BUILDING A RESILIENT AI-OT SOC STRATEGY

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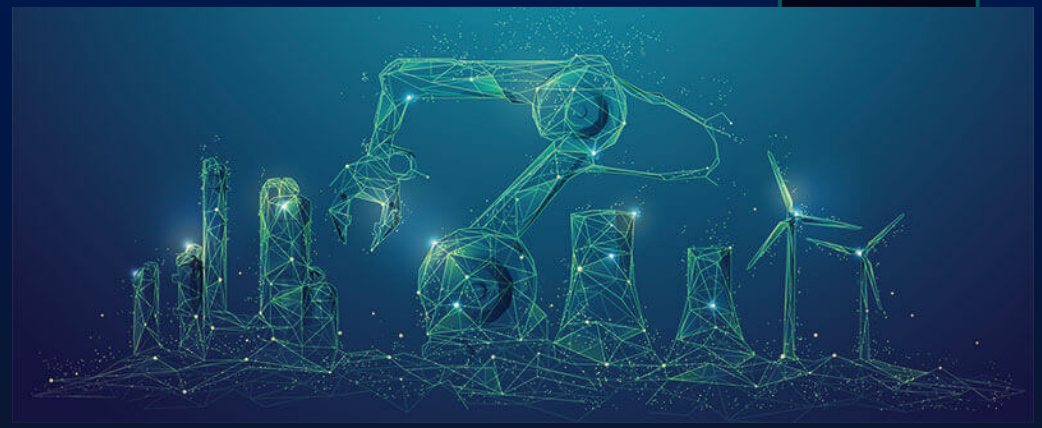
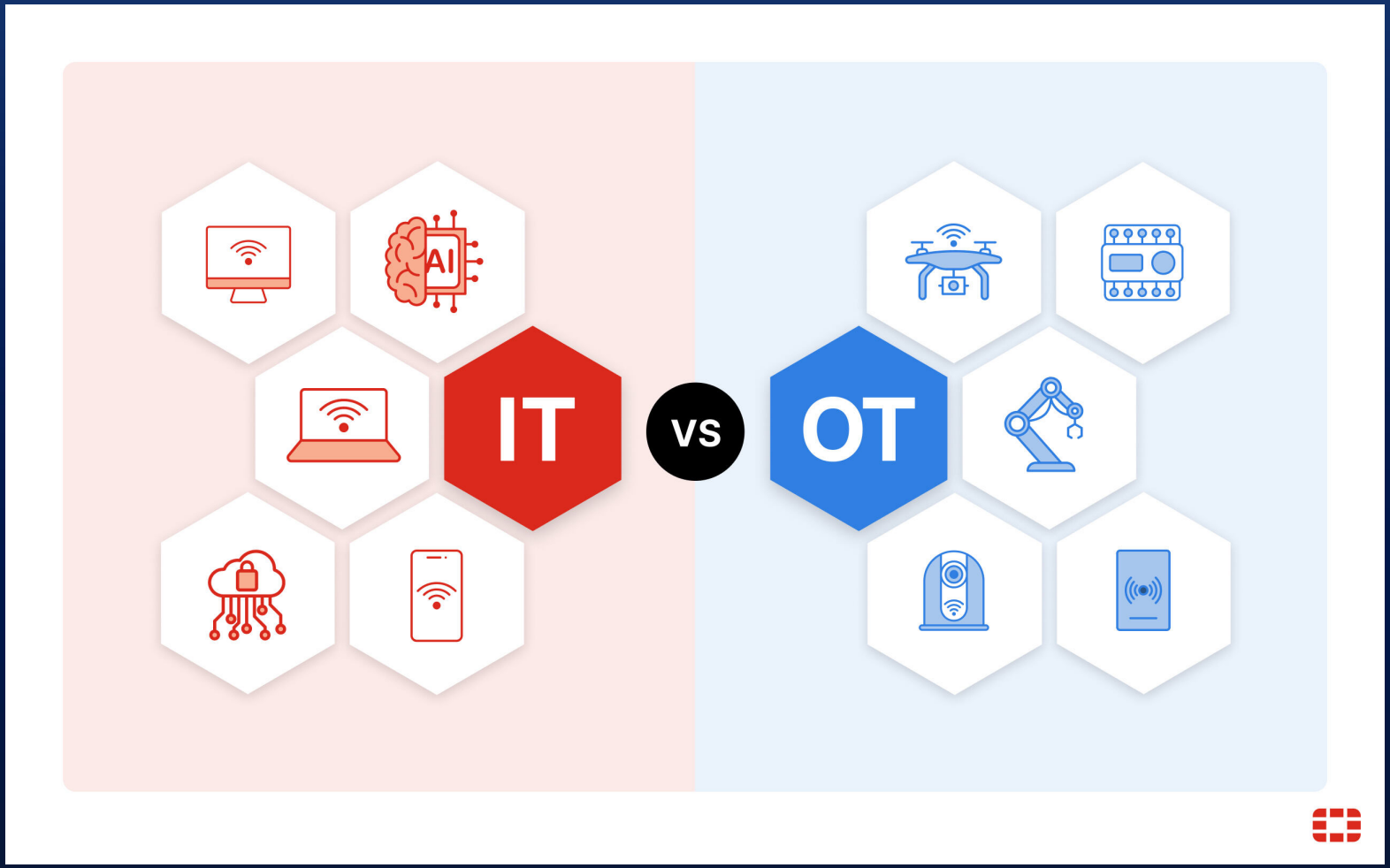
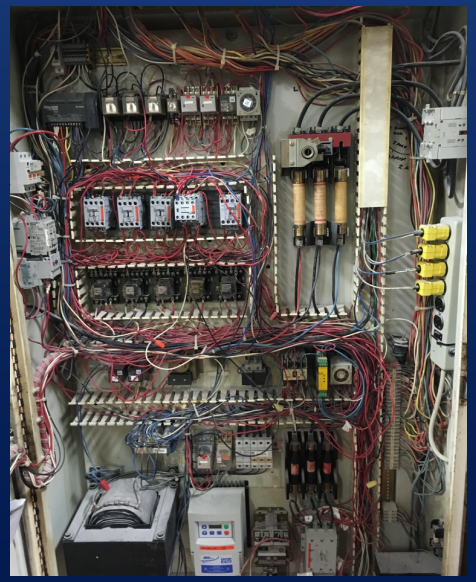


