

INTRODUCING SPECTRA SENSE

**Detect, Protect & Prevent
with Distributed
Acoustic Sensing**

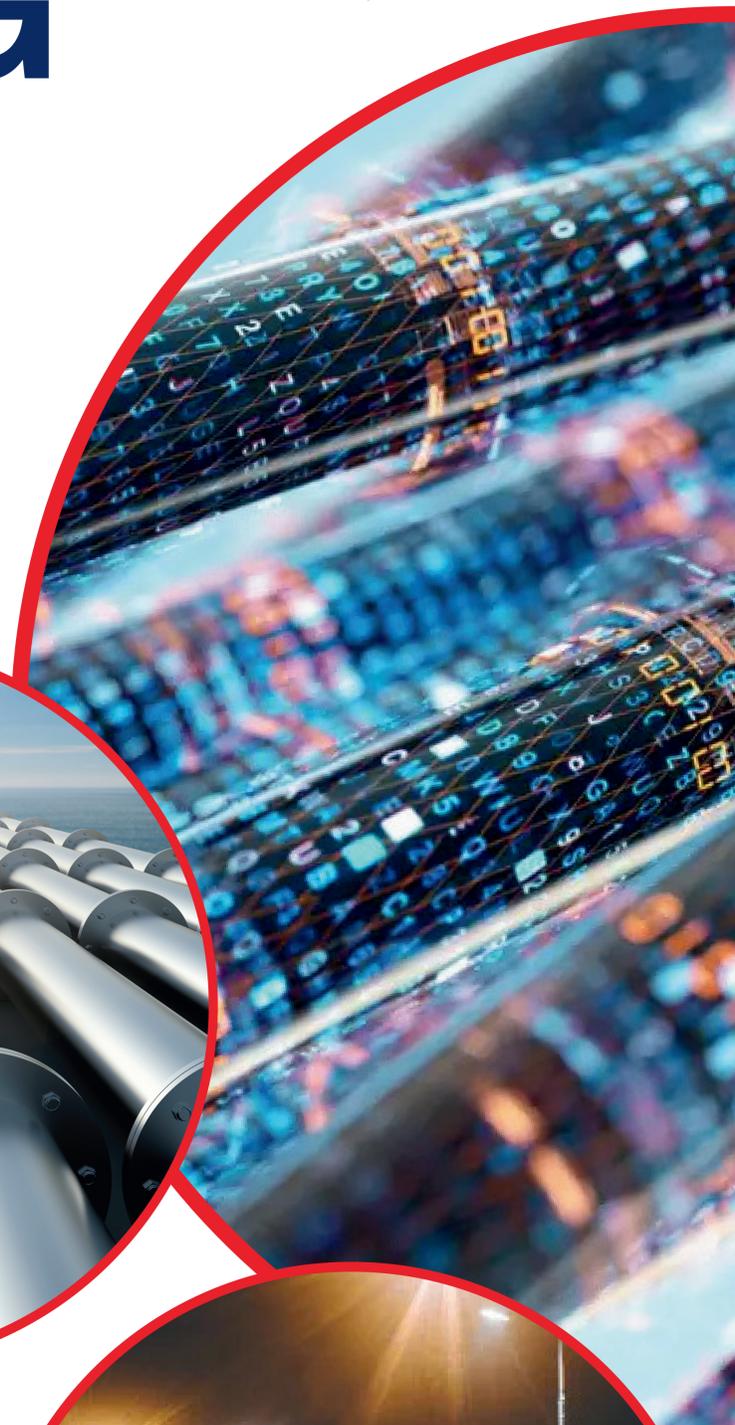


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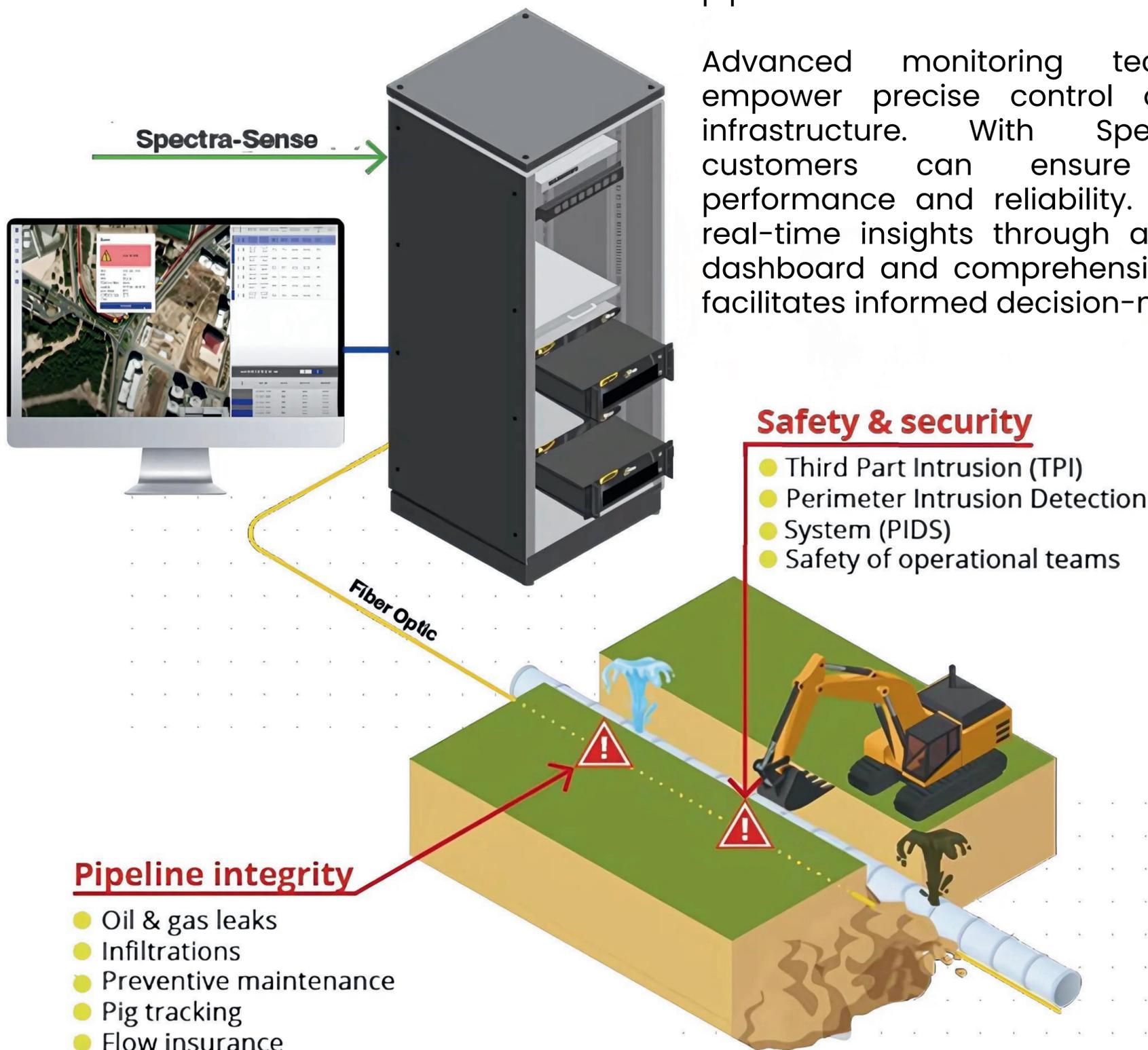
CERTIFICATIONS & PARTNERS

Introduction

Making Every Location Count With Fiber Optic Sensing

Get actionable insights with predictive maintenance systems tailored for pipeline distribution and infrastructure.

Advanced monitoring technologies empower precise control over your infrastructure. With Spectrasense, customers can ensure optimal performance and reliability. Accessing real-time insights through an intuitive dashboard and comprehensive reports facilitates informed decision-making.



