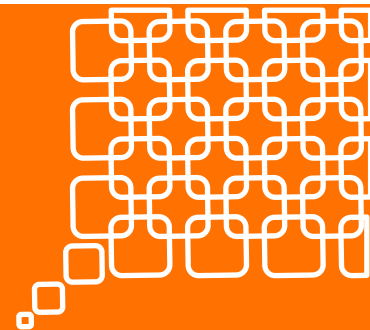


SIMPLICITY, SECURITY, SCALABILITY

# ADAPTING TO THE ISOLATION ECONOMY



**TOSIBOX<sup>®</sup>**

# LAPP

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## The Speakers

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**Boon Hong, Lee**  
**LAPP Asia Pacific**  
Regional Product Marketing Manager



**Mark Dilchert**  
**Tosibox**  
VP Sales, Asia & Africa

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## Reliably connecting the world

---

**8** strong  
brands

which are international  
industry standards

**>40,000**  
standard  
products

for practically every  
requirement

**Manufacturer  
& Solution  
provider**

for industrial  
applications

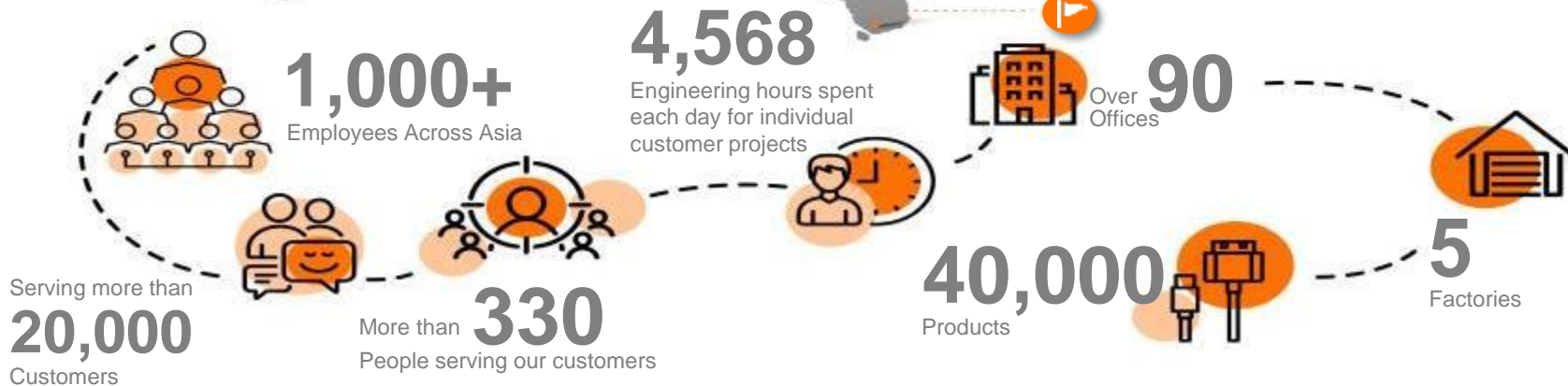
# LAPP IN ASIA PACIFIC

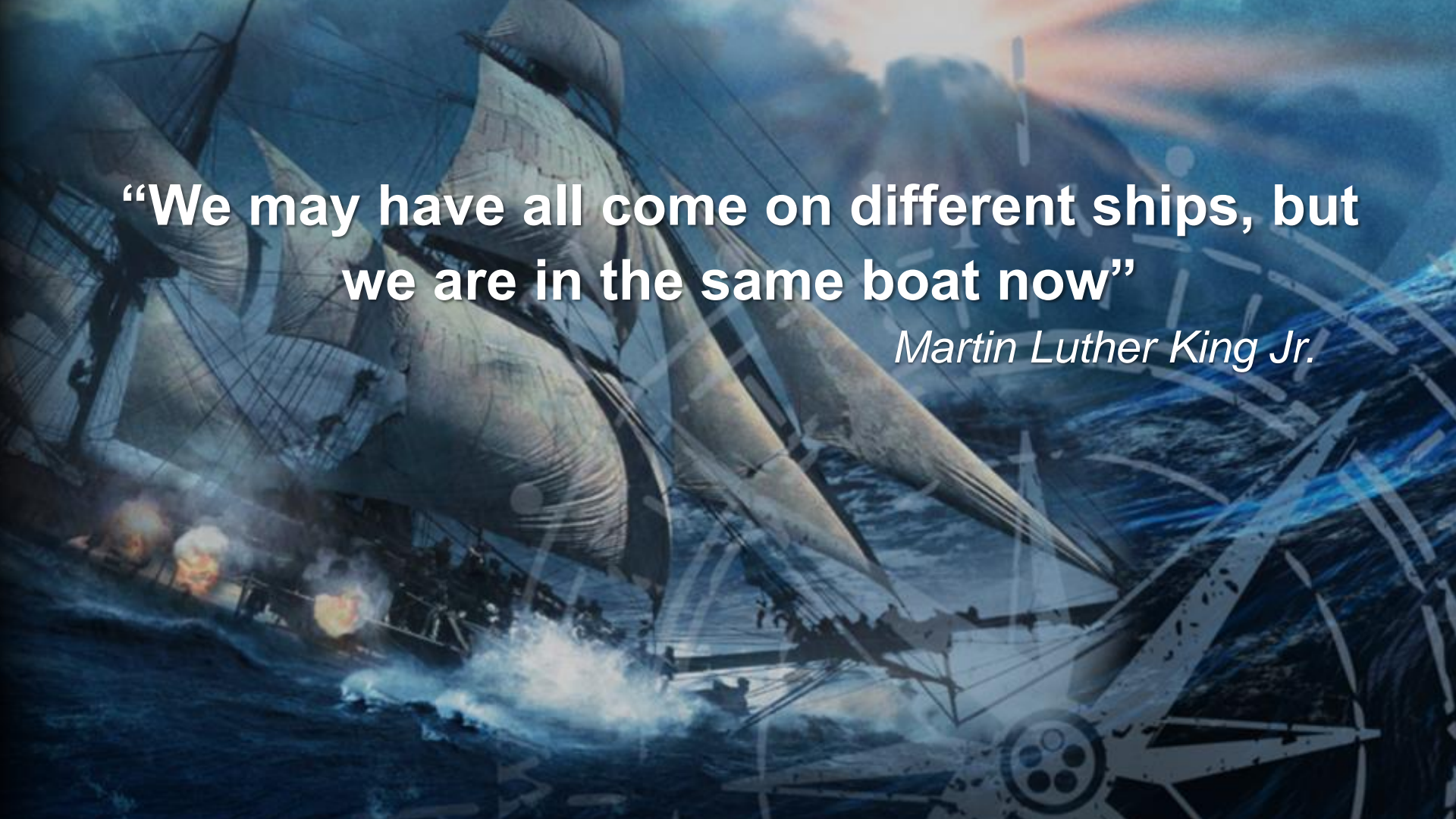
## OUR FOOTPRINT



### Asia Pacific

China	Lapp Kabel Shanghai Co., Ltd.
India	LAPP India Pvt. Ltd.
Japan	LAPP Japan K.K.
South Korea	LAPP Korea LLC
Singapore	LAPP Asia Pacific Pte Ltd
	JJ-LAPP (S) Pte Ltd
Malaysia	JJ-LAPP (M) SDN BHD
Indonesia	PT. JJ-LAPP Cable SMI
Philippines	JJ-LAPP (P) INC
Vietnam	JJ-LAPP Vietnam Co. Ltd.
Thailand	JJ-LAPP (T) Ltd.
Taiwan	DKSH Taiwan Ltd.
Australia	LAPP Australia Pty Ltd
New Zealand	ECS New Zealand Ltd.





**“We may have all come on different ships, but  
we are in the same boat now”**

*Martin Luther King Jr.*





## What is Isolation Economy?

“The Isolation Economy is based on the principle that people **will travel less** to complete everyday activities. Instead, they will be able to complete them **just as effectively** from their homes...”

“In the Isolation Economy, you don't go out for things; they come to you ... Coronavirus has not created this **way of life** ... we can **continue to thrive** even as we increasingly seclude ourselves from our neighbours.”

- Forbes Magazine

## How has Isolation Economy reshape the industrial needs?



No quick  
bounce back  
to pre-Covid



Changes in  
travel  
restrictions will  
be part of life



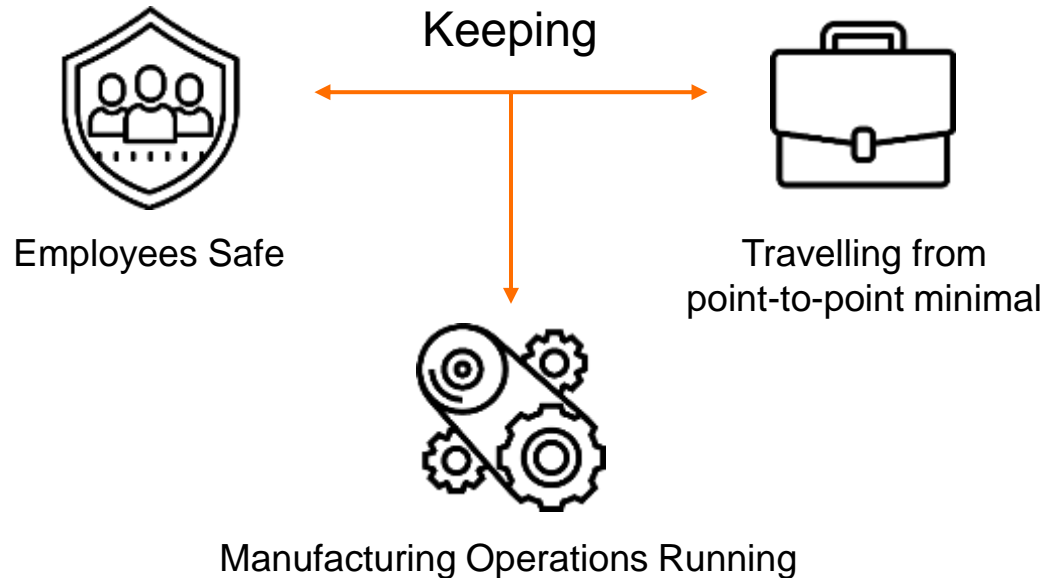
Prepare for  
possible next  
wave –  
Processes and  
Infrastructure



Future  
proofing for  
the **Isolation  
Economy**



## 3 Main Objectives Companies Will Be Looking For



# THE SOLUTION WITH THE 3S

---

## THAT WILL FULFILL THIS



### **SIMPLICITY**

Plug and play solution



### **SECURITY**

World class encryption with  
cyber-security features



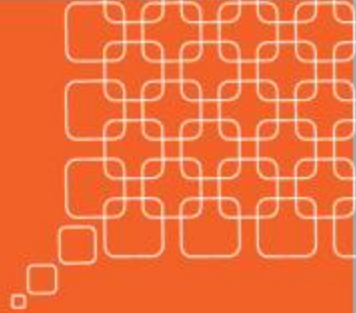
### **SCALABILITY**

Implementable at various level  
– PLC, Machine, Network,  
from 1 discrete point of  
access to multiple points and  
multi-access

What's tried and tested for centuries?



