

# GE Day Torino

## Camera di Commercio di Torino



**GE Power & Water**  
**Water & Process Technologies**



GE imagination at work

© 2013 General Electric Company - All rights reserved

# Global presence and reach



# Evolution of GE's Water Business




GE Water & Process Technologies



Osmonics

Ionics/Ecolochem



Zenon



- Antifoulant
- Corrosion inhibitors
- Biocides
- Coagulants
- Floculants
- Odor Control
- Dust Control

Treatment Monitoring  
Performance Improvement  
Analysis  
Audits  
Value Generation Plan

## Industrial Water Chemical Treatment




**Membranes  
&  
Filters**

One company...  
One Solution

**Industrial  
Water  
Reuse**



Consumable



Equipment

Chemical Specialties

Membranes :  
Standard and Turbidity  
Industrial Water

- MBR

Membranes Technologies  
COD,BOD,SS Reduction  
Outsourcing  
Industrial Waters  
Potable Waters





# Water & Process Technologies

Aligning the best people with the most advanced technology, products and services to solve any water or process challenge our customers may have

## Quick Facts

- Headquartered in Trevose, PA, USA
- 8,000 employees globally
- 50,000 customers in 130 countries
- 45 global manufacturing sites



# GE Water & Process Technologies:

## ./ Engineered System (ES)

- Capital Sales
- BMS Mobile Services

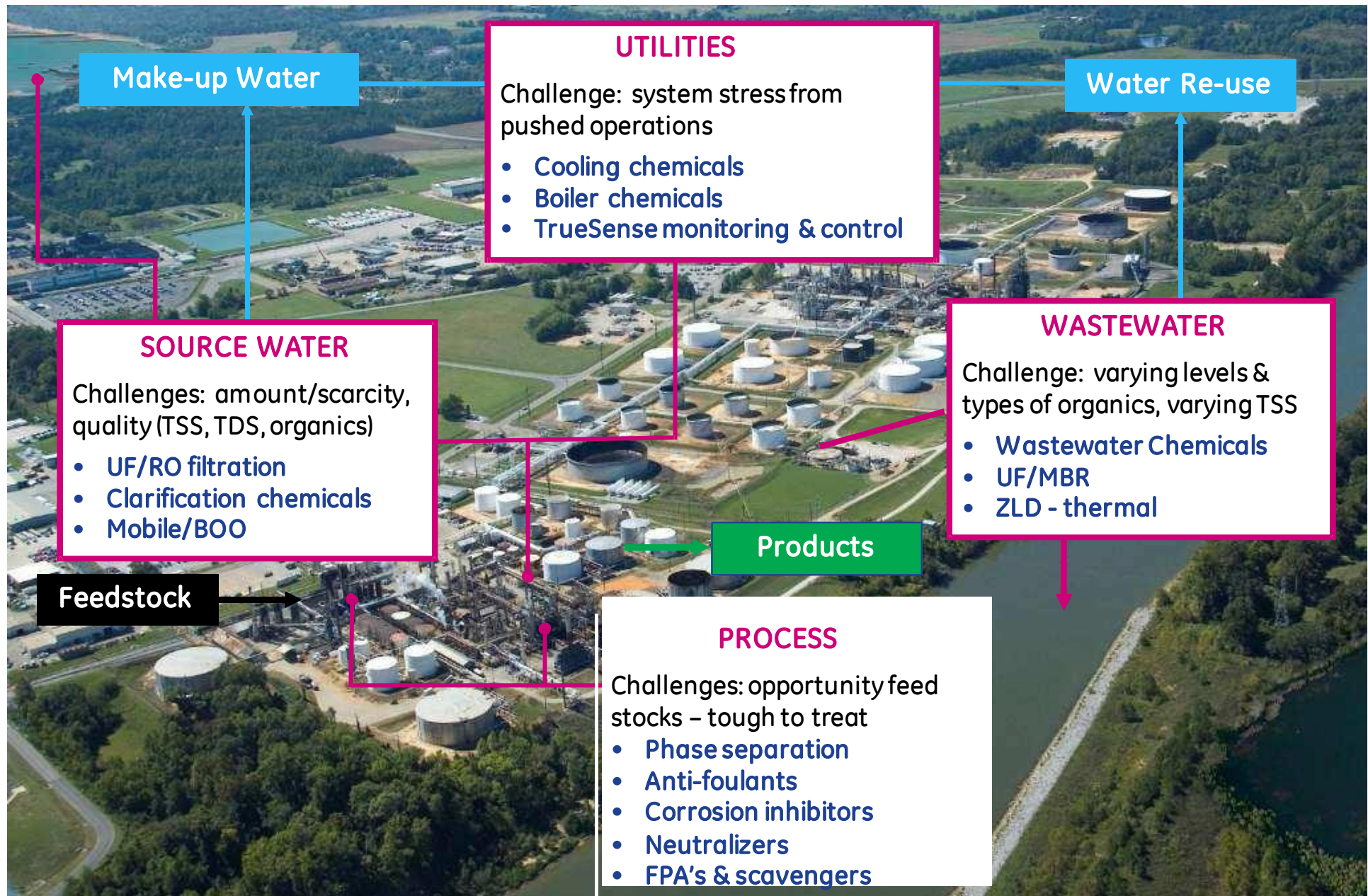
## ./ Chemicals & Monitoring Solutions CMS



imagination at work



# Water Management – Where We Play







GE water technologies purify enough  
water to satisfy the daily needs of 39  
million people around the world.



imagination at work



# Meeting the needs of North Africa

*Challenge: Insufficient fresh water to meet demands of growing city*

*Solution: Seawater reverse osmosis solution meets cities demand*

Hamma SWRO provides 25% of Algiers drinking water

Largest reverse osmosis desalination plant in Africa

53 MM gallons per day...enough for 1 million people every day

25-year Build, Own, Operate agreement



# Creating New Water Sources

*Challenge: Insufficient quality water for irrigation and human consumption*

*Solution: Purify wastewater for irrigation, use fresh water for drinking*

Sulaibiya plant in Kuwait City

Water produced for irrigation

Frees up fresh water for human consumption

375,000 cubic meters/day (100 MM gal/day)

