To Know or Not to Know…
An Actionable Approach to Performance Management

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Starting from (almost) scratch
Goals, levels of service, and KPIs…oh my!
Turning data into knowledge
Now what?
01 Starting from (almost) scratch
Background

**What?** Collection System Improvement Program (CSIP)

**Why?** Reduce SSOs and increase operational efficiency

**Where?** City of Winston-Salem, Forsyth County, NC

**Who?** City/County Utilities (CCU)
  - 100k sewer connections
  - 225 FTEs working in collection and treatment
  - 1750 miles of gravity sewer lines
  - 50 pump stations

**When?** 5-year program kicked off in July 2016 (assessment and fast start activities Mar-Jul 2016)
Vision
We will be a top-performing utility supported by a trained, knowledgeable, and proactive staff, dependable equipment, efficient processes, effective information management, and fair and affordable rates.

Mission
To improve collection and conveyance of wastewater while protecting the environment and community we serve by complying with all regulatory requirements.
What does “starting from scratch” really mean?
02 Goals, levels of service, and KPIs…oh my!
Where to “start”?

**Goals**

*What specifically are we going to achieve over the next five years?*

1. Operate in a manner that aligns with regulatory expectations
2. Become an employer of choice
3. Transition from mostly reactive, to mostly proactive maintenance
4. Develop resilient and sustainable policies and practices
5. Use sound data to make good asset management decisions
6. Execute the right projects, at the right time, for the right reasons
The storm! (brainstorming, that is…)

Selecting KPIs:
No enterprise solution? No problem!

Drum roll please...
03 Turning data into knowledge
The old made new

Cleaning Totals
Proactive vs. Reactive

Proactive: 88,177  44%
Reactive: 110,159  56%

Ratio of Planned to Reactive Cleaning WOs

Month
July...
August...
September...
October...
November...
December...
January...
February...
March...
April...
May...
June...
July...
August...
September...
October...

Miles Cleaned
0
5
10
15
20
25
30
35
40
45

Percent of Miles Cleaned
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Sum of CCU Reactive Miles
Sum of Contractor Reactive Miles
Sum of CCU Proactive Miles
Sum of Contractor Proactive Miles
Miles Cleaned
Old data, new tricks

Reactive Work (Service Request Response) by Follow-Up Work Order Type
New data, new look

Vehicle Status by Type

Running Total as % of Days

Vehicle Type, Vehicle, Month, Date

Dispatched  Down-Eq.  Down-Staff  Other

Avg. and Max. Cumulative Down Days (vehicle in shop)

Vehicle Type, Vehicle, Month, Date

Average of Cumulative Down Work Days (Shop Only)
Max of Cumulative Down Work Days (Shop Only)
04  Now what?
Where we've been…

Year-to-Date SSOs per 100 Miles of Pipe

Planned and Reactive Work

Collection System Improvement Program

Cleaning Productivity vs. Goals

SSOs by Aggregated Cause

SUCCESS IN YEAR 1
So, how ARE we doing?
Where we’re going...
Questions?

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