



Big Data – fiskehelse og fiskevelferd

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Innovation on net pens

Net solutions

Development and testing of novel antifouling solutions
Development and testing of autonomous net cleaning solutions

Variable feeding depth

Development and testing of technology that enables variations in feeding depth, to capitalize on spatial differences in environmental conditions



IoT and cloud services

IoT and cloud services for seamless and "smart" data collection in the production environment. Facilitating exploratory analysis - using large data sets to improve efficiency

Wireless environmental monitoring

Wireless monitoring of the whole water column
Establishing real-time monitoring



Camera development

Development of novel camera solutions to improve feeding control and allow implementation of machine vision



Machine learning

Developing machine learning models to allow identification of individual fish and real-time welfare monitoring, real-time biomass estimation, automatic sea ice counting and autonomous feeding control



Autonomous feeding control

Harnessing multiple data streams for decision support
Development of AI techniques to facilitate optimized feeding

Real-time surveillance

Collecting environmental data from smart sensors

Lighting strategies and equipment

Lighting regimes to stimulate increased growth rate

Light as a tool in sea ice prevention

Sea ice prevention technologies

Trialing the use of desalination plants to provide a constant brackish water layer to mitigate new sea ice infestation

Trialing the use of sea ice traps and skimmers to remove sea ice from the environment

Trialing different combinations of preventive technologies/ approaches

Drone surveillance

Monitoring of nets, moorings and other site infrastructure

Key development for offshore/ exposed operations





BREMNES SEASHORE

CERMAQ



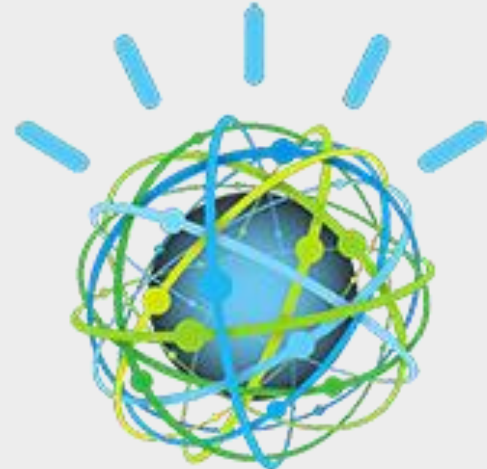
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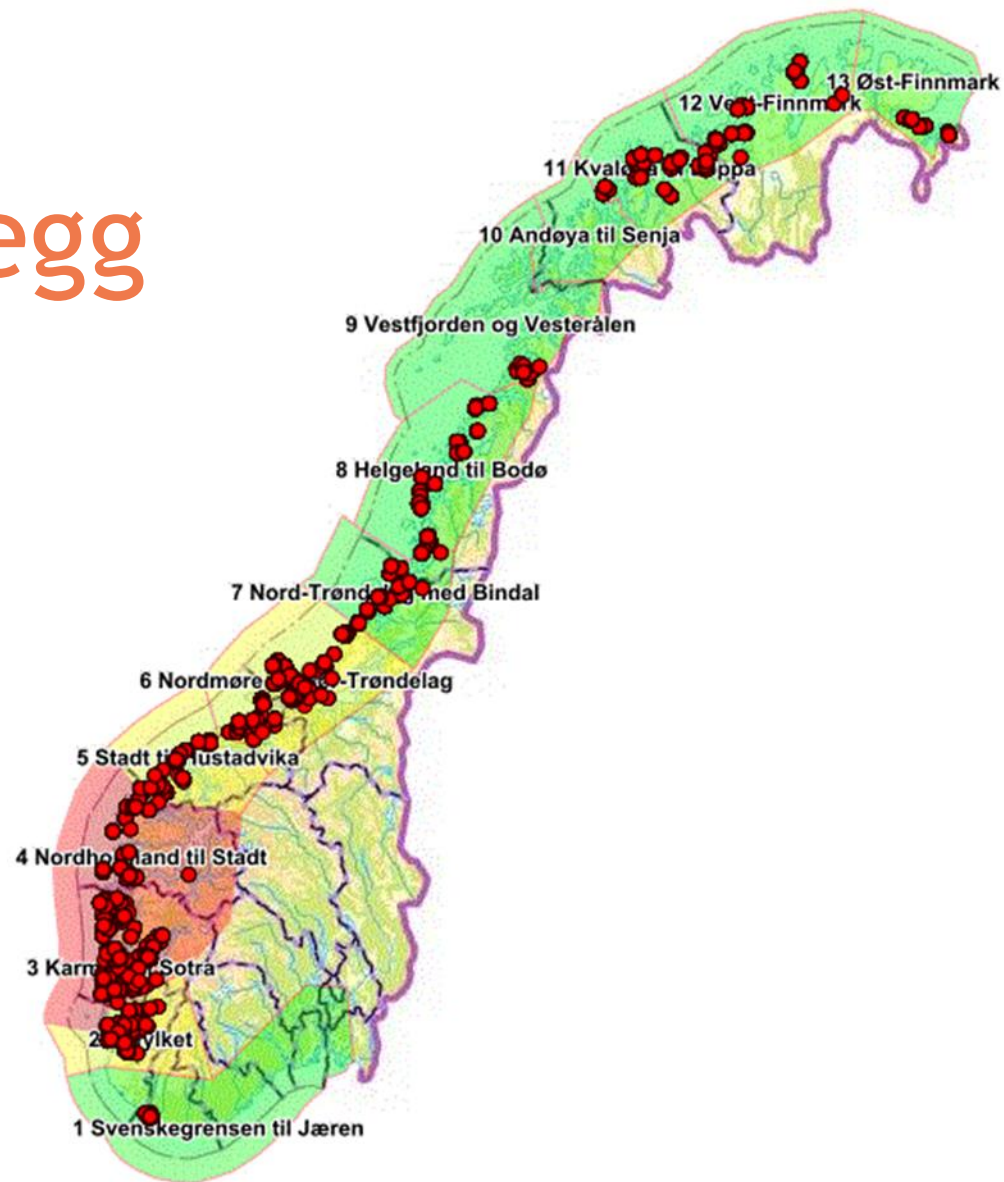
IBM Watson

IBM Watson

THOMMESSEN

- Proaktiv drift

On-line anlegg i Norge



Påvirkning på velferd og helse

- Bedre analyser – Situasjonsforståelse
- Bedre prognoser – proaktiv holdning og beslutningsstøtte
- Økt innovasjon – dreining mot disruptiv innovasjon – det åpnes for nye teknologier og nye selskap som ser mot Norge
- Effektivisering av forskning – lettere å få data og implementere funn

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Eierskap til data

- Unngå situasjonen i landbruket i Europa og USA
 - Ordinære driftsdata eies av oppdretter
 - Fellesprosjekt data vs resultat
 - Etter endt forhold – unngå «lock out»
 - Ligger modellen allerede i «Bratislava enigheten» fra April 2017
- «Data controller & data processor»





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