World's largest membrane based wastewater filtration project

GE Proprietary Information Subject to Restrictions on First Page





# Eliminating discharge with ZLD

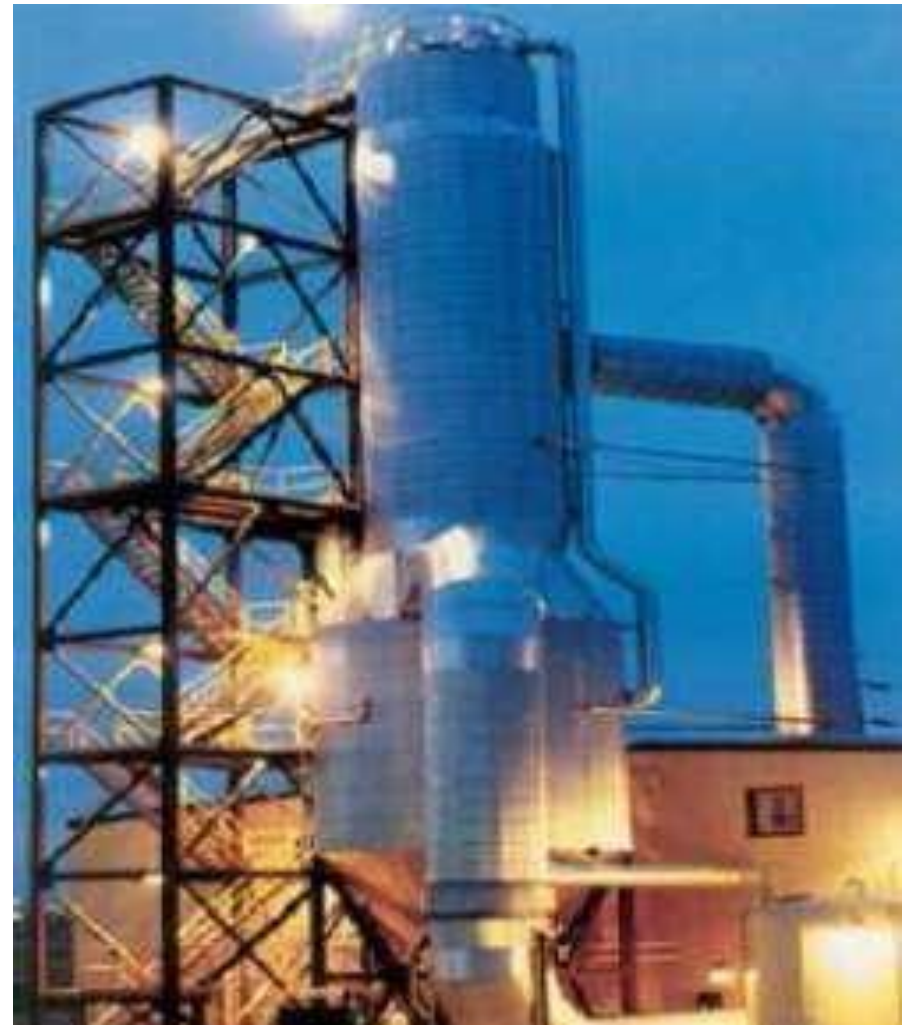
*Challenge: Environmental regulations prevented discharge*

*Solution: Water reuse and treatment system eliminates all liquid waste*

Hays Energy, Texas, USA – Zero  
Liquid Discharge System (ZLD)

Cooling tower feed is river water or  
secondary effluent

Integrated membrane system  
reuses 98% of plant's wastewater





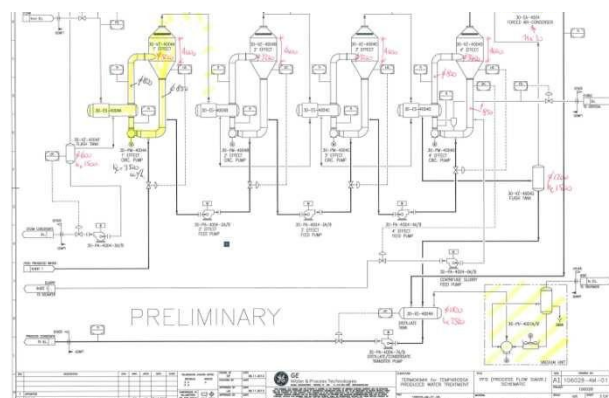
## News Release

IFAT Entsorga 2014

Booth # A2.217

### Tecnologie GE scelte per riciclare fino al 98% dell'acqua prodotta in un giacimento petrolifero in Basilicata

- *Prima applicazione di questo tipo in Europa di GE per il trattamento delle acque "prodotte"*
- *Evaporatore e cristallizzatore di scarico liquido zero GE per la depurazione e il riciclo dell'acqua presente nel giacimento petrolifero Tempa Rossa*
- *GE fornisce la tecnologia a Maire Tecnimont per Total E&P Italia*
- *I giacimenti petroliferi Tempa Rossa e della Val d'Agri soddisfano circa il 10% del fabbisogno italiano di petrolio*
- *Il progetto è conforme alle nuove normative nazionali in materia di ambiente e scarico delle acque reflue*





# Mobile Water Services

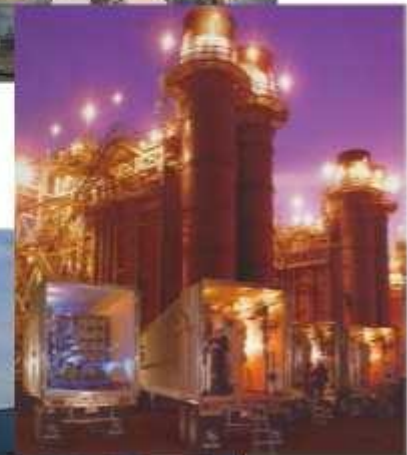


# GE Mobile Water System

## The Water When and Where you need...

---

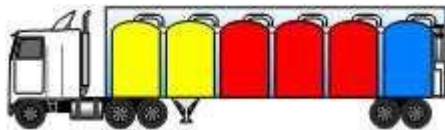
- Boiler Start-up
- Additional Water Requirement
  - Steam Blow
  - Pressure Testing
  - Boiler Chemical Cleaning
- Seasonal Peaking
- Equipment Maintenance
- Change in Raw Water Quality
- Condensate Dumping
- Failing Clarifier or Filters
- Environmental Issue



