Cadent
Your Gas Network

Digital Platform for Leakage Analytics (DPLA) Overview

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Project Leads

Cadent
Your Gas Network

Guidehouse
outwit complexity

SIF Project Partners

SGN
Your gas. Our network.

WALES&WEST
UTILITIES

Northern Gas Networks

national gas transmission

DPLA
DIGITAL PLATFORM FOR LEAKAGE ANALYTICS

Our mission is to reduce carbon emissions, realise customer benefits and improve safety in a cost-effective way

Our big idea…

Revolutionise our emissions understanding and asset management capabilities by researching and utilising technologies, systems and data for granular identification and prioritisation of network assets that will;

1. Reduce Emissions

Lowering emissions contributes to government targets and safeguards the environment for future generations

2. Improve Safety

Proactive leak detection and the capability to predict asset failure will increase consumer safety across UK GD Network areas

3. Reduce Customer Bills

Reducing emissions will reduce consumer bills. Unlocking asset level intelligence will allow more efficient asset management

We are embracing SIF funding with an ambition to provide a new real time emissions platform, in collaboration with industry partners

Shrinkage and Leakage Model

SLM

Utilises real asset data, localised performance measurements, leakage rates and factors to form an overall view of Distribution Network emissions following a universal regulator approved methodology

Digital Platform for Leakage Analytics

Will utilise a combination of direct air monitoring technologies and sensors, underpinned with an expert hydraulic model that facilitates granular and accurate leakage insights and targeted interventions enabling considered emissions remediation plans

Lead Network

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Delivery Partner

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Outwit *Complexity*

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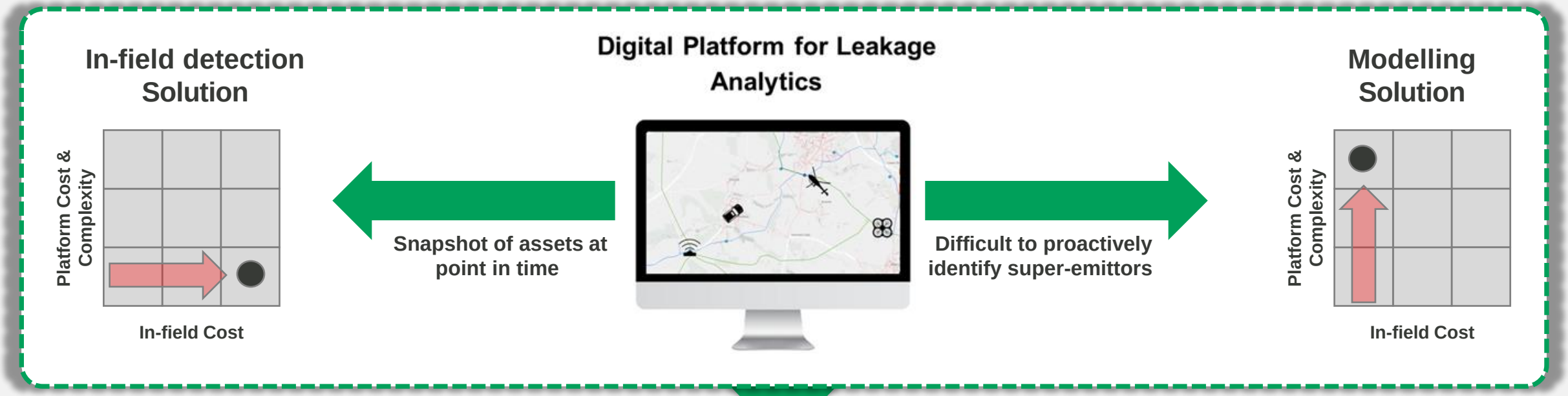
The challenge is how best to combine In-Field Detection and Modelling to deliver effective leakage detection and management



Our approach

Testing and refining the optimal mix for each asset type through well thought out stage gates

Combining aspects of in-field detection and modelling allows cross validation and enhanced accuracy

