digital workshop

Industrial Remote Access for IT/OT Connectivity & Agile Ops

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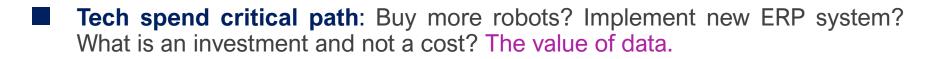


- **Operational Agility**: What agility can you obtain from IT/OT Connectivity?
- Manufacturing Case: Business & Technology Needs.
- **IT/OT Convergence:** Leadership, Infrastructure and Security Needs.
- **IT/OT Architectures:** Efficient & Secure Infrastructure.
- Hybrid Cloud: Industrial Remote Access.
- IT, OT & IIoT Connectivity: Secure Solutions.
- Industrial Remote Access: Use Cases for Manufacturers.





Agility from Scratch the data advantage

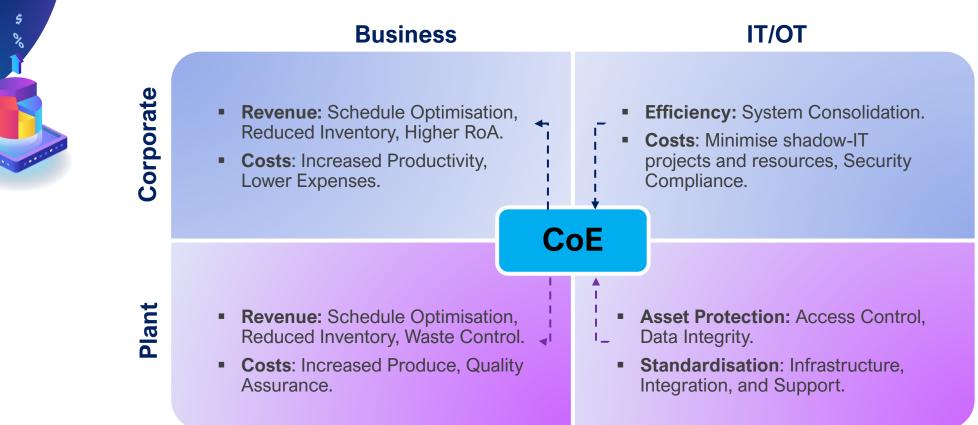


Agility through IT/OT Connectivity. Connectivity Use Cases:

Manufacturing Agility	Data Agility
Production Processes Flexibility	Query Time Optimisation
Production Efficiency & OEE	Enhanced Data Transparency
Team Integration	Enhanced Data Quality

