

#### Like it Or Not... We Are Now a Technology-Driven Society

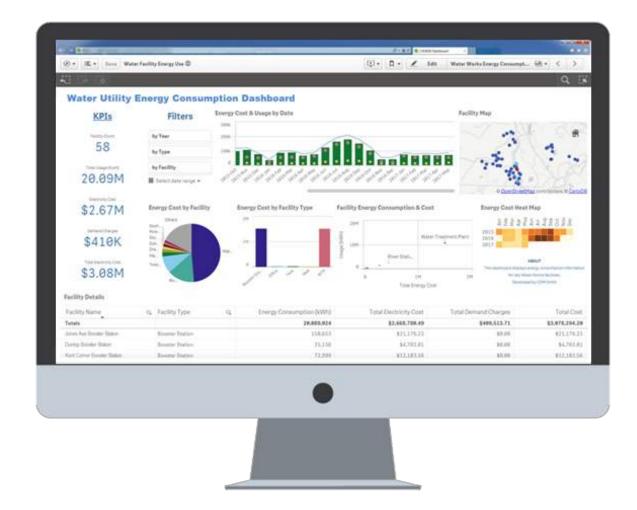




### We are Also Seeing The Rise of the Data-Driven Organization

### Decisions Based on Data





Because of This... We have Piles and Piles of Information and Maximizing the Use of It Has Become Vital

#### **Technologies to Support Utility Asset Management**

- Asset Inventory & Condition Assessment
- 2 Web & Mobile Solutions
- **3** Business & Operational Intelligence





# Asset Inventory & Condition Assessment

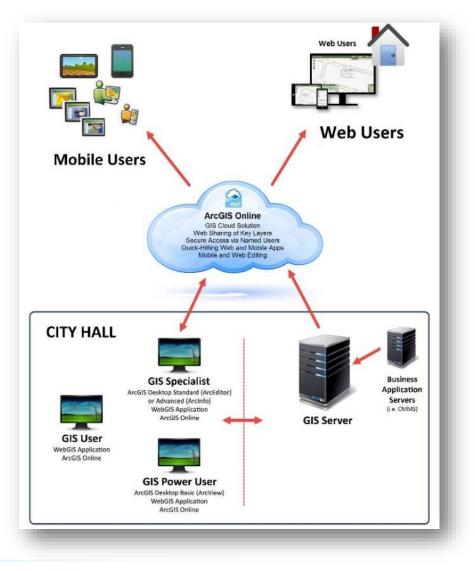
**The Foundation of Any Asset Management Program is a Comprehensive Asset Inventory** and Baseline Condition Assessment

## There are Several Options for Effectively Collecting Data in the Field

#### <u>ArcGIS Online or Portal</u> - Leveraging to Support Enhanced Data Collection

**Esri's Cloud-Based Offering** 

- Publish Data to the Cloud
- Consume via Desktop, Web, and Mobile Apps
- Visualize results to support Decision Making