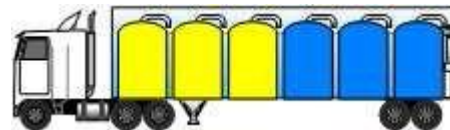


# Mobile Portfolio: EMEA

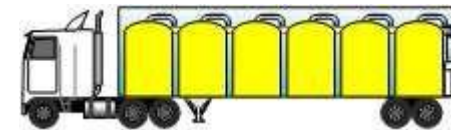
MobileFlow\* and MobileRO\*



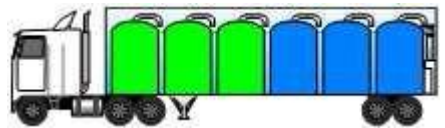
Demineralization



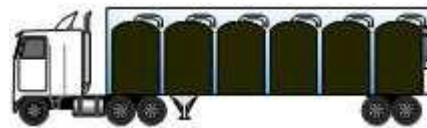
Condensate Polishing



Softening



Deoxygenation



Filtration



Reverse Osmosis & SWRO

- Filter Media
- DEOX Media
- Cation Resin
- Mixed Bed Resin
- Strong Base Anion Resin

**NEW!**



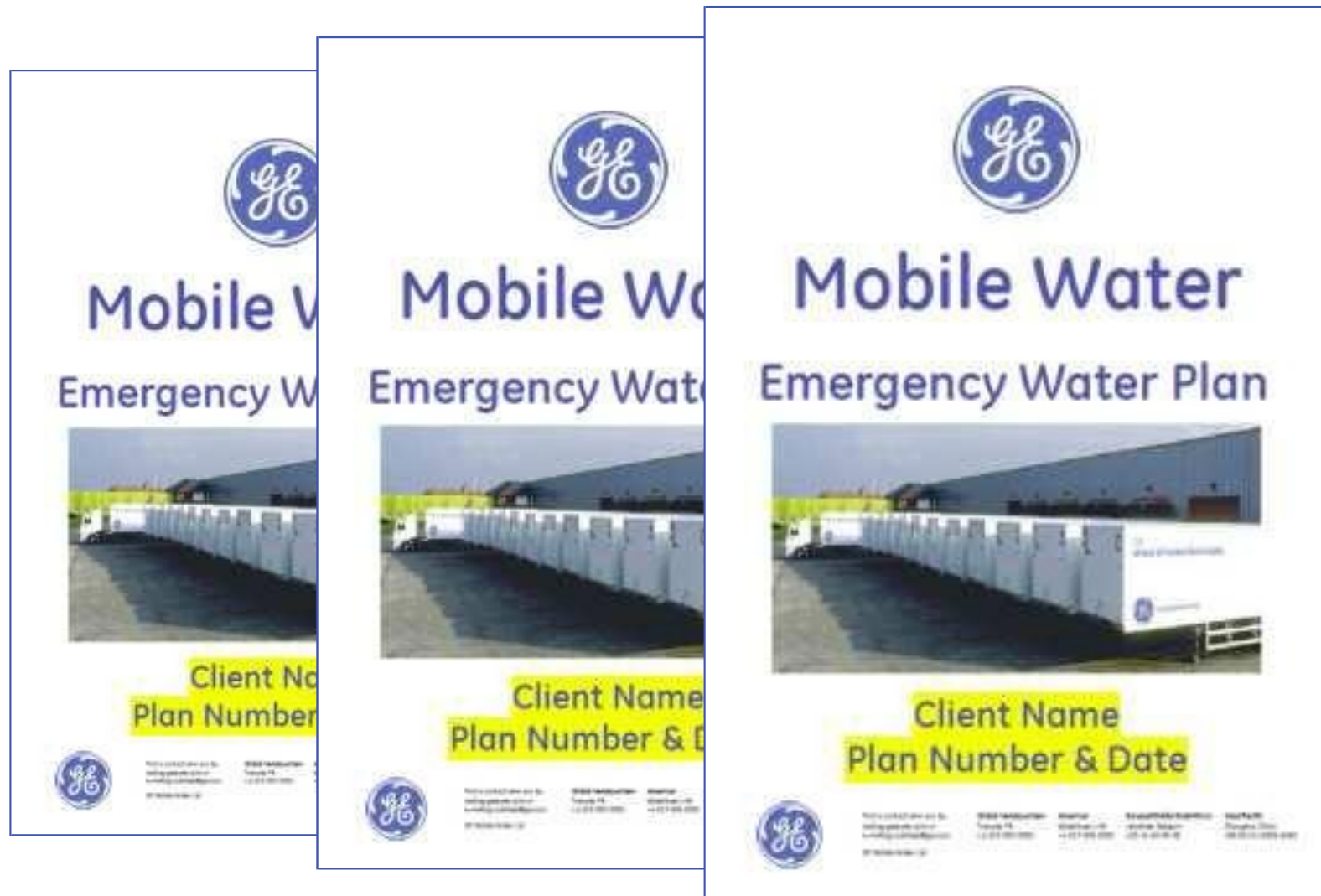
Ultrafiltration M-PAK

# Emergency Water Plan



# Site by site Emergency Support Plans

---





GE  
Water & Process Technologies



imagination at work

**CMS Portfolio**  
Chemicals & Monitoring Solutions

# GE W&PT Product Offering

---

## Water Chemicals

### BoilerTreatments

- Corrosion Inhibitors
- Fouling Control

### Cooling Treatments

- Corrosion Inhibitors
- Fouling Control
- Microbiological Control

### PreTreatment

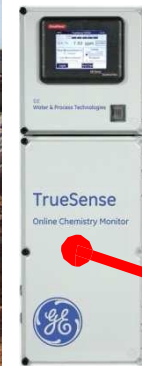
- Coagulants
- Flocculants

### WasteWaterTreatments

- Coagulants
- Flocculants
- Dewatering Aids
- Separation Aids
- Antifoam
- Bioaugmentation



