“Industrial IoT for a secure & reliable Digital Manufacturing world”

Charalampos Gkevrekis | Business Development Manager

Agenda

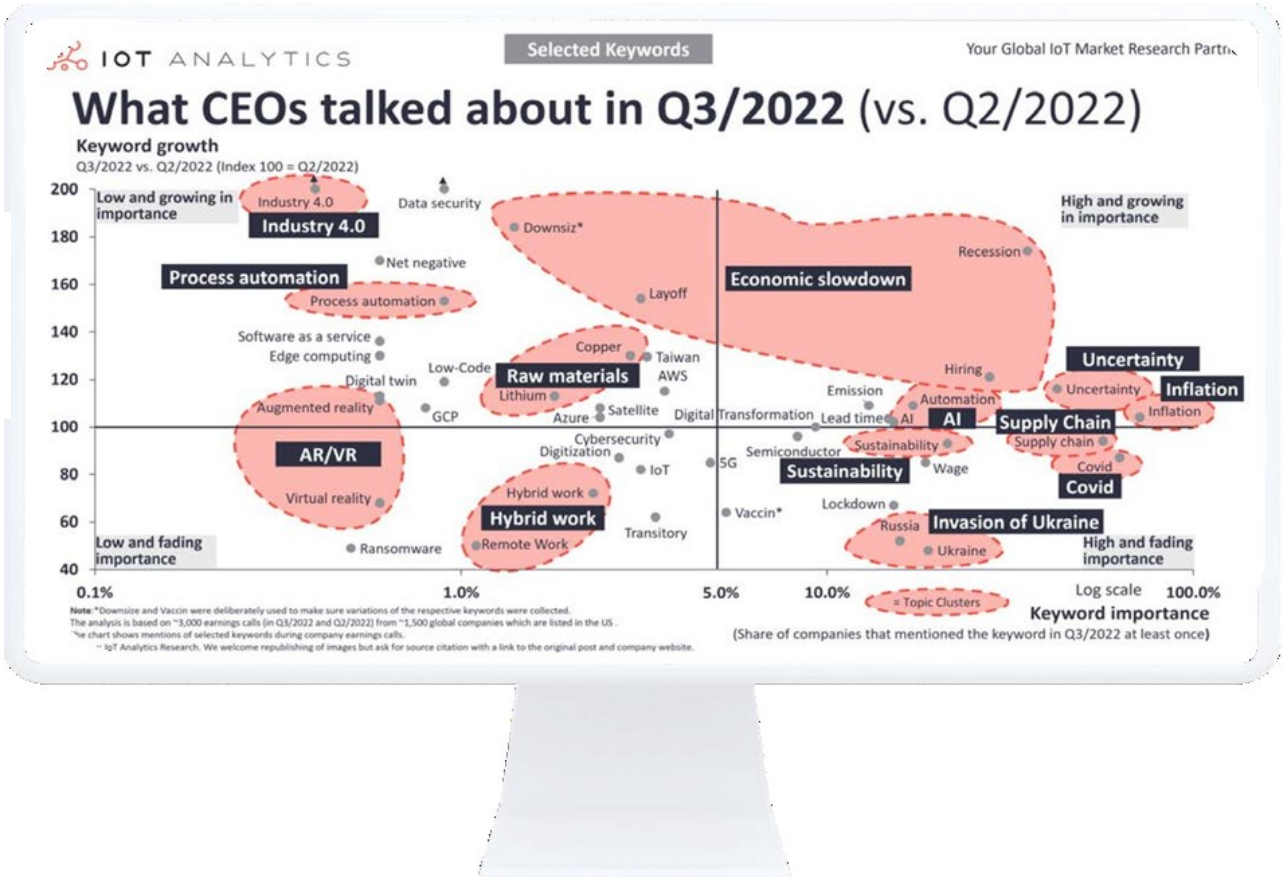
- Manufacturing Trends
- Market Trends for Industrial Organisations
- Manufacturing Challenges
- Industrial IoT Strategy
- The IT&OT convergence
- OT network visibility and Cyber Security
- OT Case study

Manufacturing Trends

Input Costs

+45%

Source[2]



Labor costs

+4.2%

labor cost growth in Europe[5]

2. DESTATIS ('Erzeugerpreise' - includes energy, investment costs, input costs, consumables);
3. What's Going on with Shipping Rates, McKinsey & Co, Aug 2021;
4. DIHK Survey on German companies and their strategies to cope with supply chain issues
5. EUROSTAT; June 2022 data on Q1 labor cost growth
6. DESTATIS Press Release

Market trends for today's industrial organizations

Industrial digital transformation

Create the ability to quickly leverage emerging technologies into sustainable top-line growth

Industrial IoT

Capture real-time performance data that can be used to optimize production and operations

Business performance targets

Think differently to achieve results that will set your organization apart

Security

Implement a robust IT-based cybersecurity strategy that supports OT teams and creates a strong security culture across the organization

