Oliasoft | WellDesign™

General presentation | Q2 2020

OLIASOFT

Oliasoft – Short Story

👥 Team

Oliasoft has 34 employees and consultants on full time, and we are hiring.

Deploying sales and marketing organization during 2019

💵 Well Funded

Raised NOK ~110 million in private equity and grants

Awarded funding from the Norwegian Research Council program, Petromaks2 in 2017 and Demo 2000 in 2018

Cash and accounts receivable NOK ~65million

Demanding Clients

Oliasoft WellDesign is being validated in cooperation with Equinor, Shell, Chevron + 17 other oil companies

equinor OMV Lundin Petroleum Chevron Shell AkerBP

⛰ Well Built Foundation

~180 000 hours spent to build Oliasoft WellDesign 1.0

🧩 Solving a little piece of the industry

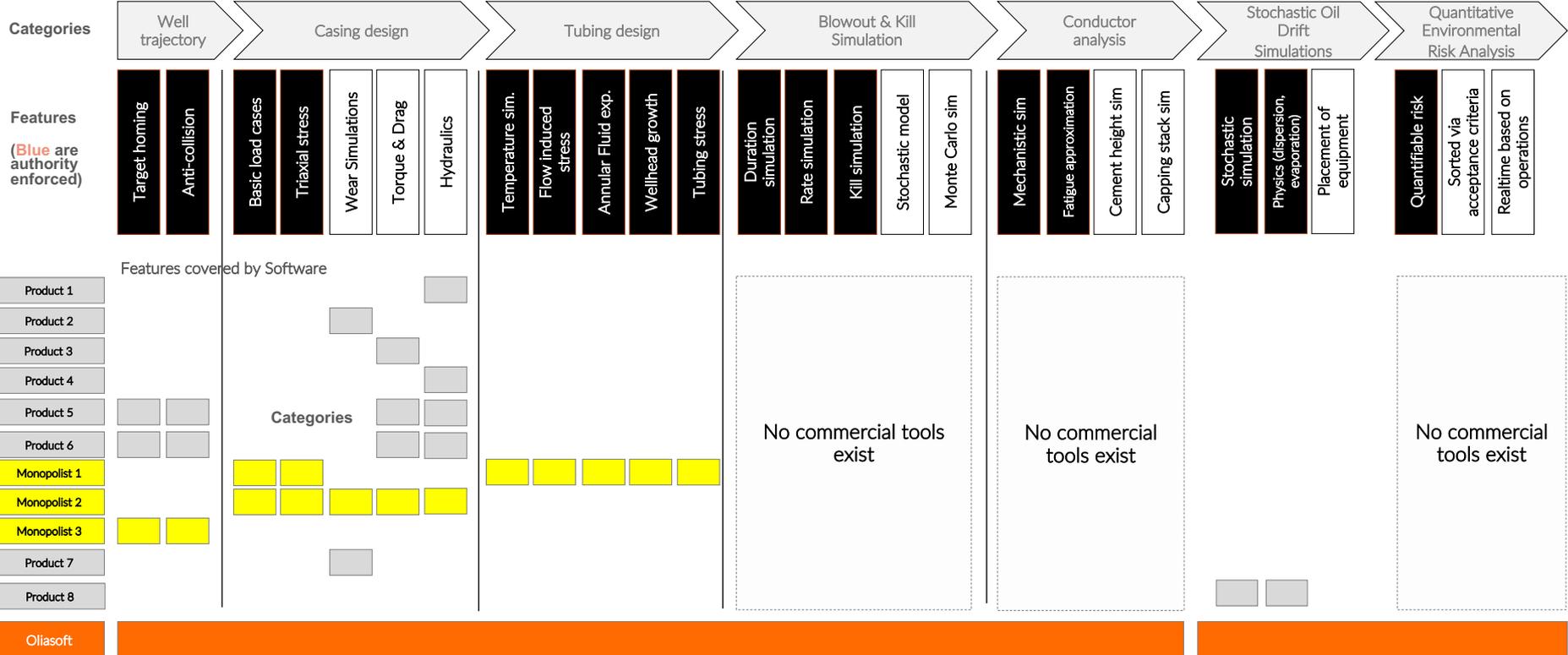Oliasoft is rigged to solve a little piece of the industry by offering a modern, transparent and low barrier system to operators, capable of performing all authority and company specific well design calculations – ready for digitalization and automation.

