

Revenue Management as a Customer Service

Ed Hackney



About Ed

14 years with SUEZ and United Water

- Revenue Management
- Operational Technology
- Engineering
- IT

2 Internet Startups

2 “Big 4” consultancies

BS Rutgers '95

MBA Fordham '02



SUEZ, A World Leader In Sustainable Management Of Resources

WATER

92 million people supplied with drinking water
1,130 drinking water production sites
10,000 water treatment plants in **70** countries
65 million people benefiting from sanitation services
2,310 wastewater treatment sites

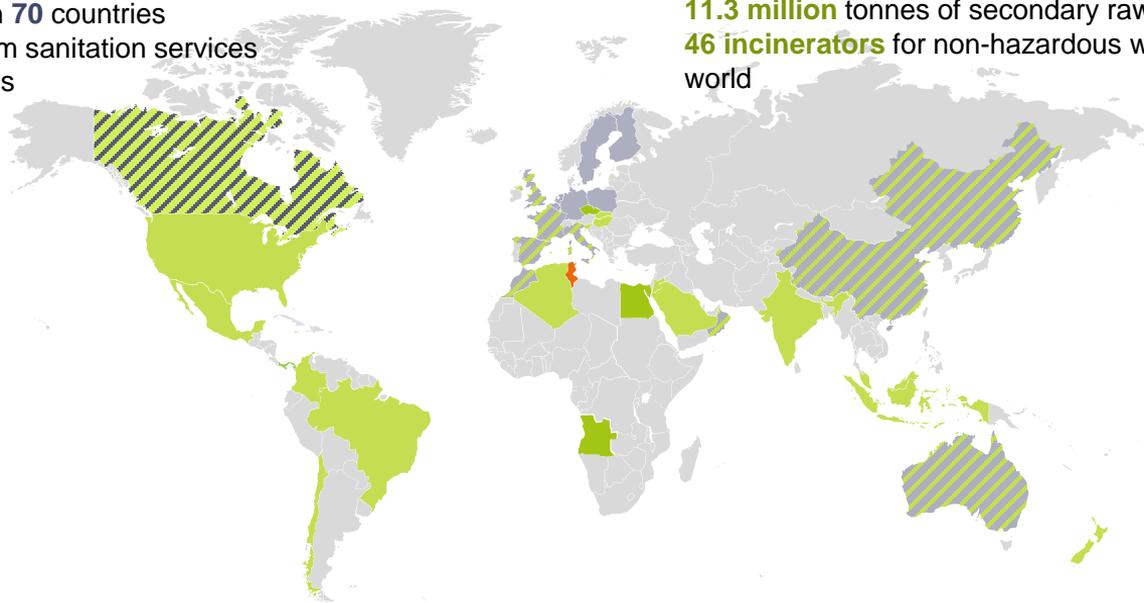
82,500
employees

€16.2 Billion
revenue in 2015

€74 Million
invested in Research

WASTE

34 million people benefiting from waste collection services
17.6 million tonnes of waste treated
11.3 million tonnes of secondary raw materials
46 incinerators for non-hazardous waste throughout the world



SUEZ in North America

Operating in all 50 states and Canada



3,400 employees



15 water utilities
Regulated by State
Utility Commissions



**55,000 tons of
waste for recycling**



**16,000 industrial
& municipal sites**
for water treatment and
advanced network solutions



**7.4 million people
water & wastewater
served**



**78 public-private
partnerships – municipal
water systems**
Two concession agreements
investing over \$300 million
in infrastructure in partnership
with private equity firm KKR



Revenue \$1.3 billion
Manager of \$3.3 billion
in total assets in 2014



**Benefiting from \$80 million global
research & innovation budget**



The Premise:

**Water AMI / Smart Meters
Focus on Revenue
Enhancement**



True... but

**Going digital is also a
powerful conservation tool**



...And

**Revenue Management is an
important part of Customer
Service to maximize ROI on AMI**



Because....

