

# NIAGARA SUMMIT 2026

SEAMLESS CONNECTIVITY,  
POWERFUL INTELLIGENCE

**NS**<sub>26</sub>  
CUSTOMERS

**TRIDIUM**

2:00PM – 2:50PM | WEDNESDAY

# ENERGY MANAGEMENT ACROSS LARGE EDUCATION/HEALTHCARE CAMPUSES AND EXTENDED PORTFOLIOS



TRIDIUM

# SPEAKERS



Therese  
Sullivan  
Tridium



Aaron Mason  
Hawkeye  
Energy  
Solutions



Robbie Bauer  
University of  
Illinois  
Urbana-  
Champaign



Jim Meacham  
Altura, LLC



Jared Arwine  
Altura, LLC



Tharanga  
Jayarathne  
TRC  
Company

# University of Illinois

Two large campuses served by



- University of Illinois-Chicago
- University of Illinois-Urbana-Champaign



# Existing Metering System Overview

4,328 Meters



294 Buildings



Data Management

Legacy eDNA

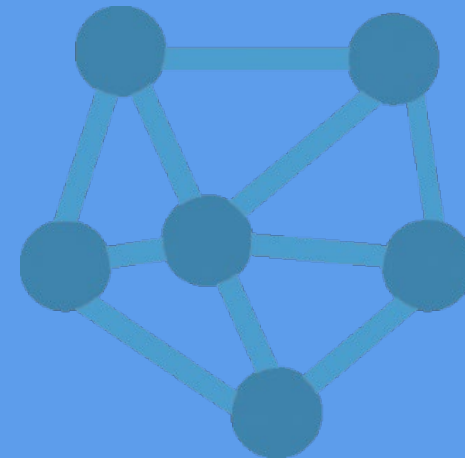
Historian for data management



IT Network

Modbus

BACnet via BAS



# How It Started



- Energy Dashboards
- Legacy Historian Migration
- Diversification From BAS
- Centralized User Interface
- Leverage Framework to Enable Meter Health

