

WEDNESDAY NOVEMBER 16

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# Water & Wastewater Customer Panel

Accelerating resiliency and sustainability with digital transformation

Gary Wong | Industry Principal Cities & Infrastructure

**AVEVA**

A photograph of a water treatment facility at sunset. The sky is a mix of purple, blue, and orange. A bright light source, likely the sun or a lamp, is visible in the center of the sky. In the foreground, there are several rectangular concrete basins with water cascading over their edges. In the background, there are industrial buildings and structures. A large, semi-transparent purple rectangle is overlaid on the center of the image, containing white text.

How a holistic approach to digital transformation enables resilient and sustainable management of water throughout its lifecycle. And how modernizing aging infrastructure and integrating people, place, process, with technology such as cloud/SaaS, will allow water operators to continually meet the expectations of communities, government, and industry.

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# Customer Panel

16:00 – 17:00



**Devin Doring**

Technical Services Supervisor  
City of Salem



**Jan Kooy**

Director, Engineering  
California Water Service



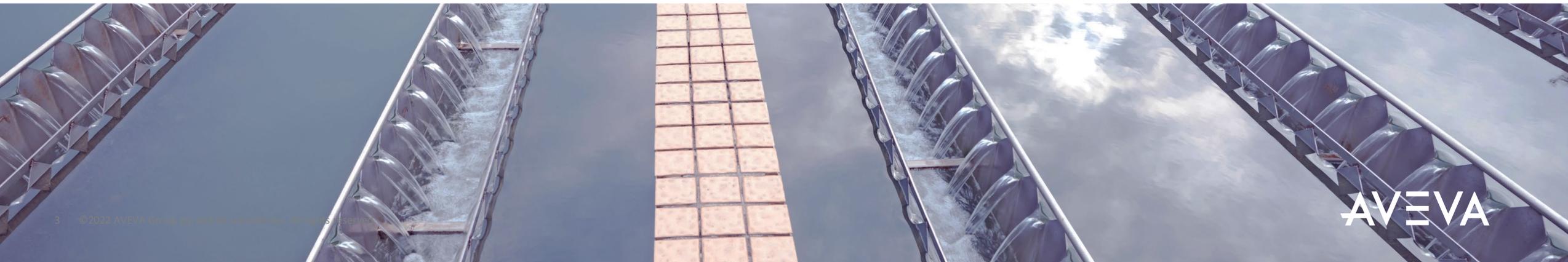
**Alain Dedieu**

Water & Wastewater Segment President  
Schneider Electric



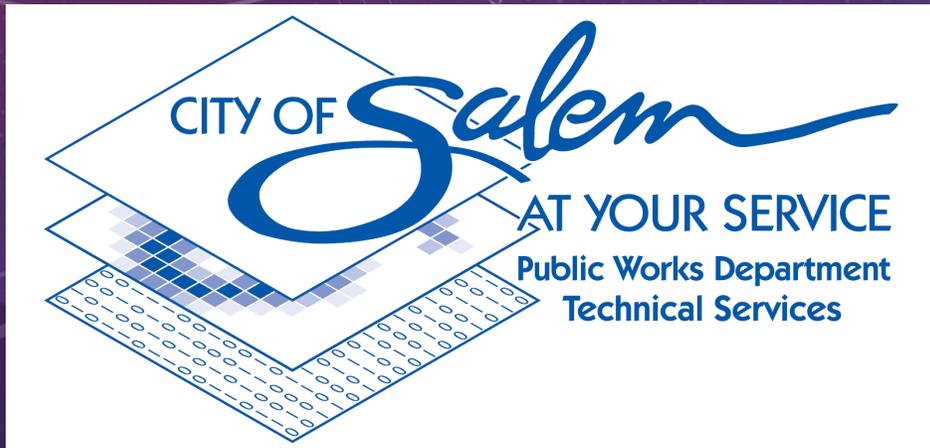
**Gary Wong**

Industry Principal, Water & Cities  
AVEVA



# WHY CLOUD IS CRITICAL TO OPERATIONS

DEVIN DORING, TECHNICAL SERVICES SUPERVISOR



# CITY OF SALEM



# WHY CLOUD IS CRITICAL TO OPERATIONS



Provide data accessibility and interoperability without compromising network security