**The full value of AMI not realized
unless Revenue Management
methods and actions are practiced**



Revenue Management Components - Baseline

Build the team

Focus on the Meter to Cash Process

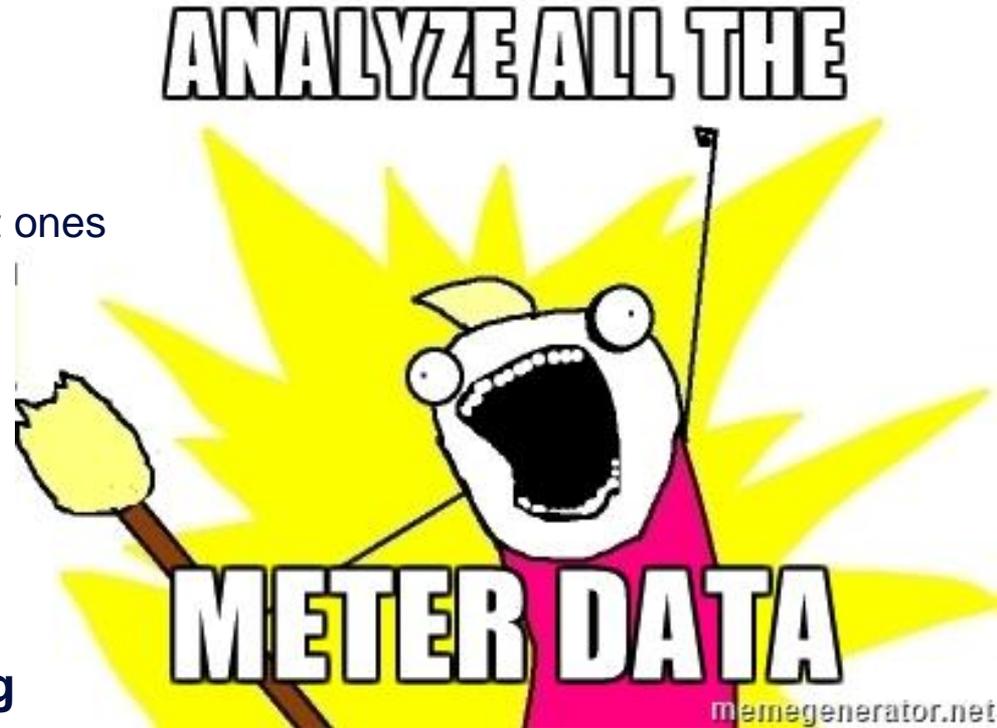
- True focus on Meters – choose the right ones
- Maintenance program
- Track as an asset

Clean your customer data

Capture & analyze all meter data

- Time for AMI? Disk & CPU now cheap

Take action – workforce repositioning



Revenue Management Components - Enhanced

Optimize the Team

Maintain Meters on Age & Flow

- Focus on Strategic Customers
- Right-size meters (5, 15 min data)