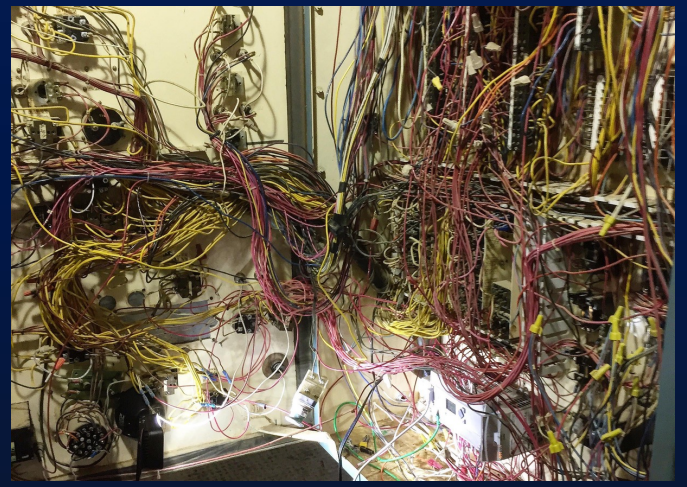
IT and OT ARE Different



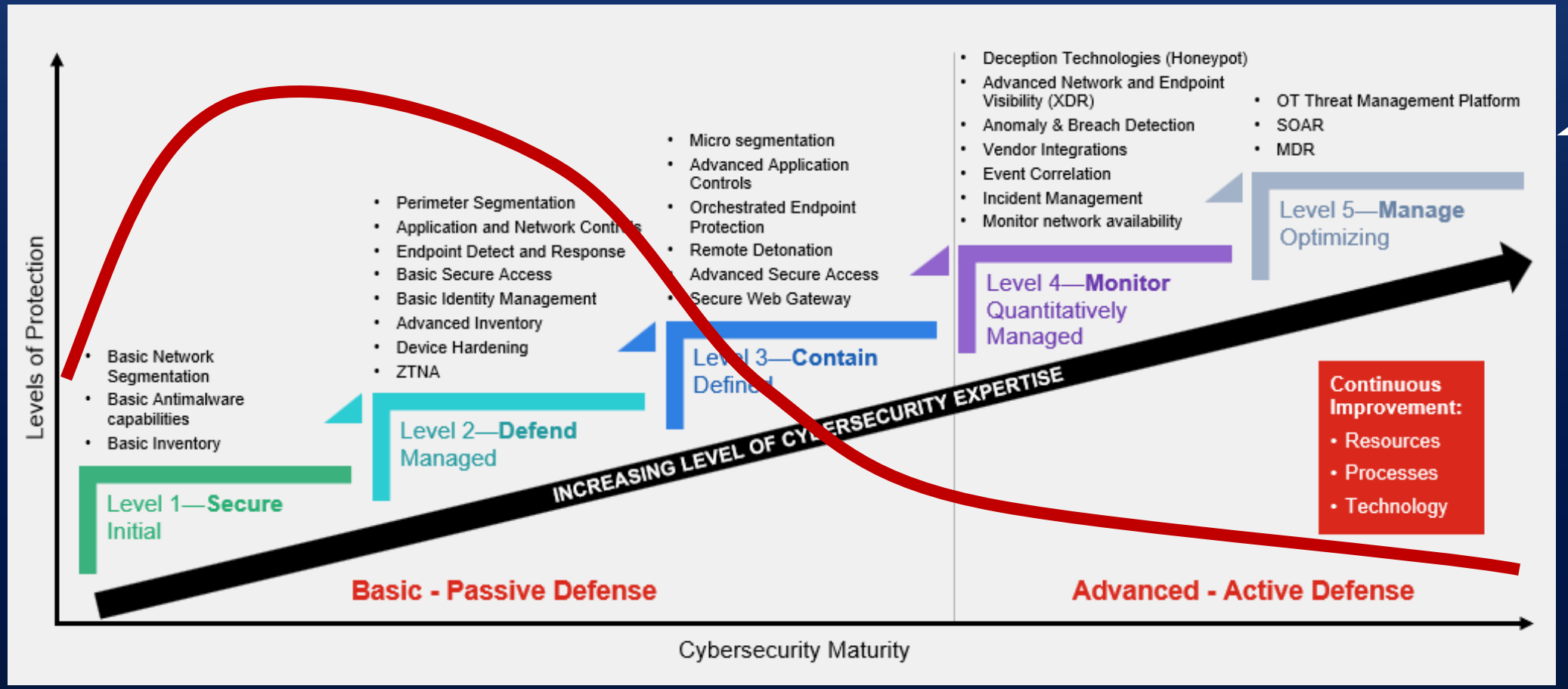
IT and OT People ARE Different

OT Devices are also a little Different





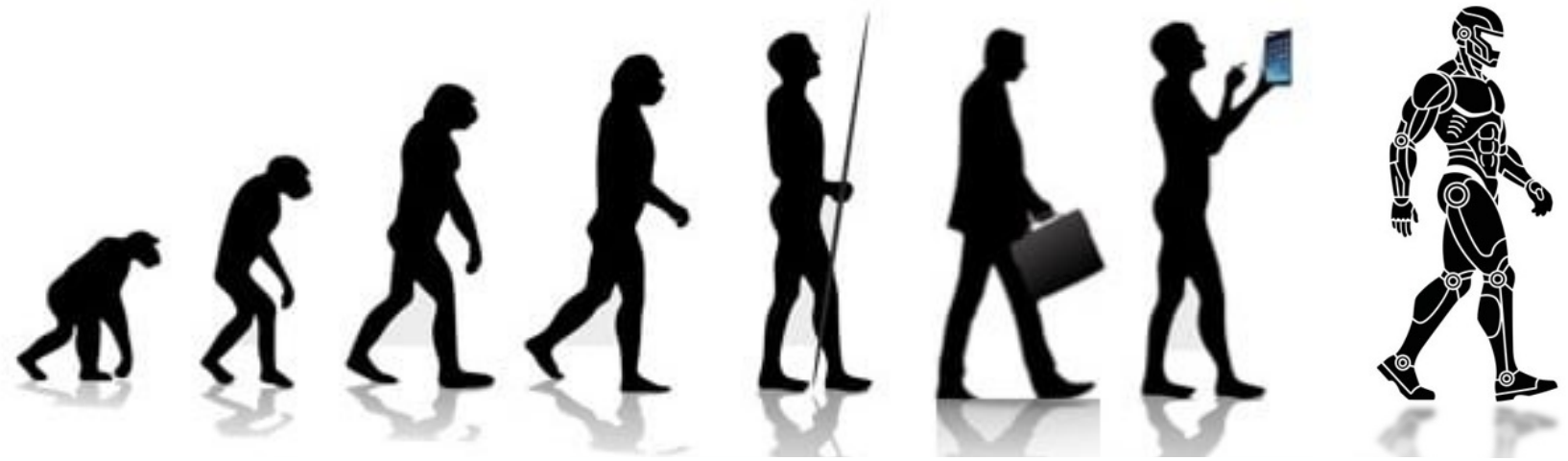