The AVEVA PI System acts as a foundation for numerous data sources

Implement AVEVA Data Hub

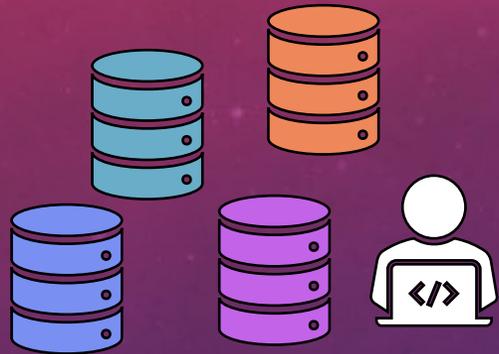
Low cost SAAS

Able to share to anyone securely

Common platform

# DATA ACCESSIBILITY

THE SITUATION.....EVERYWHERE



Inside

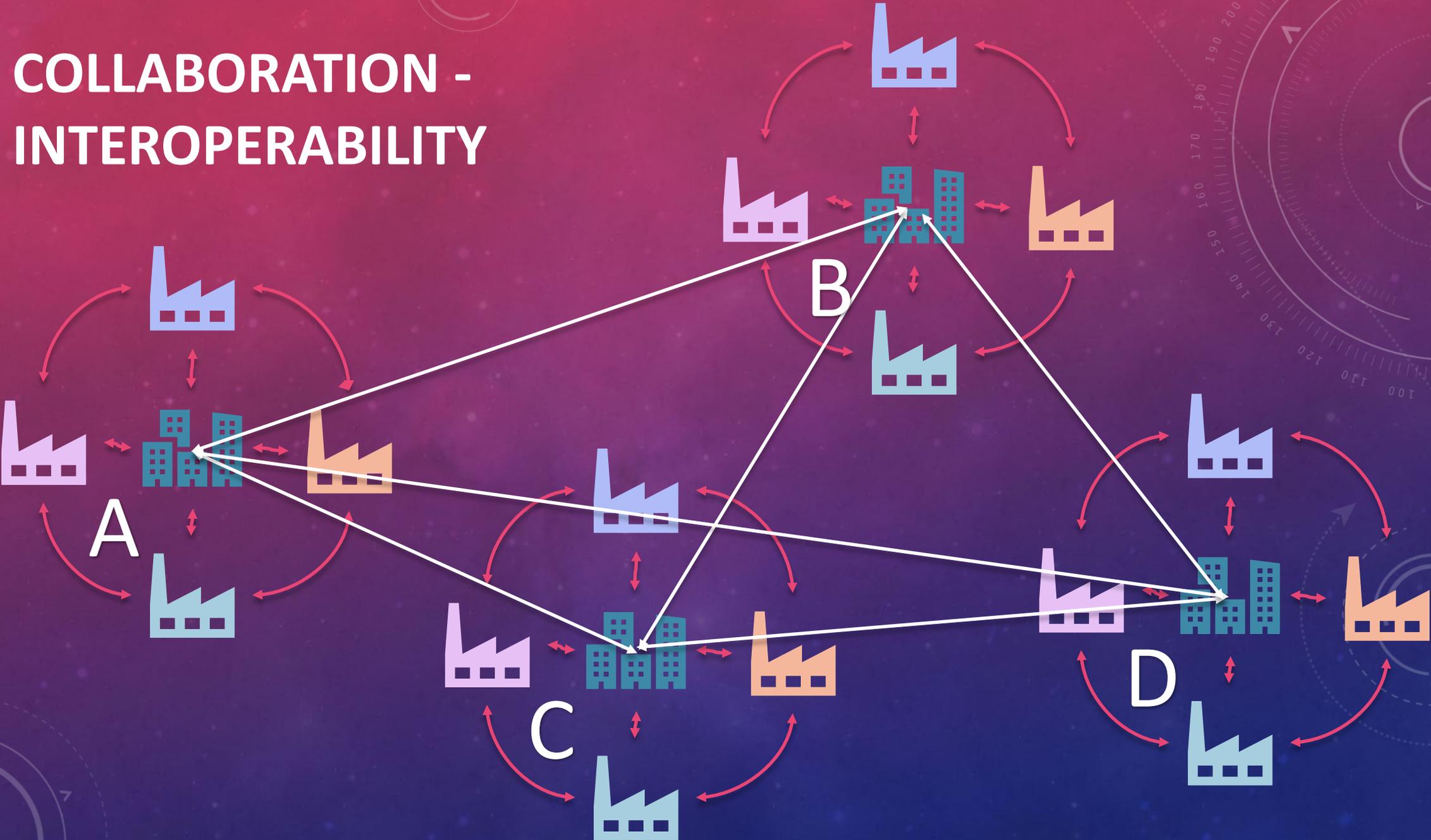
AVEVA Data Hub



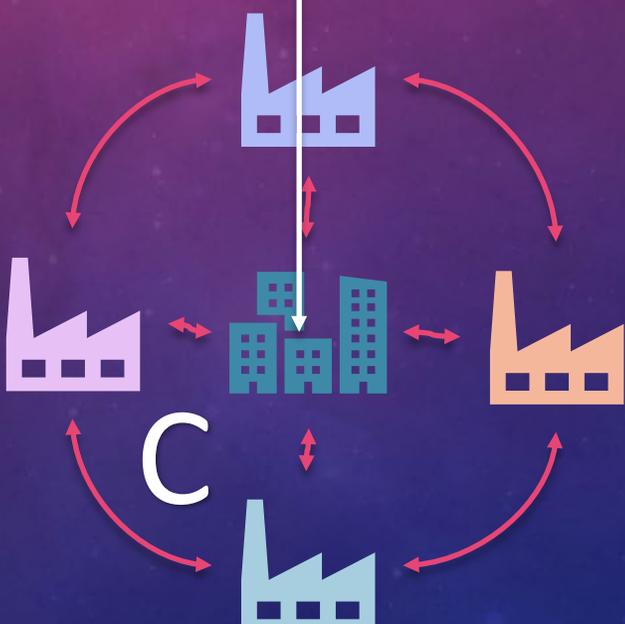
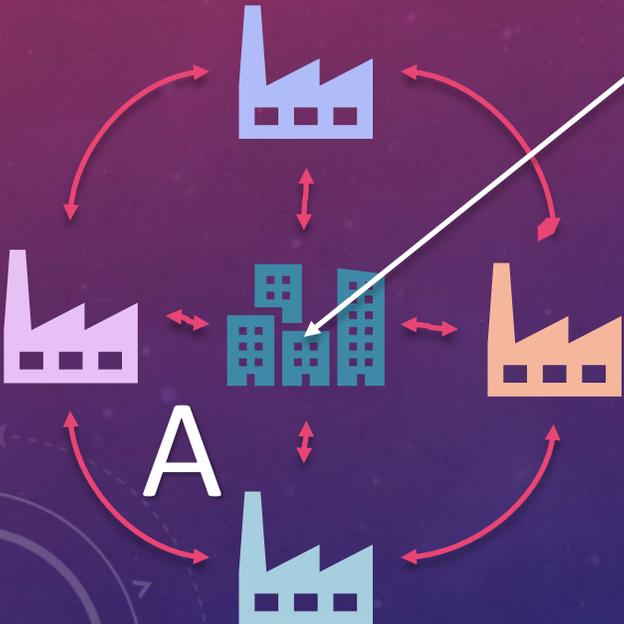
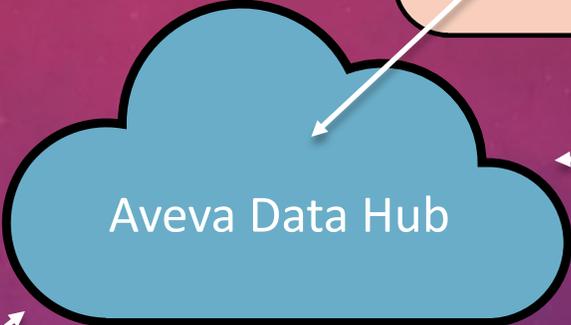
Outside

Corporate IT Firewall Chasm

# COLLABORATION - INTEROPERABILITY



# COLLABORATION - INTEROPERABILITY



Salem Water Quality - Cyanobacteria

Selectors

Select a Date Range

Predefined [Calendar](#)

All Dates

Today

This Week

Last Week

This Month

Last Month

This Quarter

This Year

Last Year

[Reset](#)

Select a Site Code

- All
- BCR
- PK
- MI
- HT
- LB
- BO
- LBS
- LBP
- BB
- HA
- DL
- 3W
- 4E
- 4W

Algae Speciation

- Area Counted Total: 160.49  
Density Cells per mL: 4,723  
Date: 8/12/2021  
Site Code: BCR
- Area Counted Total: 1.71  
Density Cells per mL: 2,968  
Date: 8/12/2021  
Site Code: BCR
- Area Counted Total: 158.79  
Density Cells per mL: 1,755  
Date: 8/12/2021  
Site Code: BCR
- Area Counted Total: 1.53  
Density Cells per mL: 5,859  
Date: 8/12/2021  
Site Code: PK
- Area Counted Total: 1.53  
Density Cells per mL: 5,859  
Date: 8/12/2021  
Site Code: PK
- Area Counted Total: 1.02  
Density Cells per mL: 61  
Date: 8/12/2021  
Site Code: MI
- Area Counted Total: 2.05  
Density Cells per mL: 5,336  
Date: 8/12/2021  
Site Code: MI
- Area Counted Total: 1.02  
Density Cells per mL: 5,274  
Date: 8/12/2021  
Site Code: MI
- Area Counted Total: 3.49

