



Water Flow Intelligence

Powered by **ECOLAB3D™**

Where Sustainability Meets Accountability

Problem → solution

· Customer Problem

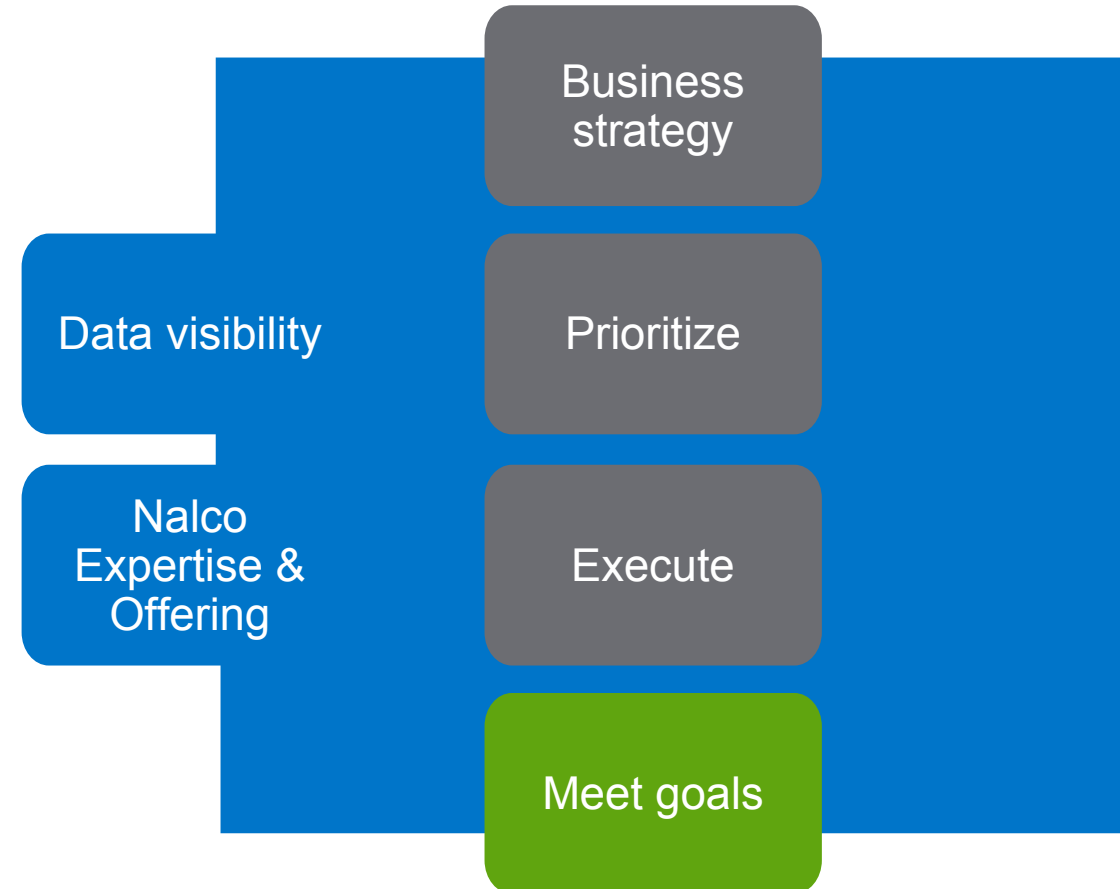
- Lack of visibility on water usage in process/utility at a plant level
- Manual data collection
- Old data management system
- Need to meet water saving and sustainability goals
- Increasing cost of water and strict discharge limits
- Water scarcity

· Nalco Solution

- Automated data collection
- Real-time visibility to enterprise, plant & asset operations
- Expert service and alarms on flow anomalies
- Leverage NW water managing expertise to identify water savings opportunities
- KPIs on program execution to drive accountability & improvement
- Reduction of TCO