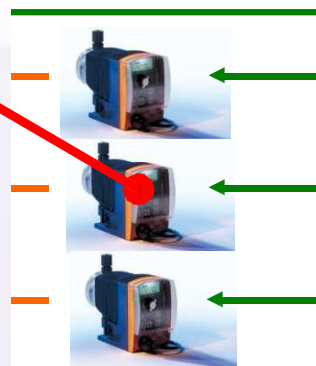
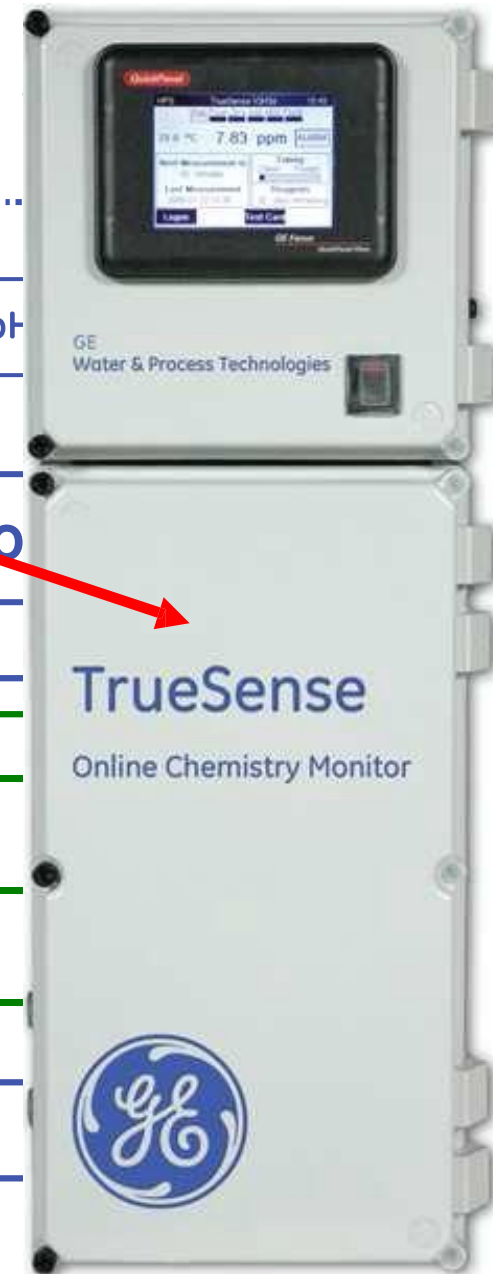
Monitoring



pH

Co

her...





## Injection Skids and chemical tanks



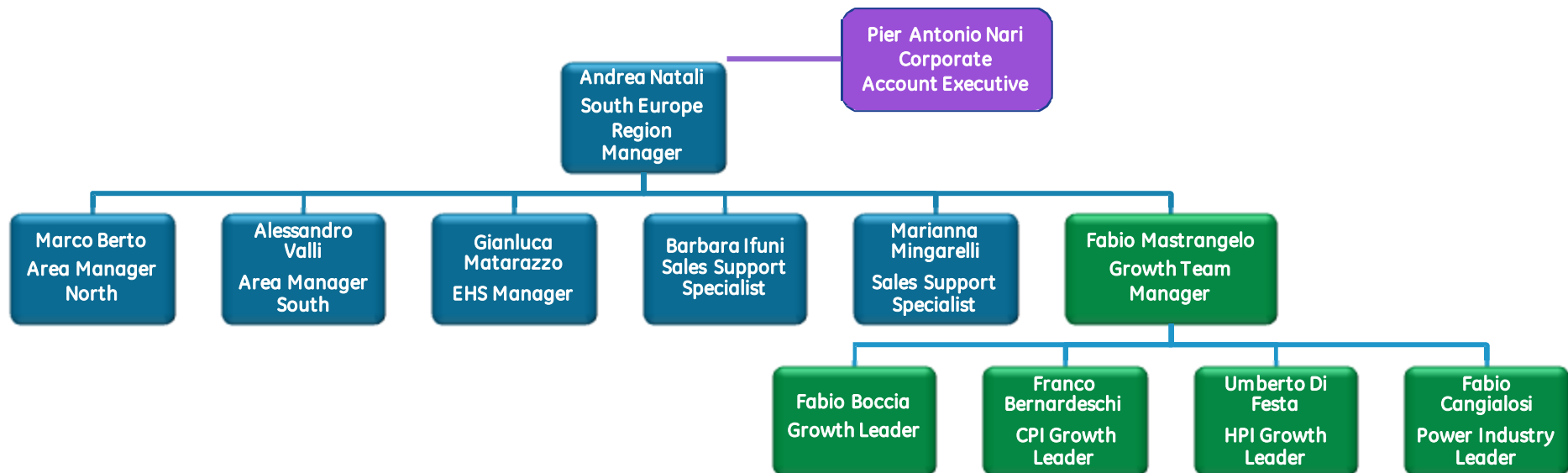
# CMS Sales & Services Organization - Italy



