ENTERPRISE AUTOMATION
A TETRA TECH COMPANY

Executive Update: ML and AI Positioning

Presented by Joberto Lee

5-28-2026

Joberto Lee – Innovation Practice Lead

- B.S. Mechanical Engineering – UC Irvine
- B.S. Materials Science – UC Irvine
- M.M. Artificial Intelligence – Columbia University
- Specialization in Business Strategy – Harvard University
- 9 certifications in AI & data science
- AI consultant for several WWW clients
  - Carmel Area Wastewater District, Central Arizona Project, City of Santa Monica, Sweetwater Authority, Orange County Sanitation District, Vallecitos Water District
- Lead engineer for over 20 clients serving all verticals from semiconductors to oil & gas
- Happy to connect: www.linkedin.com/in/jobertolee

Certified in 30+ software products

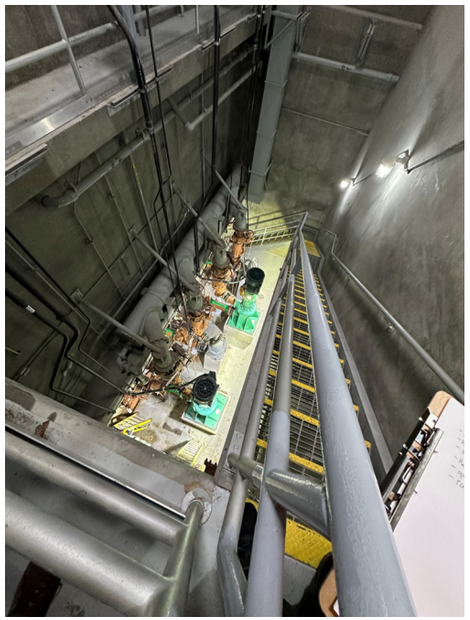
Presentation Agenda

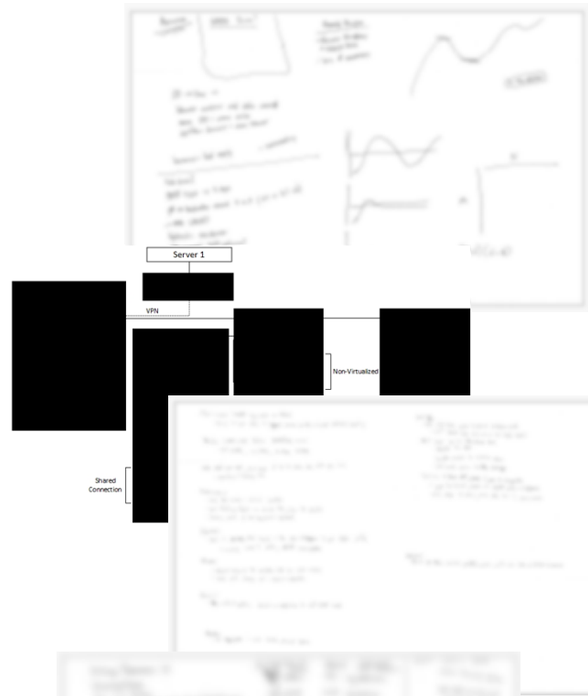
1. Project Origins & Design Concept
2. Cybersecurity Upgrades
3. Aeration Basin Optimization Pilot
4. A Shared Future Outlook

Project Origins

Is a 4 MGD wastewater utility really positioned to explore AI technology implementation?

