Cyolo

At a Glance

Safe and Secure Manufacturing in the Age of Industry 4.0

Cyolo PRO for Smart Manufacturing

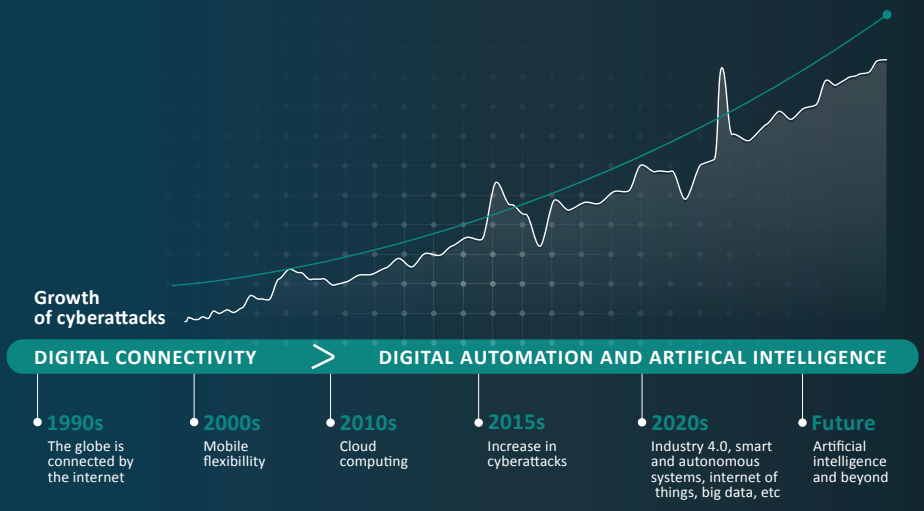
The advent of Industry 4.0 has revolutionized manufacturing operations by integrating cutting-edge technologies such as automation, Internet of Things (IoT), and data analytics into traditional industrial processes. However, increased connectivity between operational technology (OT) and information technology (IT) has significantly heightened cybersecurity risks in manufacturing environments. According to recent Ponemon Institute research, as many as 72% of manufacturing organizations are currently pursuing some level of IT/OT convergence.

With interconnected systems and devices forming the backbone of smart factories, the attack surface for cyber threats has expanded exponentially. Increased connectivity and data visibility within the manufacturing ecosystem make it a prime target for cyberattacks, with the sector experiencing the highest number of attacks globally for three consecutive years, comprising 25.7% of all attacks.

Cyolo PRO (Privileged Remote Operations) is an advanced secure remote access solution that empowers manufacturers to safely connect remote workers, third-party vendors, and privileged employees to even the most sensitive assets and environments.

Smart Factory Security Risks

As with every great revolution, Industry 4.0 brings new challenges. Increased connectivity heightens the risk that key components of a manufacturer's OT network could come under cyberattack, potentially leading to downtime, financial loss, and safety hazards. To mitigate such risk, cybersecurity must become an essential part of industrial control systems.



Source: World Economic Forum

Manufacturing Cybersecurity: Statistics and Risks

60% **Rising Cybersecurity Incidents:** Over 60% of manufacturing companies have experienced cyberattacks, reflecting an escalating risk environment.

$1M **Financial Ramifications:** The average cost of a cyber breach in this sector is around $1 million, signifying substantial financial risks.

30% **IoT Expansion and Risks:** IoT integration exposes new risks, leading to 30% increase in security incidents.

70% **Human Error:** Internal vulnerabilities, primarily due to human error, account for 70% of breaches in manufacturing, and underscore the importance the comprehensive cybersecurity training.

Source: DataGuard, 2024

Case Study: Global Top 3 Food and Beverage Manufacturer

100 Global sites

2000 Remote maintenance and support engineers

The Need: Simplify secure access for third parties to the factory floor

Top Challenges

- Complex login processes on both the user side (7 logins for an RDP!) and admin side (excessive ticketing)
- Needed secure file transfer within the OT environment
- Needed to allow emergency fix access for an OEM vendor

Business Outcomes

- Simple, secure, and agentless remote access for employees, third party contractors, and OEM vendors
- File scanning (ICAP) integration within the policy
- No need to change existing network topology
- Fast and secure remote OEM support
- Under 90 days to deploy

Multiple Needs, 3 Security Layers , 1 Unified Solution

PRIVILEGED ACCESS

Safeguard Credentials → **Vault**

Establish Audit Trail → **Session Audit & Recording**

Track Privileged Activities → **Intelligent Supervised Access**

IDENTITY MODERNIZATION

Protect the Last Mile → **Zero Trust for Devices**

OpEx Reduction → **End User Self-operation Tools**

Device Security → **Internal IDP/MFA/SSO for Legacy Systems**

ZERO TRUST SECURITY

Mitigate Asset Vulnerabilities → **Application Security**

Mitigate Risk of Phishing Attacks & Ransomware → **Zero Trust for Users**

Implement Robust Access Controls → **Access & Action Management**

THE OUTCOMES

Advanced Security

Operational Safety

Increased Production
Reduced Cost & Complexity

Better User Experience

Reduction of Compliance Headaches

Enterprise-ready Deployment

Managing Access and Risks in Connected OT Environments

45% of security professionals believe their organization is not effectively mitigating risks and security threats to the OT environment.

