# SMART LEAK DETECTION – METHANE (SLED/M)
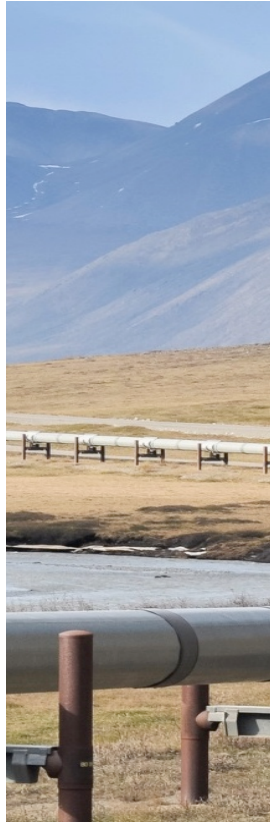
## Heath Spidle

Engineer

Southwest Research Institute

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# How is SLED/M™ Different?
*Remote Sensing + Artificial Intelligence*

- State-of-the-art mid-wave infrared (MWIR) camera (COTS)
- Expands on the limitations of existing methane sensors
    - **Machine learning-based detection algorithms** to autonomously and reliably (low false alarm rates) detect methane
- Powerful deep learning algorithms (AI) for reliable plume identification
    - No human in the loop
    - Reliable false positive rejection
- Can be used for surveillance and ROW intrusion detection
    - Objective detection
    - Vehicle detection
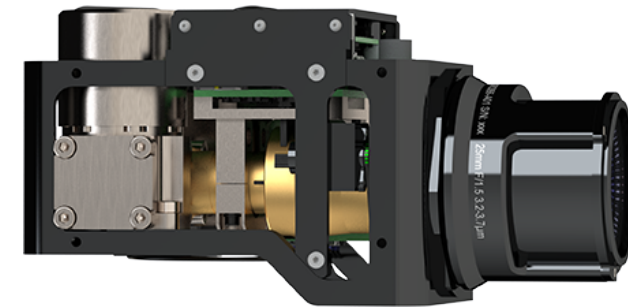
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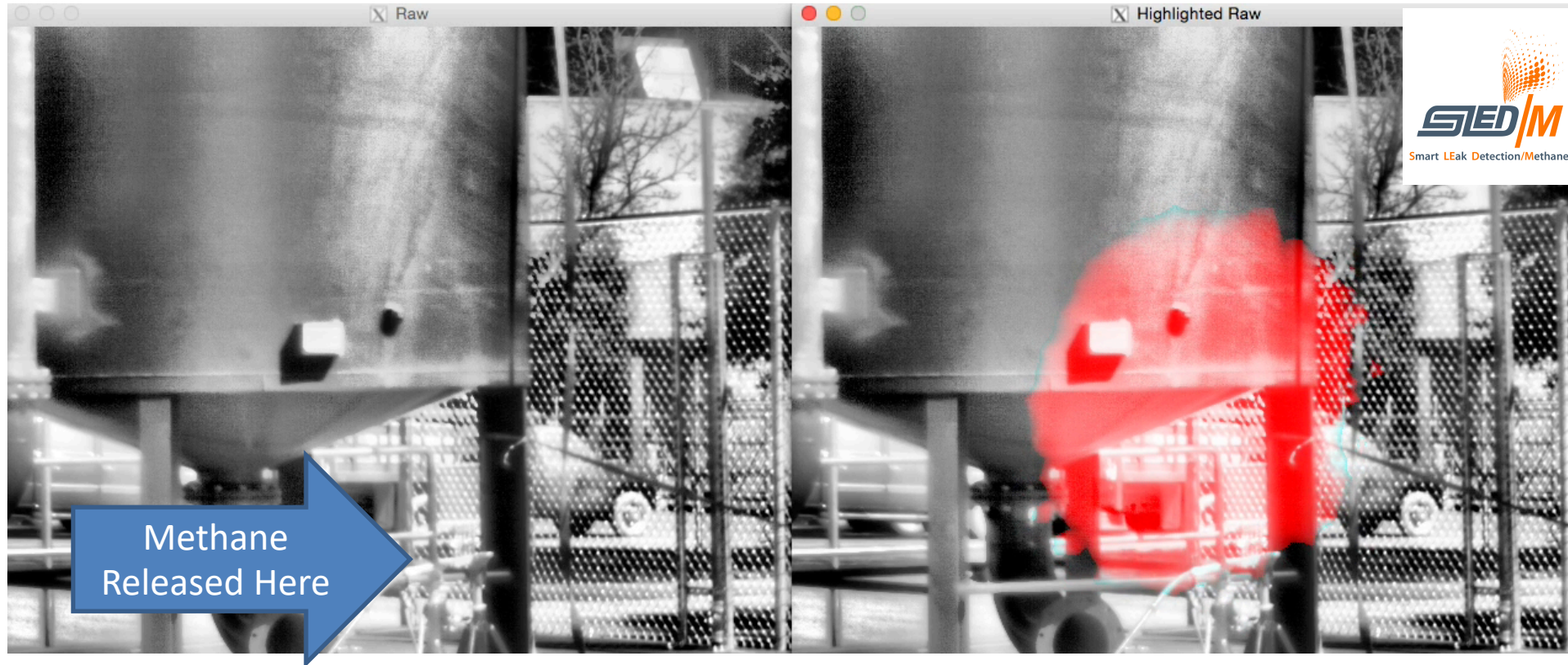swri.org