OT Focus is on the Basics: Requires Serial Progression to Maturity



Level 6+—**AI enabled OT SOC**

What about the SOC People Skillset?

4.7 Million unfilled cyber jobs
10x or 100x the deficit in OT?



OT

IT SOC Analyst

AI-enabled?

IT/OT SOC Response, or Lack There of

OT SOC & Operations Analyst: Mythology?

Now, We Understand the Challenge

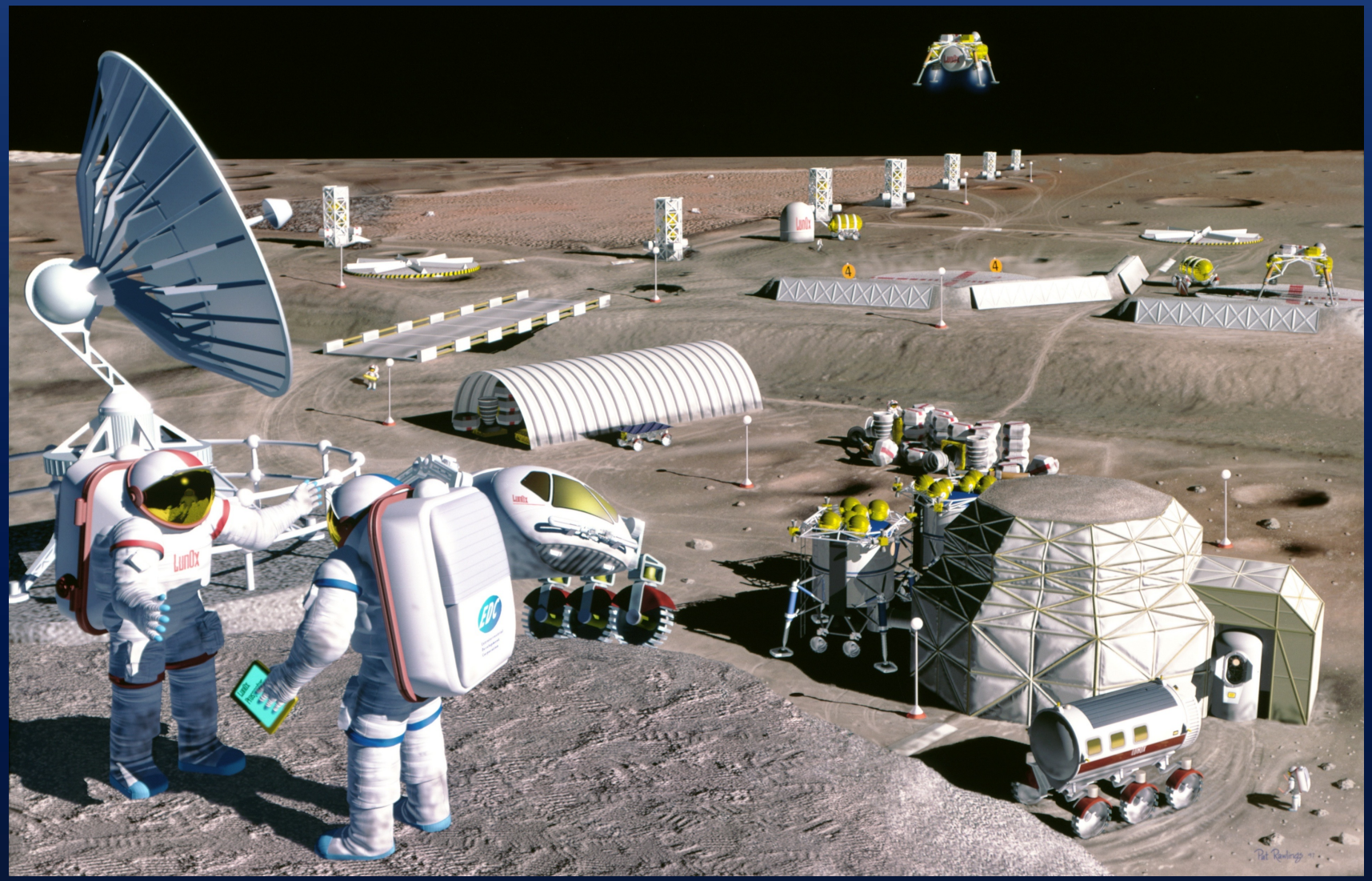
Meanwhile, AI will Enable Additional OT events