Project Origins – Technology Audit



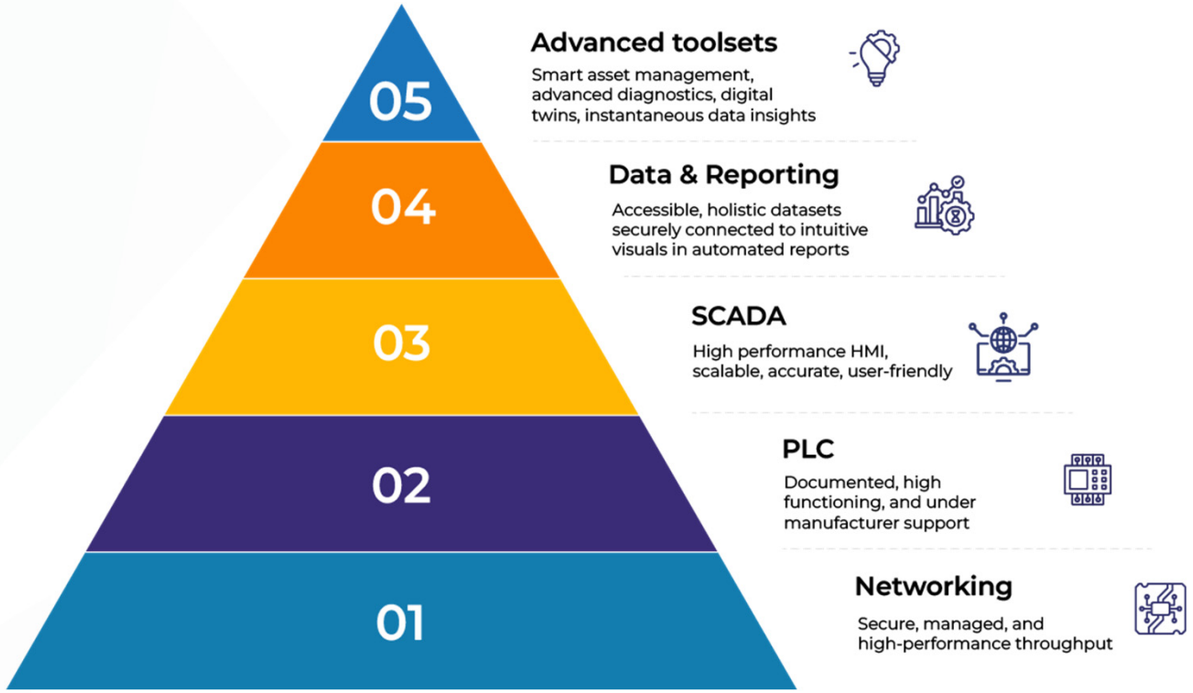


Select images throughout the presentation are redacted for security

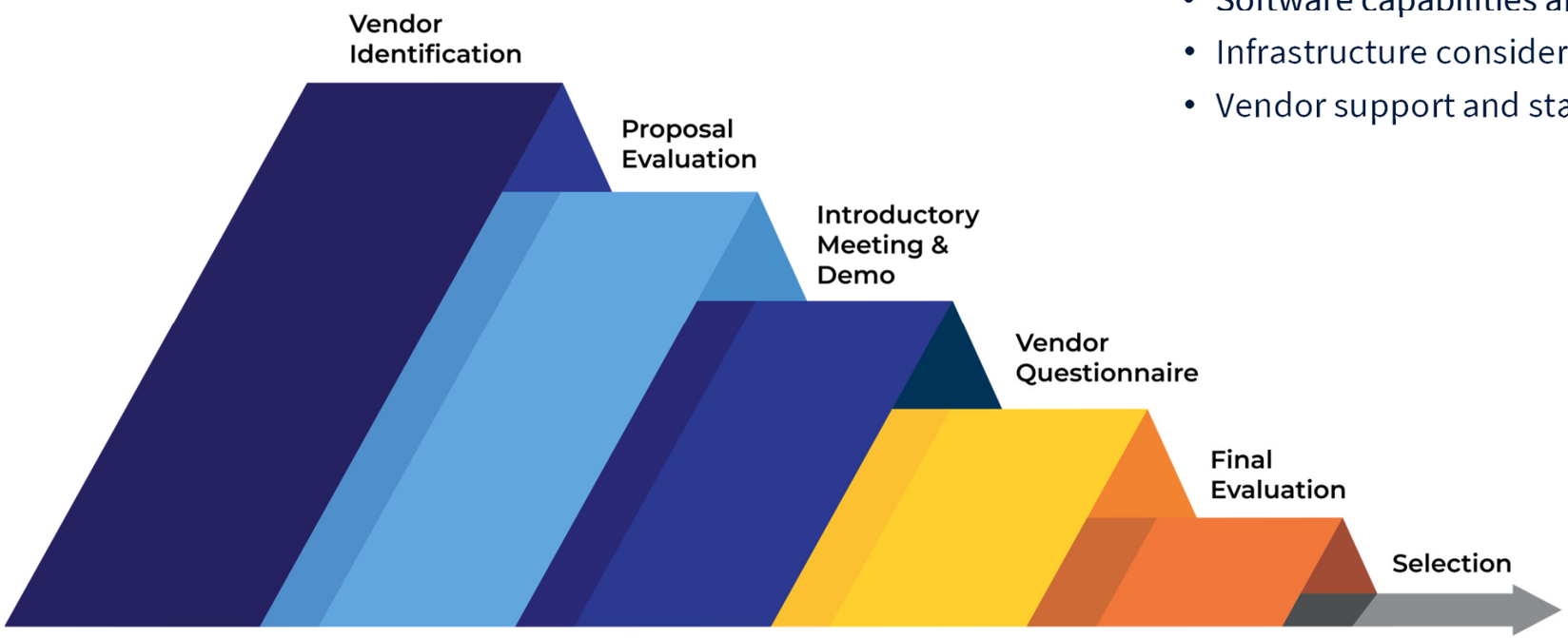
Project Origins – AI Readiness

The makings of a great partnership:

- Stable foundations
- Maturity in OT standardization
- IT/OT alignment
- Strong cybersecurity ideals
- Highly collaborative staff
- An internal champion