imagination at work

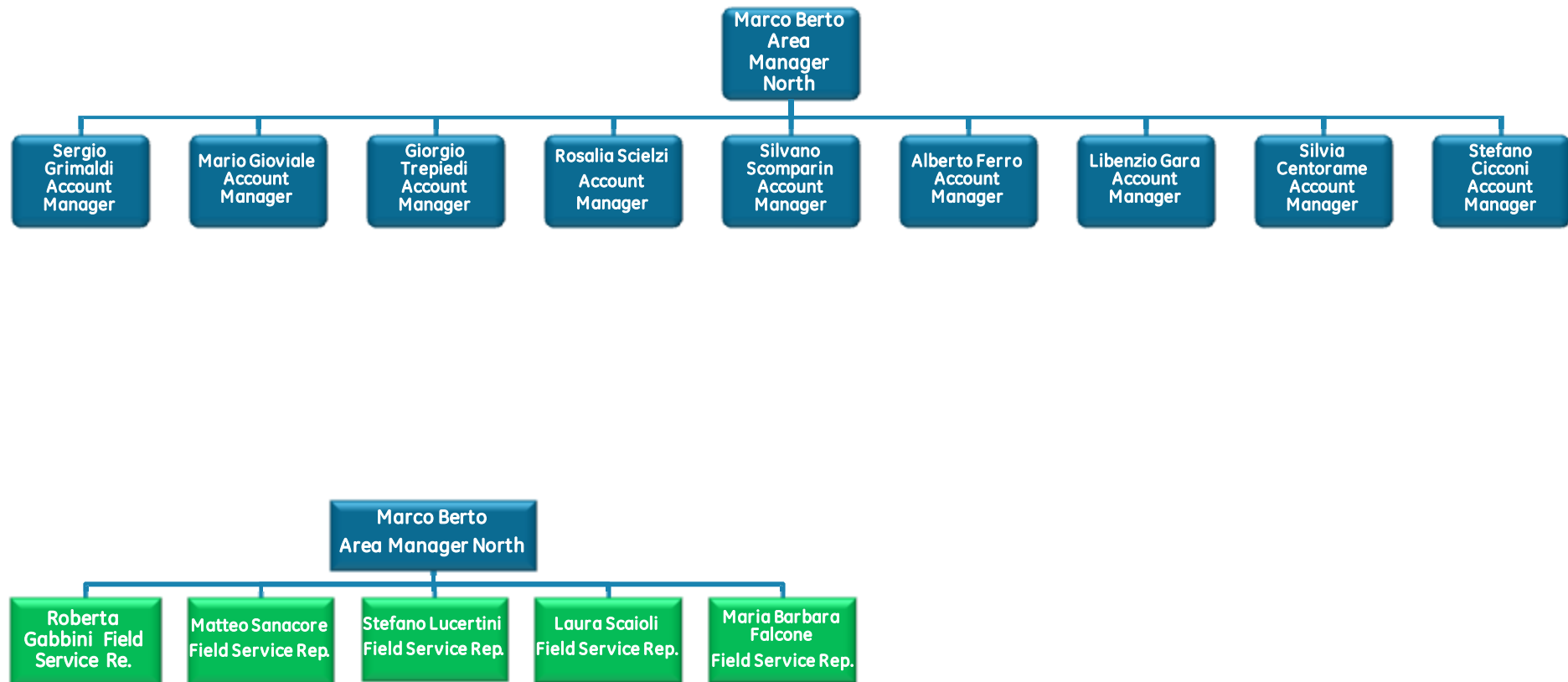


# CMS Sales Organization Italy

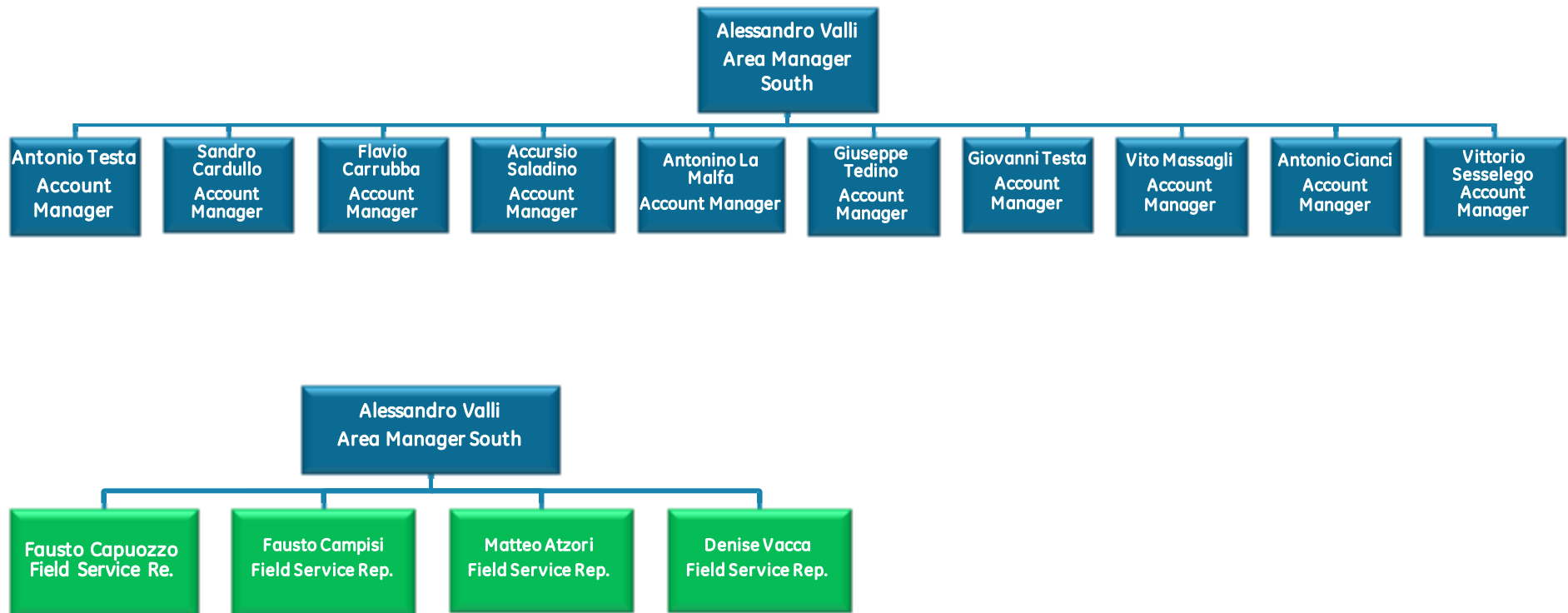




# CMS Sales Organization North Italy



# CMS Sales Organization South Italy & Islands



# Remote Monitoring & Diagnostics



## Why choose GE ?





# The answer is clear .....

	GE	Others
Direct measurement of residual polymer in your system	✓	✗
No interference	✓	✗
Maintains required chemical residual in all conditions	✓	✗
Polymer accuracy up to 1ppm	✓	✗
Immediate controller calibration – no need for learning curve	✓	✗
Dosage control assures the optimum residual polymer is always present	✓	✗
Can use GE & Customer data – manual & digital	✓	✗
Available for all water & process applications eg Boilers / Waste Water	✓	✗
Control Centers operating 24/7 including Europe (Belgium)	✓	✗
Monitored by >40 Technical Experts in Europe	✓	✗
State of the art patented technology	✓	✗

