

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

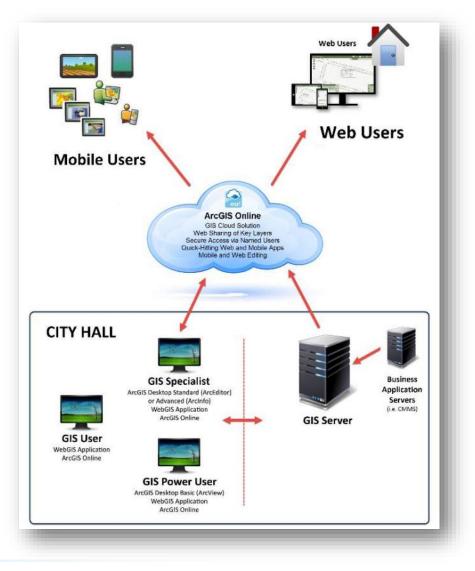
The Foundation of Any Asset Management Program is a Comprehensive Asset Inventory and Baseline Condition Assessment

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

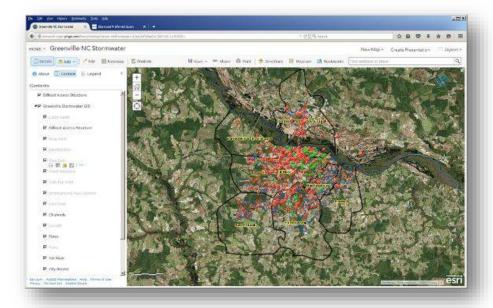
Survey 123 App

Dashboard

Workforce



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Insights