Cyanobacteria

Selected Records

2.3k

Total Records: 2.3k

Cyanobacteria

Area Counted Total

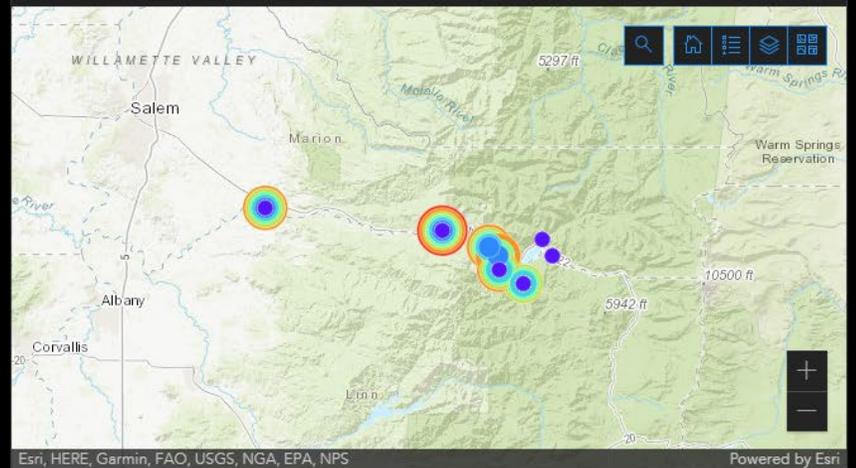


Cyanobacteria

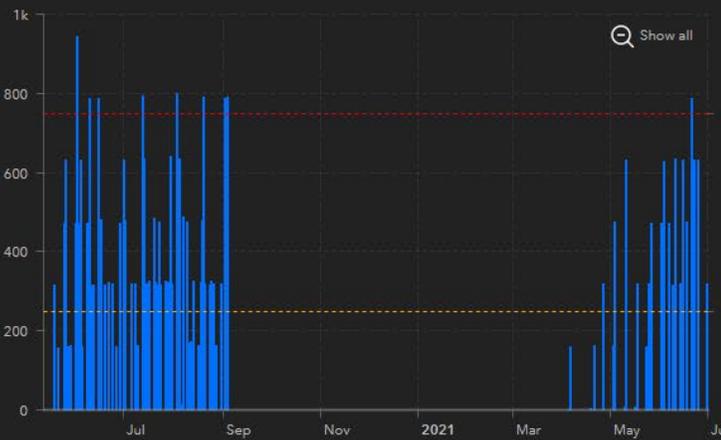
Density Cells per mL



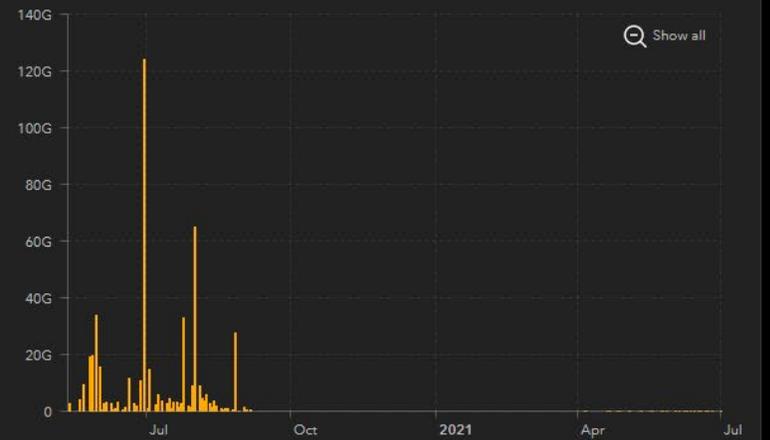
Cyanobacteria - Area Counted Total



Cyanobacteria - Area Count Total



Cyanobacteria - Density Cells per mL





# Harmful Algal Bloom Forecasting System

## Detroit Lake, Oregon

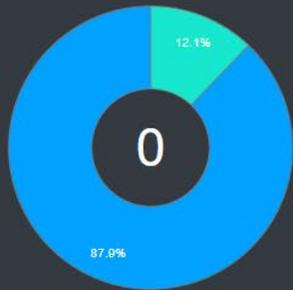
Last update: 10/31/2022

CyAN Weather Streamgauge Water sample Blog

CyAN Risk Forecast

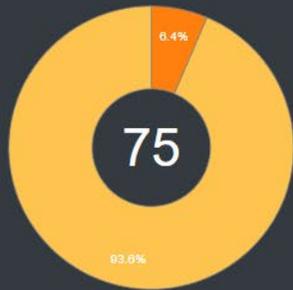
### Historical forecast

10/22-10/28



### Current forecast

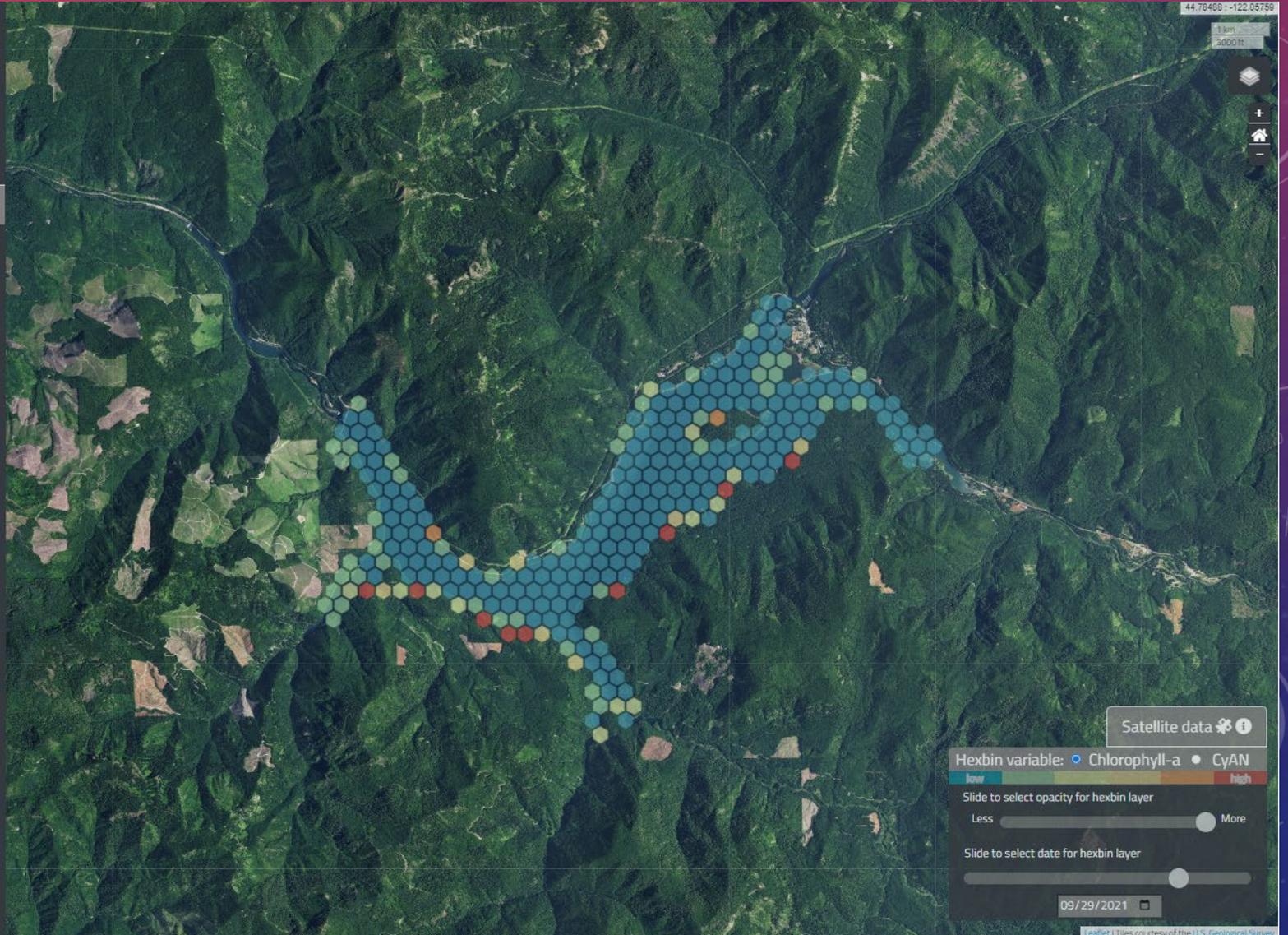
10/29-11/4



