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A Journey to OT-IT Convergence Part 1: Defining the Need

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AGENDA

- Intro to BWWB
- Results
- The Need
- The Process
- The Solution
- Summary
- Questions

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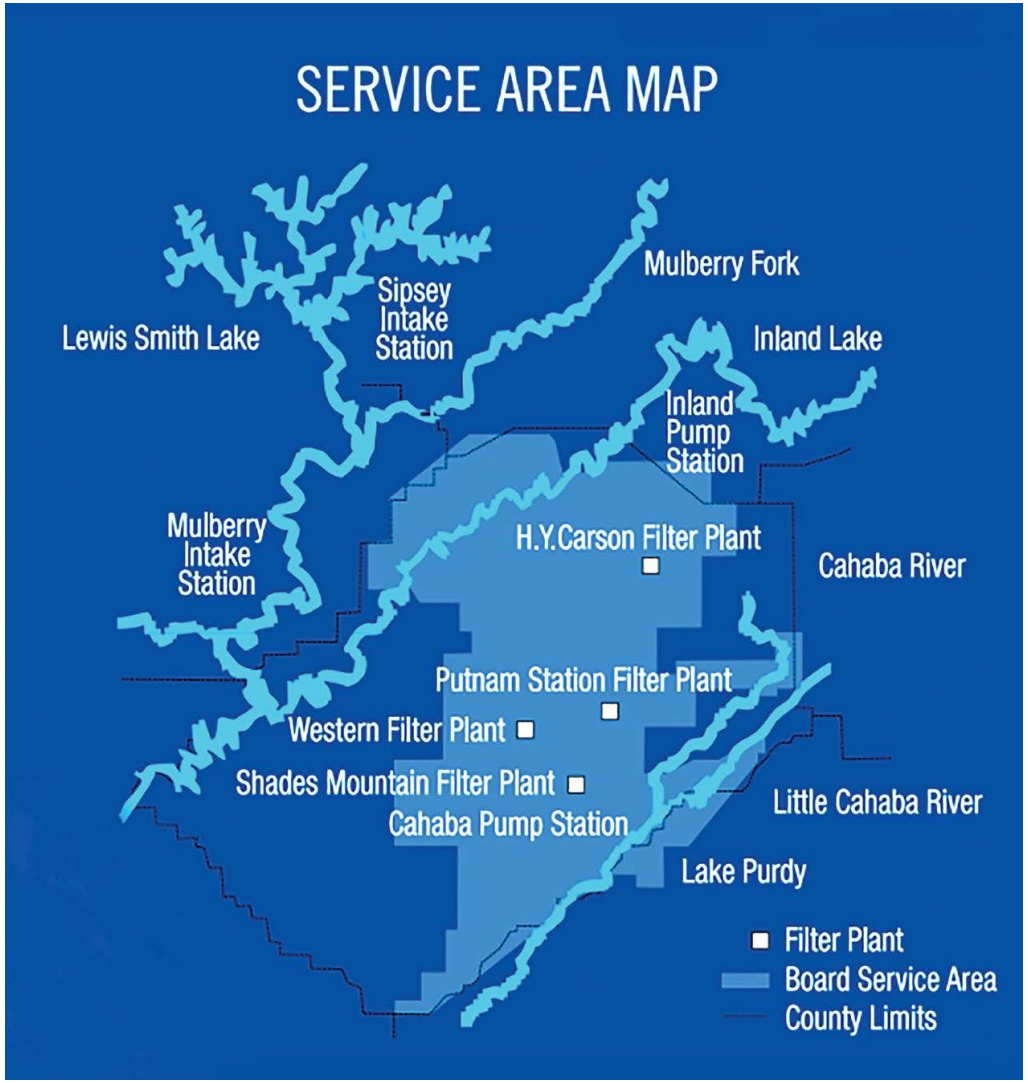
Birmingham Water Works Board



BWWB serves high-quality drinking water to more than 600,000 people in the City of Birmingham and five counties. We are the largest water system in Alabama and our focus has always been on providing the best water service to our customers at an affordable price.

