



energy valley

Energy Valley @Aerospace Valley

November 2019

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Illustration: Kongsberg



Osloregionen



NCE
Norwegian Centres
for Excellence

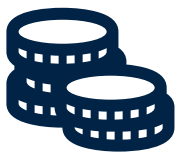
Energy Valley – a snapshot



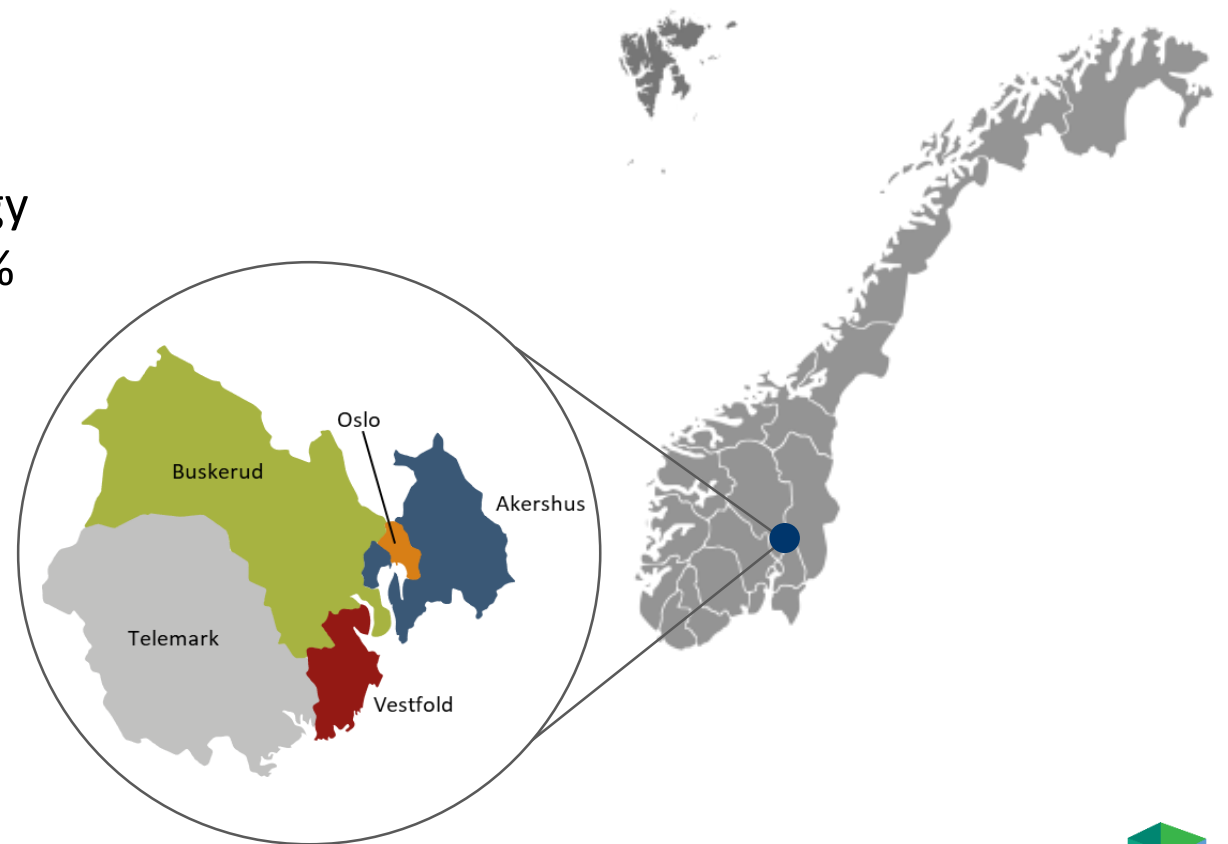
Close to 200 member companies/
institutions, mainly from the energy
industry. SME share of approx. 75%