### HAB Season



Click on the blue line to explore previous predictions



Site

- Detroit Lake
- Geren Island

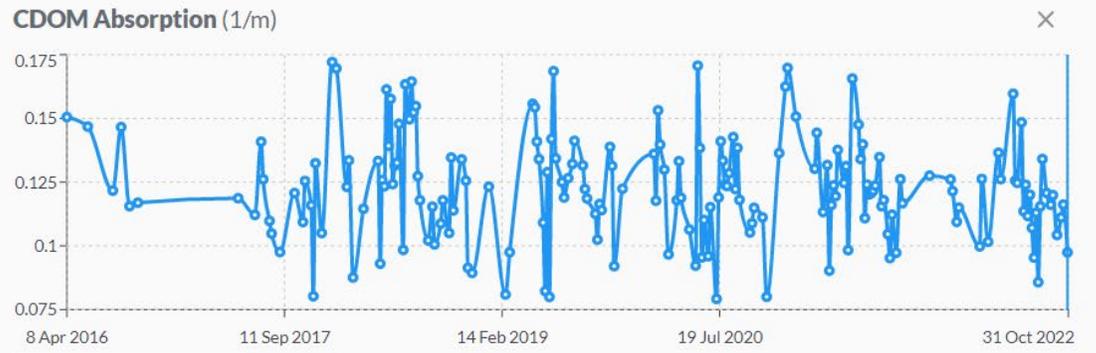
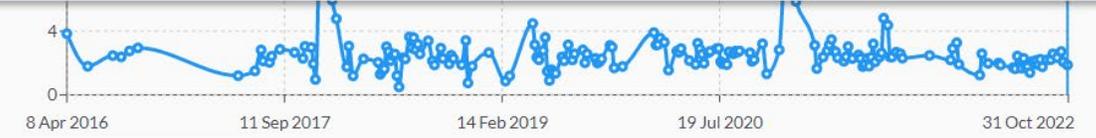
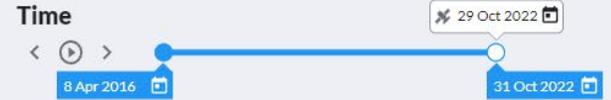
Data layer

- Turbidity
- Cyanobacteria Index
- Chlorophyll-a
- Suspended Matter
- CDOM Absorption
- Satellite Image

Location



Time



# NEXT STEPS

- Share more data
- More Partner Collaboration

THANK YOU!

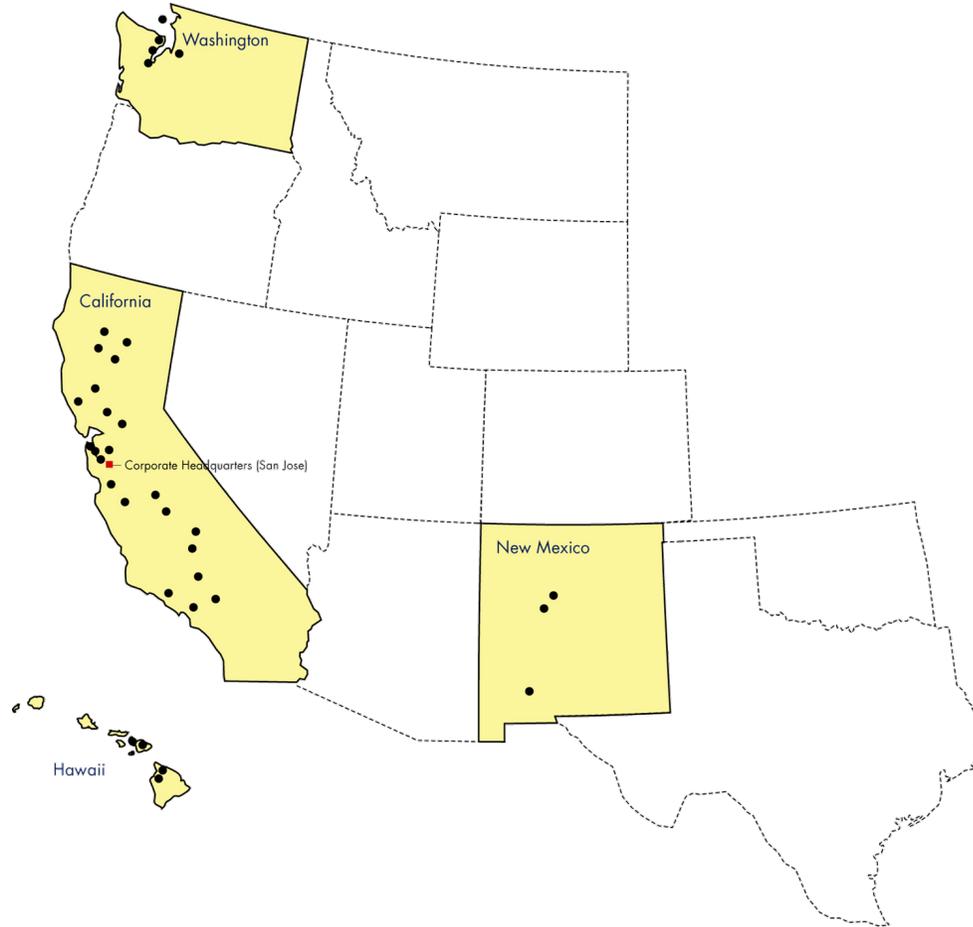
# California Water Service Group



## Energy Management and Analytics

Quality. Service. Value.®

# California Water Service



- Established 1926
- Operations in 4 States
- Partners in Texas
- Serve approximately 2M people in California
- 23 Districts in California

