

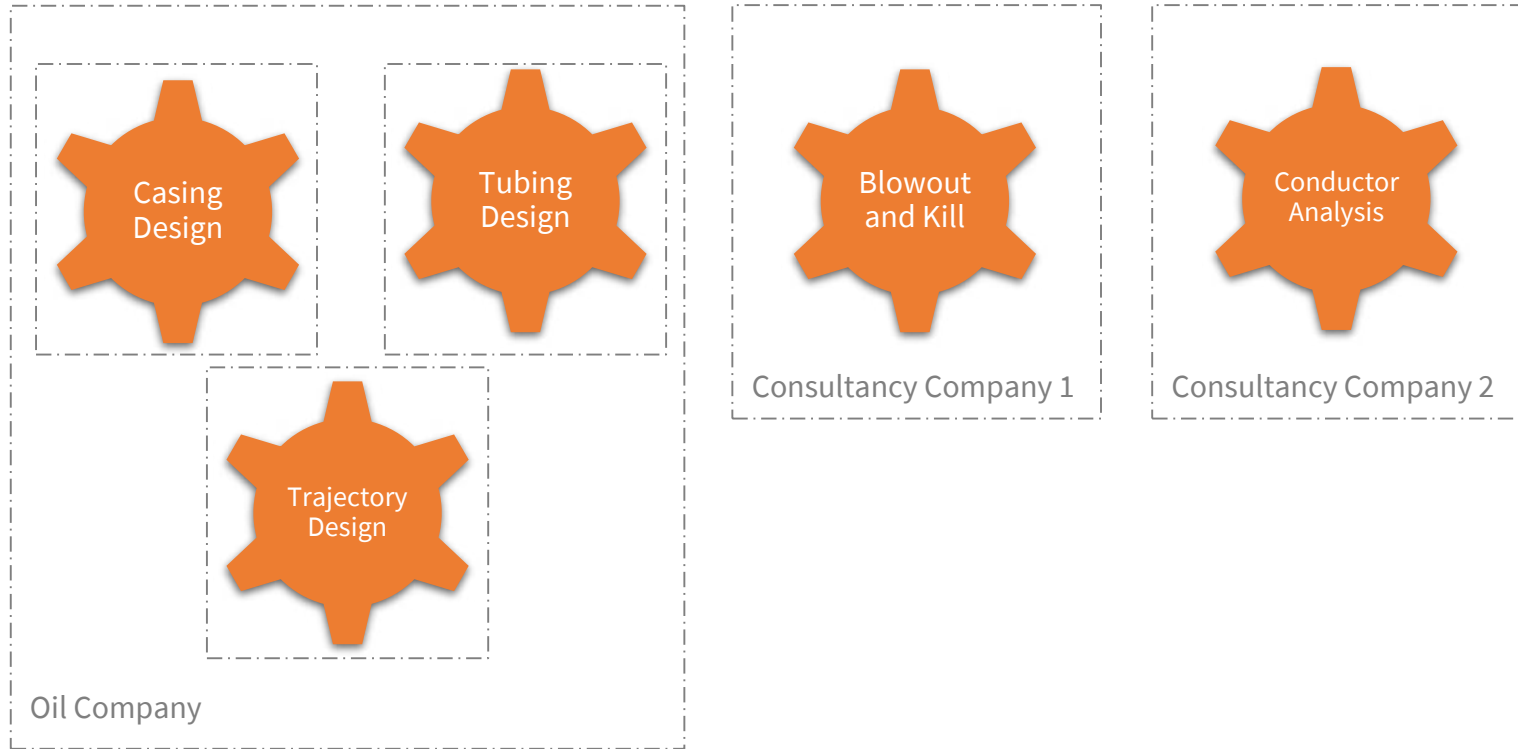
A misty mountain landscape with a lake and forested slopes. The scene is atmospheric, with thick clouds and fog hanging over the mountains and the calm water of the lake. The mountains are covered in dense evergreen forests, and the lake reflects the surrounding scenery.

