

NNS Overlooked Pay Project

The background of the slide features a close-up of a person's face, specifically their eyes and nose, which are partially obscured by a series of white, glowing digital lines and circular patterns. These lines suggest a high-tech or data-driven environment. The overall color palette is a mix of soft blues, greys, and a vibrant teal used for the text and logo elements.

The
Oil & Gas
Technology
Centre

Your Innovation Partner

Jason Paterson
Project
Engineer

Presentation Objectives



- Introduce the Oil and Gas Technology Centre (OGTC)
 - who we are and how we work
- Background to the overlooked pay projects
- Project Objectives and high level summaries
- Overview of the main challenges – data, access and legal
- Key learnings and opportunities

The Oil and Gas Technology Centre



Unlock

Unlock the full potential of
the UK Continental Shelf

Anchor

Anchor the supply chain
in North East Scotland

Inspire

Inspire a culture of innovation
and transformation



£180 million funding from the Aberdeen City Region Deal

How We Work



Driving

Action through technology roadmaps to achieve MER UK and grow the supply chain



Delivering

Projects that move the dial on key challenges and opportunities across the UKCS and beyond



Connecting

Industry, governments, regulators and academia to drive technology investment and deployment



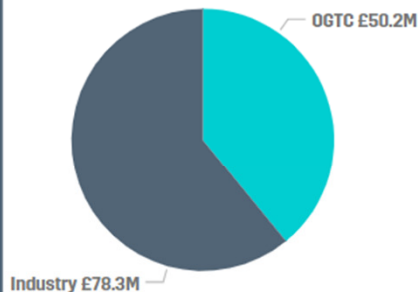
Partnering with industry, government and academia

Our Track Record



£128M Invested

Co-Investing in Industry-led projects to develop and deploy new technologies.



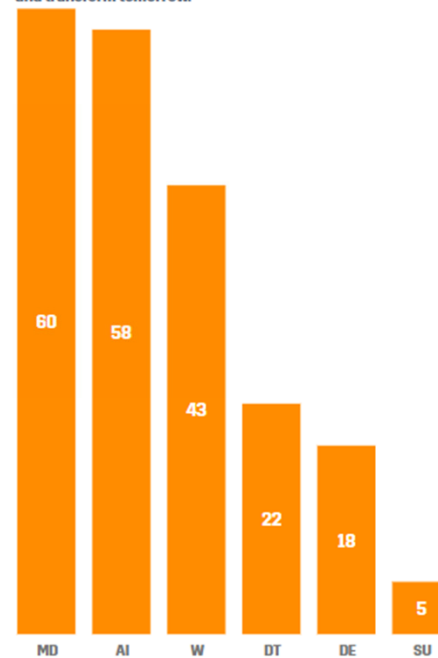
580+ Technologies Screened

Harnessing the power of an ever-expanding range of transformational new technologies.



206 Approved Projects

Delivering technology projects to fix today, maximise recovery and transform tomorrow.

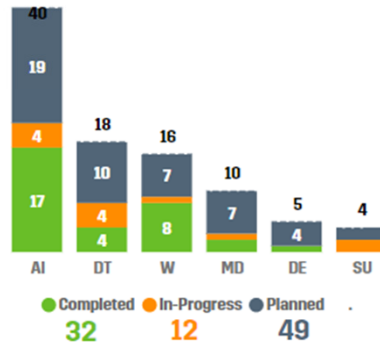


Memberships

132 Bringing together Operating, Supply chain and technology companies to drive innovative new solutions.

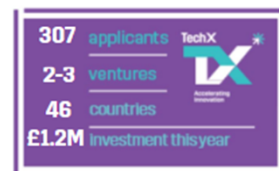


Field Trials



20+ TechX Startups

Accelerating Innovation by helping a new generation of entrepreneurs take their technologies to market - faster.



