



ProDecs

A game changing solution for
investment valuation under uncertainty



ProDecs

Better investment decisions

How it all began

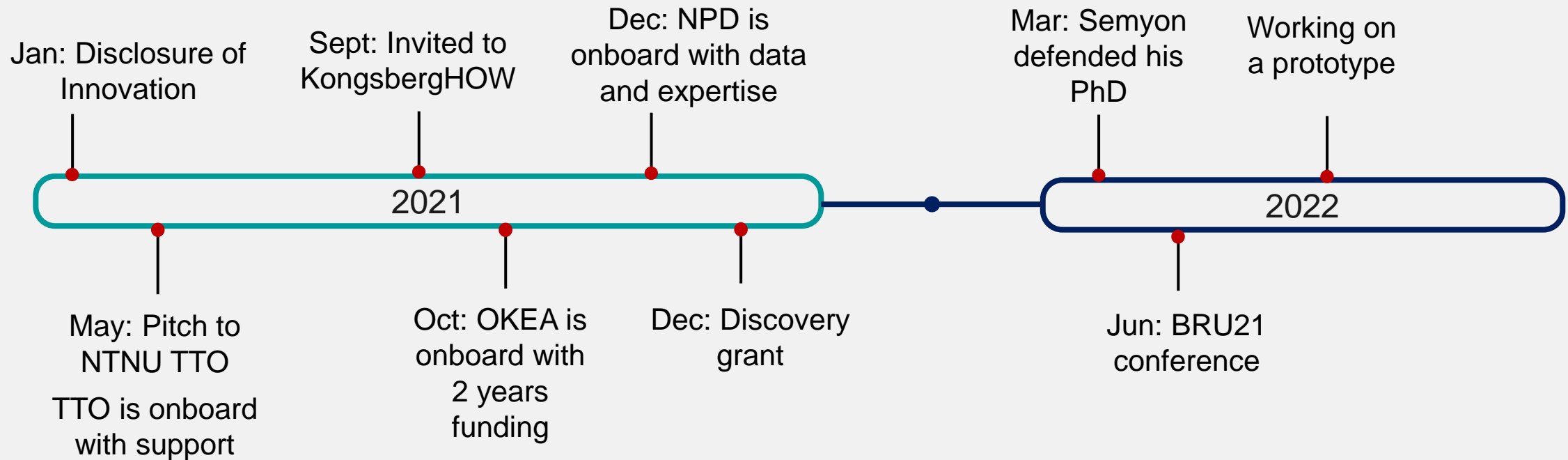
- 3.5 years of PhD research on investment valuation and decision making
- Collaboration within the Field development and economics research area
- Concrete use-cases from OKEA



- We developed methods for valuation **under uncertainty**:
 1. Staged field development (with optional wells)
 2. Sequential production of several oil fields (with a single FPSO)
 3. Risk and benefit sharing in oil E&P
- Our results inspired us to create a tool to **bring our solutions to the industry**

ProDecs' path

In **September 2018** Semyon started his PhD project with OKEA



The challenge

Investment decisions are driven by **uncertainty**

Standard valuation tools (DCF and Monte Carlo simulation) **fail to handle** uncertainty and project **flexibility**