## Oliasoft™ | WELLDESIGN Digitalization in Drilling & Well

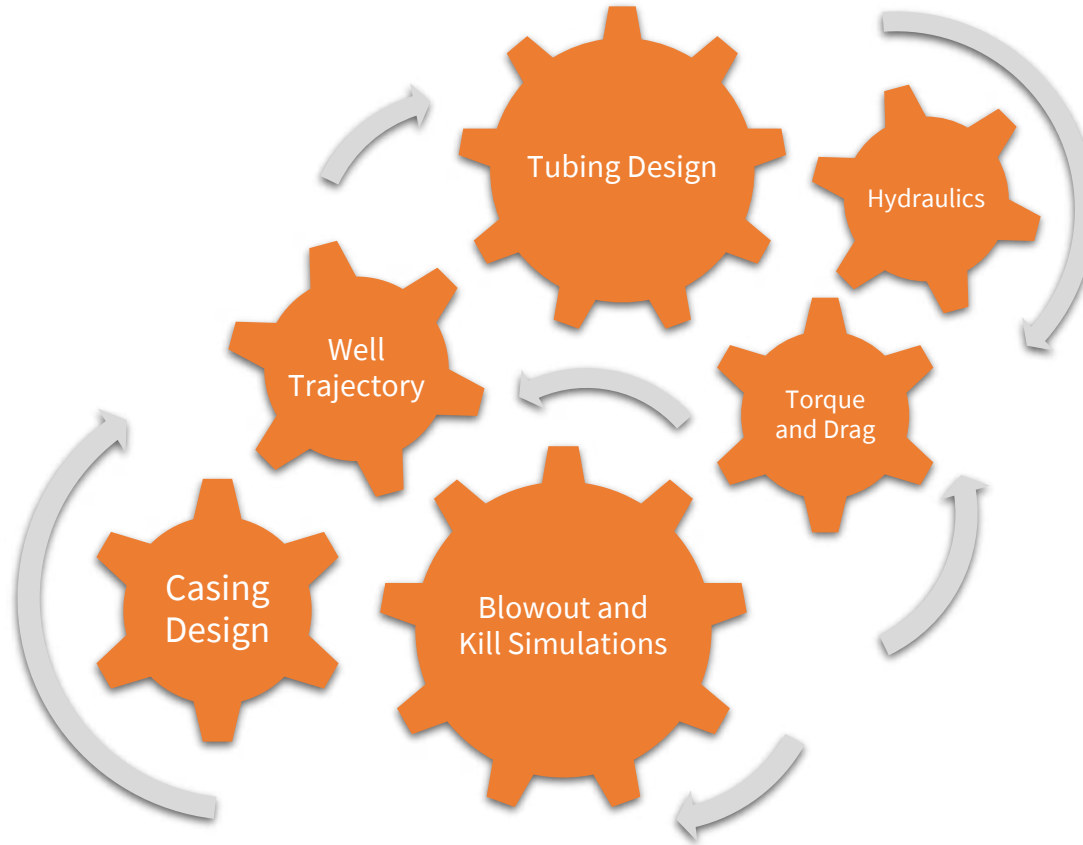
Knowledge Forum AOG 2019

**Digitize the oil industry by including  
all well design calculations in a cloud  
based web application**

# Current Well Design Process



# Oliasoft WellDesign™ - Integrated Cloud Engineering



# Next Generation Well Design

OliaSoft  
v10.0-DEV

Save Dash Demo-dataset Projects OliaSoft AS Marius Kjeldahl

General Input > Trajectories > Casing Design > Tubing Design > Blowout & Kill >

Meta / Project Settings ● Design ● Casing ● Casing ● Blowout ●

Site Config ● w/Casing ● Casing Loads ● Tubing Loads ● Kill ●

Formation Pressure ● Design (legacy) ● Custom Loads ●

Undisturbed Temp. ● Plots ● Wear ●

String / BHA ● Overpull ●

Access Control ● Torque & Drag ●

Reservoir ● Hydraulics ●

Summary ● Summary ● Summary ● Blowout Summary ●

Dataset name and grouping fields ?