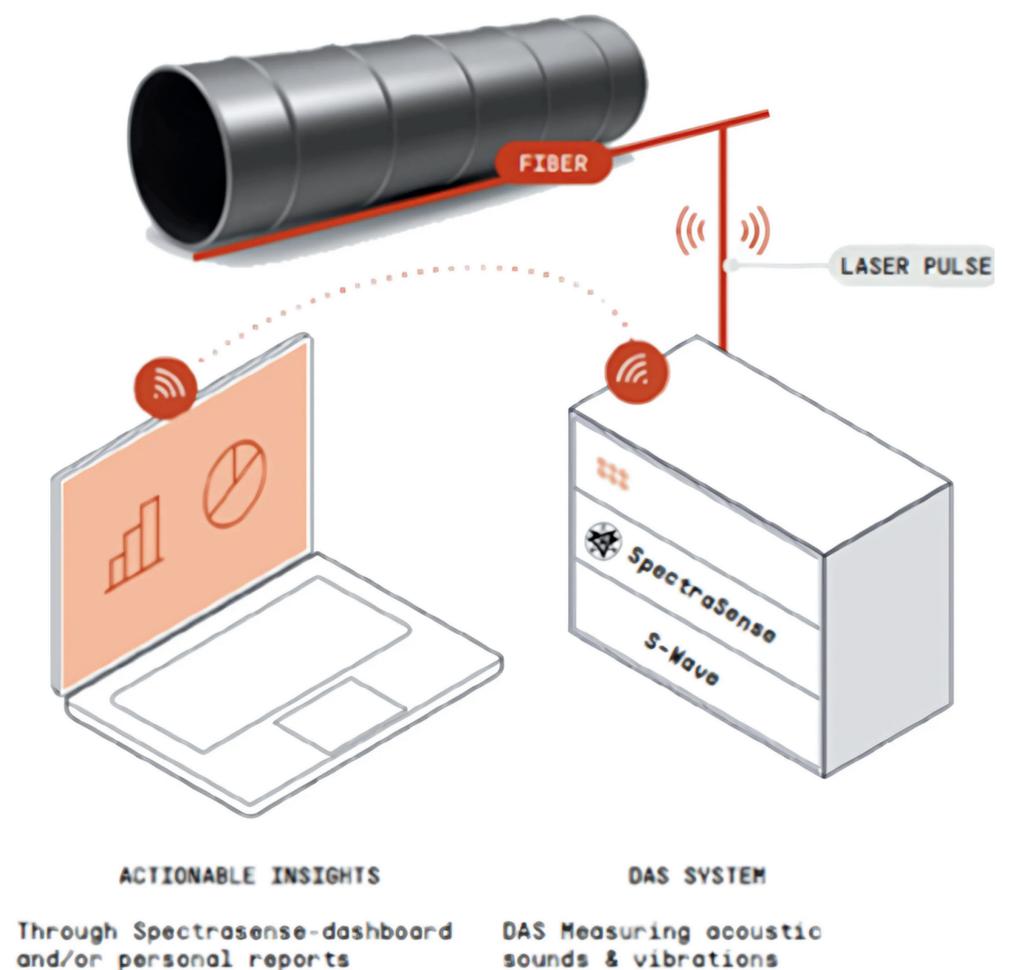
One Fiber Equals Thousands of Sensors

DISTRIBUTED FIBER OPTIC SENSORS

Fiber optic sensing technology has revolutionized the monitoring industry thanks to its exceptional accuracy.

Using a single fiber as a comprehensive sensor network, laser pulses are transmitted through the fiber, enabling continuous and precise measurements of vibrations. Spectrasense utilizes Distributed Acoustic Sensing (DAS) hardware device.

Once the fiber is connected and properly calibrated, DAS initiates measurements, providing actionable insights for informed decision-making. Customers can effortlessly access the Spectrasense dashboard and receive customized reports tailored to their needs.





WHY Spectrasense ?

- ▶▶ Same fiber for sensing and transmission
- ▶▶ No Power required on field
- ▶▶ Immunity to RF noise & EMI interference
- ▶▶ Accurate event classification and localization
- ▶▶ 24/7 Real-time monitoring
- ▶▶ Non-flammable and chemically inert
- ▶▶ Long sensor life
- ▶▶ Low maintenance
- ▶▶ GIS-Based customized mapping
- ▶▶ Data logging & automated report generation

