Bridger Photonics:

LDAR Implementation: Requirements, Standards and Industry Perspectives

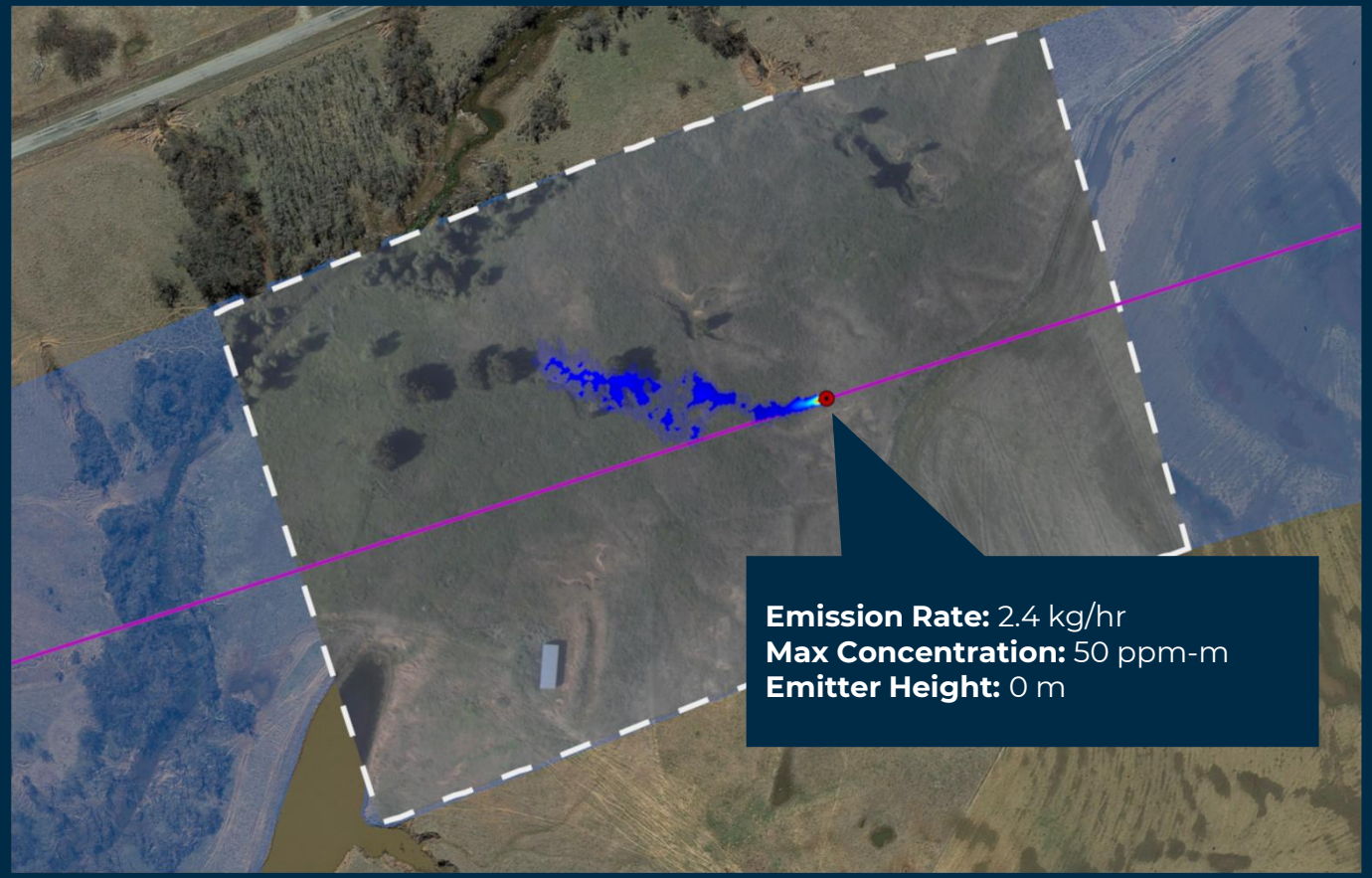
Eurogas Webinar

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Director of Policy and External Affairs



DATA EXAMPLE

TSO Example



Plumes created for demonstration purposes. © Bridger Photonics, Inc.