**A Secure Solution**



# TOSIBOX<sup>®</sup>

Simplifying  
IoT

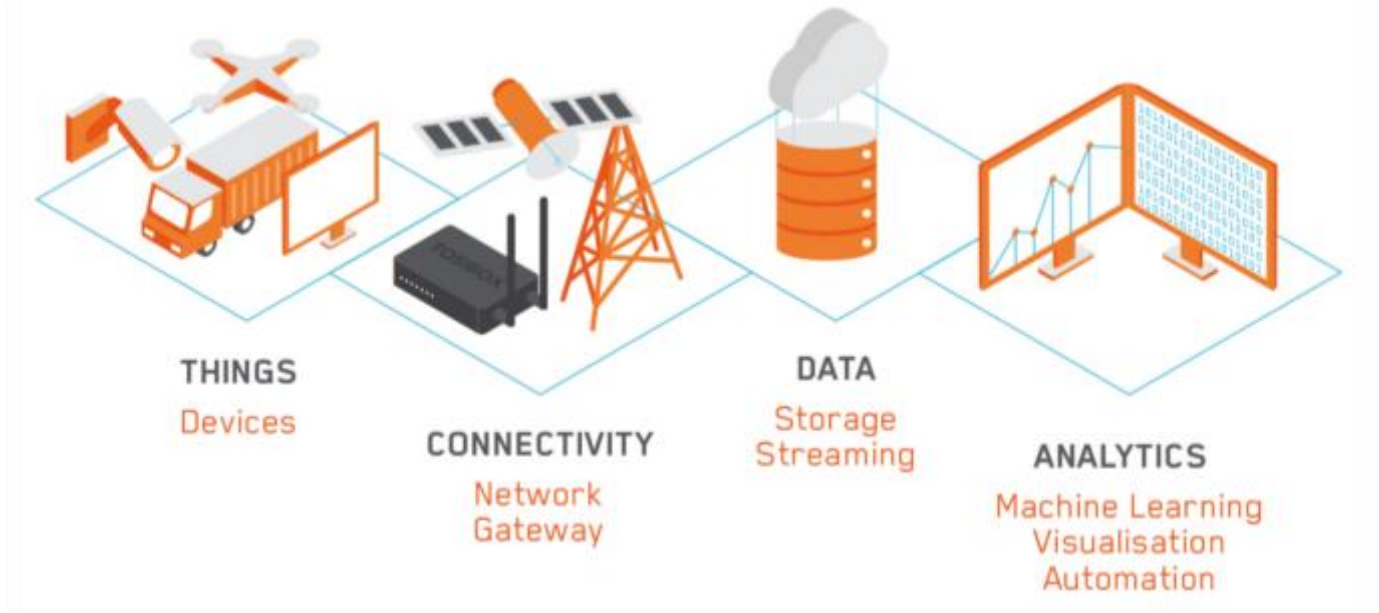


TOSIBOX<sup>®</sup> Virtual  
Central Lock



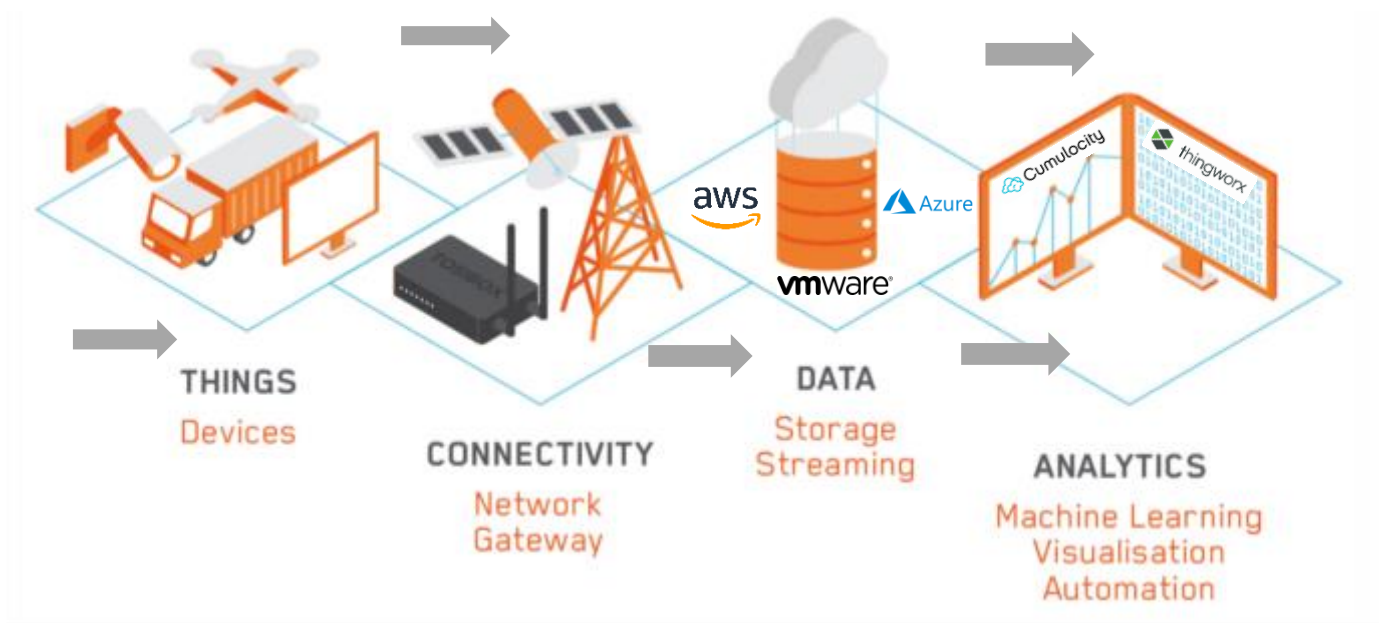
TOSIBOX<sup>®</sup> SoftKey

# The Four Pillars of OT



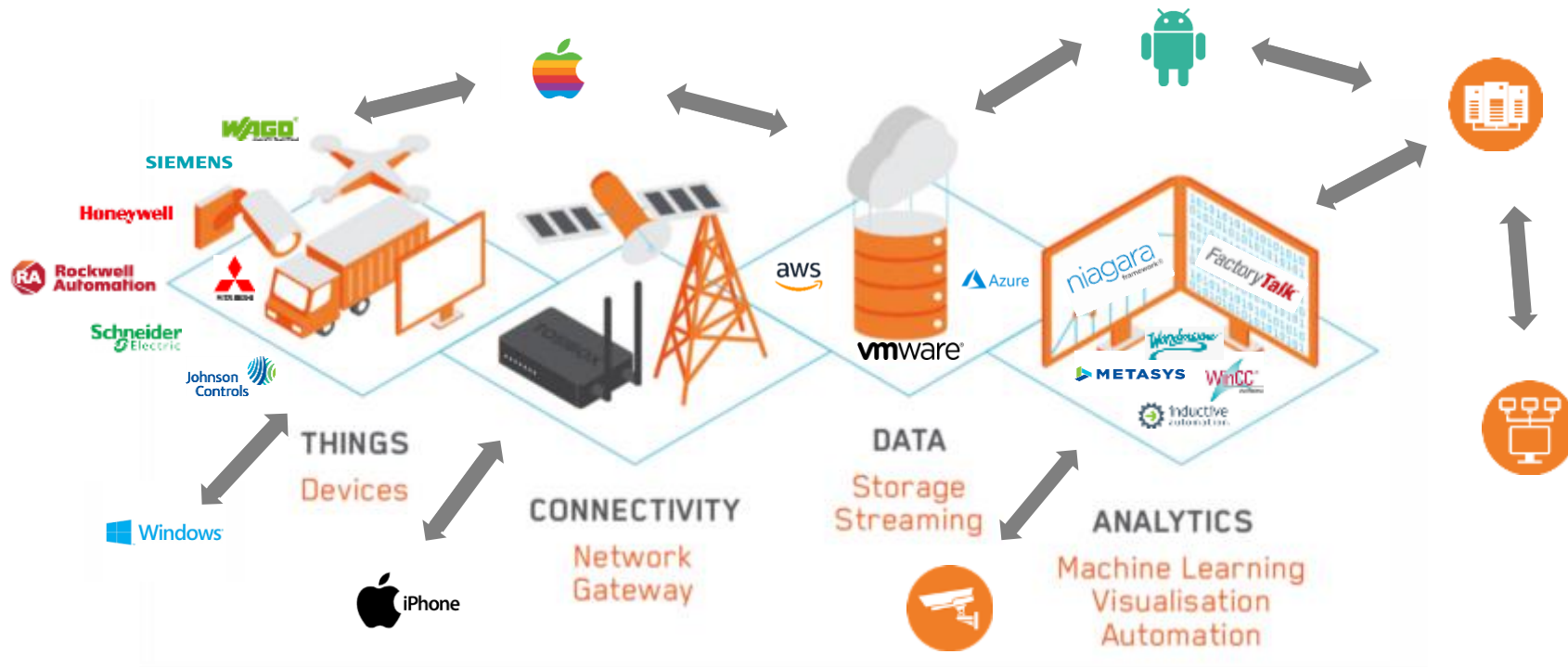


# Outdated IoT Model

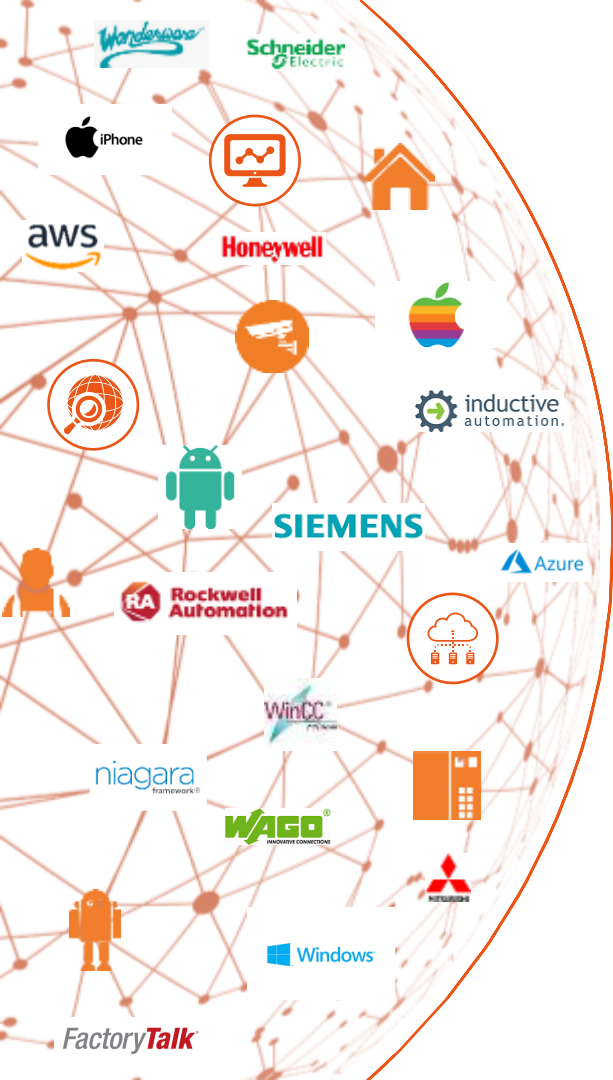


**BUT ONE THING HAS CHANGED.**

# Today's OT Model

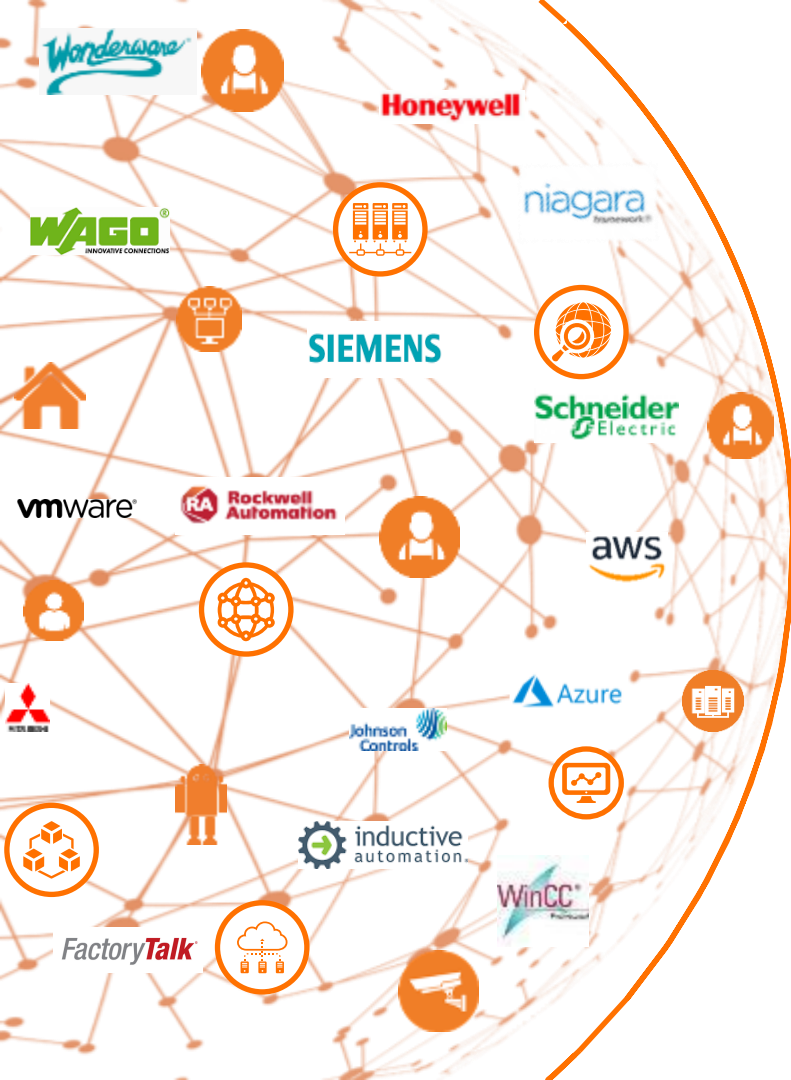


TWO-WAY DATA FLOW  
BETWEEN  
EVERYTHING



# OT Network Essentials

- ✓ Automated & Intuitive Network Management (Simplicity)
- ✓ Layer 2 & Layer 3 Connections for Device Interaction
- ✓ Always-on Data Acquisition
- ✓ Edge-to-Edge Cybersecurity
- ✓ Concentrate in Cloud Servers, On-premises or both
- ✓ Scalable and Cost Effective to meet demand
- ✓ Compatible with all Manufacturer & IT protocols



# The OT Model

---

## OT Ecosystem

A complex set of interconnected systems.



## OT Networks

The ability to store and exchange data through a centralized communication system.