Government Industry Schools Community



Visitors

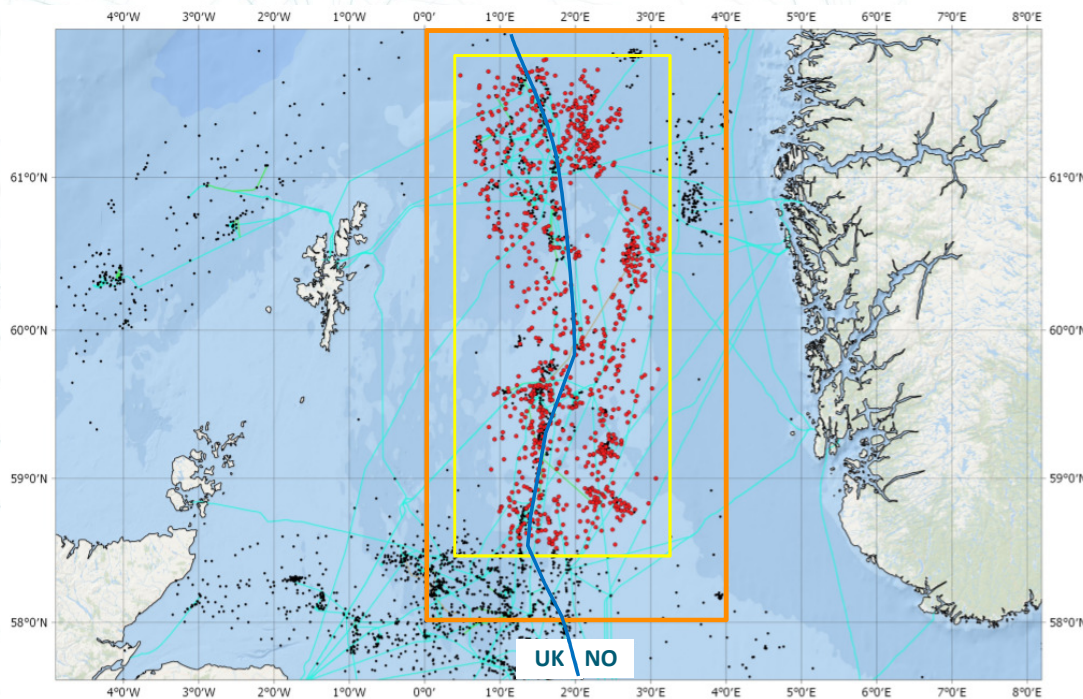
19,900+

Creating a culture of Innovation in the region through exciting events and workshops.

*Correct as of June 2019

Delivering strong results

Overlooked Pay Call For Ideas (2017/18)



Call for Ideas Summary:

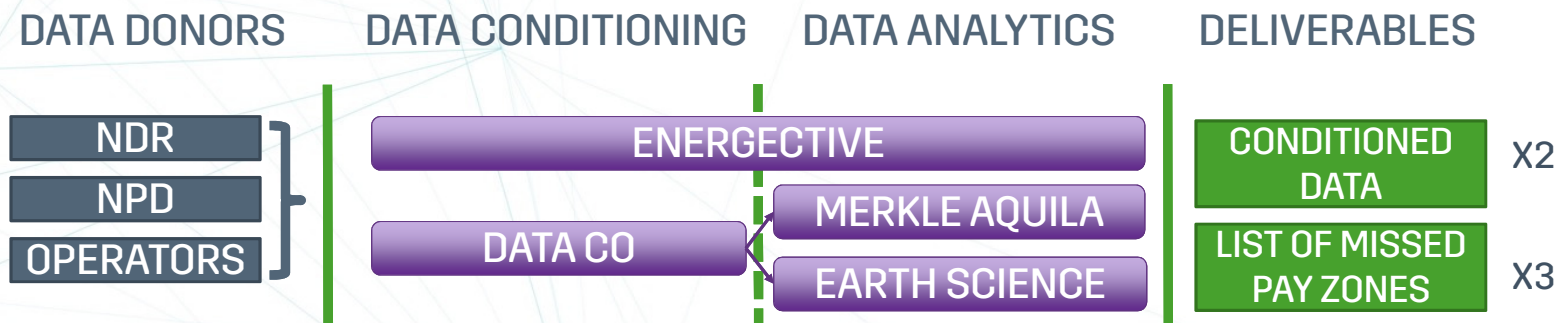
- Use Machine learning techniques to rapidly identify remaining 'overlooked pay' opportunities
- Prove that ML techniques can improve productivity and objectivity and be deployed at scale
- Use available well data within the AOI from NPD, NDR and Operators
- Appx 7,000 wells from NDR (CDA), NPD and 9 Operators
- Mainly log data plus available associated data, e.g. core, reports, etc.
- Excludes seismic data for this phase

