

Challenges in collecting, managing and manipulating complex data sets in the digital oil field

Andy Nelson

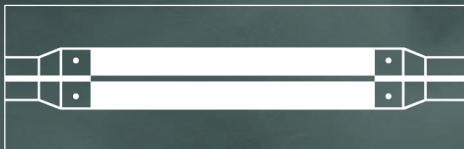
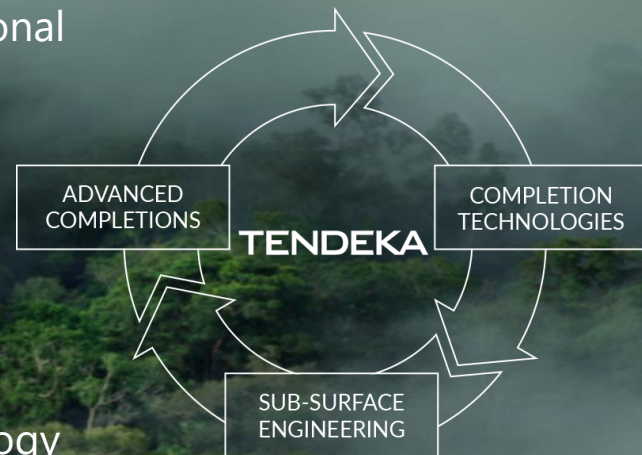
TENDEKA

RESULTS ACROSS YOUR RESERVOIR

Introduction to Tendeka

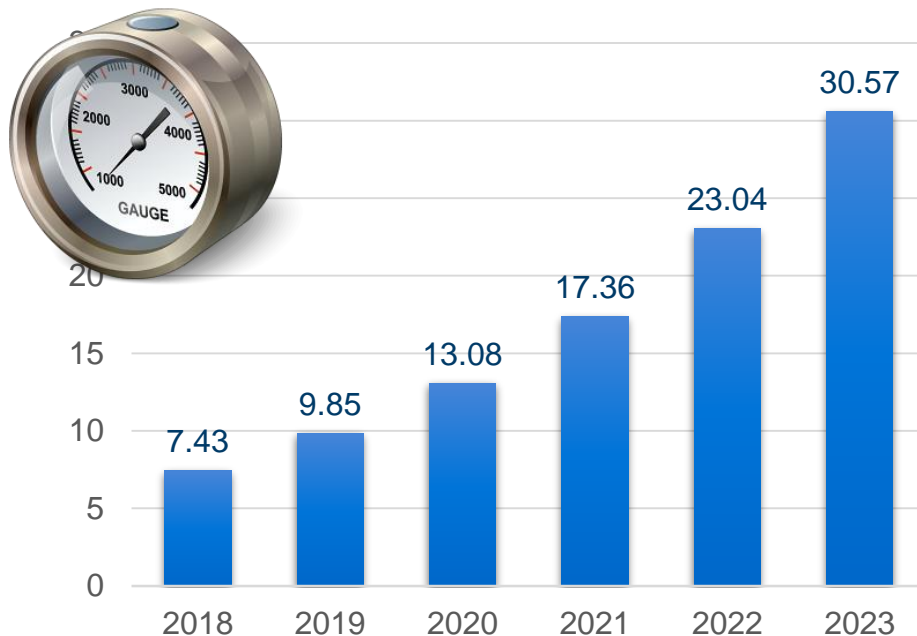
Tendeka are a completions company operating in conventional and unconventional reservoirs.

- Mid tier completions company
- Focus across production phase of reservoir lifecycle
- High value technologies and extensive track record
- Core growth strategies: Geographic Expansion, Technology and Service Portfolio Development and Reservoir Capability