Dataset Name Project Site Well Wellbore

Demo-dataset Demo Demo Demo Demo

Access Control

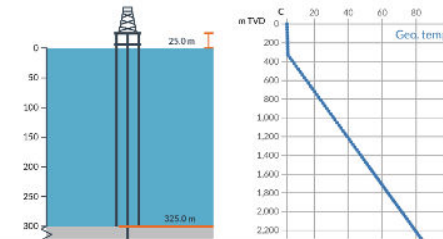
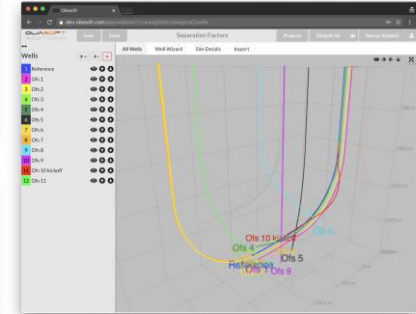
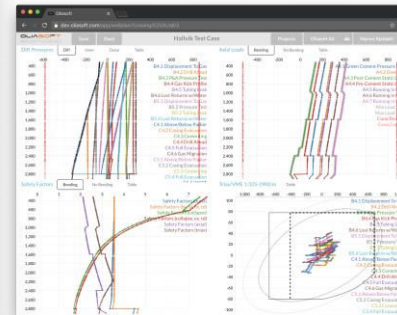
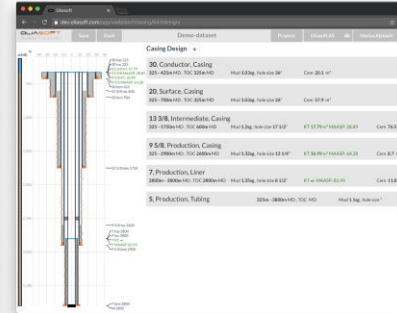
Well Location

Depths and Temperatures

Water Depth 300 m Drill Floor H./Air Gap 25 m Drill Floor Temp. 4 C

Wellhead Depth (MD) 325 m Seabed Temp. 4.44 C Temp.grad 4 C/100m

Site Configuration: Subsea

# How we achieve this



## Experienced Team

A combination of oil and software industry experts together with PhDs in mathematics and physics



## Demanding Clients

Oliasoft WellDesign™ is being tested in cooperation with Equinor, Aker BP, Chevron, OMV + 17 other oil companies

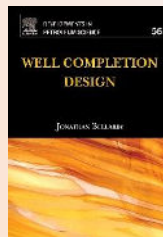


## Research Institutions

Partner up with world leading institutions and organizations with extensive knowledge and experience



## Domain Expert



Domain expert Jonathan Bellarby and Canmore Consulting are responsible for advanced stress calculations in Oliasoft

# Digital Technology – Connecting the Dots

# Oliasoft WellDesign™ in a Digital Environment



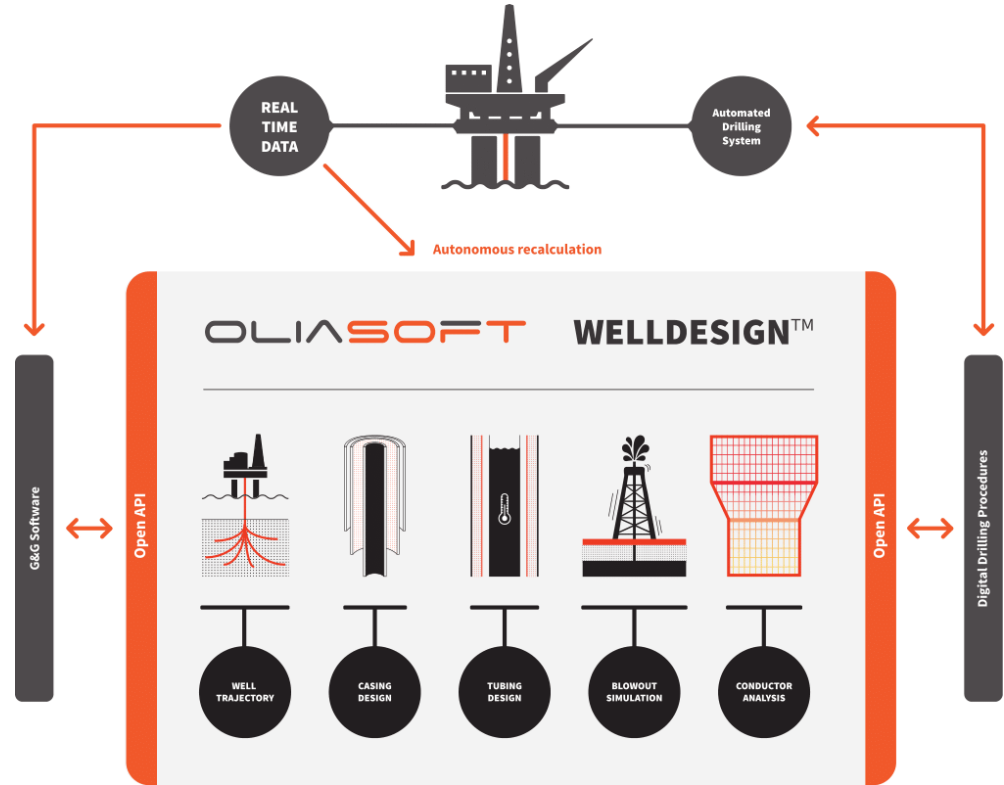
Machine-to-machine communication with any other application through open API