### ArcGIS Online Cloud GIS Environment

Explorer App

ArcGIS.com

Collector App

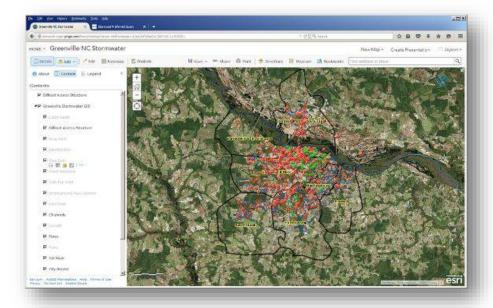
Survey 123 App

Dashboard

Workforce



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Insights

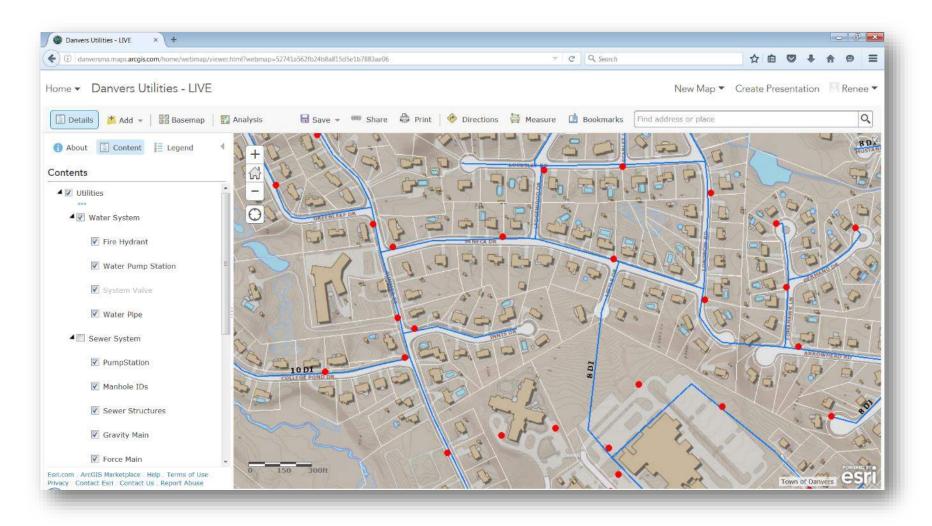


Execution of a Hydrant Asset Inventory and Flushing Program With ArcGIS Online

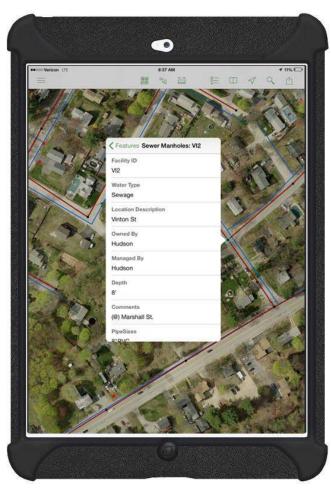
#### **Hydrant Inspection and Flushing Program** \* Prepared Data Back at the Office



