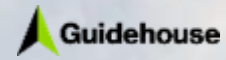


Shrinkage and Leakage Forum

23rd November 2022

Digital Platform for Leakage Analytics - Strategic Innovation Fund



The DPLA project is funded by Ofgem and Innovate UK through the new Strategic Innovation Fund (SIF)

What is the Strategic Innovation Fund?

SIF Innovation Challenges



The aim of the Ofgem Strategic Innovation Fund is to **decarbonise** gas and electric energy distribution and transmission networks and **benefit the consumer**.

Eligibility Criteria (including but not limited to)

- 1) address the Innovation Challenge set by Ofgem;
- 2) have clearly identified potential to deliver a **net benefit to gas or electricity consumers**
- 3) involve network innovation;
- 4) not undermine the development of competitive markets;
- 5) be innovative, novel and/or risky;
- 6) include participation from a range of stakeholders;
- 7) **The process - an agile approach to innovation**

What role does DPLA play?

DPLA Objectives

- Reduced gas leaks → lower methane emissions → better environmental performance
- Greater accuracy → improved reporting → optimised maintenance and repair capital investment
- Reduced shrinkage → lower customer bills → customer satisfaction

Discovery Outcomes ✓

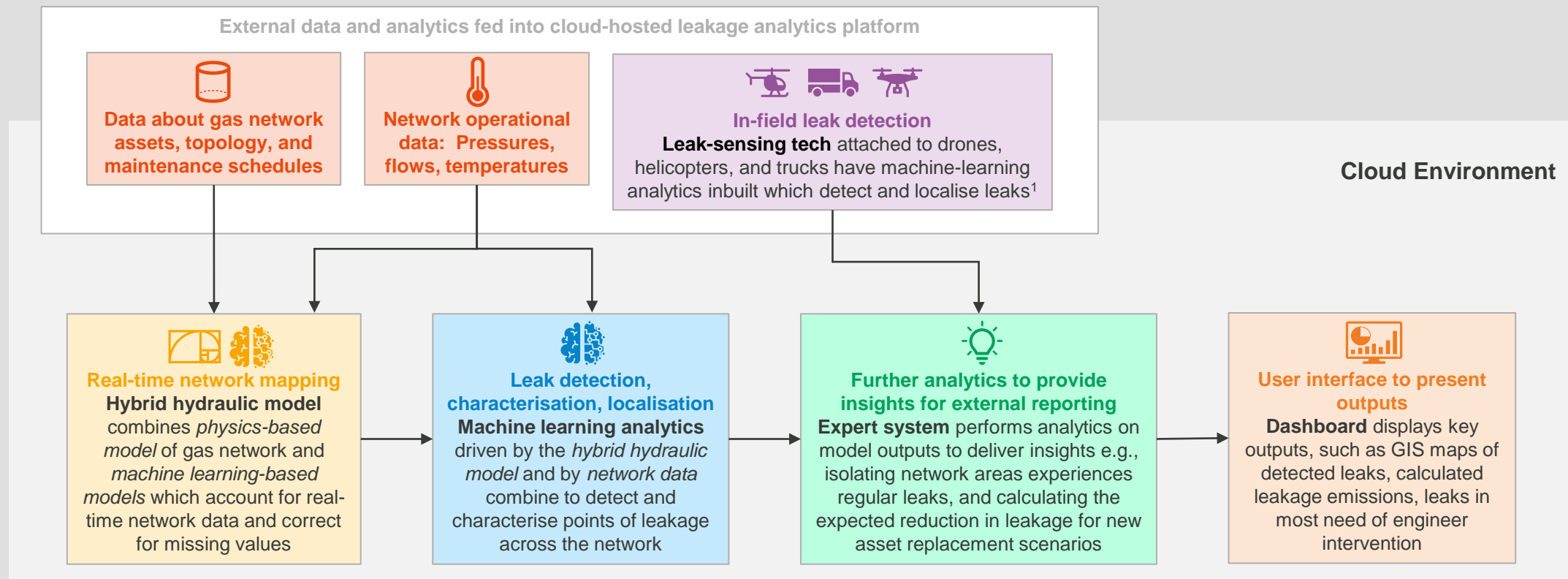
- Verified the feasibility of the DPLA concept from a technical, conceptual, regulatory and economic angle
- Identified potential technology options and deployment modes
- Cost benefit analysis demonstrating the economic benefits of the DPLA

Alpha Progress

- Technology providers shortlist ✓
- Assessed vendors' digital leakage analytics platform development to support the submission of an RFI ✓
- Performed a change impact assessment and strategy ✓
- To assess regulatory options for roll out
- To refine the cost benefit analysis

Merging physics-based models, machine learning-based models and analytics, and novel leak sensors creates a first-class leak detection platform

Digital Platform for Leakage Analytics Architecture



¹ Sensor data will also be fed into the machine learning models during a training phase for DPLA to improve model database and understanding of 'leak signatures'

DPLA has the potential to accelerate decarbonisation, bring value to the consumer and deliver reporting and operational improvements



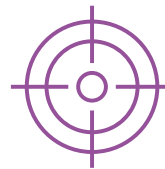
**Accelerating
decarbonisation**



Customer Benefits



Reporting Benefits



Increased Accuracy



Real-time Inputs

Next steps: Beta phase... and beyond



Scale of the Beta Phase

- Multi-year, large-scale projects
- Expecting several **multi million £ programmes**
- **Build, operation and/or demonstration** of the concept



DPLA Beta High-Level Objectives

- Build and test a **minimum viable product**
- **Demonstrate** several methane detection **technologies**
- **Test the scalability** of the technology across different regions and pressure tiers
- Develop a suitable **regulatory framework** to drive faster emission reductions

Thank you

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