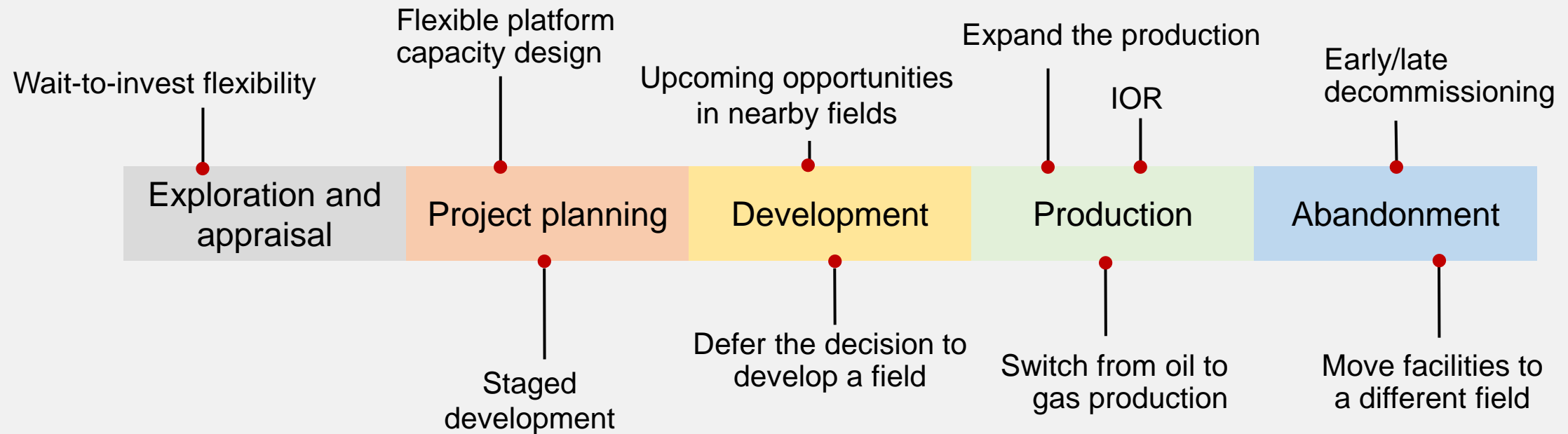
Existing solutions:

- spreadsheet based
- too stylized
- used only to **model** risk

ORACLE
Crystal Ball

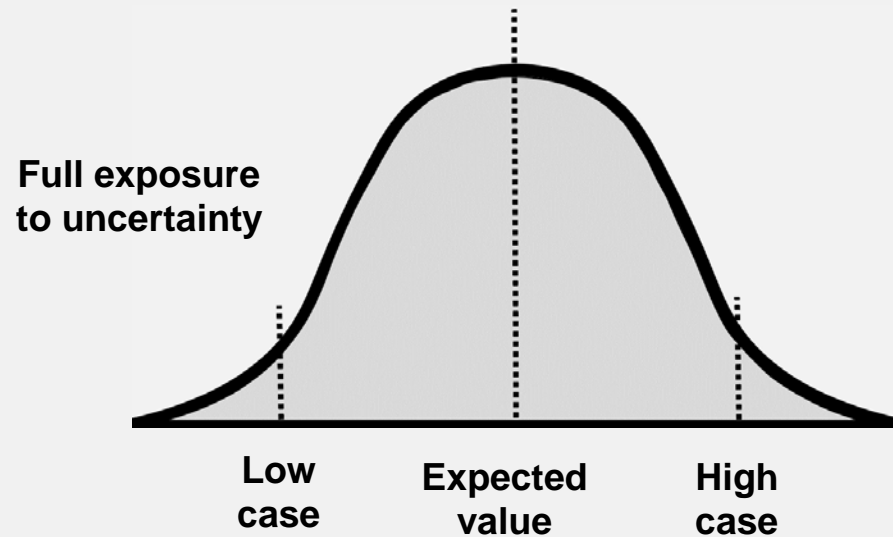


Example of flexibilities in E&P projects

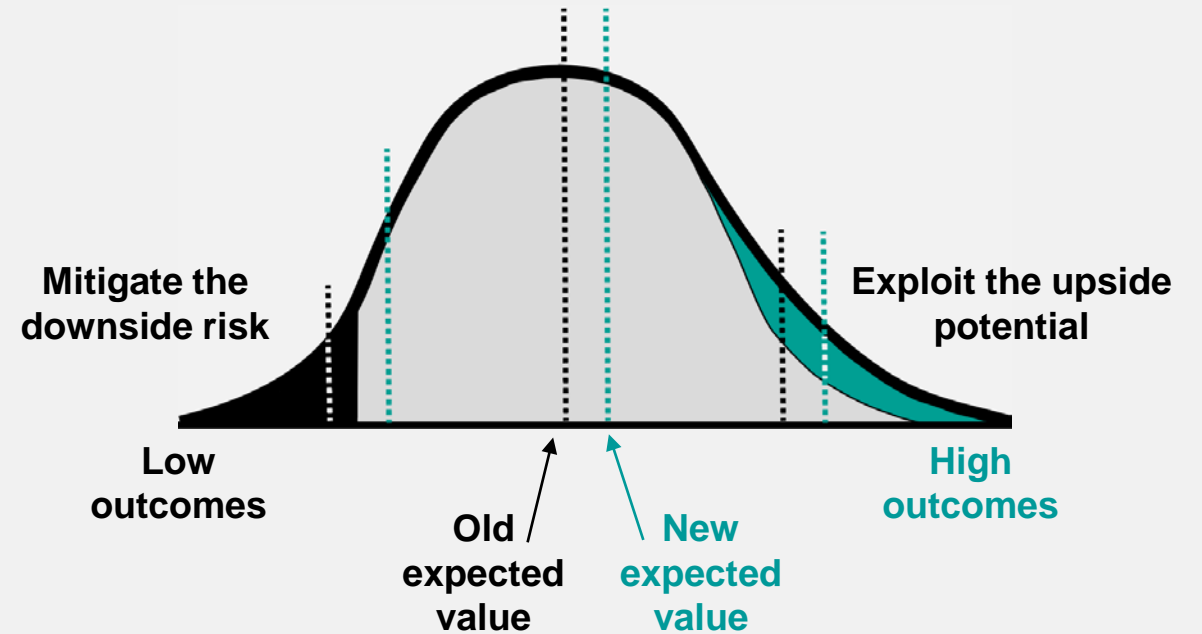


Accounting for the value of flexibility

DCF and Monte Carlo simulation



Real options approach

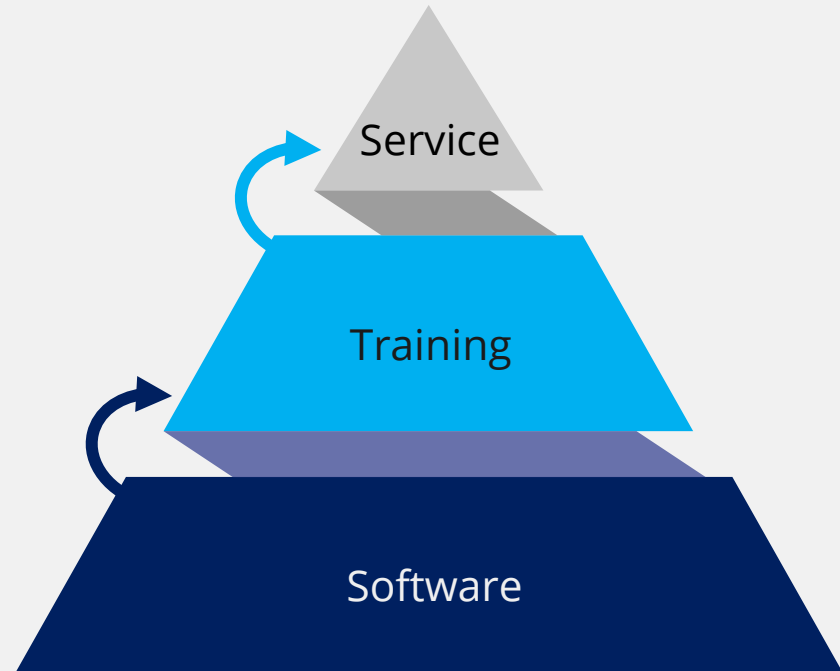


The solution

We develop an **ultimate solution** for investment valuation and decision making under uncertainty.