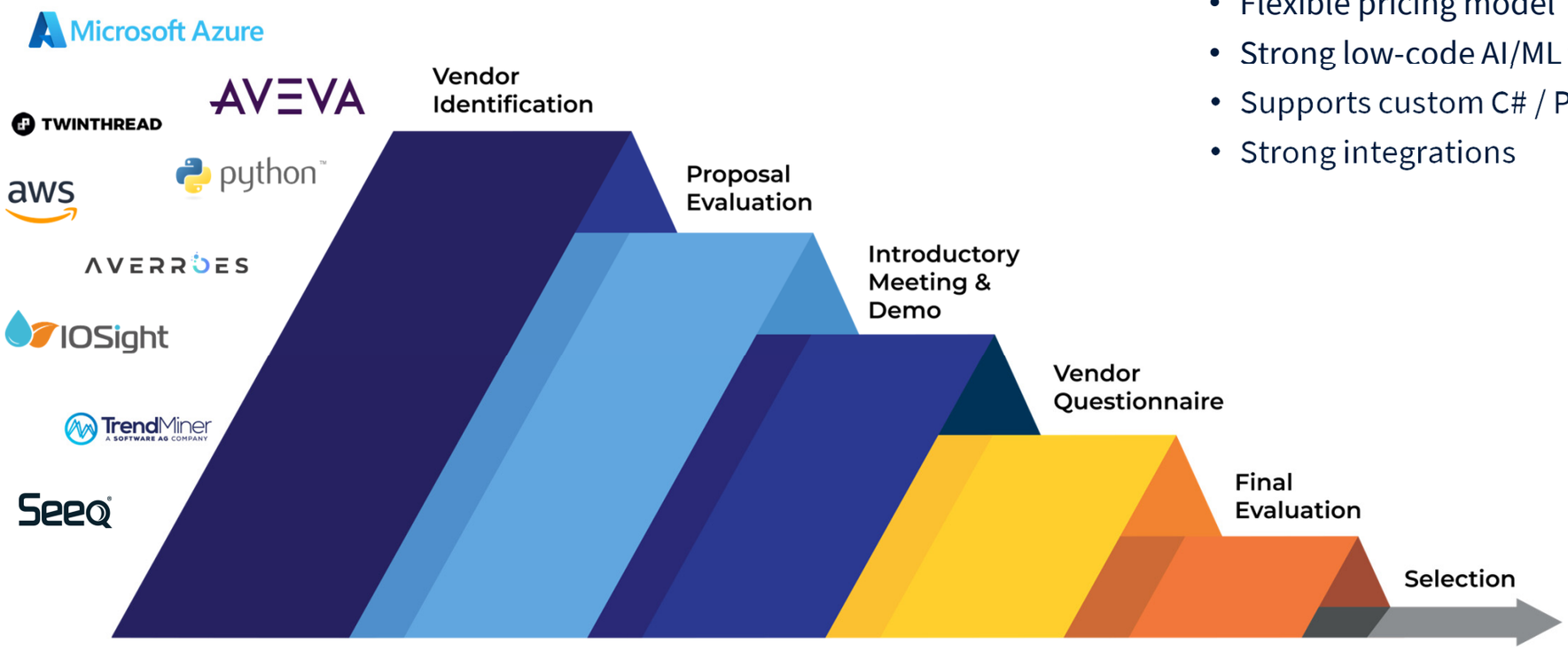
Design Concept – Vendor Evaluation



Core Criteria

- Upfront and recurring costs
- Software capabilities and usability
- Infrastructure considerations
- Vendor support and stability

