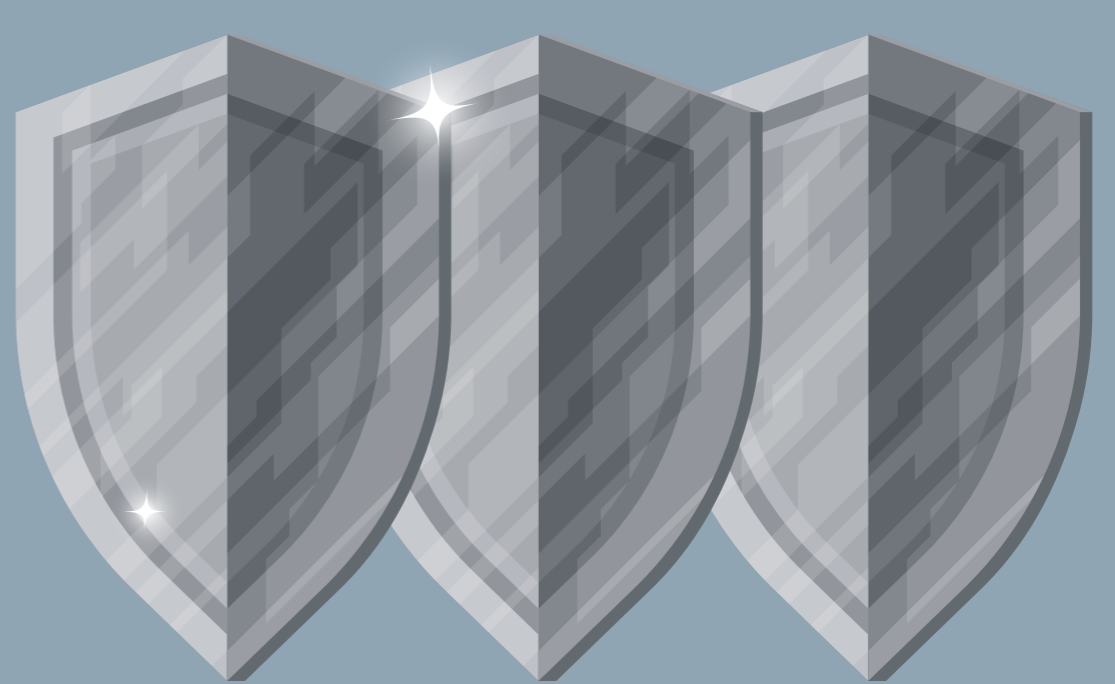


# Proving Safety

How Enbridge strives for outstanding system safety and reliability through our pipeline integrity management programs



**Above all else**, our core value of Safety guides every decision, action and interaction at Enbridge. This mindset reflects our commitment to protecting public and worker safety, the environment and the health and fitness for service of our pipelines and facilities.