- A **transparent, intuitive and reliable** tool
- Tailor-made **for industry needs**
- Based on the **real options approach** and state of the art **optimization algorithms**
- Gives insight to think and act **differently**

- Software as a **service**



The solution

1

Toolset to identify and model uncertainty space

2

ROV modules with optimization algorithms

3

Necessary to handle real world problems

4

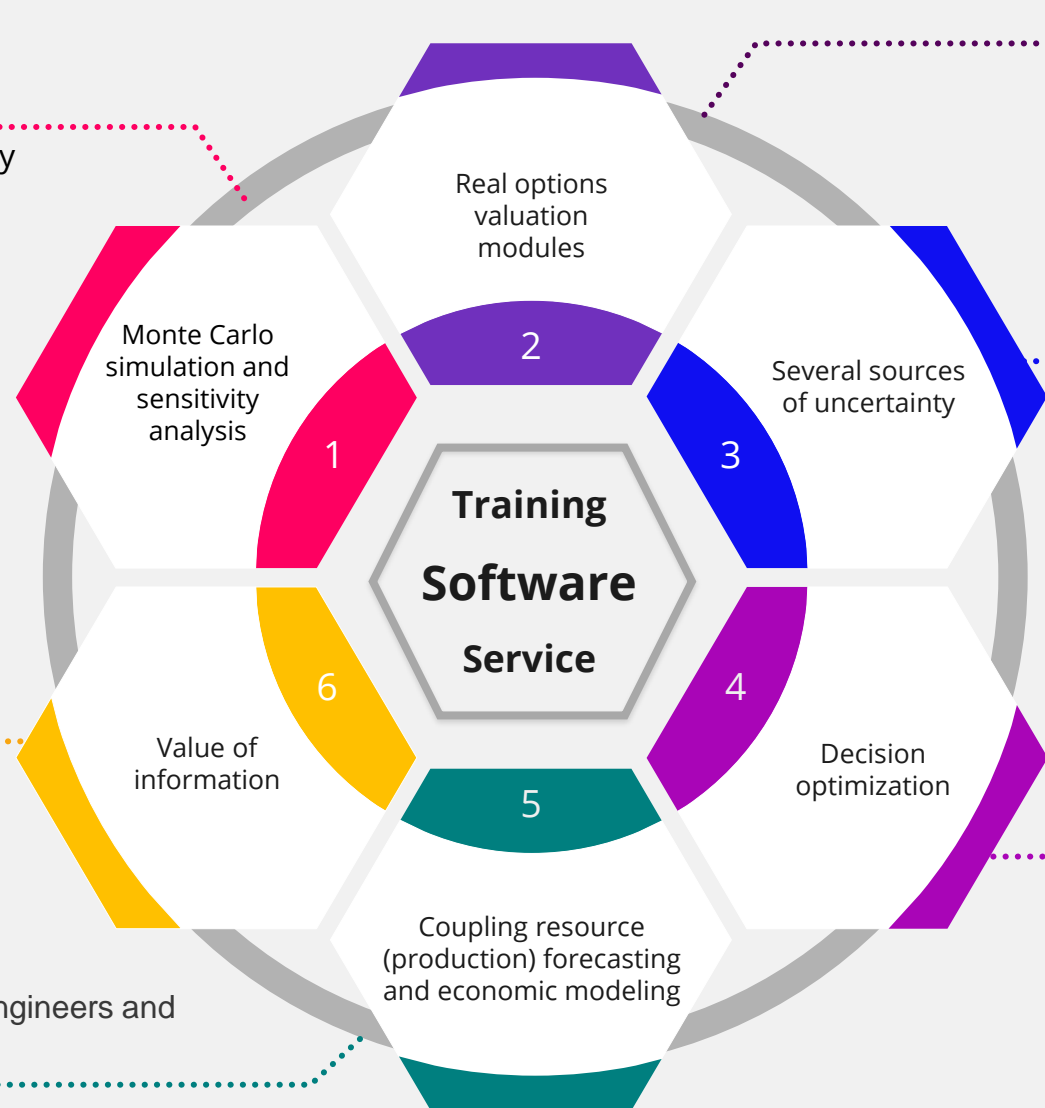
Identifies optimal decisions over time

6

Learn effectively from market and technical data

5

Allows efficient communication between engineers and analysts



The team

A strong and ambitious **team** with a solid background



Verena Hagspiel

Professor of
Investment and
Finance



Semyon Fedorov

Postdoctoral
researcher, BRU21

Department of Industrial Economics and Technology Management



Alexey Pavlov

Professor in
Petroleum
Cybernetics



Milan Stanko

Associate Professor
in Field Development

Department of Geoscience and Petroleum

Supported by:



Provide industries with an instrument

that helps them to make better informed investment decisions

contributing to value creation both in Norway and globally

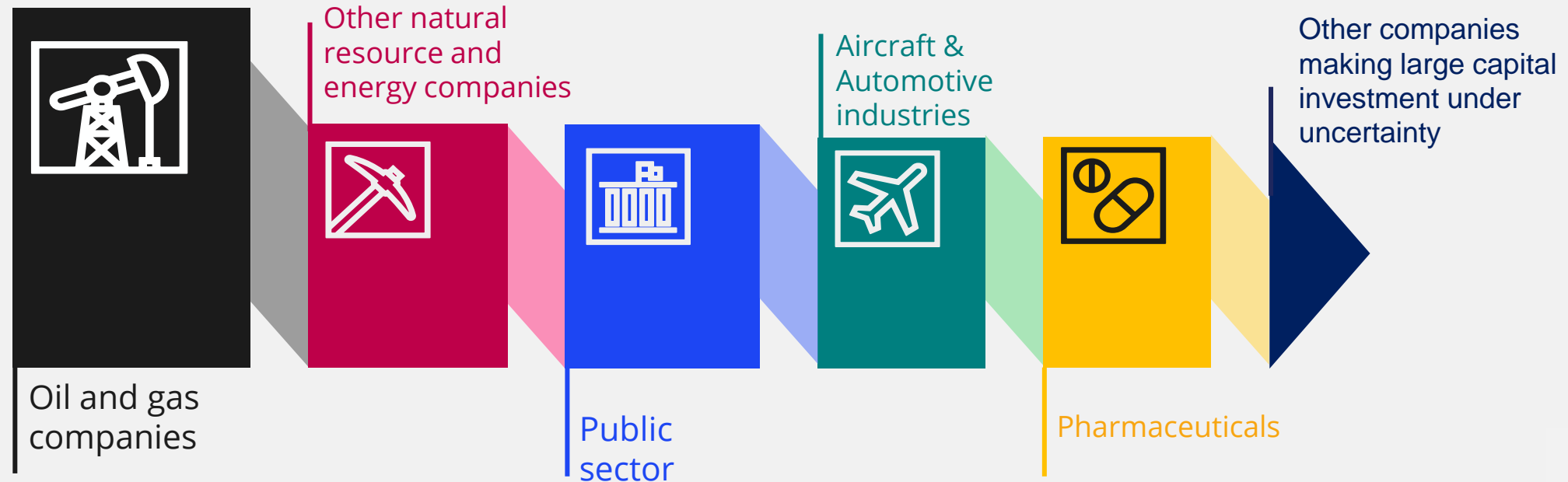


Potential to grow and create value

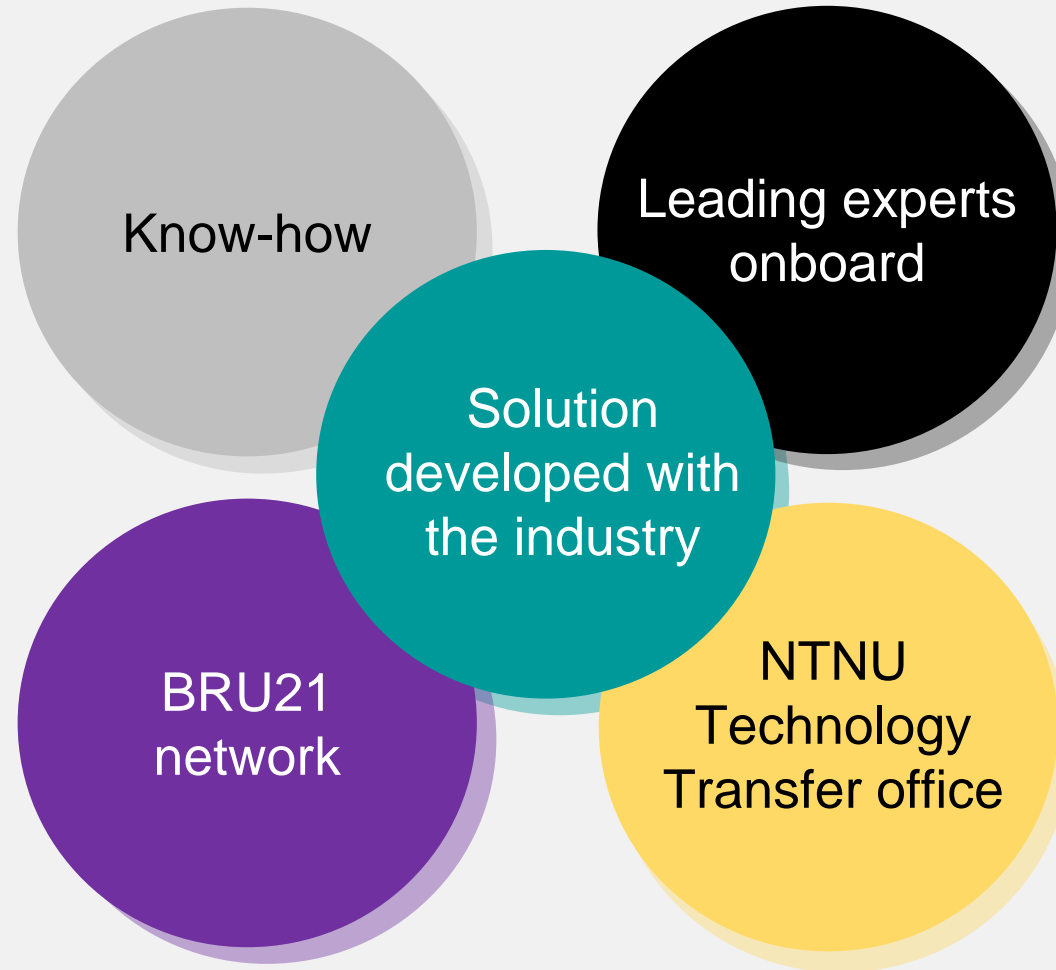