Design Concept – Vendor Evaluation



AVEVA + TwinThread Strengths

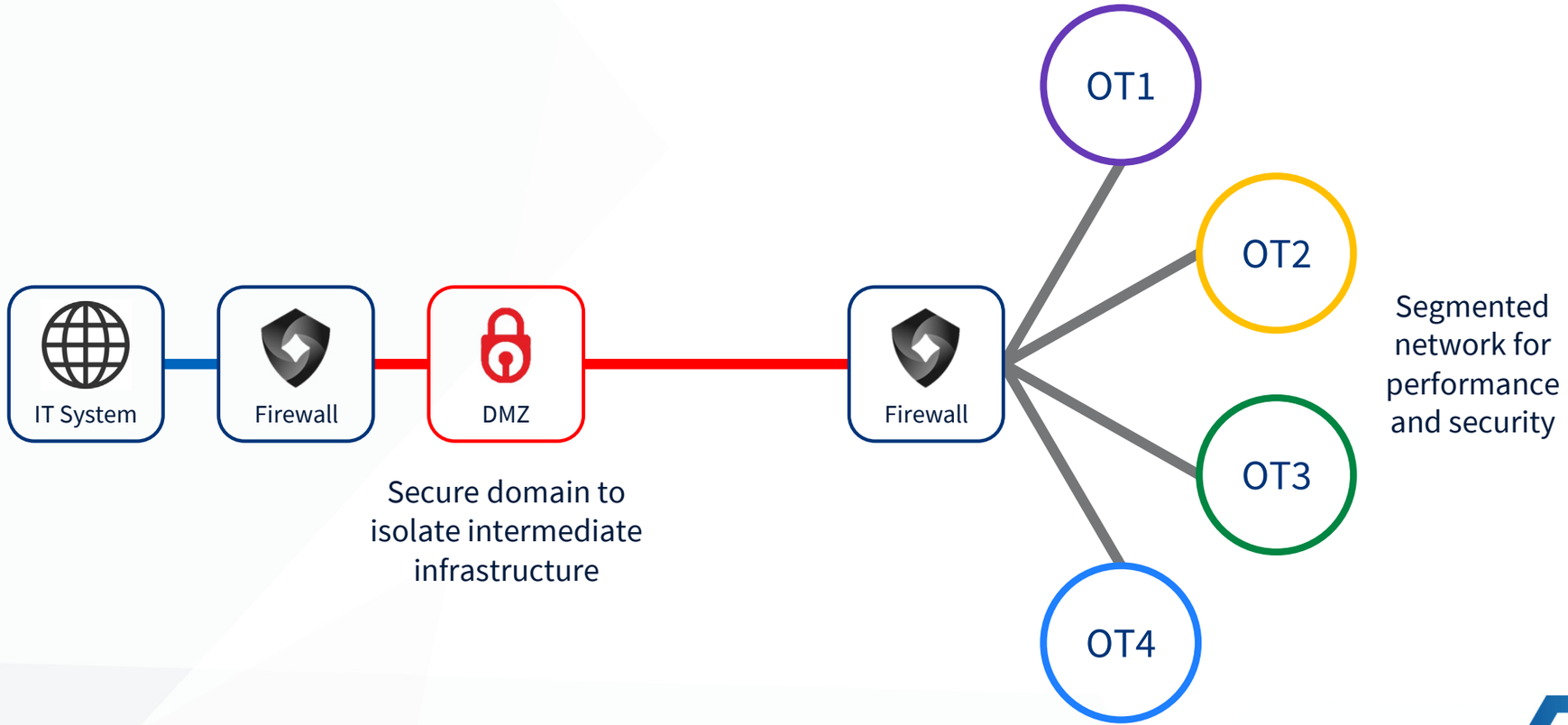
- Flexible pricing model
- Strong low-code AI/ML features
- Supports custom C# / Python code
- Strong integrations

