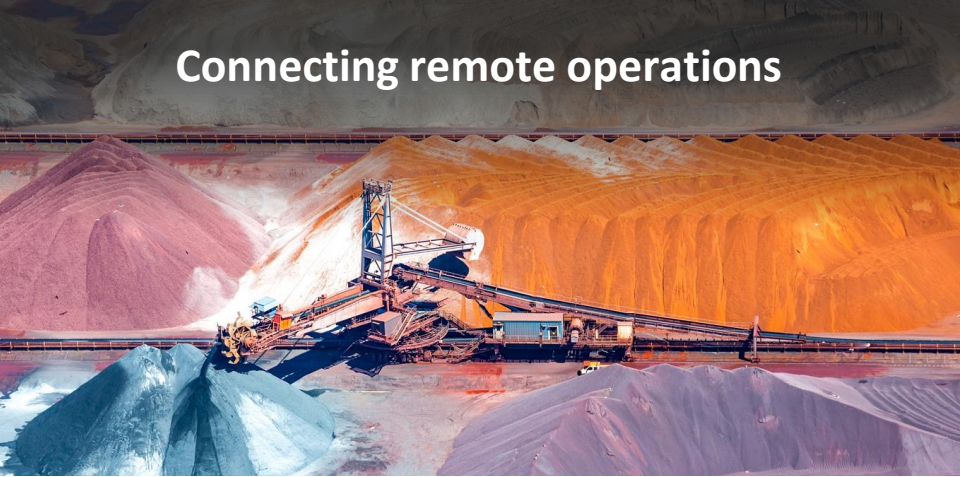
Outubro 2019

IoT

is Digitally
Transforming
Industries



Connecting remote operations



Worker safety



IoT delivers transformation across many use cases

Predictive maintenance



Asset management



The reality: only 40% of IoT deployments make it past proof of concept blocking the value



3 main inhibitors to IoT adoption in the enterprise

TechRepublic - September 3rd, 2019

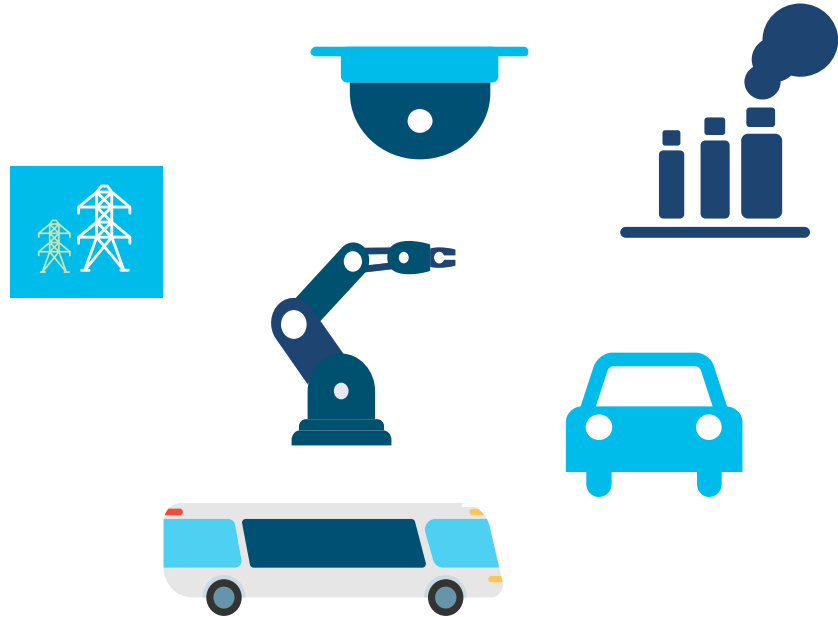
- “Gartner is predicting the number of Internet of Things (IoT) devices in the world will hit **20.4 billion by 2020**, with global data and information services business IHS similarly expecting that **by 2030, 125 billion** connected devices will be part of our daily lives.”
- “It isn't just due to the **security risk connected devices pose to businesses.**”
- “What should organizations be aware of before developing an IoT strategy?”
 - **Return on Investment**
 - **Scale**
 - **Technology Heterogeneity**

Nothing is static – lots of small moves

Need for Scale

You need to:

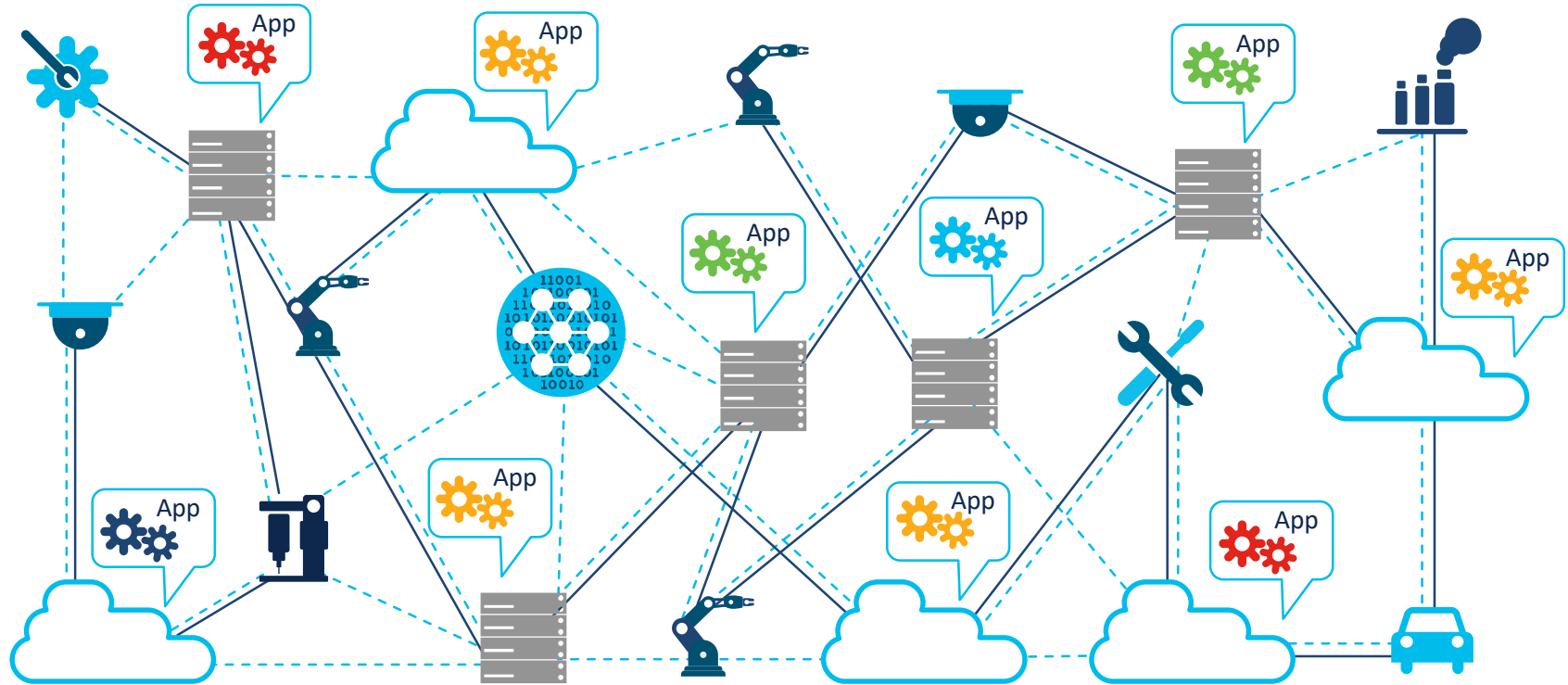
- find things
- measure things
- evaluate things
- move things
- maintain the stability of things
- smart network devices for things
- secure things



The Complexity Factor

- “A single corporation may have temperature sensors that are radically different — completely different manufacturers, completely different protocols.”
- **“Many CIOs feeling paralyzed as they sit and observe all of the heterogeneity coming at them. That's freaking them out, and they don't know how to move forward because of the heterogeneity.”**
- “So heterogeneity is a really difficult thing. And so some of us are looking at how do we reduce some of that heterogeneity at the gateway level, we think that's maybe the proper way, proper place to reduce some of that.”

Technology Heterogeneity or Complexity



IoT: Why do we need Edge Computing?

