



**Production optimization using the
Cognite platform**

AKERBP'S DIGITAL INITIATIVE WITH COGNITE

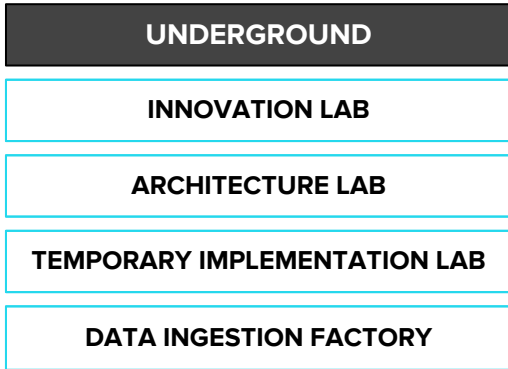
GOAL: build digital infrastructure and data-driven efficiencies across O&G operations, resulting in **lower costs, less downtime, and increased safety**

IN ACTION: Cognite contributes its technology and participates in Aker BP's dedicated, co-located agile crews, delivering targeted solutions during 3-4 month supersprints

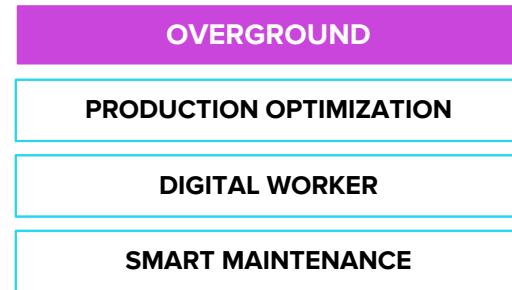
RESULTS: Aker BP seeing significant benefits in OPEX for topside operations



AKER BP AND COGNITE WORK INTEGRATED TO ACHIEVE THE AMBITIONS OF THE EUREKA PROGRAM



Using data to improve decision making across **Drilling & Well, Reservoir development and Exploration**

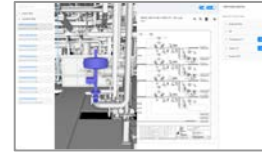


Using data to improve decision making across **Production Optimization, Digital Worker, Smart Maintenance**

KEY INDUSTRY CHALLENGES

Data Access and Discovery

How to move from incoherent search to purposeful discovery?



Scalability

How to scale models from one piece of equipment to many?



Google Cloud Platform

Data Quality

How to ensure data quality at all times?



Incorporating Physics

How to leverage the knowledge and laws of physics?