# Current State Metering System Overview

4,328 Meters



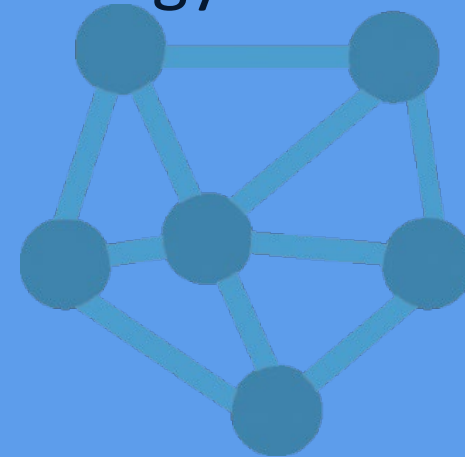
294 Buildings



Centralized Energy  
Management Site  
Migrated to N4

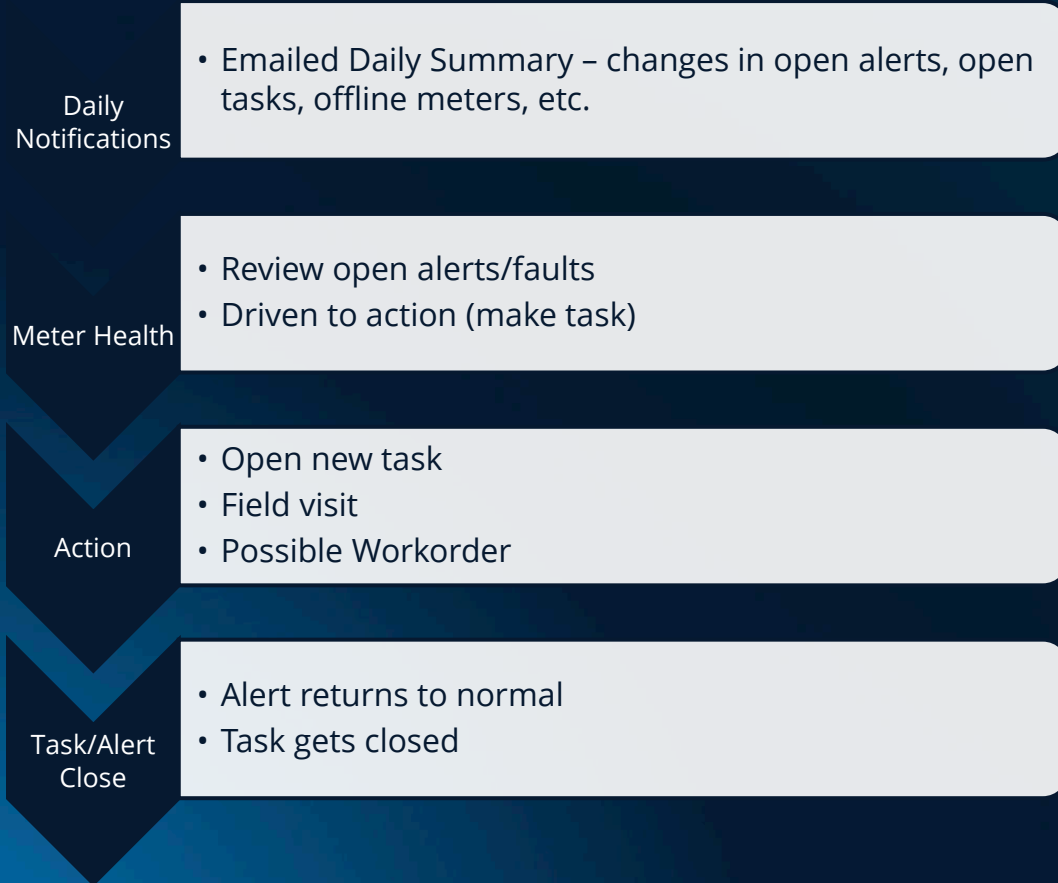


IT Network  
Modbus-IP - Elec  
Niagara Network For  
Energy Meters



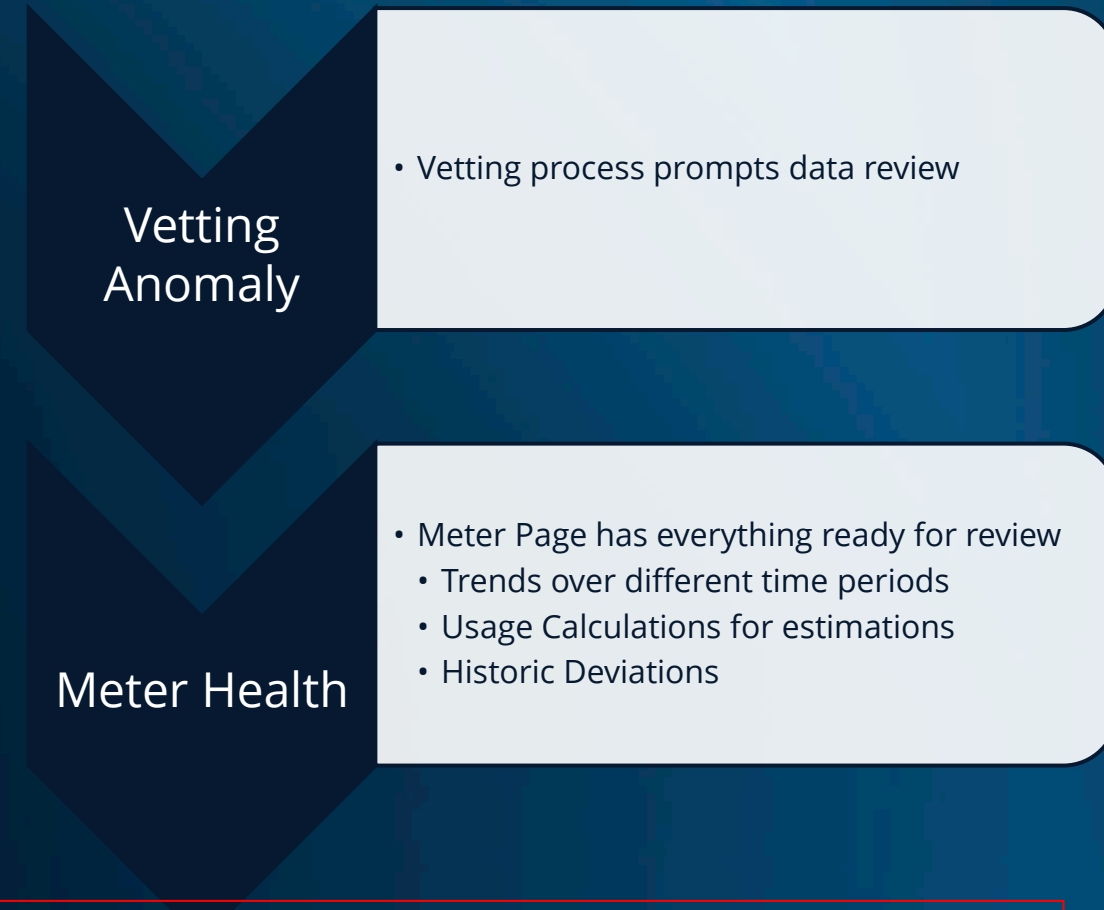
# Meter Health Workflows

## Daily – Find Issues Quickly



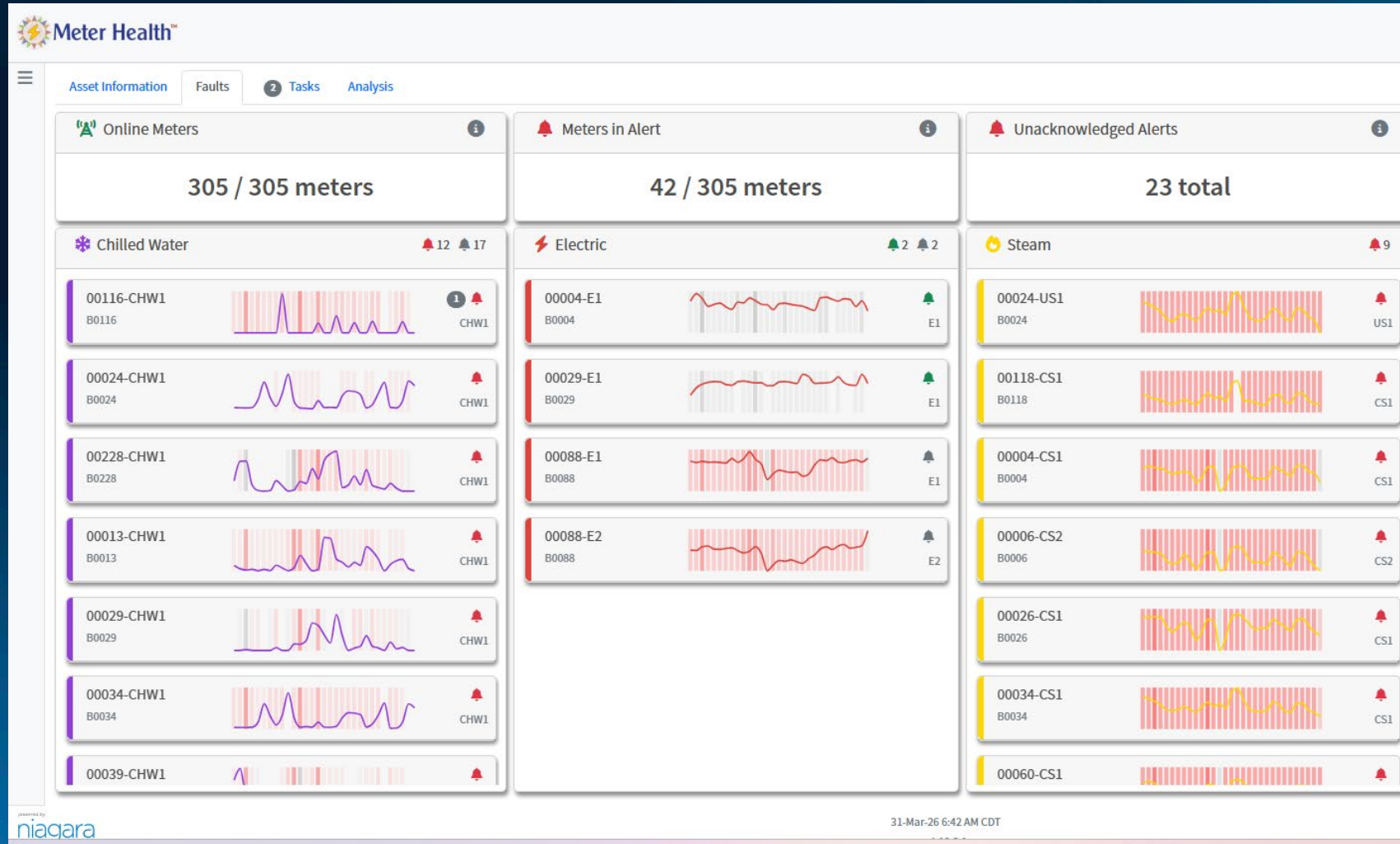
**Goal #1:** Catch issues quickly to reduce downtime so estimations can be made over available data and not 5-year averages