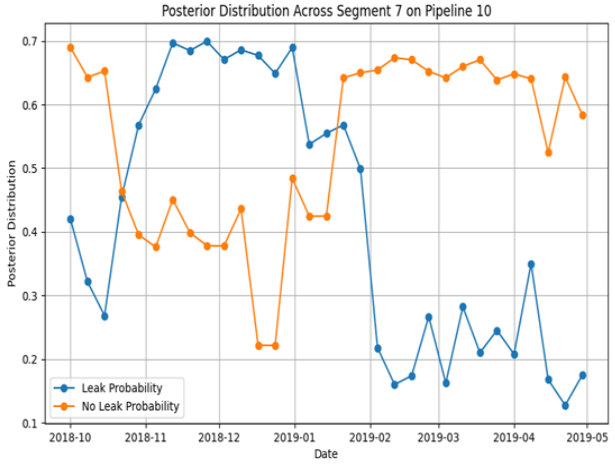
Expected outcomes

Improved leak detection, cost optimisation and rapid reduction in emissions

By combining modelling and in-field detection technologies we can provide benefits beyond just network-wide assessments of emissions

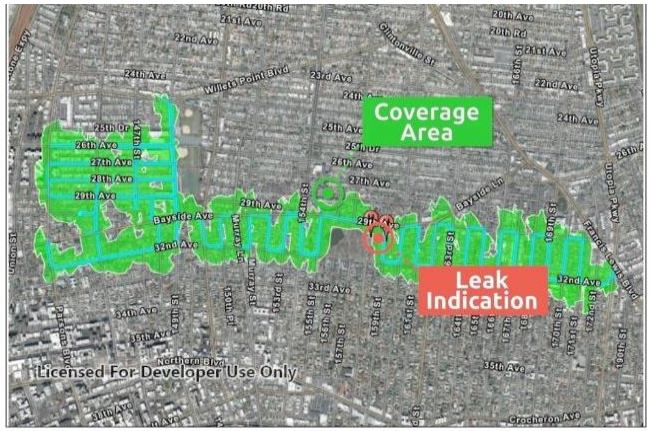
1

ML Leak Detection



2

In-Field Detection Outputs



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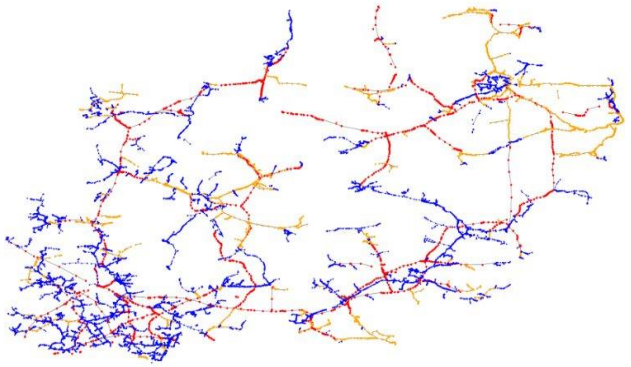
Network Model Outputs



Near real-time emissions monitoring and detection, above and below ground, to enable targeted responses and accelerated efficient emission reductions.

Fast-forward 12 months and our learning has focused the direction and solidified the boundaries of our ‘Big Idea’

Deterministic vs. Probabilistic
Probabilistic modelling delivers the necessary accuracy balanced against cost and benefits

ALD Technology is Here to Stay
More and more technology providers are becoming available offering competitive solutions and choice to the market

Modernising the SLM
A real life reflection of asset emissions enables networks to take action

Digital Platform for Leakage Analytics

Reactive to Proactive
Enabling a more proactive approach is reducing operational costs and improving the safety of the network

Additional Benefits
Asset investment strategies can be rationalised and designed using greater intelligence

More Needs to be Done
More work needs to be done with government and regulators to deliver value for consumers

The DPLA empowers Gas Distribution companies to protect the global environment for future generations

Thank you

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