FREEWAVE

Operations Software Suite (OSS) Overview

September 23, 2020

Who is FreeWave?

Low-power, long-range IIoT connectivity,
now with an intelligent edge.

27 Years
providing M2M wireless for **data transfer and command/control**

3,000+
customers with **deployments across 32+ countries**

Long-Range
leader in reliably connecting **challenging RF environments**

Designed, manufactured and tested **in the USA**

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EDGE
EVOLVED.

Full offerings for industrial

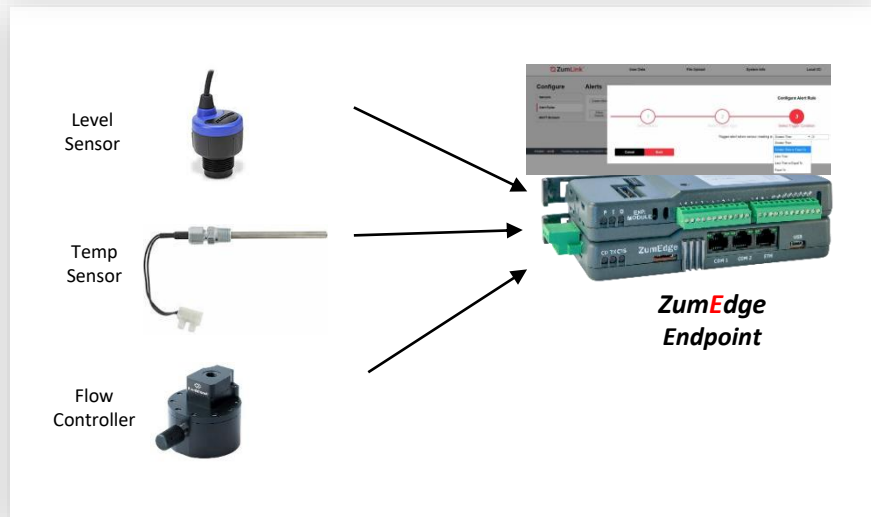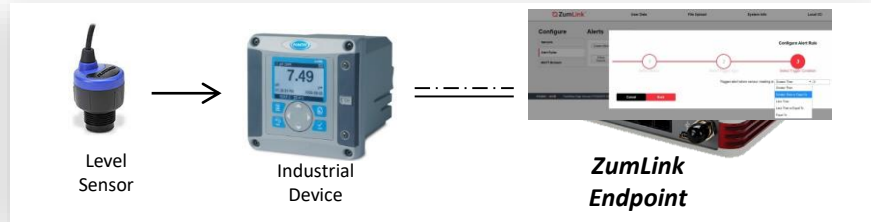**Edge Connectivity**