# Can You Spot the Methane?



OGI Camera Video
**Can You Spot the Methane?**

SLED/M™ Processed Video
**Methane Highlighted in Red**

Methane Released Here

*Patent Pending*

# Spotting Methane Emissions With SLED/M™

OGI Camera Video
**Can You Spot the Methane?**

SLED/M™ Processed Video
**Methane Highlighted in Red**



*Patent Pending*

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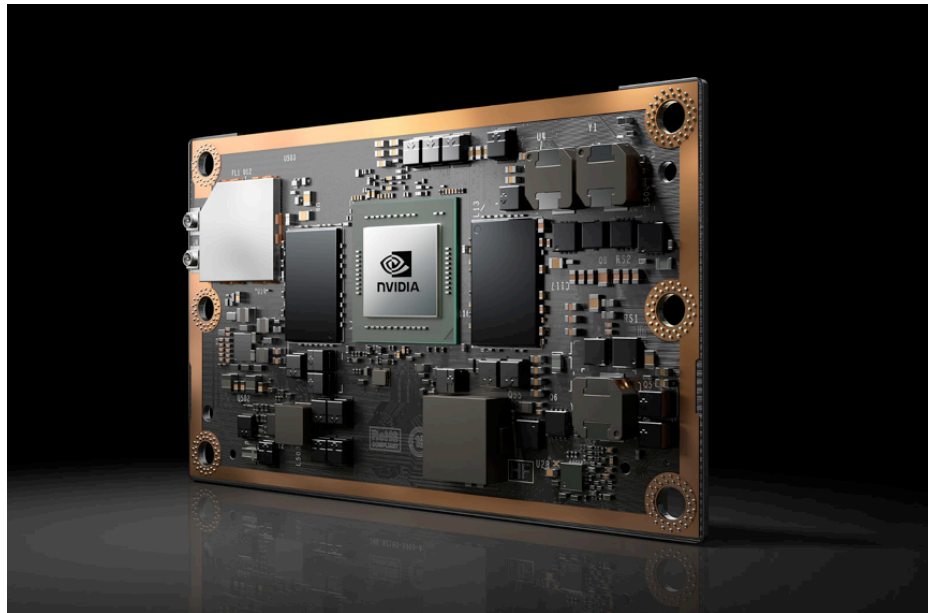
# SLED/M™ - Smart Methane LEak Detection System
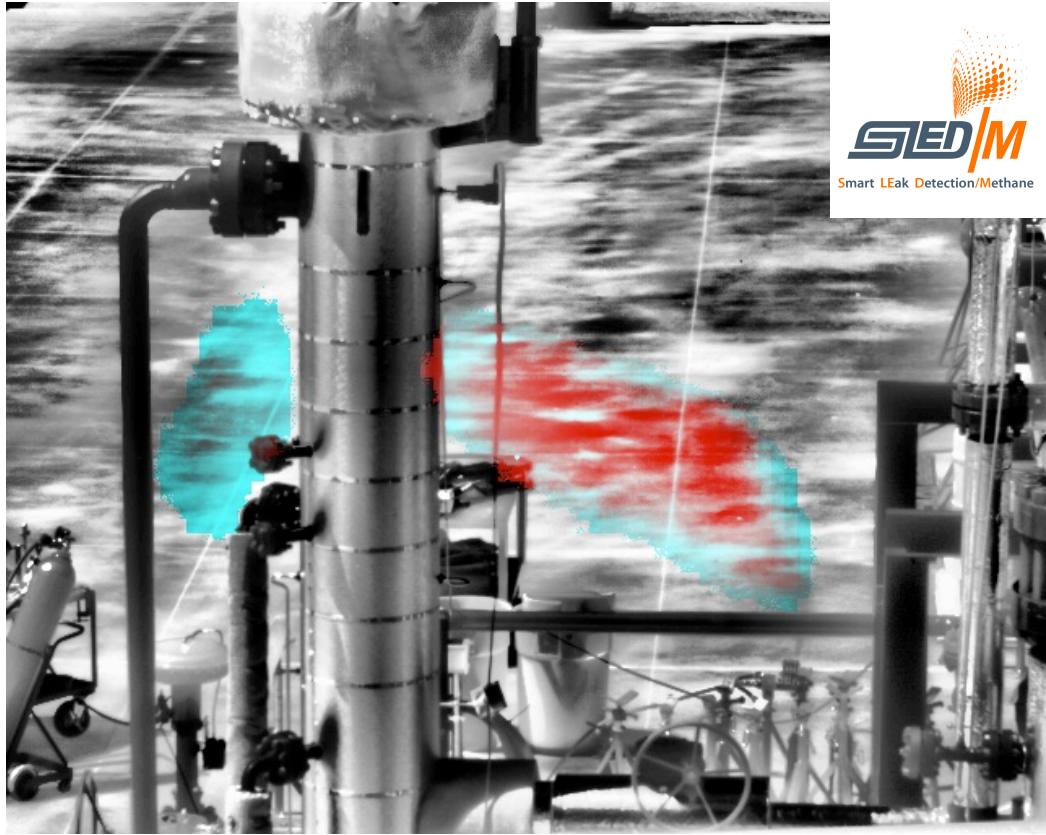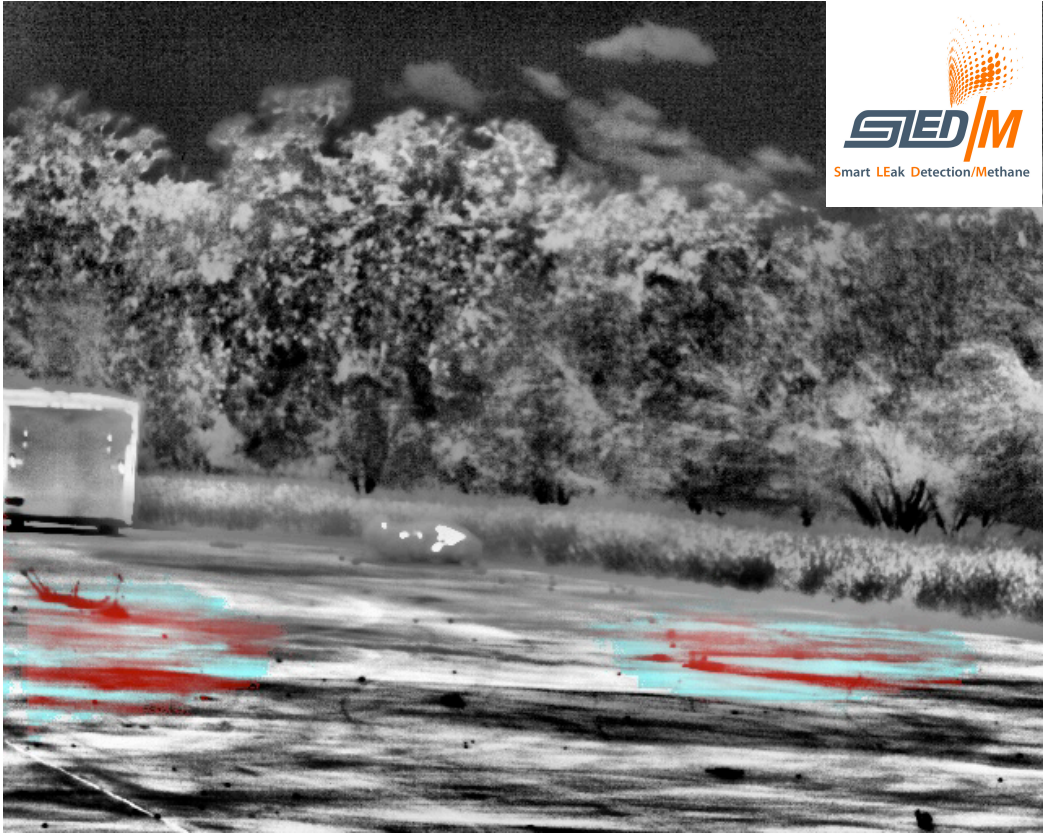
# SLED/M™ - Smart Methane LEak Detection System

