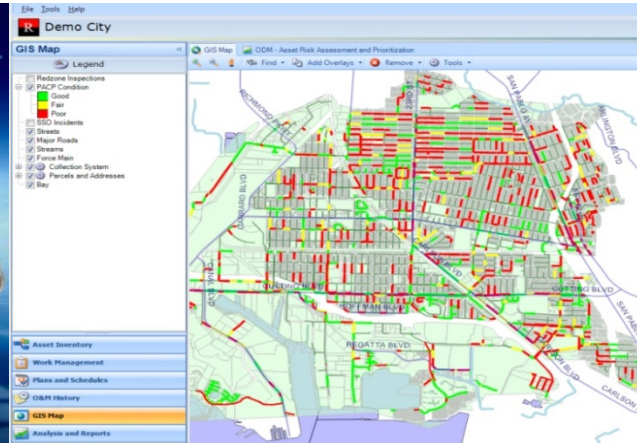


US EPA ARCHIVE DOCUMENT

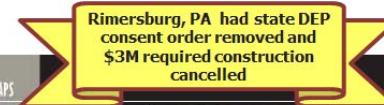
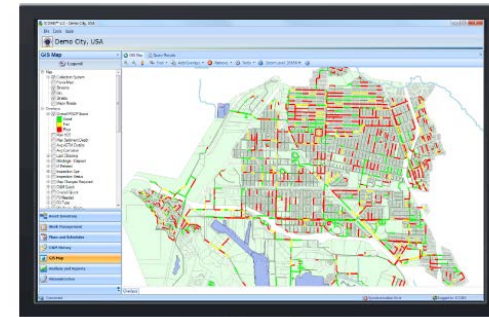
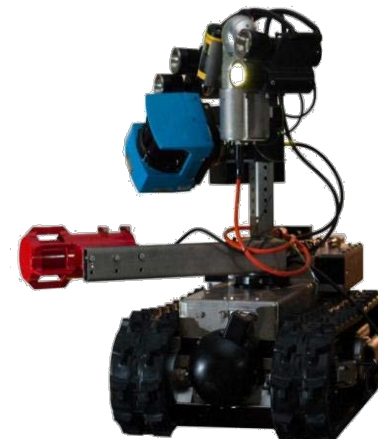


COMPREHENSIVE WASTEWATER ASSET MANAGEMENT SOLUTIONS

Ken Wolf
Executive Vice President



- Well-recognized wastewater technology company founded in 1987; focused exclusively on wastewater since 2004
- Strong legacy background in alternative markets:
 - Mining
 - Oil & Gas
 - Nuclear Energy
- Headquarters in Pittsburgh, PA with office in CA & NZ
- ~75 employees
- Recognized innovators



A robotic pipe inspection system enables a western Pennsylvania municipal authority to complete an assessment and avoid a consent order and fine.

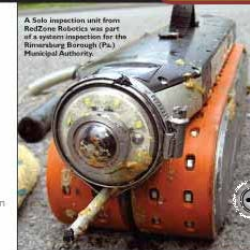
By Scott Dugan

In a city where, as a result of a settlement, a sewer operating budget is under \$1 million, the city of Rimersburg, Pa., was looking for a way to complete an assessment and avoid a consent order and fine. The city's sewer system is in poor condition, and the city is looking for a way to complete an assessment and avoid a consent order and fine.

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A safe inspection unit from RedZone Robotics was part of a special inspection for the Rimersburg Borough (Pa.) Municipal Authority.

BETTER INDUSTRIES
PRODUCT: RedZone Robotics
APPLICATION: Sewer pipe inspection
BENEFITS: Improved inspection productivity
USER: Rimersburg Borough Municipal Authority
WEB SITE: www.redzone.com

OUR MISSION



The worldwide wastewater industry is plagued by a massive **information deficit**.

Funds are scarce and vital decisions are being made with incomplete information.

