



Digitally Enabling
Oil & Gas Operations



Maximising the Value of Operational Data.

Chris Ayres, COO, OPEX Group

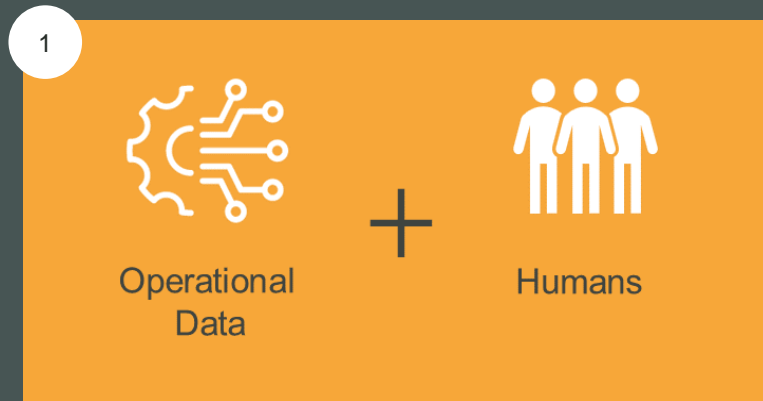
Why We Need To Do Things Differently.

>\$2
billion

potential to be
unlocked from the
UKCS basin.

OGTC Digital Landscaping Study of the Oil & Gas Sector, 2018.

Approaches To Extracting Value From Data.



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Humans swamped



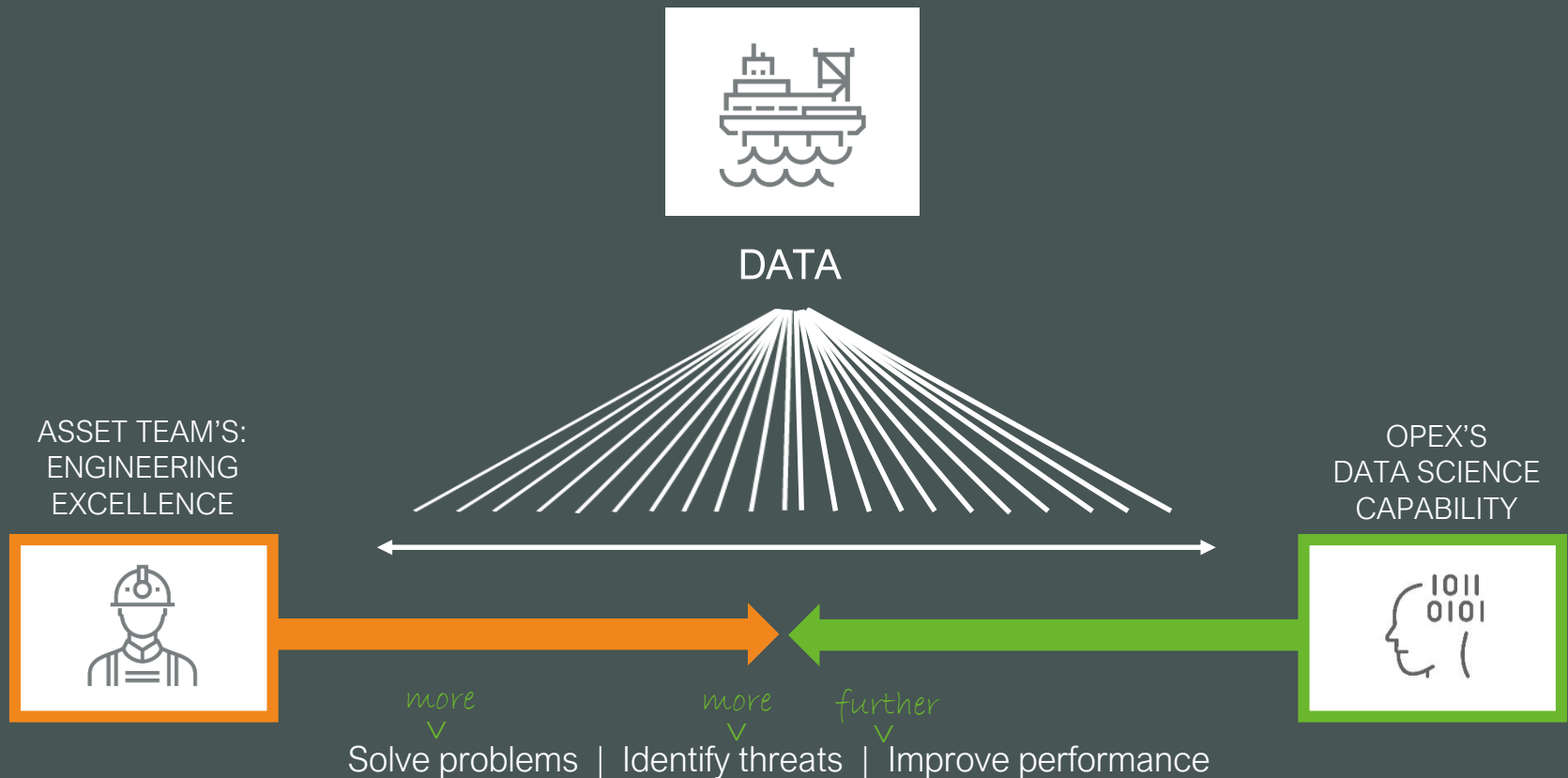
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Lacking direction, context and domain expertise

