Statoil Technology Invest

UK Deal Team
Oslo - Stavanger - Trondheim – Houston

No permanent UK presence but a dedicated UK deal team
Our mission

**Build** start-ups  
**Implement** their technology  
**Sell** them

Target Innovative, high impact upstream technology companies
What we look for in a company

We are Statoil’s oil and gas corporate venture unit hence our first filter would be to assess what the portfolio company can bring to Statoil, now or in the future.

✓ Significant implementation value
✓ Scalable market potential
✓ Strong team
✓ Competitive advantage
✓ Exit potential

✓ Strong financial return
✓ Technology
✓ IP / FTO
LOOP project funding

- $0.2 – 2 million per company
- Royalty on revenue or Conversion option
- Leverage network of entrepreneurs

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NORSE
OILTOOLS
INSTRUMENTS AS

28 oktober 2017

Classification: Open

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**Equity investments**

- $1-10$ million per company
- Ownership $10-40\%$
- Board seat
- Investing period $5 – 10$ years

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### Proof of concept

- Exploration
- Reservoir

### Product Development

- Drilling & Well
- Facilities

### Market introduction

- **numascale**
- **sharprefections**
- **Quantico**
- **SILIXA**
- **NeoDrill AS**

### Mature Growth

- **LITHICON**
- **RESMAN**
- **TRAC ID**
- **SHARE AS**
- **TechInvent**
- **aptonar**

### Recent Exits

- **LUX Assure**
- **Deep Sea Anchor**
- **HyBond**
- **ecotone**
Implementation driven VC Business Model with a proven track record

- 260 LOOP projects since 1991
- Invested in over 60 venture companies since 2001

Equity Investment

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<th>Value</th>
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<td>2005</td>
<td>STI Investment</td>
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<tr>
<td>2006</td>
<td>1st pilot well Urd</td>
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<td>20 X</td>
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<td>2007</td>
<td>1st commercial well Skinfaks</td>
<td>2.5 X</td>
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<td>2009</td>
<td>R&amp;D financing</td>
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<td>2015</td>
<td>Exit</td>
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<td>28X (Direct)</td>
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Exit of the Year (Norway) - NVCA 2015

Exit return: 16X
Implementation value: 28X (Direct)
## High activity in 2017

### New Investments / LOOP Projects

- Artificial intelligence for efficient operation of rod pump
- Software for more efficient interpretation of seismic data
- New LOOP project
- New LOOP project
- Acoustic telemetry

### Exits

- Sold to Yokogawa
- Chemical injection valve
- Sold to Nabors
- Robotic technology for fully unmanned drill floor operations
- Liquidation of dormant company
- Sold to Norbit
- Oil spill detection
COREteQ Systems

London, UK
COREteQ was established in 2012 to develop and commercialize step-change reliability in ESP (Electrical Submersible Pump) motors. COREteQ Systems is completely re-designing the Permanent Magnet Motor, cables and seals, in order to eliminate one by one the most common failure modes, providing a step change in reliability.

Value proposition:
For operators of ESP-driven wells who are experiencing frequent and costly pump downtime, COREteQ offers a completely re-designed ESP motor which will eliminate the most common failure modes, thus providing 2-3x longer mean time between failure. In comparison to currently available alternatives, COREteQ’s increased reliability will save significant workover cost and increase production.

Segment: Drilling and Well
Ownership: 46%
Investment year: 2014
Statoil Board member: John Egil Johannessen

Implementation status
• 150hp ESP for onshore/offshore applications currently in test well in Great Yarmouth
• SAGD application to be field tested in 2019
Lux Innovate Ltd.

Edinburgh, Scotland
Offers a unique tool to monitor whether pipelines are optimally protected against inside corrosion. Uses a chemical tracer and an optical instrument combined with a patented analysis algorithm. Tests can be performed in-field in a minute.

Value proposition
CoMic: Operator deployable kit for field use, method detects under dosing and over dosing of corrosion inhibitor – enables optimization of chemical dosage – reducing chemical cost and separation difficulties related to overdosing – and maintains asset integrity.

OMMICA: Onsite easy to use kit assessing MEG and methanol concentrations in Oil & Water, low cost, quicker than GC – enabling informed decisions onsite.

Segment: Facilities / HSE
Ownership: 18 %
Investment year: 2013
Statoil Board member: Hanne Kvikne Furberg

Implementation status
- CoMic: Early version of solution deployed on Statfjord, and tested in Statoil’s Porsgrunn lab.
- Statoil Porsgrunn is about to test the new COMIC kit. Peregrino is looking for a better solution; Statoil Porsgrunn has proposed to Peregrinot giving the CoMic method a try. Statfjord is considering to try new CoMic.
- OMMICA: Statoil Mongstad has adopted and endorsed the method publicly.
Raptor Oil Ltd

Aberdeen, UK
Raptor Oil develops the world’s most advanced acoustic telemetry system, a.a.d.m, for use in all drilling and well operations as well as in completed wells. It provides two-way communication between surface and downhole sensors or BHA components. The acoustic signal is transmitted through the drilling or completion string.

Value proposition
Low cost, high speed in-well telemetry providing high quality drilling data in real-time with no need for mud circulation and no need for expensive specialty drill string elements. 6000 m transmission without repeaters, 300 bits/s two-way communication.

Segment: Drilling & Well
Ownership: 22 %
Investment year: 2017
Statoil Board member: Ivar Aune

Implementation status
• None to date. The technology is at TRL3.
• Pursuing early revenue streams, e.g. in cooperation with well testing companies.
Silixa Ltd.

Elstree, UK
Silixa Ltd was established in 2007 to develop state-of-the-art distributed fibre-optic sensing solutions.

The company’s Distributed Acoustic Sensor, iDAS, listens to the acoustic field at every point along an optical fibre cable. It is like having a microphone at every point along the fibre, each recording digital-quality sound. Silixa also offers leading performance Distributed Temperature Sensor.

Value proposition
High quality, distributed fibre optic acoustic and temperature measurements that characterize and diagnose the dynamic behaviour of reservoirs, wellbores, and pipelines

Segment: Reservoir
Ownership: 11 %
Investment year: 2013
Statoil Board member: Ingebrigt Masvie

Implementation status
• R&T and Grane – testing, validation and research of Silixa’s latest interrogator used with an existing/old fibre
• Azeri–Chirag–Gunashli (ACG) Azerbaijan operated by BP – in-well monitoring
• Statoil DPUSA Eagle Ford – test for in-well monitoring such as fracking
• Statoil Porsgrunn – validation of use of fibre optics for flow profiling
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