 = Original Area of Interest

 = Extended Area of Interest – non truncated (DataCo)

5747 Wells – 9958 well bores

The projects and the data...



Data Input:

- National Data Repository
- Norwegian Petroleum Directorate
- Operator donations – 9 operators

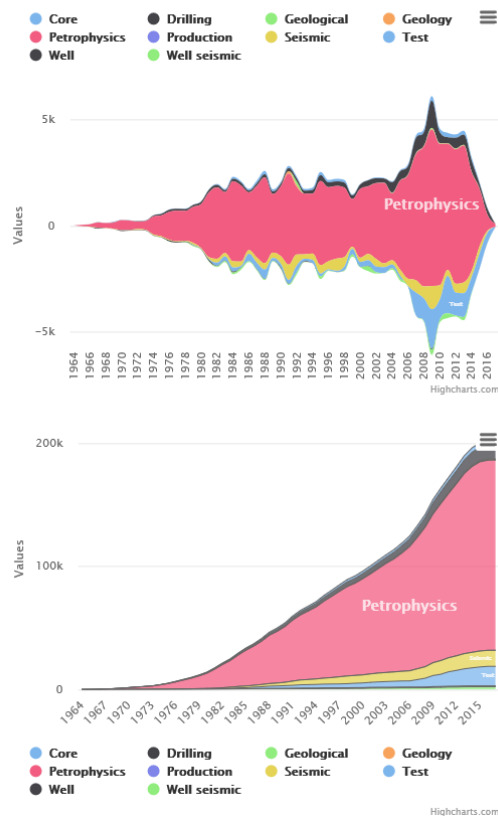
Project Deliverables:

- Ranked list of 'overlooked pay' opportunities in order of confidence
- Clean conditioned dataset to add to NDR
- Comparison and analysis of various ML techniques for data conditioning and analytics

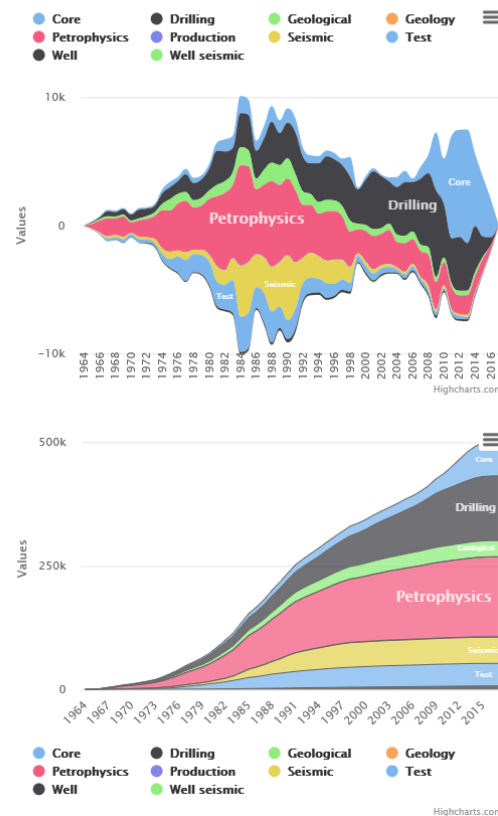
Data Insights



Structured Data



Unstructured Data



Type of data created when wells are drilled has changed through time

Exponential growth of digital data in the NNS despite a decreasing trend in the amount of wells drilled since 2004

