

Our innovation mindset

Every success story around innovation starts with people. Walter Kresic, Vice President, Pipelines Integrity and Kristen Higgins, Strategist, Internal Communications, discuss how our innovative culture encourages all employees to work collectively and think creatively to solve the most pressing problems faced by our industry and society.



Walter Kresic,
Vice President,
Pipeline Integrity



Kristen Higgins,
Strategist, Internal
Communications

Higgins: Why is innovation important to an infrastructure company like Enbridge?

Kresic: I know that when some people think about innovation, they immediately associate it with large technology firms, but it really applies to all enterprises. When you look at how fast the world around us is changing, you start to recognize that your company needs to be resilient to succeed in those conditions over time. It has to have the right people, with the right mindset, and the right processes and technology to be competitive.

Higgins: How did Enbridge go from recognizing the importance of innovation to actually making it work?

Kresic: First, we understood that innovation depends on having a culture that is open to new ideas, and having people who are willing to step up and work on tough challenges. We were fortunate to have both at the outset. Second, you need to build a structure and have discipline to guide participation and outcomes, but do this in a way that allows for some flexibility and freedom. Without this structure, you end up having solutions looking for a problem, rather than being clear about the problem that needs a solution. In our LP business, we call this structure I-Frame, our innovation framework. Third, you need to tap the collective knowledge and imagination of your team to find the best ideas. Last, but not least, you have to support the best ideas with funding. In the past two years, we have invested over \$18 million in technology development and innovation.

Higgins: What does this look like in practice?

Kresic: At the most simplistic level, it is an innovation process: define the need(s), ideate on solutions, select a set to test, and execute the best solution(s). To define needs in 2019, we worked with 12 teams across our business units to help build out their technology roadmaps. A roadmap gives each team the opportunity to use thought leadership and a network of minds to kick things into gear.

Moving from defining needs to ideation, we support this step in a number of ways. We created Technology + Innovation Labs in Calgary and Houston that help spark innovative thinking and collaboration, and use the power of data to make breakthroughs on tough issues such as evaluating pipeline integrity across tens of thousands of miles. We also have an ideation tool – “Excellerate” – that provides access for employees to participate in Innovation Challenge events. In 2019, we had 4,400 employees access the tool, with 50% of them collaborating and submitting 500 ideas for consideration. We advanced the top 45 to solution projects, with six of those completing the pilot stage of development. In addition to challenges, our Innovation, Research and Development team has also been busy conducting many of the other innovation efforts – 170 projects in total for 2019.

Higgins: What is an example of an innovation project completed in 2019?

Kresic: I think the best example is our \$20 million multi-year joint venture with NDT Global that created the Next Generation Crack Tool (NGCT). We asked this vendor not for an existing solution, but rather a solution to a clearly defined problem in how we analyze the integrity of our liquids pipelines. We challenged them to take the best elements of existing inline inspection tools and create a new solution with an array of sensors that would reliably differentiate benign features from tiny imperfections, dents, metal loss, corrosion and cracking in pipelines with respect to integrity. We successfully tested the NGCT at Gretna, Manitoba, demonstrating its capabilities to analyze the integrity of our most challenging pipelines, and eliminating the environmental disturbance and other impacts associated with verification hydrostatic tests. This change in mindset – starting with an outcome and working to produce a solution to a specific problem – is how we achieved a step-change in integrity testing for the industry.

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