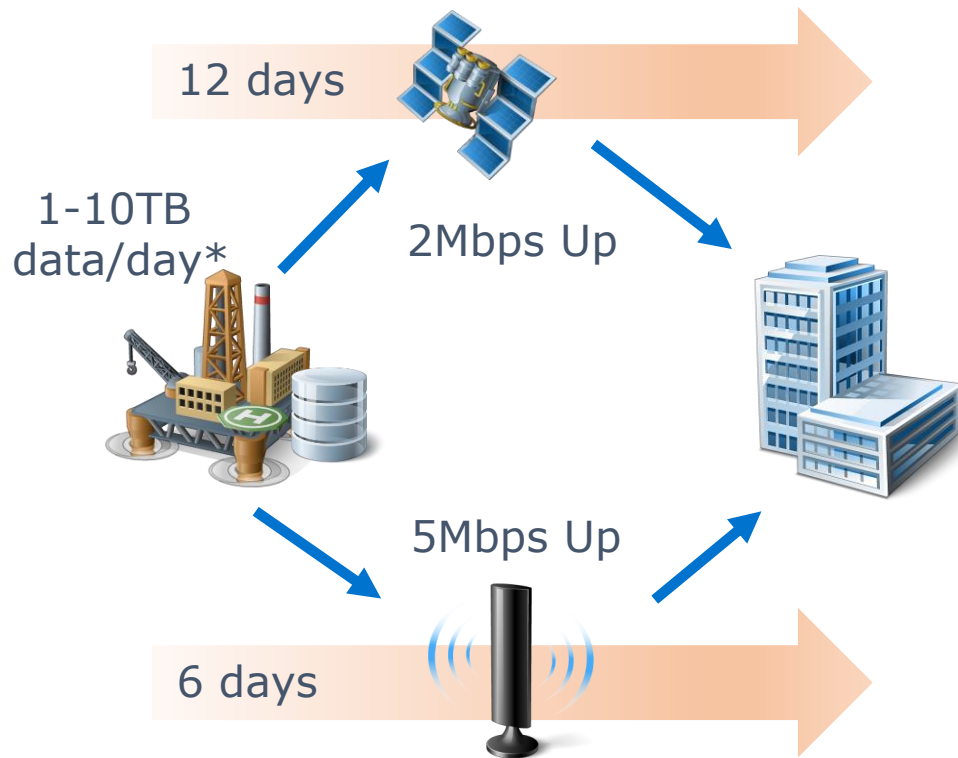
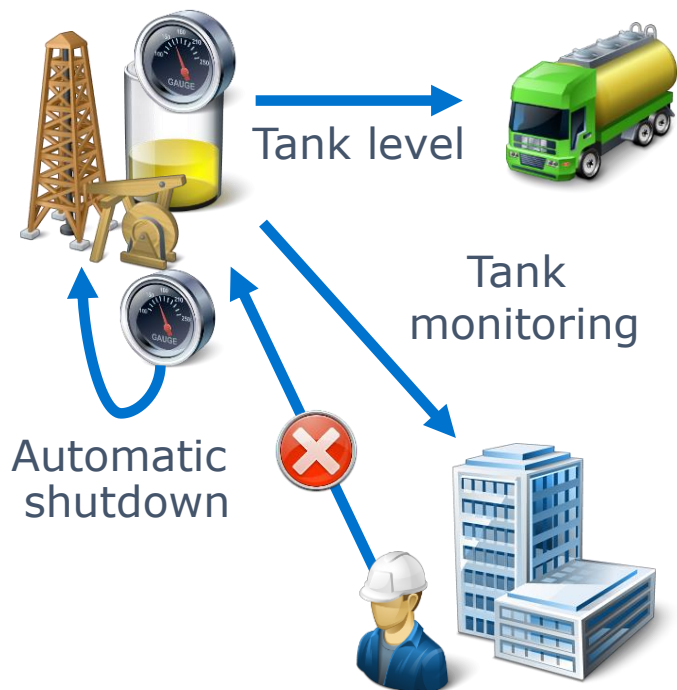
There is a Proliferation of Sensors

- Explosive 24.65% CAGR - \$30.57b by 2026*
- Reduced cost of sensors
- New ways of monitoring
- Enables edge computing
- Drives efficiency
- Improved safety
- Better compliance



*BIS Research. Global Internet of Things (IoT) in Oil and Gas Market Analysis and Forecast 2017-2026