Actionable Data = Emissions Reductions

Comprehensive
Sees every component in view of the aircraft

Sensitive
Detects < 500 ppm methane

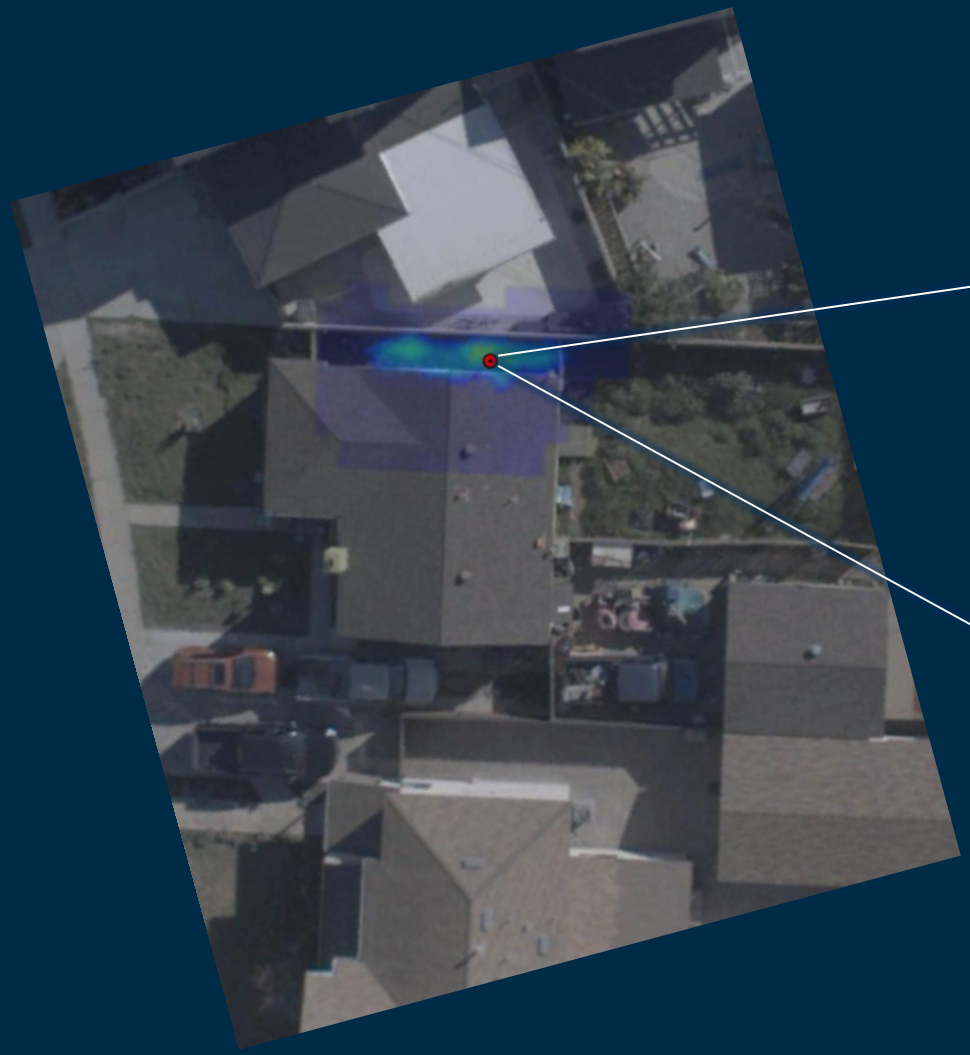
Source-resolved
Pinpoints individual leak locations