Edge Computing

Edge Sensing

Edge Software

Enterprise Software

ZumLink and ZumEdge –

Edge Data HW/SW Platform
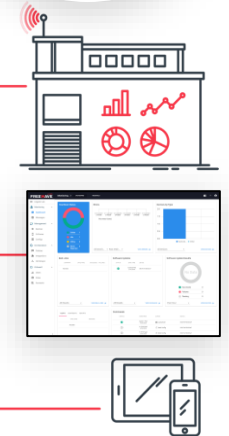

Level Sensor → Industrial Device → **ZumLink Endpoint**

Level Sensor → Industrial Device → **ZumLink Endpoint**

Level Sensor, Temp Sensor, Flow Controller → **ZumEdge Endpoint**

900MHz

ZumLink Gateway

Poll/Response **or** MQTT **or** API

FREEWAVE **Edge Data Platform** Available Now

FREEWAVE **Remote Management** Available Now

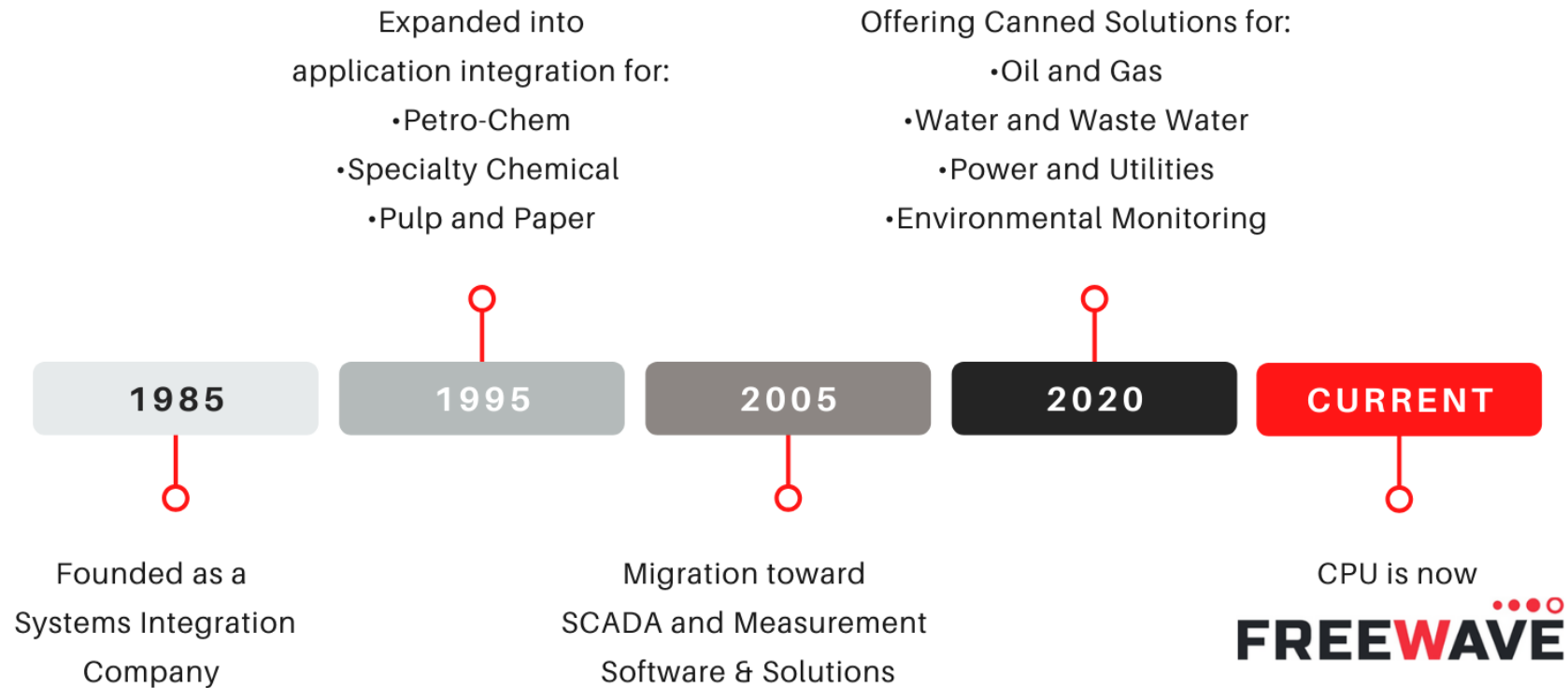FREEWAVE **Operational Software Suite (OSS)**

OSS

Agenda

- Introductions

- What is FREEWAVE OSS

- Examples of "How and Where we Work"

- Project Example & Channel Pricing Models

- Next Steps and Q&A

Combining Decades of Hardware and Software creating Solutions that Solve Customer Problems

CPU Background

Expanded into application integration for:
- Petro-Chem
- Specialty Chemical
- Pulp and Paper

Offering Canned Solutions for:
- Oil and Gas
- Water and Waste Water
- Power and Utilities
- Environmental Monitoring

1985 · **1995** · **2005** · **2020** · **CURRENT**

Founded as a Systems Integration Company

Migration toward SCADA and Measurement Software & Solutions

CPU is now

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Company We Keep
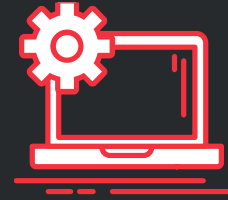
Operations Software Suite (OSS)

What is OSS?

- A fully integrated software suite for any operational need
- A complete Information System
- Collect, historize, visualize and analyze and report on the information
- Fills gaps where other solutions fall short
- Full SCADA and Measurement solutions
- Templated solutions for each Industry

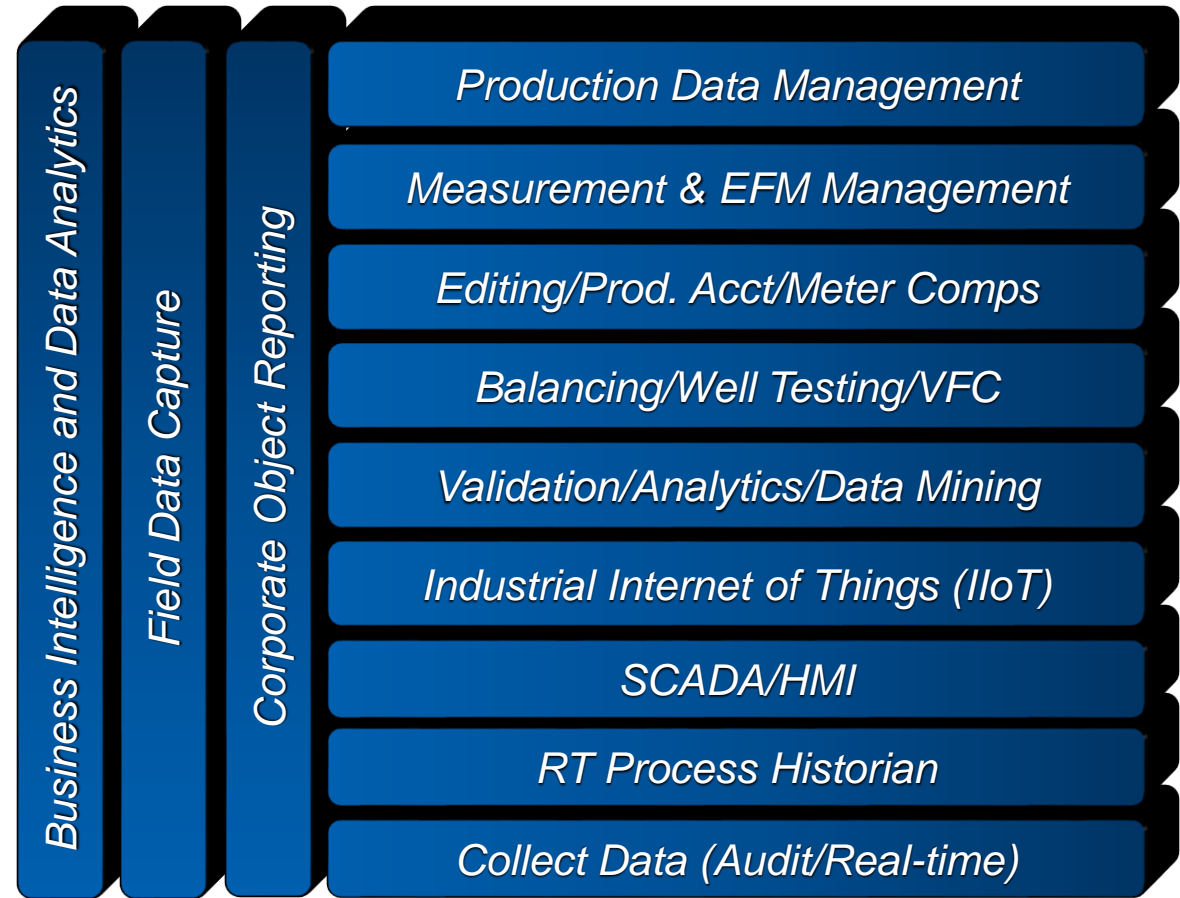## Building real-time information systems