#### **Hydrant Inspection and Flushing Program** \* Pushed/Referenced Data to ArcGIS Online



#### **Hydrant Inspection and Flushing Program** \* Prepared Mobile Apps for the Field



Explorer



Collector



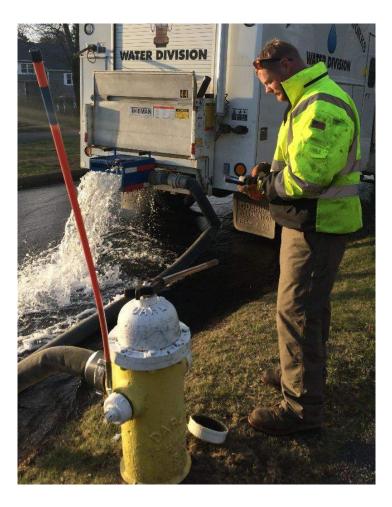
Survey 123

#### **Hydrant Inspection and Flushing Program** \* Sent Crews into the Field





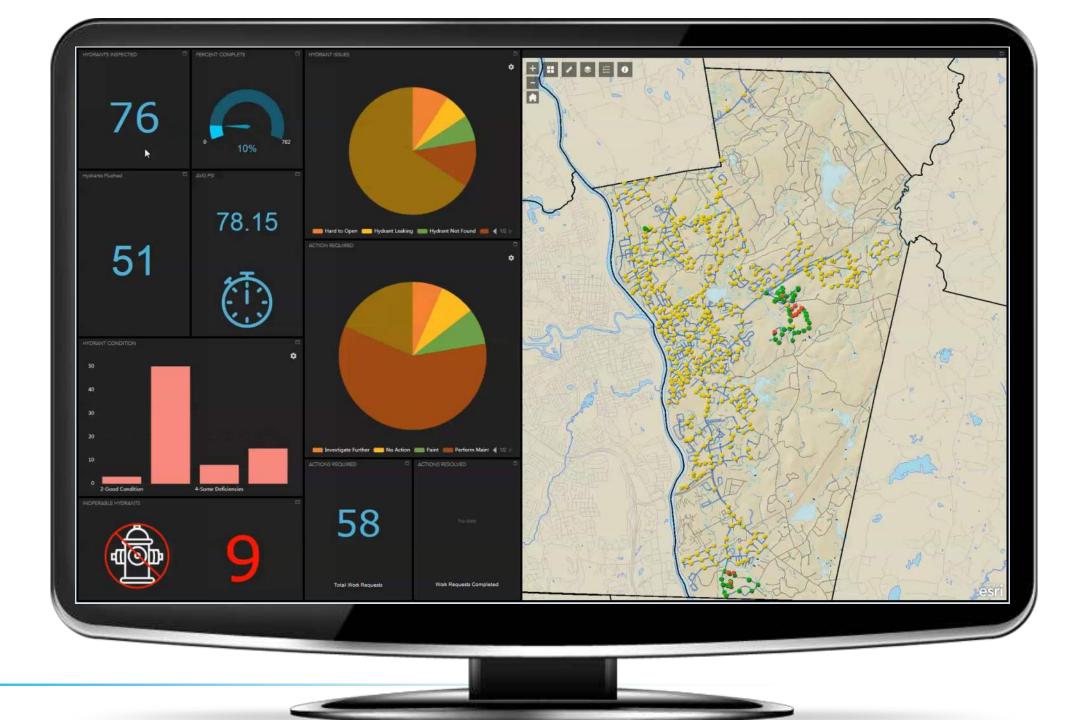
#### **Collector – What the Person in the Field Sees**





#### **Hydrant Inspection and Flushing Program** \* Tracked Progress Back at the Office





#### One Quick Example... Summary of Results

**3,000** Hydrants & Valves Inventoried

**30%**\* Estimated Reduction in Time

**44** Critical Deficiencies Identified

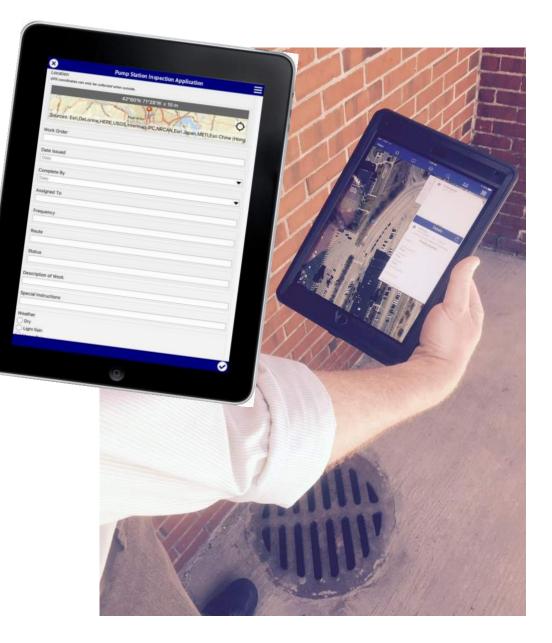
**100+** Workorders Generated

"big savings in logistics and program execution"