Output of digital operation procedures for use by rig robotics



Automatic re-calculation of the full calculation chain during operation based on real-time data





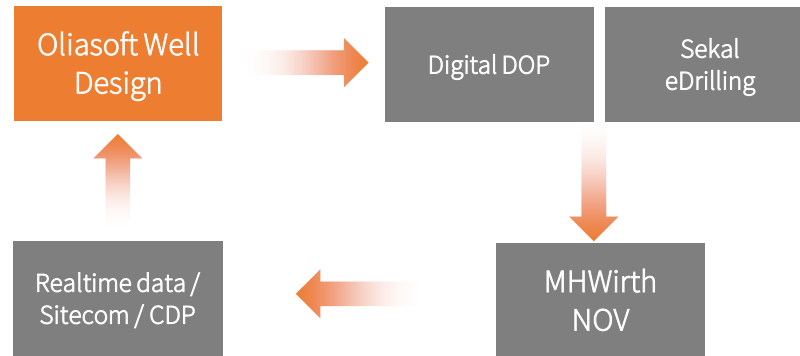
# Use case 1 – Enabling Autonomous Operations

## Use case

Enable autonomous drilling through digital operation procedures

## Value objective

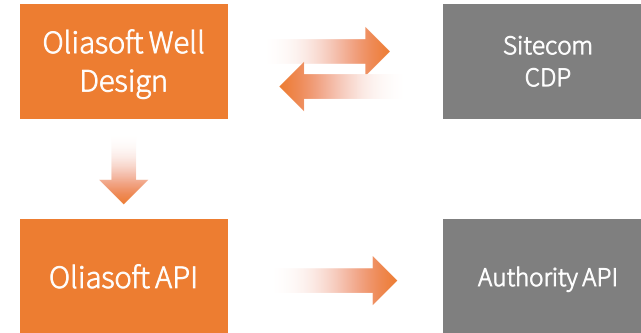
Enable automatic re-calculation of well design and well integrity in order to achieve autonomous drilling operations



# Use case 2 – Automatic Daily Drilling Report Generation and Authority Reporting

## Use case

Automate large parts of the daily drilling report generation and reporting to authorities

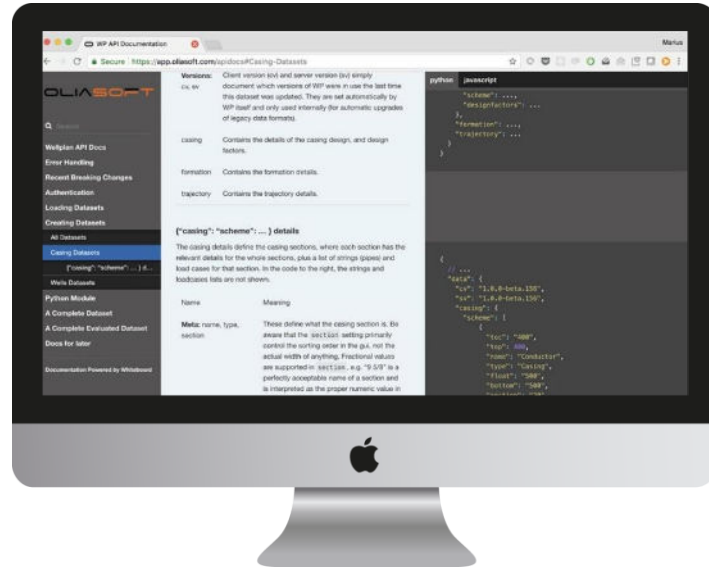
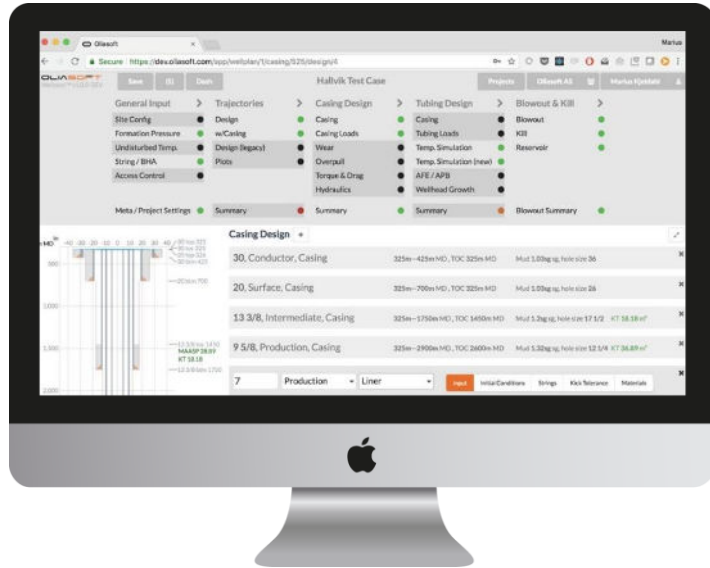