Value proposition

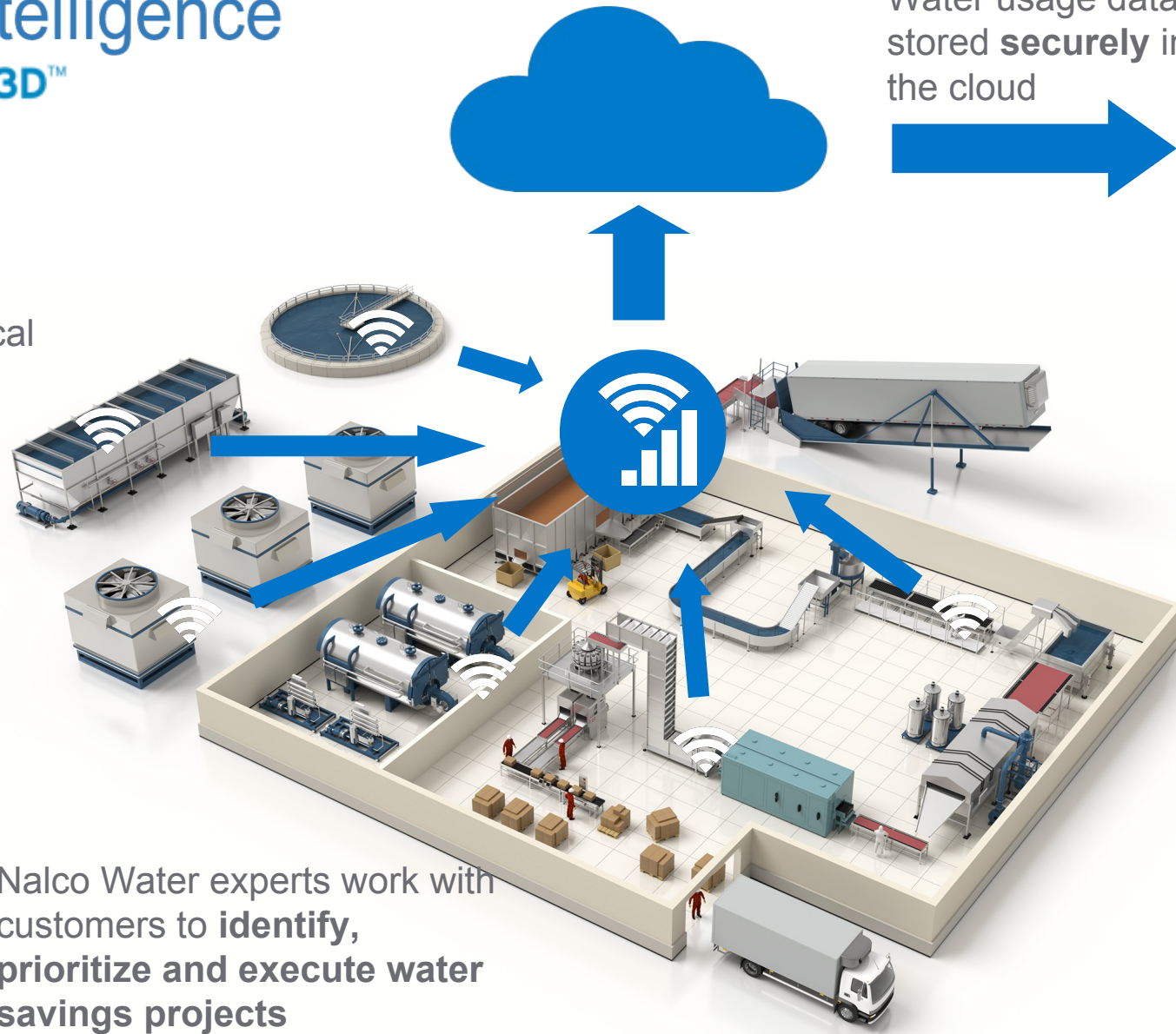
- **Data visibility** to prioritize water reduction initiatives, focusing on the big consumers
- Executing tasks thanks to **Nalco expertise and the product portfolio**
- Track results and performance with **dashboards and data analytics**