Approaches To Extracting Value From Data.

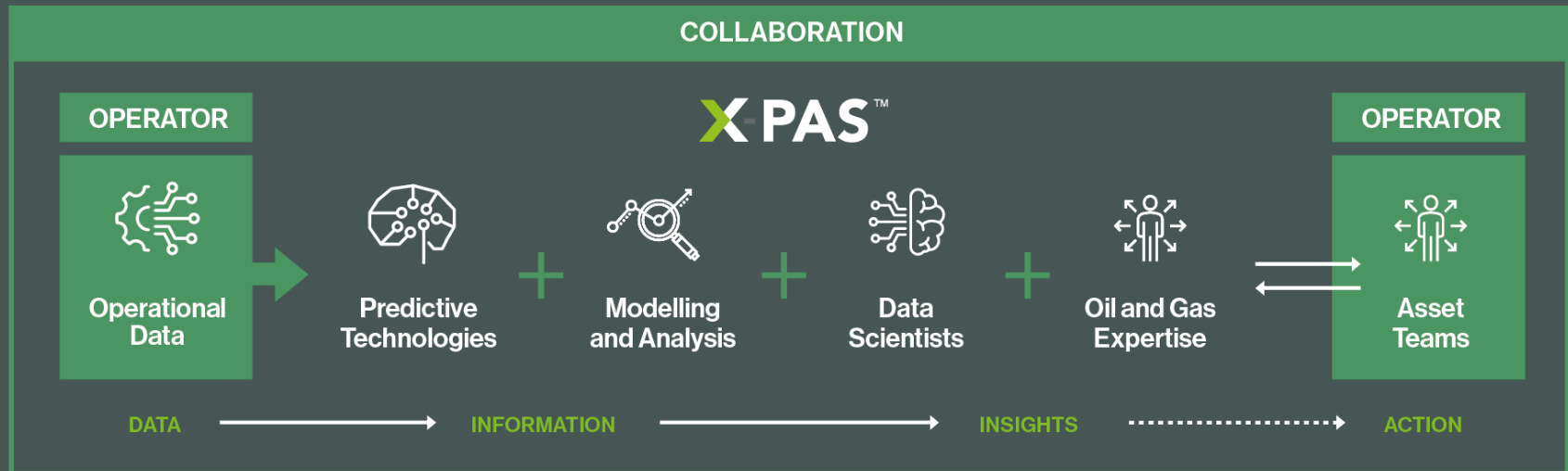


Supplementing Existing Expertise



Built on Data. Driven by Results.