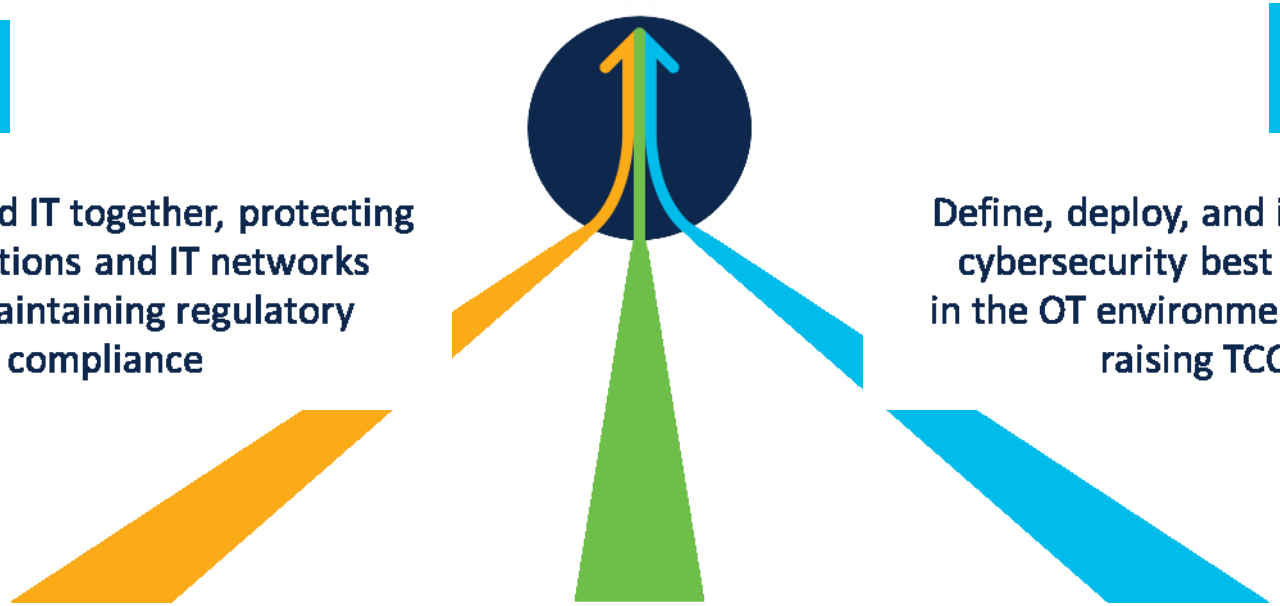
Services and software

Increasing numbers of manufacturers across industries are providing software and service innovations that complement and enhance their products and processes

Challenges to realizing transformational change

Establish a robust and secure production infrastructure to help industrial organizations reach new performance levels

Leverage new technologies to improve performance and flexibility (AI, ML, analytics, cloud, IIoT)



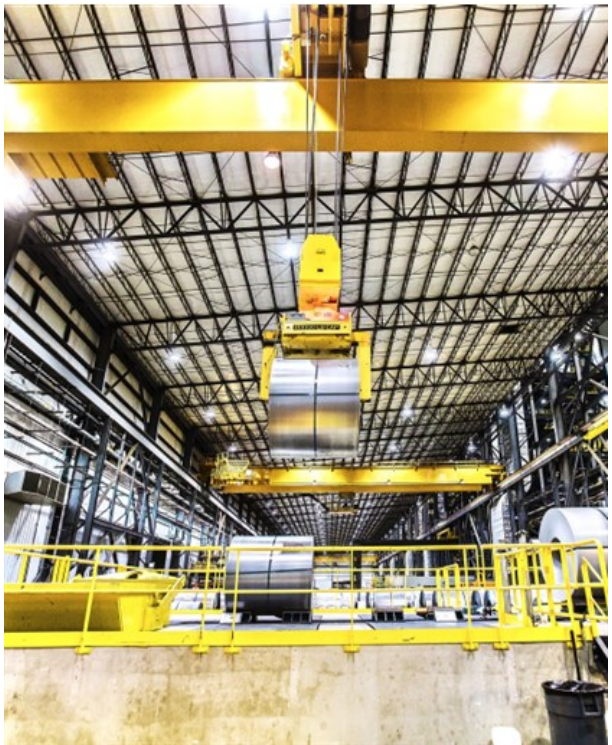
Bring OT and IT together, protecting OT operations and IT networks while maintaining regulatory compliance

Define, deploy, and implement cybersecurity best practices in the OT environment without raising TCO

The risk of not moving forward

Operational inefficiencies and increased downtime from lack of data and slower, manual processes

Ability to adequately protect their production systems, including networks, data, and equipment