## Monthly – Estimate Efficiently



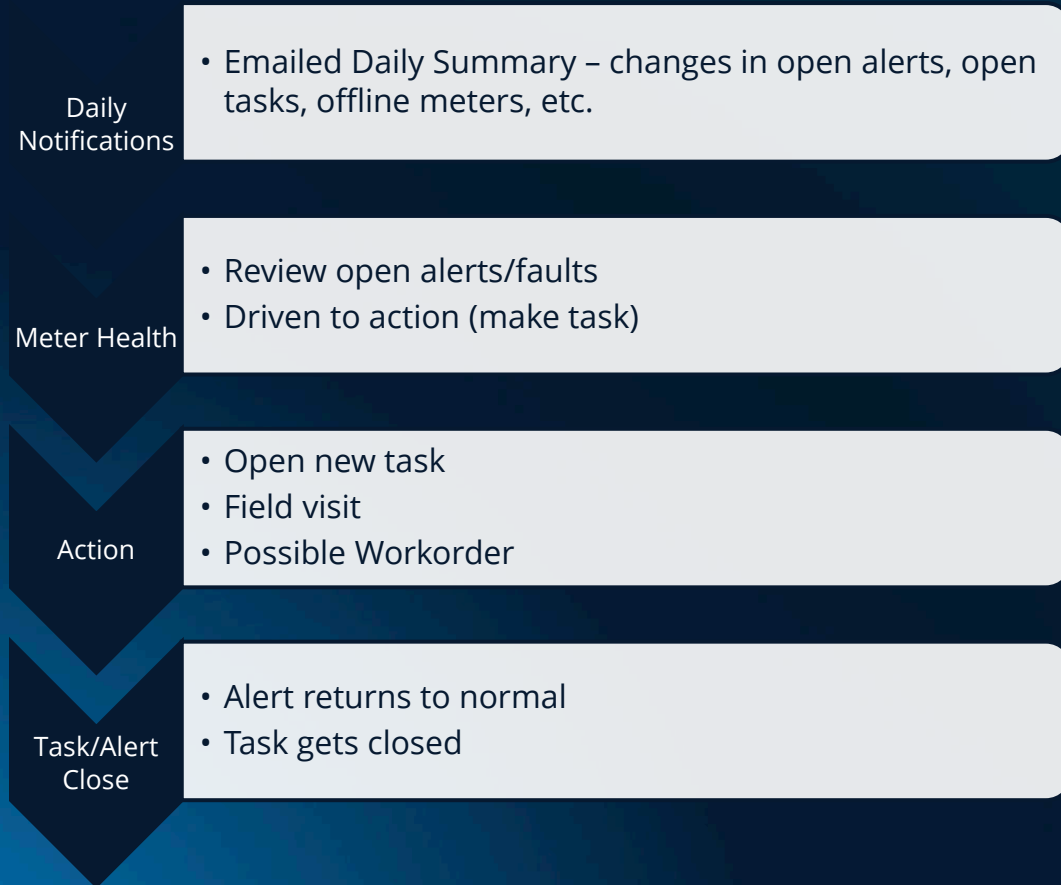
**Goal #2:** For needed estimations, have a single source that streamlines estimations and minimizes estimation calculations and overall vetting process time