## Is Why we Created TOSIBOX®

The world's purpose-designed OT Networking Standard

---

*PREVIOUS CHOICES WERE INSUFFICIENT, UNSCALEABLE OR TOO EXPENSIVE*

TRADITIONAL IT NETWORKING



CLOUD-BASED REMOTE ACCESS



AUTOMATED OT NETWORKING



IT PLATFORMS  
Not designed for OT

HAND MADE IT  
Not designed for OT

A Subset of OT

Purpose-Designed For OT



COMPLICATION

Set-Up Speed  
Scalability

DAYS/WEEKS/MONTHS  
NOT SCALEABLE

HOURS  
NOT SCALEABLE

HOURS  
NOT SCALEABLE

AUTOMATED  
UNLIMITED



COSTS

Set-Up Costs  
Ongoing Costs

VERY HIGH  
VERY HIGH

MEDIUM/HIGH  
MEDIUM/HIGH

ACCOUNT-BASED

LOW  
LOW



SECURITY RISKS

Human Error Risk  
Vulnerability Risk  
Data Privacy Risk

HIGH  
HIGH  
LOW

HIGH  
HIGH  
LOW

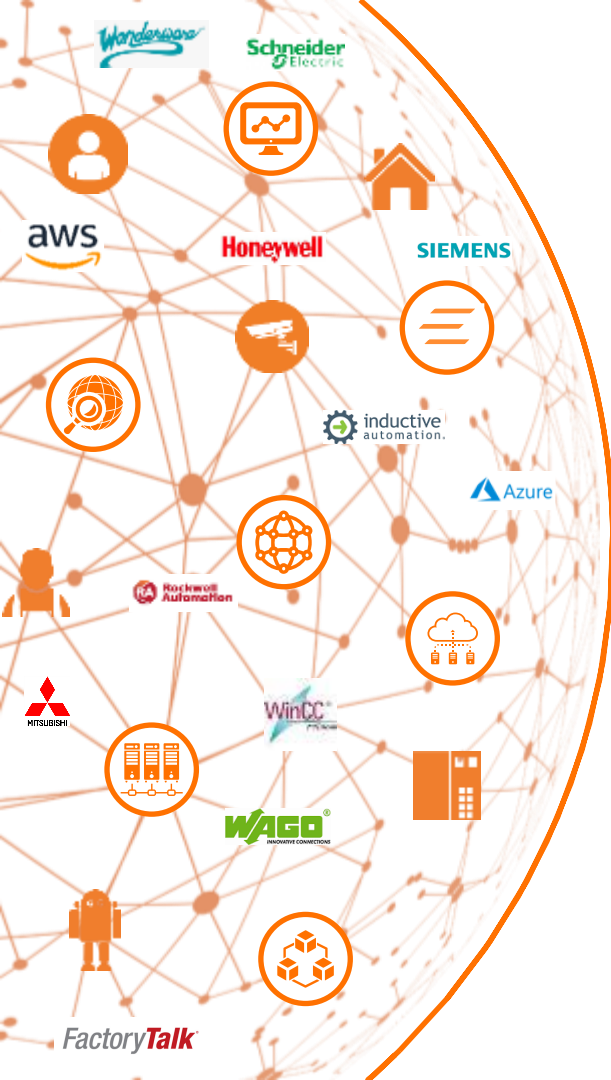
NOT A CYBER  
SECURITY PRODUCT

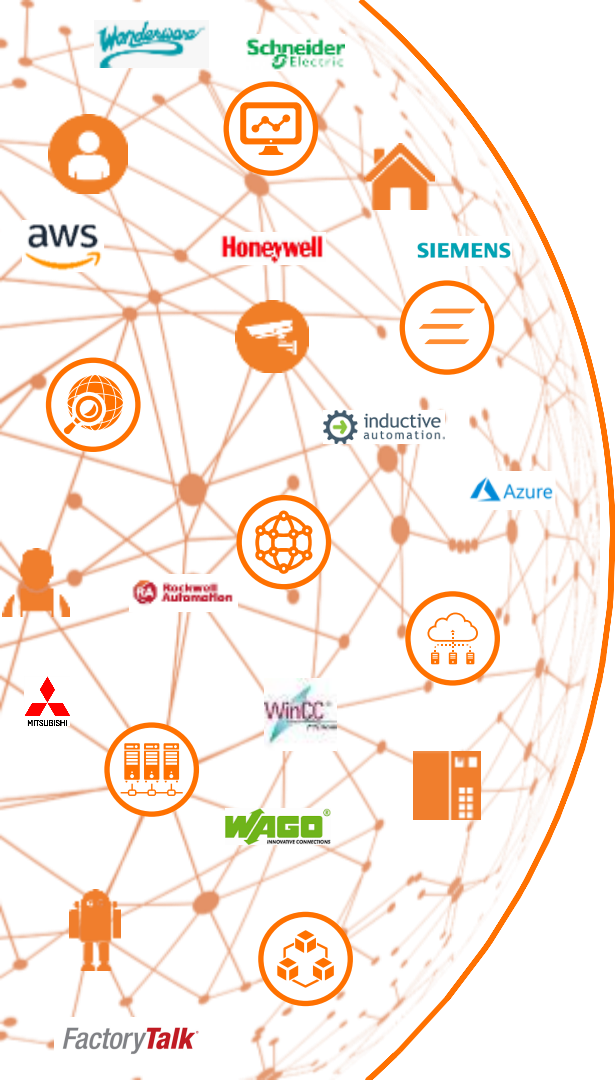
ELIMINATED  
ELIMINATED  
ELIMINATED



# Automated OT Infrastructure

- Automated network **Infrastructure Management**
- Layer 2 (Bridged) & Layer 3 (Routed) for **Remote Maintenance** and device interaction
- Always-on **Data Acquisition**
- Automated **Security and Access Control**
- **Cloud, Hybrid Cloud** or On-Premises friendly
- **Unlimited** network scalability
- **Compatible** with all manufacturer & IT protocols



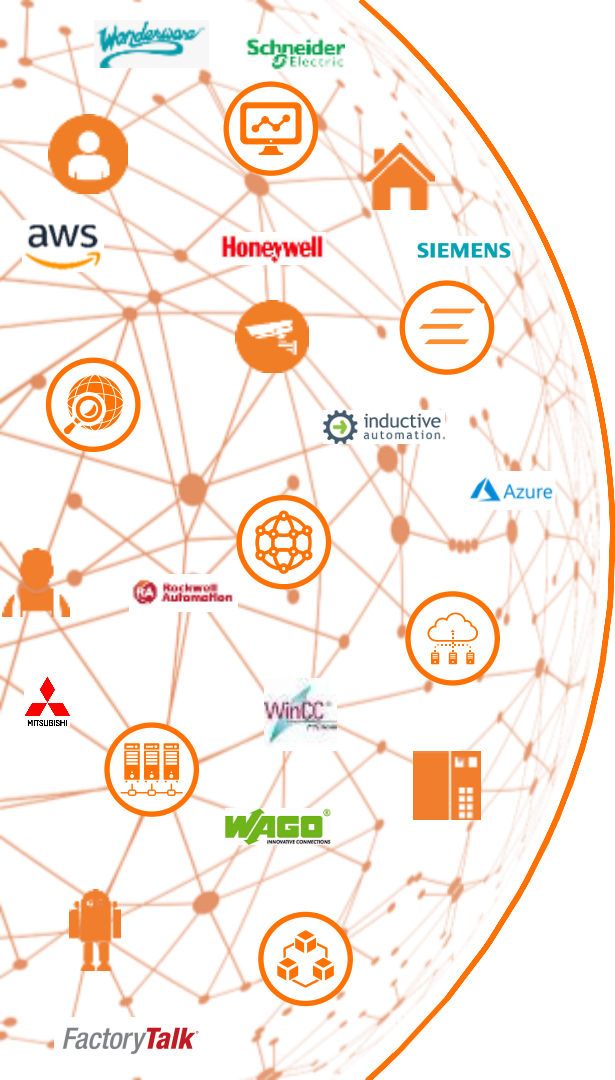


# Zero Trust OT Cyber-Security



- Self-creating OT networks. Eliminating human error
- No 3rd party cloud providers (data privacy)
- Point to Point data flow with 256-bit AES Encryption
- All networks Physical First Multi-Factor Authenticated
- No static or public IP Addresses
- Drag & Drop Access Control: Simplicity = Security
- Over-The-Air updates for all security and software updates





# Frictionless IT/OT

- No special ports needed from IT. Outbound ports only.
- No Static/Public IP addresses
- Automated Firewall. Works automatically behind firewalls
- 1-1 NAT, DHCP, VLAN, Proxy Support, Static Routing, MAC Filtering
- Build a Class A network at every site
- Networking technology IT Professionals know and trust
- The entire Tosibox® infrastructure is Cellular Ready