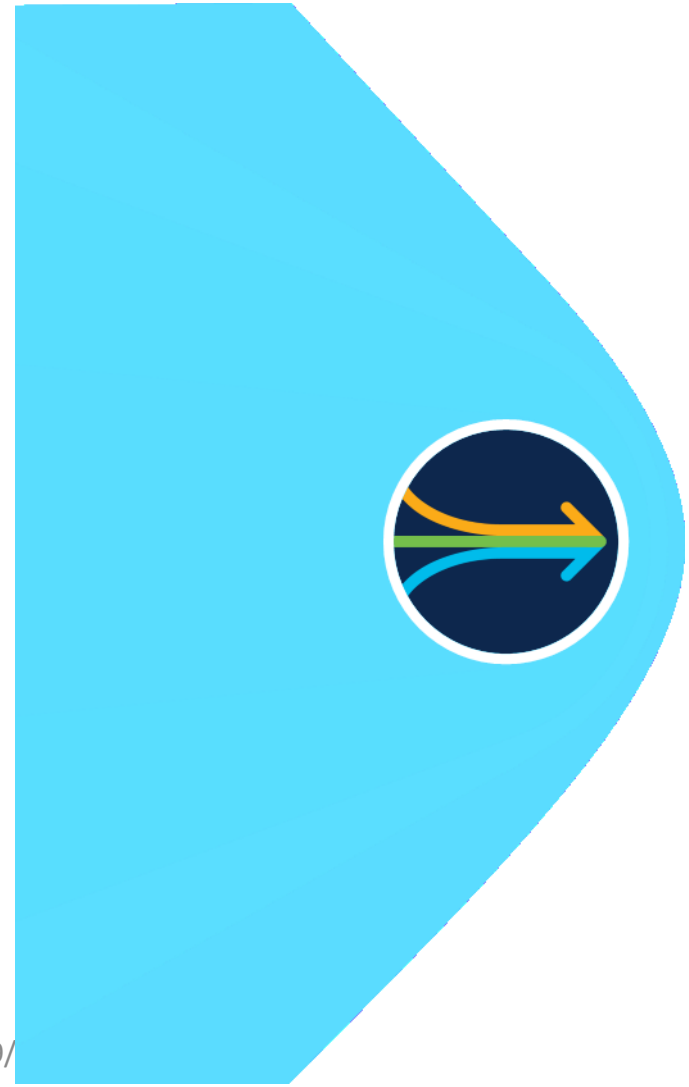
Inability to leverage analytics solutions to optimize processes and assets

Increasing costs from maintaining multiple, disparate networks

Imagine your organization with fully converged OT and IT

How much could you benefit by bringing together the best of OT and IT into one secure, streamlined ecosystem?

Benefits available with OT and IT convergence



- Up to 80% engineering cost and time optimization
- Up to 80% energy cost savings
- Up to 75% maintenance cost optimization
- Up to 50% carbon footprint optimization
- Superior uptime and resilience
- End-to-end communications, from sensor to cloud
- Ease and confidence of deployment based on OT and IT expertise

Digitization is enabling Resilience and Sustainability

RESILIENCY

Industrial Smart Working

Virtual commissioning

Supply Chain Redesign

SUSTAINABILITY

Energy monitoring & efficiency

Information-based processes

Digital Twin decision model

Environment monitoring
& data-based decision process

Digitization Demanding a new class of infrastructure

More Network Bandwidth

Video, AGVs, thermal imagery
3D sensors drive increased need

Low Latency, Resilient Communications & Rich Data

Real-time control of unmanned vehicles. Secure, context rich (time, location) data delivered to IoT apps