# Meter Health Application



# Meter Health Workflows

## Daily – Find Issues Quickly



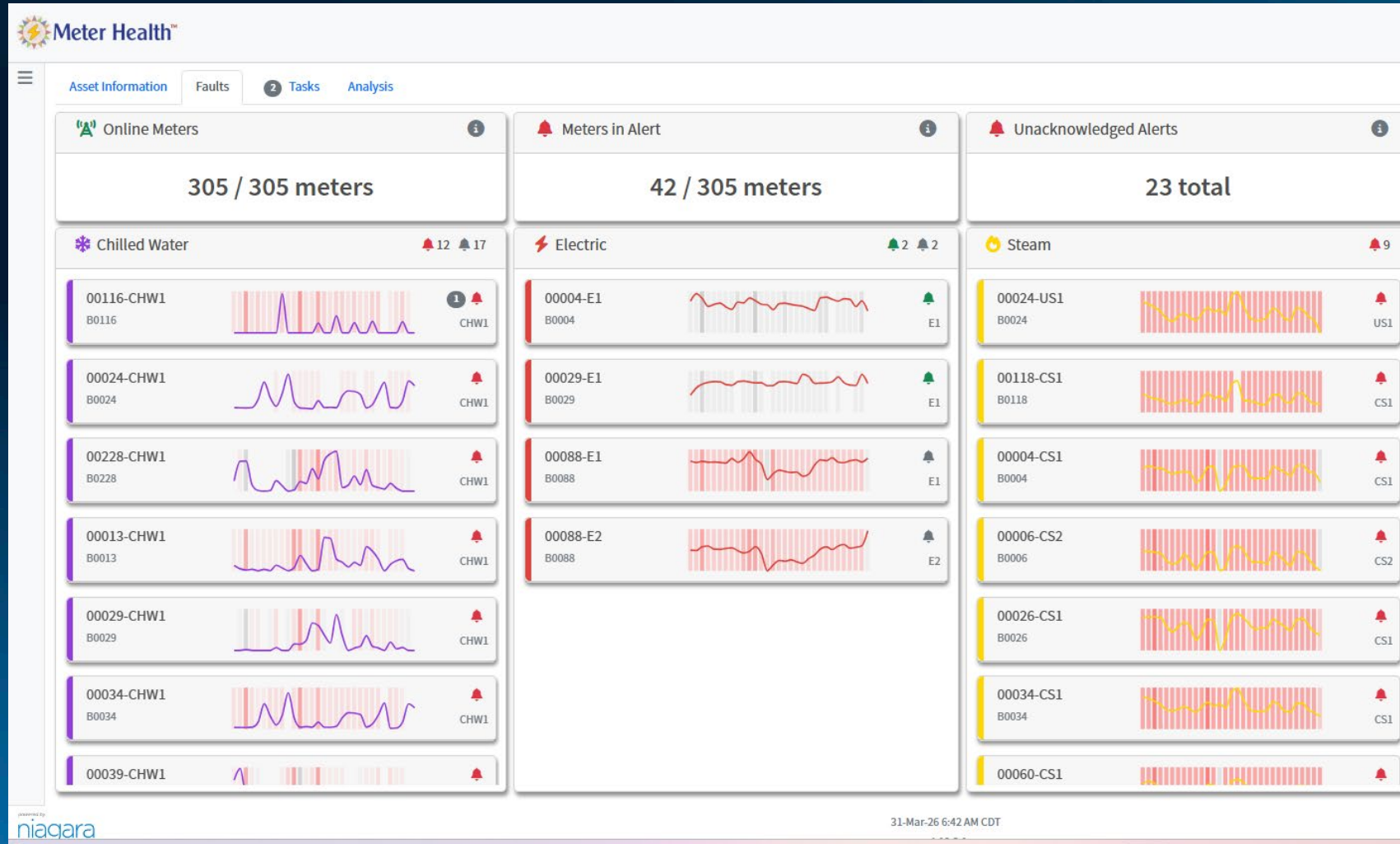
## Monthly – Estimate Efficiently



**Goal #1:** Catch issues quickly to reduce downtime so estimations can be made over available data and not 5-year averages

**Goal #2:** For needed estimations, have a single source that streamlines estimations and minimizes estimation calculations and overall vetting process time

# Meter Health Application



# Fault Diagnostic View

Site Group Utility: Main Chilled Water  
Site: B0116 - Roger Adams Hall  
Meter Number: 00116-CHW1

00116-CHW1

**Actions**  
Available actions for this meter

Acknowledge This Alert | Create Task | Go to meter

**Alert Summary**  
Details on the meter's alert condition

Alert status: **Offnormal and Unacknowledged**

Alert opened on: 7/9/2025 6:00 AM

Alert fault conditions: Over the last 30 days, 81.2% of the data was below the minimum threshold (40 Deg F). Over the last 30 days, 76.2% of the data was below the minimum threshold (45 Deg F).