Beachhead market: Norwegian oil and gas companies

- Collaboration with OKEA and NPD

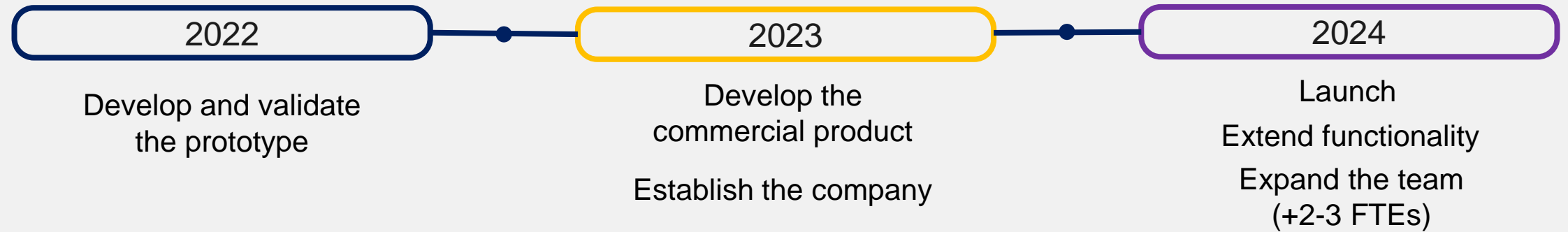
Total addressable market (TAM):



Our strenghts



Our future goals



Thank you!

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