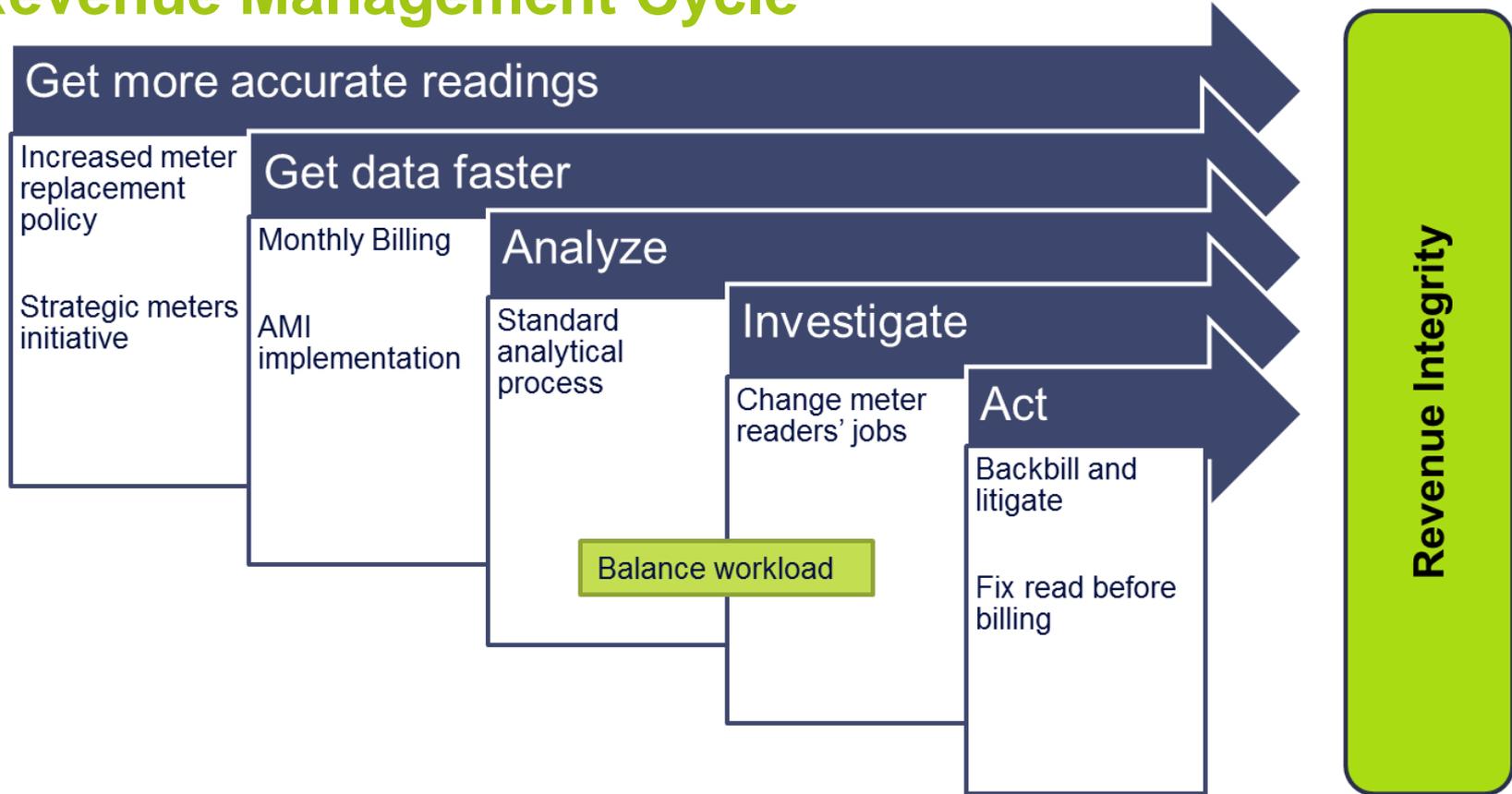
Deep Customer Data Management

Customer Engagement

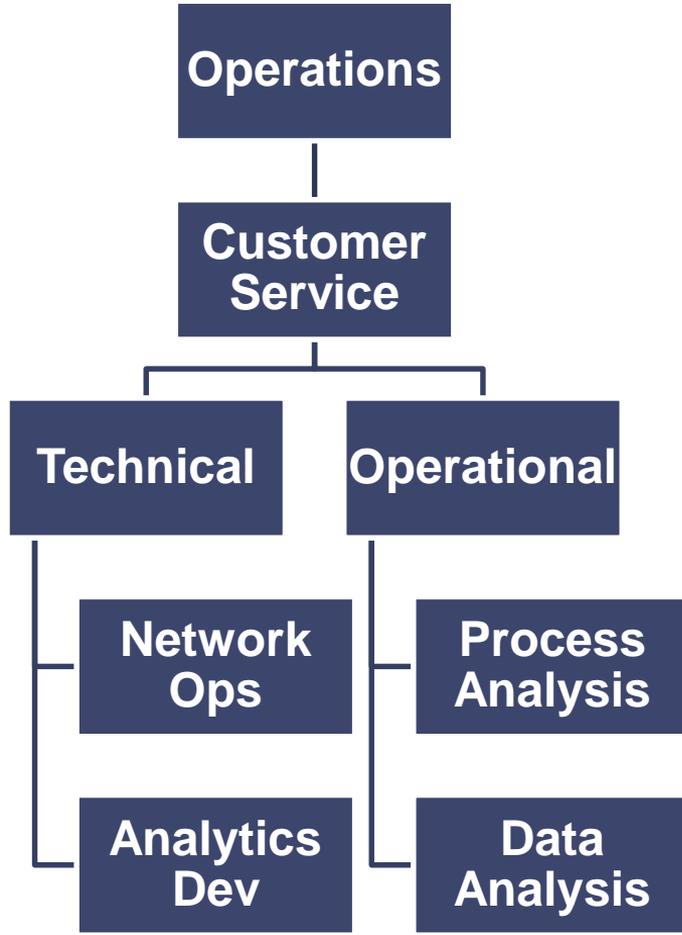
Mobile Work Management



Revenue Management Cycle



Revenue Management Structure



121



Revenue Management Results

In one \$200M USD/year Utility:

\$3.7M Additional Billed

Sources (in order):

Bad Customers (Tampering)

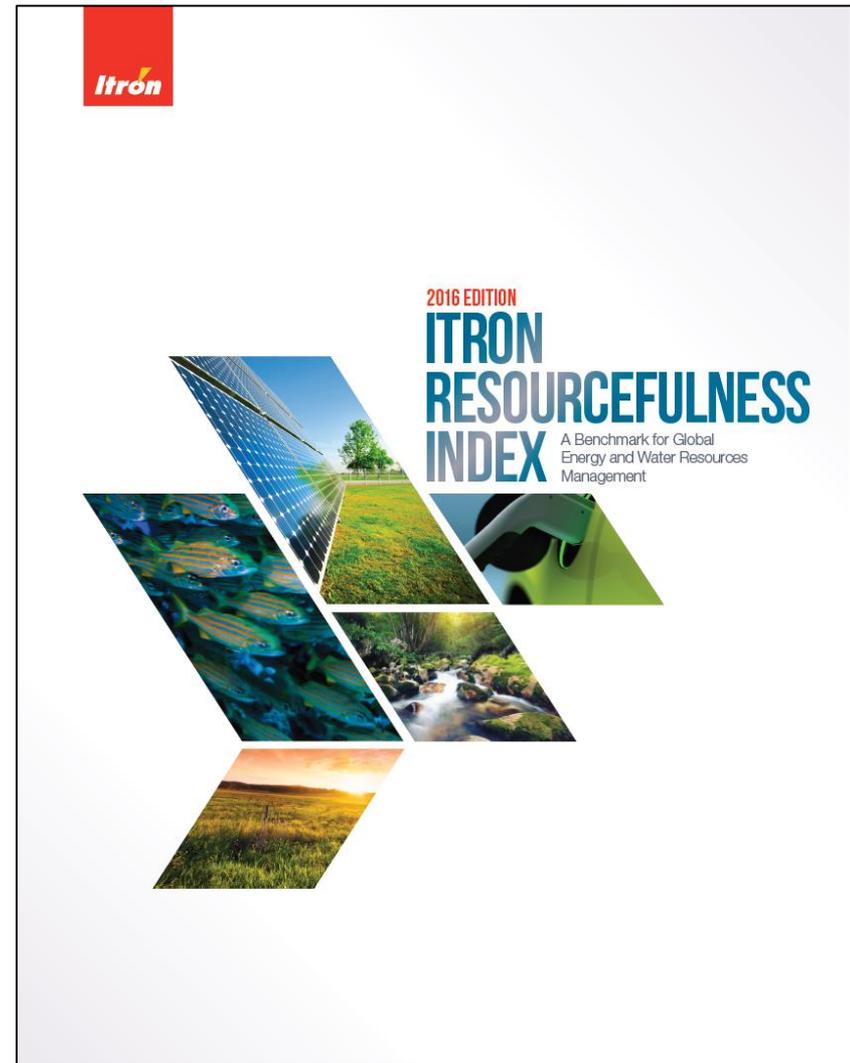
Bad Meters

Bad Data



Revenue Management Role Mapping to Industry Trends

<https://itron.com/index>



Revenue Management vs 2016 Itron Resourcefulness Survey - 1

Smart Networks

TREND #1

Utilities are Deploying Technology That Can Lead the Age of the Internet of Things and Smart Cities

79%
of all utility
executives



said their country needs an integrated energy system that includes renewables

TREND #2

Utilities Are Turning to Technology to Address the Changing Business Landscape



74%
of all utility
executives

viewed the changing business model as an "urgent" or "growing concern"

Operational
Technologies

Customer
Management

TREND #3

Consumers Want Utilities to Do More to Connect the Dots for Them

Only
25% of
consumers



felt informed and satisfied with the amount of communication from utilities about changes in the industry

TREND #4

It's Not About Big Data; It's About the Right Data

Less than half,
49%



of utility executives felt that their company is prepared to manage big data today

Manage all
Systems & Data

Secure all
Systems & Data

TREND #5

Cybersecurity Continues to Be a Concern

71% of
consumers



were increasingly concerned about cybersecurity and physical attacks on utility systems

Revenue Management vs 2016 Itron Resourcefulness Survey - 2

Regulator Engagement

(ex: AMI Approval, Conservation efforts)