Last update on: 3/31/2026 6:38 AM

**Alert History**  
List of previous alert information

Opened on: 5/22/2025 11:40 AM (open for: 1 days)  
Fault Summary: undefined

**Fault Diagnostics**  
Details on all configured faults for this meter. (faults configured: 17)

Energy Usage

Energy Rate

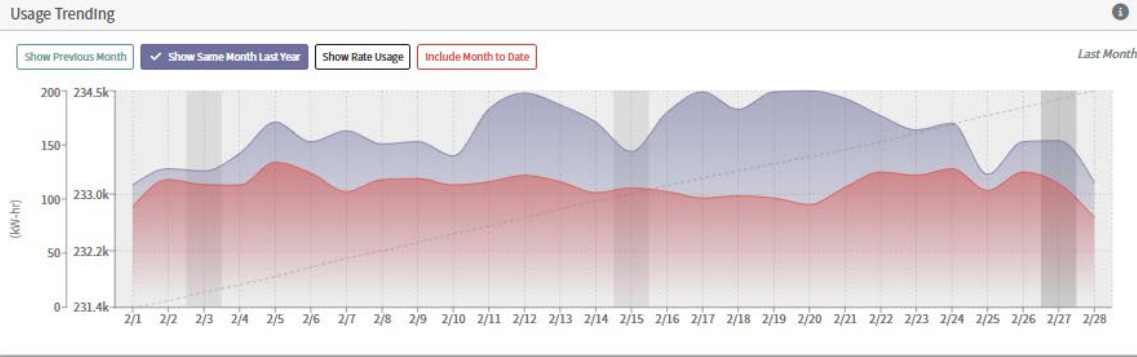
Supply Temperature

Return Temperature

# Meter Analysis View

← ⚡ Main Electric: 00088-E2 ⓘ

Asset Information Summary ⚠️ Faults Tasks Analysis

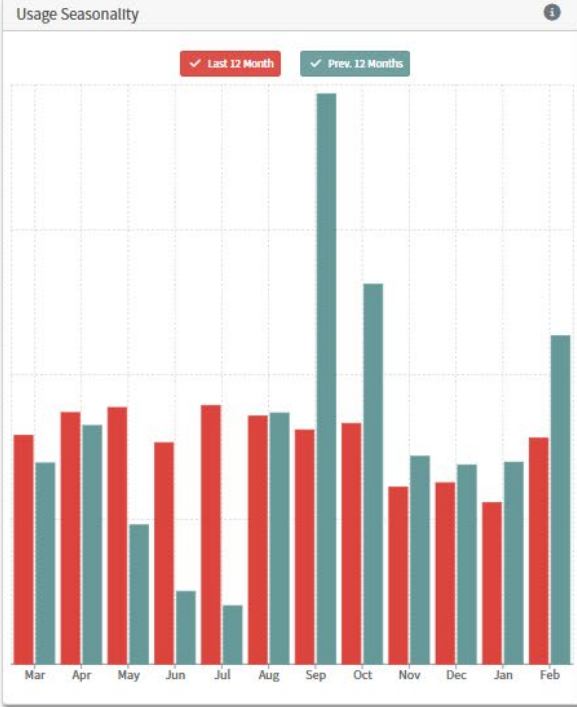


### Meter Notes ⓘ

Meter was replaced in July 2025	3/31/2026 6:50 AM admin	⋮
Energy Spike - 2024	3/31/2026 6:49 AM admin	⋮

### Usage Calculations ⓘ

Last - First:	3,143 kW-hr	✓
Smart Usage:	3,145 kW-hr (+0.1%)	
Demand Usage:	3,018 kW-hr (-4.0%)	
Selected Usage:	3,143 kW-hr	(I-F)



### Data Integrity ⓘ

Statistic	Value
Completeness:	100%
Count:	8,032/8,064
Negative/Zero Count:	3/4,921
Stale Count:	0
Bad Signal Count:	0
Above/Below Limit Count:	3/4

# Tasks & Notes

The screenshot shows the 'Meter Health' interface for asset 'Main Chilled Water: 00116-CHW1'. The 'Tasks' tab is active, displaying a list of tasks sorted by 'Recent'. There are two tasks: '6 - Temp Sensor Faults' (dated 1/7/2026 11:05 AM) and '3 - High Supply & Return Temp' (dated 7/17/2025 10:30 AM). A 'Create a New Task' form is visible on the right, with fields for 'Meter' (pre-filled with '(00116-CHW1) CHW1'), 'Subject' (with a placeholder 'Enter Subject'), and 'Details' (with a placeholder 'Enter Details'). A green 'Create Task' button is at the bottom of the form.

# WO Integration

The screenshot shows the 'Main Chilled Water: 00116-CHW1' asset page with the 'Work Orders' tab active. The 'Asset Information' and 'Asset Device Information' sections are visible on the left. The 'Work Orders' section shows a list of work orders, with the most recent one being '(COMPLETE) 11319200' dated 3/26/2026 2:55 PM. The work order description reads: 'CHWS26-116-CHW1 MBTU TOT IS SHOWING ERROR IN GRAPHICS EVEN THOUGH THERE IS GOOD METERING VALUES (CHW FLOW, CHWST, AND CHWRT) REQUESTING REG WO AND PH FOR THE SHOP SJ AND 55 TO CORRECT THE ISSUE WITH MBTU TOT AND THE BACNET EXPORTING SO USAGE CAN BE USED F'. The 'Requested by' field is 'ROBBAUER'. Below the work orders, there is a list of 'Asset Documents' including PDF files like 'CHWM-00116-CHW1 TEST RAL.pdf' and 'CHWM-00116-CHW1 CALIBRATION RAL.pdf', each with a link icon.