Wastewater & Stormwater Inventory



#### **Pump Station Inspection**

#### There Are Other Data Collection Options \* US Navy Asset Management Program

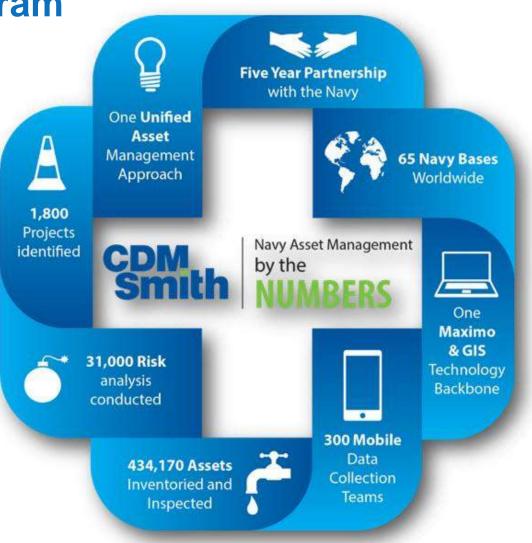




**500,000** Data Records Generated

#### There Are Other Options \* US Navy Asset Management Program







## Data Access & Visualization

#### **Custom Web & Mobile Apps Provide Simplified Access to Complete Data**





#### Coming Soon.... Mixed & Augmented Reality





Esri AuGeo 3

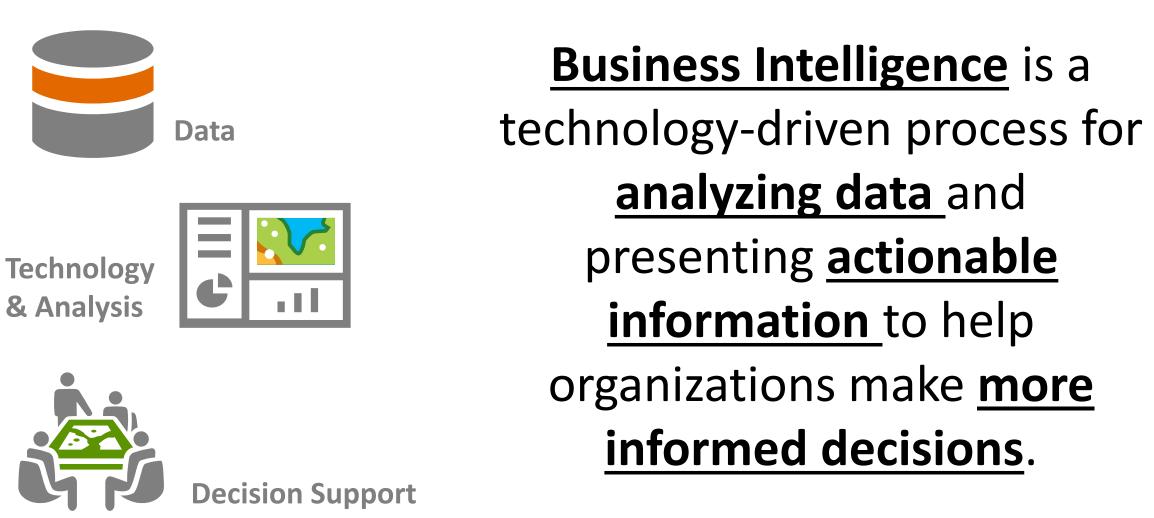
### The Next Step is to Leverage Your Data to Support More Effective Utility Management

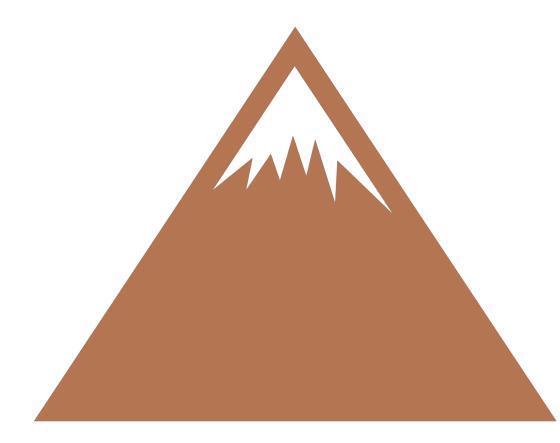
## GIS Billing SCADA Finance CMMS Complaints DOC MGT