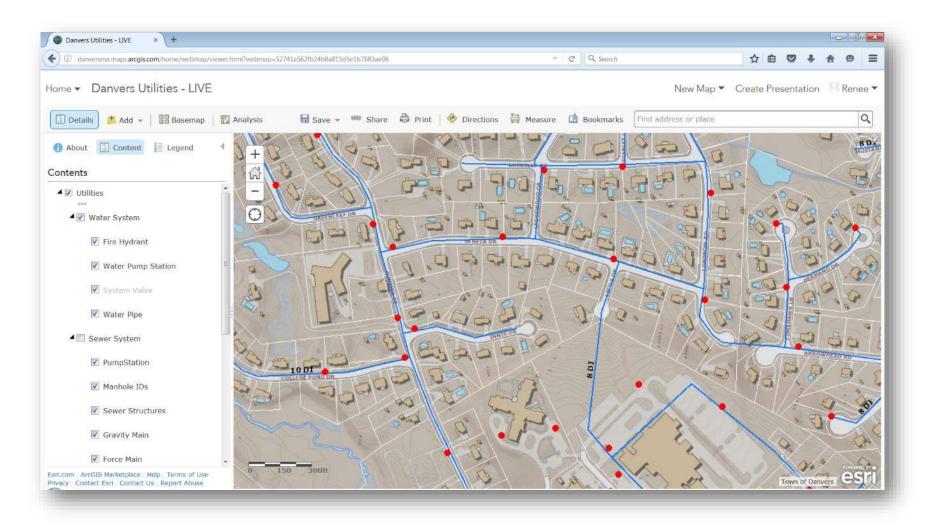


Execution of a Hydrant Asset Inventory and Flushing Program With ArcGIS Online

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





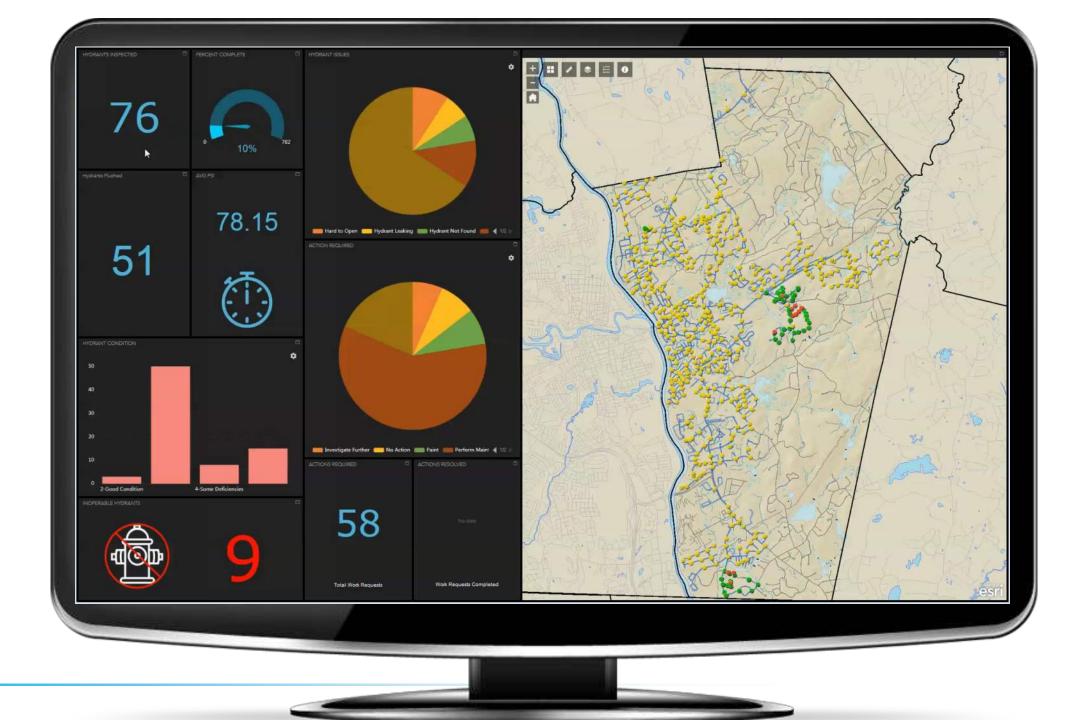
Collector – What the Person in the Field Sees





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

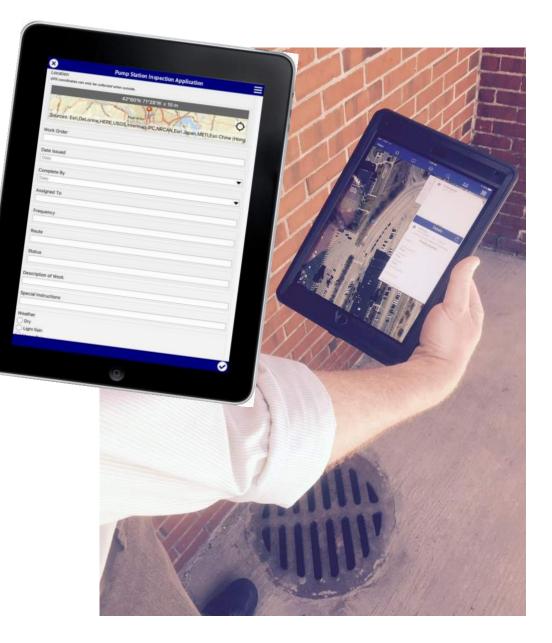
100+ Workorders Generated

"big savings in logistics and program execution"