For this, Oliasoft was in 2019 awarded the prize "Most Promising Startup" by Rice University, voted for by a panel of 140 investors and oil companies.

OLIASOFT

Well Construction

HSEQ

Categories

| Well trajectory | Casing design | Tubing design | Blowout & Kill Simulation | Conductor analysis | Stochastic Oil Drift Simulations | Quantitative Environmental Risk Analysis |

Features

(Blue are authority enforced)

Well trajectory: Target homing, Anti-collision

Casing design: Basic load cases, Triaxial stress, Wear Simulations, Torque & Drag, Hydraulics

Tubing design: Temperature sim., Flow induced stress, Annular Fluid exp., Wellhead growth, Tubing stress

Blowout & Kill Simulation: Duration simulation, Rate simulation, Kill simulation, Stochastic model, Monte Carlo sim

Conductor analysis: Mechanistic sim, Fatigue approximation, Cement height sim, Capping stack sim

Stochastic Oil Drift Simulations: Stochastic simulation, Physics (dispersion, evaporation), Placement of equipment

Quantitative Environmental Risk Analysis: Quantifiable risk, Sorted via acceptance criteria, Realtime based on operations

Features covered by Software

Product 1
Product 2
Product 3
Product 4
Product 5
Product 6
Monopolist 1
Monopolist 2
Monopolist 3
Product 7
Product 8