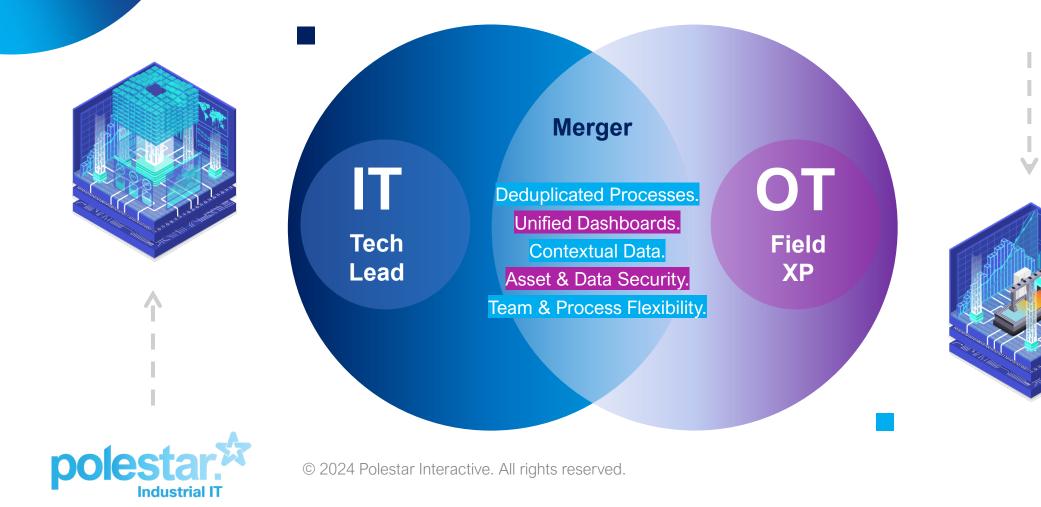


Connectivity manufacturing case

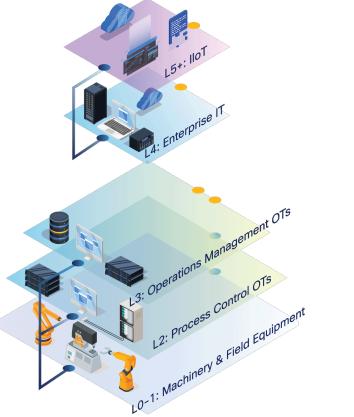




IT/OT Integration leadership requirements



T/OT Integration infrastructure requirements



safety first

Validated designs & architectures and trusted vendors to build-in security checkpoints across all ICS, OT / IT layers, and responsible departments in the business.

scalability

Solutions that grow into existing infrastructure organically while building the digital model of all plants to show what is happening anywhere, at any given time.

future proof



Control over data sharing and assets to gain mastery over facilities for future readiness, bringing benefits like new business models using analytics and AI.



TOT Integration security requirements



- **Impact:** What are the risks of a security incident?
 - **Management** = Takover, Legal Case, Supply Chain Disruption
 - IT = Data Loss, Legal Case
 - Operations = Loss Production
- **Centralised Operating Model:** Separate IT & OT security standards, sharing:
 - Asset & Process Management Flexibility
 - Data Loss Prevention
 - Security Operations
 - Incident Response and Recovery





TOT Integration infrastructure & security

CLOUD SERVICES 3RD PARTY MFA

ERP

LEVEL

SUPPLY CHAIN

Insecure/Inefficient Architectures

- No visibility to assets or operations.
- Asset ringfencing with multiple firewalls.
- OT & Automation are not connected.
- Enterprise services receive most hacks.
- Spreadsheets and manual management.



EVEL O

LEVEL 1

TOT Integration infrastructure & security

SD-WAN CLOUD SERVICES 3RD PARTY MFA

EVEL

Secure/Agile Architectures

- + Visibility of all assets, processes & data points.
- + Cloud Security & SD Segmentation.
- + IT, OT & Automation Integration.
- + Hybrid Cloud Platforms & Edge Computing.
- + BI & Remote Operability.



LEVEL O

LEVEL 1

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IT/OT Connectivity remote access for agility

Network & Systems:

- IT Connectivity: Docker, Cloud-based connectivity for Enterprise, IT & 3rd parties, management and commissioning.
- **OT Connectivity**: ICS Accessibility.

Security Mesh:

Access Management, MFA, SSO, Encryption, Standards Compliance.

Data Fabric:

- Data Centers.
- PLC & Automation.
- MES/SCADA.





Secure Connectivity for IT, OT & IIoT

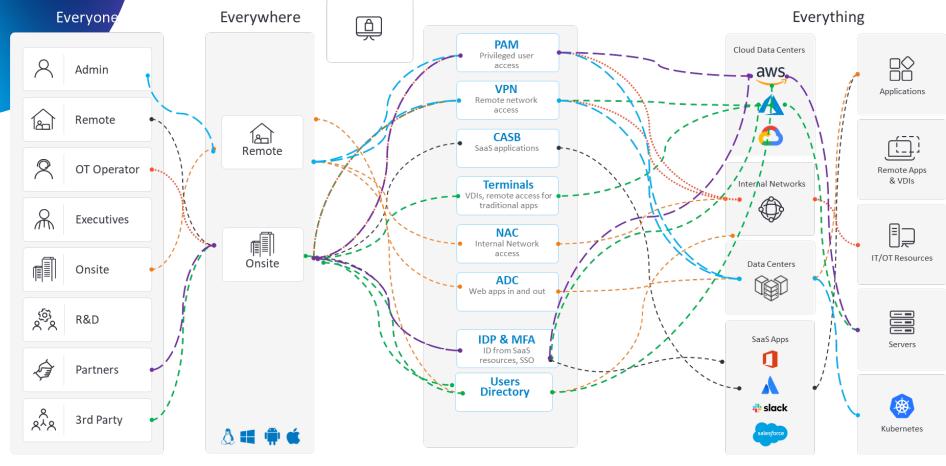
"addressing the people, process and technology challenges"