Quantitative
Accurately quantifies leak rate, so the largest are fixed first and overall mitigation is tracked

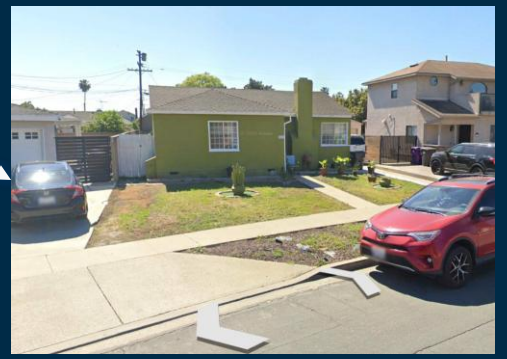
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DATA EXAMPLE

DSO Example







Street-level view

Emissions location, timestamp, emitter height, aerial photograph, and flux rate provided

Tells crews exactly where to go and the size and source of the leak. Saves time otherwise spent knocking on doors and gaining access to backyards.

Distinguishes network leaks from other sources, like CNG vehicles.

Customer-side leaks can be flagged to homeowners, supporting community safety.

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ARTICLE 14

Regulatory context

NOW

Best commercially available technology

Until the implementation rules are finalized, operators use the best technology.

NEXT

Implementing act

(possibly interim version)

Sets detection limits and techniques that CEN standards will complement. Could require companies to hold documentation of a technology's performance demonstrations.

LATER

Testing prescriptions

Standardisation of technology performance demonstrations.

What we might expect in the implementing act

Thresholds for buried pipelines

The gas level at the ground surface that tells crews to dig or check more closely

Reference to CEN and ISO standards

Standards already in development define how surveys are done

Technology recognition

Within those standards, technology types recognized by how they measure and how they are used

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Best Available Technology

Technology attributes to determine the best commercially available technology

Covers all components

Does the technology actively measure across full network and facility footprints?

Can elevated, hazardous, buried, remote and access-restricted equipment be surveyed with the technology?

Identifies the methane and the source

Can the technology precisely localize emissions and avoid false positives from offsite sources like waste facilities, CNG vehicles, feedlots, wetlands, and natural seeps?

Detects reliably

Can the technology overcome interferences such as steam and poor ambient light?

Is detection impacted by user error, and is the data auditable?

Measures leak size

Can the technology quantify methane leakage rates to guide repair priorities?

Measure mitigation outcome.

Can the data be used for Article 12 measurement, reporting, and verification (MRV) programs?

Cost-effective and scalable

Are surveys affordable and efficient?

Is responding to detections easy and effective?

Are data management systems clear and efficient?

Improves crew safety

Does the technology allow crews to avoid occupational hazards?

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Transparent Performance Demonstration

Independent testing already documents the technology performance attributes for modern leak detection technology

1 Real-world operating conditions

Technologies have been tested in a variety of environmental and deployment conditions and at operating facilities.

- **Terrain and weather**
- **How the technology was used**
- **Operational facilities**

2 Performed by 3rd parties

Testing has been performed through established independent organizations.

- **METEC test center, Colorado State University**
- **DVGW certification**
- **TADI controlled release site**
- **Alberta Energy Regulator alternative LDAR program pilots**

3 Clear results

Results are published transparently.

- **90% detection probability shown in real-world conditions**
- **Zero false positives in real-world testing scenarios**
- **Source GPS locations accurately registered**
- **Emission reductions quantified in operating programs**

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Summary

1. We've moved beyond sensory (audio, visual, olfactory) and handheld inspections alone: modern technologies deliver reliable detection, comprehensive coverage, and actionable data.

2. Modern technologies have been extensively demonstrated and have driven significant reductions in real-world use, with reductions exceeding 70%.

3. Handheld detectors remain important. Modern technologies applied at scale accelerate reductions, improve efficiency and safety, and are essential to meeting the scale of the EUMR.

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Thank you

Looking forward to the discussion

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