TREND #6

Gas and Electricity Grids Grow Together



79% of utility executives

said there needs to be a connected energy system that includes gas, solar and wind renewables

TREND #7

Addressing Wasted Water Is a Priority



71% of water utility executives

thought their ability to deliver adequate services will be diminished if inefficiency in the industry persists

TREND #8

Government Has an Increasing Role in Shaping Resourcefulness



53% of utility executives

said government regulation delays investment

TREND #9

Next Generation Workers are Needed



71% of utility executives

surveyed thought attracting the next generation of utility workers was a growing or urgent problem

Customer Engagement

(ex: Leak Notification)

TREND #10

Everyone Needs to Take Action to Create a More Resourceful World



41% of utility executives

thought that consumers play the biggest role in improving resourcefulness, closely followed by governments and then utilities

Revenue Management in Action: Bayonne, NJ



The Bayonne Story



SUEZ and KKR joint venture selected for a 40 year contract; SUEZ to operate the system

Invest a minimum of \$20M in improvements over the first five years, \$107M overall

Services include

- Water Utility
- Wastewater Utility
- Billing and Collections
- Customer Service
- Capital Investment Management

SOLUTIONSM
Investing in America's Water

Projected savings of \$34M over 40 years for City



Smart Metering in Bayonne

Replace and recycle 20 year-old direct-read meters

Install 11,000 smart meters, 15 rooftop or pole collectors

Ultra precise (.01 cubic feet resolution) meters by Sensus Technologies

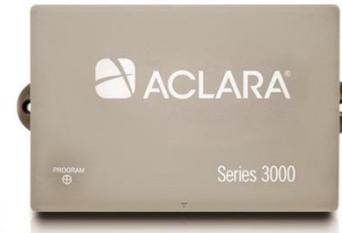
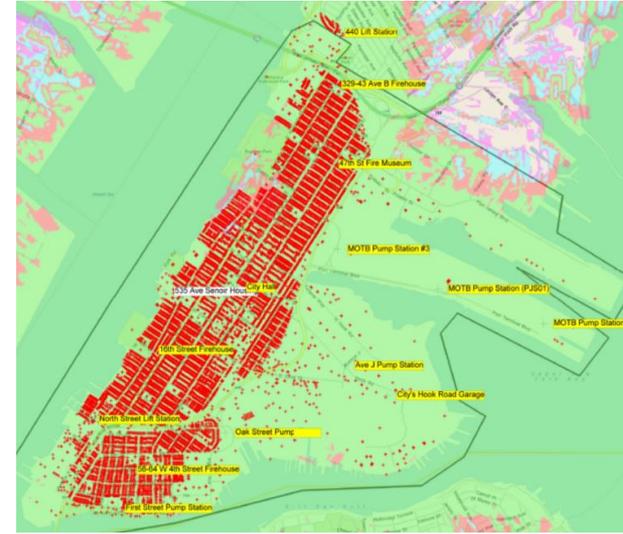
Securely transmit hourly reads via Aclara AMI endpoints and collectors

Daily reporting, compare with SCADA:

3/14/16, Total System Consumption - 674245 Cu. Ft.

3/13/16, Total System Consumption - 590630 Cu. Ft.

Daily NRW monitoring driving action



Revenue Management Action Driven by Smart Metering

Metering Supervisor reviews AMI reports every single working day

30 minutes to review:

Network collector status

Total consumption

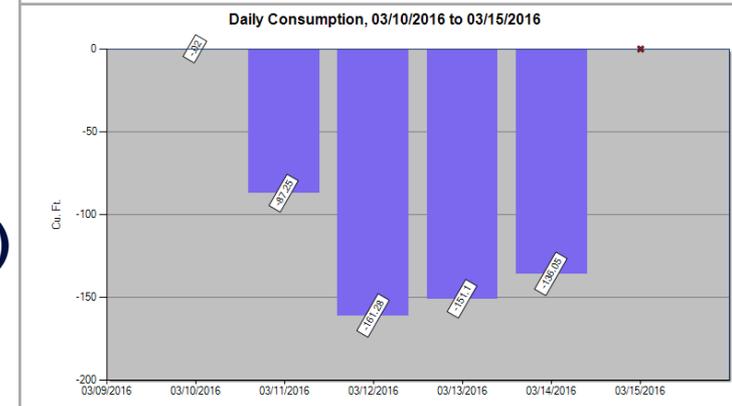
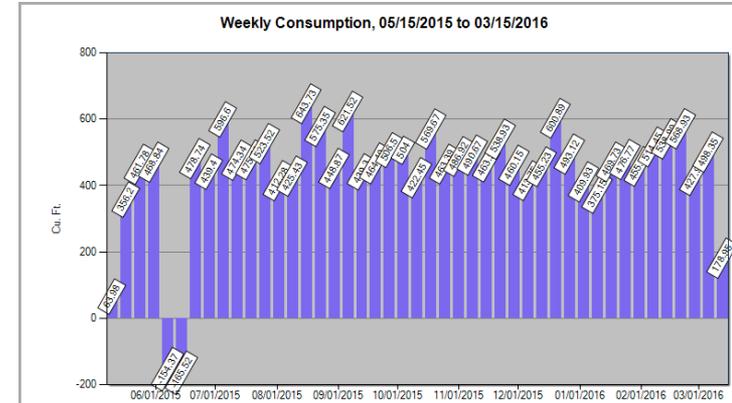
Backflow/negative consumption

Zero consumption

Constant consumption

Missing reads

Large customers (Laundromats and car washes)



Revenue Management Action Driven by Smart Metering, cont.

Metering Supervisor reviews AMI reports every single working day

Then takes action:

Direct instant contact, re: significant tampering

Dispatch to inspect installation anomalies

Next day tamper& installation anomalies detection

Backbill calculations

Occasional Law Enforcement assistance

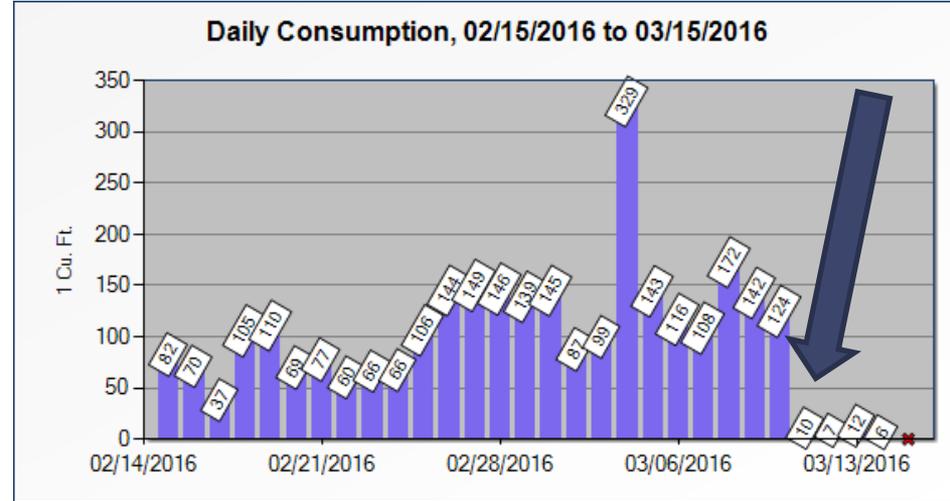
Leak notification calls and letters



Leak Notification Results and Analysis

Results in Minimizing Wasted Water:

- 10%+ of the customer base had significant leaks
- 1,100+ leak notifications sent (letters, calls, emails)
- 1,033 meters' consumption analyzed
 - (several months before and after notification)