X-PAS™ is a predictive analysis service, specifically tailored to the oil and gas industry to help operating companies extract maximum value from their data.



Case Study 1:

90% Reduction in SRP Trips.

IDENTIFICATION



A recurring threat was identified with faulty redox probe readings on the sulphate removal package causing regular water injection trips.

NOTIFICATION



Working with the customer this was identified as a 'focus area' to improve the reliability and performance of the water injection system.

INTERVENTION



New processes put in place by the customer for cleaning, and enhanced X-PAS™ analysis introduced to continuously monitor the relationship between the redox probes.

OUTCOME



A 90% reduction in the number of water injection trips related to redox probes/SRP was achieved along with the avoidance of associated production losses.

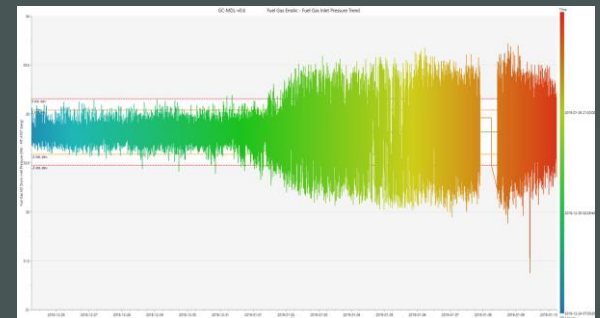
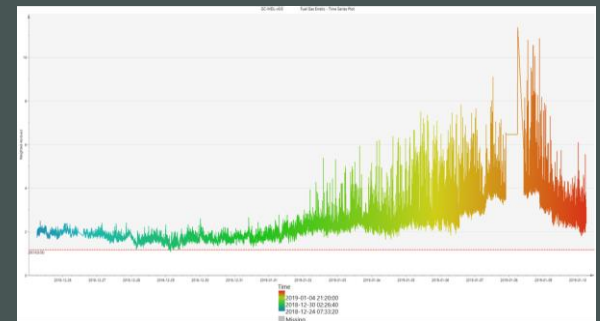
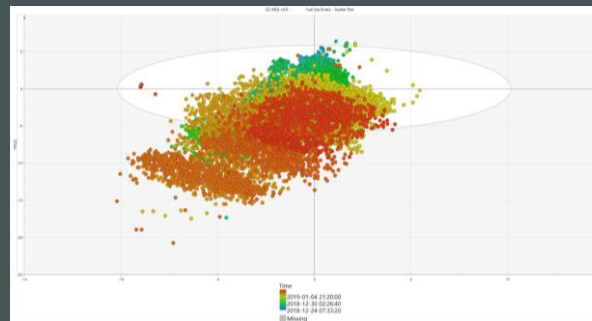
Case Study 2:

Early Identification of PCV Failure.

IDENTIFICATION



Our data scientists identified a pressure control valve was no longer responding to fluctuations in fuel gas supply.



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NOTIFICATION



The issue was validated by our SMEs and the customer's onshore asset support team was promptly notified.

INTERVENTION



The offshore control room was notified to adjust the operating mode of the turbine until maintenance could be carried out.

OUTCOME



Prompt identification and action avoided a system trip and the associated production losses.