RedZone helps people, cities and the environment by giving wastewater managers the information and tools they need to make fact based decisions on how to spend limited funds

The status quo is unsustainable...

Common regulatory 'starting point' questions:

Core Questions of Asset Management:

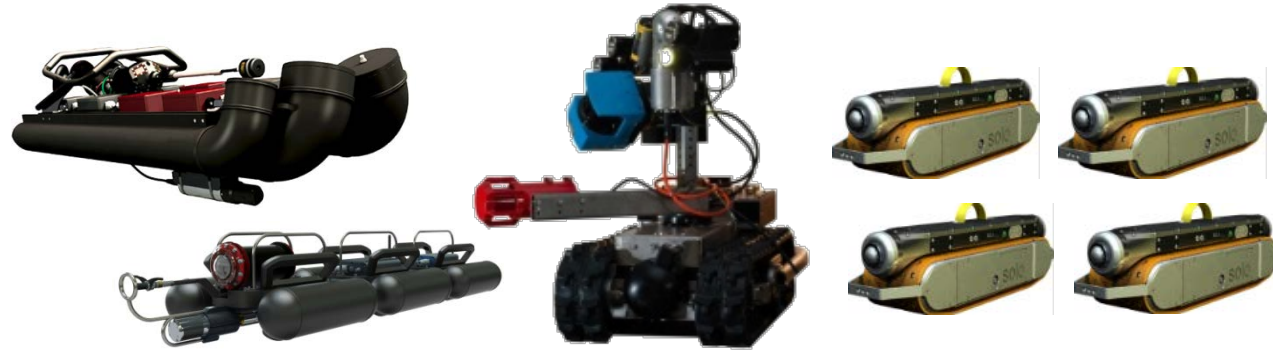
- What do I own?
- Where is it?
- What is the probability of failure?
- What is the consequence of failure?
- Should we repair, refurbish or replace the pipe?
- What are the costs to replace?
- What are the social costs of failure?
- What are my operations and maintenance priorities for next year?
- What capital budgets should I allocate for the next 1, 5, and 20 years?



- *Asset Management: A Best Practices Guide EPA*

OUR PLATFORM

**Data Acquisition Tools
Robots & Sensors**
“Getting information you need”

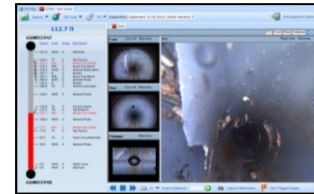


**Asset Management
& Planning Software**
“Making data useful”



ICOM3

- Specialized linear asset repository.
- Observation coding
- Industry Standard (PACP)
- EAM Integration
- Dynamic planning R3,
- Maintenance planning
- PTZ & Standard video viewing
- Work planning options