Cyber Security

Explosive growth in connected devices increases expansion of the threat surface

Simplified Scale

Deploy & manage more devices across more locations with the same resources

Edge Compute

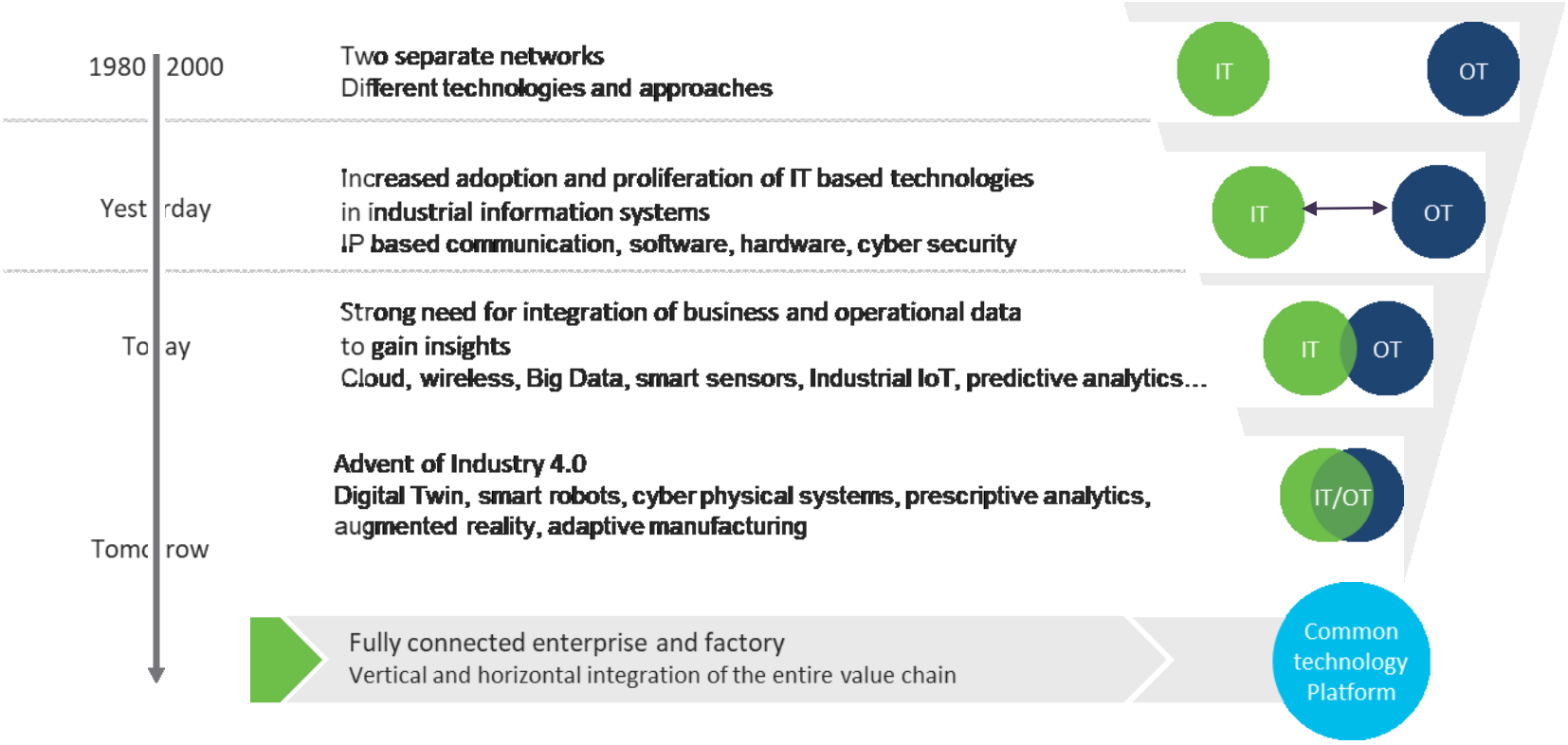
Process and act on data faster when it is closer to its source. Maintain compliance. Save costs.

Driving the need for further IT/OT collaboration

The IT & OT convergence

A continuous technology alignment

For almost two decades, IT and OT technologies have started to converge towards a common technology platform.



To be successful, IT and OT must collaborate every step of the way.

IT and OT share common problems

	Scalability	Security	Missed Insights
Goal	Deploy 1000's of assets quickly and reliably	Avoid business impact from security issues	Maintain reliable services and improve efficiency
Challenges	Resources for operational assets Networking skills and resolving issues	Greatly expanded threat surface impacts OT & IT Business resiliency to cyber attack	Too many tools make it difficult to be proactive Lack of visibility creates inefficiency & downtime

Industrial networking combines enterprise-grade with industrial-strength

Best of IT

Manageable by Cisco DNA Center
Same management tools as Enterprise

Proven Cisco Security Solutions
Supports MACsec, TrustSec SGT, SGACL, Netflow, Cisco ISE, SecureX

IOS-XE Operating System
Next Gen Secure Enterprise OS, SW Defined support

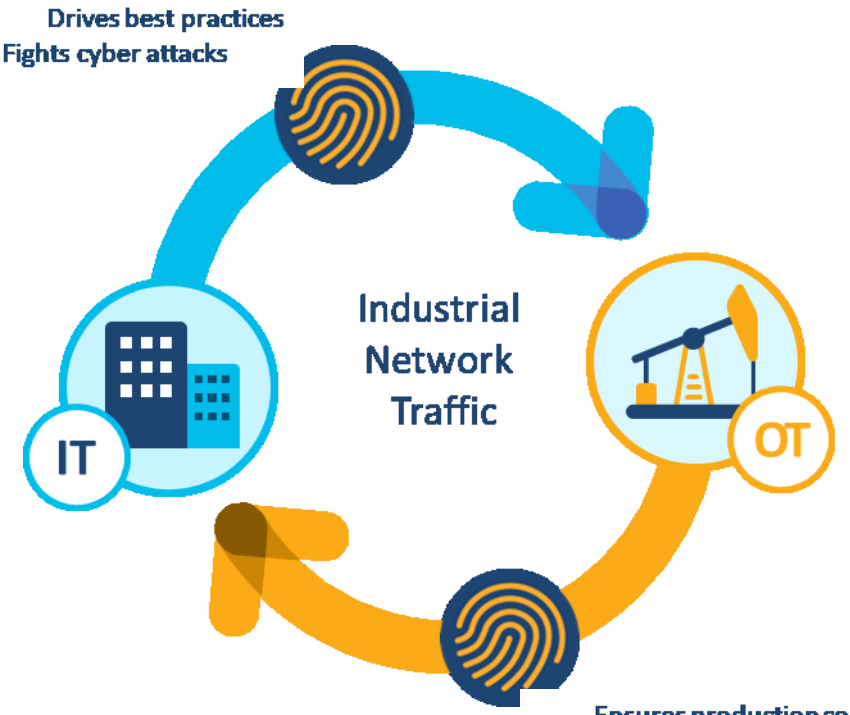
Best of OT

Ease of Use
Device Manager, SD Card Swap

Industrial Features
PROFINET, Ethernet/IP, Modbus, PRP, MRP, HSR, Precise Time

Industry Certifications
ODVA, Profinet, Shock and Vibration, IP30-67, Extended Temps, IEC 62443 Cybersecurity.

