

# Digitalization perspectives from the oil and gas domain

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# The SIRIUS Centre

Eight years' financing from RCN

12 Industrial Partners (11 in 2017)

3 Leading Academic Institutions

Centre for Research-Based Innovation

Funding for 20 Ph.D. students

Innovation through prototypes and pilots

45 affiliated researchers



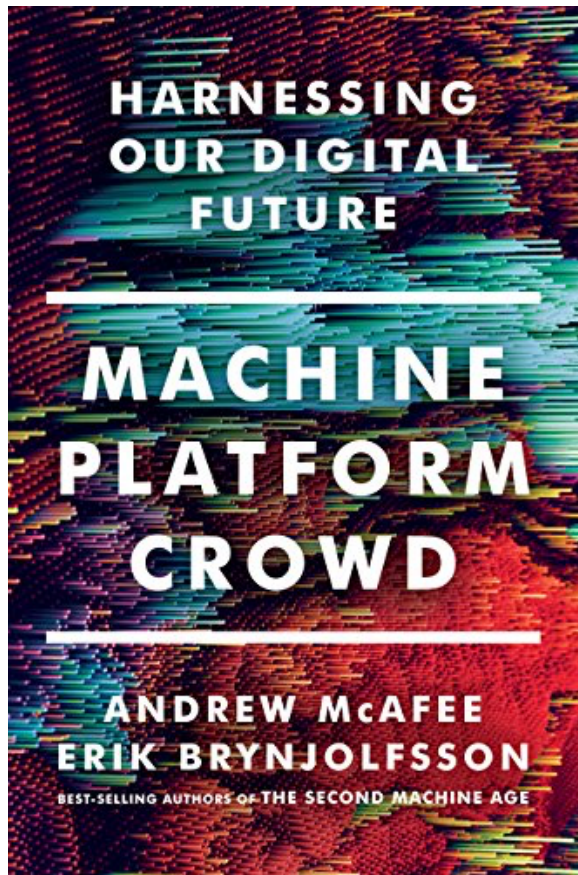
UiO : **University of Oslo**

**simula**





# The digital world



# Machines

- Are machine learning and artificial intelligence oversold?
- Are systems safe? Reliable? Resilient?
- Do we have the data? Is the data good enough?
- How do machines support better work practices?
- How much of our decision-making is decided by science fiction?





# Platforms

- Whose platform?
- Whose data?
- Platforms as the new silos?
- Sovereignty, ownership and integrity?
- Security?
- Design of platforms?
- Interoperability?