More Trouble:

- IT Ransom Novices
- Underfunded Nation-states
- Rapid expansion of OT Attack Surface
- Greater frequency, and impact, to industry and infrastructure
- Compressed Vulnerability timelines

We are in a race...

Getting to Level 6+ in OT?



Can’t Avoid Programmatic Steps: Don’t Head Straight to Mars

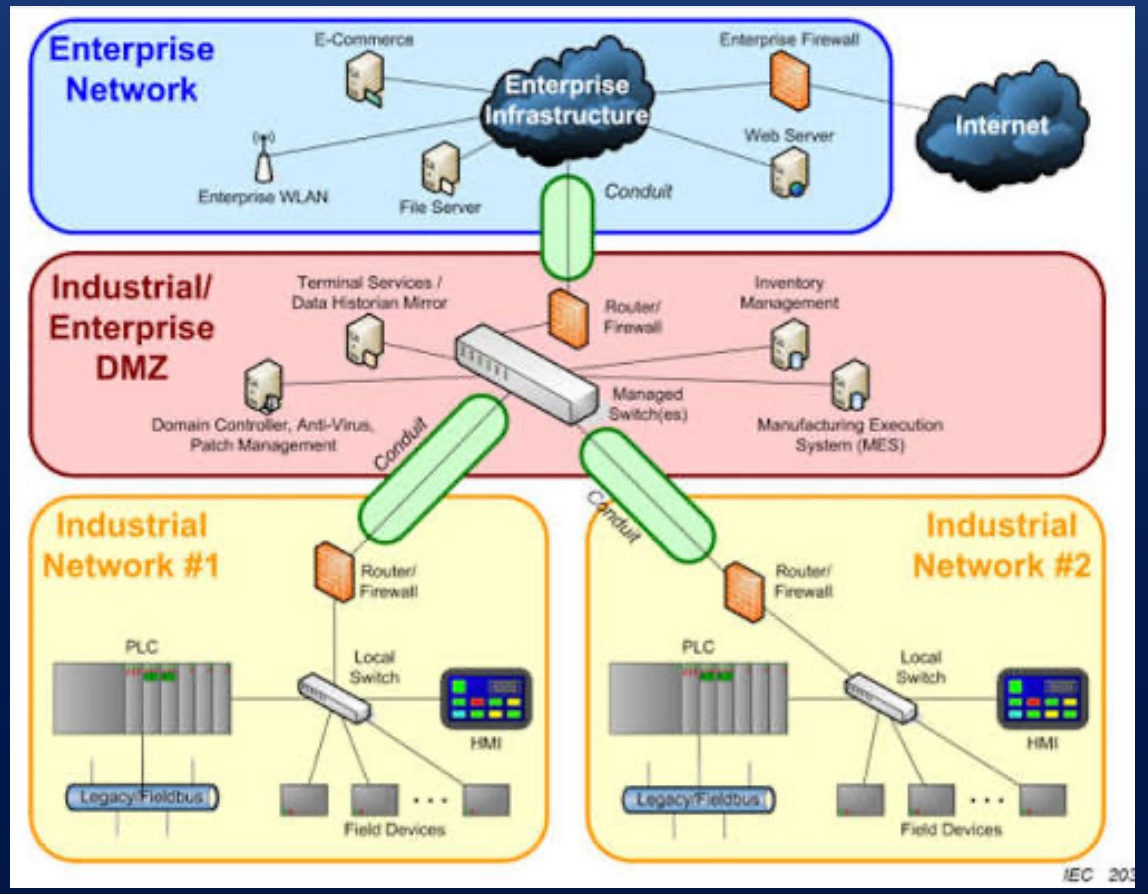
Mission: OT Level 6+, Step 1

Basics: determine & create OT network architecture

- Purdue Model – basic “stack” of Internet, IT and OT network Levels
- More advanced and realistic: IEC 62443 Zones & Conduits
  - Zones = segments Conduits = data flow
- Segmentation, micro-segmentation – reduce blast radius
- Secure Remote Access, aspects of Zero Trust – vendors & employees
- IT/OT tabletop exercises and IR – learn operational contingencies