Water Flow Intelligence

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- Sensor network **wirelessly** connected to critical plant processes



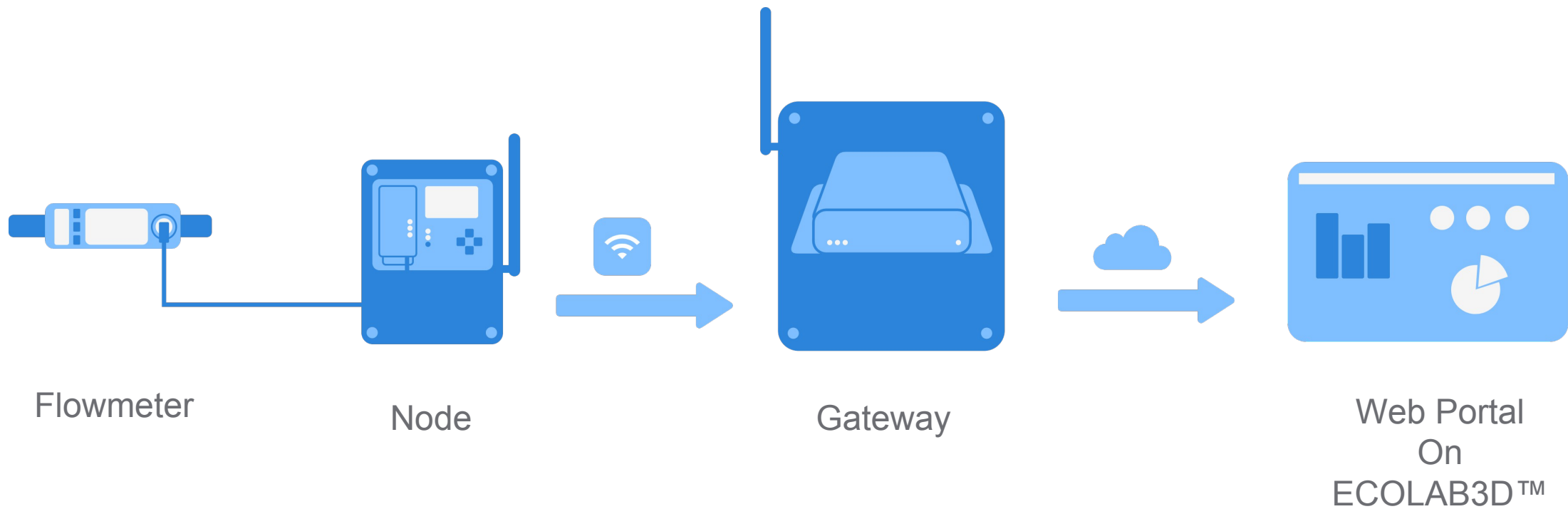
- Actionable, **data-driven intelligence** accessible anytime, anywhere
- **Benchmark** performance across plants and assets
- **Proactive alerts** and alarms
- **Regular follow-up and reporting**– enterprise rollups and drilldowns, and service to support water savings opportunities



Nalco Water experts work with customers to **identify, prioritize and execute water savings projects**