## Value objective

Automatically generate most of the necessary items in the DDR based on plan (WellDesign) and realtime data (Sitecom, CDP etc).  
Automatic reporting and validation to authorities.

# Digital solutions– Endless possibilities

# Oliasoft Build Software for Humans and Machines



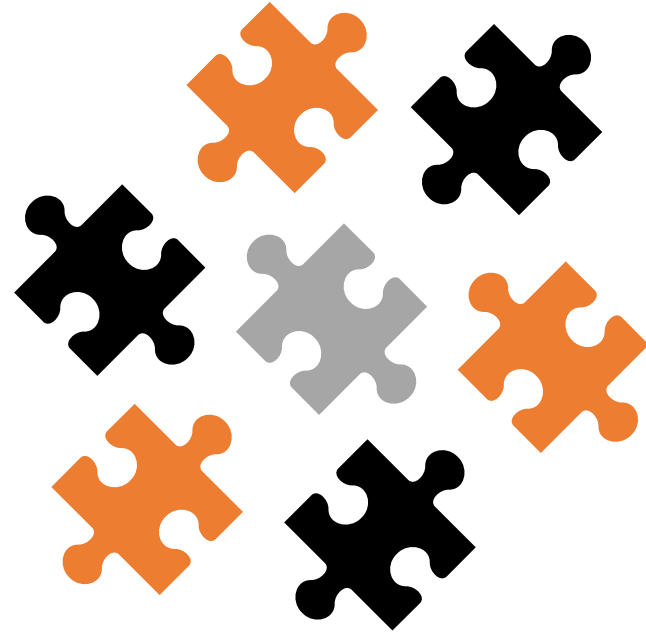
# Integrate Oliasoft Modules in Your Own App