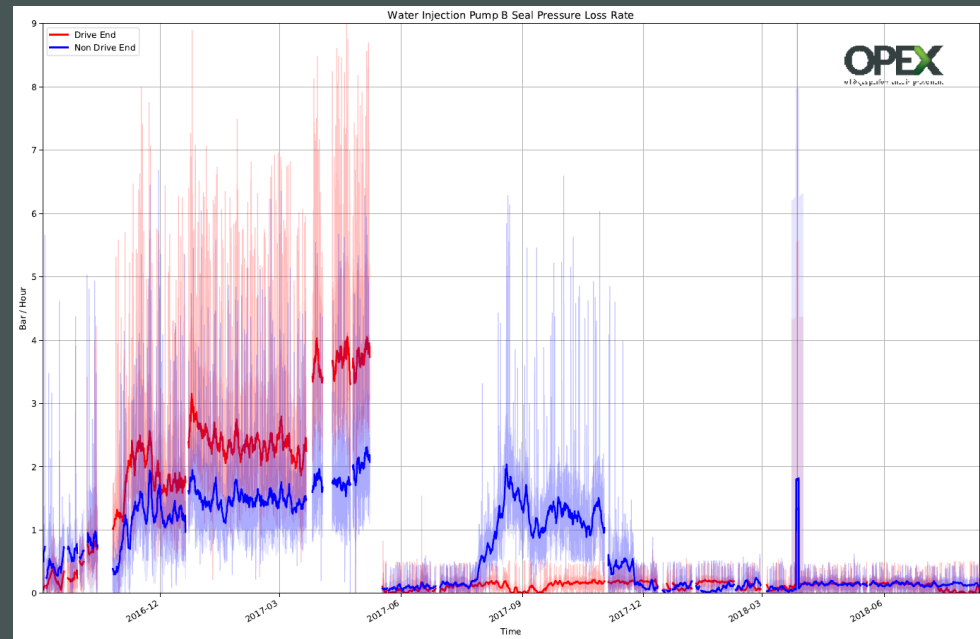
Case Study 3:

Optimising System Start Up.

IDENTIFICATION



A data-driven study was undertaken to uncover key insights that could impact start-up success of the water injection system.



Case Study 3:

Optimising System Start Up.

IDENTIFICATION

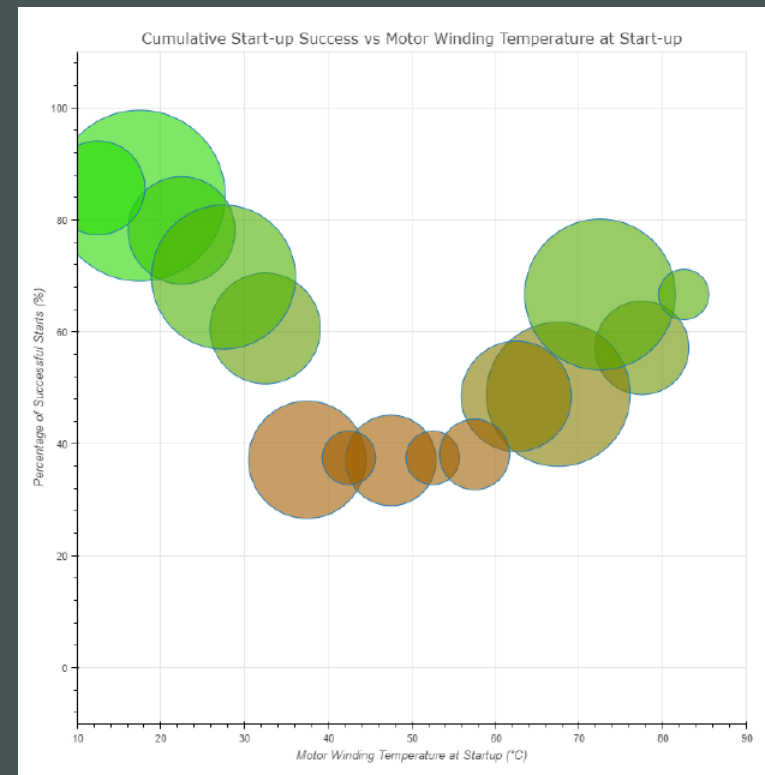


A data-driven study was undertaken to uncover key insights that could impact start-up success of the water injection system.

