

Avodahtec Introduces Business-Centric Framework for Managing Aging Pipeline Infrastructure

The framework enables utilities, municipalities, and industrial pipeline owners to stretch their capital budgets and enable just-in-time investments.

EDMONTON, ALBERTA, CANADA, November 24, 2025 / EINPresswire.com/ -- [Avodahtec](#), a Canadian engineering consulting firm specializing in sustainable infrastructure, has unveiled a business-centric, risk-based approach to assessing and managing aging pipeline systems. Developed under the leadership of [Managing Principal Dr. Olugbenga Ibikunle](#), the methodology has been successfully applied across utilities, municipalities, and industrial pipeline owners to stretch limited capital budgets and reduce the growing infrastructure deficit through a “just-in-time” investment strategy.



High pressure water main break



Avodahtec Logo

A Smarter Way to Confront the Global Pipeline Challenge

Around the world, for example, water and wastewater pipelines are approaching or exceeding their design lives. In North America, the overall water sector funding gap was \$110 billion in 2024, projected to reach \$194 billion by 2030. These realities, combined with shrinking budgets, have intensified the risks of failure, environmental harm, service interruptions, and escalating renewal costs.

Condition assessment remains central to effective pipeline asset management, as it generates the data needed to determine the likelihood and consequence of failure, guiding decisions on repair, maintenance, and replacement. However, conventional approaches often focus solely on

the condition, without adequately addressing the broader business, social, and environmental implications of failure.

As Dr. Ibikunle has argued in his thought leadership work, pipeline failures are never just technical events—they are community events. “Beyond the break or failure,” he notes, are ripple effects on people, ecosystems, and local economies. Avodahtec’s methodology incorporates this reality directly, ensuring that planning decisions reflect the full spectrum of consequences.



Pipeline

A Framework that Brings Risk and Reality into Focus

Avodahtec’s enhanced framework shifts the focus toward risk, embedding best practices in asset management, forensic engineering, and data science. The model prioritizes pipeline segments not only by their structural or functional condition but also by the direct and indirect impacts of failure on the owner’s Triple Bottom Line: people, planet, and profit. This holistic view ensures that assets critical to public safety, environmental protection, or economic continuity rise to the top of rehabilitation priorities, helping organizations avoid the hidden, often substantial, downstream costs of failure.

Risk-Based Assessment in Action

A recent project in a Canadian city illustrates the value of the approach. Avodahtec assessed a 620-meter section of a 900 mm combined trunk sewer whose upstream sections showed signs of distress. A conventional condition-based evaluation suggested that only one segment required immediate attention. However, Avodahtec’s risk-based analysis revealed that several segments clustered within the high-risk (red) zone of the risk matrix plotted for this project. The analysis ultimately showed that multiple segments, not just the initially suspected one, required timely rehabilitation to mitigate broader service, environmental, and economic risks. This data-driven insight enabled the owner to prioritize investment where it mattered most.

A Business-Centric Framework for Sustainable Pipeline Asset Stewardship

Avodahtec’s methodology integrates the firm’s core strengths, including:

- Leveraging advanced inspection, condition assessment, and trenchless renewal techniques to sustainably extend the life of aging pressurized and non-pressurized pipelines across water, wastewater, municipal, and industrial sectors.
- Decision-support systems that help owners prioritize upgrades, avoid costly emergency repairs, and implement just-in-time capital planning strategies.

- Asset and infrastructure management practices aligned with ISO 55000, IIMM, and IAM standards—supporting a shift from reactive operations to proactive, data-driven asset-lifecycle planning.

Enabling Resilient Infrastructure at the Lowest Life-Cycle Cost

By integrating risk management into traditional condition assessment, Avodahtec helps asset owners maintain structural and hydraulic performance at the lowest life-cycle cost, while meeting stakeholder expectations and regulatory obligations. The approach empowers organizations to maximize the value of every rehabilitation dollar and strengthen the resilience of critical buried infrastructure—socially, environmentally, and economically.

Call to Action

Avodahtec invites municipalities, utilities, industrial operators, and asset owners to learn how this framework can enhance the management and longevity of their pipeline systems.

Organizations interested in deeper insights are encouraged to request a Lunch-and-Learn session to explore practical applications, benefits, and implementation steps.

For more information or to arrange a consultation or Lunch-and-Learn session, please contact info@avodahtec.com

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