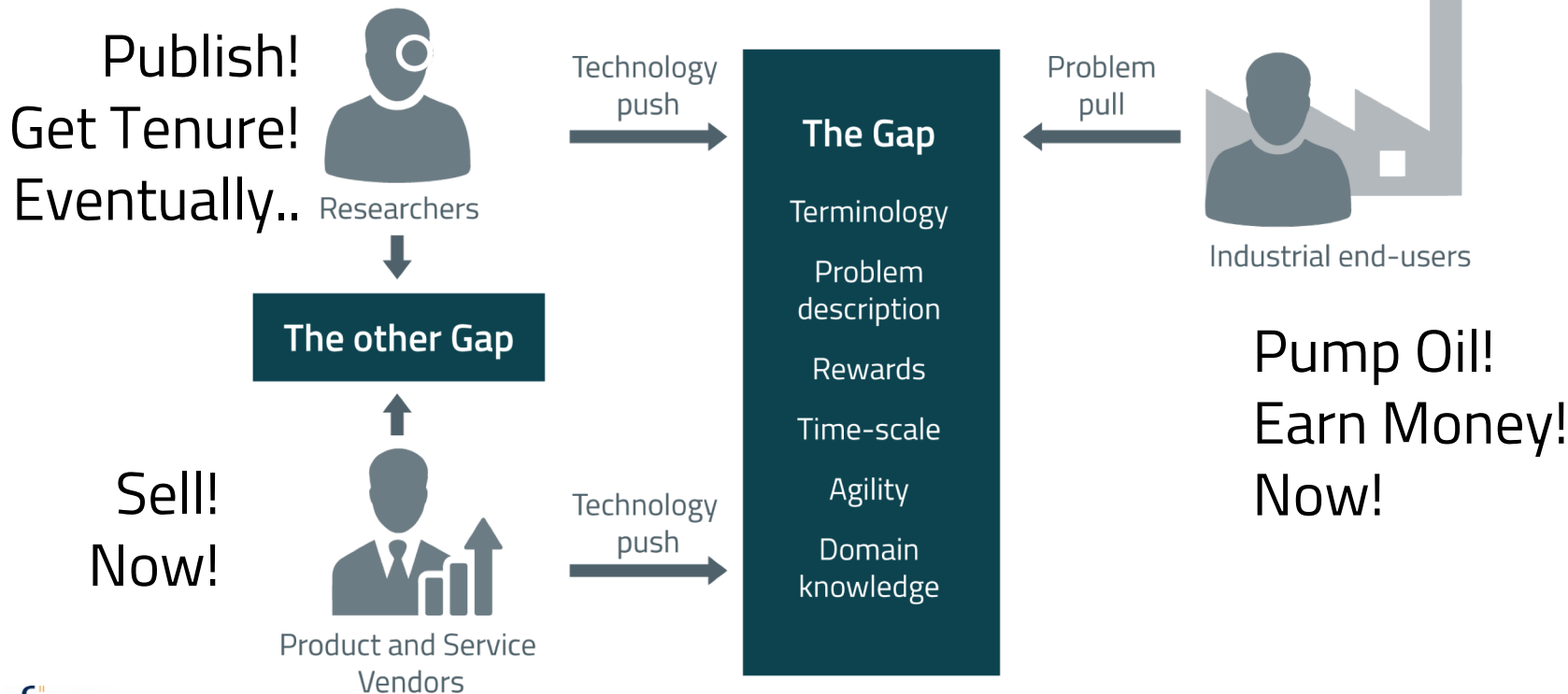
# Crowds

- Capturing the contribution of each engineer, geologist or planner
- Open supply chain to share data
- Work with vendors in co-design
- Expand access to start-ups and SMEs
- Build an agile culture without anarchy
- Self-service access to data and analytics



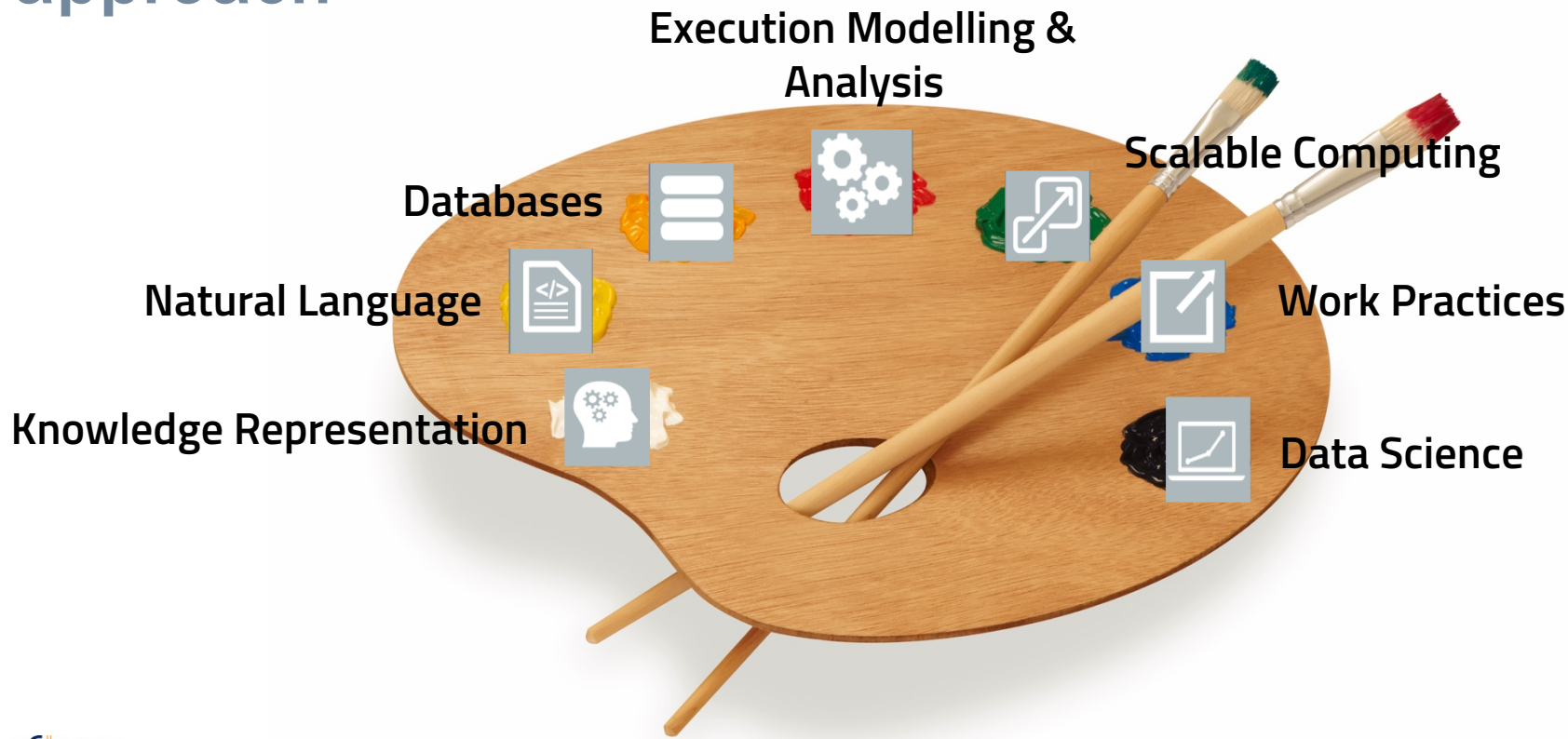


# Building bridges to fill gaps





# An interdisciplinary computer science approach





# Through beacon projects



## ***WP1 Exploration***

Digital Support for  
Exploration  
Processes

Access to  
Exploration Data

Digital Field and  
Reservoir  
Management

## ***WP2 Operations***

Planning

Digital Twins

Digital Thread

## ***WP3 Cross-domain applications***

Personalized  
Medicine

Arctic Earth  
Observation

## ***WP4 Supporting technologies***

Migration to the  
Cloud

Sustainable Large-  
Scale Ontologies

Cross-cutting  
Technology Stack