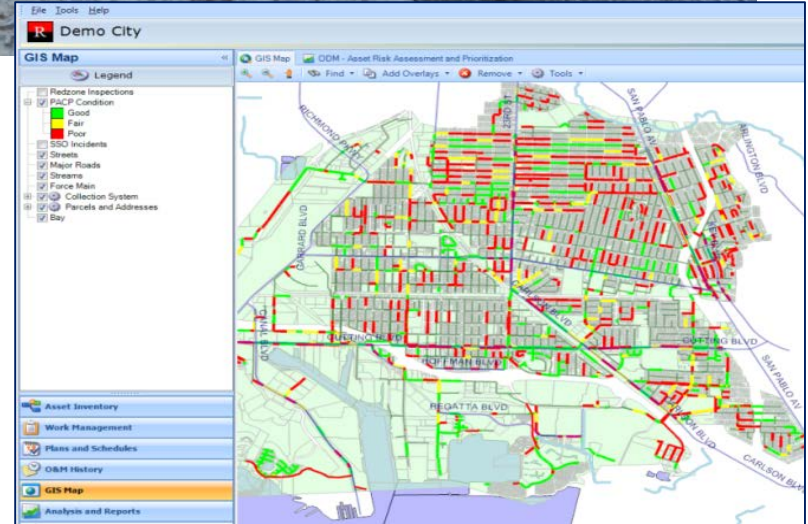
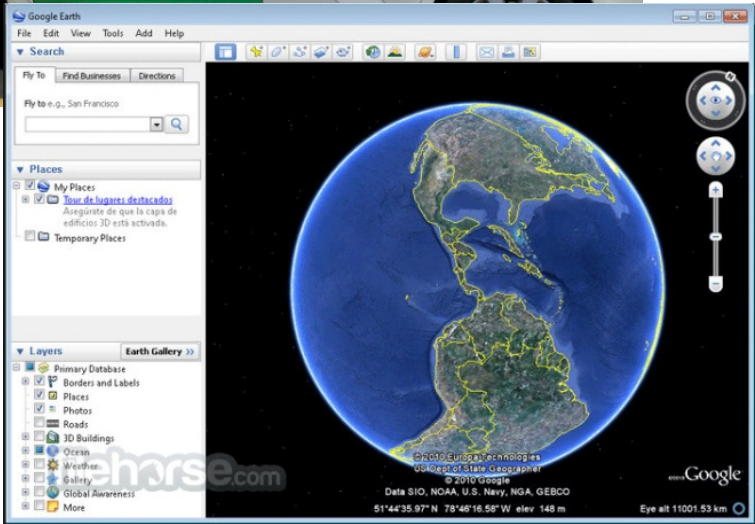


Execution Services
“Executing the smart spend”

**Payment Plans | EAM Integrations | Engineering | Rehab |
Observation Coding | IT services | Project management |
Select field work**

Above Ground...

...Below Ground



TRUSTED GLOBAL PARTNER



EMPHASIS ON DATA

Conventional Approach

Decisions made with incomplete information

‘Institutional’ knowledge

Archived information. Multiple sources. ‘Data exists’

Reactive ‘run-to-failure’ practices (O&M / Rehab). Higher risk. More costly.

Reactive/defensive regulatory compliance programs. Higher risk. More costly.

Task/work based approach to the system

REDZONE Approach

Decisions made with complete information

Baseline benchmark data

Analytics. **One primary Source.** ‘Data is useful’

Proactive fact-driven practices (O&M / Rehab). **Less Risk. Saves Money. ROI**

Proactive fact-driven regulatory compliance programs. **Less risk. Saves Money.**

System based approach to tasks/work.

Trenchless

TECHNOLOGY, FEBRUARY 2014

“Having our system-wide data in ICOM3 allows us to be prudent with our spending based on the true current state of the collection system. Based on our findings, we were alerted to some potential failures. We have been able to allocate funding to address these findings before they become major issues. In particular, we have an updated, targeted root control program.” **PCWASA MANAGER**

“With the YES baseline data in ICOM3, we have successfully tripled our pipe lining budget and we know the money is being cost-effectively spent. Whereas in the past it was difficult to recommend sewer projects and request funding based only on crew reports and limited information”
EAST MOLINE ENGINEER



“After DEP officials reviewed the authority’s efforts to improve its collection system management they removed the consent order and cancelled the requirement to construct a \$3 million pretreatment plant”
RIMERSBURG PA CASE STUDY



NORTHERN KENTUCKY SD1

- Avoidance cost savings over \$400,000 YR 1
- Increased In-house Inspection Production by 110% between 2008 and 2011
- Reduced in-house CCTV inspection costs by more than 25%
- Reduced Dry Weather SSOs by 54%
- Dry Weather SSOs are 50% below industry benchmark
- From 2009 to 2011 increased Asset Renewal by 500% & Reduced Renewal Costs by 71%



FORT WORTH, TX

Ongoing internal analysis of proactive MSI inspections of large lines in advance of other O&M activities.

- \$4.6M+ in targeted cleaning savings
- \$1.9M+ in avoided emergency response and bypass

THANK YOU

For more please visit
www.redzone.com