SOLUTIONS





SECURITY

Care for your **CRITICAL INFRASTRUCTURE**

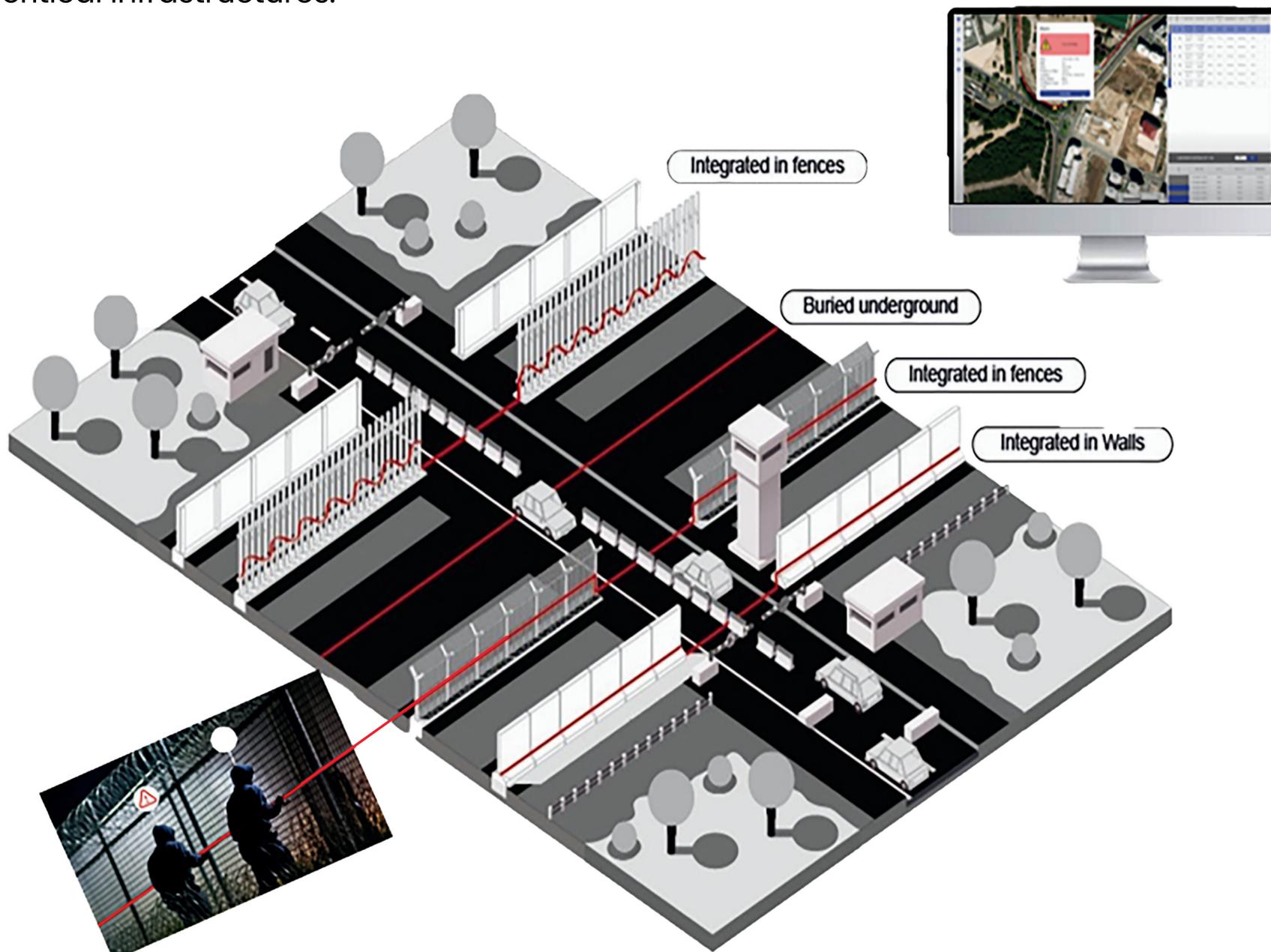
Monitor your critical infrastructure 24/7.

In safeguarding the reliability and operational excellence of critical infrastructures, the implementation of advanced monitoring systems becomes paramount.