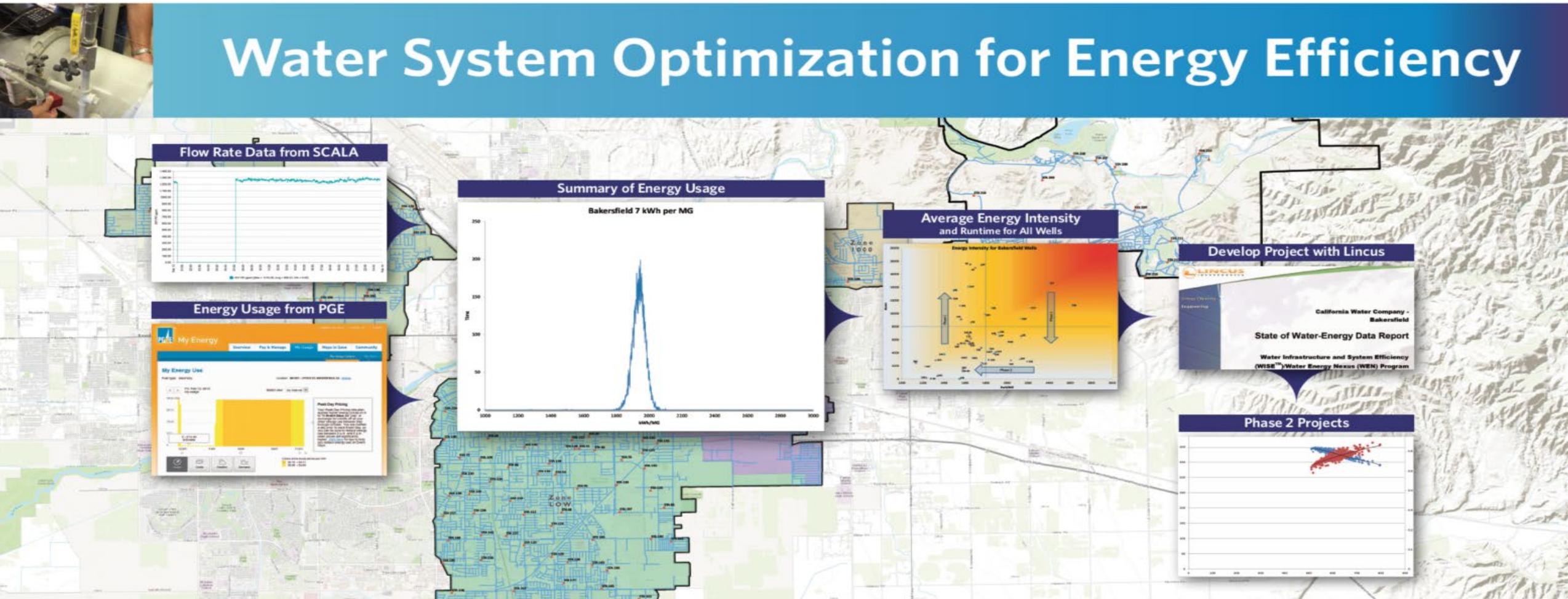




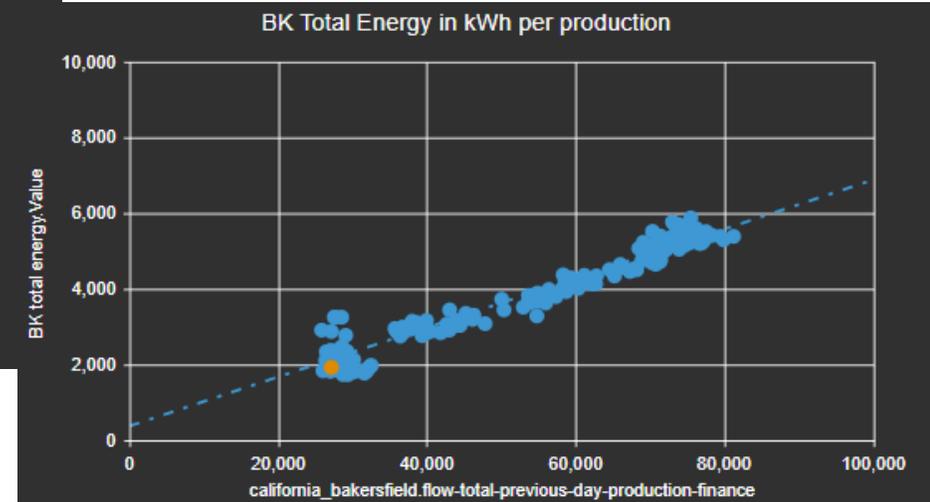
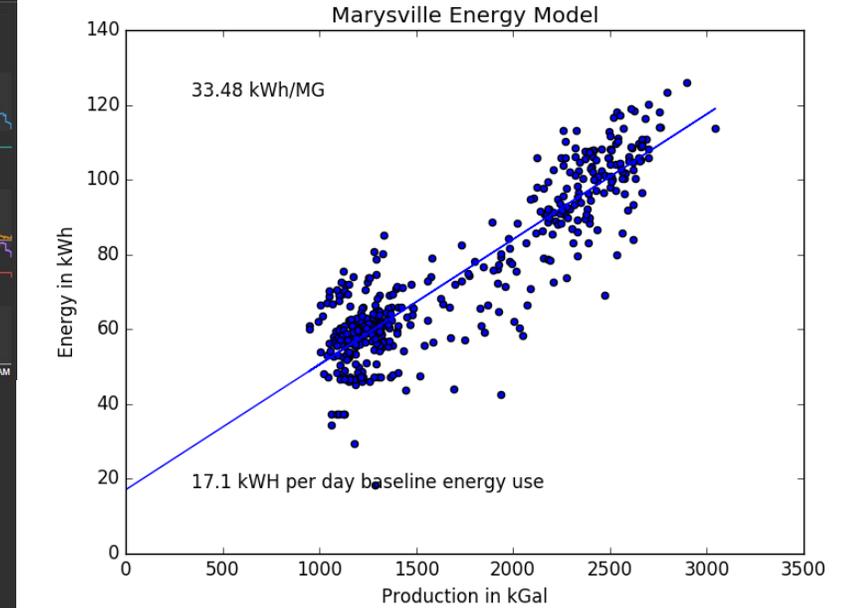
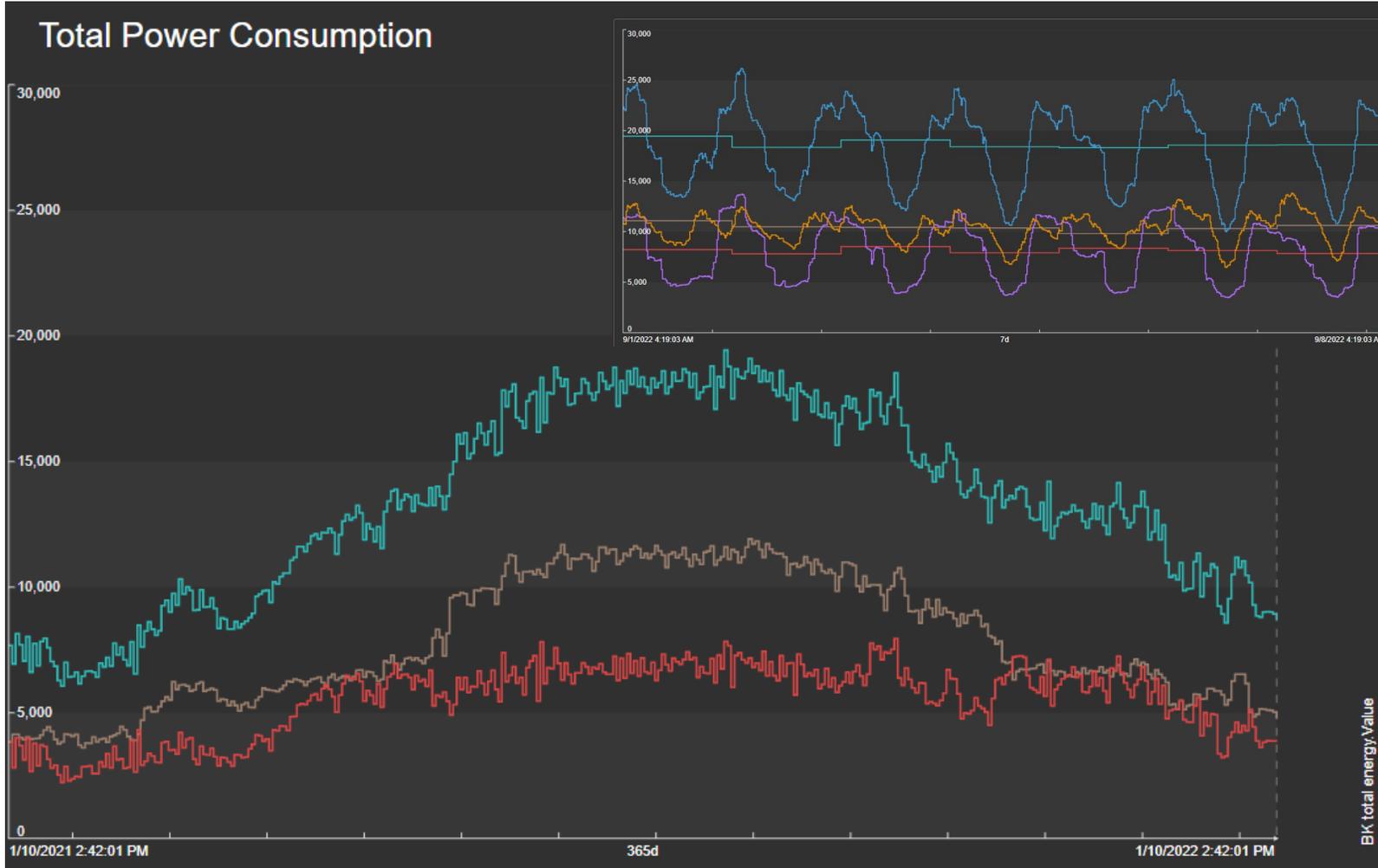
# Original Vision