The Problem with Data Over-Abundance



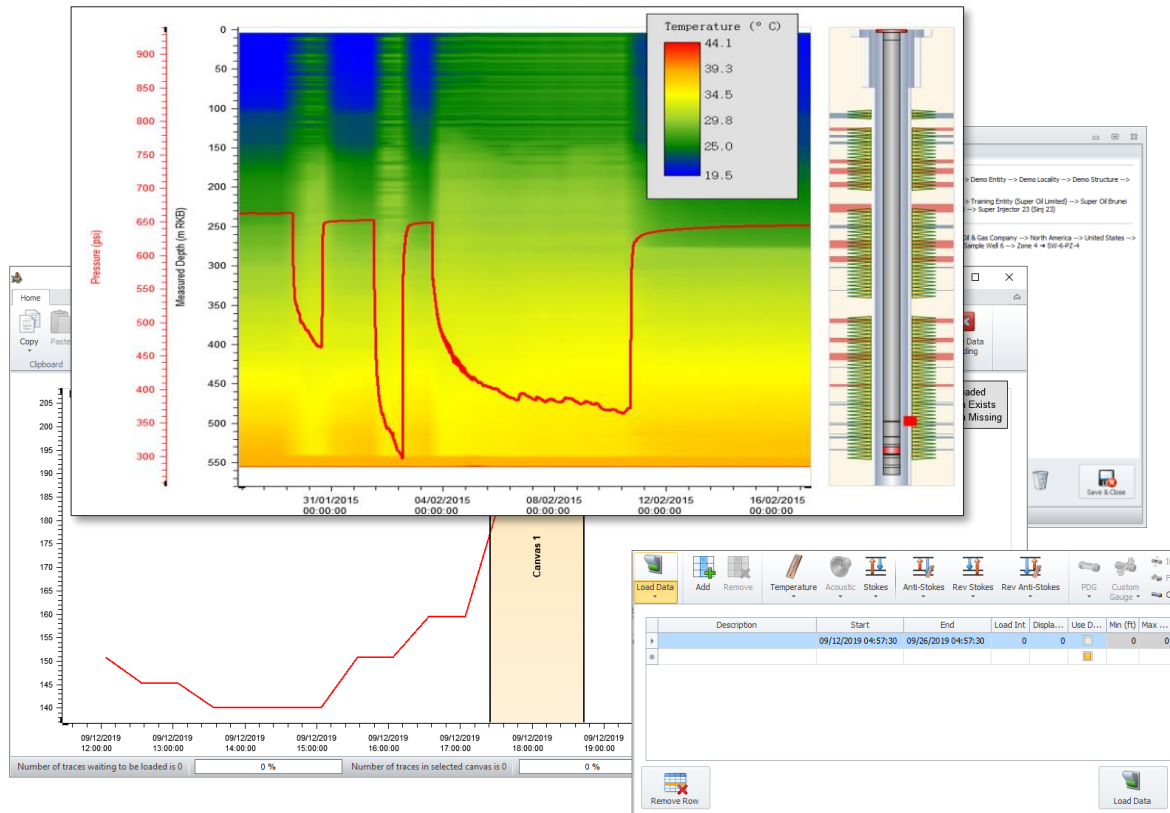
*CISCO. New realities in Oil and Gas: Data Management and Analytics, September 2017