# SLED/M™ Operates at the Edge

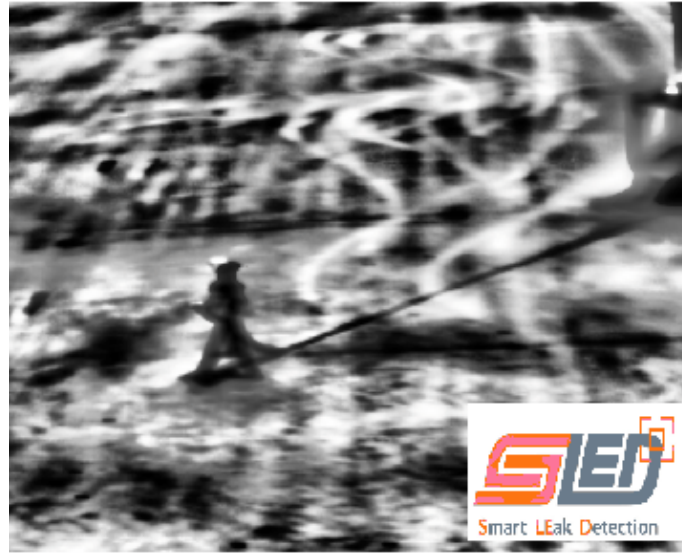- SLED/M™ detects gases in less than 2 seconds at the edge

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# Combating Sources of False Positives SLED/M™

