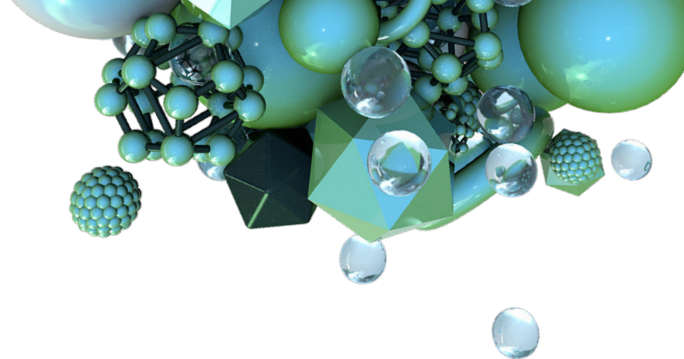




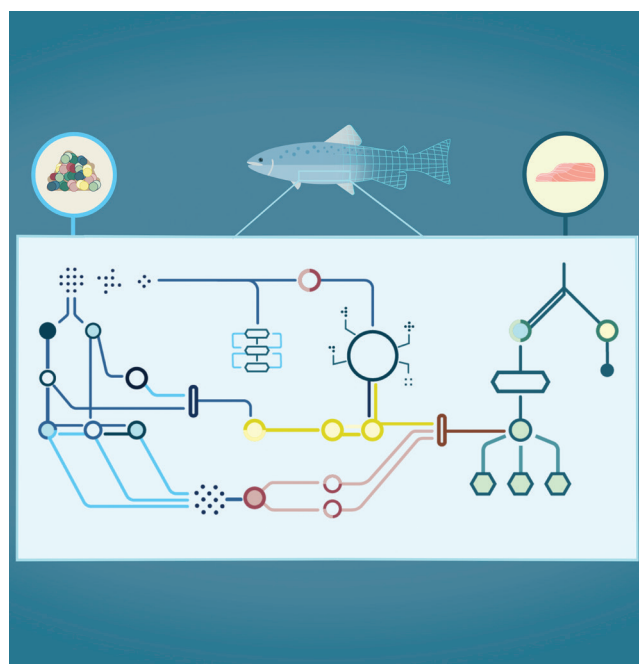
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The Digital Salmon

– Faster response to new challenges

Salmon farming in the future must navigate conflicting and shifting demands of sustainability, shifting feed prices, disease, and product quality. The industry needs to develop a flexible, integrated basis of knowledge for rapid response to new challenges. The Digital Salmon will be an ensemble of mathematical descriptions of salmon physiology, combining mathematics, high-dimensional data analysis, computer science and measurement technology with genomics and experimental biology into a concerted whole. The foundations are being laid by the DigiSal project that is part of the national consortium for biotechnology, Digital Life Norway. Focusing on challenges of novel feedstuffs, DigiSal develops a computer model of salmon metabolism to interpret data on gene expression and metabolomics.



Value proposition

Mathematical models and effective knowledge management helps you see patterns across datasets, evaluate hypotheses in computer simulations and make testable predictions about real-world quantities. This makes for much faster iteration in research and development, letting the industry shift from a reactive to a pre-emptive strategy in dealing with challenges.

Opportunities for collaboration

Does your business have a biological challenge where it is hard to make sense of the data? Join the Digital Salmon to view your data in the context of existing and new knowledge, through the clarifying lens of mathematical models, ranging from the carefully designed to brute-force machine-learning methods. We invite dialogue with industry, academia and funders to discuss collaboration and possibilities for value generation built on sharing and reuse of data and systems biology models.

Scientific fields and technology

Systems biology, aquaculture, big data, biotechnology, phenomics.

Resources and partners

- The project has been granted 38.8 million NOK from the RCN within 2016-2020 and is part of the Centre for Digital Life Norway.
- A consortium consisting of NTNU, UiB, UiT, University of Sterling, Wageningen University, Havforskningsinstituttet, AquaGen AS.

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