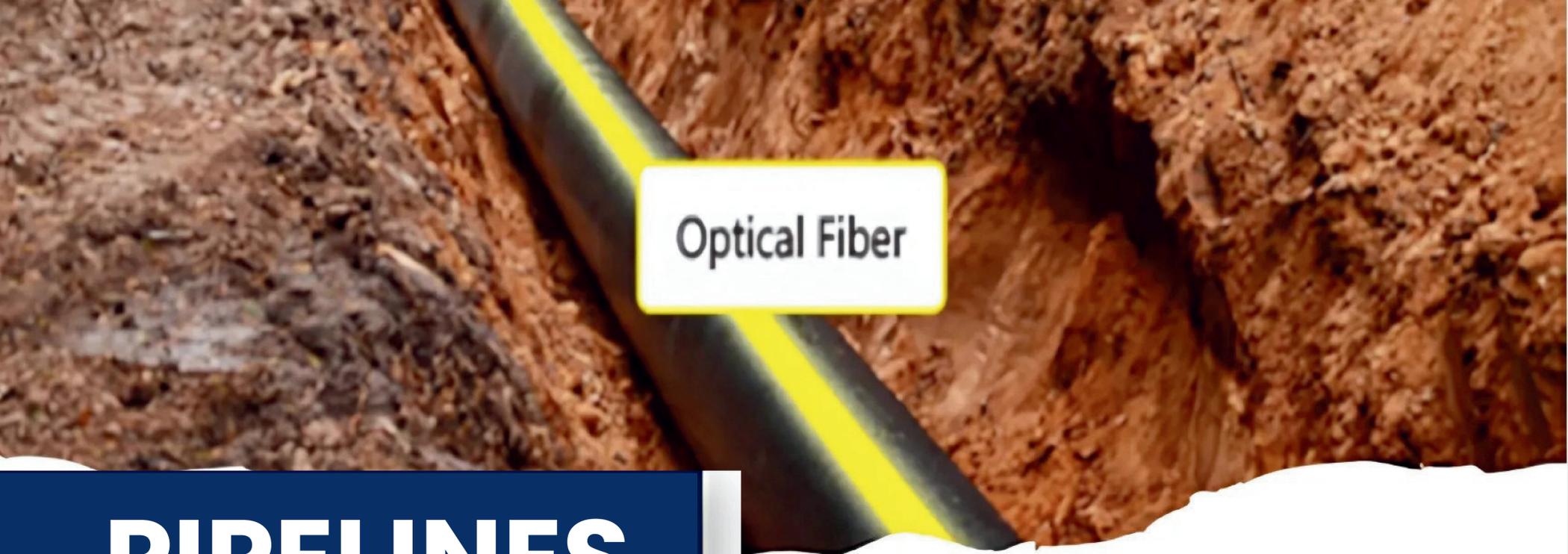
At Spectraev, we recognize the pivotal role that continuous monitoring plays in fortifying the integrity and efficiency of essential assets. Specifically tailored for critical infrastructures.

Spectrasense S-Wave monitoring solutions, including offers real-time insights that go beyond conventional methods.

In essence, our monitoring systems form a proactive defense, promoting predictive maintenance, operational optimization, and, most importantly, enhancing the safety, sustainability, and longevity of critical infrastructure networks.





A close-up photograph of a black optical fiber cable with a yellow stripe, laid in a trench. A white label with a yellow border is placed over the cable.