Oliasoft

Categories

No commercial tools exist

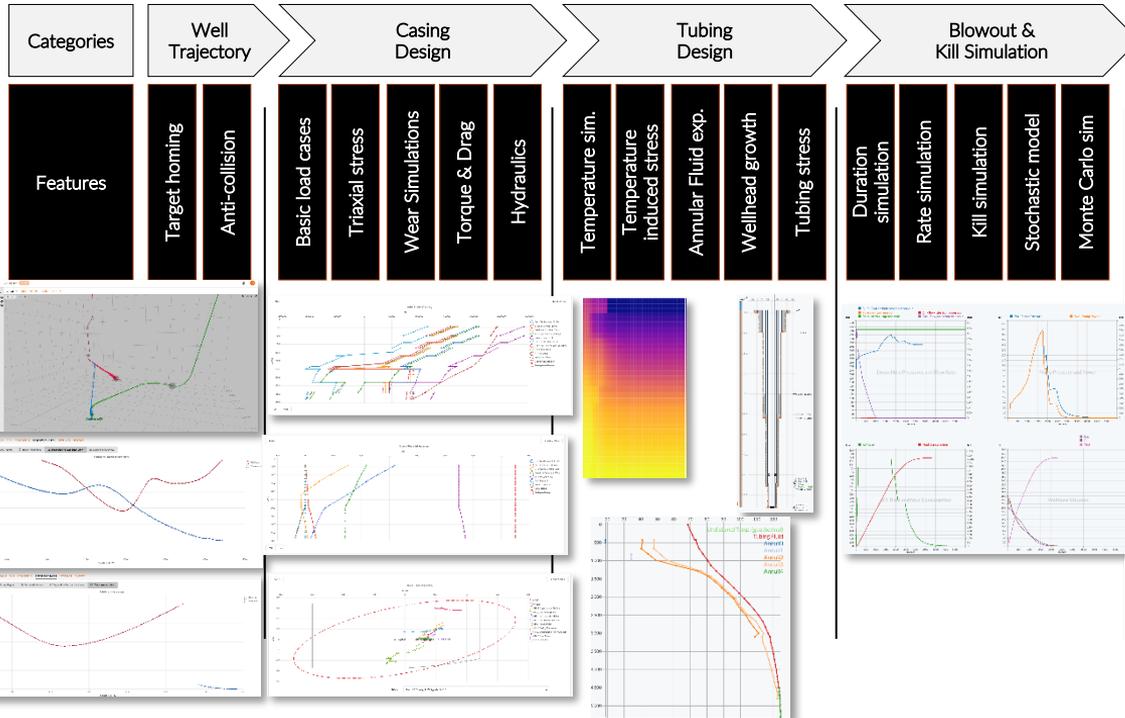No commercial tools exist

No commercial tools exist

= Monopolist   = Niche Tools   = Oliasoft Wellplan

Oliasoft offer a fully integrated cloud software for well design, covering all well design requirements in NORSOK D-010
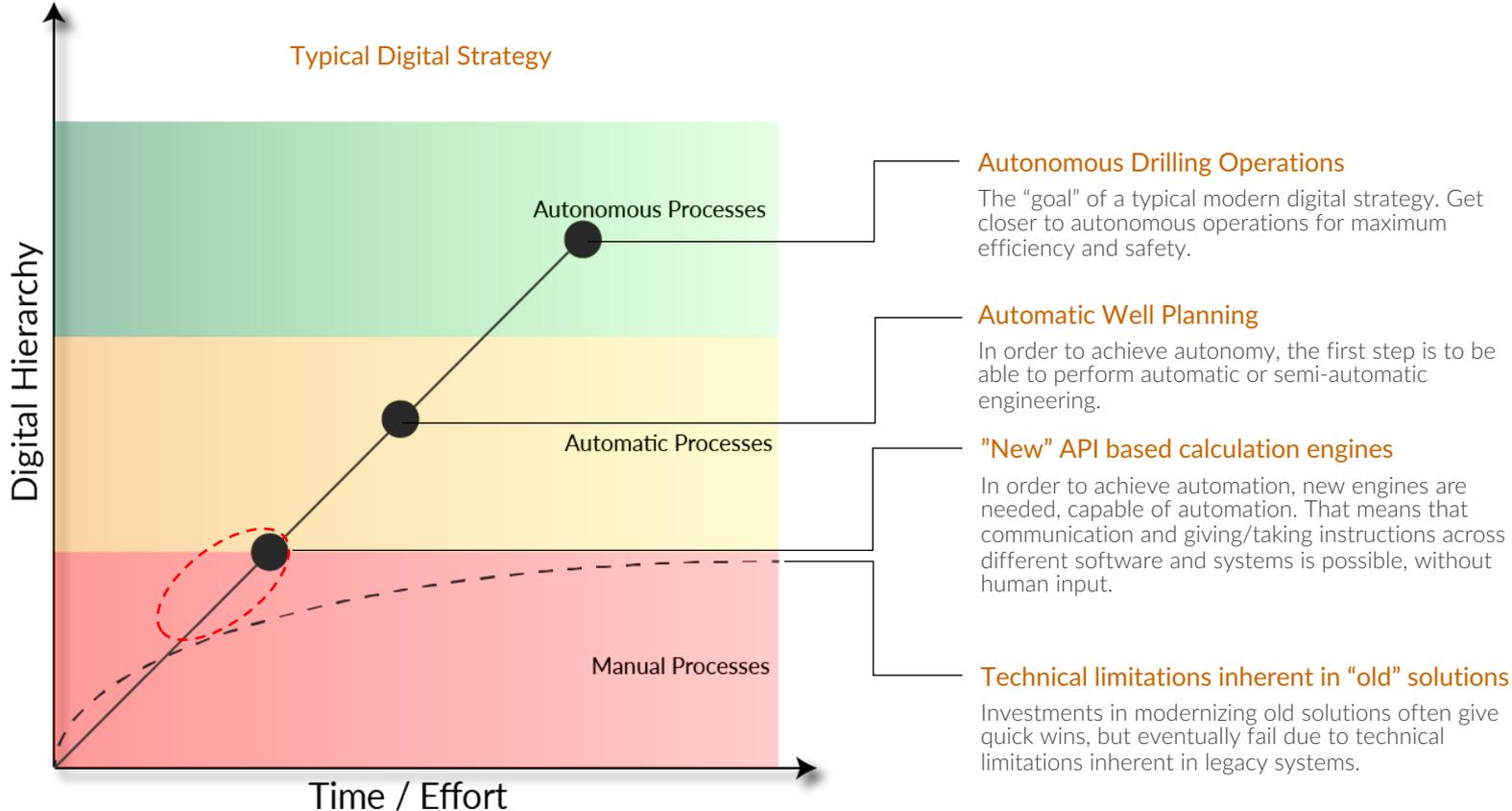
Oliasoft WellDesign