- 4 Filter Plants
- 5 Raw Water Pumping Stations
- 1 Central Operations Center
- 200 Remote distribution, pressure, pumping, tanks

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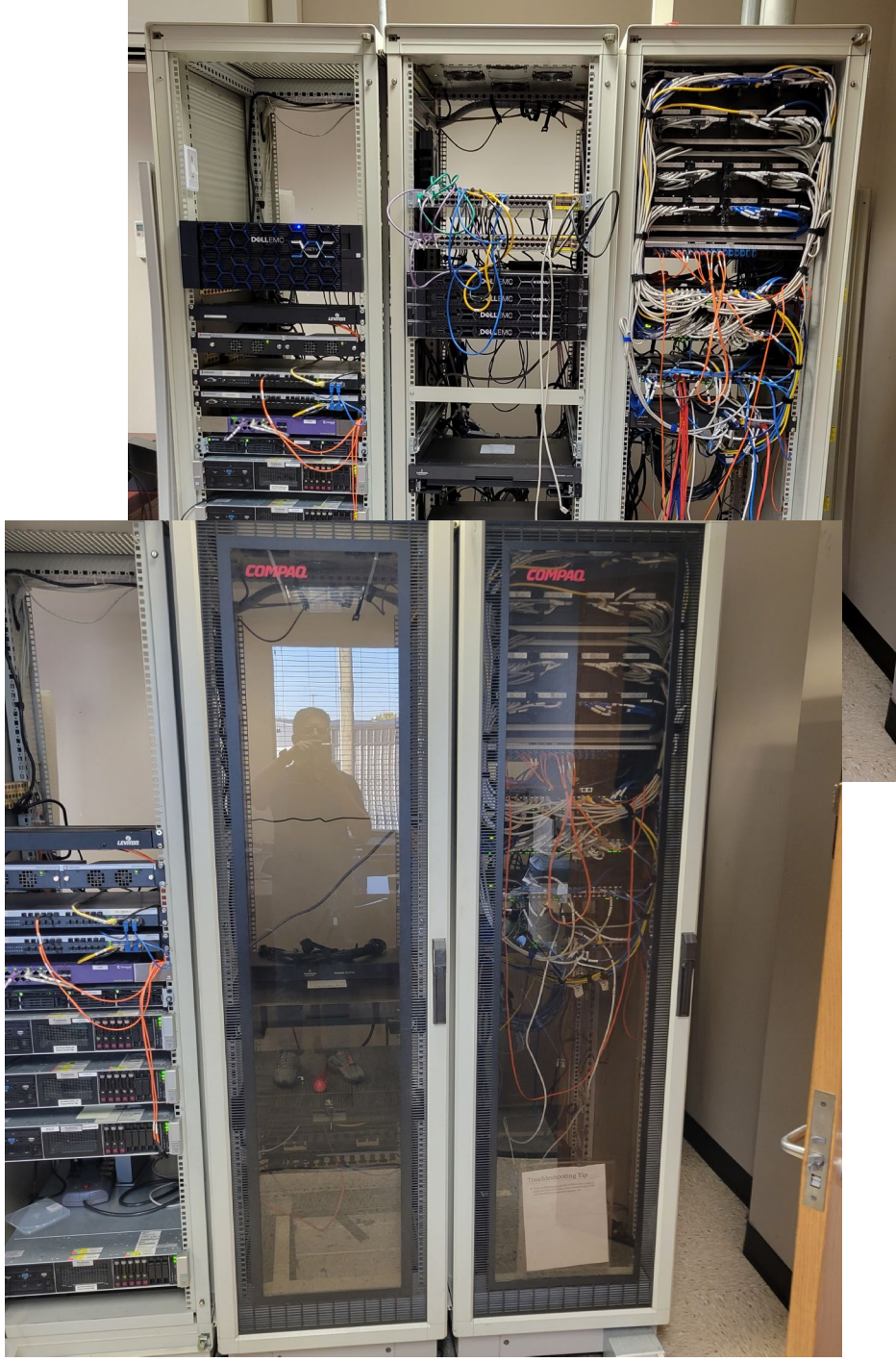
Results