- **Improved** overall service reliability

- **Enhanced** detection and outage prevention

- **Reduction** in outage downtime

- **Faster** repairs and more accurate service restoration estimates

- **Reduce Operational Costs** through increased efficiencies

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Operations Software Suite (OSS) Value Proposition
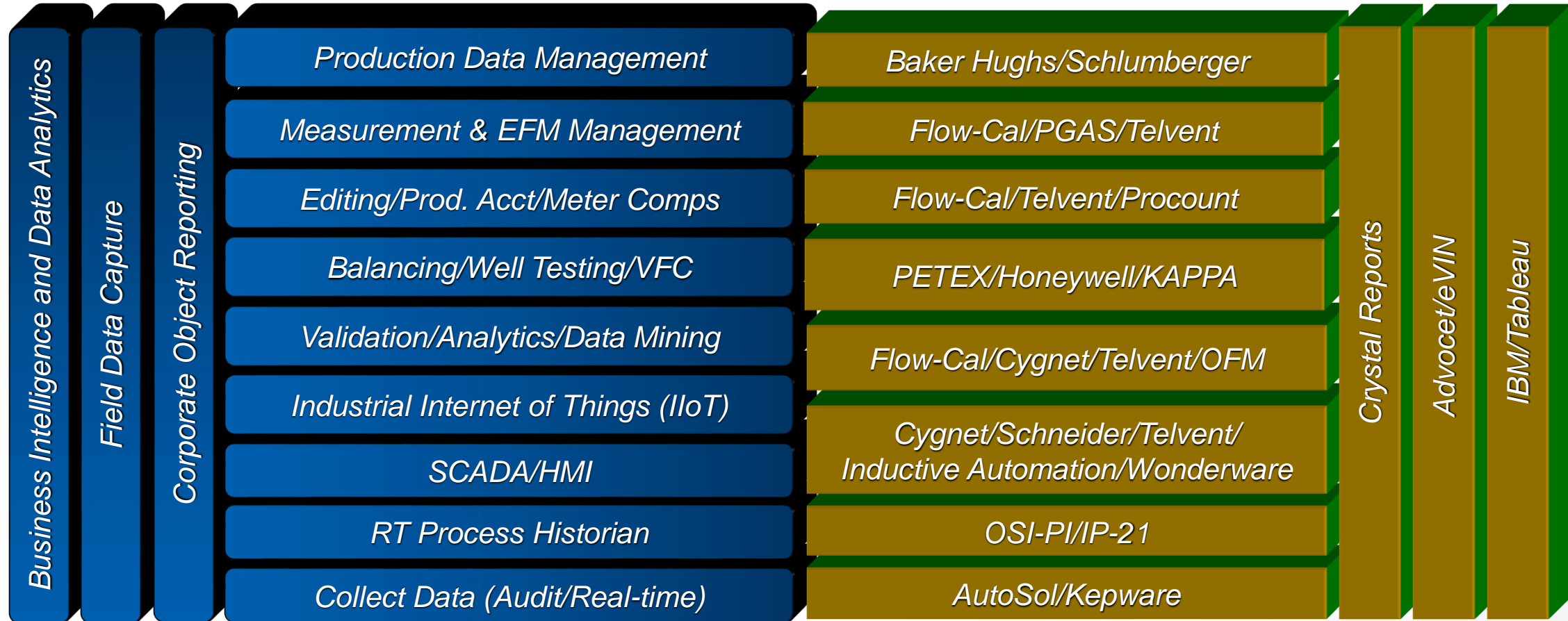
Control Room to Boardroom