Wastewater & Stormwater Inventory



Pump Station Inspection

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

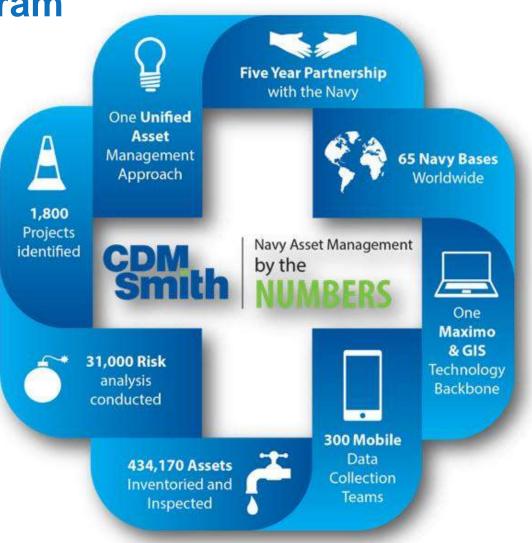




500,000 Data Records Generated

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

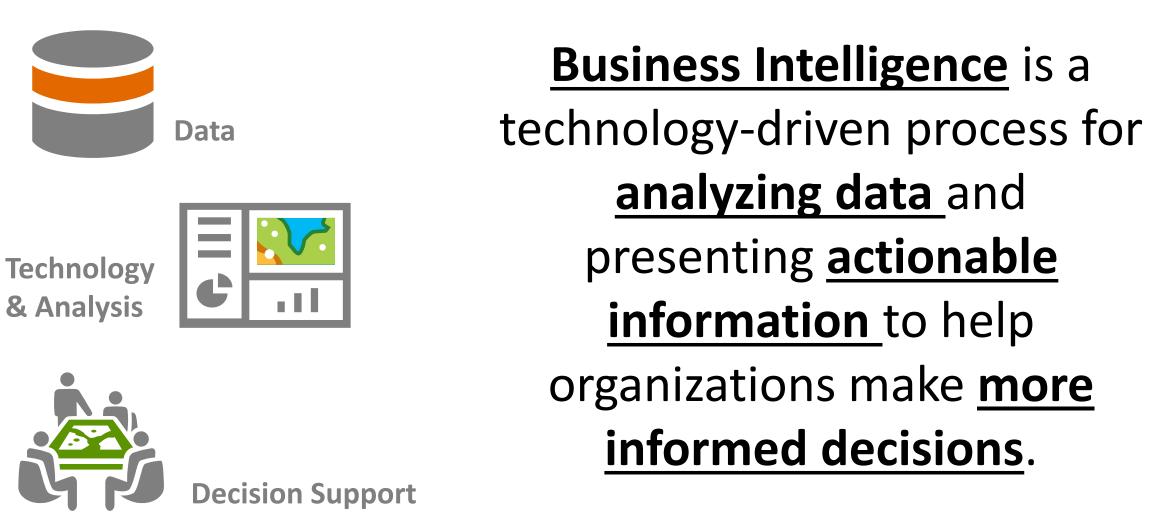
The Next Step is to Leverage Your Data to Support More Effective Utility Management

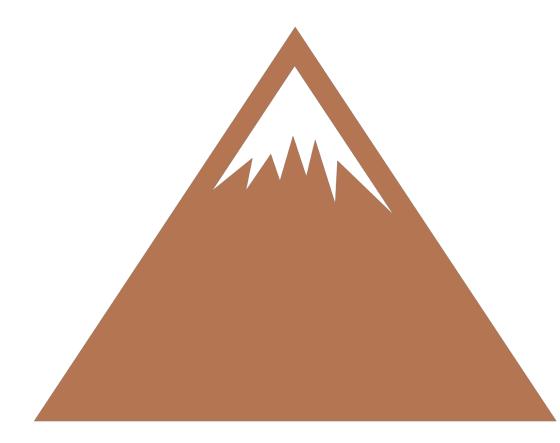
GIS Billing SCADA Finance CMMS Complaints DOC MGT