Data Challenges (a sample):

- Columns not standardised
- Well naming convention not standardised
- Standardise coordinates
- Standardise formation tops

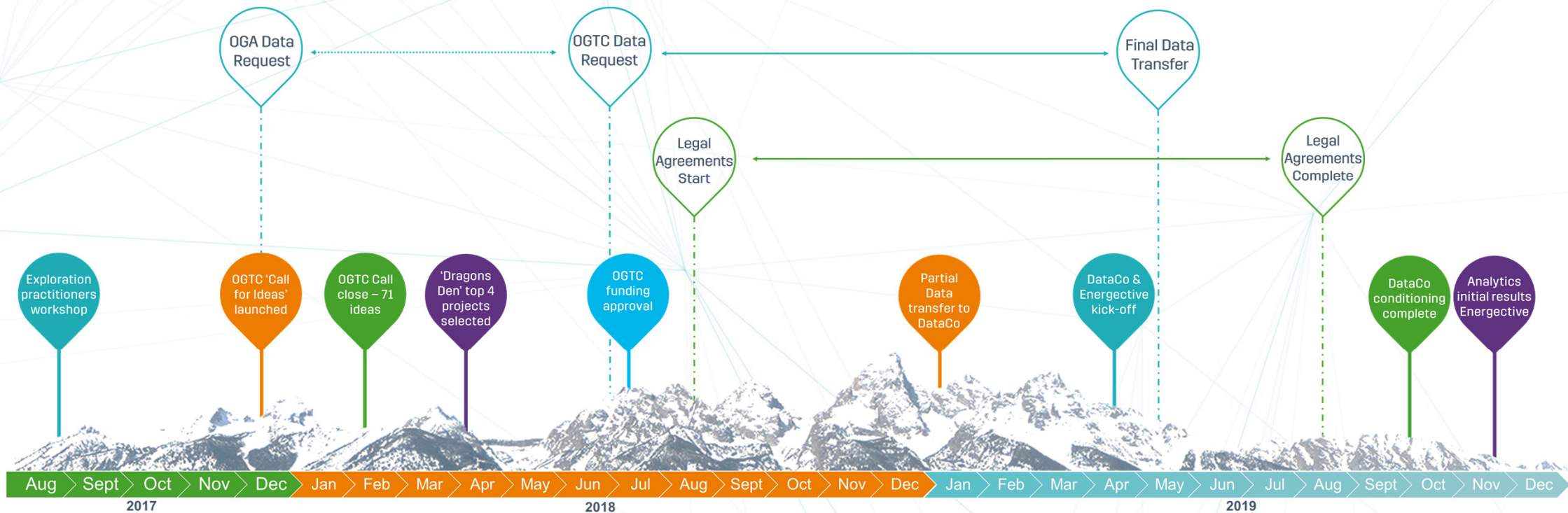
<http://dataco-global.com/ogtc-project/>

Call for Ideas Timeline



Key learnings:

- Historical 'gaps' in national repository with no DWL must be addressed to realise value through ML
- Data release is still a complex process in many operator companies
- Legal agreements are still a significant blocker in terms of collaborative projects



Learnings and Opportunities



Learnings

- Historical data 'gaps' with non digital data should be filled where possible – DWL's generally exist but may not have been reported
- National repositories should be home to 'gold standard' data
- Non-standardised well and formation naming conventions, formatting and coordinates are a challenge
- Legacy non machine readable formats are common and need to be 'upgraded'

Opportunities

- Create an ecosystem for wider usage and view of data
- Cloud storage and compute technology can now handle and facilitate rapid access and interrogation of data
- Opportunity to build large regional scale training models for ML



Thank You



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Together we can transform the future