The Need to Contextually Combine Data

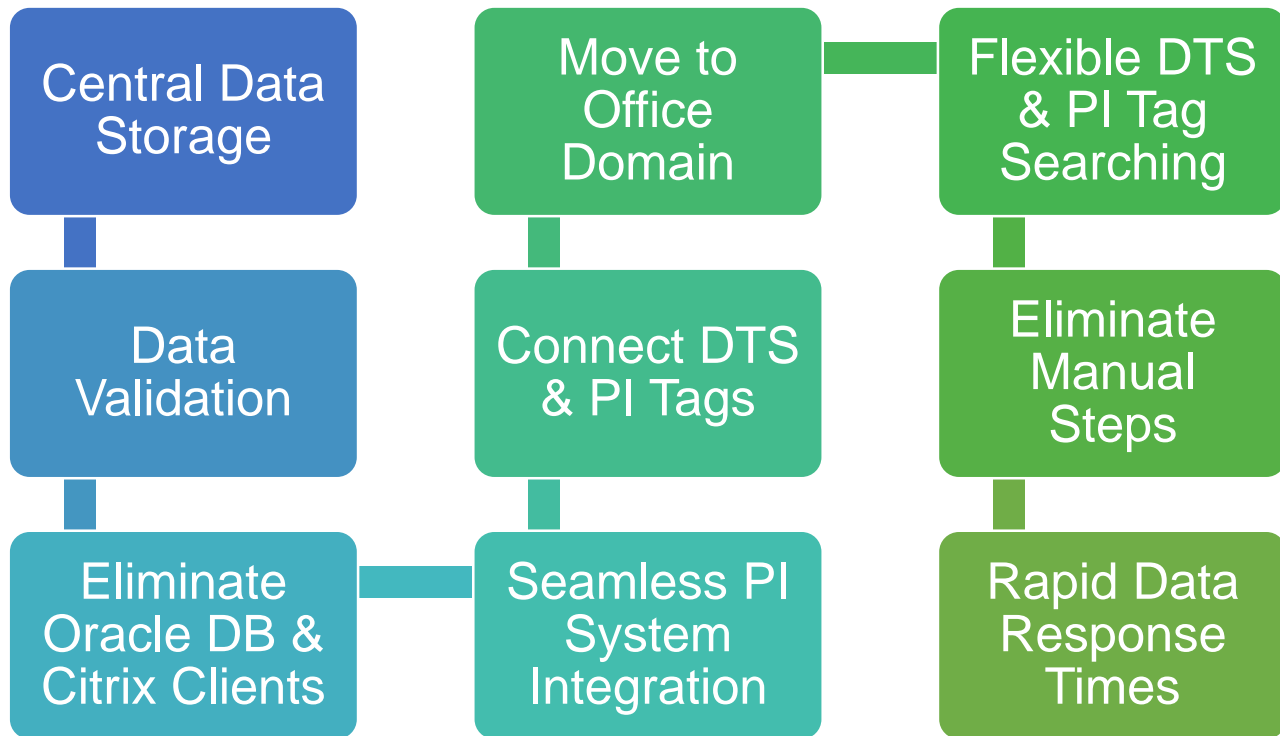
DTS Data



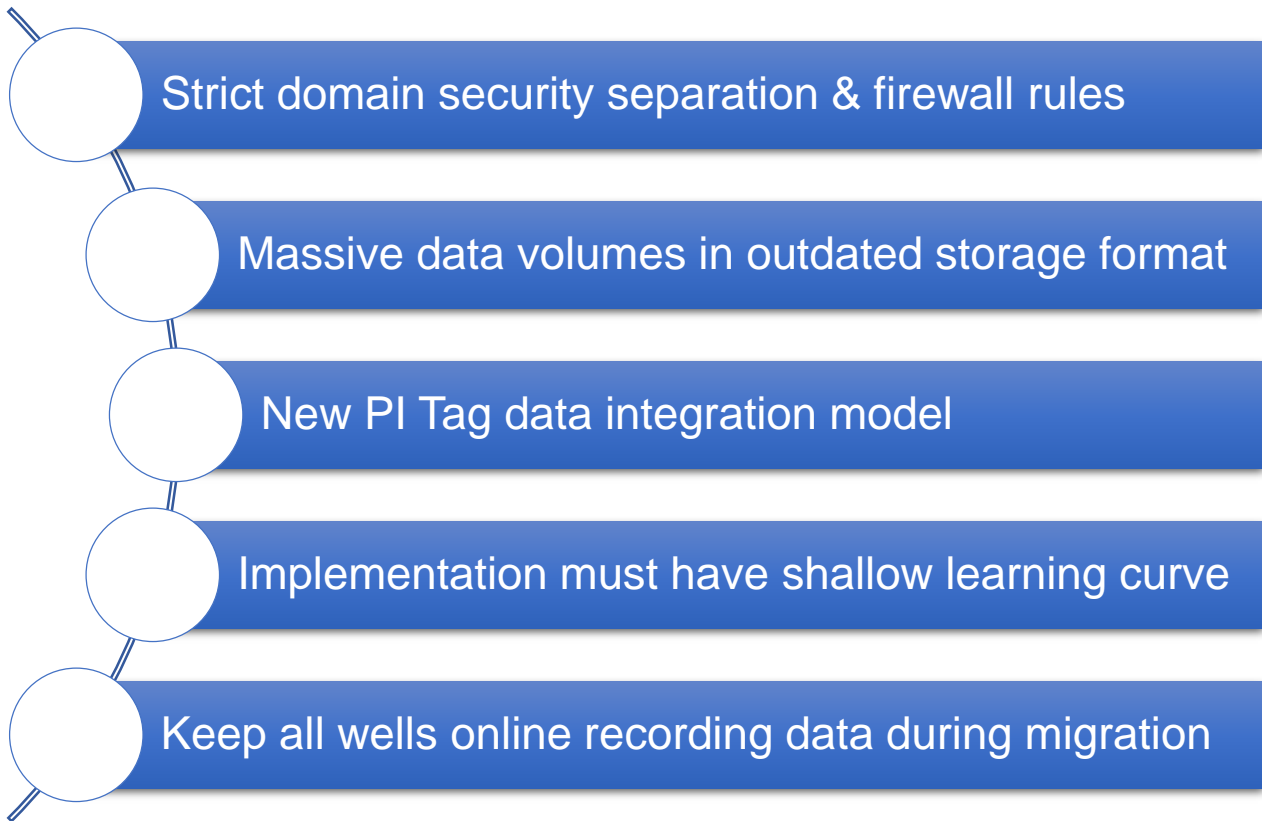
PI Tag Data



The Scope

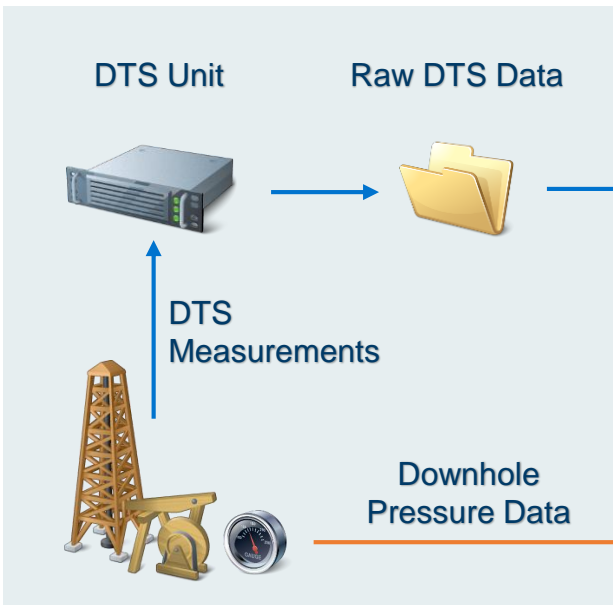


The Challenges



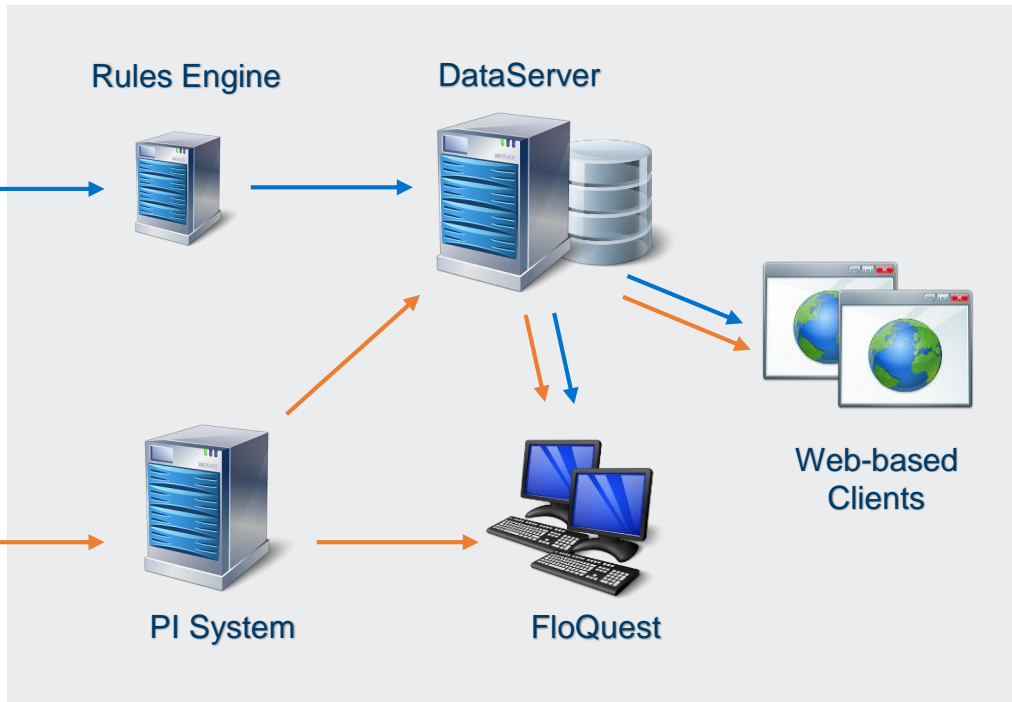
Solution Architecture

PROCESS CONTROL DOMAIN

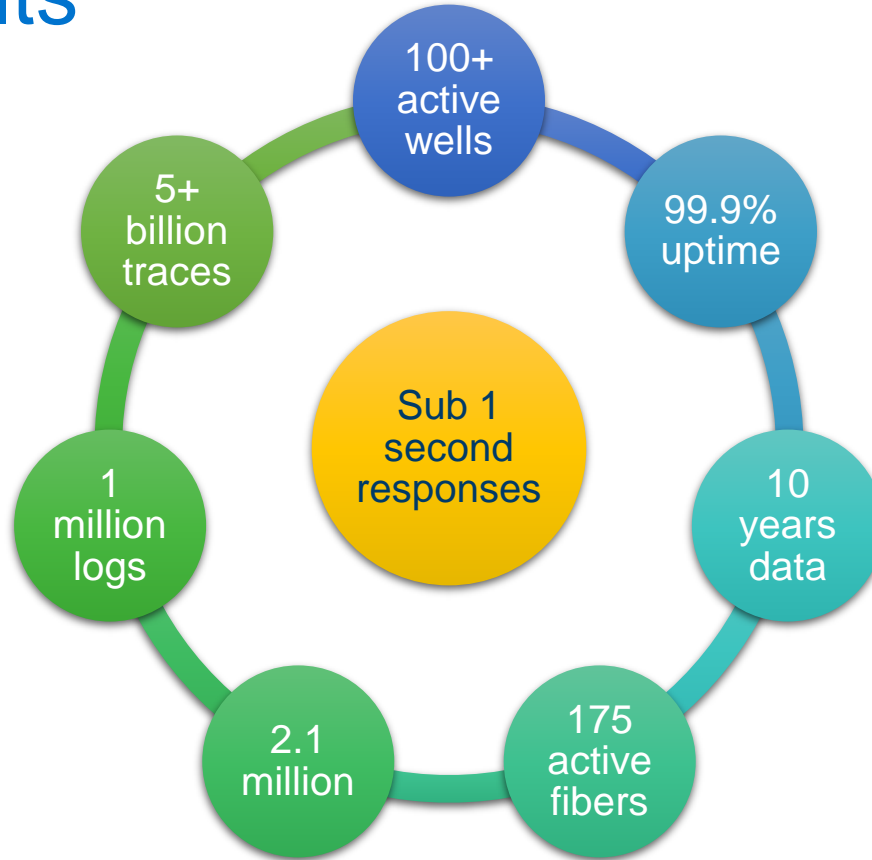


—→ DTS Data Flow
—→ PI System Data Flow

OFFICE DOMAIN



Data Results



CHALLENGES

- DTS alone not showing the full picture of the well
- Time to process interpretations delays critical production decisions

SOLUTION

Using PI System, users can pull pressure data from more than 10 million data points and contextually apply that data to a subset of more than 5 billion DTS measurements – all within seconds

BENEFITS

- Significant improvement in interpretation and modeling accuracy
- Ability to store temperature profile and interpretation results into PI System
- Improves production enhancement decision making





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OBRIGADO شڪرا SALAMAT
DANKON TANK TAPADH LEAT
DANKIE TERIMA KASIH
KÖSZÖNÖM
СПАСИБО
PAKMET CIZGE
GO RAIBH MAITH AGAT
БЛАГОДАРЯ GRACIAS
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