AVEVA TWINTHREAD

Cybersecurity Upgrades – Before

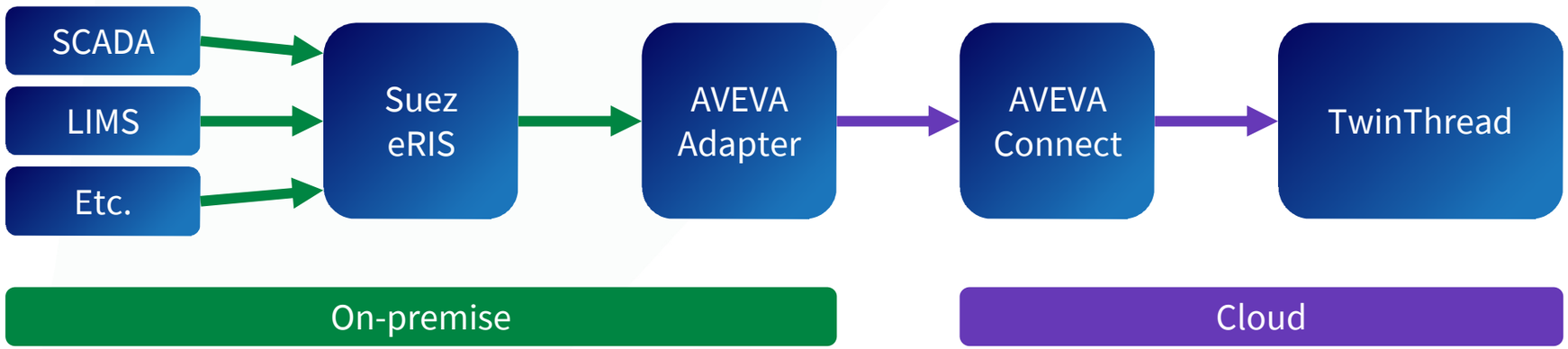
Network abstracted for communication and security