- One vendor for all Operation Software Needs
- Fixes "Silos of information" problem
- Obtain data from any device or any system
- Templated solutions for efficient configuration
- All your information, anytime – mobile or desktop
- Alerts as required – emails, text, voice
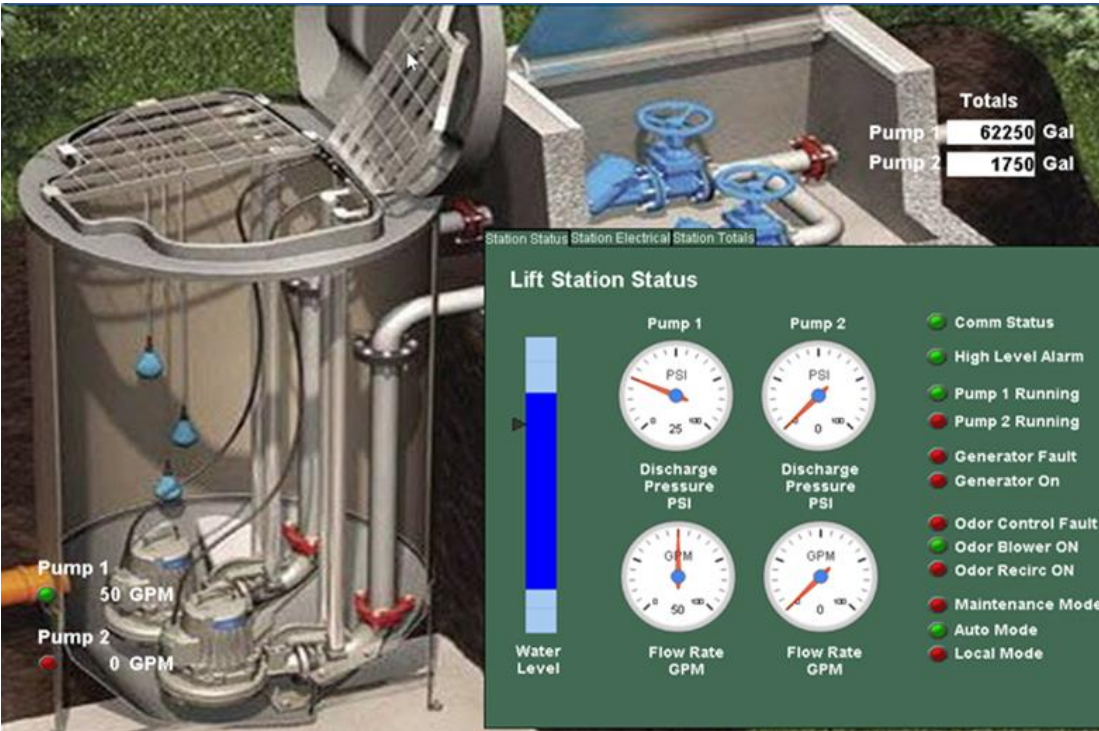- Can fill gaps in current solution or replace

Business Intelligence and Data Analytics

Field Data Capture

Corporate Object Reporting

| Production Data Management |
| Measurement & EFM Management |
| Editing/Prod. Acct/Meter Comps |
| Balancing/Well Testing/VFC |
| Validation/Analytics/Data Mining |
| Industrial Internet of Things (IIoT) |
| SCADA/HMI |
| RT Process Historian |
| Collect Data (Audit/Real-time) |

FULL Modular Stack……Pay as you GROW

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Operations Software Suite (OSS) Competition

Business Intelligence and Data Analytics	**Field Data Capture**	**Corporate Object Reporting**	Production Data Management	Baker Hughs/Schlumberger
			Measurement & EFM Management	Flow-Cal/PGAS/Telvent
			Editing/Prod. Acct/Meter Comps	Flow-Cal/Telvent/Procount
			Balancing/Well Testing/VFC	PETEX/Honeywell/KAPPA
			Validation/Analytics/Data Mining	Flow-Cal/Cygnet/Telvent/OFM
			Industrial Internet of Things (IIoT)	Cygnet/Schneider/Telvent/ Inductive Automation/Wonderware
			SCADA/HMI	
			RT Process Historian	OSI-PI/IP-21
			Collect Data (Audit/Real-time)	AutoSol/Kepware

Crystal Reports · **Advocet/eVIN** · **IBM/Tableau**

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Operations Software Suite - Examples

OSS Pumping Station Overview

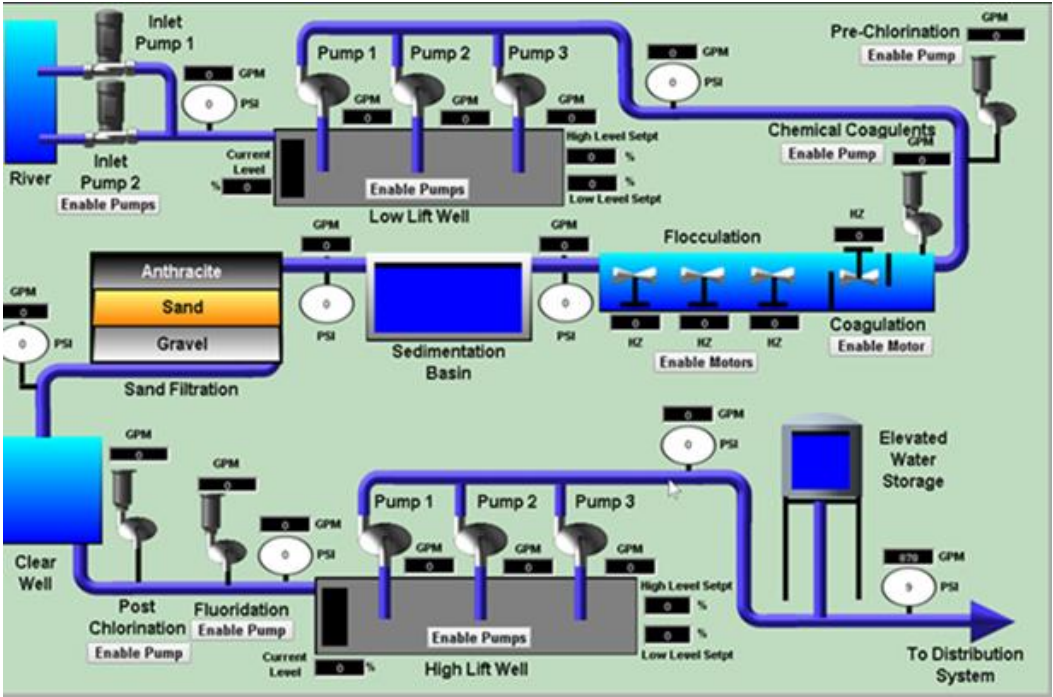OSS Water Cooling Tower Overview Dashboard