OT and IT Working Together

- Clear understanding of Cyber Risks and Current Equipment Inventory
- Opening Channels of Communication and Partnership
- Standardization using Existing IT hardware, vendors, relationships
- Shared Tools
- More Resilient IT and OT network
- Equipment consolidation



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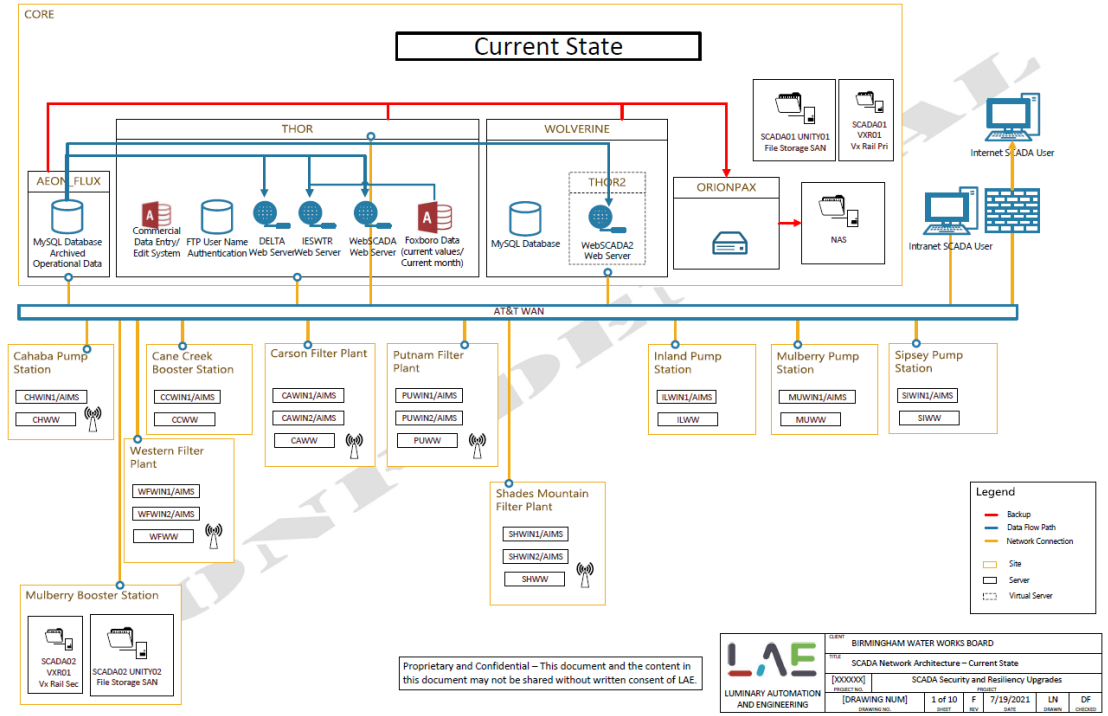
The N

Foxboro
SHDVH1
Use Restore Media with Foxboro P/N K0177SB
Foxboro
SHDVH2
Use Restore Media with Foxboro P/N K0177BB
SHADES
BUFFALO
151.128.81.1
151.128.81.2

The Need

The usual suspects of a 25-year-old system (What makes Trey's life difficult)

- Original Systems installed in the mid '90s
  - Foxboro DCS – updated through the years
  - Spread Spectrum Radios - original
  - Modicon and Allen Bradley PLC's - original
  - Homegrown reporting and web screens
- general lack of documentation of the OT environment
- Little interaction between IT and OT. OT left to be self-sufficient
- Resource turnover / unfilled openings
- Need for streamlined
- MFA logins consolidation
- cybersecurity,



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A Day in the life of SCADA - Firefighting

Manual Activities, Data Errors, Intermittent Problems

- Looking for errors before they become a problem
- Manual Data Manipulation/reporting
- Responding to calls
- Addressing problems
- No time to maintain/improve
- Short Staffed
- Opportunities being missed
  - cost savings
  - knowledge transfer
  - workforce development
  - General system upkeep