Quality. Service. Value.

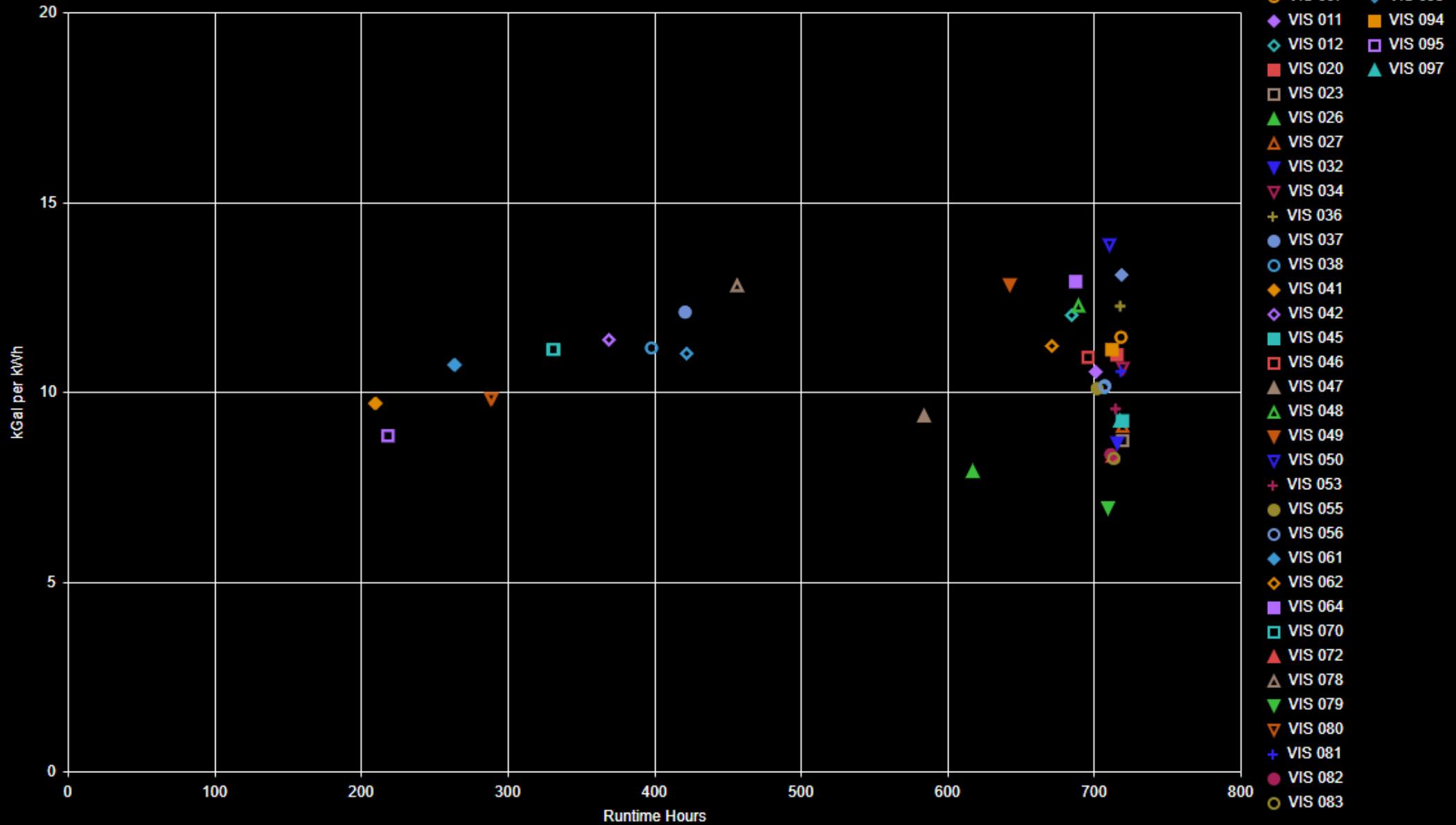
## Water System Optimization for Energy Efficiency