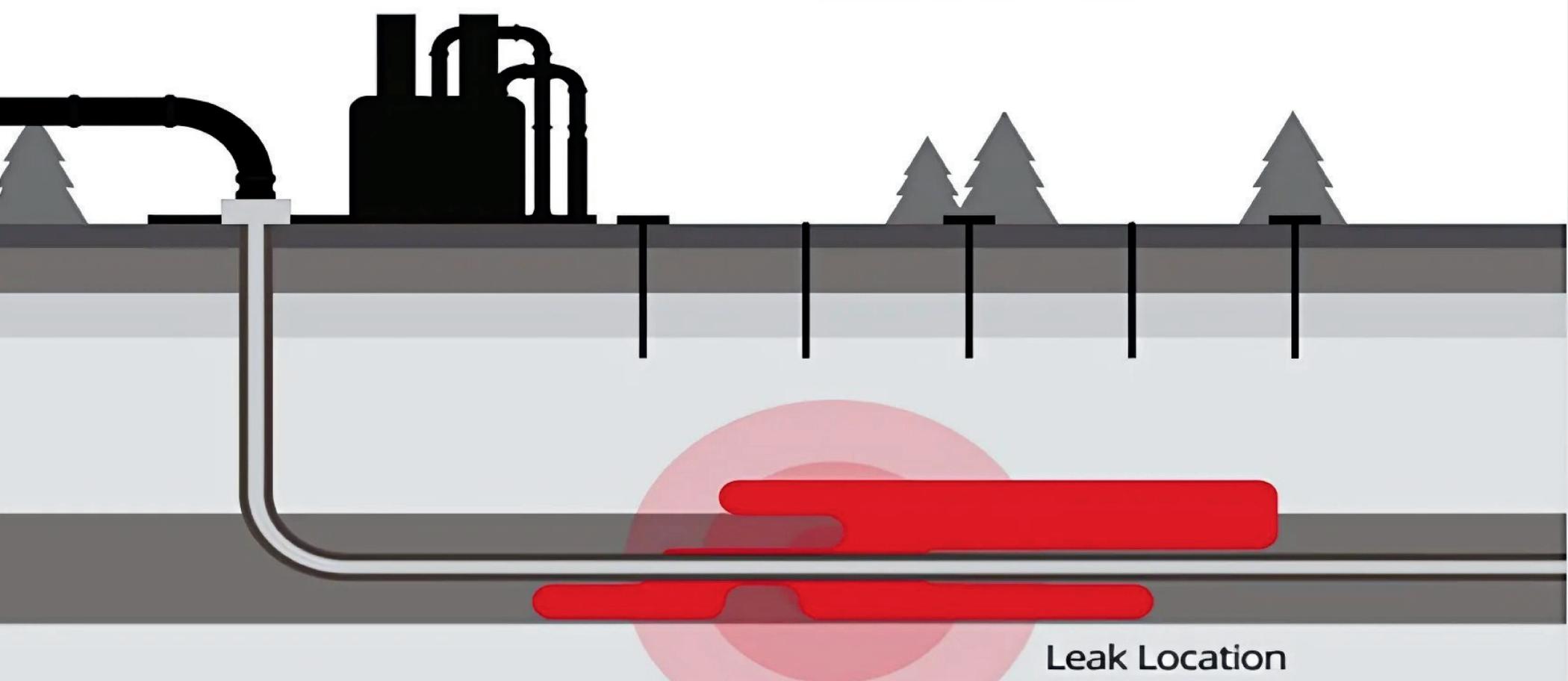
Optical Fiber

PIPELINES

Protect Your PIPELINES

Monitoring pipelines is crucial for ensuring the integrity and efficiency of every infrastructure.

By implementing advanced monitoring systems like spectrasense, potential issues such as leaks, or structural weaknesses can be detected in real-time. This proactive approach allows for timely intervention, preventing costly damages, environmental impact, and ensuring the uninterrupted flow of resources. Additionally, continuous monitoring promotes predictive maintenance, optimizing operational performance and minimizing downtime, ultimately contributing to enhanced safety, sustainability, and longevity of the pipeline network.





Detect Pipeline LEAKS AND INTRUSIONS

Leak Detection

S-Wave and fiber optic technology, instantly locates leaks and intrusions in pipelines for - Oil, Gas, drinking water and other liquids. This helps utility companies and industrial facilities to reduce wastage of resources and extend the service life of their assets.

Return on Investment

Installing S-wave typically costs less than 1% of a full pipeline replacement. In return, you get an extended pipeline lifespan, reduced wastage of resources and infrastructure peace of mind.

Third-Party Intrusion Detection (TPI)

DAS-based fiber optic technology continuously monitors pipelines for unauthorized activities such as digging and tampering. It provides real-time alerts for all types of pipelines, helping operators prevent damage, enhance security, and ensure regulatory compliance while minimizing operational risks.

Telecom & Smart Networks

S-Wave only needs one optical fiber for monitoring, which means other available fibers can be used for connecting and remotely controlling network assets, such as valves and sensors. The fiber can also be used for creating a data communication network or tuning a pipeline into a fiber backbone in collaboration with telecom operators.

Asset Management

Utility and industry asset managers can increase the service life of their pipelines and make asset management more cost-effective. With Fiber Based monitoring it is possible to continuously stay up-to-date of the status of any pipeline. With early warning alerts you can act in time to make your pipelines last longer and delaying replacement of old infrastructures.

Some of the S-Wave product features.