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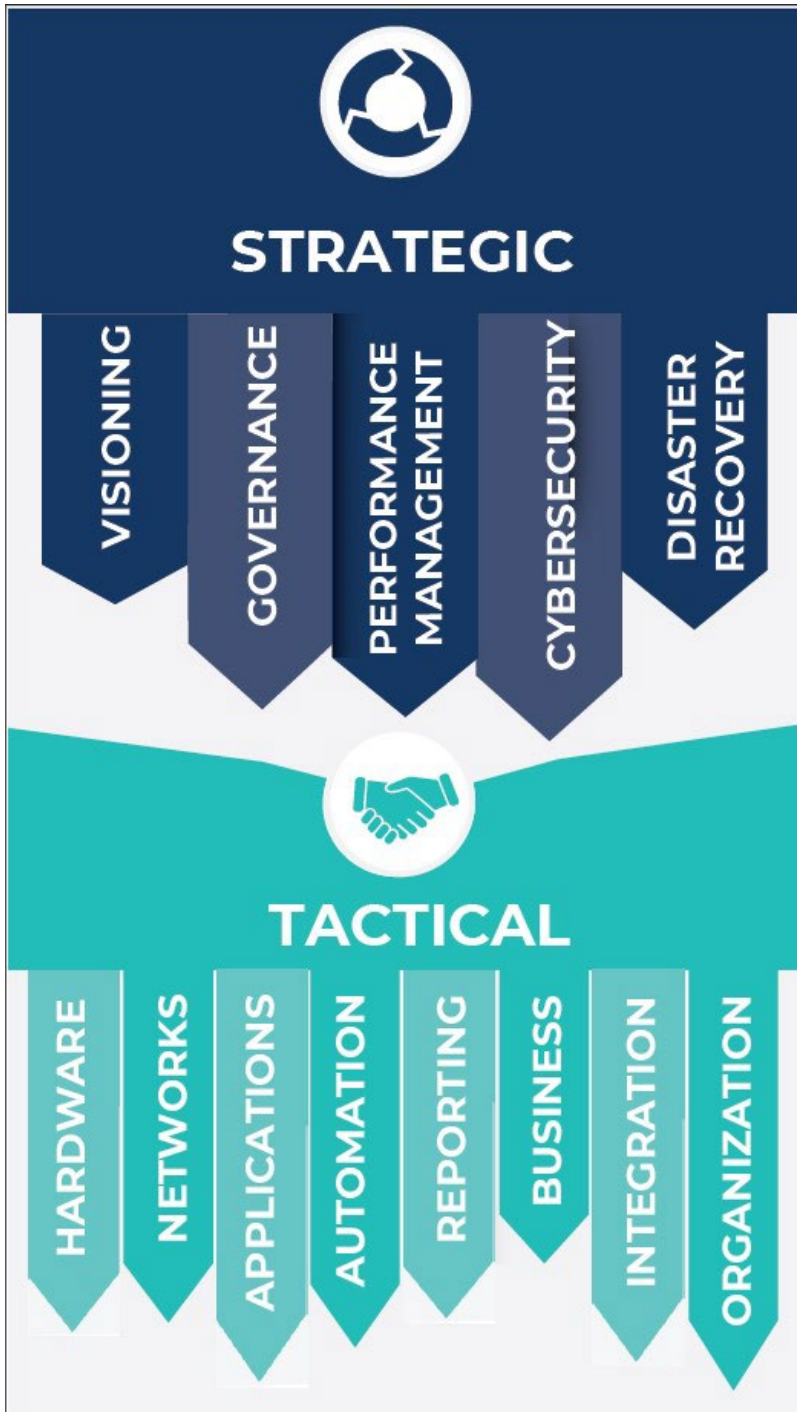
The Process

A Proven, Repeatable Methodology

- Utility Operations Framework
- Assess each of the critical areas
- Identify the current state
- Discuss best practices
- Determine future state
- Map paths to close the gaps
- Follow standards
- Report out Transparently