Δ MINIMUM MINIMUM Remote (IIIIII) r Onsite **ZTNA2.0** 'aws **OT Operator** amm 1000 Martine **3rd Party** Internet Company * Data Center

Kevin Kumpf OT Strategist



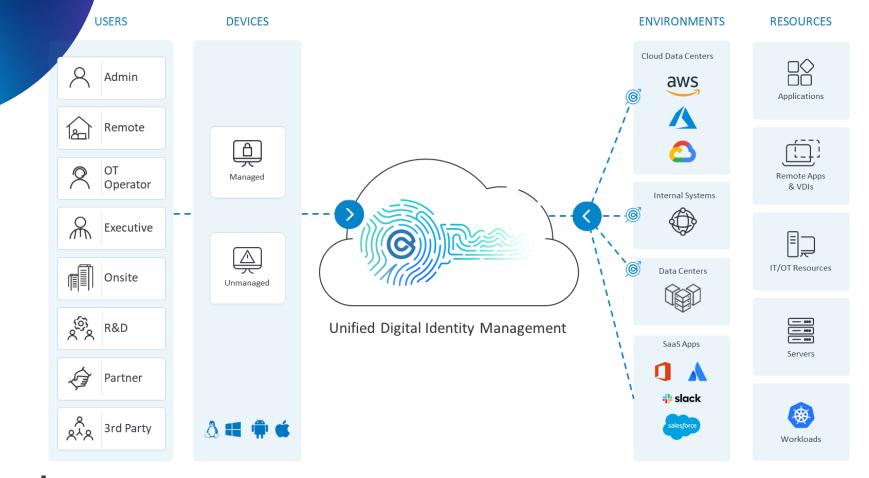
Current State IT/OT infrastructure



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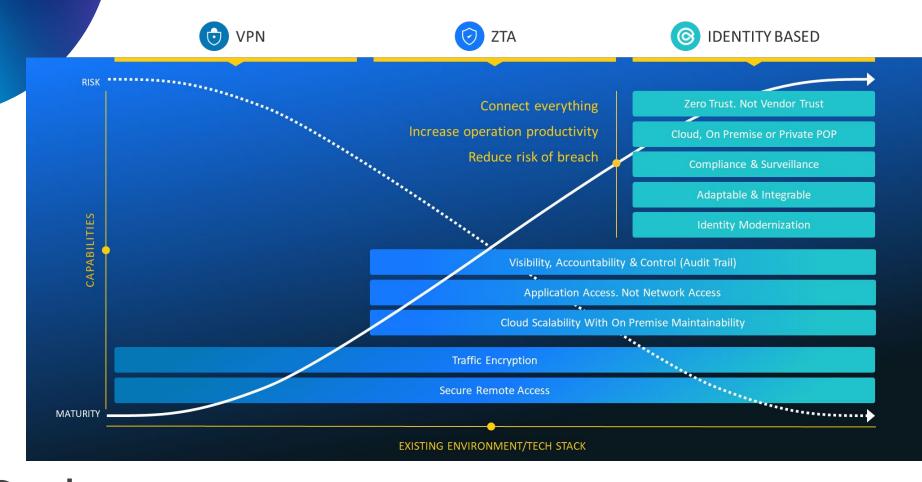
Future State IT/OT infrastructure



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Unified Digital Identity Management UDIM



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Achieving UDIM Tech Goals



Mitigate Risk of Breach

- MFA & SSO to any app and resource
- End-to-end encryption & continuous authorization
- Secrets vault
- Application access instead of network access



Increase Operational Productivity

Just in time access

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- HA Architecture
- Integrate with existing PAM / IAM platforms
- Identity federation
- Local IDP
- Work with corporate or BYOD devices



Modernize and Retrofit

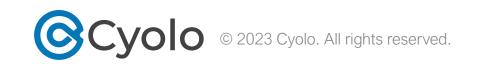
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- Web and native application support
- Agentless
- Desktop and mobile device enabled
- Integrate with existing tools (TVM, SOAR, ITSM)
- Cloud, On Premise, Hybrid deployment



Simplify Compliance Reporting

- Supervised Access
- Session recording
- Full audit trail
- Align to current and emerging compliance standards
- Integration into event correlation and Reporting platforms



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Achieving UDIM Operational Goals







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