Jefferson Parish Water Board
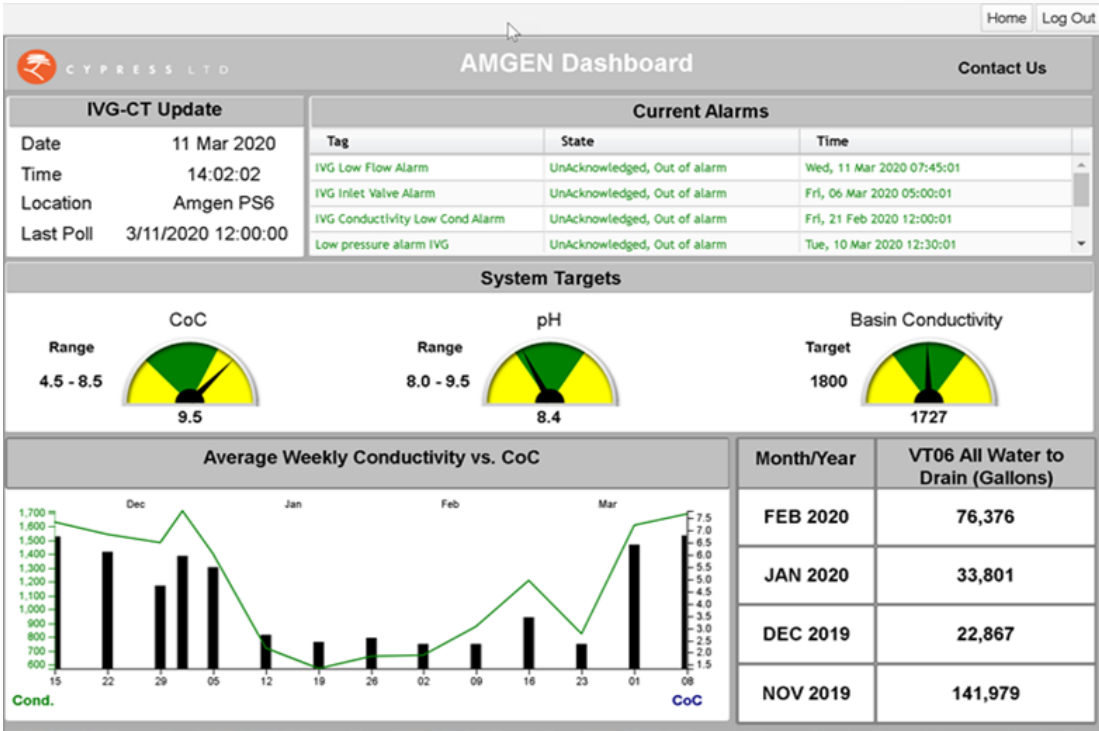
Cypress, Amgen, Westin