GE leads the Industrial Internet & continually invests to stay ahead

# It is what you do with data that counts

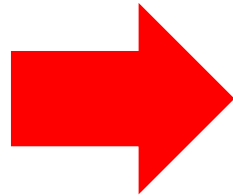


Service Reliability Centres,  
monitoring your assets  
pro-actively 24hr/day

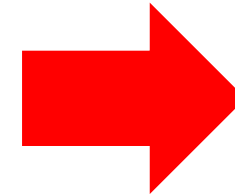


Located within GE  
W&PT facilities in  
Europe, North America  
& Asia + Operated by  
Industry Experts

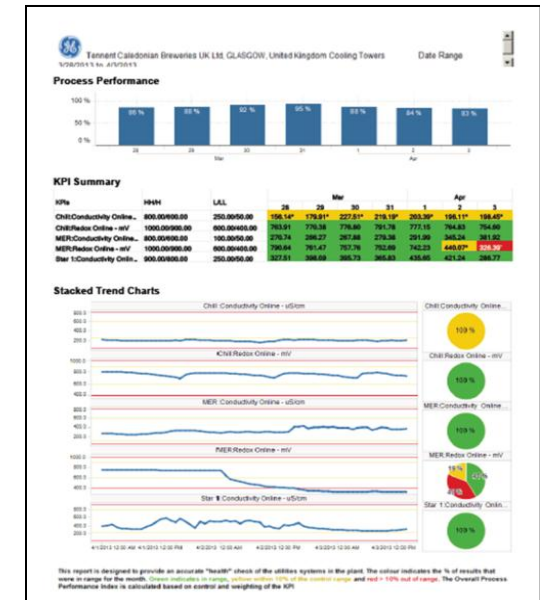
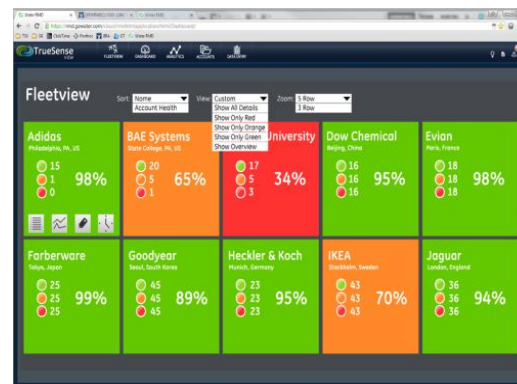
# Differentiation .....