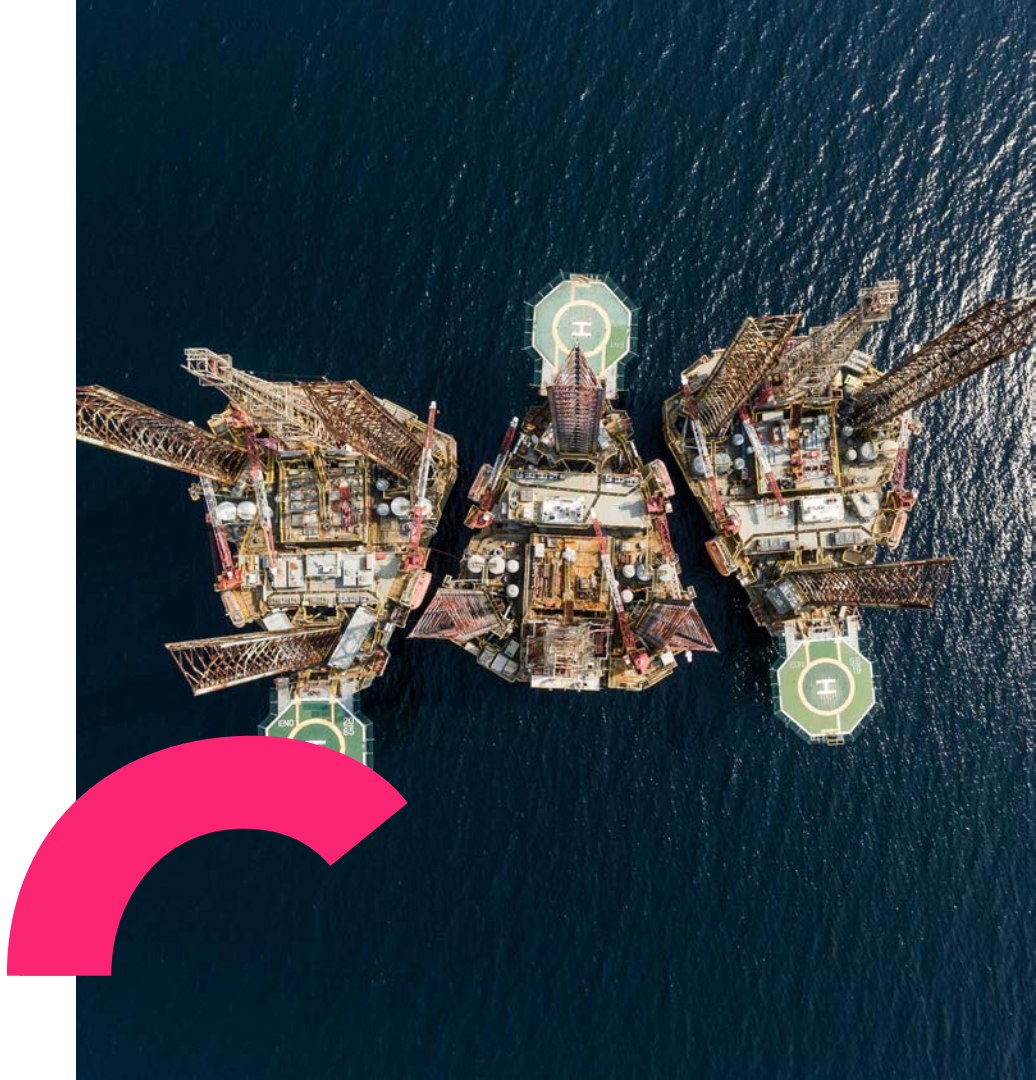


Lack of Accessible, User-Friendly Tools

How might we empower more people to tackle data science challenges?

AKERBP USE-CASES

The use-cases were solved by a cross-discipline team from AkerBP and Cognite





PREDICT AND PREVENT WELL EVENT UTILIZING HYBRID MODELS

CHALLENGE

AkerBP has a significant production loss due to a handful of sudden Chalk Influxes plugging wells every year.

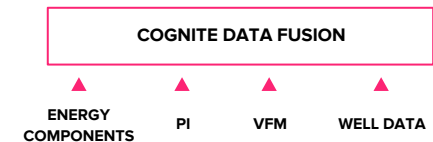
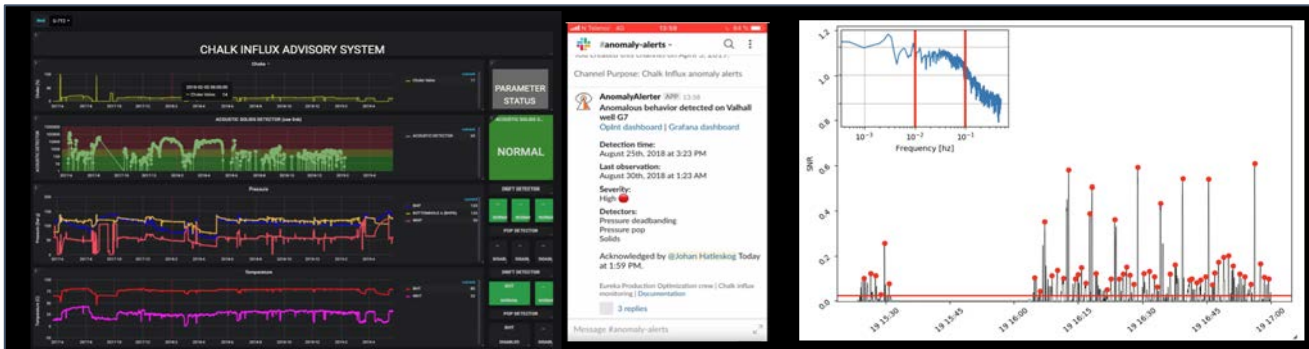
Manually monitoring the wells for irregular behavior in e.g. pressure and temperature have not been successful for predicting nor preventing the costly events.

SOLUTION & IMPACT

A live warning system combining data and physics monitor all risky wells recognizing signs of early stage Chalk Influxes, allowing operator to initiate mitigating actions

COGNITE PRODUCTS

- Multiple data sources
- Contextualization
- Asset Data Insight
- Model Hosting
- Write back results to CDF
- Integrated virtual flow meter from partner (simulator)
- Data quality monitoring
- Visualization connector
- Management Console (Data Quality)



INCREASED PRODUCTION BY IMPLEMENTING DYNAMIC SEPARATOR CAPACITY LIMITS BASED ON CURRENT FLOW CONDITIONS

CHALLENGE

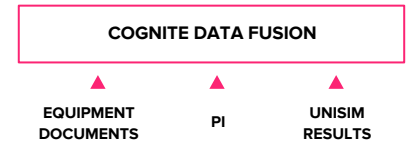
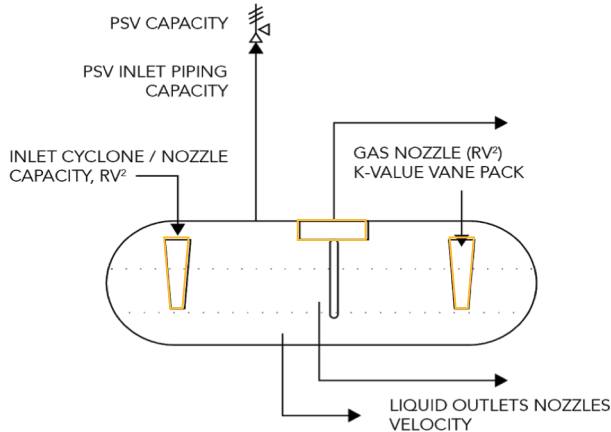
Production limited by separator when one of the separation trains cannot be fully utilized.

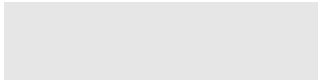
SOLUTION & IMPACT

Dynamic capacity limits to debottleneck the separator and utilize the actual capacity based on the current flow conditions.

COGNITE PRODUCTS

- Multiple data sources
- Contextualization
- Asset Data Insight
- SDK
- Model Hosting
- Connection to physics simulator
- Visualization connector
- **Management console (Data Quality)**





— HA JK Y DU