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

Business Intelligence Dashboards

Business Intelligence



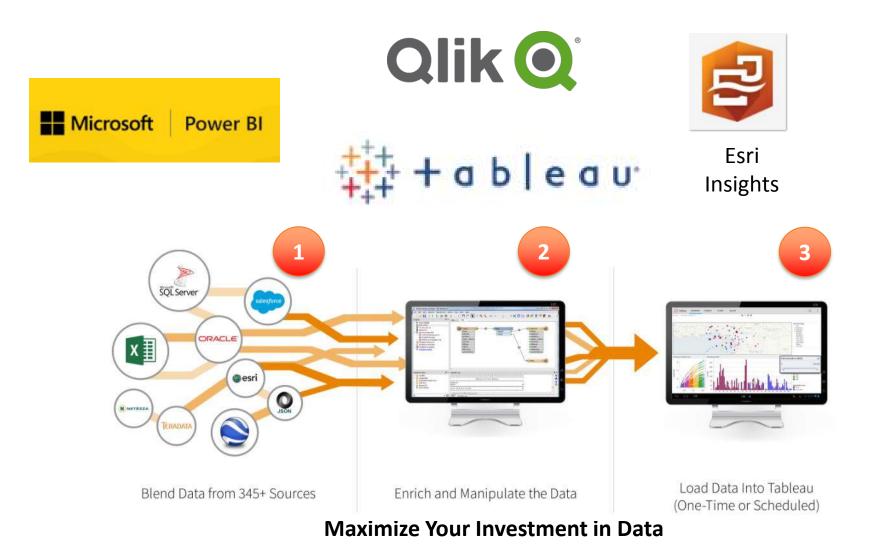


Making Sense of a MOUNTAIN of Data



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

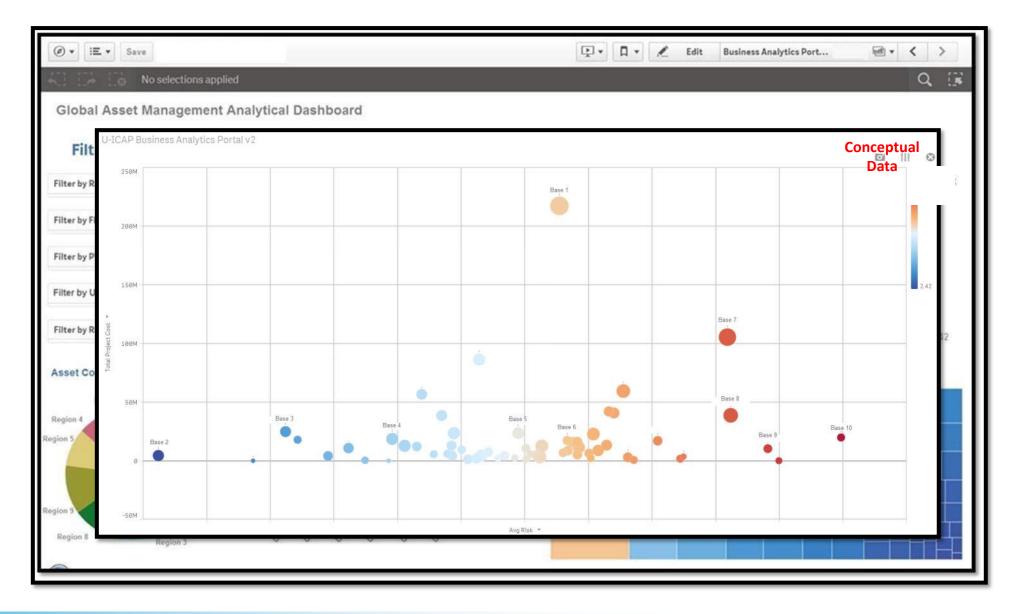
Track Progress

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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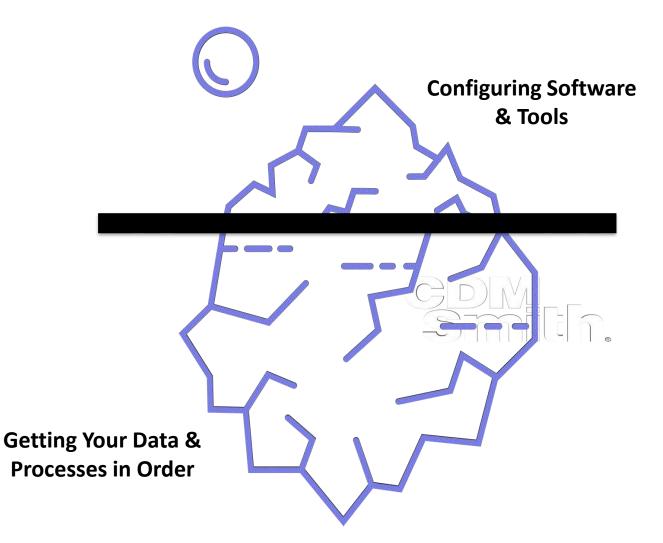
Predicted Pipe Failures over Next 10 Years

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