Manufacturing



Low latency,
high performance
requirements

Retail



Geographically
distributed physical
locations

Utilities



Interfacing with
legacy and physical
systems

Transportation Cities



Mobile & physically
distributed
infrastructure

IoT Edge Computing is a Top of Mind



Insights



Smart Critical biz decision

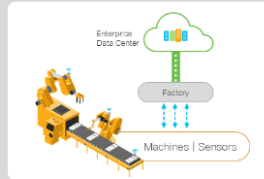
Multi-Cloud



IoT Edge & Data



Instrumenting / Sensors / Measuring



75%

of data will be created and processed outside a traditional centralized data center or cloud by 2025*

Top Drivers

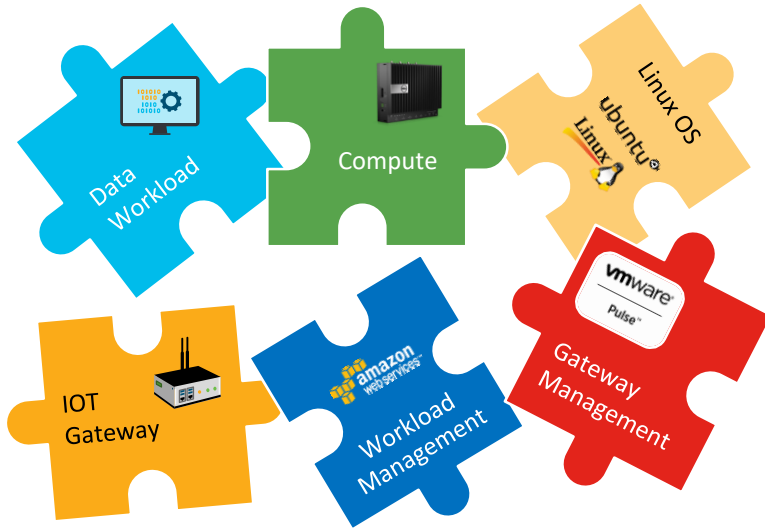
Cost, Efficiency, Regulatory

Complexity

stands in the way - bringing HW/SW components together

Complexity stands in the way

Multiple vendors to integrate, manage
and support



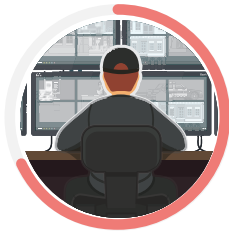
How do I deploy and
manage at scale ?

How do I manage data at edge ?

How do I manage my edge workloads ?

How do I securely connect
sensors/machines ?

Security is the #1 Barrier to IoT Deployments



68%

*of security professionals say
security is the biggest
challenge to IoT*

Only 25%

of IT professionals are confident that they know
the IoT devices in their network

Source: ZK Research

BUSINESS

Cyberattack cost Maersk as much as \$300 million and disrupted operations for 2 weeks

LA Times

By JILL LEVY AUG 17, 2017 | 5:35 PM

Massive cyber-attack could cost
Nurofen and Durex maker £100m

Reckitt Benckiser says 'NotPetya' ransomware - which also
affected FedEx and others - disrupted production and deliveries

ANDY GREENBERG, SECURITY 12.14.17 10:00 AM

**UNPRECEDENTED MALWARE
TARGETS INDUSTRIAL SAFETY
SYSTEMS IN THE MIDDLE EAST**

Bloomberg

Technology

**FedEx Cuts Profit Forecast on \$300
Million Hit From Cyberattack**

ANDY GREENBERG, SECURITY 06.12.17 08:00 AM

**'CRASH OVERRIDE': THE
MALWARE THAT TOOK DOWN A
POWER GRID**

Home / Articles / 2017 / Malware May Have Cost Mondelez \$100 Million

Malware May Have Cost Mondelez \$100 Million

A June 27 ransomware attack crippled the top food company, especially its overseas business
units.
Nov 06, 2017