73% of industrial organizations do not maintain an accurate, up-to-date inventory of the assets in their OT environment.

60% of industrial organizations grant OT systems access to more than 50 different vendors, and 25% give such access to more than 100 vendors.

72% of industrial organizations are pursuing some level of IT/OT convergence, but just 33% have policies, tools, governance and reporting in place to control and monitor connectivity between IT and OT systems.

Source: Ponemon Institute, 2024

Key Remote Privileged Access Use Cases

Facilitate Third-Party Remote Access

Safely connect third-party vendors to OT environments for enhanced productivity.

Provide OEM Access For Fast, Secure Support

Ensure rapid, secure, and safe support and maintenance of diagnostics (M&D) for OT systems.

Manage Critical and Risky Access

Secure, monitor, and control all connections to mission-critical assets, whether on-prem or remote.

Achieve Regulatory Compliance

Implement segmentation, supervision and other requirements of industry and regional compliance mandates.

5 Critical Controls

For World-class OT Cybersecurity

- **ICS Incident Response**
- **Defensible Architecture**
- **ICS Network Visibility Monitoring**
- **Remote Access Security**
- **Risk-based Vulnerability Management**

Source: SANS Institute

The Cyolo Ecosystem Addresses All 5 SANS Critical Cybersecurity Controls

Case Study: The Cyolo/Dragos Partnership
Together, Cyolo and Dragos deliver a comprehensive ICS/OT security framework based on the five critical controls of effective ICS/OT security:

ICS Incident Response - which integrates operational insights into incident handling, enhancing system integrity and recovery (Dragos)

Defensible Architecture - ensuring robust visibility, segmentation, and enforcement mechanisms to bridge technological and human aspects of security (Dragos and Cyolo PRO)

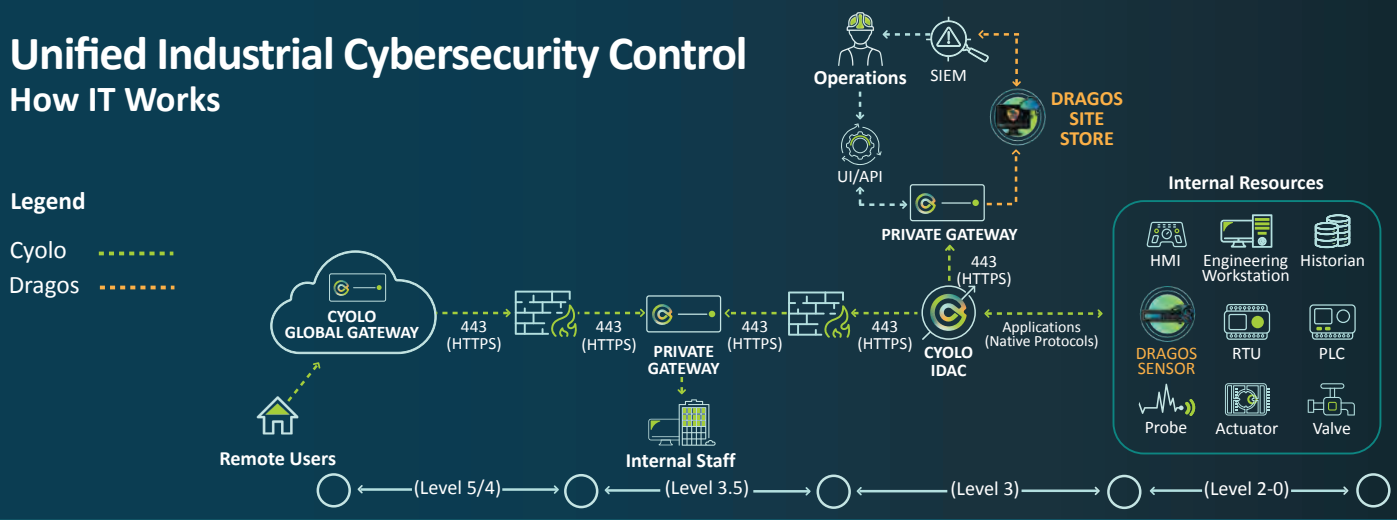
ICS Network Visibility Monitoring - employing continuous monitoring and protocol-aware tools to detect and address potential vulnerabilities (Dragos)

Remote Access Security - ensuring safe and secure stringent access control in the face of evolving hybrid work environments (Cyolo PRO).