Members employing **31 400***
professionals, primarily highly
skilled



Members generating an annual
value added of **50,3 NOK bn***



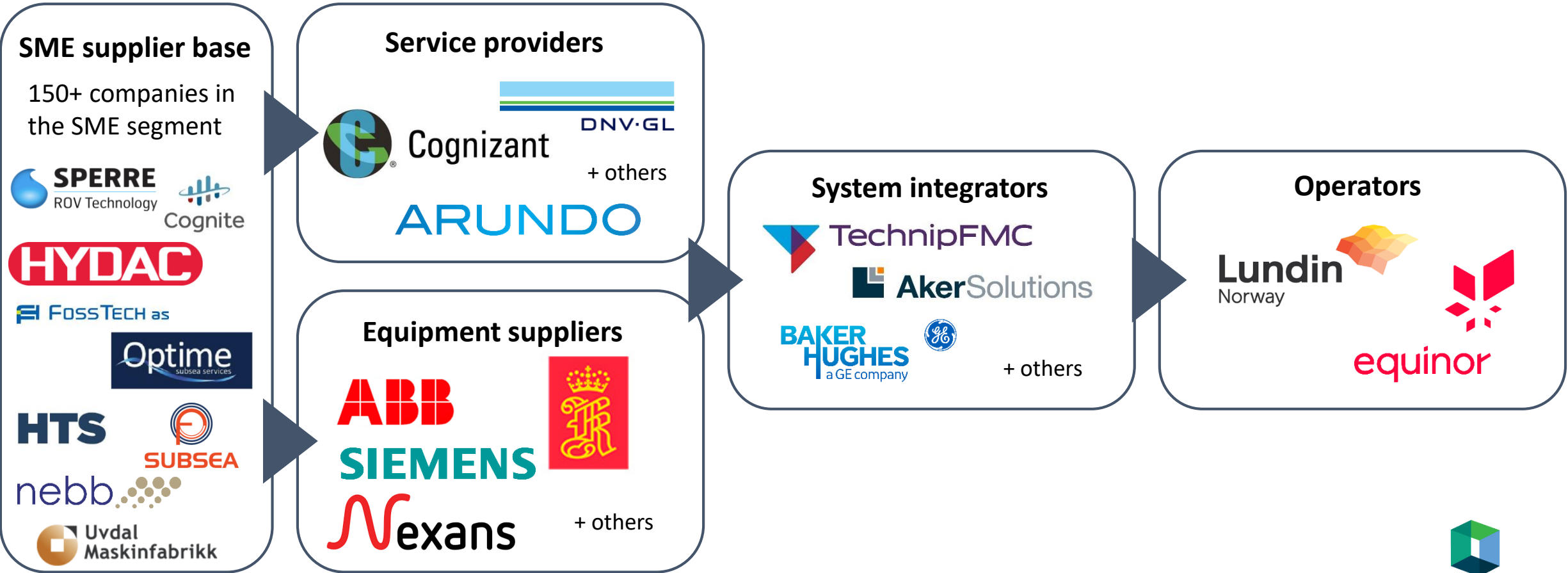
Osloregionen



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*Source: Menon Economics Report 2018: Economic Value created in the Subsea Valley, 2016 numbers

Representing the entire energy value chain



NCE Energy Technology

“Energy Valley is awarded
Norwegian Centre of Expertise (NCE)
in Energy Technology

- to accelerate the energy transformation
- foster unique cross-industry collaborations
- create value and advance innovative technologies in energy and beyond”

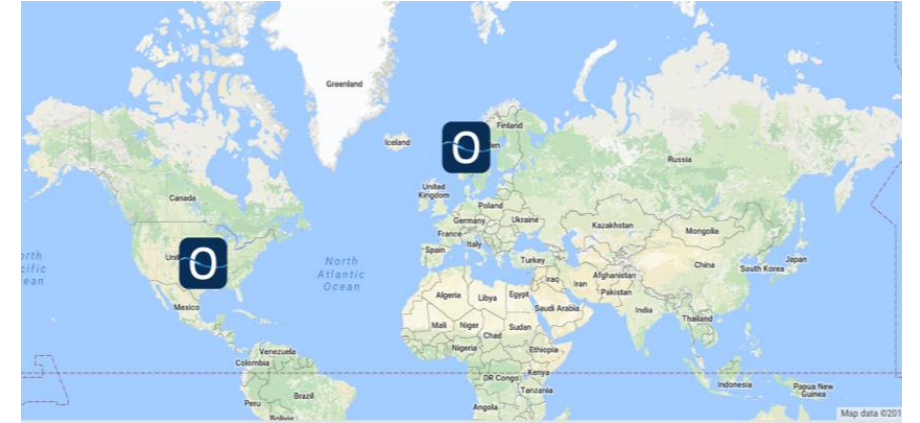
Norwegian Ministry of Trade and Fisheries, 2017



Optime subsea at a Glance

Offering individual services within

- subsea engineering and analysis
- specific products such as subsea hydraulic pump and modular hyperbaric testing vessels
- as well as unlimited workshop testing and maintenance services
- Offering low cost subsea services with disruptive technology



An industry expert on subsea well access systems technology and services.