Categories	Well Trajectory	Casing Design	Tubing Design	Blowout & Kill Simulation

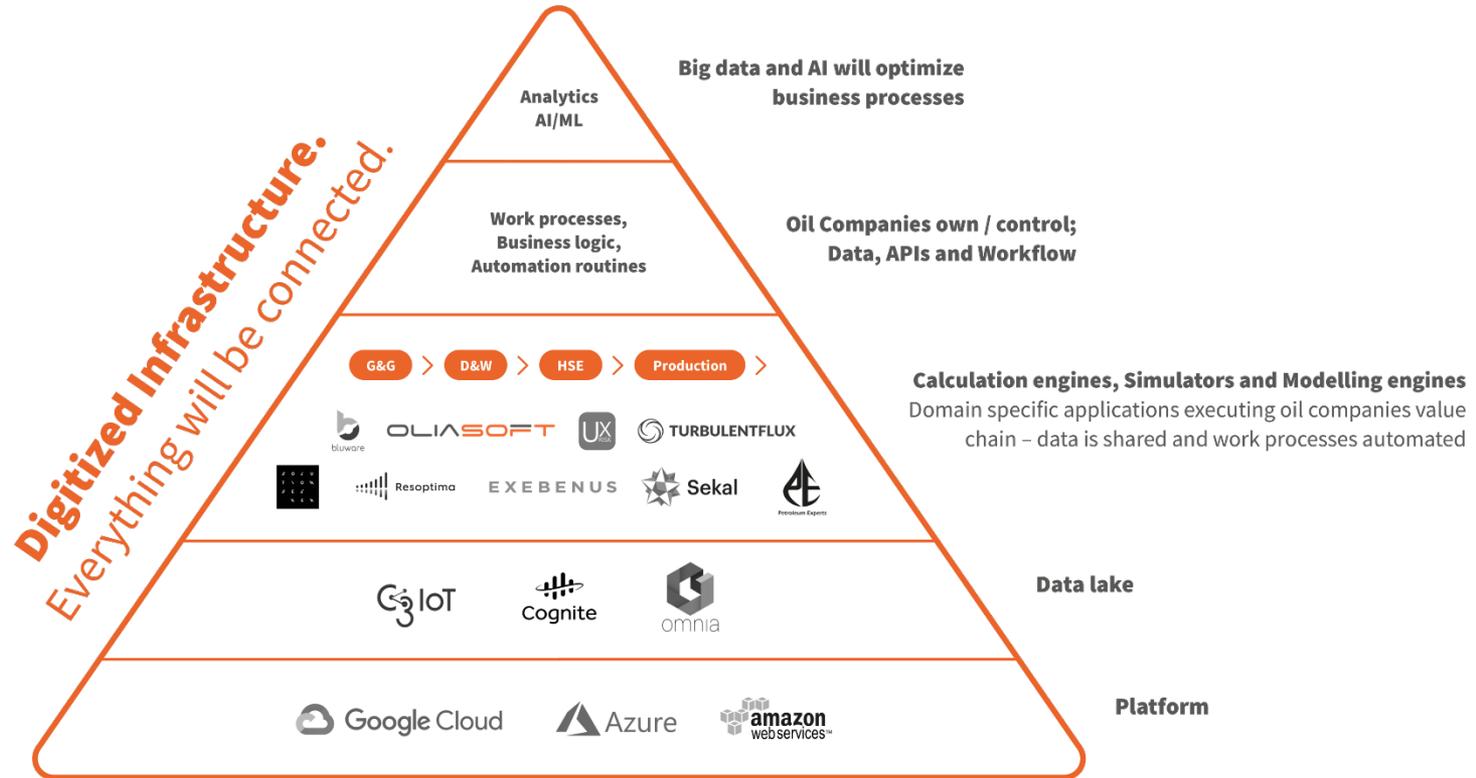| Features | Target homing | Anti-collision | Basic load cases | Triaxial stress | Wear Simulations | Torque & Drag | Hydraulics | Temperature sim. | Temperature induced stress | Annular Fluid exp. | Wellhead growth | Tubing stress | Duration simulation | Rate simulation | Kill simulation | Stochastic model | Monte Carlo sim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