### The Next Step is to Leverage Your Data to Support More Effective Utility Management

## Business Intelligence Dashboards

## **Business Intelligence**



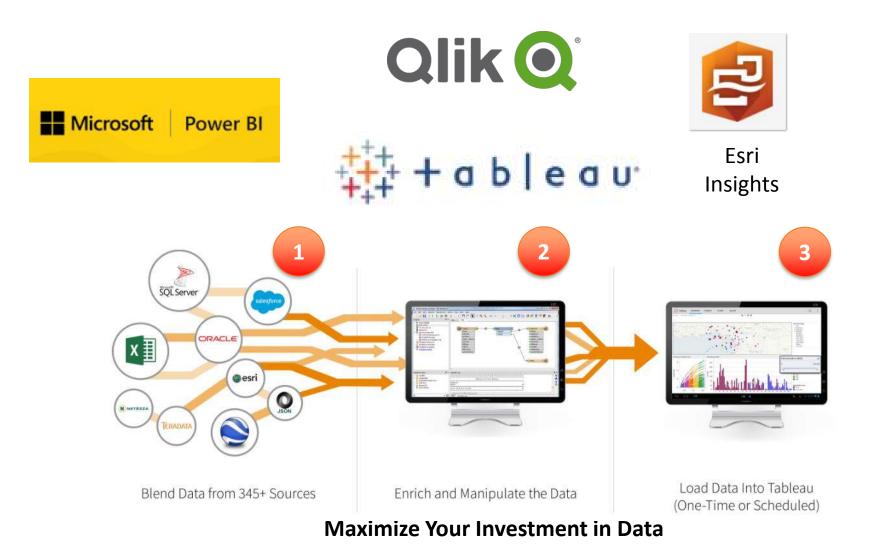


## Making Sense of a MOUNTAIN of Data



## Turning DATA into KNOWLEDGE so Organizations can MAKE DECISIONS

#### **Many Good Business Intelligence Software Platforms**



#### If You Have Good Information, BI Tools Can Help You Maximize It

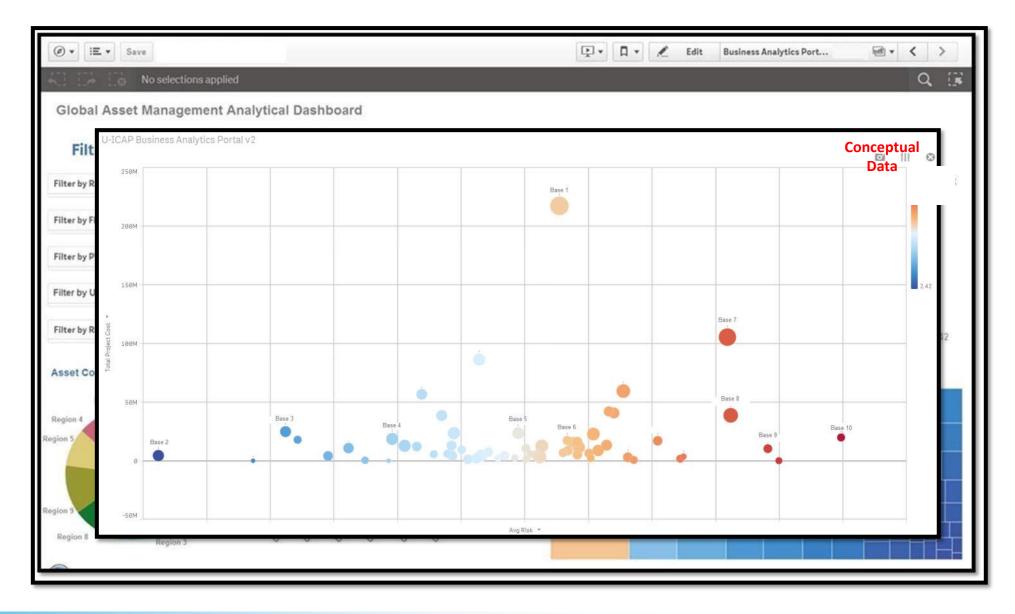
Track Progress

Compliance Reporting

> Business Analytics

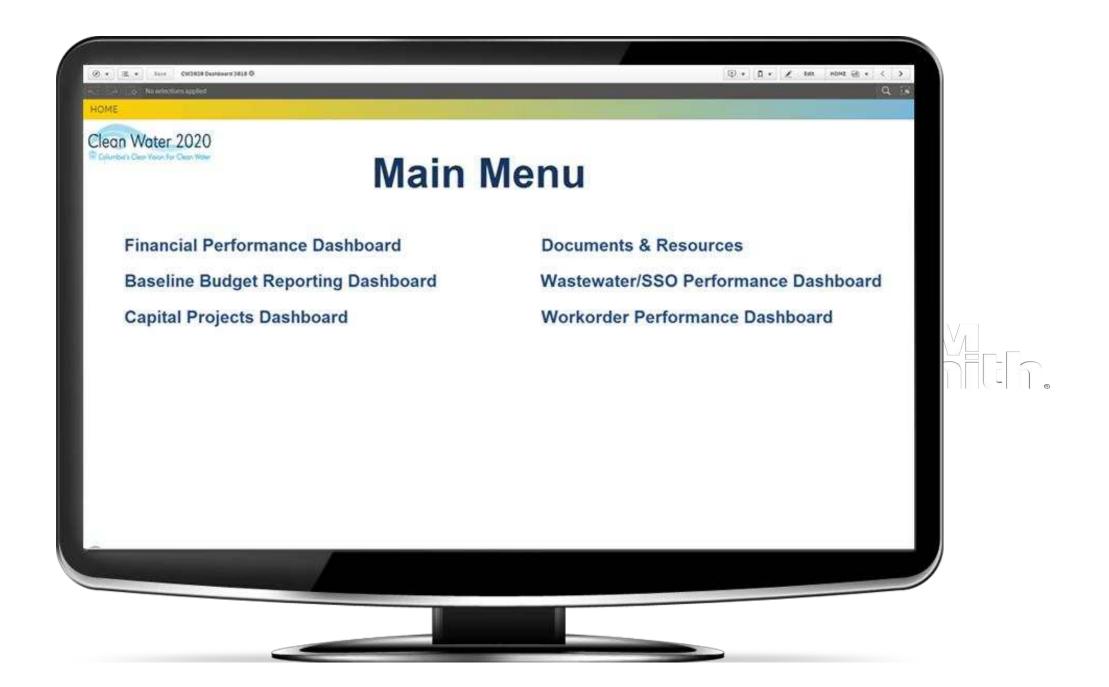
Project Problems

Project Tracking





Bottom Line... Critical Information at Your Fingertips is an Easy to Digest Manner