IT-OT collaboration is vital for securing ICS

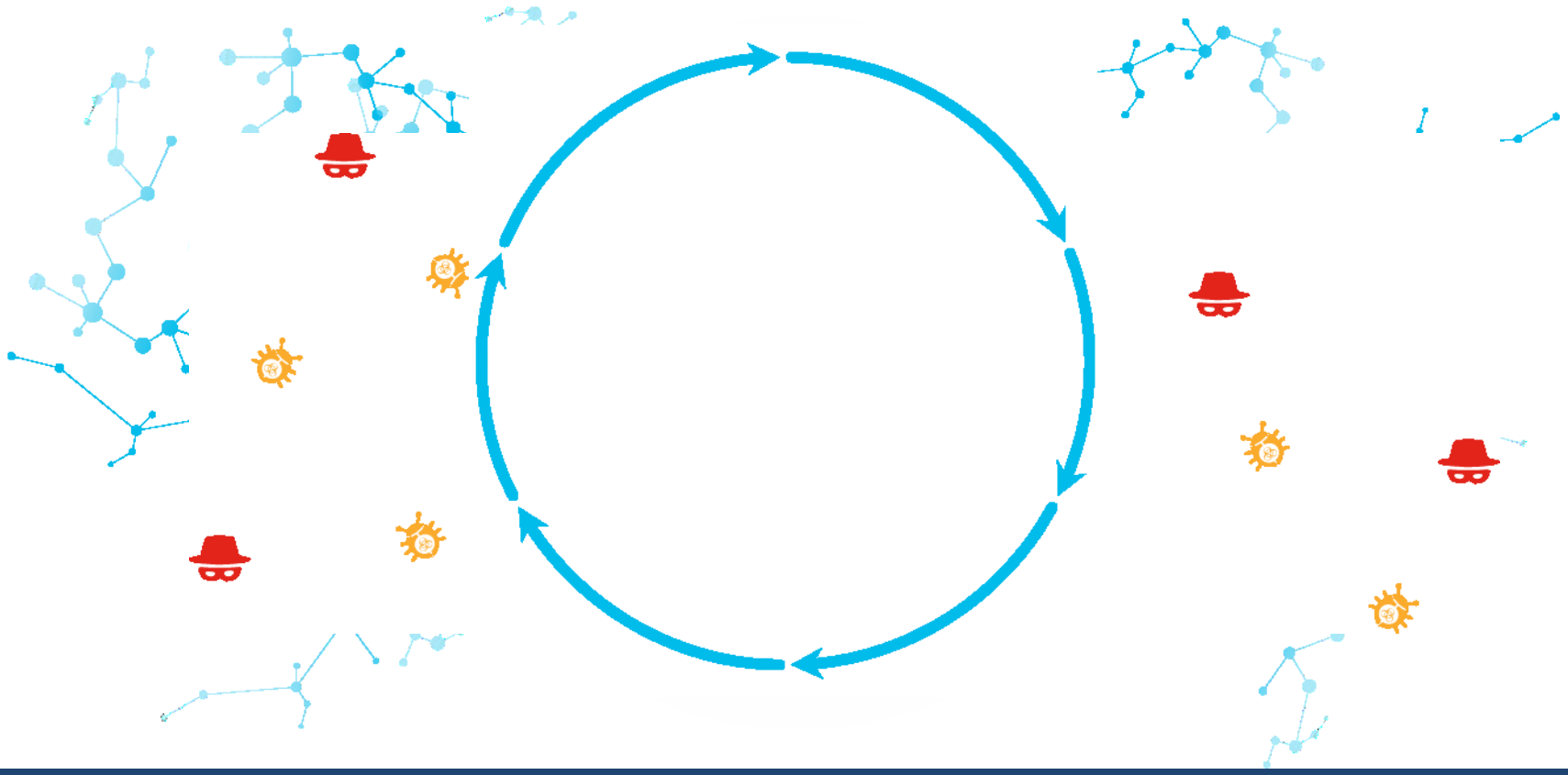


Cybersecurity skills
Network hygiene
Security policies
Detection & Remediation

Industrial process skills
Operational events context
Asset criticality levels
Equipment configuration