Operations Software Suite - Examples
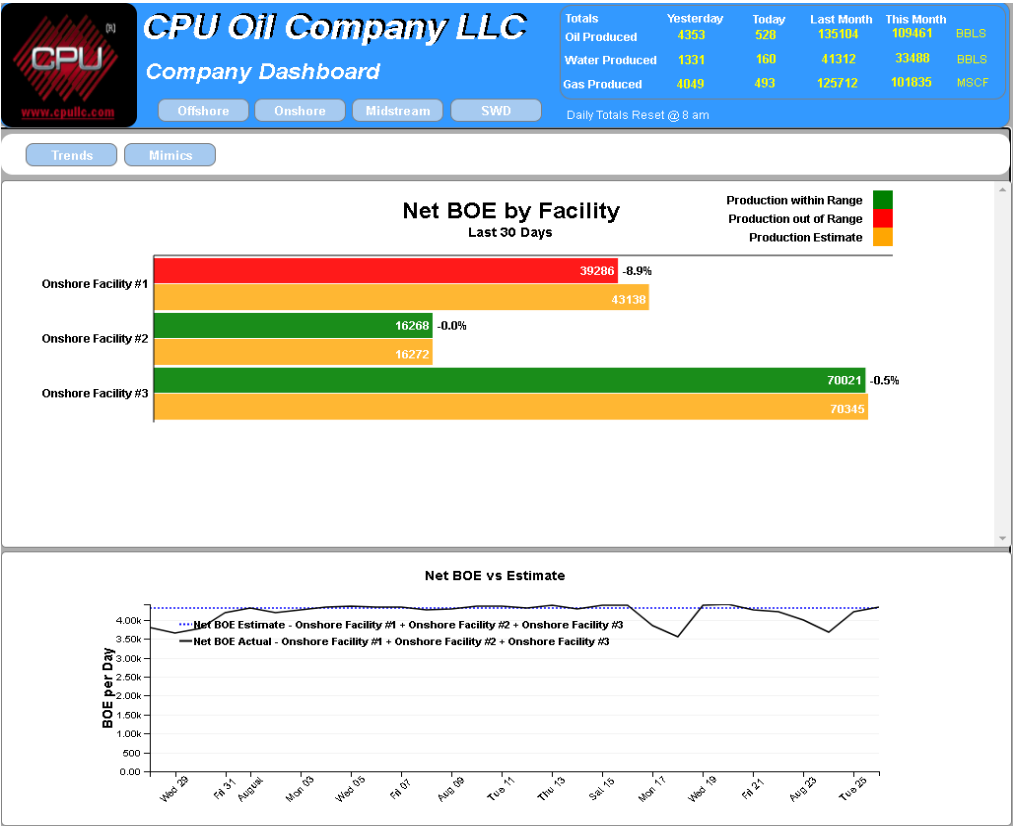
OSS Power Monitoring Overview
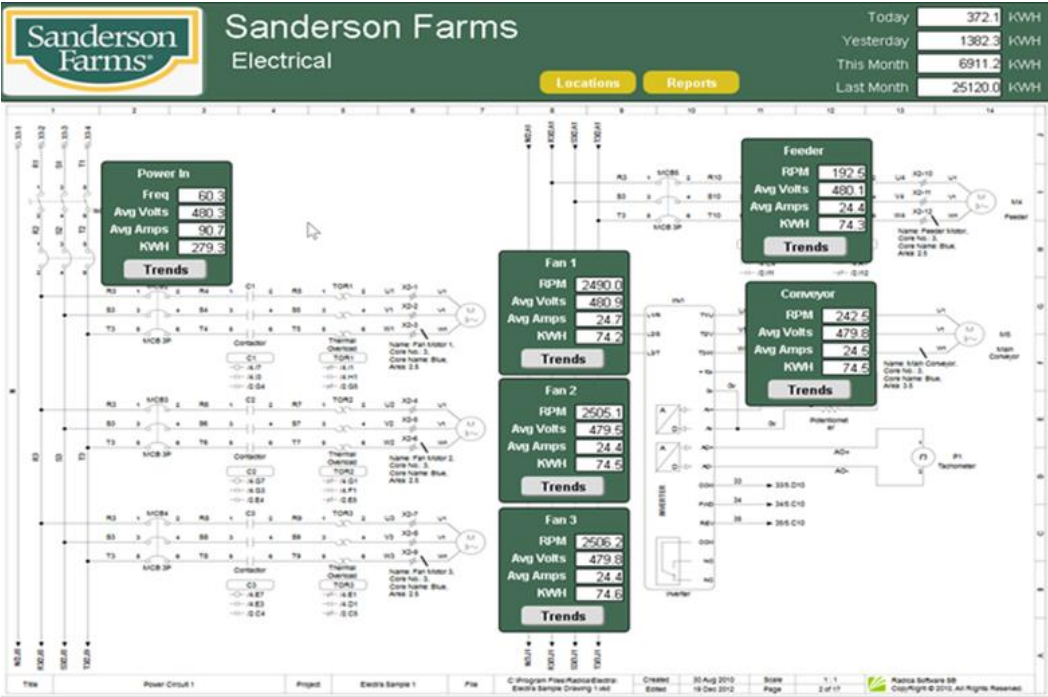
OSS Water Processing Overview