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#### PM & WO Performance





CIP and Project Tracking

#### Predictive Analytics

Optimize CIP & PM Programs to Address Life Expectancy Issues

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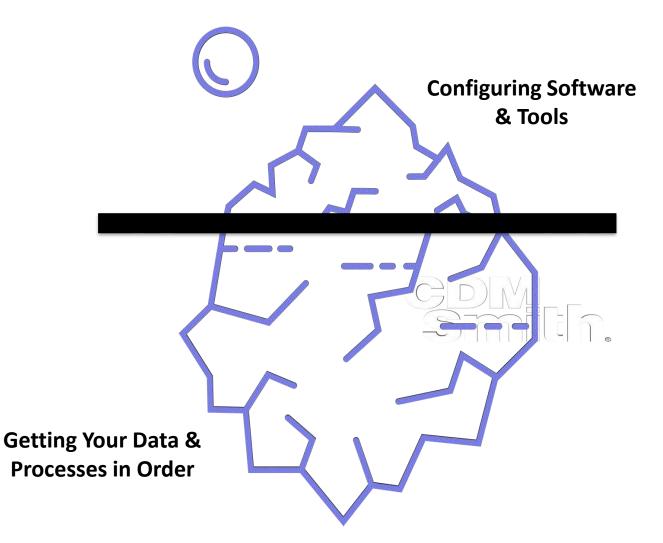
Predicted Pipe Failures over Next 10 Years

# Data Governance is the Key

**The Software is Secondary!** 



# There is No **Silver Bullet** Software Product



#### **Comments and Opinions**

- Let Your Data Work for YOU
- Predict Where Problems May Occur and Plan for Them.
- Apply the Right Technology Tools to Fit the Job
- Support More Effective Utility Management

Questions Jayson Brennen brennenjd@cdmsmith.com