Cybersecurity Upgrades – After



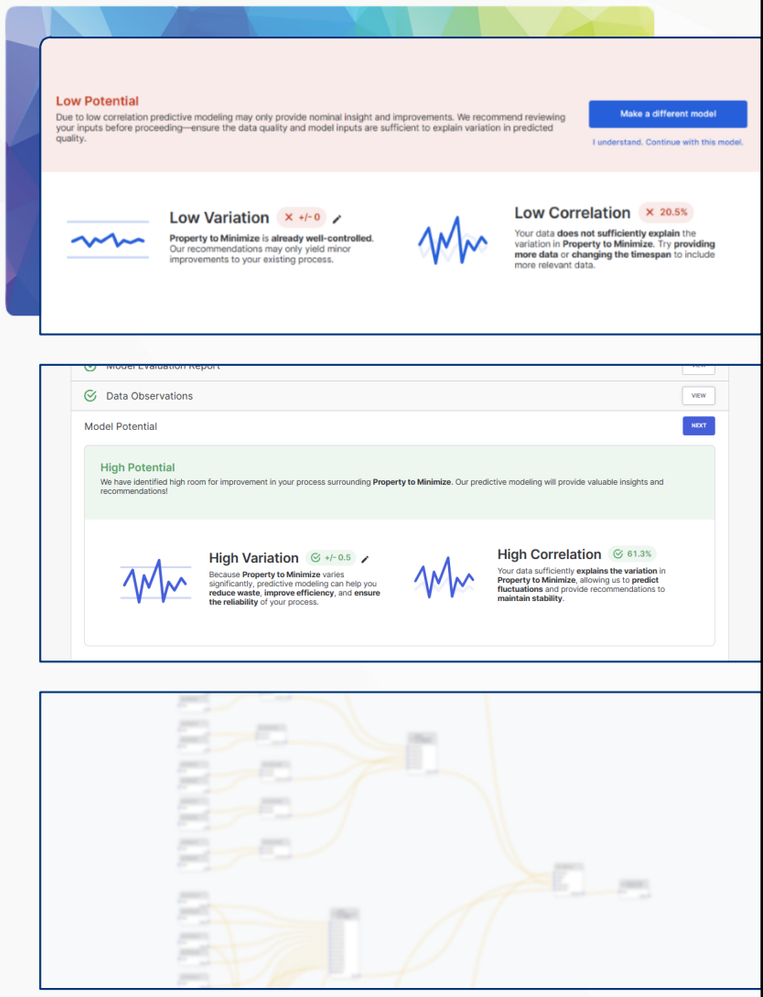
Network abstracted for communication and security

Data System Architecture



Aeration Basin Optimization Pilot

- Some initial kinks to work out with AVEVA software access
  - Minor schedule delays, but EA was able to leverage it for ~18% extra AI tokens at no additional cost
- This application was definitely on the complex side
  - Out of the box models did not perform well
- ML model performance made a large jump when EA began developing a custom error function