## Puzzle philosophy

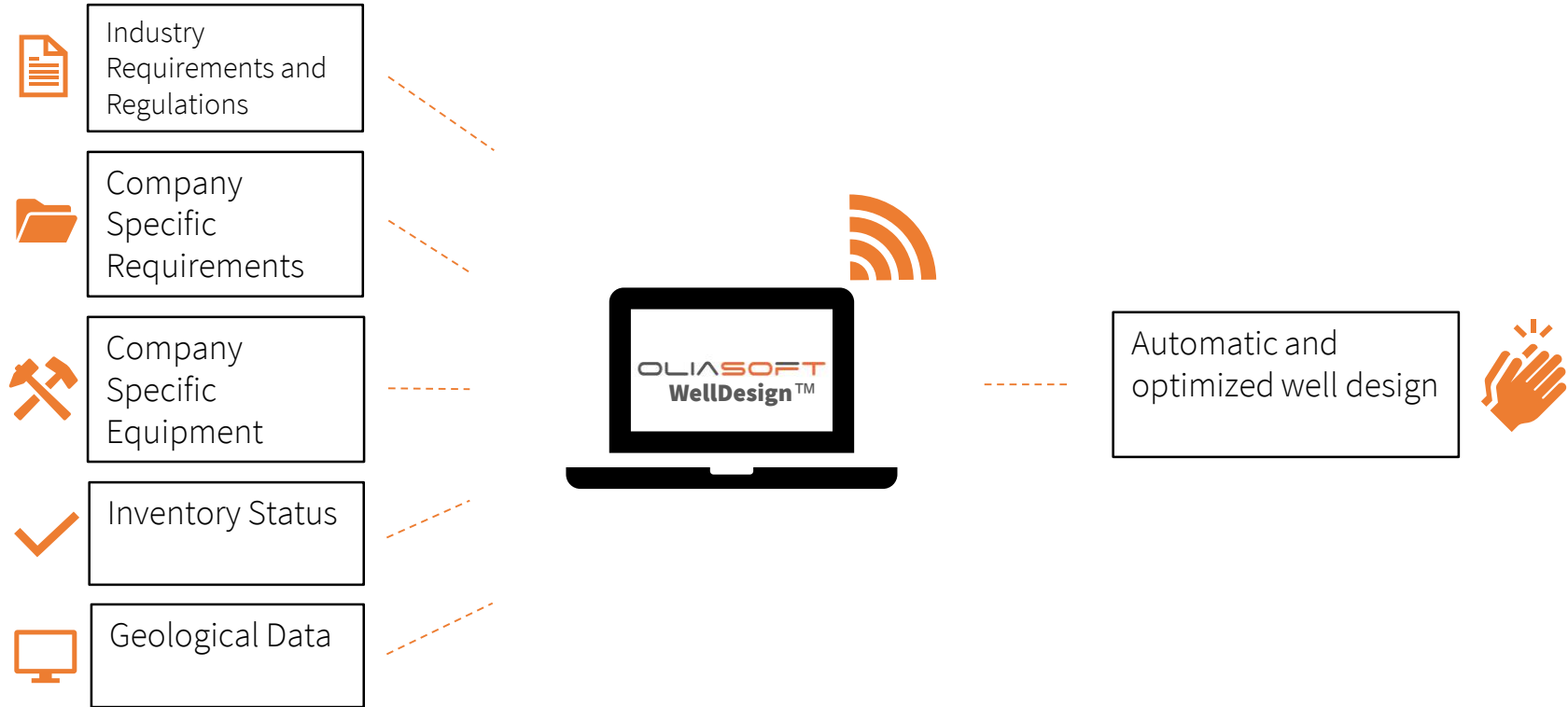
All modules and calculation engines in Oliasoft WellDesign™ are available through documented REST APIs

This allows advanced users to integrate any part of Oliasoft into their own third party applications

Applications can be used as components in a larger digital puzzle



# Future Well Planning With Digital Technology



# Why Is Our Solution Unique?

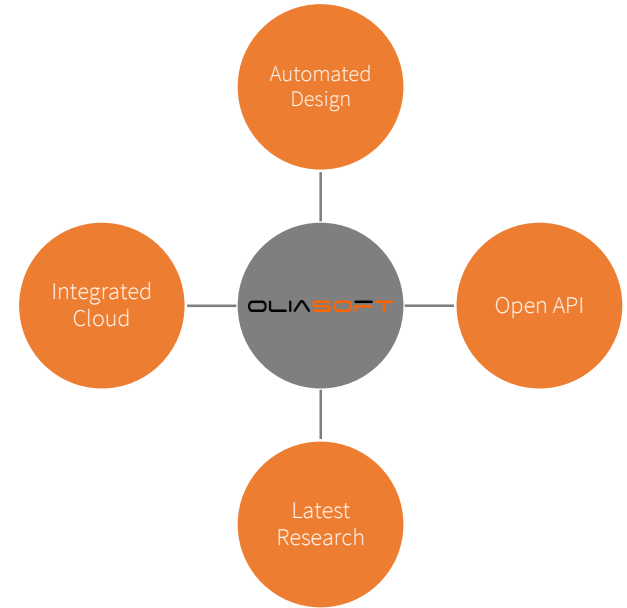
# What Makes Oliasoft WellDesign™ Unique?

**Open API** – Machine-to-Machine Communication and Real-time Updates of Design During Operation

**Latest Research Included** – Constant Implementation of Updated Calculation Methods

**Integrated Cloud Engineering** – One Source of Data in a Modern Web Application

**Automated Work** – Optimize Well Design Processes and Save Valuable Time





# Questions?

## Contact

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Oliasoft

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# Digitized Infrastructure – everything will be connected

Big data, AI etc will optimize business processes

Oil Companies own / control; Data, APIs and Workflow

Calculation engines, Simulators and Modelling engines.

Domain specific applications executing oil companies value chain – data is shared and work processes automated

Data lake

Platform