USERS TO NETWORKS



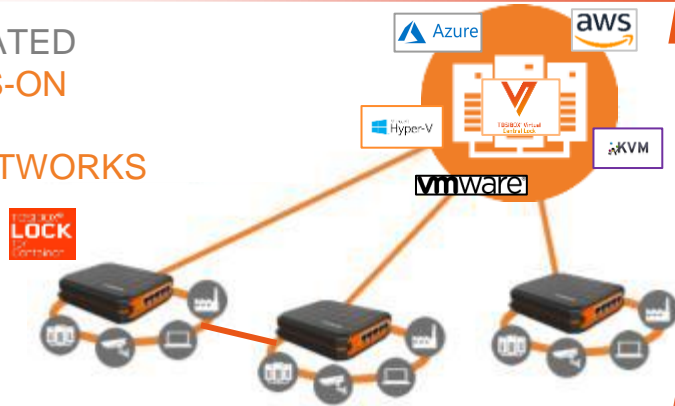
1

NETWORKS TO USERS



2

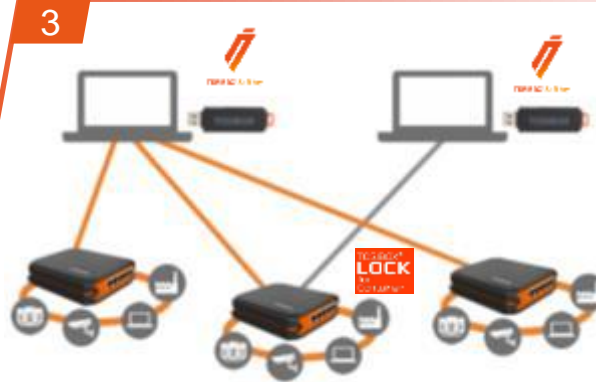
AUTOMATED ALWAYS-ON DATA & M2M NETWORKS



4

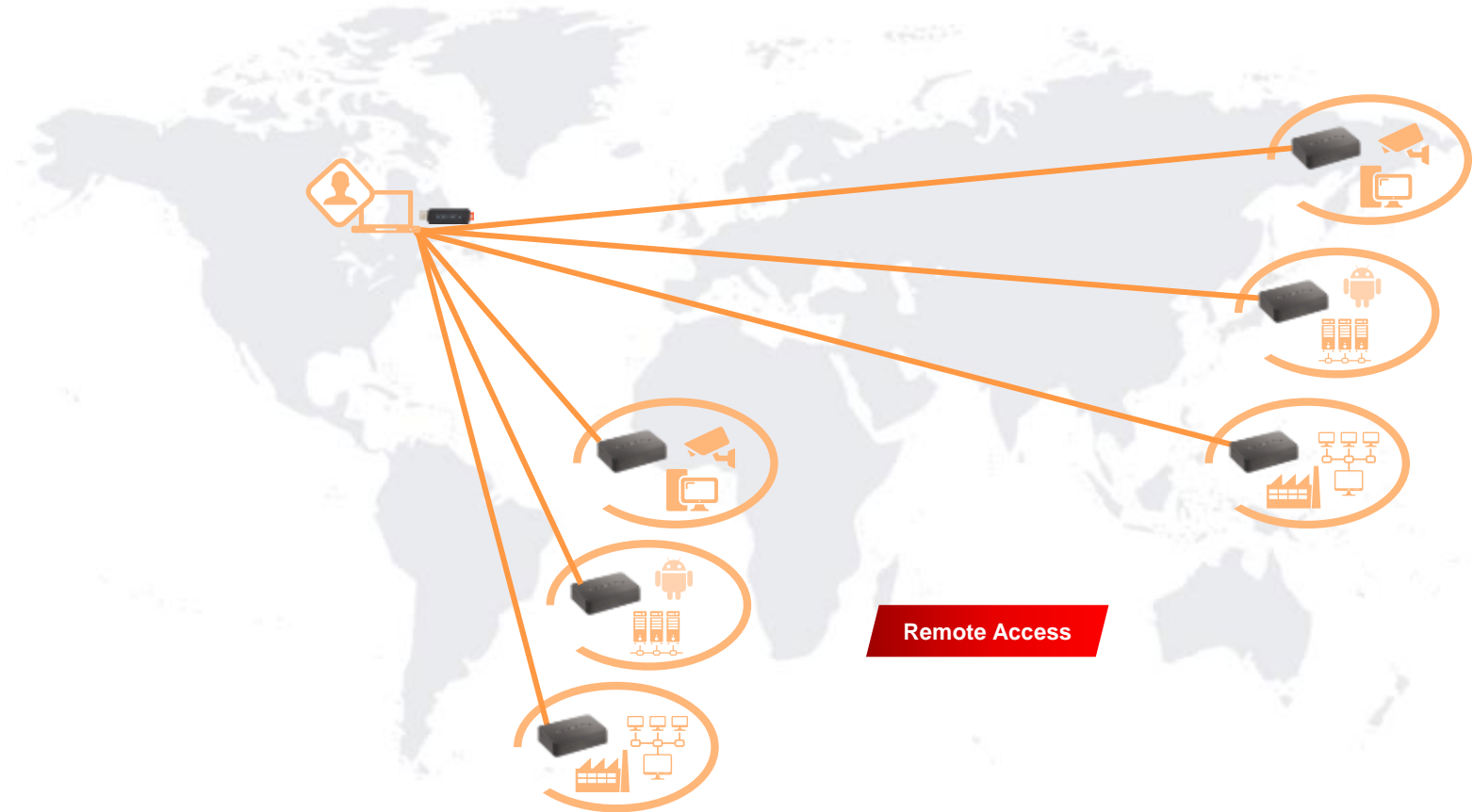
AUTOMATED NETWORK ACCESS CONTROL

- Site Level
- Device Level
- Port Level
- Protocol Level



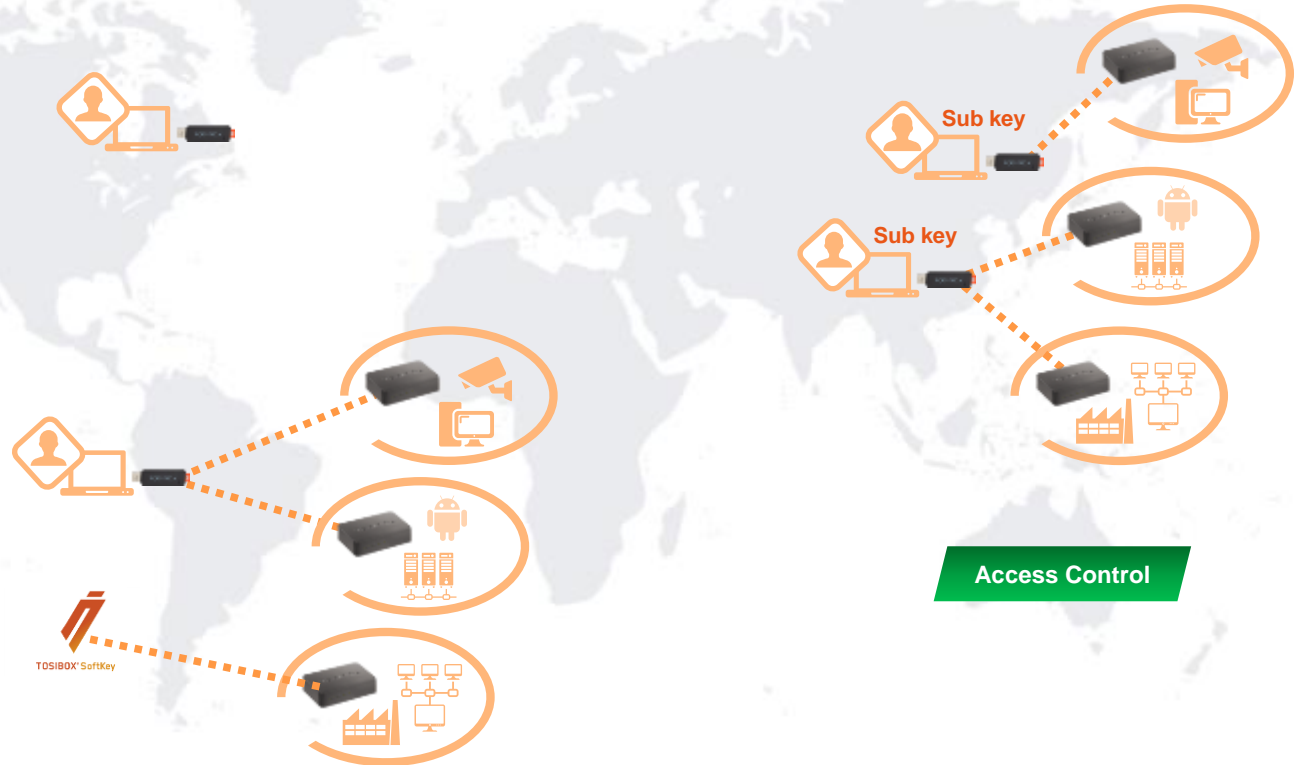
3

# It's Easy to Get Started

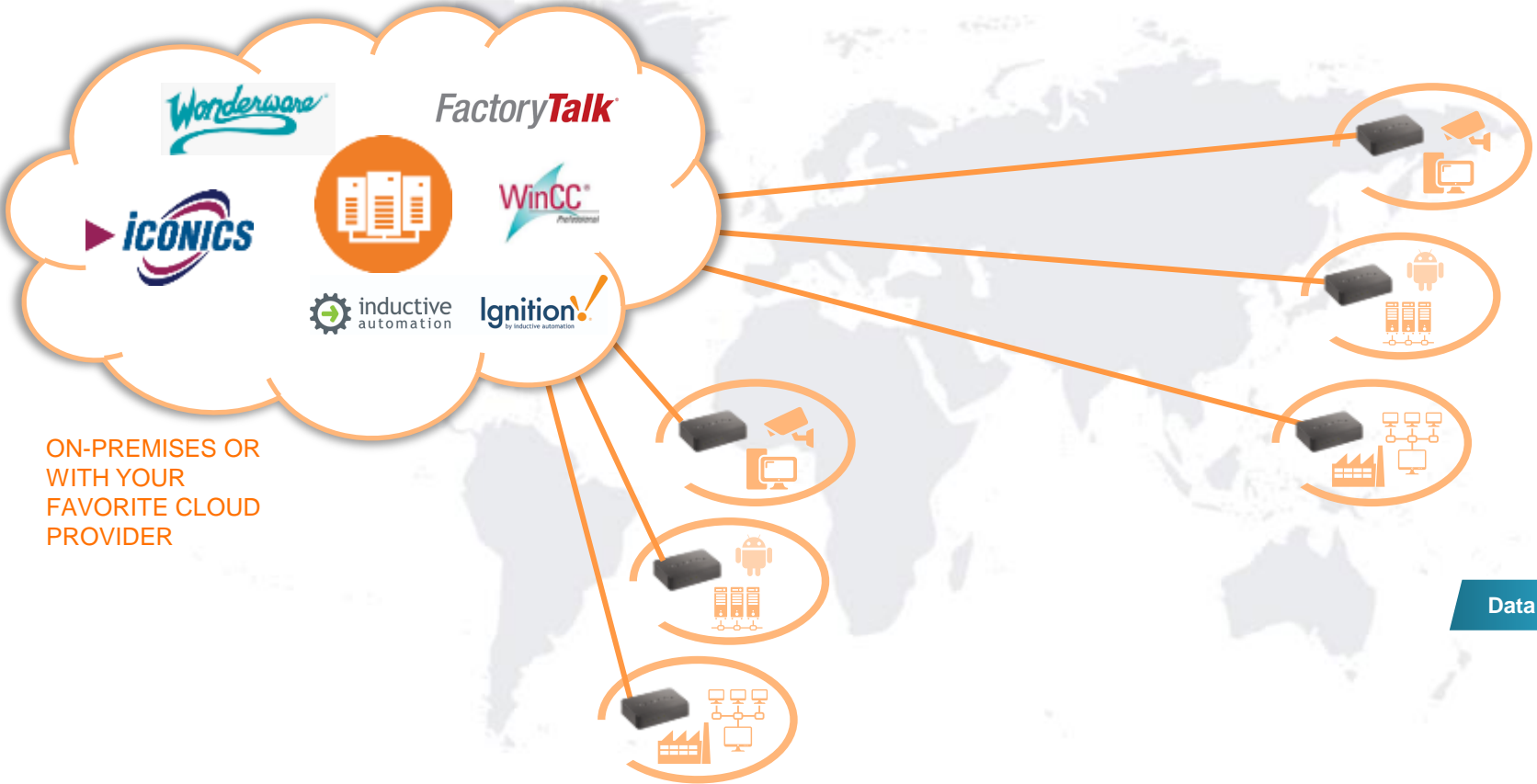




# It's Easy to Get Started



# It's Easy to Get Started

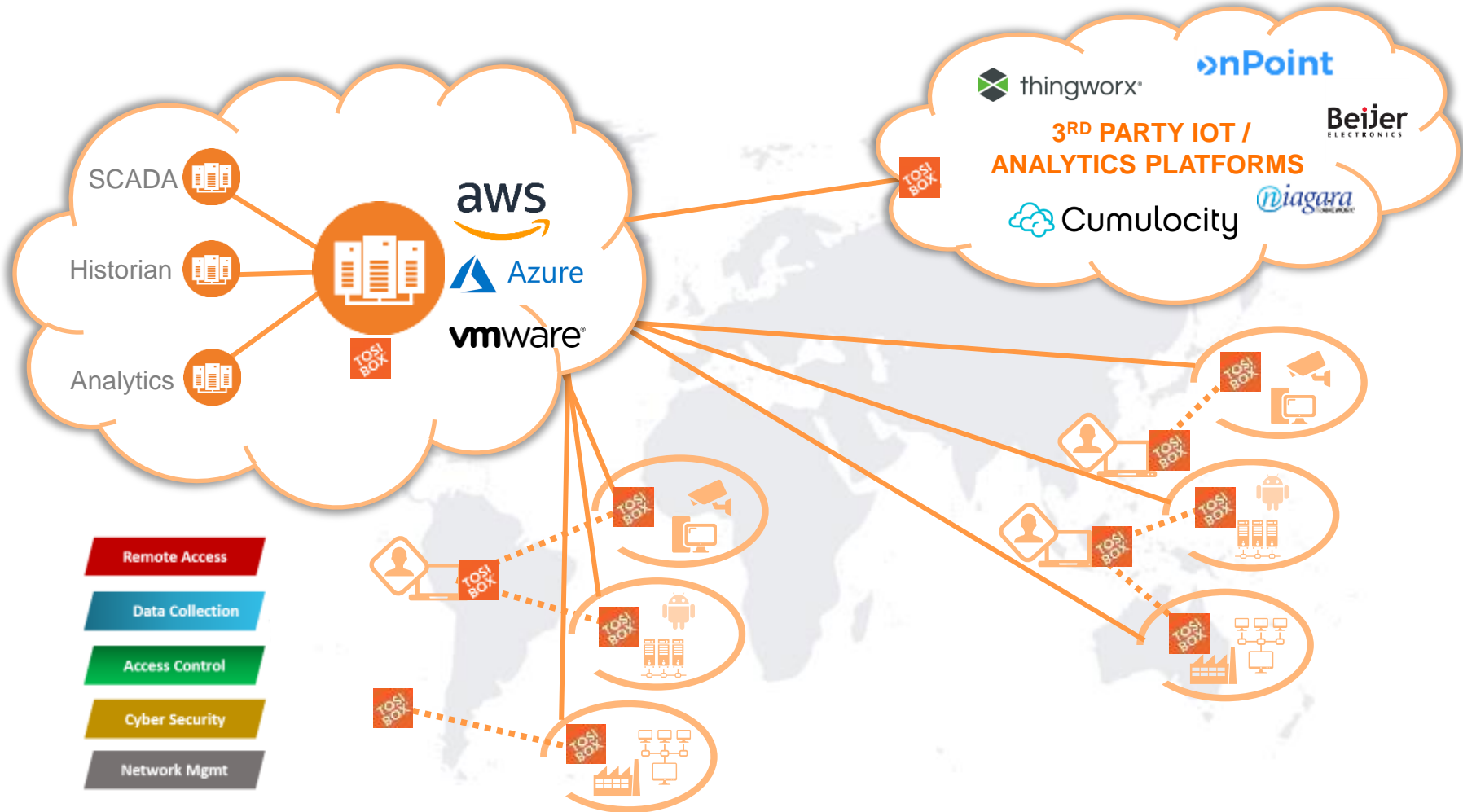


