How to Protect Your Pipeline's Integrity and Network Reliability

Answering the Who? What? Where? When? Why? How?

BY WILLARD PUFFER

Are these questions difficult to answer quickly when you need to dig, vacuum excavate, locate, respond to a leak, repair, change out, etc.? Are you prepared for immediate traceability and reporting of HDPE welds, operator certifications, material type, source, size, age, manufacture lot, and network integrity?

A robust Asset Information Management (AIM) platform protects assets by letting you answer quickly and reliably the Who? What? Where? When? Why? How? -- All while saving time and expense, and looking to increase revenue. An Asset Information Management platform is an interactive, secure web interface that incorporates document retrieval, work orders, dig sites, leak detection, etc. on an easily understood map. Forecasting and much more is also offered.

Accomplish these Functions and More with an AIM Platform:

- Track vacuum excavation results quickly
- Track leak detection and response as never before
- Integrate 811 Dig Tickets response
- Monitor Butt and Electro Fusion weld reporting
- Monitor Operator Certifications
- See your work order progress on a map
- See your pipeline network in an interactive map
- Leave paper behind
- See information such as meter read history, material, size, etc.
- Ask questions by area, information type, and more
- See into the future and learn from the past

The ability to respond to information requests tied to work orders, leak detection responses, 811 Dig Tickets and meter change outs, is severely limited because of the quantity and quality of information that is readily available. Information is not readily retrieved because it is on paper sheets, drawings and sketches or in folders in file cabinets, along with information never envisioned to be needed with each information request.

Figure 1

Figure 1 illustrates the ability to easily see the most recent relationships of parcels, pipeline distribution network, meters, pipes by material type and size, and more. The platform is easy to use and requires minimal training.

Chasing down paper documents and drawings or looking at separate paper spreadsheets costs money. Decisions based on "old information" costs a lot of money to correct. The platform can be utilized for tracking the day-to-day data information requests in a reliable map and accurate excel spread sheet seen the lower portion of Figure 1.

Figure 2 illustrates a common viewer where staff can easily "see" their information saving time, look at "newest data", and allows questions be answered reliably.

Figure 2

Figure 3 illustrates the ability to track Dig Tickets, vacuum excavations, and any other work flow activity linking the work flow to the highly visual AIM platform.

The AIM platform is a framework for meeting cost-effective reporting, allocating, and decision-making objectives .It combines engineering principles with sound business practices and economic theory, and provides for vastly improved decision making.

Figure 4 shows an interactive daily work order web portal that allows work crews to go directly to the field, avoiding costly daily trips to the office. The portal is easily used, avoids delays in seeing issued work orders, and allows completed work orders to be posted from the field.

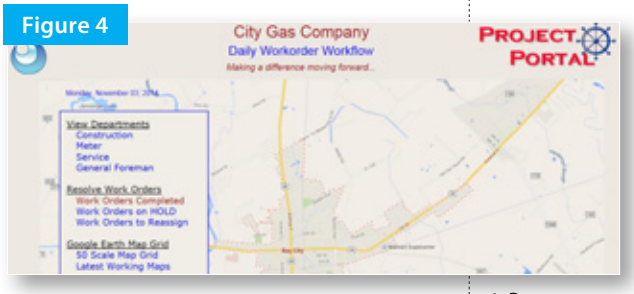
Managing a utility's assets is not a new idea. Utilities have been developing maintenance management systems for at least the past two decades. A properly developed asset information management platform allows the merging of multiple asset database systems into a unified spatial approach for meeting a utility's recording, reporting, allocating, programming, and decision-making objectives.

An inventory of the assets and a means to

Figure 3

assess their condition and model their performance allows the utility to protect its assets by verifying assets, reporting asset changes, and identifying investment requirements for improvement in the short and long term.

Figure 4



The AIM platform is used by all levels of staff at a utility. The platform allows for better communications between and amongst groups, yielding cost savings never before possible. Staff members can see the up-do-date network from anywhere by using a laptop. Old paper drawings can easily be incorporated into the map at a very low cost. Ongoing changes of he network can also be incorporated by leveraging Computer Assisted Drawings (CAD) and simple PDF field uploaded mark-ups.

ADDITIONAL FEATURES OF THE AIM PLATFORM INCLUDE THE FOLLOWING:

- ***Condition Assessment and Investment Requirement Determination***

1. Supports condition analysis
2. Quick identification of assets needing immediate attention
3. Promotes standard condition rating procedures and criteria for evaluation
4. Promotes improved decision-making

- ***Identification and Selection of Strategies utilizing the Map***

1. Allows combining data to develop more effective management strategies
2. Reduces the risk of making the wrong decision
3. Prevents multiple strategies for the same activity or asset
4. Permits results to be readily retrieved
5. Promotes fact-based decisions

- ***Program Development***

1. Improves program development
2. Provides timely information for setting priorities
3. Promotes efficient distribution of funding
4. Promotes consistency year-to-year

- ***Scheduling of Activities and Allocation of Resources***

1. Expedites timing of activities and assignment of resources
2. Helps identify critical shortages of resources
3. Minimizes costly design build errors
4. Promotes consistent level of resource allocation
5. Reduces mainte - nance and storage costs

- ***Reporting of Costs and Accomplishments***

1. Allows comprehen- sive summary of asset activities
2. Helps reduce costs
3. Improves productivity
4. Standardizes cost and accomplishment reporting
5. Attributes costs and accomplishments to specific functions
6. Provides graphs depicting costs and accomplishments

- ***Asset Performance Evaluation***

1. Provides for the immediate feedback
2. Promotes consistent performance measures
3. Reduces time to see multiple performance of assets
4. Provides differenttypes of analysis with the data
5. Allows quick comparison of assets

Utilities are far more successful at maintaining their Pipeline Integrity and Network Reliability utilizing a comprehensive, across-the- enterprise Asset Information Management platform. Answering the important questions rapidly while also improving the work order and other workflow processes are all benefits extending far into the future. DP

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