Established in 2015

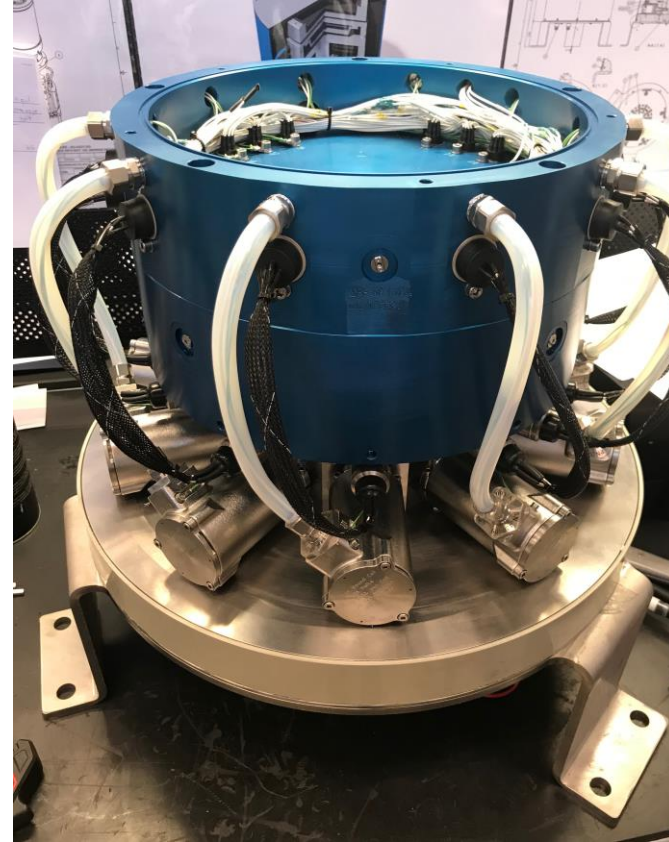
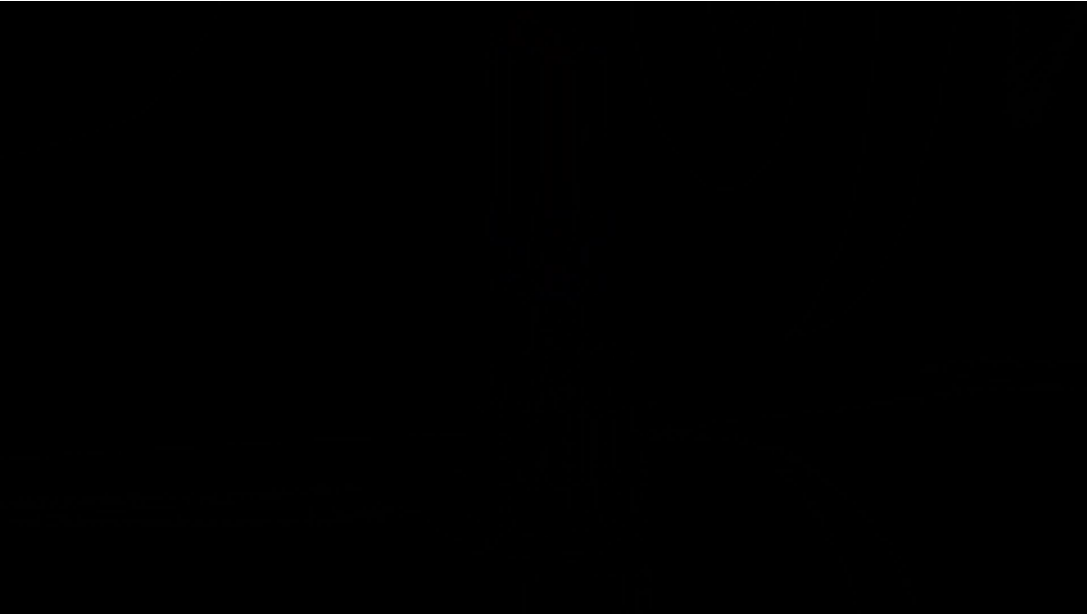
- Technology innovation
- Global presence
- Culture of integrity and management responsibility
- Currently 40 employees in Norway, 3 in Houston





2017

Developing unique Products





2018

Stepping it up to a System



2019

Deliver Success
Solutions



Aker BP Frame Agreement



Digital Transformation challenges



Digital Transformation challenges

Some main challenges:

1. The data is a mess!
2. Initiatives are too dispersed
3. Exec Suite is not bought in



Digital Transformation challenges

Our purpose of addressing digital transformation in the cluster

- Deepen understanding of digital platforms and collaboration opportunities
- Accelerate digital understanding in the SME-segment
- Identify new opportunities for communication between SME's, system integrators, and operators
- Explore standards and develop new solutions for sharing, exchange and storage of data
- Accelerate integration of visualization tools and augmented/virtual reality tools (AR/VR)
- Strengthen industry competence of additive manufacturing, autonomy, AI and machine learning




Cross industry co-operation

www.techtransfer.no/en/

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Aker Solutions ready to scale up offshore wind

Semi-submersible platforms from Aker Solutions can carry larger and much more powerful wind turbines than those found on land.