SRC

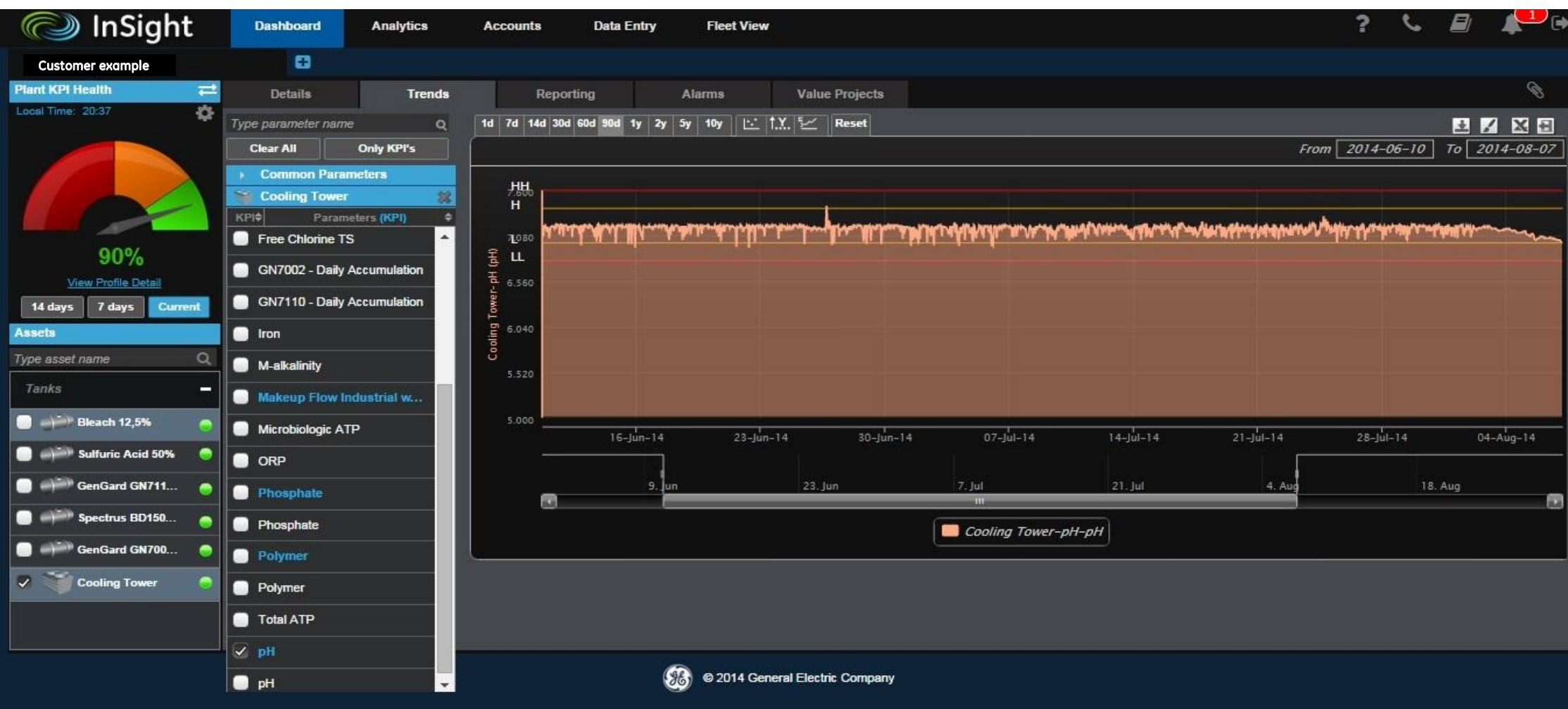


Via the Web / Email

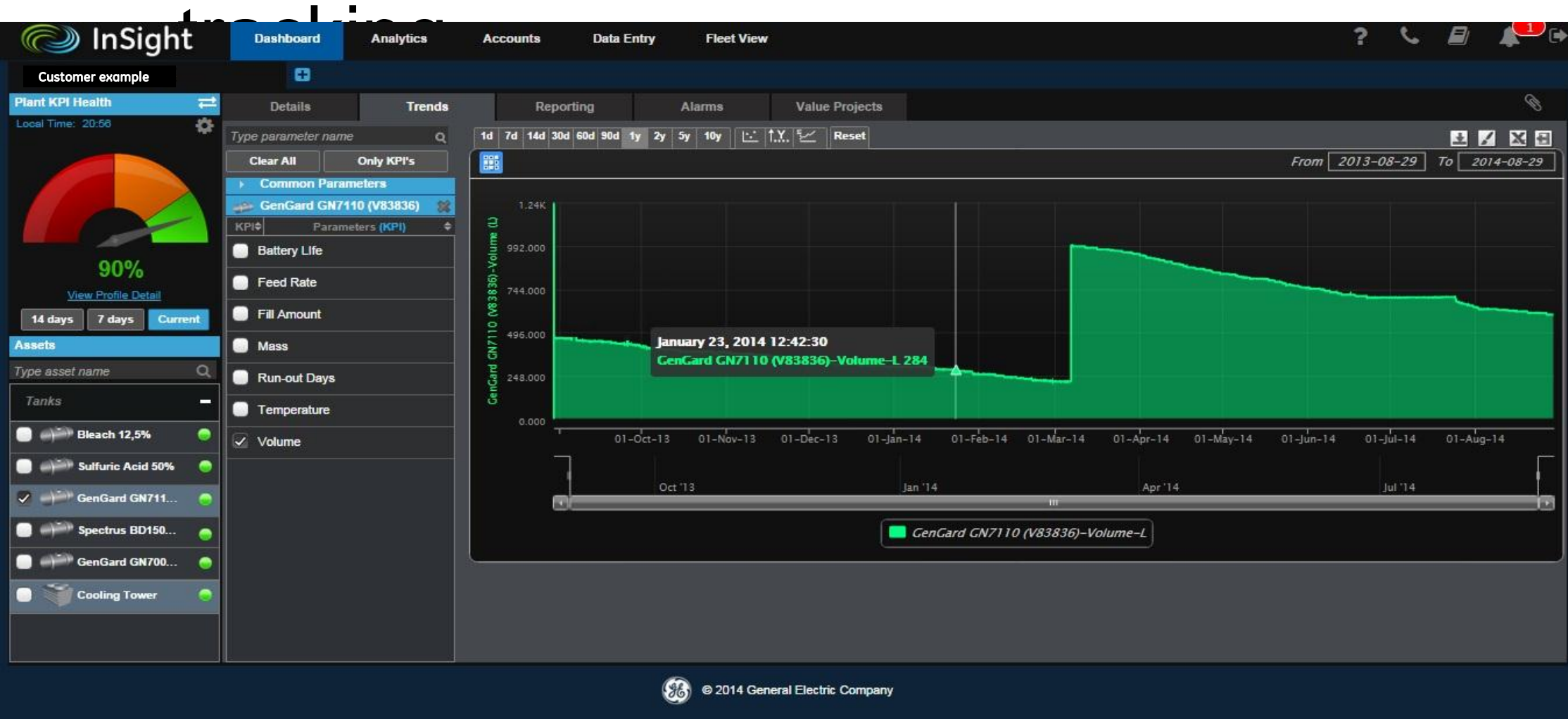




# InSight example – pH tracking



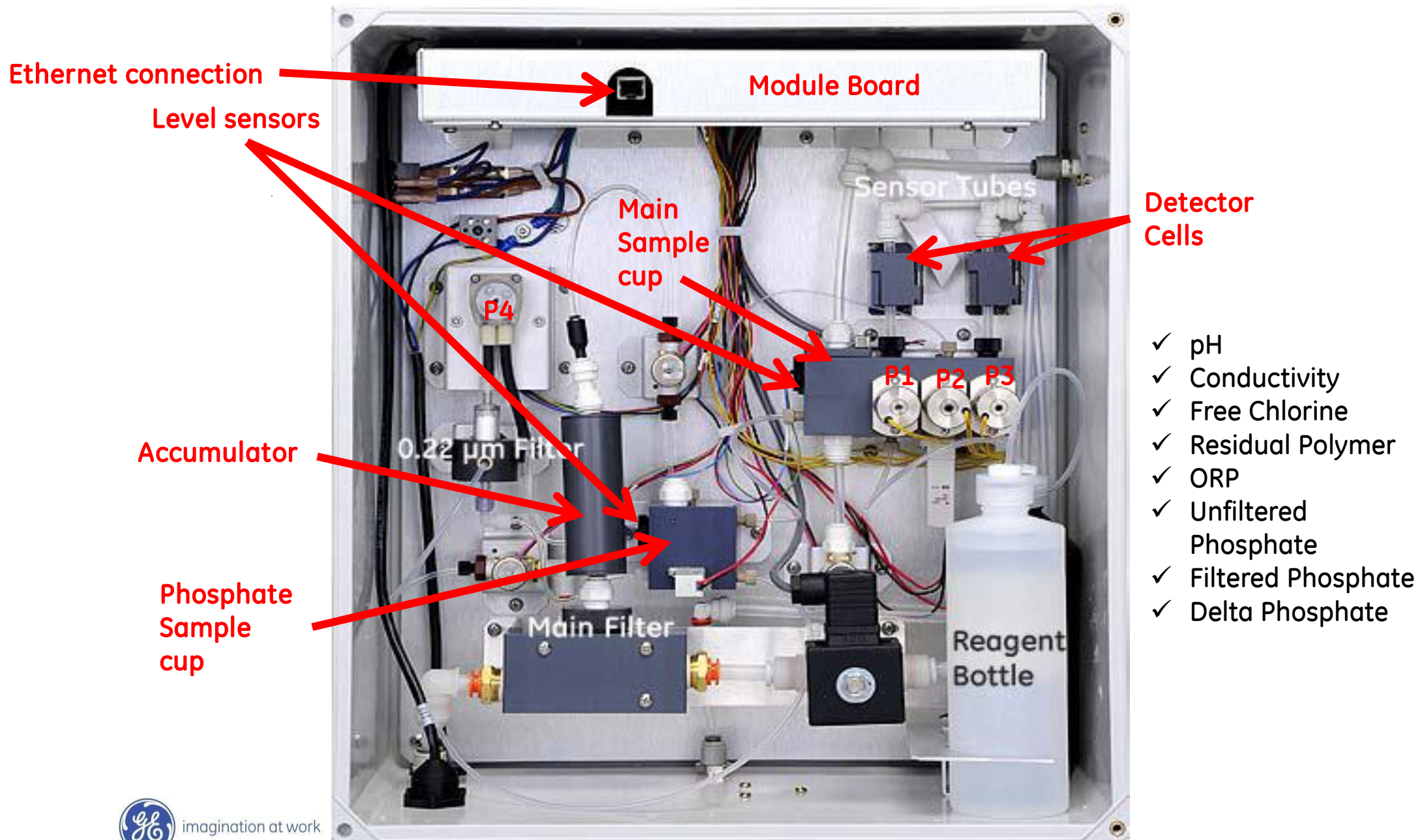
# InSight example – Tank level



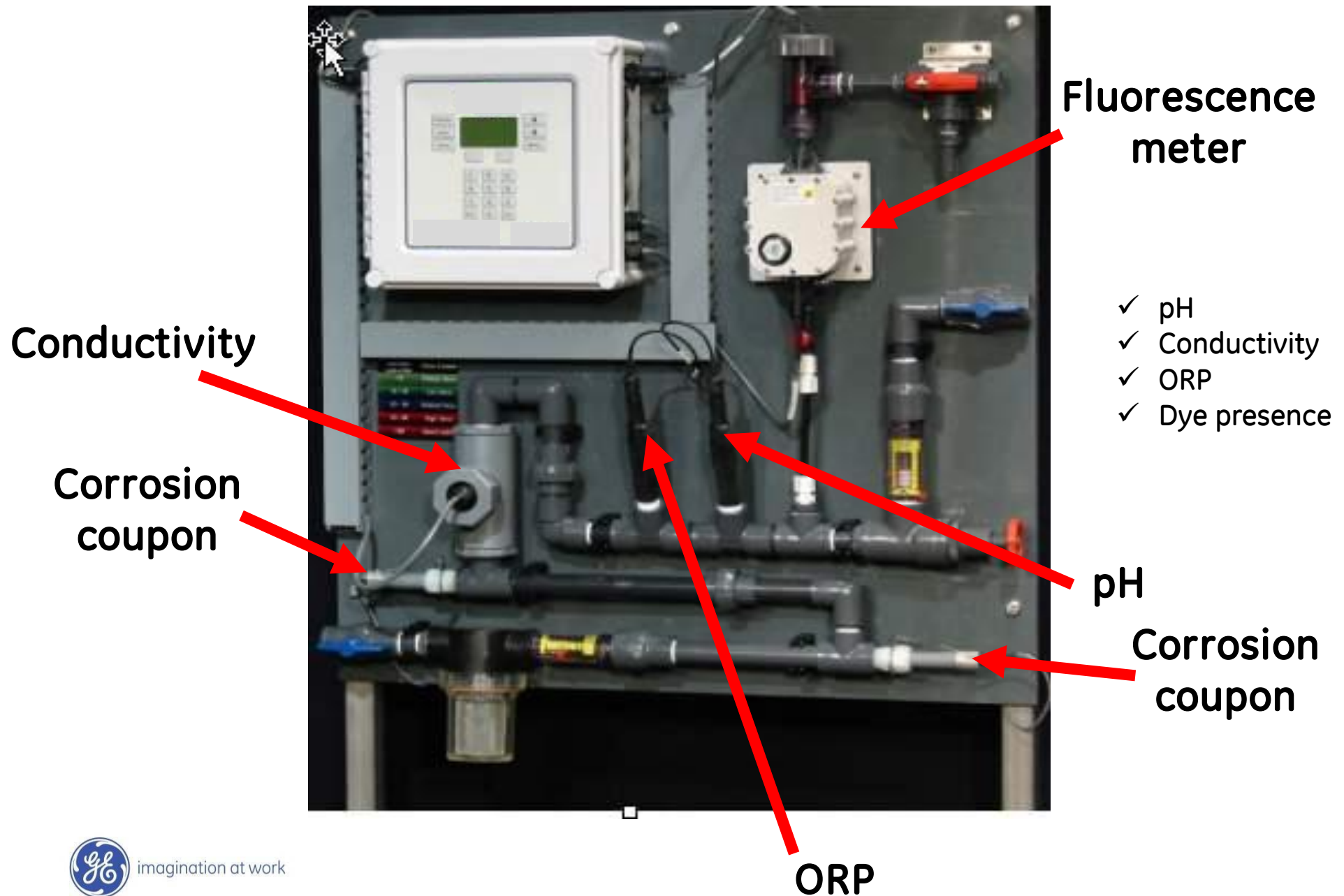
# Inside the Box



# GE – State of the Art



# Versus older technology



# Pro-active visibility at all times

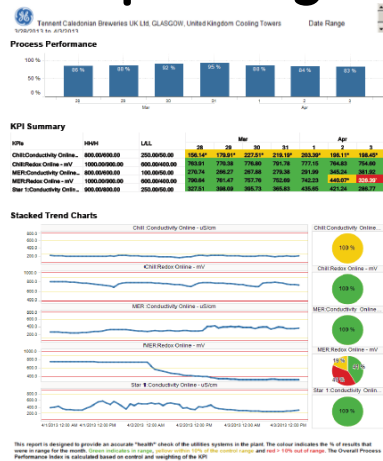
## Web access



## Mobile Connectivity



## Reporting



## Fleetview





# The 3 Levels of iService

## 1. InSight Manual Data Entry



## 2. Sensor + Controller + InSight Wireless



## 3. Analyser + Controller + InSight Wireless + more