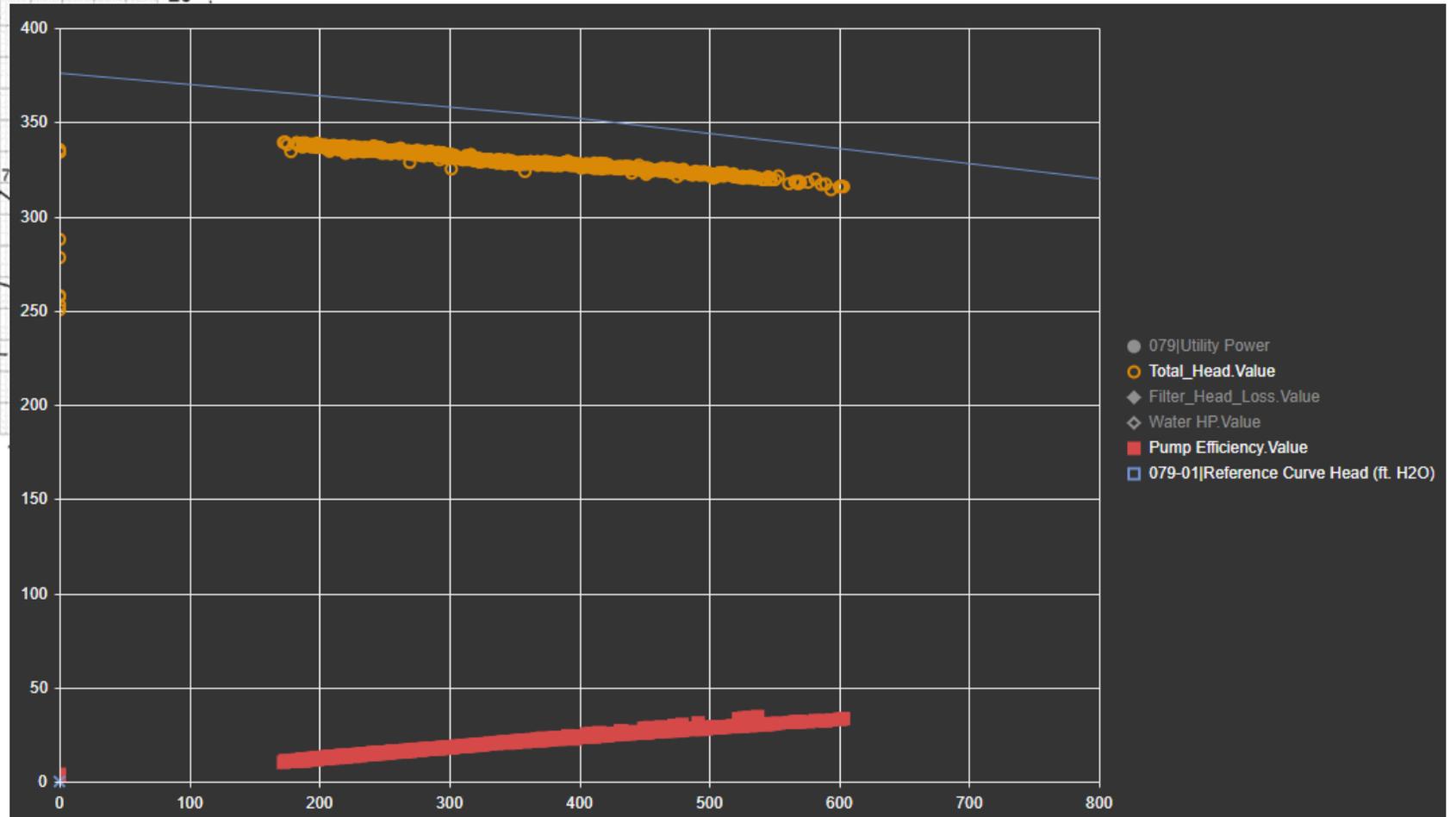
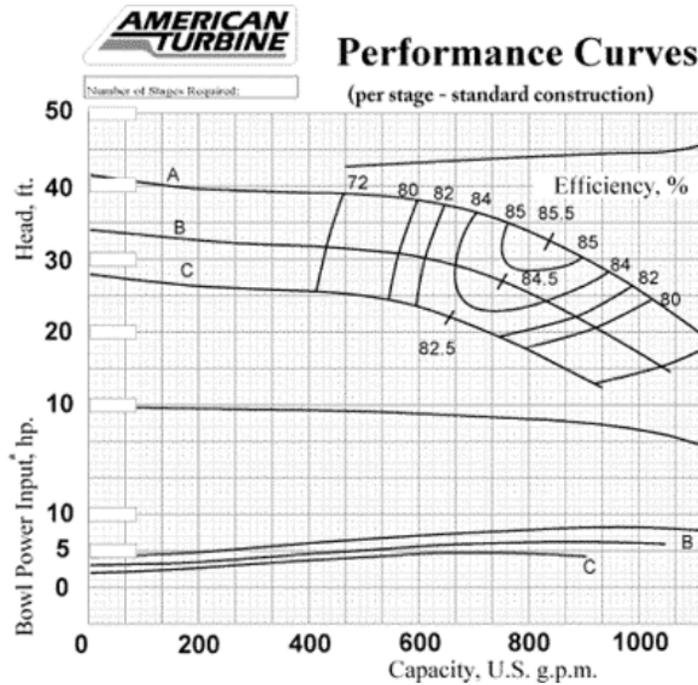
# Energy Analytics



Visalia Monthly Delivery Factor vs Runtime



# Pump Curves



# Next Steps

- Complete Energy Management System
- Better operations management
- Behavior change





# The power of partnerships

Alain Dedieu

# Sustainable and resilient water is critical for human health, environment and economy

## UN's Sustainable Development Goals across the water cycle



Scarcity

Optimization of irrigation uses  
Management of hydrographic basins  
Desalination



SDG9



SDG6



SDG11

Circularity

Zero-emission industry  
Reuse of wastewater

CO2 footprint

Optimization of high consumption of water  
Renewable sources and energy efficiency

Asset Efficiency

Advanced asset management  
Investment prioritization

Resilience

Smart working  
Flood control  
Cybersecurity

# Digital Transformation for Sustainability and Resilience in water management

## Management

Sharing and integration of data  
Process management  
Predictive and remote maintenance

## Asset

Optimization of existing assets  
Data-driven models  
Analytics and predictive management



## People

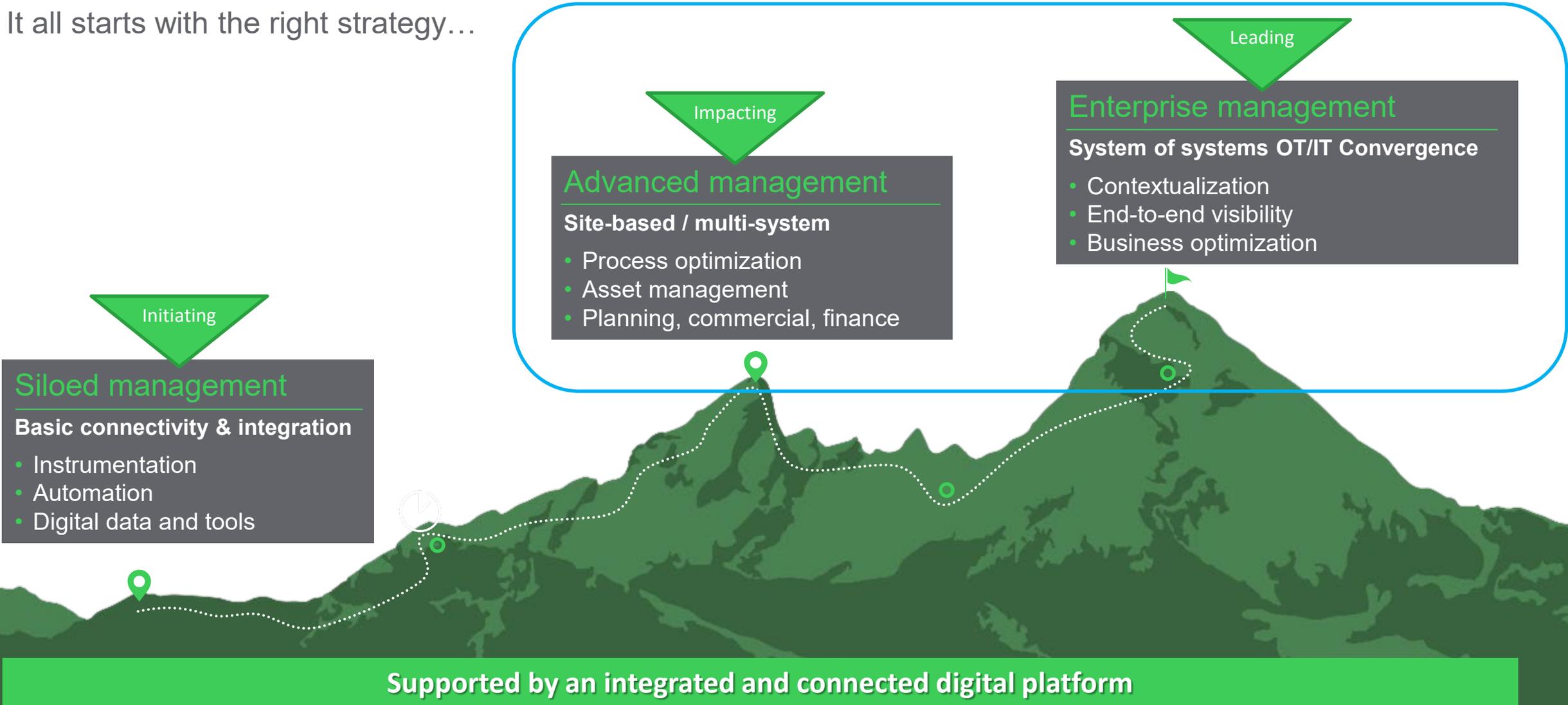
Workforce empowerment  
Culture of innovation  
Remote work  
Corporate image improvement  
Customer experience

## Resources

Reduction of network losses  
Analytics based on energy management

# Partnering with our customers in their Digital Transformation journey

It all starts with the right strategy...