Sanderson Farms
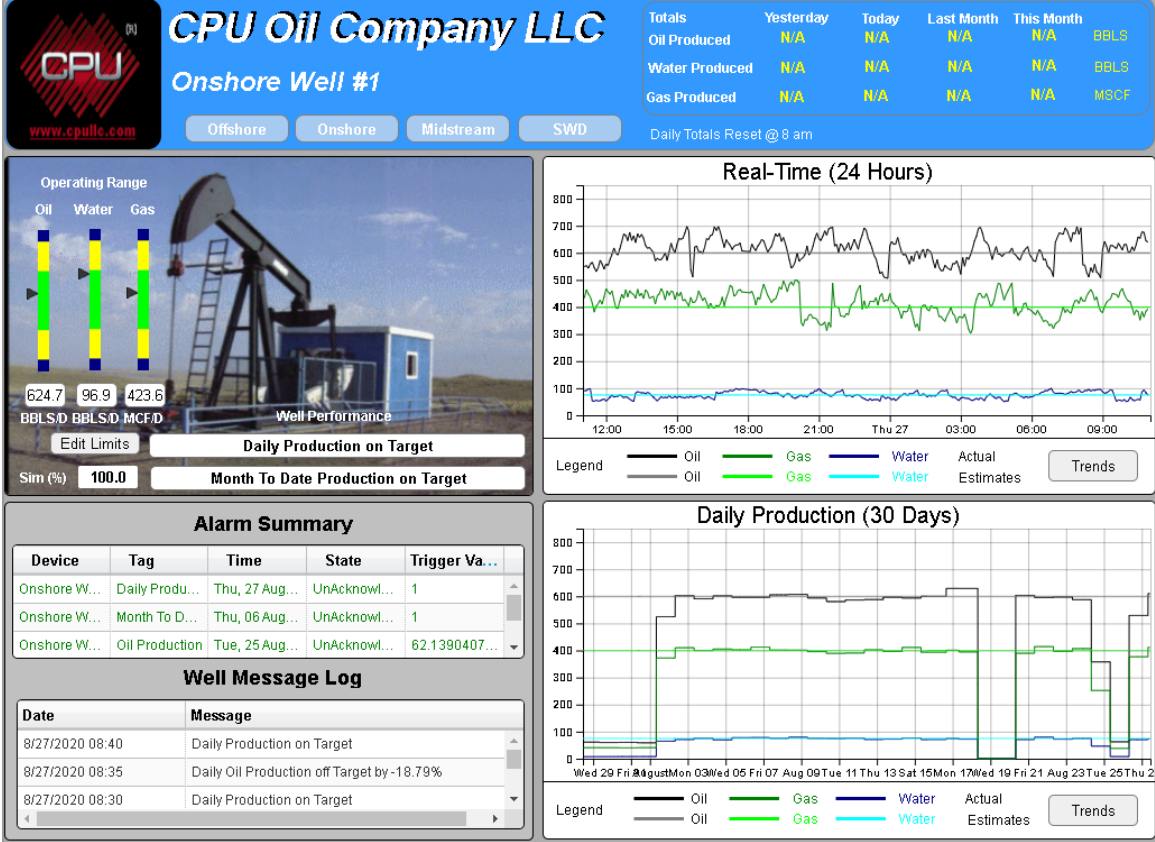

Sanderson Farms

Operations Software Suite – Digital OilField

OSS Production Dashboard

Urban Oil and Gas

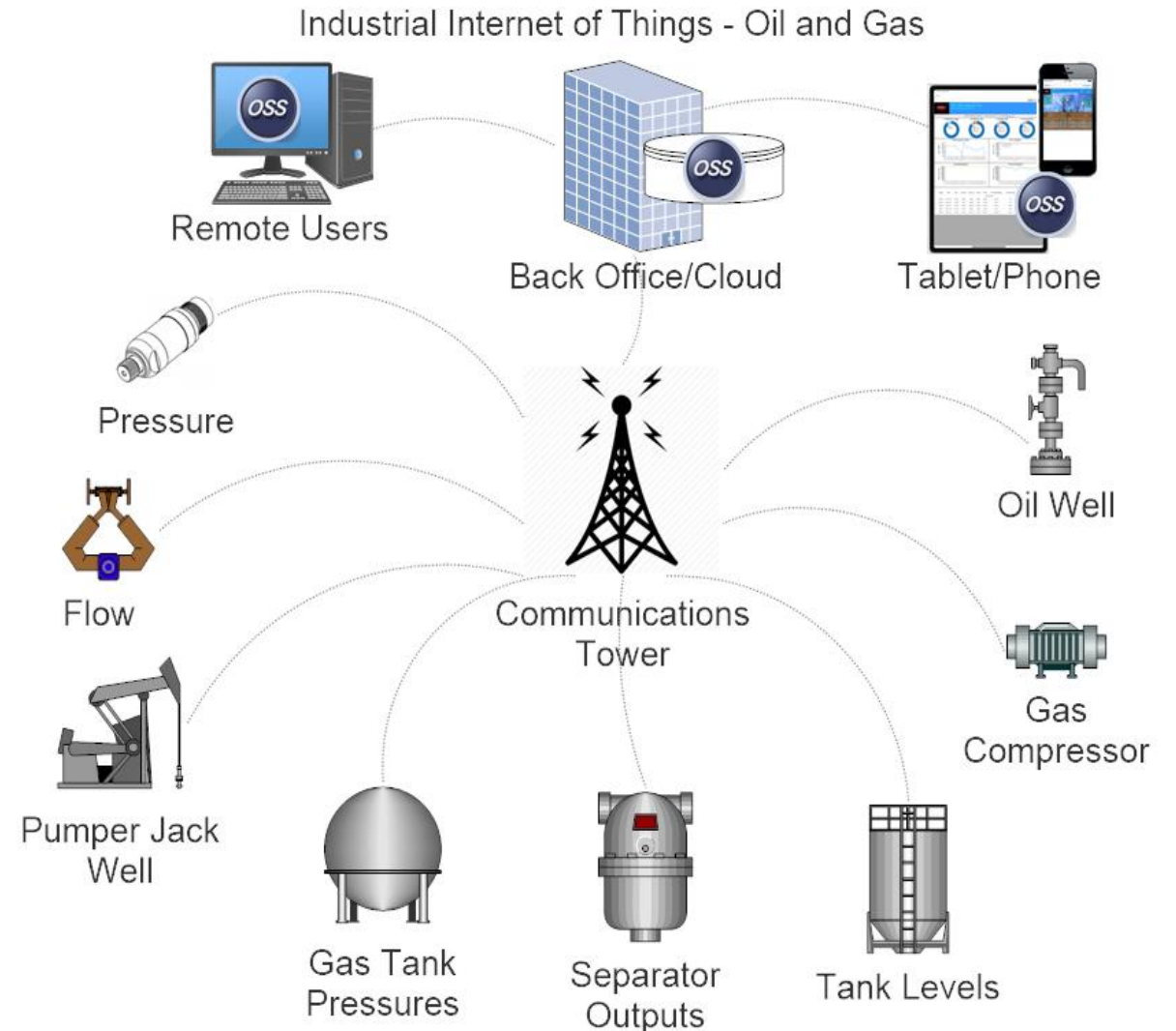## OSS Production Management

Urban Oil and Gas

Operations Software Suite (OSS) Deployment Models

Cloud Deployment

- Customer pays one-time "Setup" fee then monthly fee charged quarterly or annually
- FreeWave or FW Integrator can Setup and configure the system and get signoff from customer
- Setup can sometimes be automated