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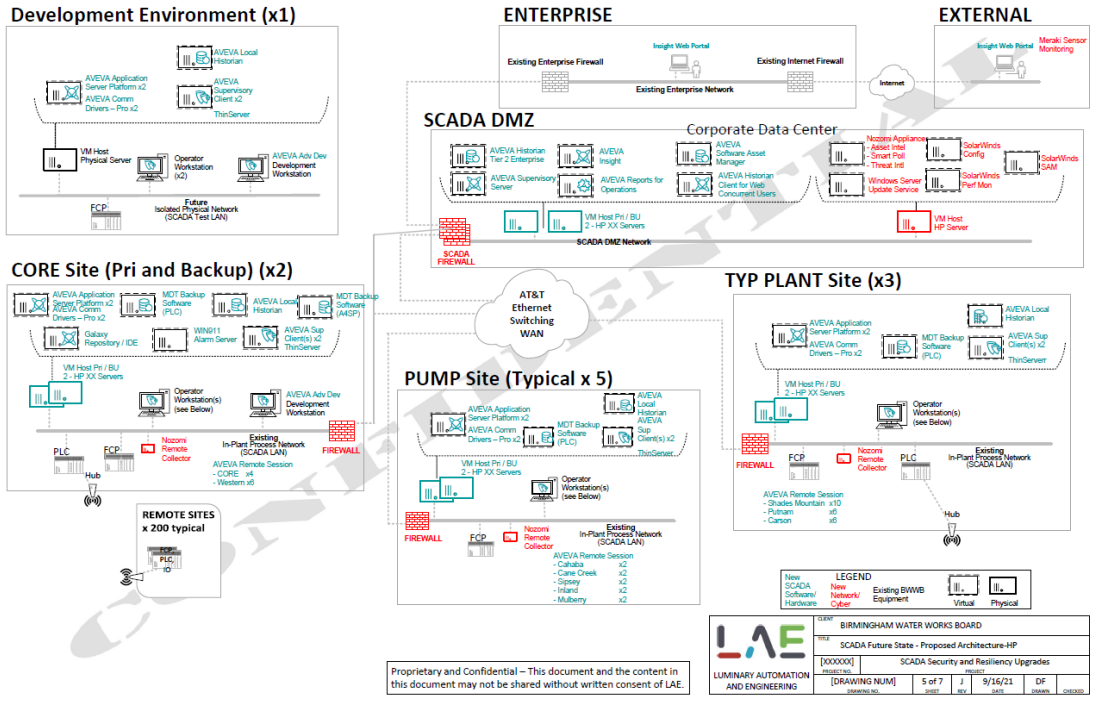
The Solution

Optimize, Consolidate, Upgrade, Improve



- AVEVA Solution Stack
- Segregated Network
- Common hardware software
  - Juniper, Palo Alto, VMWare, HP, Virus Protection
- Network Monitoring
  - Nozomi, SolarWinds, RADUIS
- Integrate IT/OT Active Directory
- MFA for Operators
- Policies Procedures
- SandBox

