

# Xylem Asset Performance Optimization

COMPREHENSIVE ASSET RISK ANALYTICS AND PLANNING SUPPORT SERVICES TO HELP UTILITIES PROACTIVELY MANAGE THEIR WATER PIPELINE NETWORK

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## Benefits of Xylem Asset Performance Optimization

- Reduce failures by an average of 4-10X more effectively than traditional replacement strategies
  - Lower OpEx spend on emergency break repairs (an average of \$2.4M over 3 years), freeing emergency spend resources for other needs
  - Provide data to help justify CapEx budgets for pipeline replacements
  - Increase safety and efficiency for teams by averting failure of critical infrastructure
  - Receive guidance for operational mobilization and prioritization of key tasks
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## What if utilities could use advanced analytics to identify and assesses potential trouble spots in their water network before they occur?

When it comes to managing pipeline assets, your responsibilities are as wide-ranging as your network. Traditionally, asset management efforts would be primarily focused on maintaining the quality and efficiency of the water network with an age-based approach to pipeline repair and replacement.

But now, thanks to the continued evolution of machine learning, artificial intelligence, and other advanced analytics techniques and tools, you have the ability to harness the power of decision intelligence to significantly reduce risk and improve the overall efficiency of your asset management plan.

**Xylem Asset Performance Optimization** is an analytical solution set that helps identify, prioritize, and quantify potential challenges in water pipeline networks before they negatively impact the community. Developed, supported and delivered by industry and technical experts, Asset Performance Optimization features in-depth pipe failure risk analytics and an Esri-based web application.

## What You Can Expect

Regardless of your pipeline network's size or age, Xylem Asset Performance Optimization can efficiently and cost-effectively analyze massive amounts of data (past pipe breaks, impact of pipe segment failures in both dollars and service loss, etc.) and identify the parts of your network that are most in need of attention, so you can more efficiently prioritize pipeline management strategies.

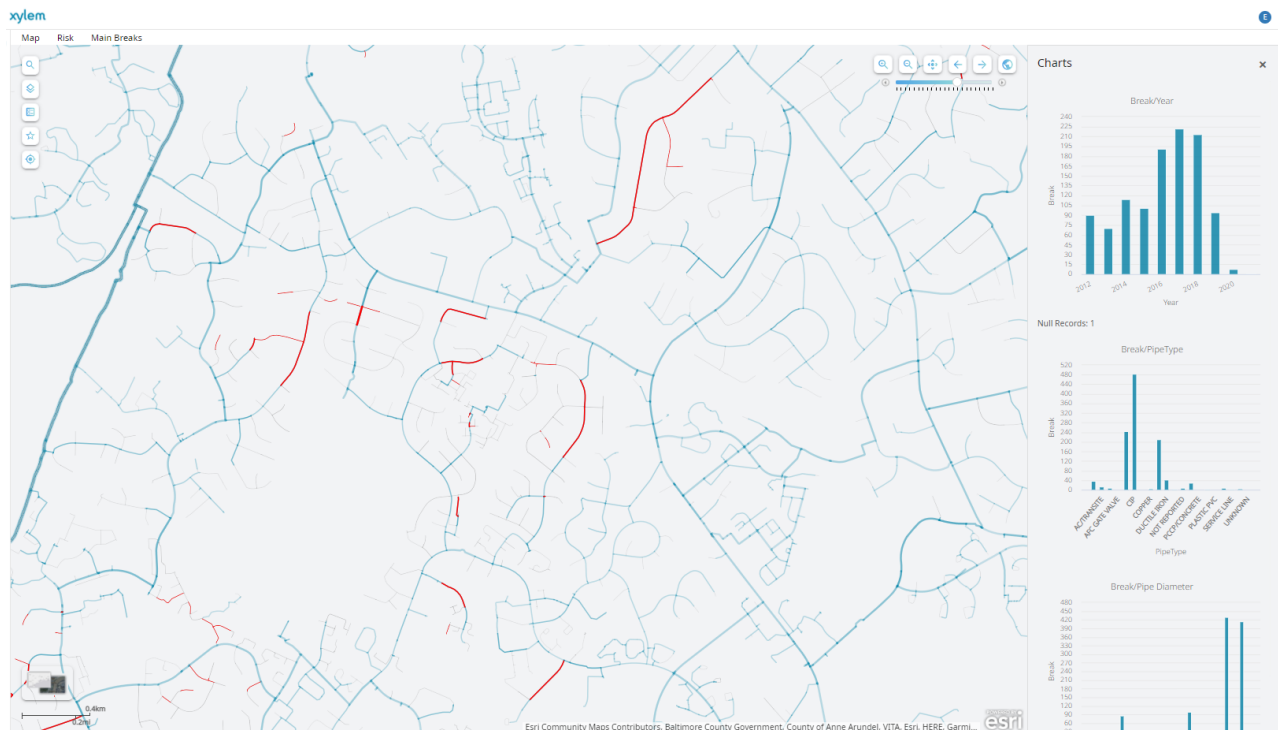
### Our partnership with you begins by gathering existing data.

First, we perform a data health check, data gap analysis, data gap filling, and road mapping to set goals upfront. We leverage your existing historic leak and break data, including GIS & hydraulic model, previous inspection results, and any other open-source data that may exist. This ensures that Xylem Asset Performance Optimization is utilizing the most thorough and up-to-date data available.