# Questions?

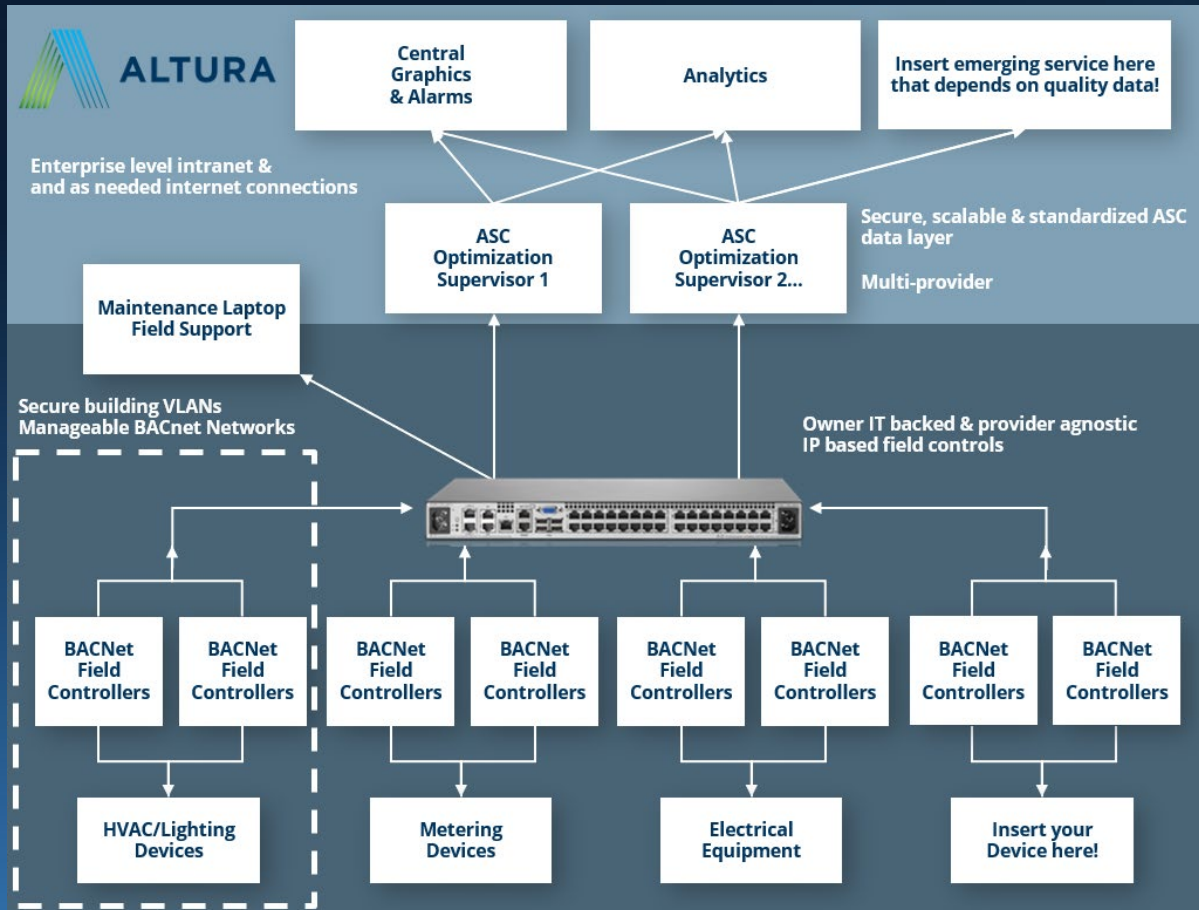
Feel free to reach out.

Aaron Mason

[aaron.mason@hawkeye-es.com](mailto:aaron.mason@hawkeye-es.com)

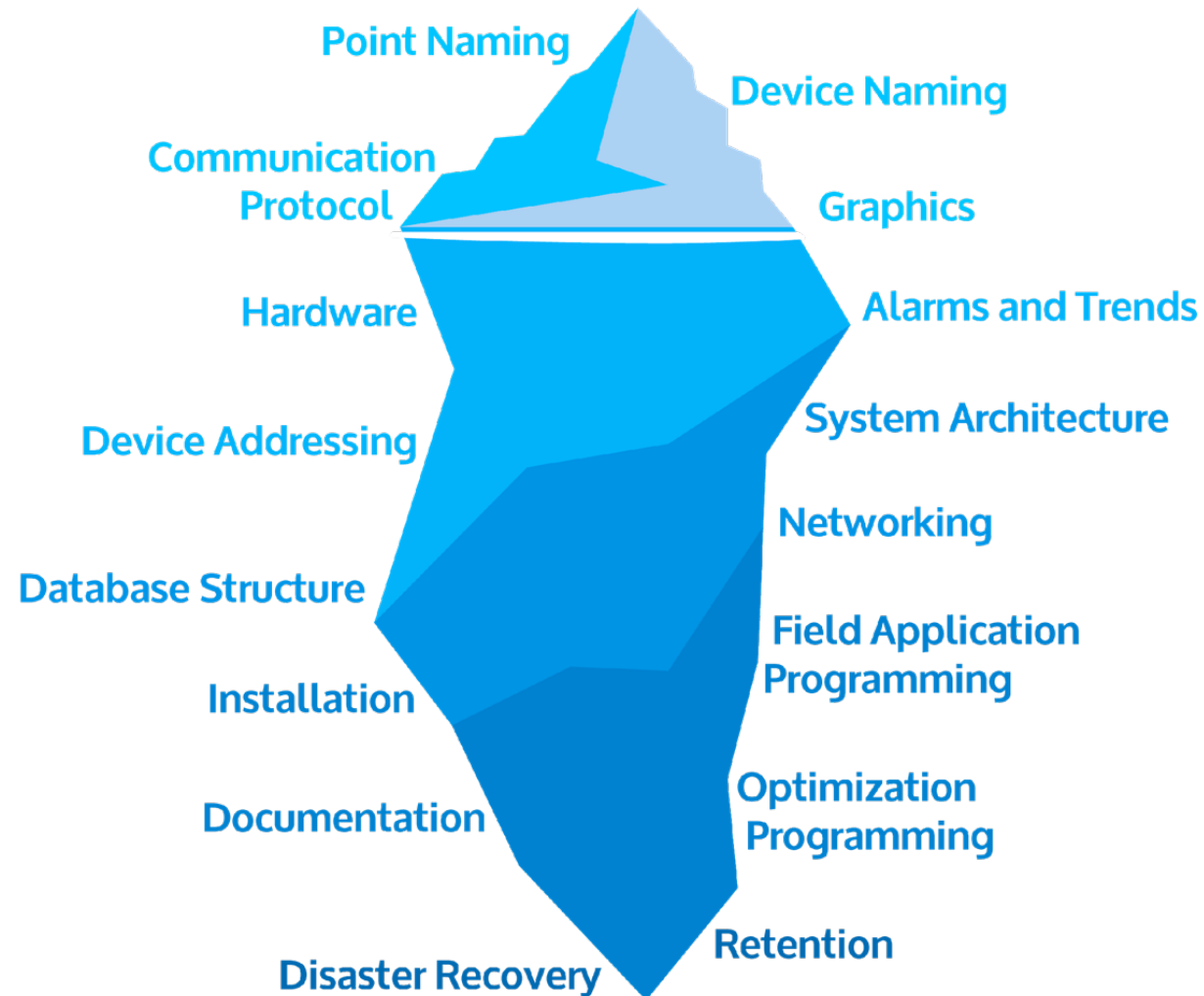


# Scaling Technology with an Enterprise Niagara Architecture



- Abstracting the supervisors to the cloud
- “Flat”, open, and managed BACnet networks
- Standardized everything