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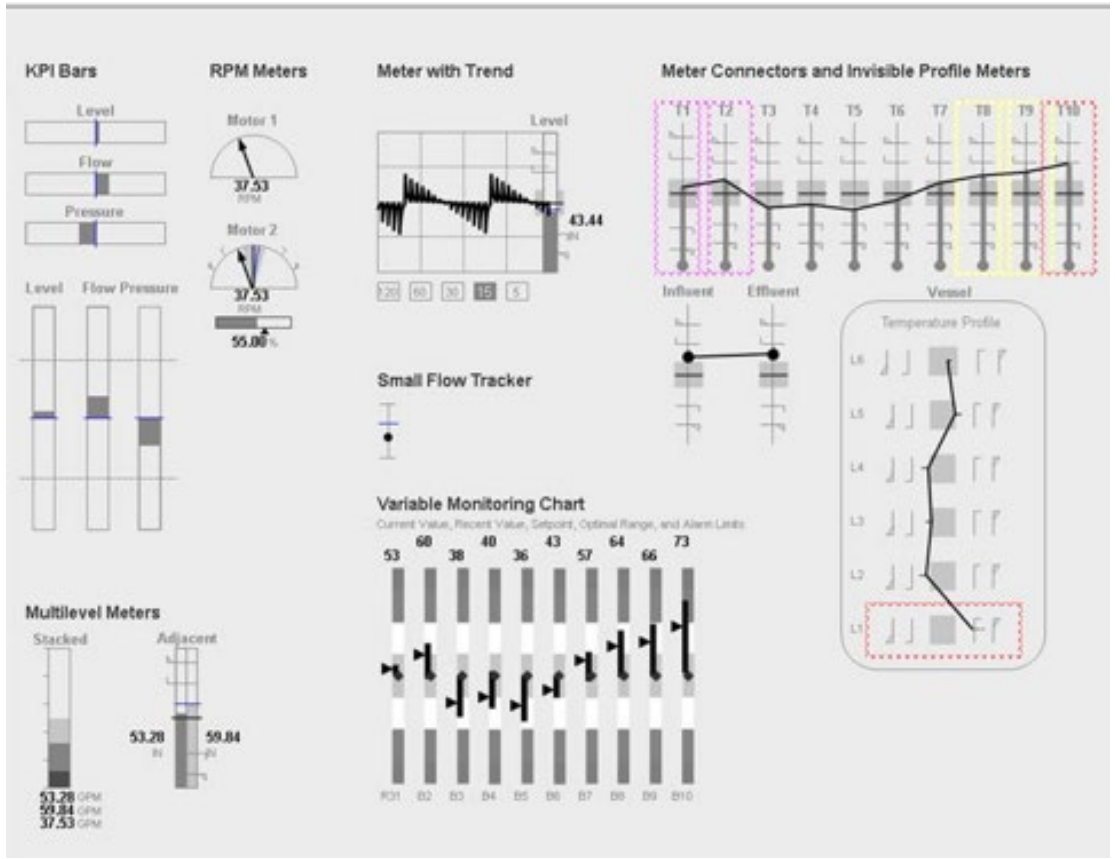
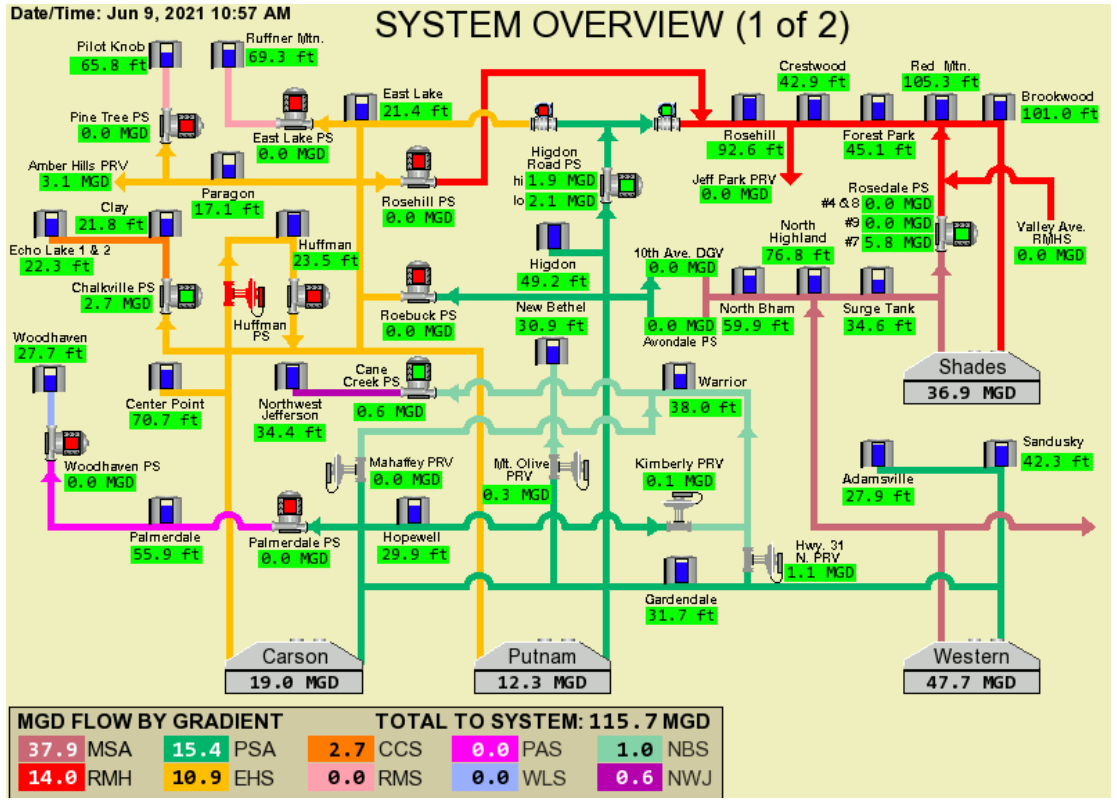
The Solution