MYCER RISE JULY 26, 2017 | 6:56 AM | 10 DAYS AGO

**Merck says cyber attack halted
production, will hurt profits**

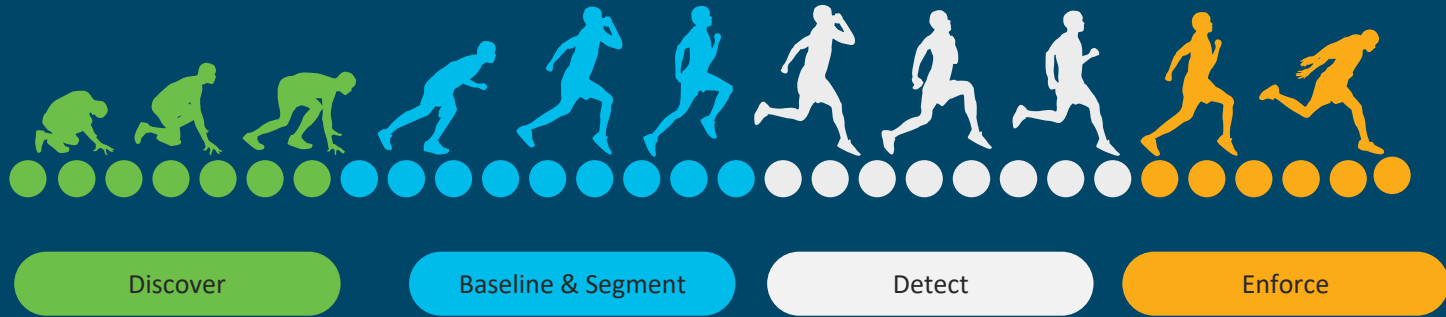
Michael Erman and Jim Finkle

6 MIN READ

8078 views | Jun 23, 2017, 05:00am

**Cyber Attack At Honda Stops
Production After WannaCry
Worm Strikes**

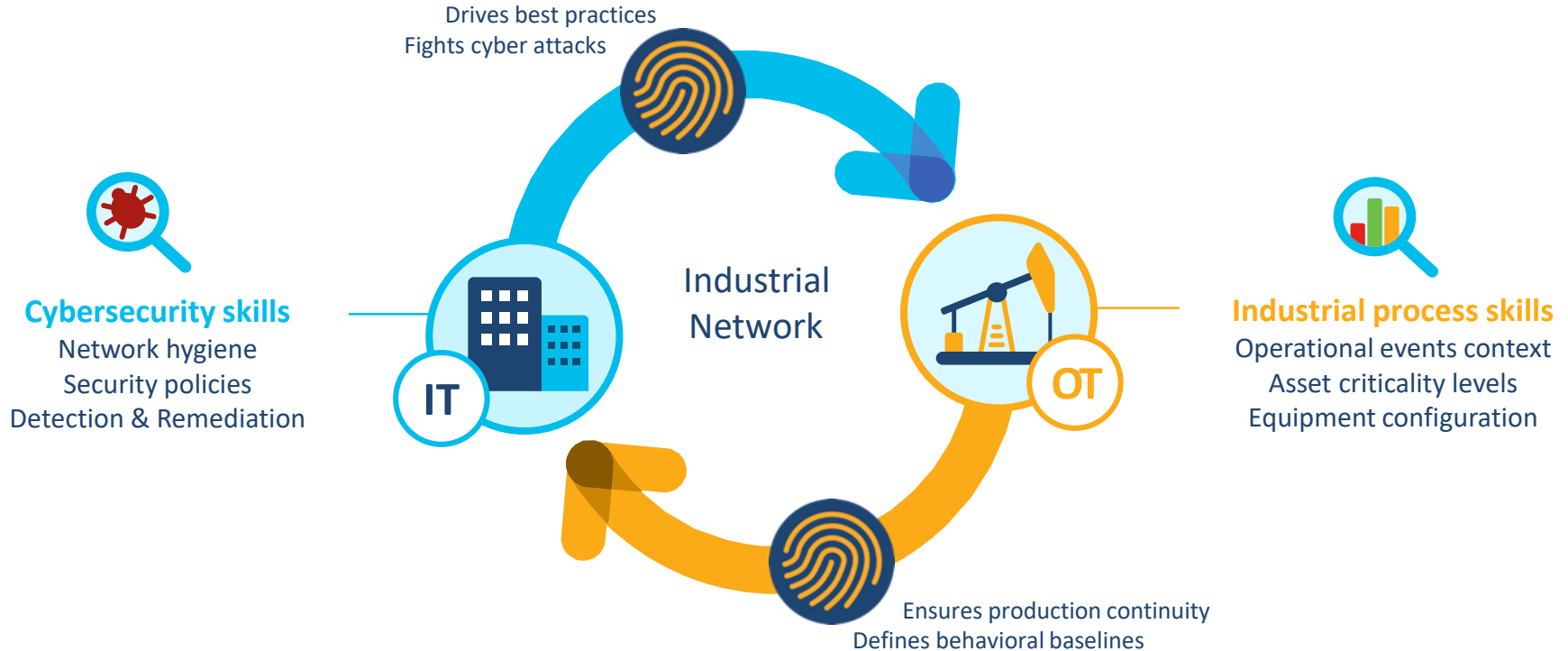
Basic steps to securing the data



Basic Strategy.

Applies to securing any environment, not just Industrial Control Systems

IT-OT collaboration is vital for securing ICS



Make these areas Scalable, Simple and Secure and focus on the Business Outcomes



Network
connectivity



Connectivity
management



Data control
and exchange



Edge
computing



Cyber Security

Obrigado

Rodrigo Linhares

rlinhare@cisco.com