ON-PREMISES OR  
WITH YOUR  
FAVORITE CLOUD  
PROVIDER

Data Collection

# Automated OT Infrastructure





Remote Access

Data Collection

Access Control

Cyber Security

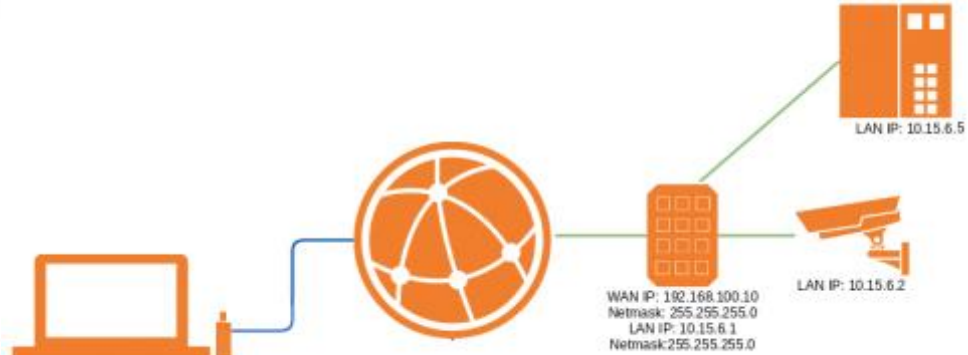
Network Mgmt

# Every Lock Has A Story



# Easy Remote Access to IT

- Serialise lock and key
- Config in 'Lock' mode
- Add to network
- Login
- Max 10/50 users
- Access to devices which can be setup within the Lock