- Build Resiliency and plan for Restore and Recover

Must build the Network Security Foundation

- Flat networks or too many connections create numerous attack vectors and lateral movement inside OT networks



Mission: OT Level 6+, Step 2

Basics: protect unsecure OT devices

- Visibility - must “see” unique OT devices to defend them
- Vulnerability Management – OT Threat Intel, unique OT vulns
- NGFW with IPS for IT and OT devices – make data “actionable” by blocking malicious IT and unique OT traffic
- EDR - still need to protect those old Windows XP boxes
- SIEM/SOAR/Deception/NDR – designed to “see” OT network traffic

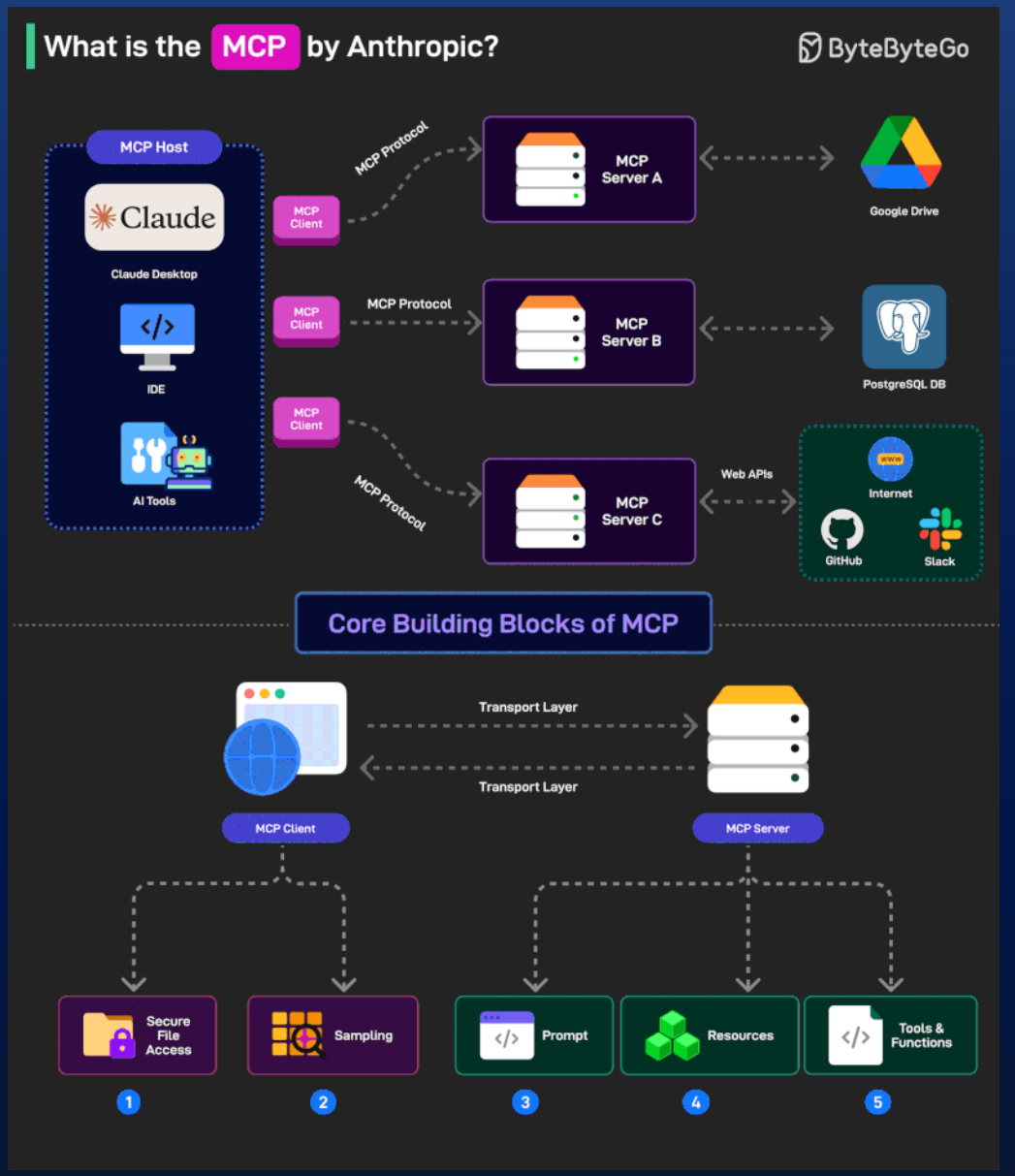
Use Compensating Controls to protect vulnerable OT devices & fill the OT Cybersecurity Data Lake