Operator Adoption of Situationally Aware Graphics





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The Solution Stack

Optimize, Consolidate, Upgrade, Improve

AVEVA Solution Stack

- System Platform
  - Application Server
  - IDE
  - Supervisory Server / Client
  - Local Historians
- Tier 2 Historian and Web Client
- Anywhere Connect
- Insight
- Reports for Operations
- Software Asset Manager

Partner Products

- VM Ware
- WSUS
- MDT for System Platform
- Win 911
- Schneider / Foxboro DCS
- Modicon PLCs

Other

- Nozomi Guardians and CMC
- SolarWinds PM, CM, SAM
- Cisco Endpoint

Hardware

- HP Servers
- Juniper Switches
- Palo Alto Firewalls

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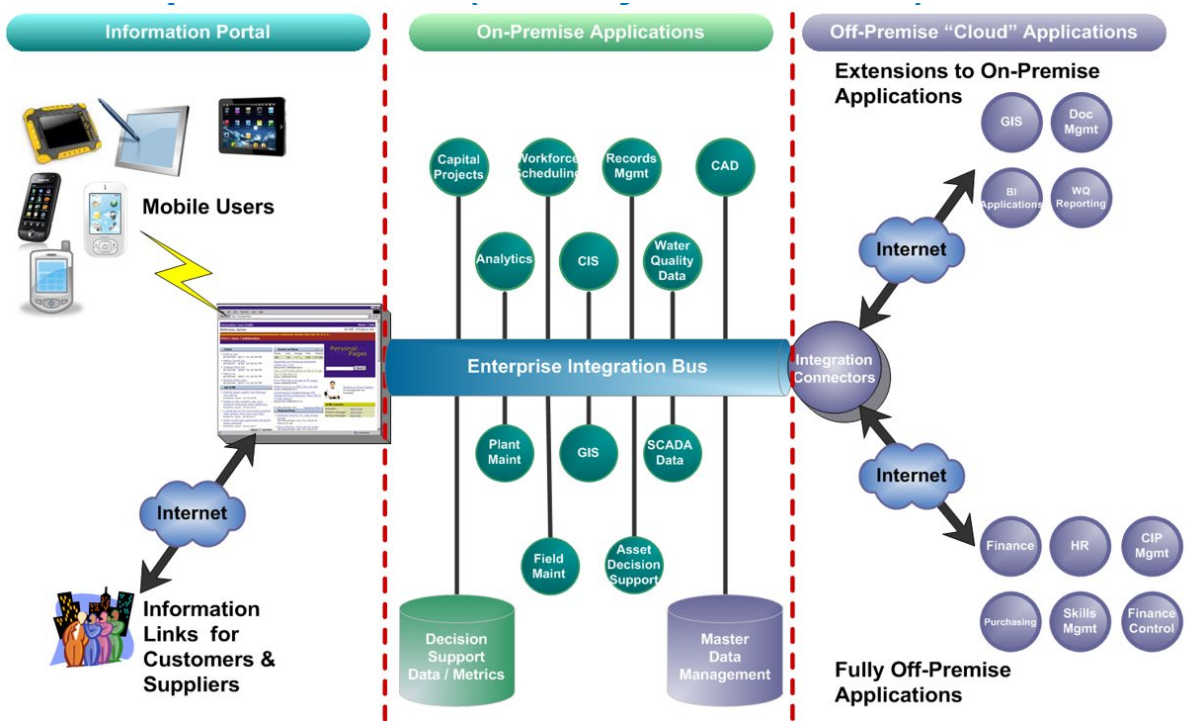
Summary