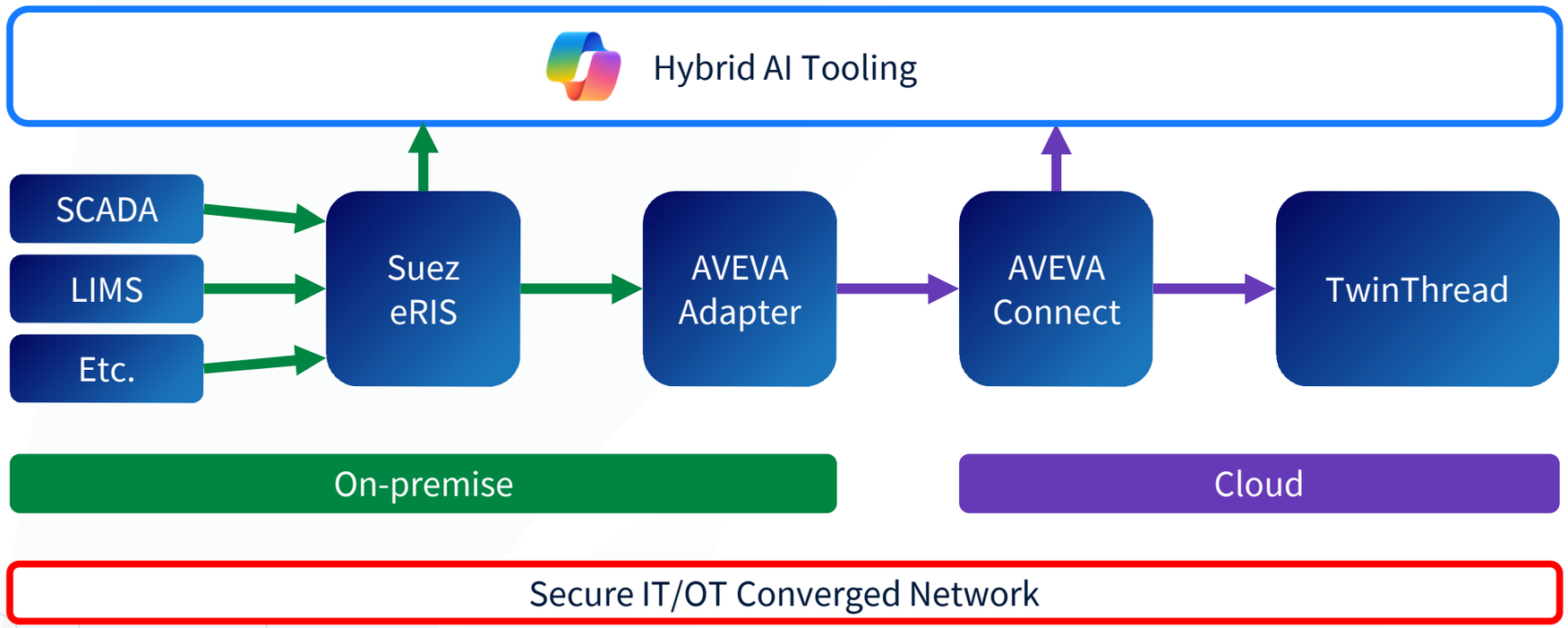
Aeration Basin Optimization Pilot

- Viable model produced with promising theoretical performance
- Next step would be testing recommended setpoints in operations
- Logistics of testing
  - Setpoints would be recommended to operators via dashboards for use during operator hours
  - Operators would log decisions between manual and recommended setpoints and reasoning
  - Near zero risk to operations given the system reaction time

Positioning & Outlook

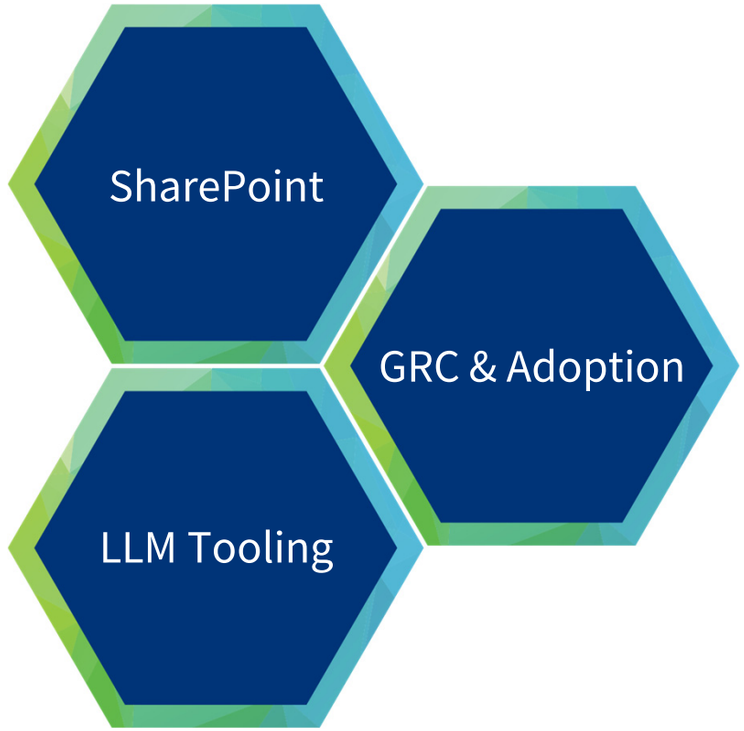
Is a 4 MGD wastewater utility really positioned to explore AI technology implementation?

Data System Architecture



Shared Future Outlook

- Knowledge capture and transfer to cut technical debt
  - Reduces risk of staff departures
  - Accelerates training efforts
- Time series analytics
  - Predictive maintenance
  - Anomaly detection
- Optimization projects
  - Chemical cost reduction
  - Power cost reduction
  - Operations KPIs



Thank You

An EA & CAWD Collaboration