NOTIFICATION

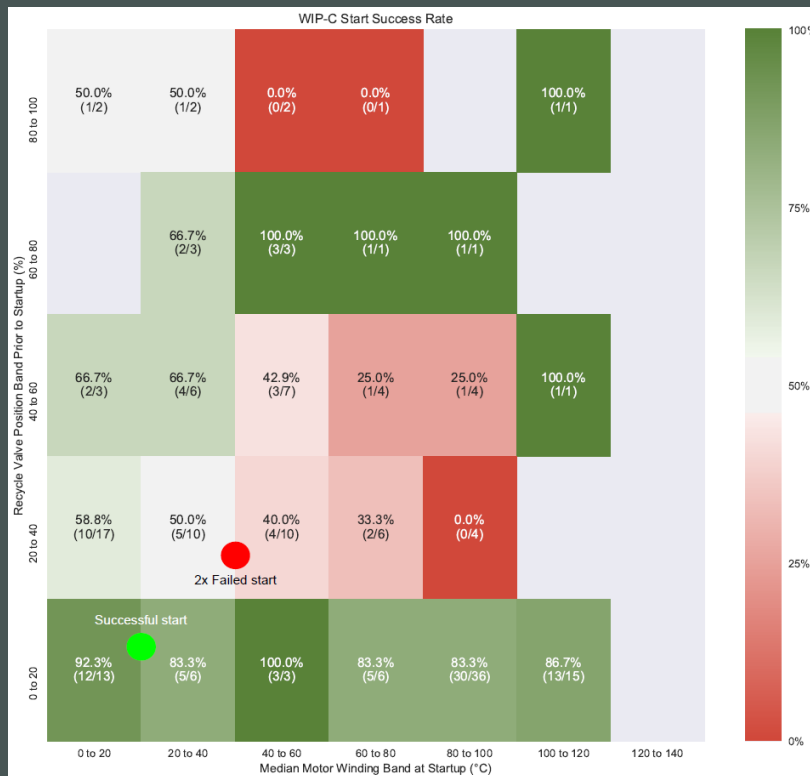


A clear correlation was found between the probability of successful start-up and the median motor winding temperature when the attempt was made.



Case Study 3:

Optimising System Start Up.



INTERVENTION

OUTCOME



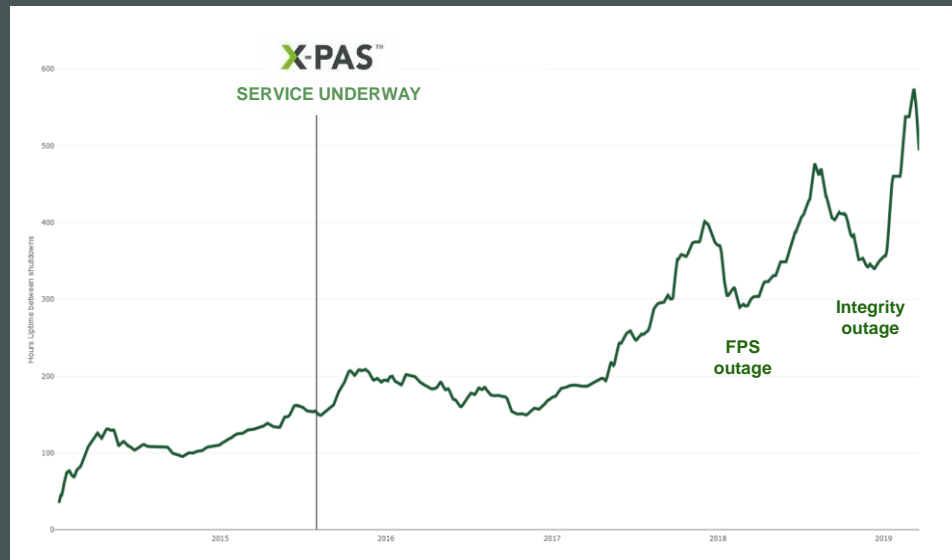
Successful start ups were increased from less than 40% to greater than 75% by only starting the system under identified conditions.

Maintenance and repair costs reduced as the level of wear was minimised and system uptime was increased.

Customer Success.

Customer: UKCS operator | Application: Gas compression system | Duration: 3 years

Mean Uptime Between Trips



132

Data-driven insights provided by OPEX's data scientists



119

Interventions taken by the operator's on and offshore teams



51

System trips avoided: equating to a reduction of 65%



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[Any Questions?]

www.opex-group.com