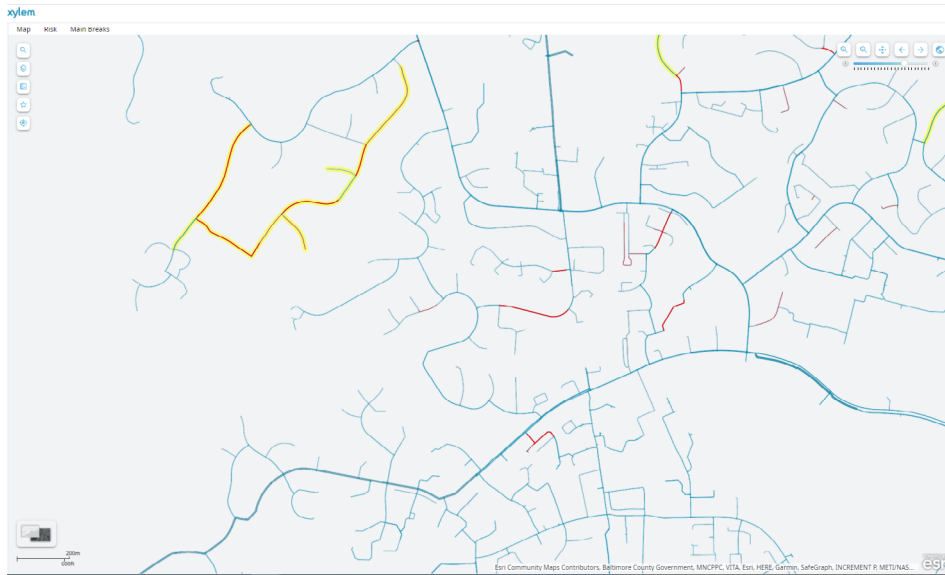
Next, we use a variety of analytical methods to provide you with three key outputs which help you proactively manage high-risk pipes across your network and guide your pipeline management strategy.

- **Predictive degradation modeling** forecasts optimal timelines for intervention on your most critical assets
- **Quantitative risk analysis** powered by machine learning, combines Probability of Failure (PoF) and Consequence of Failure (CoF) to deliver pipe risk results with predictions up to 3-5 years.
- **Cluster Analysis** identifies groupings of high-risk pipe segments across your pipeline network, revealing breaks avoided, and forecasts cost savings for mobilization scenarios.

These analyses can be easily accessed through an **interactive decision-support web application with maps and tools**, as well as raw GIS data. You will also receive in-depth reports detailing all the analyses performed, as well as a series of technical workshops to help ensure that you can easily digest the data and identify where to focus your attention.



Xylem Asset Performance Optimization provides a visual summary of recent trends in break counts, with a corresponding map identifying the highest risk pipe segments (top 1%) across the system.



Xylem Asset Performance Optimization can help you achieve significant savings on mobilization costs by suggesting project candidate clusters based on a system-wide analysis that bundles high-risk pipes together for mitigation action.

## Get More From Xylem Asset Performance Optimization

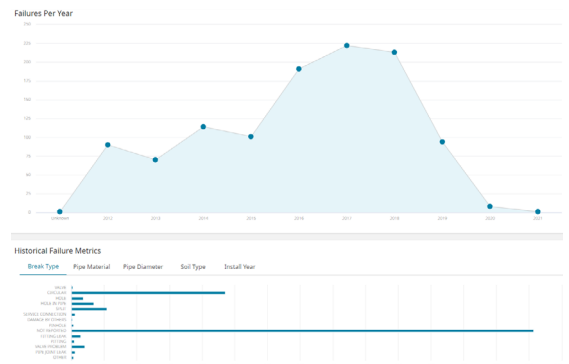
**A partner ready to work with you** – Regardless of when you began your journey to mitigate risk, improve efficiency, and maximize costs, Xylem Asset Performance Optimization can meet you where you are. It provides immediate benefits: from building the data that will give you an overview of your water network, to predicting future events and helping you develop a long-term strategy to optimize and continuously improve your pipeline asset management program.

**ESRI integration** – As an ESRI Platinum Partner, we are ready to help you take advantage of opportunities to be more effective and efficient by maximizing the benefits of your GIS investment. Xylem Asset Performance Optimization delivers results in an intuitive ArcGIS web application and allows you to interact directly with the results.

**A clear, transparent solution** – Many other predictive modeling solutions are “black boxes” that deliver very little transparency into the solutions and forecasts. Xylem’s approach to data analysis provides exclusive insights into the process to help you make the most-informed decisions about the challenges affecting your infrastructure.

## Harness the Power of Decision Intelligence to Proactively Manage Pipeline Risk

- Proactively manage water network assets more effectively than traditional replacement strategies
- Reduce cut pipe replacement CapEx without increasing break rates
- Improve customer service with fewer service disruptions
- Reduce leakage and related non-revenue water
- Have the information you need during emergency situations at your fingertips



A dashboard summary of pipeline break history and relevant asset information.

## Xylem Asset Performance Optimization in Action

### Mid-Size Mid-Atlantic Utility

#### Project Highlights

- Developed a plan to reduce customer outages and improve service reliability, while cutting replacement spending by over 70% compared to other prioritization methods.
- Using Xylem Asset Performance Optimization methodology, the utility will experience a dramatic 4X reduction of water main breaks, as compared to legacy prioritization approaches that are mainly subjective.
- The utility and Xylem developed a mobile, field-tracking application to improve break record accuracy, reduce labor time required to update their computerized maintenance management system (CMMS) and their geographic information system (GIS), as well as improve the output of the AI model.

[Read the full case study](#)

## Additional Xylem Asset Performance Optimization Clients Include



Xylem Asset Performance Optimization is a set of comprehensive asset risk analytics and planning support services that you can count on to help you operate more efficiently, safely, and affordably.

To start a conversation today, contact us at [decisionintelligence@xylem.com](mailto:decisionintelligence@xylem.com) or [visit our website](#).



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