24/7 monitoring



Swift Installation



Locate leaks with 5 m accuracy



Improve asset management



All pipeline types, any
pipe material



Oil



Gas



Water



Chemical



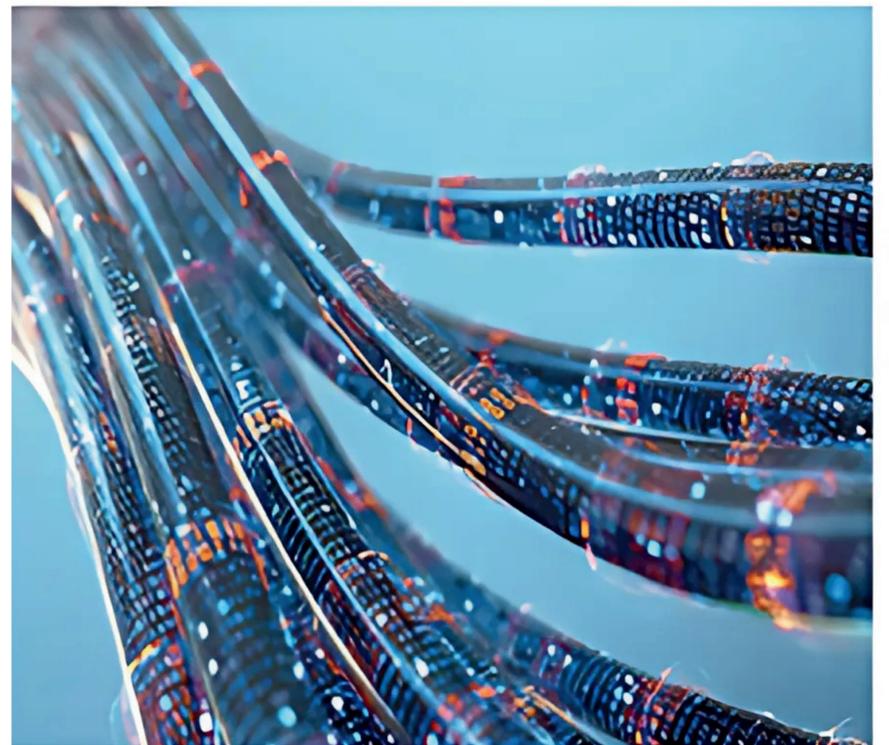
TELECOMMUNICATIONS

Monitor Your TELECOMMUNICATION INFRASTRUCTURE

Detect, locate, and identify third party intrusion on telecommunication infrastructure.

Detection and localization of abnormal activities in real time, enables immediate countermeasures. Helping to prevent major damage and identify the possible perpetrator.

spectrasense S-Wave can detect vibrations and acoustic signals caused by physical disturbances along fiber-optic cables. It helps identify potential issues such as cable faults, external damage (eg.. construction activities), or environmental threats (eg.. landslides or floods) before they cause network disruptions. Real-time data from DAS improves the efficiency of network maintenance and reduces downtime.



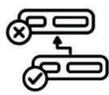
SPECIFICATIONS



**REMOTE
ACCESS**



**SECURITY
CAMERA
INTEGRATION**



**REDUNDANCY
FIBER CUT
IMMUNITY**



**ACCURACY
5 METERS**



**FUTURE
EXPANSION**



**RESPONSE
TIME
LESS THAN
A SECOND**



**SENSITIVITY
USER
ADJUSTABLE**



**SCADA
INTEGRATION**



**WARRANTY
EXTENDED UP TO
3 YEARS**



**DETECTION
RANGE
UP TO 40 KM**



**POST
COMMISSIONING
SUPPORT (SLA)**

OUR PRODUCTS

SW - 520S



Range	Up to 20 Km
Channels	Single/Multi Channel
Frequency Range	10-10000 Hz
Spatial Resolution	5- 10 m
Acquisition Time	Down to 0.1 s

SW - 540L



Range	Up to 40 Km
Channels	Dual simultaneous interrogation channels
Frequency Range	10-10000 Hz
Spatial Resolution	5-10 m
Acquisition Time	Down to 0.1 s

CERTIFICATIONS



OUR PARTNERS



Wondering what Spectrasense can do for your business? **Let's put a meeting in pipeline!**



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