

# iFarm<sup>®</sup>

Individualized aquaculture

## Individualized aquaculture based on artificial intelligence

iFarm is a technology that makes it possible to recognize each fish in a net pen and give it an individual health journal and adapted follow-up.

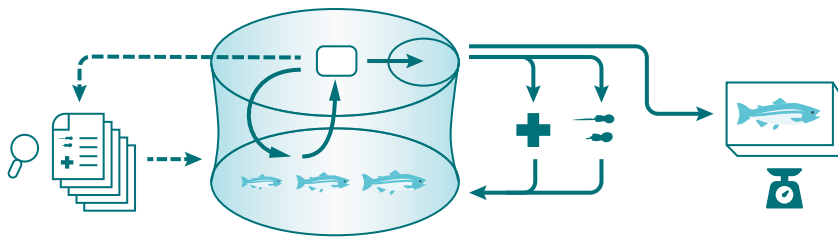
This will result in better fish health and welfare and will be a game changer in the aquaculture industry.

The project is a collaboration between BioSort and Cermaq



CERMAQ

## This is how iFarm works:



A net pen can hold about 200 000 fish. The fish are kept deep in the pen with a roof net. When they swim to the surface to fill their swim bladder, they are led through the iFarm sensor, which scans each fish and uses automatic image processing to recognize each individual fish.

Weight and growth development of each individual fish is measured. Lice is counted on the entire fish, also early stages of sea lice. Any sores or signs of illness are registered in the fish health journal.

iFarm can sort the fish so that any treatment is adapted to individual need,

and we only treat the fish that need it – without stressing the fish with handling or sorting.

iFarm can generate reports with detailed data on each fish. This will give a better basis for knowledge-based decisions.

If successful, iFarm can be used on all existing and new aquaculture sea sites along the coast. The investment cost will also be modest.

**If the development of iFarm succeeds, the technology can be used on existing sea sites along the coast. This will contribute to strengthening coastal fish farming and make it more sustainable and competitive for the future.**

## iFarm can solve challenges in aquaculture:

### Fish health and welfare

With detailed information about the fish welfare and development, the follow-up can to a larger extent be adapted to fish need, and thus increase fish health and welfare.

### Sea lice

With iFarm we are able to count sea lice on the entire fish, and also detect lice even when they are small. Fish with sea lice can be sorted out from the other fish and receive anti sea lice treatment.

### Losses

Weak and sick fish can be detected early, and measures can be taken early to avoid spread of infection in the population.

### Escapes

The most escape-prone situations are lice treatments and other “risk operations”. By sorting out and treating only the fish that need it, we avoid these risky operations and consequently reduce the risk of escapes.

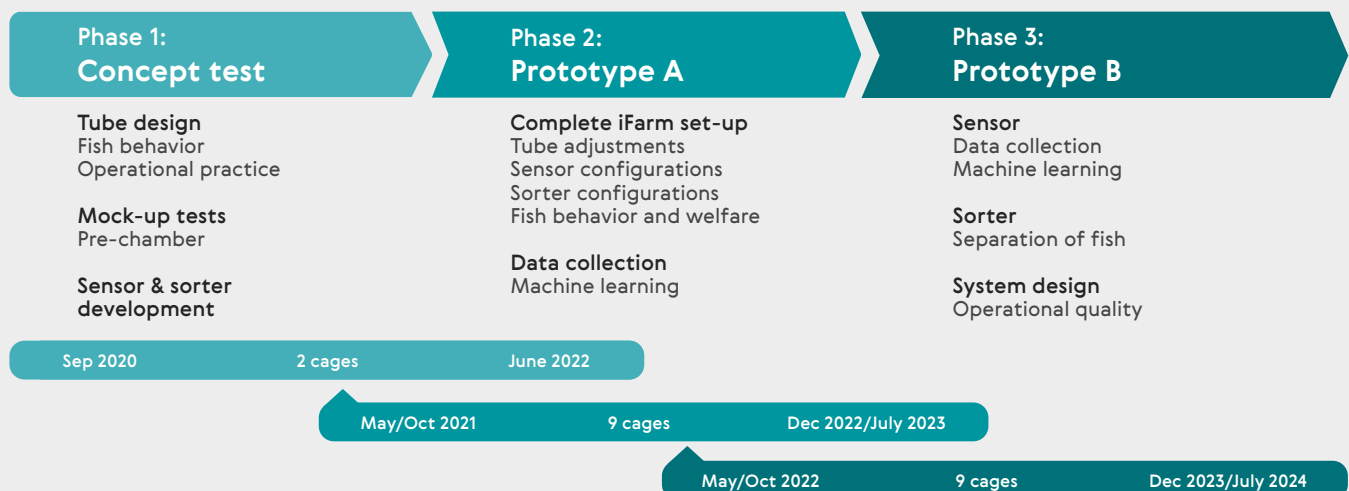
### Emissions of nutrients

With a full overview of the fish in a net pen, feeding can be more precise, with less feed going to waste.

## Project overview

Technology adapted to fish behavior

Image recognition and machine learning



Other project partners:  
[ScaleAQ](#) - supplier of all farming equipment to the project