# Easy Remote Access to IT (Alt)

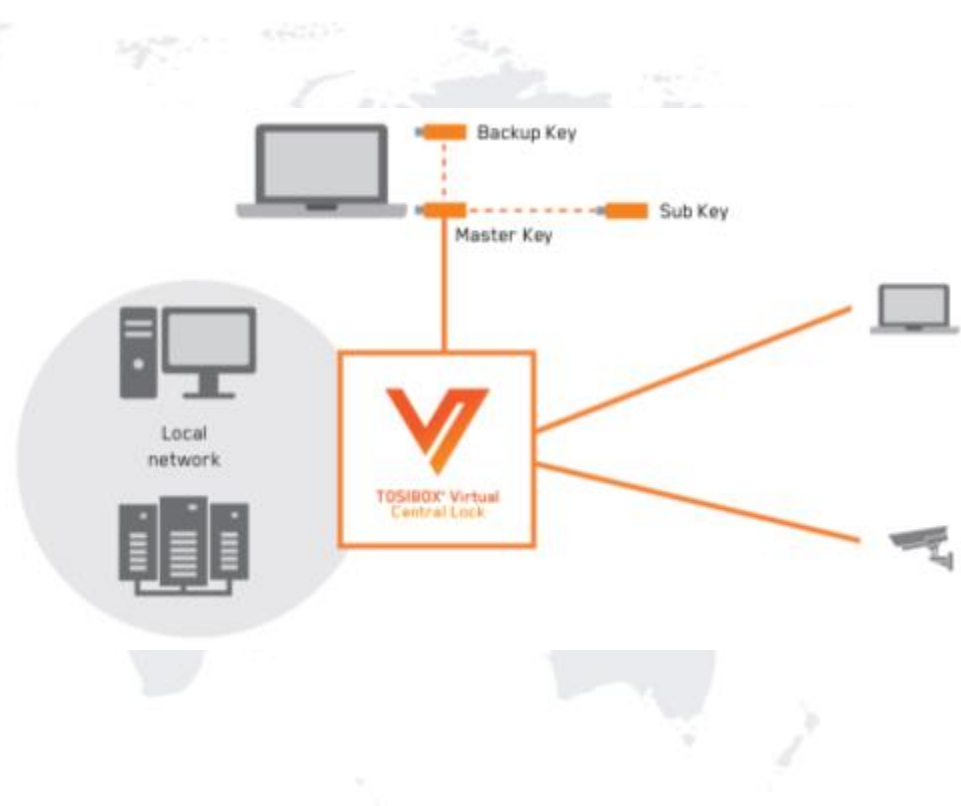
- Serialise lock and key
- Config in 'client' mode
- Add to network
- Login for access
- Max 10/50 user connections
- Access to all devices on the LAN IT



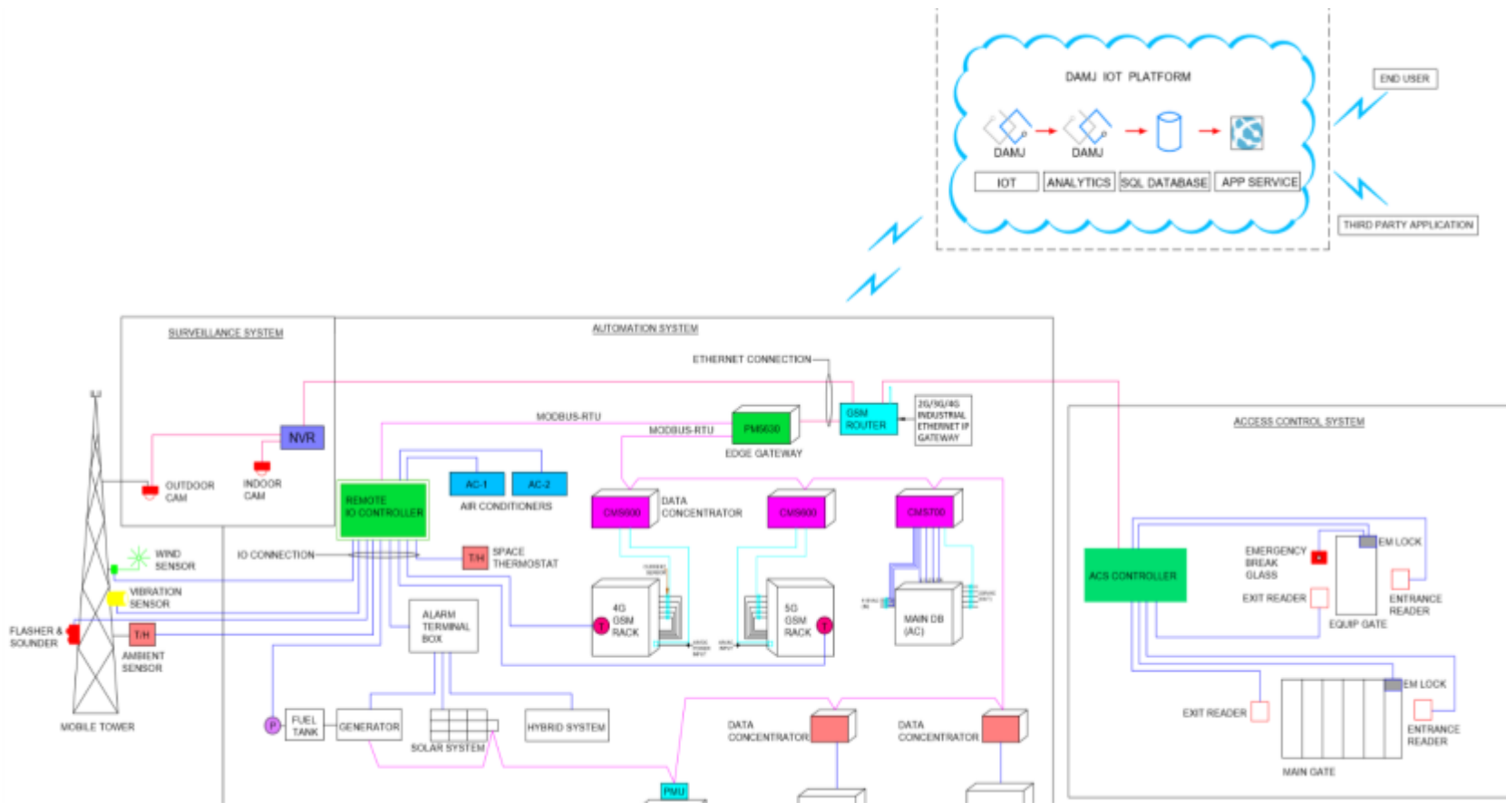


# Easy Remote Access to IT (Software Approach)

- Remote serialise VCL
- Add to network
- Login for access
- Addition of as many users as needed with Keys
- Access rights can be defined within IT administration
- Seamless access to IT LAN