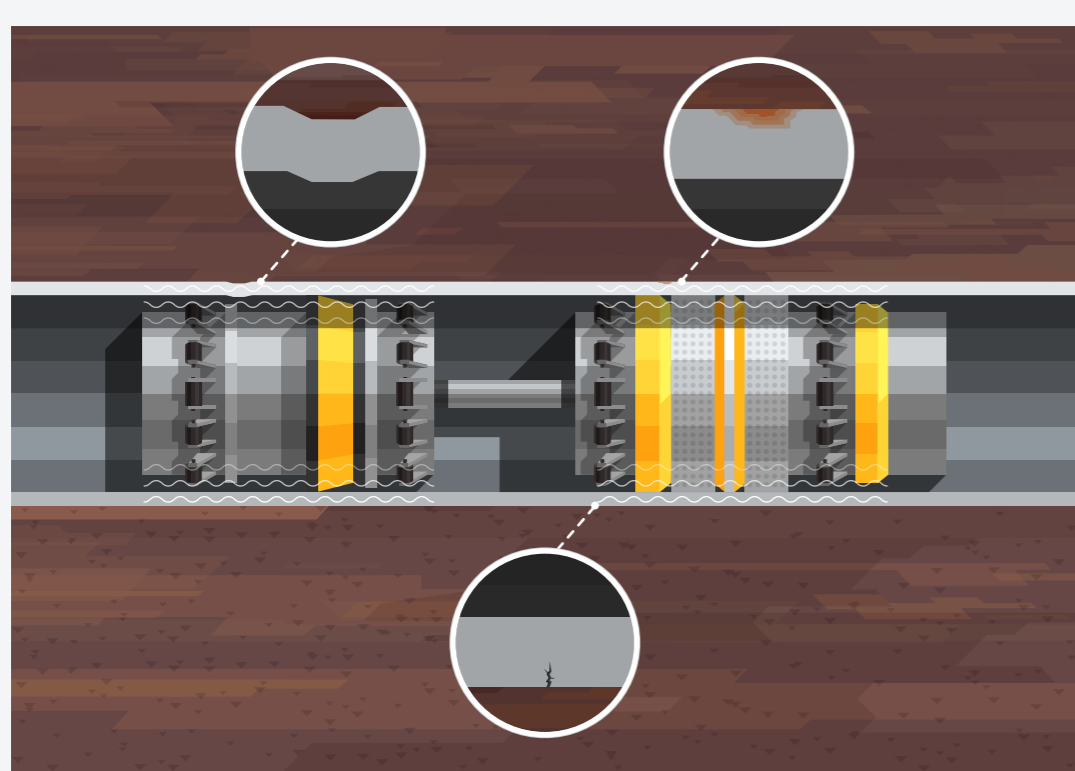
The key factors in our approach to integrity management and system safety are layers of defense; a focus on asset and equipment health; robust risk detection and situational awareness; preoccupation with failure; investigation and learning from incidents; and a strong safety culture.

## Layers of Defense

- We build safety into our systems from the start. Long before construction begins, we design our assets with safety at the forefront and with wide safety margins. This includes selecting pipeline routes and locations for our facilities that maximize safety and protection of the natural environment and limit disturbance to landowners, communities and the environment.
- During construction we continually test and confirm the quality and safety of every part of everything we build.



## Asset and Equipment Health



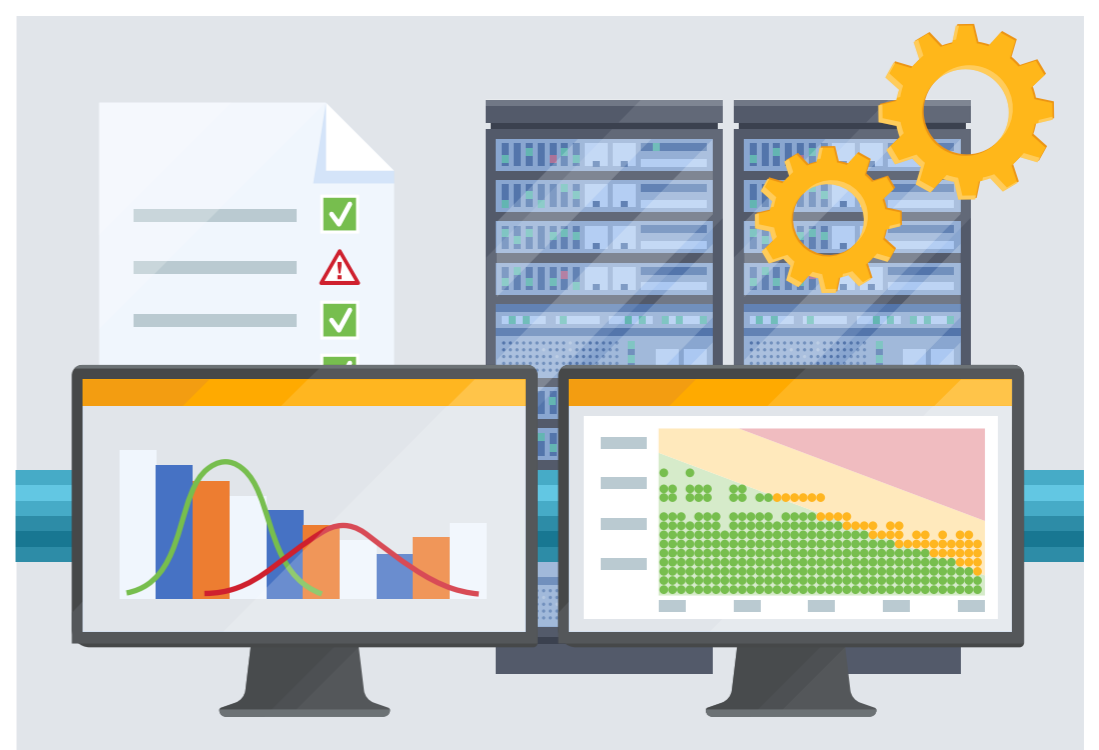
- Enbridge uses high-tech in-line inspection tools across our pipeline systems to assess the entire length of our mainline pipelines from the inside-out, millimeter by millimeter. This approach allows us to confirm and monitor the health of our pipelines in different ways:

- Calipers and internal geometry tools measure the shape of the pipeline, signs of third-party damage, such as dents, and any pipeline movement or bending.
- Ultrasonic and electromagnetic acoustic tools identify where cracks may be forming.
- Magnetic sensors, similar to medical MRIs, identify signs of corrosion.

- We believe the safety of our systems must be proven. We use inspection data and detailed risk models to confirm that our assets are safe and fit for service and to continually refine and advance pipeline integrity science and practice.

## Risk Detection and Situational Awareness

- Inspections provide a clear picture of the condition of our pipelines and their fitness to deliver the energy that society relies on, safely and reliably.
- In addition, we use cutting-edge reliability models to analyse and test the inspection data that we gather to identify gaps or uncertainty. This deep analysis helps us predict and address potential problems before they occur.
- These models add a different perspective, allowing us to confirm the safety of our pipelines and guide decisions on where additional inspections and preventative maintenance can meaningfully reduce the risk of a leak even further.



## Preoccupation with Failure



- We rigorously check the quality, accuracy and effectiveness of our integrity programs using independent audits, and reviews by industry peers and external experts.
- Enbridge has a unique program within our industry for conducting Safety Case Reviews. The Safety Case Program critically examines the reliability of our assets and the effectiveness of our layers of defense. This subjects our decisions and plans to arms-length, cold-eyes reviews to further challenge, refine and validate our approach in places where the impact of an incident could be higher.
- Our approach – check, re-check and check again – is present in all high reliability organizations and reflects our focus, vigilance and our chronic sense of unease about the hazards we must manage every day.

- Clear and conservative safety thresholds and signals are woven into our review and assessment processes. These processes require us to act and ensure we don't rationalize warning signs or yield to production pressure at the expense of safe operations.



## Investigation and Learning from Incidents

- Enbridge strives to reduce the risks associated with our operations and continually strengthen our safety programs, safety culture and safety performance.
- We know that every near miss and incident – our own, and those experienced by others within the energy sector and beyond – is an opportunity to learn and strengthen Enbridge's safety systems. We carefully study and apply these lessons to our work, assigning corrective and preventative actions to improve our ability to prevent, detect and respond to a leak or release.



## Strong Safety Culture

- Our shared belief that every incident can be prevented forms the foundation of our strong safety culture.



- Enbridge's Safety Culture Framework maps out specific and concrete safety traits, attributes and characteristics which support the effective working of our management system, driving how we talk about, think about, plan for and execute our work safely, every day.

Together, these programs, driven by our strong safety culture and guided by our core value of safety above all else, help to ensure the sustained safe and reliable operation of the energy transportation infrastructure that society relies on.