A Brief Message on MCP Servers: Your new AI API

Model Context Protocol – USB-C port for AI

- Created by Anthropic, next-gen API for AI
- How LLMs interact, “permanent” connections
- 3 building blocks
  - Tools – actions to take, run code, etc.
  - Resources – data, files, API calls
  - Prompts – user-controlled interactions
- Developers use SDKs to create an MCP server

New Ecosystem of Compliant Models and Tools to connect AI-enabled security solutions



Mission: OT Level 6+, Step 3

Build AI Level “6” – build the Bots

- Generate OT context
  - Security vendors and own genAI usage
- Correlate niche OT solutions
  - MCP servers and agentic AI
- Must generate “holistic” view through AI to eliminate blind spots and data gaps

Build the AI Tools, Connect the AI Agents and MCP servers and Leverage the OT AI Data Lake

Mission: OT Level 6+, Step 4

Balance SOC Automation with Operations

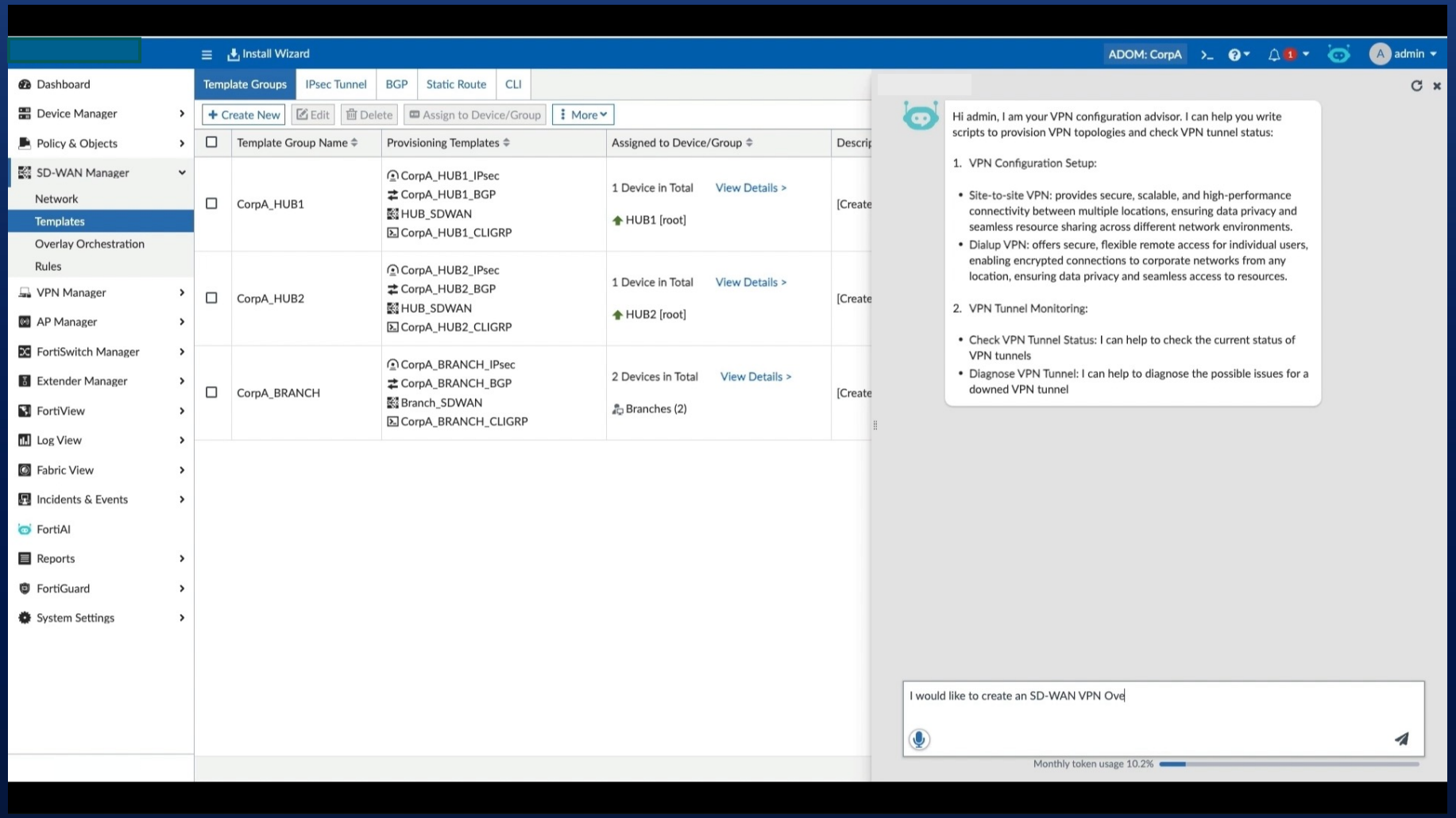
- Establish the Bright Line of Operational Risk
- Multi-functional tabletop exercises
  - Contingencies
  - Unintended Consequences
  - Hallucinations and Human Oversight
  - Data gaps or bandwidth limited OT networks
- Discover where Automation Ends
  - When the OT SOC hands over to Operations
- Accept that OT SOC will never be 100% automated

Biggest “unknown” before Level 6+

Early Preview of Level 6+: Factory VPN scenario

VPN Overlay Creation & Troubleshooting with GenAI

- Create VPN Overlay
- Define Overlay Type
- Image Recognition
- Inline Configs Edits
- Troubleshoot Down VPN
- Identify Config Issue
- Run Playbook
- Reload Config
- VPN Overlay is “Green”



Where We are Starting

Where We Will Go

Level 6+ must overcome differences:

- Networks
- Priorities
- Maturity
- Personnel
- Attackers
- genAI, agentic AI and beyond

Result: AI SOC Harmony

Resilient AI-driven OT SOC Summary

- OT Requires the Basics
- OT is Reliant on AI to rapidly accelerate
- With AI, OT can protect in an AI world
- OT, with IT, evolves into the modern digital world

And, OT will have its Unicorns!

AI-enabled OT SOC in harmony with Operations

Thank You!

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2026 State of OT and Cybersecurity Report
OT peer survey of 700 international respondents
OT Cyber Trends, Solutions & Best Practices