# Unified Operations Center for Water and Wastewater



- Manage geographically dispersed operations
- Manage Maintenance by anticipating anomalies and improving processes
- Optimize the management of energy, chemicals, safety, resilience, cost reduction
- Prevent failures, reduce water losses and ensure water quality and compliance
- Standardize KPIs and improve visibility to make appropriate decisions



Life Is On



# Customer Panel

16:00 – 17:00



**Devin Doring**

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City of Salem



**Jan Kooy**

Director, Engineering  
California Water Service



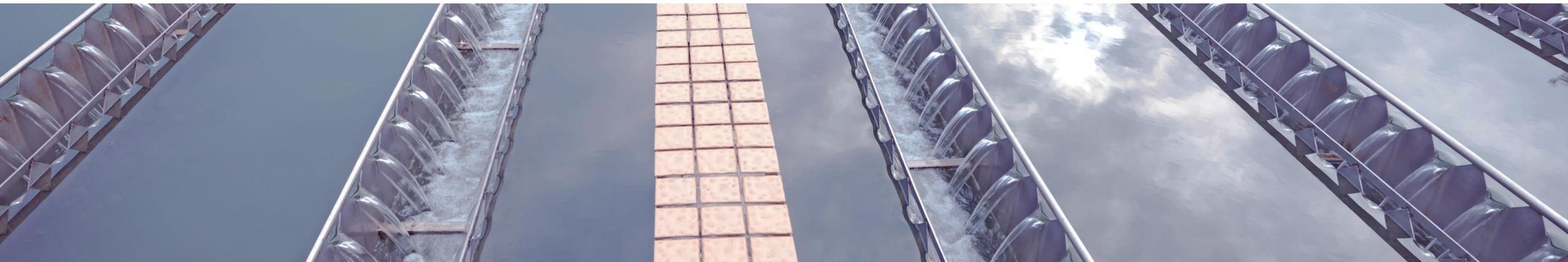
**Alain Dedieu**

Water & Wastewater Segment President  
Schneider Electric



**Gary Wong**

Industry Principal, Water & Cities  
AVEVA



# 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!



PI System Calculation Engine

- Replace PI ACE with established product
- Run custom code using PI data
- Visual Studio not required
- View calculation metrics

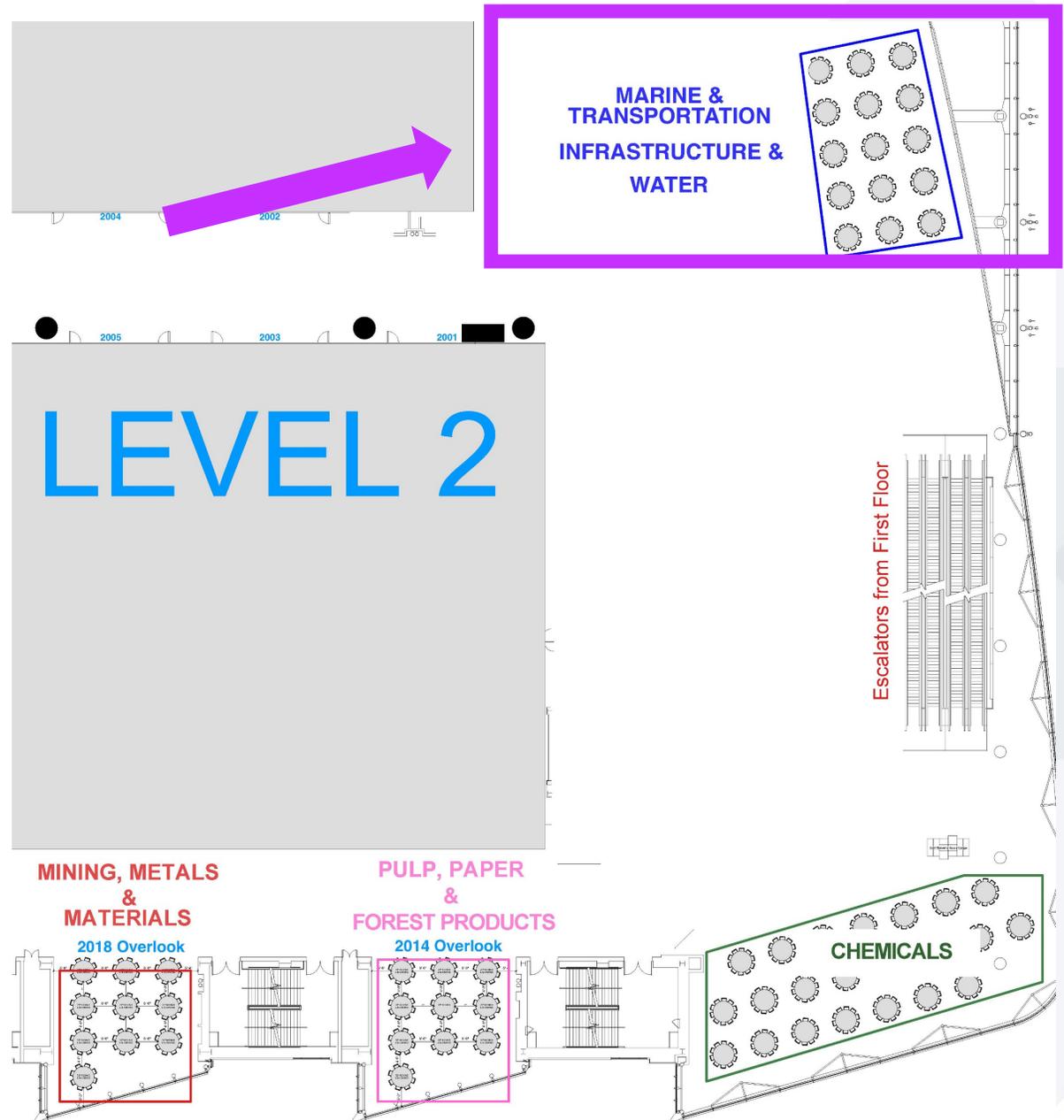
# JOIN US FOR OUR EXPO DINNER EVENT TONIGHT!

5:00 – 7:30 PM

Expo  
Dinner  
Reception

Industry  
Areas

Level 2



# Sustainability impact study

## Join us on this journey

AVEVA and Capgemini are partnering with customers to validate the digital solutions sustainability impact on plant operations.

If your company is interested in a free evaluation of sustainability KPI improvements, go to the expo and **ask about the sustainability study**.

### Expo Booth

- Energy transition & circular economy
- Capgemini (Partner Expo)



### Use cases

- Accelerate low carbon transition with process simulation
- Process and utility optimization
- Increase reliability and efficiency with predictive analytics
- Reduce waste and energy consumption with information and production management

### Metrics

- GHG emissions
- Materials waste
- Energy consumption
- Water consumption

This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by AVEVA to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.