Owned or Installed System

- Customer buys system up-front, pays Maintenance and Support Annually
- FreeWave or FW Integrator can perform services to configure, train and support customer.

Industrial Internet of Things - Oil and Gas

Remote Users · Back Office/Cloud · Tablet/Phone · Pressure · Flow · Oil Well · Communications Tower · Gas Compressor · Pumper Jack Well · Gas Tank Pressures · Separator Outputs · Tank Levels

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Project Overview – Average Customer Example

- ZumEdge/ZumLink – Field Connection Devices

- Operations Software Suite (OSS)

  - Data Collection including history per tag, trending, etc.
  - 30 Devices - Up to 3000 tags
  - Web Dashboard
  - Overview Mimic (Graphic) "Digital Twin"
  - Detailed Mimics per site if required
  - 3 Operational Reports
  - Alarming – Text/E-mail (Voice at addition cost)

ZumEdge

Owned Pricing – Average Customer Example

| #	ITEM	Price	Cost
1	Hardware	Customer Cost / Acquisition / Server / Zumlink	--
2	OSS Software	✓ Base (Scheduler and Server) - $3,500 ✓ Tags – 3000 Tags ($800*3) - $2,400 ✓ 10 Viewing Client - $15,000 ✓ 2 Standard Client (Configuration) - $6,000 ✓ Maintenance and Support (Annual) - $26,900 * .2 = $5,380	$26,900 $ 5,380
3	Configuration	✓ Tags + Alarming – 6 man-days – $8,400 ✓ Web Dashboard – 5 man-days - $7,000 ✓ Overview Mimic (Graphic) – 4 man-days - $5,600 ✓ Reports – 2 man-day - $2,800	$23,800
4	Training	Optional vs. $175 per hour	$2,500
	TOTAL		$58,580

Cloud (SaaS) Pricing – Average Customer Example

#	ITEM	Price	Cost
1	Hardware	Customer Cost / Acquisition / Server/ Hosted	--
2	Software	Initial Set Up - Includes 10 Client Licenses	$8,500
3	Software Costs 30*$40*12 months	✓ Data Collection including history per tag, trending, etc. ✓ Up to 30 devices and 3000 tags ✓ Web Dashboard ✓ Factory Overview Mimic (Graphic) ✓ 3 Operational Reports ✓ Alarming – Text/E-mail (Voice at addition cost)	$14,400
4	Integration Training	Optional vs $175 per hour	$2,500
	Total	Year 1 ($22,900 + $2,500), Year 2 = $14,400	$25,400

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Next Steps

1. Questions

2. Please contact your local FreeWave sales representative, e-mail support at support@freewave.com or call us at 866-923-6168
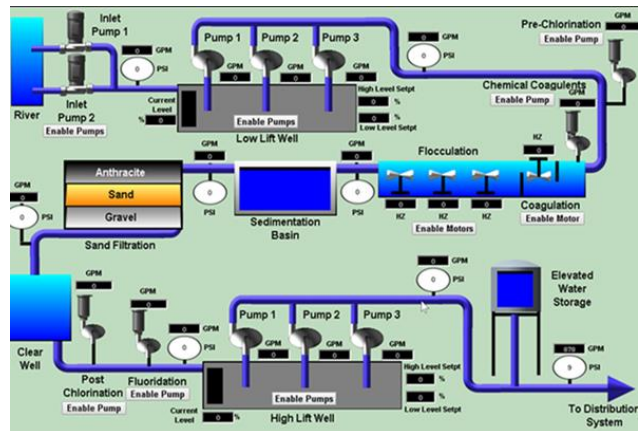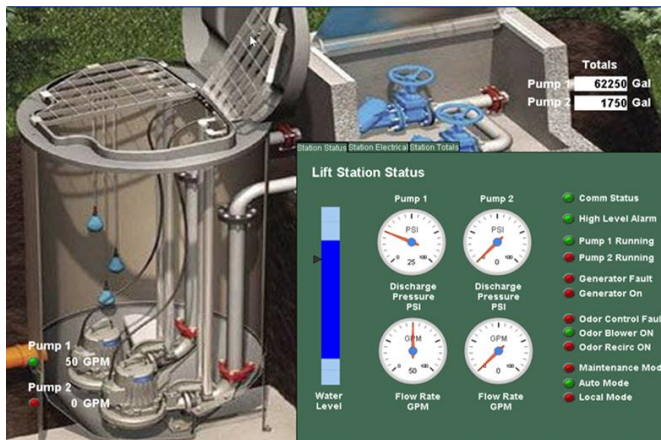
FREE
OSS Product Training
for our Channel Partners between
September – December 2020

Questions?