SCADA is the Foundation for the Future



- OT-IT-ET integration
  - OT is a foundational data element
  - IT is a partner
  - Other Opportunities
    - GIS Integration
    - Mobile Workforce
    - CMMS Integration
    - Energy Management
- Secured Solution
- Mechanisms for a Perpetually Updated System

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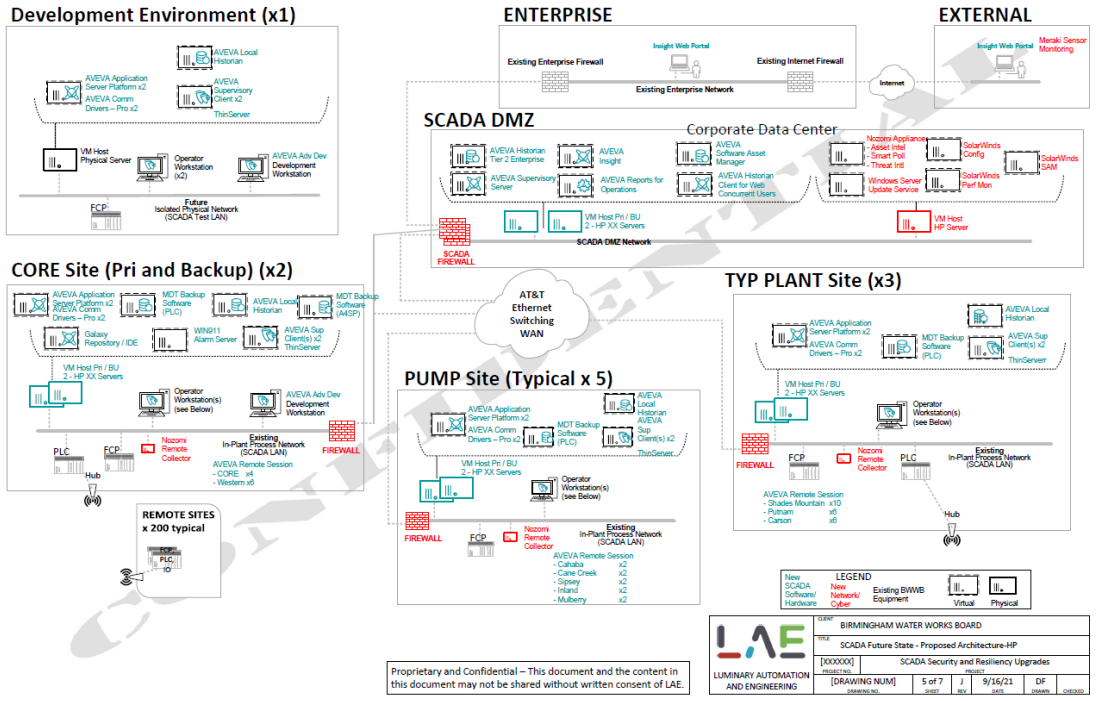
The Future – Part 2

Implementation in coming months



- Situational Aware Graphics
  - Engaging the operations users to build a style guide
- Upgrade the Remote Sites
  - Standardize equipment
  - Migrate to mobile broadband
- Consolidate IT and OT equipment at sites
- Implement a Comprehensive CyberSecurity Solution
- Automate what can be Automated for day-to-day network and system management
- ET Integration
- Manage by Exception

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Questions?

Please wait for the microphone.

State your name and company.

Please remember to…

Navigate to this session in the mobile app to complete the survey.

Thank you!

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ABOUT AVEVA

AVEVA is a global leader in industrial software, sparking ingenuity to drive responsible use of the world's resources. The company's secure industrial cloud platform and applications enable businesses to harness the power of their information and improve collaboration with customers, suppliers and partners.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. With operations around the globe, we are headquartered in Cambridge, UK and listed on the London Stock Exchange's FTSE 100.

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