All modules in Oliasoft WellDesign are available through a fully documented machine-to-machine interface, enabling automation and integration with 3rd party systems.

Industry wants to move towards a greater degree of automation and autonomy. This requires new engines capable of automation, i.e "API based engines"
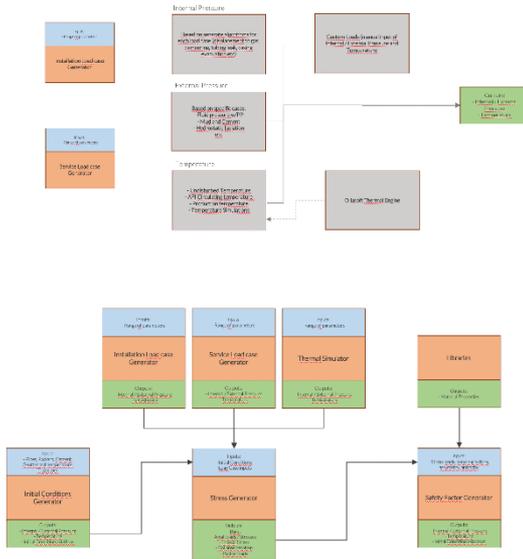

Typical Digital Strategy

Digital Hierarchy (vertical axis)

Time / Effort (horizontal axis)

Autonomous Processes

Automatic Processes

Manual Processes

Autonomous Drilling Operations
The "goal" of a typical modern digital strategy. Get closer to autonomous operations for maximum efficiency and safety.

Automatic Well Planning
In order to achieve autonomy, the first step is to be able to perform automatic or semi-automatic engineering.

"New" API based calculation engines
In order to achieve automation, new engines are needed, capable of automation. That means that communication and giving/taking instructions across different software and systems is possible, without human input.

Technical limitations inherent in "old" solutions
Investments in modernizing old solutions often give quick wins, but eventually fail due to technical limitations inherent in legacy systems.

The new digital infrastructure for the oil industry are mainly being built by Norwegian tech-companies

Digitized Infrastructure.
Everything will be connected.

Analytics AI/ML

Big data and AI will optimize business processes

Work processes, Business logic, Automation routines

Oil Companies own / control; Data, APIs and Workflow

G&G > D&W > HSE > Production >

Calculation engines, Simulators and Modelling engines
Domain specific applications executing oil companies value chain – data is shared and work processes automated

bluware · OLIASOFT · UX · TURBULENTFLUX

Resoptima · EXEBENUS · Sekal · Petroleum Experts

C3 IoT · Cognite · omnia

Data lake

Google Cloud · Azure · amazon web services
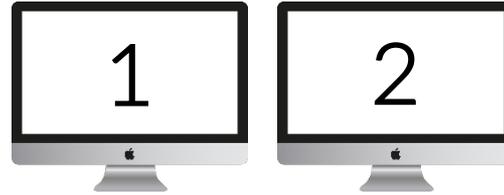
Platform

TRL Programme

Full Public Documentation

Extensive user testing + technical unit testing and integration testing throughout application

Industry Verification

Industry verification in the form of acceptance from industry leaders is necessary.

These are the only organizations capable of helping us finalise the application.