The OT network visibility & Cyber Security

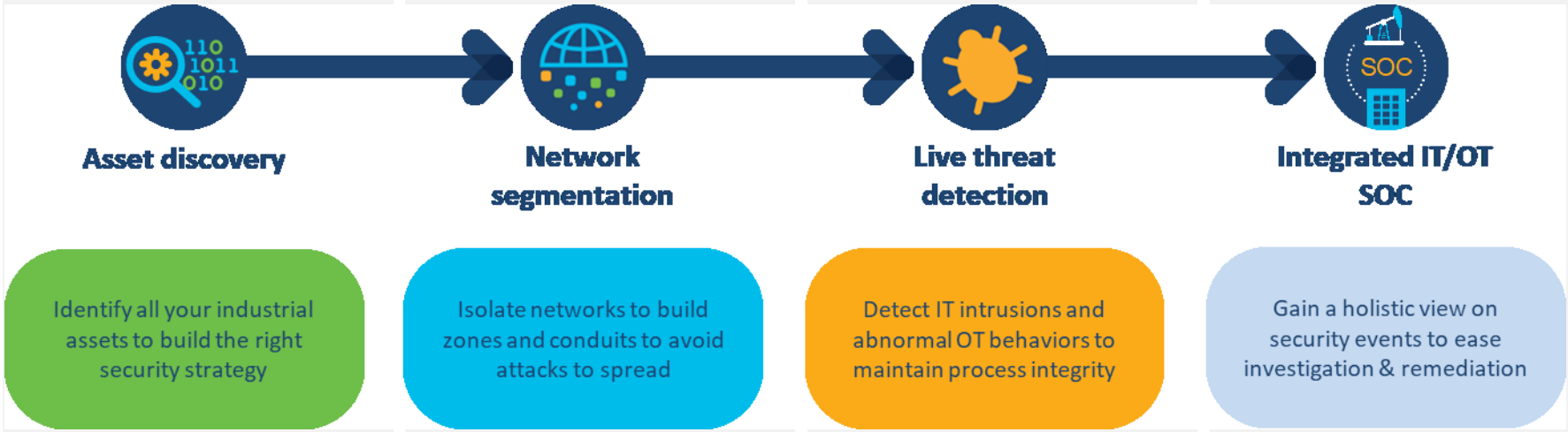
Digitization is accelerating seamless movement of data across Enterprise