RENEWABLE ENERGY



RENEWABLE ENERGY



SEABED MINING



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Cross Industry co-operation: Ntention



Energy:Connected'18

Ntention attend Energy:Connected'18 with their prototype smart glove...



Energy:Connected'19

..and came back to Energy:connected'19 with a stand and have the opportunity to pitch to the industry.

Energy Valley introduces them to Pascal Lee at Mars Institute – who is very interested...



Photo Haughton-Mars Project / P. Lee

October 2019

...and Pascal Lee brings Ntention to NASA.

The smart glove technology developed by Ntention is integrated into a concept spacesuit for Moon and Mars exploration developed by Collins Aerospace, and tested during the NASA Haughton-Mars Project 2019 field campaign on Devon Island in the Arctic.

Partnership with Market Trust

Experts in food & HPP research



- 10 years of research of HPP and food (<https://vimeo.com/128570080>)
- One of the global leading insititutes on HPP testing of food
- Supported the international HPP producers on advise and testing



Experts in innovative high pressure systems



- Leading provider of new and optimized hyperbaric pressure chambers
- ASME & ISO Certified organization
- Multiple deliveries globally – field proven, modular design





Increases storage / shelf life

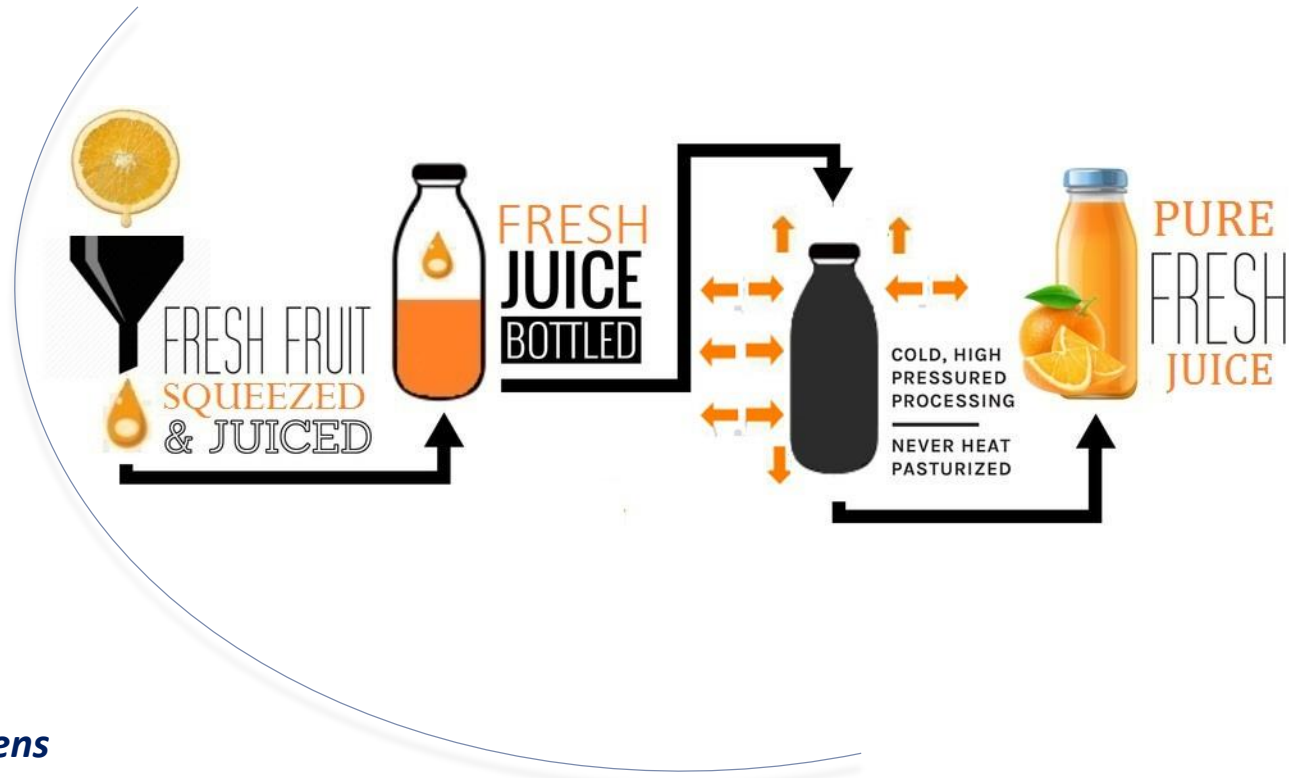


Eco-Friendly, reduces waste

Reduces risk of pathogens



HP Processing



Fresh & quality taste



Maintains nutrition w/o preservatives

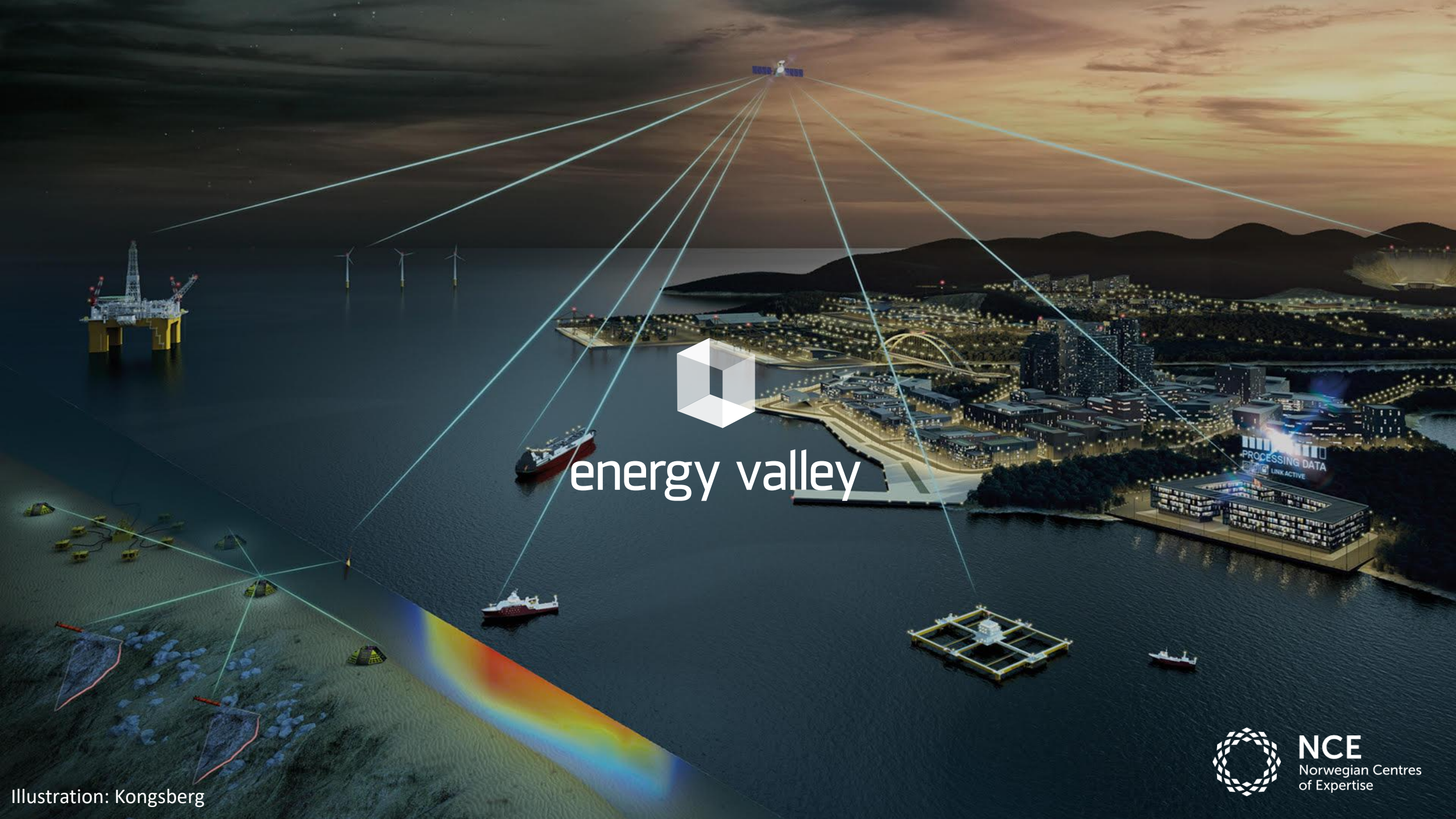


Cross industry co-operation

Potential opportunities:

1. Additive manufacturing (e.g. materials & documentation)
2. AI (e.g. EDF visit Cognite)
3. How to work with Start-ups and innovation





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