People



Motion



Dust

*Patent Pending*

# Drone-based Operations
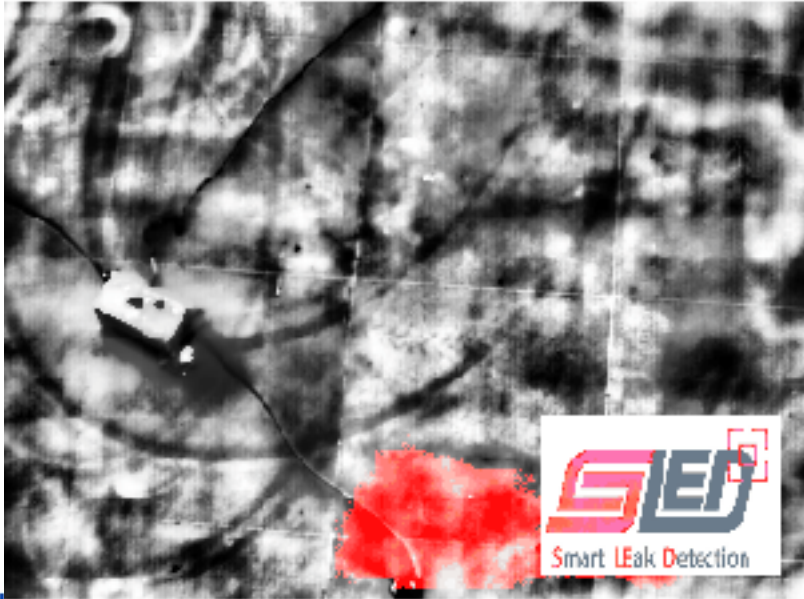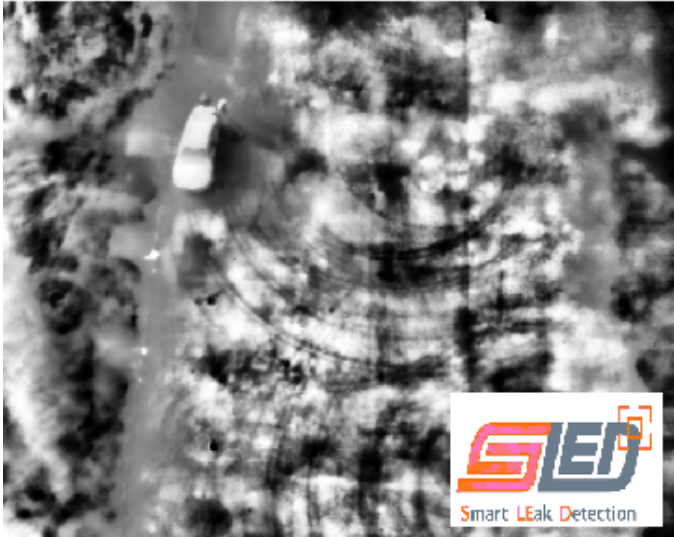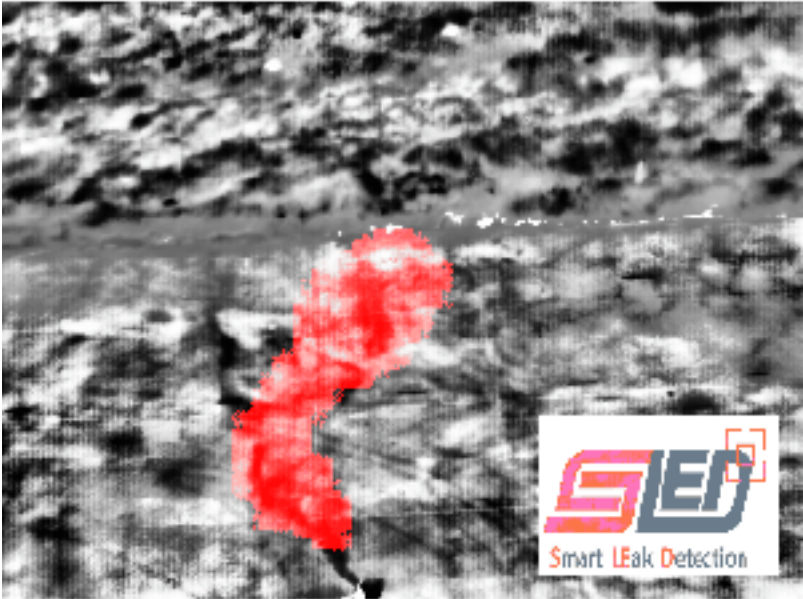
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**SLED**
Smart LEak Detection

# Questions?

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