Equipment

key components

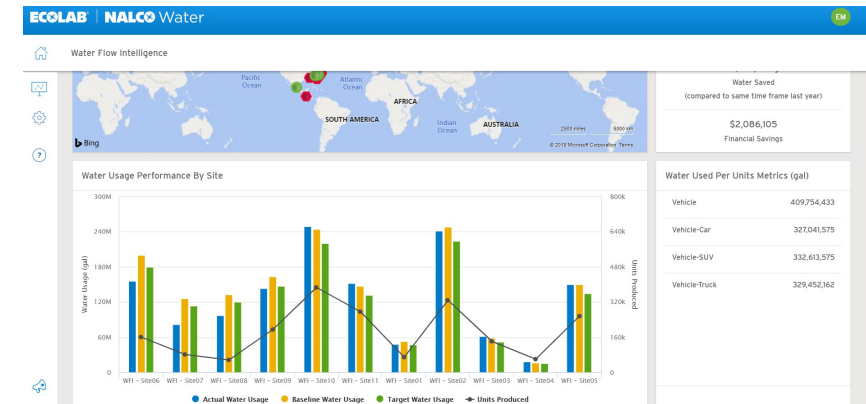


Vertical photo

WEB portal

Water Flow Intelligence

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Enterprise view

ECOLAB | NALCO Water EM

Water Flow Intelligence

Select Filter

WFI

UNITS OF VOLUME: gal

CURRENCY: USD

VIEW GRAPH BY: Last 365 Days

START DATE: *

END DATE: *

[View Details](#)

WFI - Site06

| | |
|-------------------|--------------------------------------|
| Performance (G/R) | ● |
| Target Usage | 180,036,643 gal |
| Actual Usage | 155,915,533 gal |
| Water Saved | 44,125,181 gal |
| Financial Savings | \$ 348,589 |

[Site View](#)
[Port View](#)

Enterprise Metrics

- 1,398,870,054 gal Water Used
- 140,929,514 gal Water Saved (compared to same time frame last year)
- \$2,086,105 Financial Savings

Water Usage Performance By Site

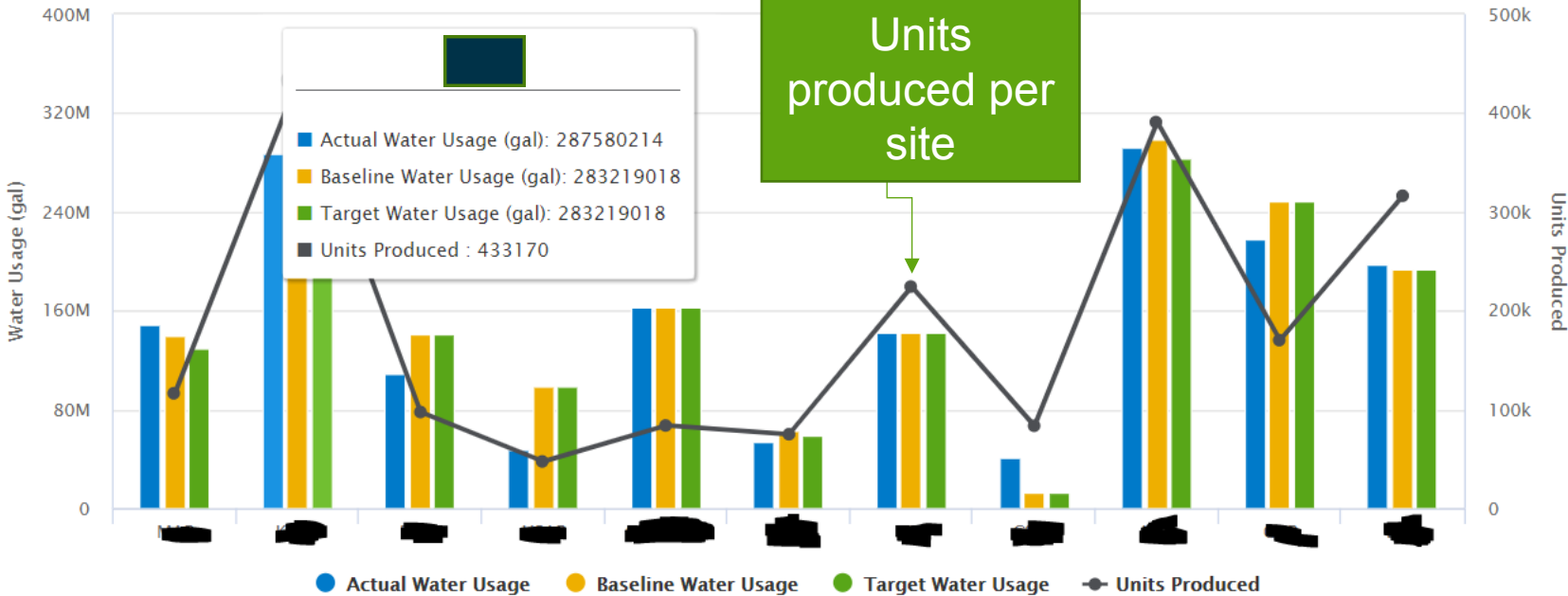
Water Used Per Units Metrics (gal)