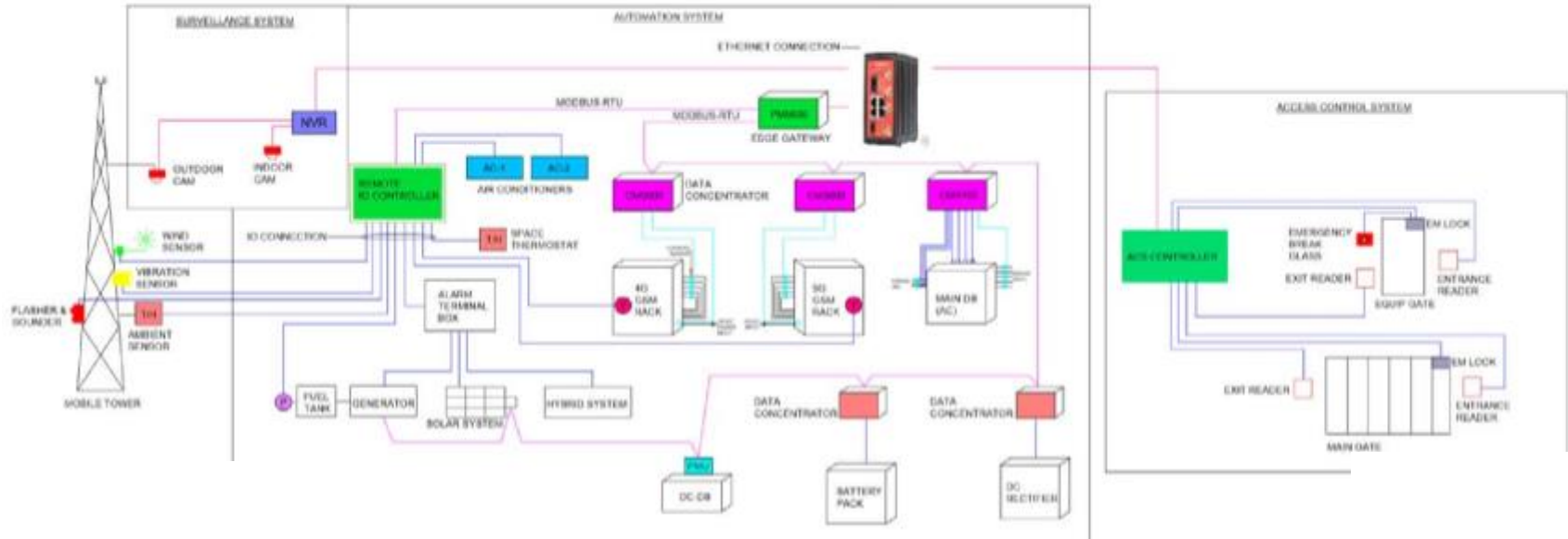
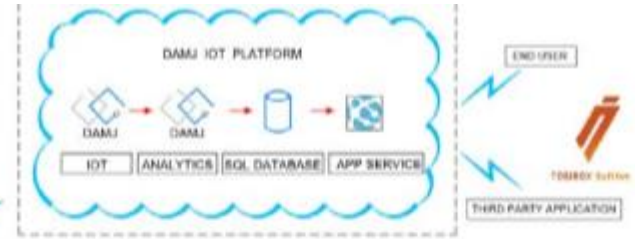