# Enterprise Niagara Architectures Require Robust Standards

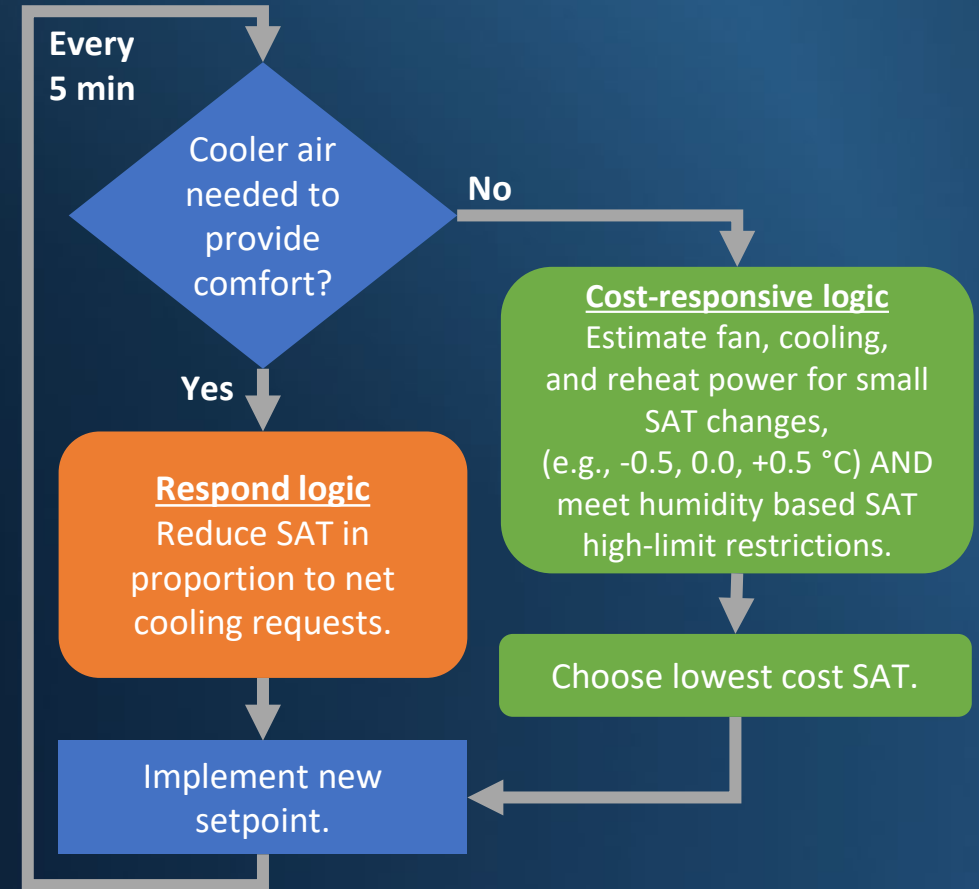


# New Tech: Cost Optimized Reset (CORE)

## How CORE Works:

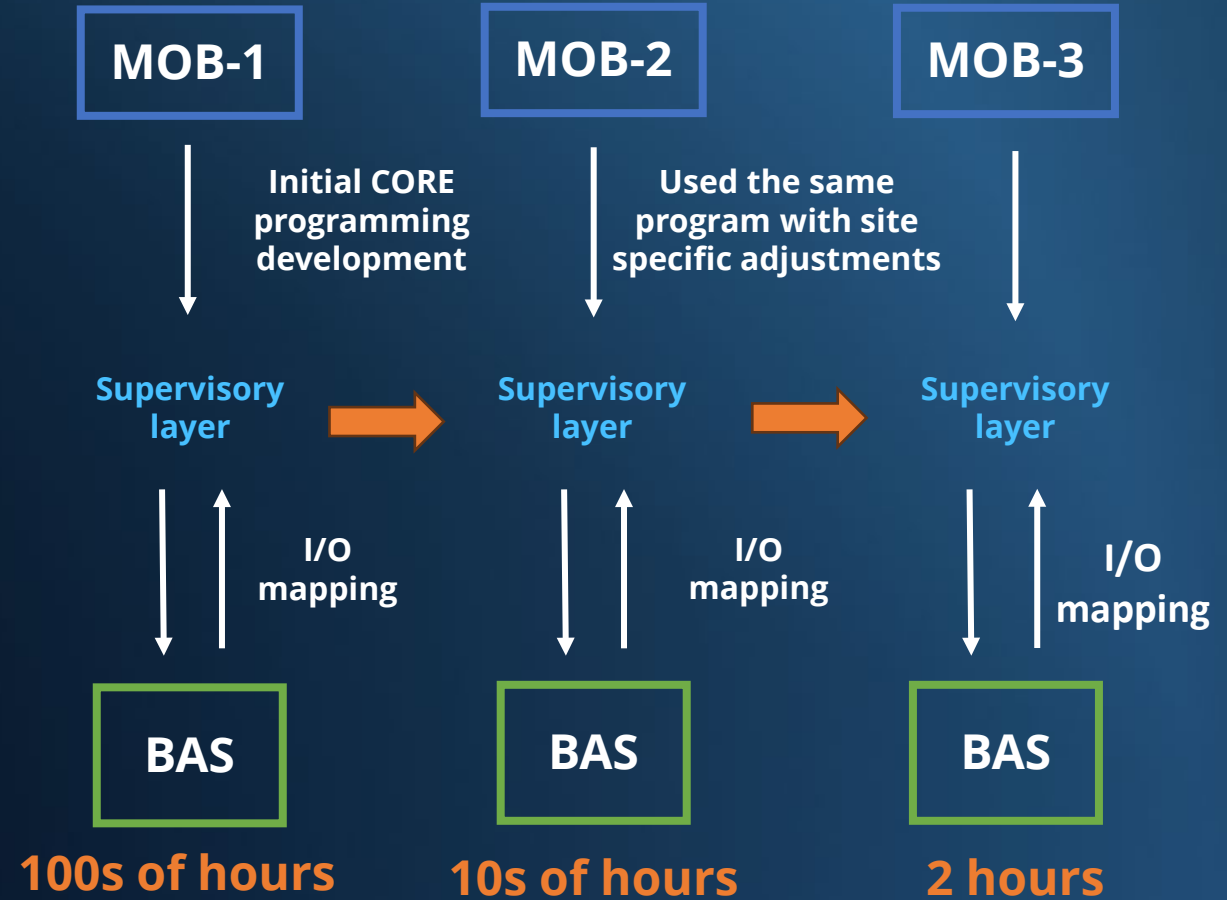
- Adjusts SAT based on zone cooling demand AND cost tradeoffs
- Uses TOU utility rates and real-time load conditions
- Humidity based limit for SAT reset range
- Designed to be simple: implement in existing BAS
- Simplified CORE algorithm: needs less data.