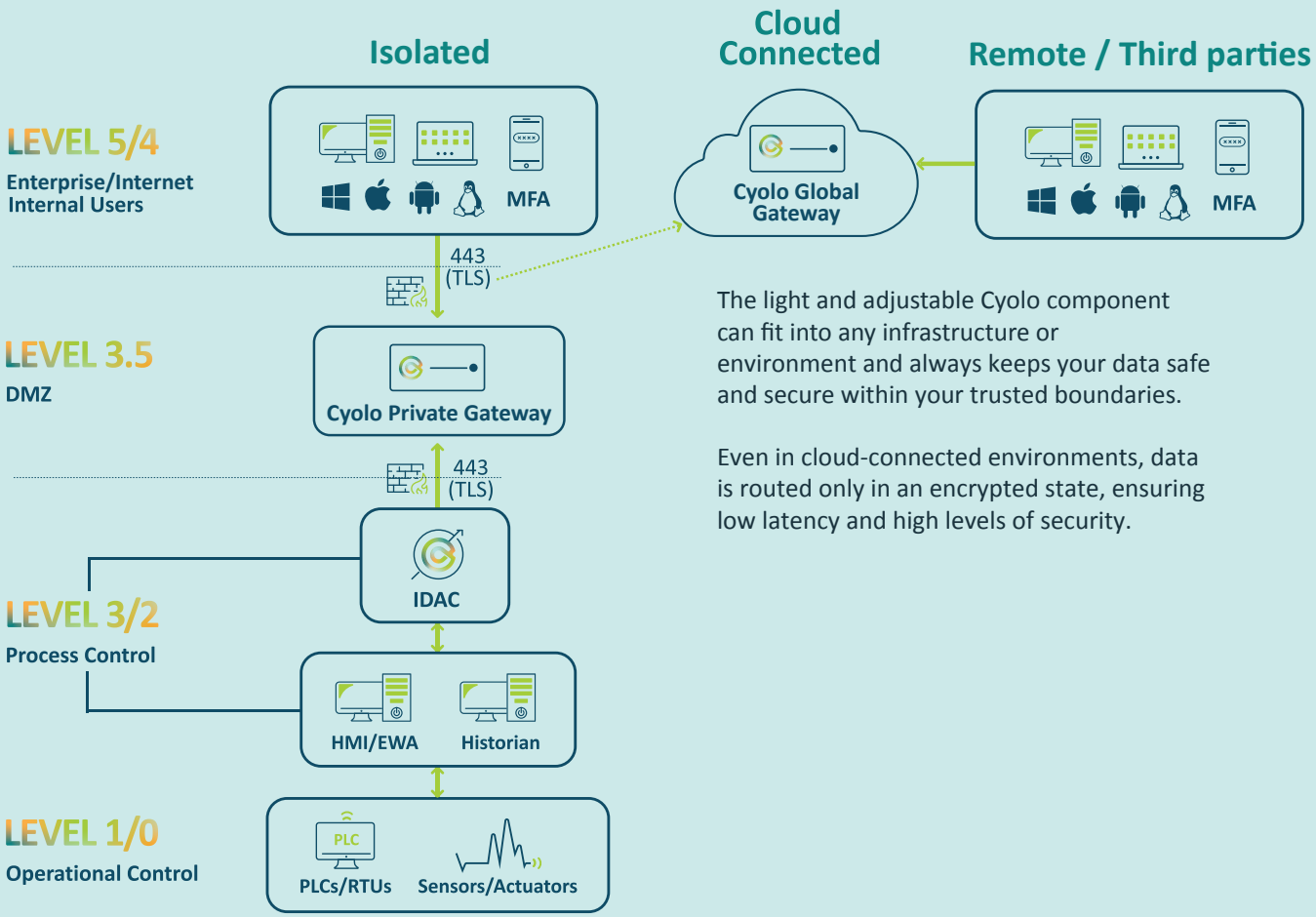
Risk-based Vulnerability Management - prioritizing and addressing vulnerabilities based on their potential to pose significant operational risks, thereby ensuring proactive prevention, response, and recovery actions (Dragos and Cyolo PRO).

Unified Industrial Cybersecurity Control

How IT Works



Cyolo PRO's Unique Architecture Enables a Flexible Solution to Fit Any Environment



The light and adjustable Cyolo component can fit into any infrastructure or environment and always keeps your data safe and secure within your trusted boundaries.

Even in cloud-connected environments, data is routed only in an encrypted state, ensuring low latency and high levels of security.

Cyolo PRO Benefits

Secure

- Keep your data inside your trusted boundaries
- Granular identity-based controls & supervision
- Full activity/audit trails

Flexible

- Deploy on-prem, on-cloud & hybrid—simultaneously
- Extend identity authentication and security to legacy applications
- Centralized governance & site-based administration

Fast and Easy

- Agentless deployment
- Consolidated access controls with modularity
- Low-latency/High-availability
- Intelligent supervision eases operational burden

Cyolo provides secure remote privileged access for cyber-physical systems (CPS). Our solution enables industrial enterprises to simply connect employees and third-party vendors to critical assets.

Cyolo meets the needs of both security and operational technology (OT) teams with a solution that's adaptable to any environment and deploys without causing disruptions or requiring change management. Learn more at **cyolo.io**.

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