Actual water saved against goal by process area

KPI and performance

Production per units

Water Usage Performance By Site



Water Used Per Unit Metrics (gal)

| | |
|---------------|-----|
| Vehicle | 834 |
| Vehicle-Car | 834 |
| Vehicle-SUV | 834 |
| Vehicle-Truck | 834 |

Site view

The screenshot displays the 'Site Overview' page for 'Water Flow Intelligence' at the 'Site' level. The page includes a navigation sidebar on the left with icons for home, charts, settings, alerts, and help. The main content area features a 'Current Flow Rate' section with a 'Water Usage' tab. Below this is a 'Current Flow Rate Details' table. A dropdown menu at the top right shows the site name 'KCAP - LIBERTY, MISSOURI - 1501 CLA...'. A 'UNITS OF FLOW' dropdown is set to 'gpm'. Two green callout boxes provide definitions: one for 'Location of the asset within the site' pointing to the 'Area' and 'Sub Area' columns, and another for 'Port = specific location of the flow sensor on the asset (i.e. supply/discharge)' pointing to the 'Port' column.

| Area | Sub Area | Asset | Port | First Reading Date | Current Flow Rate Date | Flow Rate (gpm) |
|--------------|-----------|-------------------------------------|----------|--------------------|------------------------|-----------------|
| Site Mains | RO | KCAP Truck Paint RO Permeate | Permeate | 15-Oct-19 | 07-Jan-20 | 43 |
| Transit Line | Phosphate | KCAP Stage 3 Transit Phosphate | Supply | 07-Nov-19 | 07-Jan-20 | 29 |
| Transit Line | Phosphate | KCAP Stage 6 Transit Phosphate | Supply | 17-Oct-19 | 07-Jan-20 | 58 |
| Transit Line | Phosphate | KCAP Stage 7 Transit Phosphate | Supply | 06-Oct-19 | 07-Jan-20 | 53 |
| Transit Line | Phosphate | KCAP Stage 11 Transit Phosphate | Supply | 12-Oct-19 | 07-Jan-20 | 64 |
| Paint | Ecoat | KCAP Truck Stage 9 E-Coat | Supply | 06-Oct-19 | 07-Jan-20 | 0 |
| Paint | Zirconium | KCAP Truck Zirconium Stage 13 Spray | Supply | 11-Nov-19 | 07-Jan-20 | 0 |

Port view

ECOLAB | NALCO Water

Water Flow Intelligence > Port Overview

OHAP - SHEFFIELD LAKE, USA - 799 AB... | VIEW GRAPH BY Last 1 Days | START DATE * | END DATE *

UNITS OF VOLUME gal | UNITS OF FLOW gpm

Select Area, Sub-Area, Asset and Port No WFI Devices

Select Area: Paint | Select Sub-Area: Select | Select Asset: Inlet to Body Shop | Select Port: Supply

Water usage and saving trend across time at plant level [View Details](#)

Actual Flow Rate

Port Metrics

205
(7/5/2019 3:36pm CST)
Current Flow Rate

28 gal
Water Used

How water flow intelligence is different