CORE builds on ASHRAE GL36 and is smarter than traditional resets because it **actively optimizes cost across all loads.**



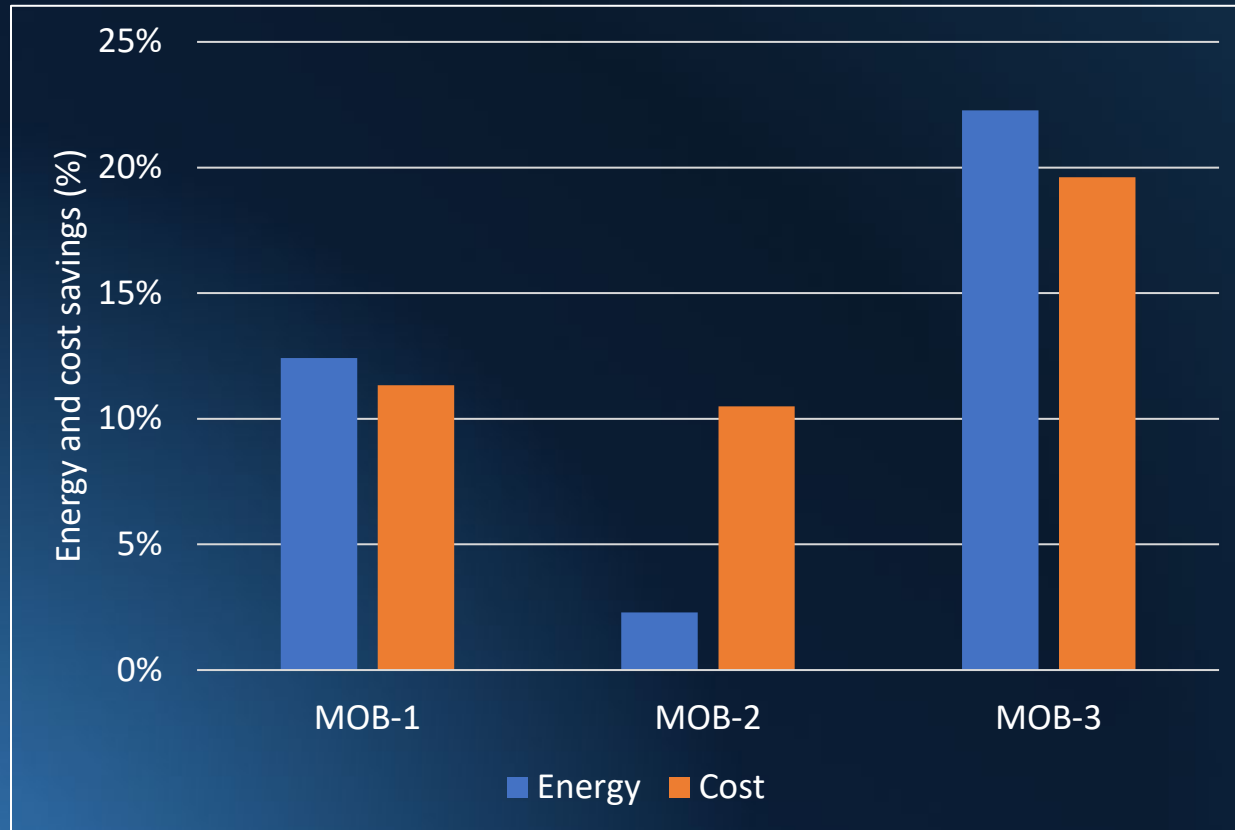
# CORE Implementation in Niagara

- Variance in sensor availability required **calculated variables**
- **Precision of data** can cause issues
- **Existing building issues** create hurdles
- **Unique and rogue zones** have to be handled
- Verification and QC are **critical to scaling**



# Project Impact

CORE saved HVAC energy and cost in all buildings compare to demand-based reset.



**2 - 22%**  
savings in heating, cooling,  
and fan energy.



**10 - 20%**  
savings in heating, cooling,  
and fan energy costs.

# Thanks!

Feel free to reach out for more information or with questions.

Jim Meacham, PE

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(949) 887-0174



# Q&A