Digitization Increases The Attack Surface

Cybersecurity is the top driver

The 4-step journey to secure your industrial network



Gain visibility on your OT to build and enforce the right security policies

Cisco Cyber Vision

Asset Inventory & Security platform for the industrial IoT

Protect your industrial control systems against cyber risks

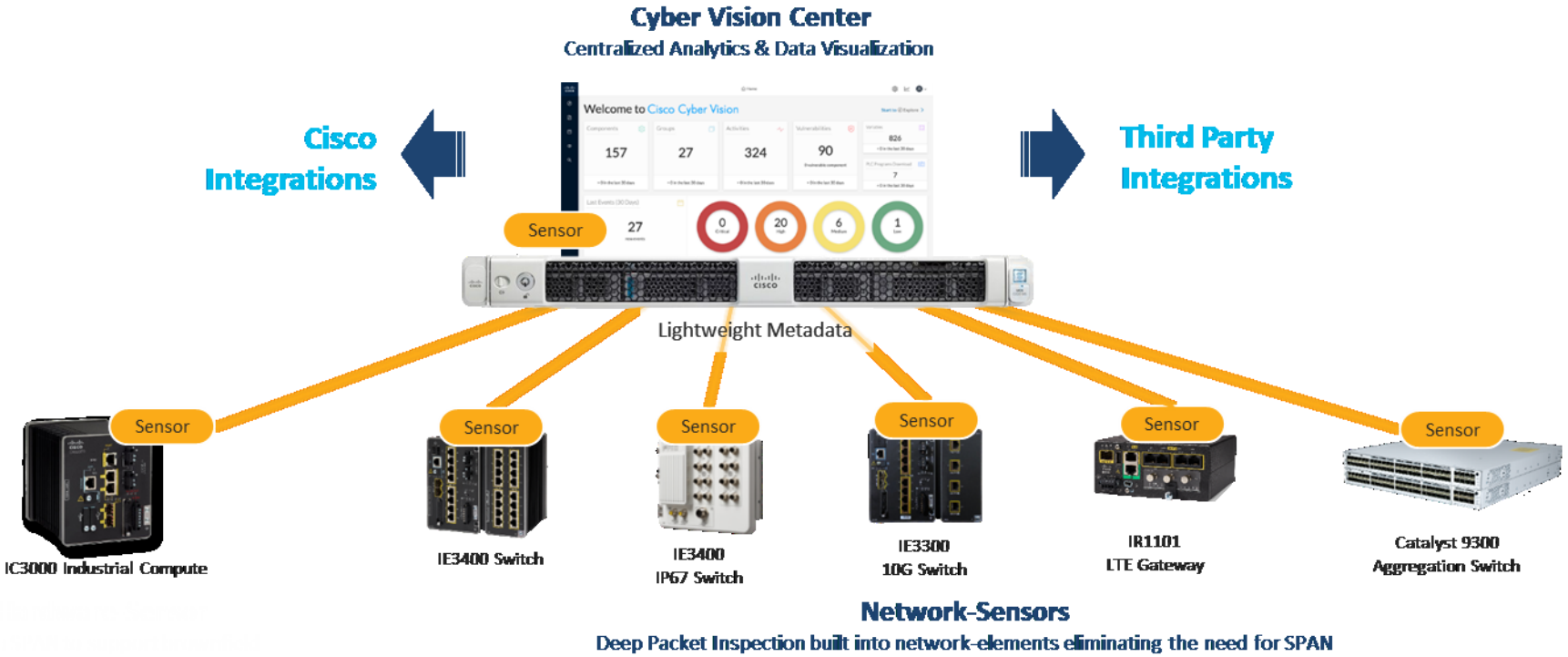
Visibility
Know your assets

Insights
Track your processes

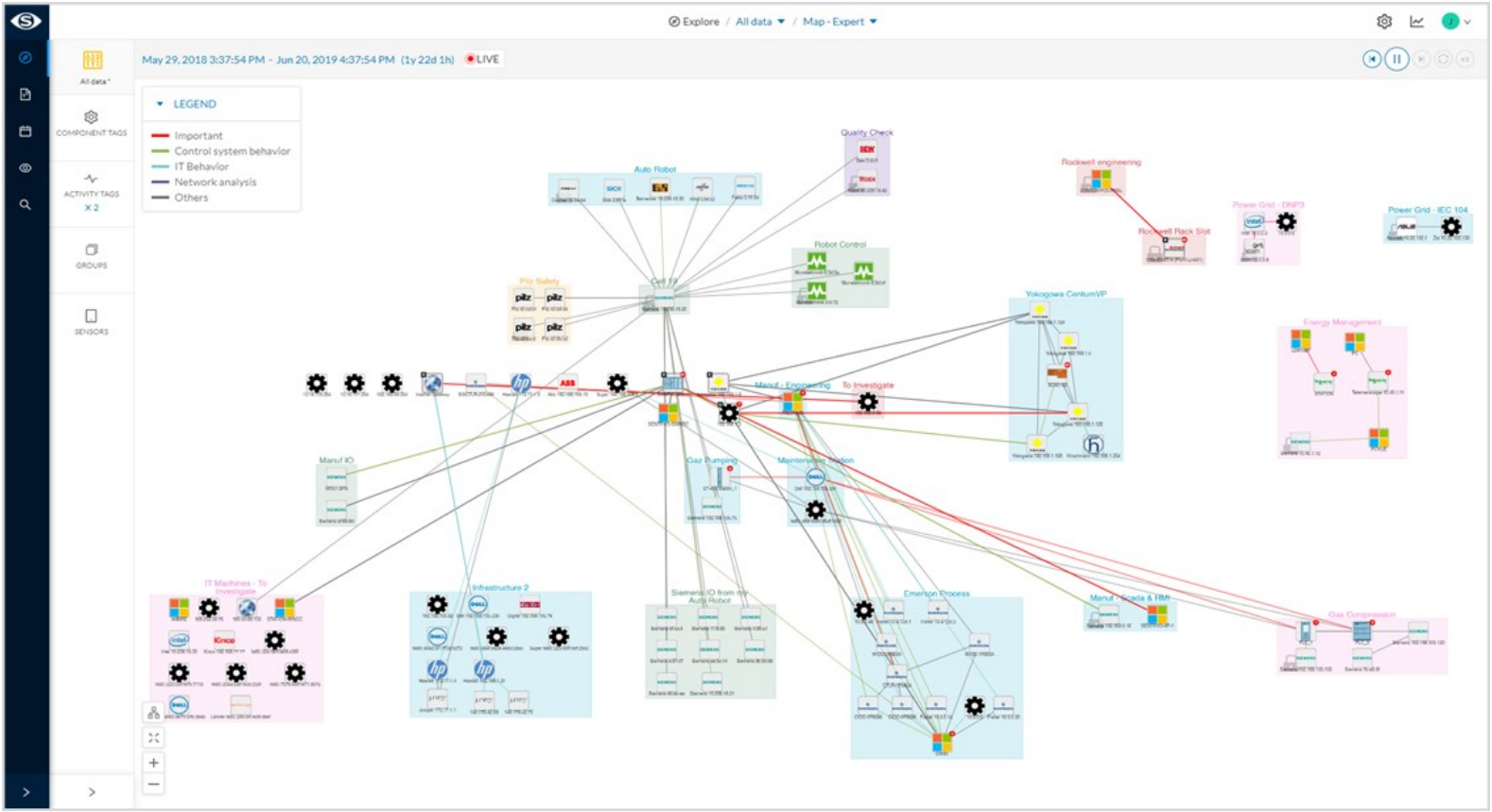
Detection
Trigger alerts

Security that scales with your infrastructure

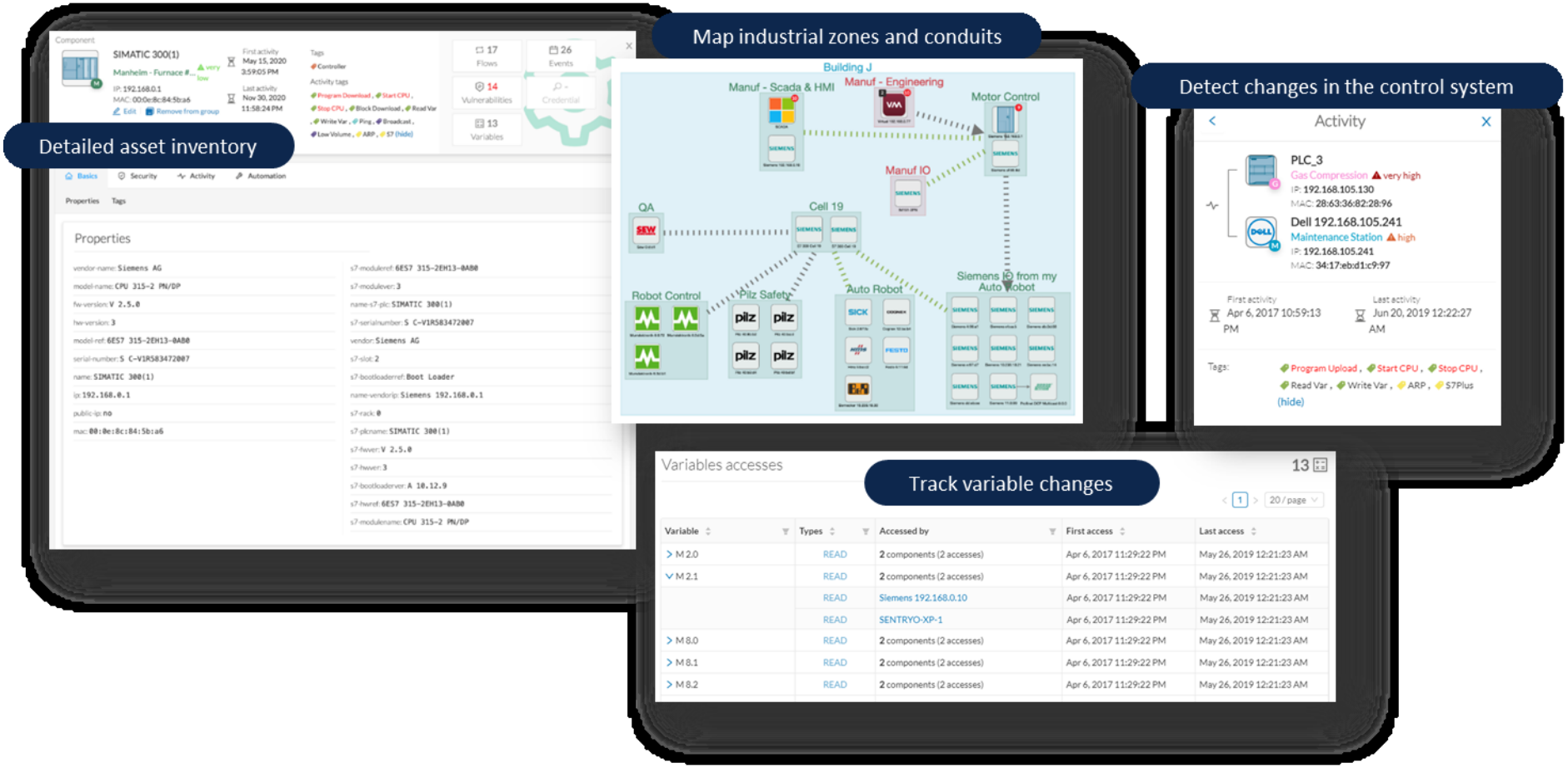
Visibility and threat detection built into your industrial network



Visibility is the only possible beginning of the journey to secure ICS environments



100% visibility and insights on industrial operations



“OT Case Study”

Asset Visibility with Cisco CyberVision

Requirements

- Visibility for OT assets and Traffic
- OT network segmentation for minimizing risk of malware expansion to all areas of OT network
- Integrations with existing Cisco security suite of products already using in IT network.
- Scripting Automation capabilities for managing OT assets (Grouping, naming, tagging etc.).

Solution

- Cybervision Software sensor on their existing Cat9300 switches
- IDS snort rules running on Sensor level for OT malware inspection

Outcomes

A major Paper Manufacturer in Portugal chose Cisco Cybervision solution to increase visibility into their industrial assets and traffic, getting also better control into their 3rd party OT vendor remote connections to the production lines.

- Unified Visibility of all OT Asset attributes and communications flows.
- Visibility was the first fundamental step for starting OT segmentation journey
- Better visibility on 3rd Party OT vendor remote connections to the production network .
- Automation via scripting on certain reporting & alerting required by the OT Personnel on specific OT tasks.