# Design Done *Before* Tosibox<sup>®</sup> Technology Implemented

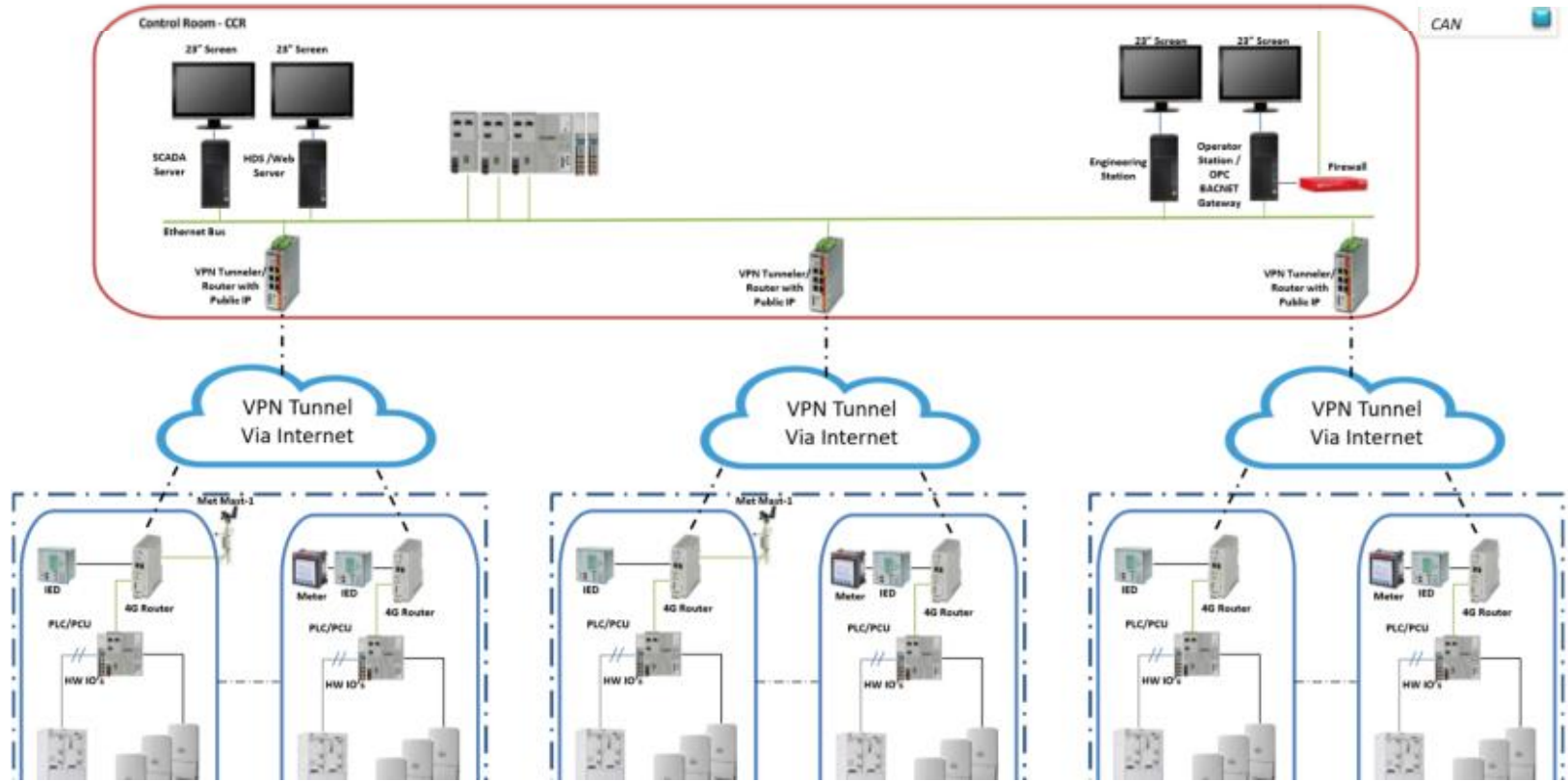


# Design After Tosibox<sup>®</sup> Implementation

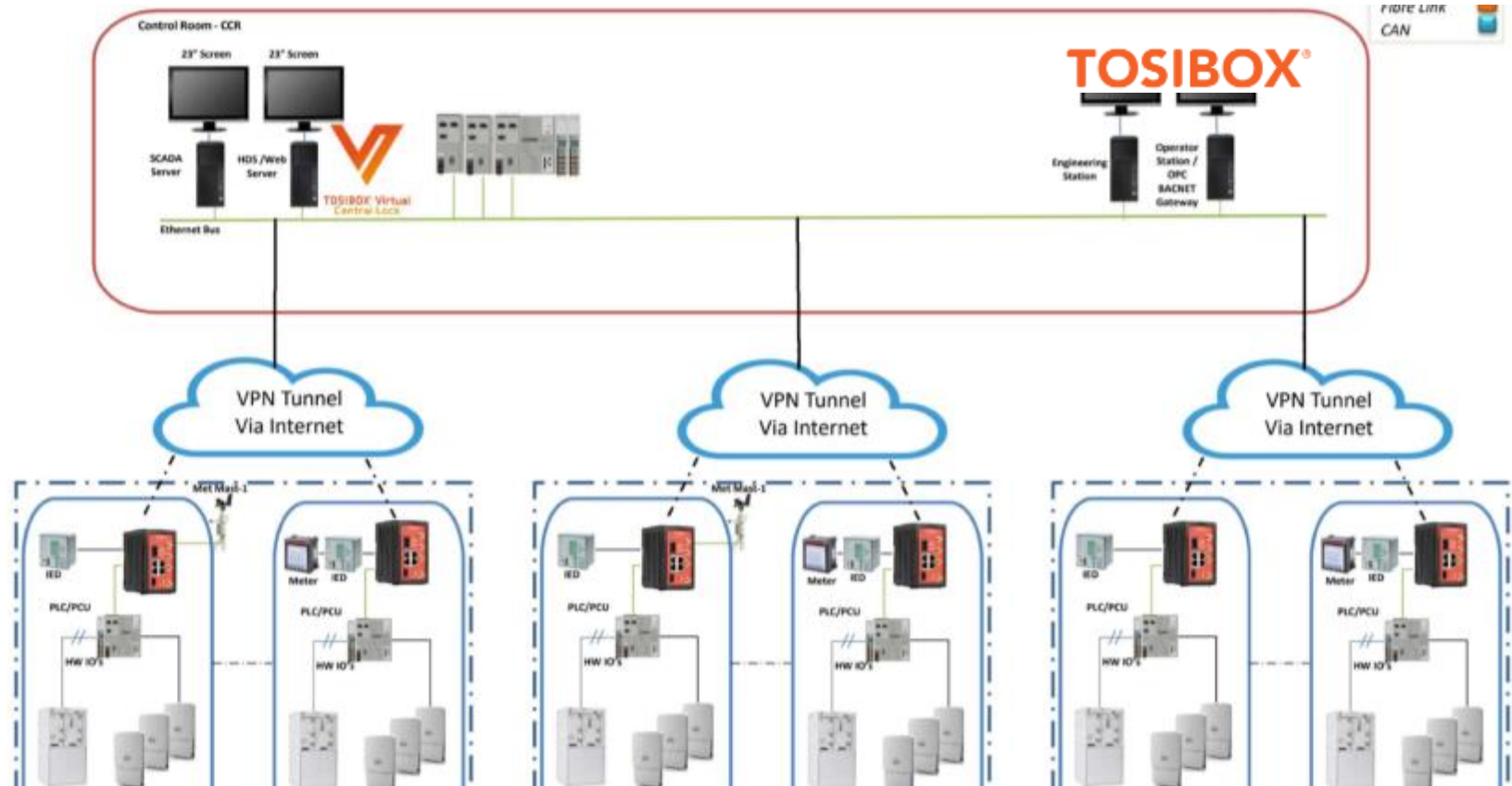
## TOSIBOX<sup>®</sup>



# Mass-scale PV Plant *Before* Tosibox® Efficiency Changes



# Mass-scale PV Plant *After* Tosibox® Implementation



# Major Retail Case: HOK-Elanto

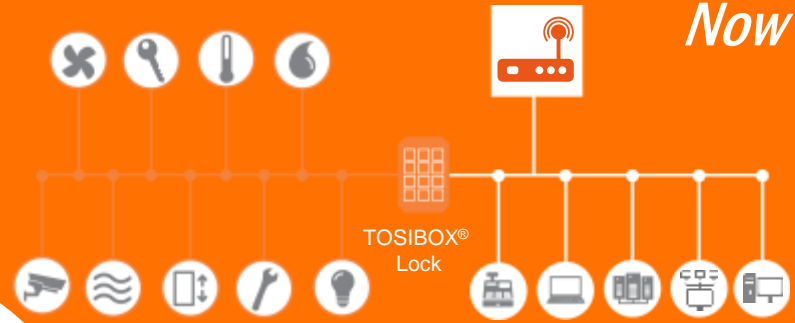
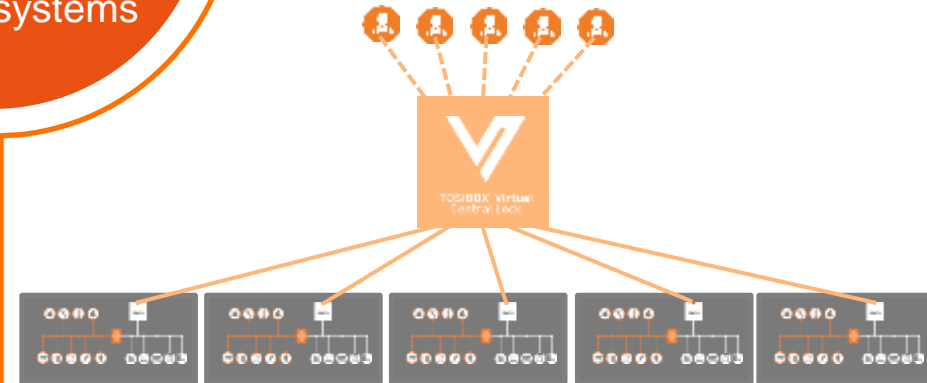
- ◆ Grocery stores and gas stations
- ◆ Revenue \$2,500 bn (in 2017)
- ◆ 5500 employees
- ◆ 323 outlets, including more than 2500 appliances/systems accessible to more than 100 external partners

*Previously In every store*



## Solution

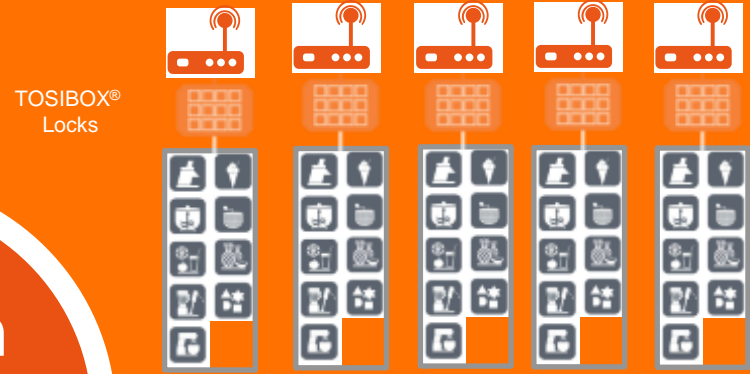
Building a differentiated OT network for devices/systems



# F&B : Kronen

- ◆ Machines that wash, peel, cut, sterilize etc. fresh, ready-to-cook fruit, vegetable and salad mixes
- ◆ The products are delivered to more than 100 countries around the world.
- ◆ Machines feature highly modern control units – flexible set-up for certain work processes or product batches for new menus or material

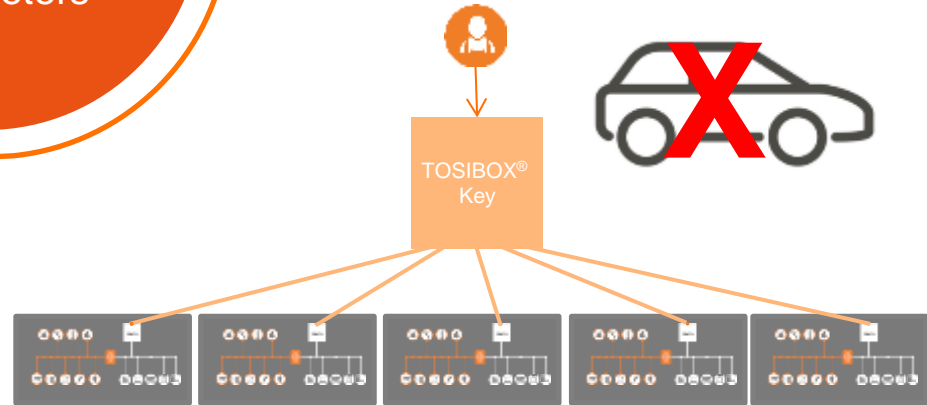
*Now*



## Solution

Remote access to set up machine parameters

*Previously in each location*  
For each new menu (change in machine parameters), a service call is needed





# Machine-side Building Blocks

Connecting devices & networks to your TOSIBOX® ecosystem.



Lock 150

- VPN throughput 10 Mbit/s
- Max 10 concurrent VPN connections
- WLAN support
- CE, FCC approval



Lock 200

- VPN throughput 15 Mbit/s
- Max 50 concurrent VPN connections
- PoE functionality
- CE, FCC, UL approval



Lock 500/500i

- VPN throughput 90 Mbit/s
- Max 50 concurrent VPN connections
- Digital I/O
- CE, FCC, UL approval pending
- Built-In LTE modem & dual SIM slots (500i)

# User Building Blocks

Intelligent crypto-processing device or software that enables a secure connection between you and your TOSIBOX® ecosystem



Key

Master or Sub Key access  
from any computer  
(c/w Mobile client)



Mobile Client

Remote access client from any  
smartphone or tablet



TOSIBOX® SoftKey

Soft Key

Sub Key access from a specific  
computer

## PROMO STARTER KIT 1 SGD996 (ex GST)



- 1x TOSIBOX Lock 150
- 1x TOSIBOX Key
- 1x Mobile Client
- 1x TOSIBOX SoftKey
- Art#3806242

## PROMO STARTER KIT 2 SGD1,665 (ex GST)



- 1x TOSIBOX Lock 500i
- 1x TOSIBOX Key
- 1x Mobile Client
- 1x TOSIBOX SoftKey
- Art#3806246

Specific market duties or taxes may apply

The background of the slide is a blurred industrial setting with a warm, orange-red color cast. It shows various pieces of machinery, pipes, and electrical conduits. A prominent feature in the foreground is a black, flexible, multi-bundle cable or data tray, likely used for industrial communication, which is slightly out of focus. The overall scene suggests a modern manufacturing or data center environment.

# Industrial Communication

– Powered by

**UNITRONIC® | ETHERLINE® | EPIC® | HITRONIC®**

AS-i, Fieldbus, Ethernet, data connectors, Fiber Optics



OLD WAYS  
WON'T  
OPEN  
NEW  
DOORS



**THANK** **YOU**