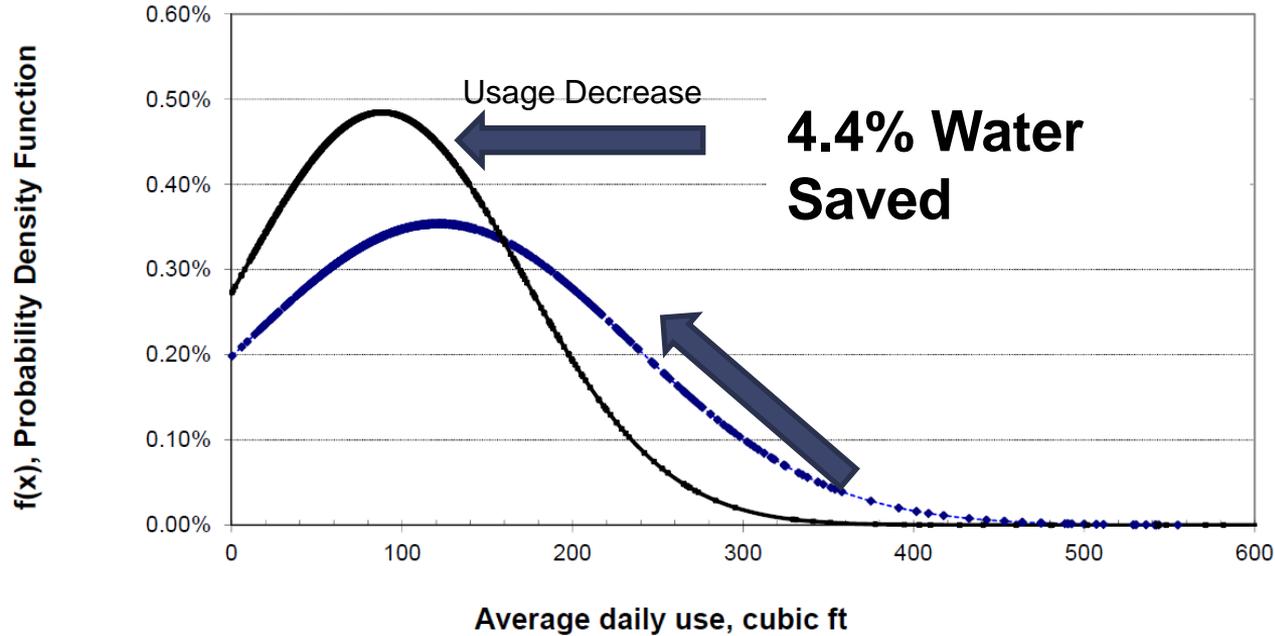


Consumption by the notified 1033 decreased by 38%

Total system demand decreased by 4.4%

1033 Meters on The Graph

2013-2015 Leak Letters

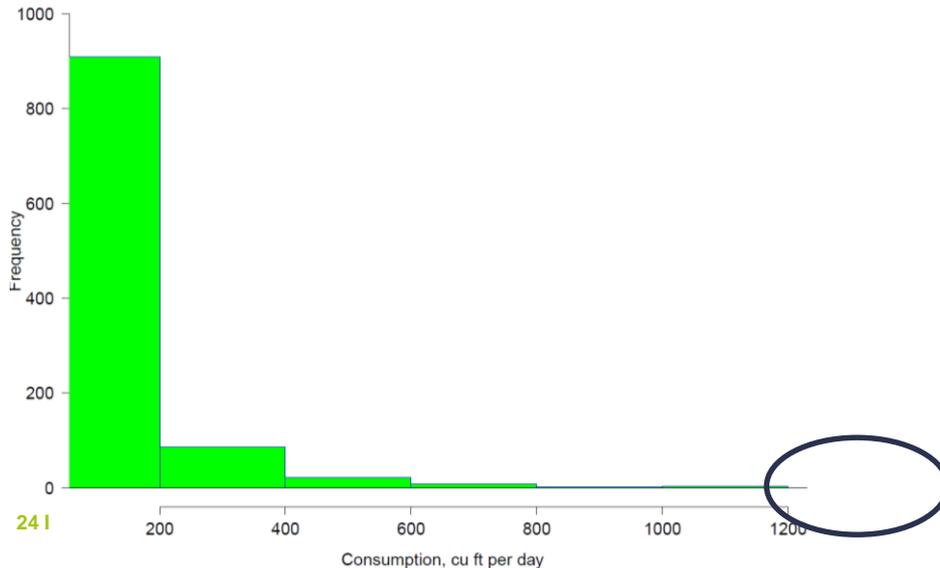


Leak Notification Results and Analysis

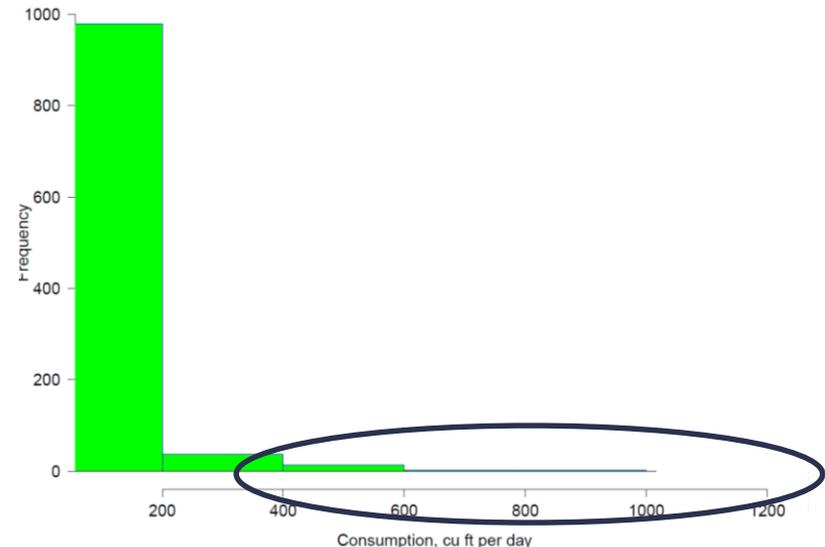
Real Numbers, Real Results in Minimizing Wasted Water:

- Increased customer satisfaction & engagement
- **On track to *not* waste 100 million gallons of water per year**

Histogram Consumption Before Letters

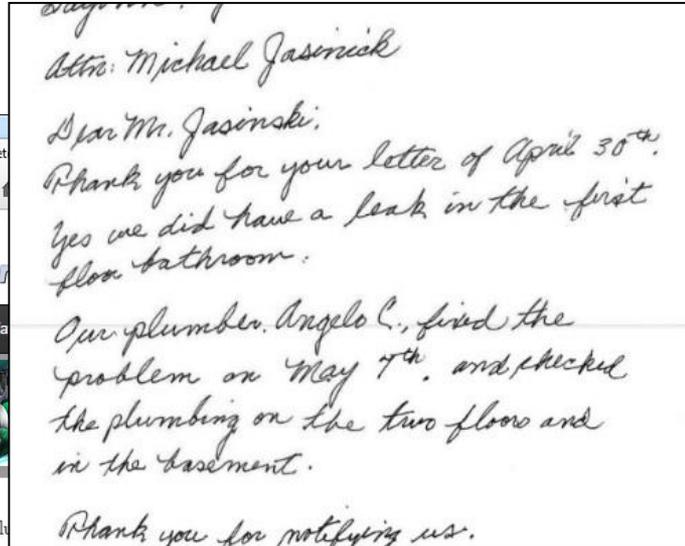


Histogram Consumption After Letters



Revenue Management Impact

- **1100+ customers notified about leaks**
 - Success story touted in media
- **Many thankful customer calls and letters**
- **Virtually no “big brother watching” or RF complaints**
 - The few that came in were dealt with on a 1:1 basis, with information and respect
- **Some customer expressed annoyance in social media that they could no longer tamper!**
 - Tampering significantly decreased



Smarter Meters Help Plug Leaks In Bayonne, NJ — Over 800 Detected

By Ed Hackney, Director of Revenue Management, United Water

Water is relatively inexpensive in the context of your overall household budget. On average, the cost of water is less than a penny a gallon. That makes it all too easy to waste.

Right now, in your basement or in your backyard, there's that one spigot that won't completely shut off. And you're paying more for water service than you have to as a result.

If that sounds familiar, you don't live in Bayonne, NJ, where United Water has installed over 11,000 new and smarter meters for 95 percent of the city's residents and businesses. High-resolution Sensus SRII meters and Aclara endpoints enable meter data to be constantly gathered by several collectors on poles and rooftops throughout the city. Data is then transmitted to United Water servers for calculation and consumption reports.



Satisfied Customers

“Found a note in my front door from SUEZ about a possible leak in our house. The note was written on a form showing a read out of a drastic spike in water consumption.

Thank you for the attention you gave to us on our issue and the quick warning. I am sure this warning saved us a pretty penny.”

Smarter Water Meter Data Helps to Detect More than 800 Leaks in Bayonne, NJ

by United Water Team | Oct 16, 2014 | Featured, Investing in Infrastructure, Our Projects, Technology & Innovation, United Water SOLUTION™, Water Conservation | 0 comments



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If that sounds familiar, you don't live in Bayonne, NJ where United Water, has installed over 10,500 new and smarter meters for 90 percent of the city's residents and businesses. The data from the new meters enables our dedicated customer service team to show and tell homeowners and the Bayonne Municipal Utilities Authority (BMUA) how much water they're using each day.



Revenue Management Take Aways

Critical part of a high-performing utility

Enhance revenues

Technical by nature

Enhance conservation

Nexus between CS, IT & ENG

Enhance engagement

Thank You!

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