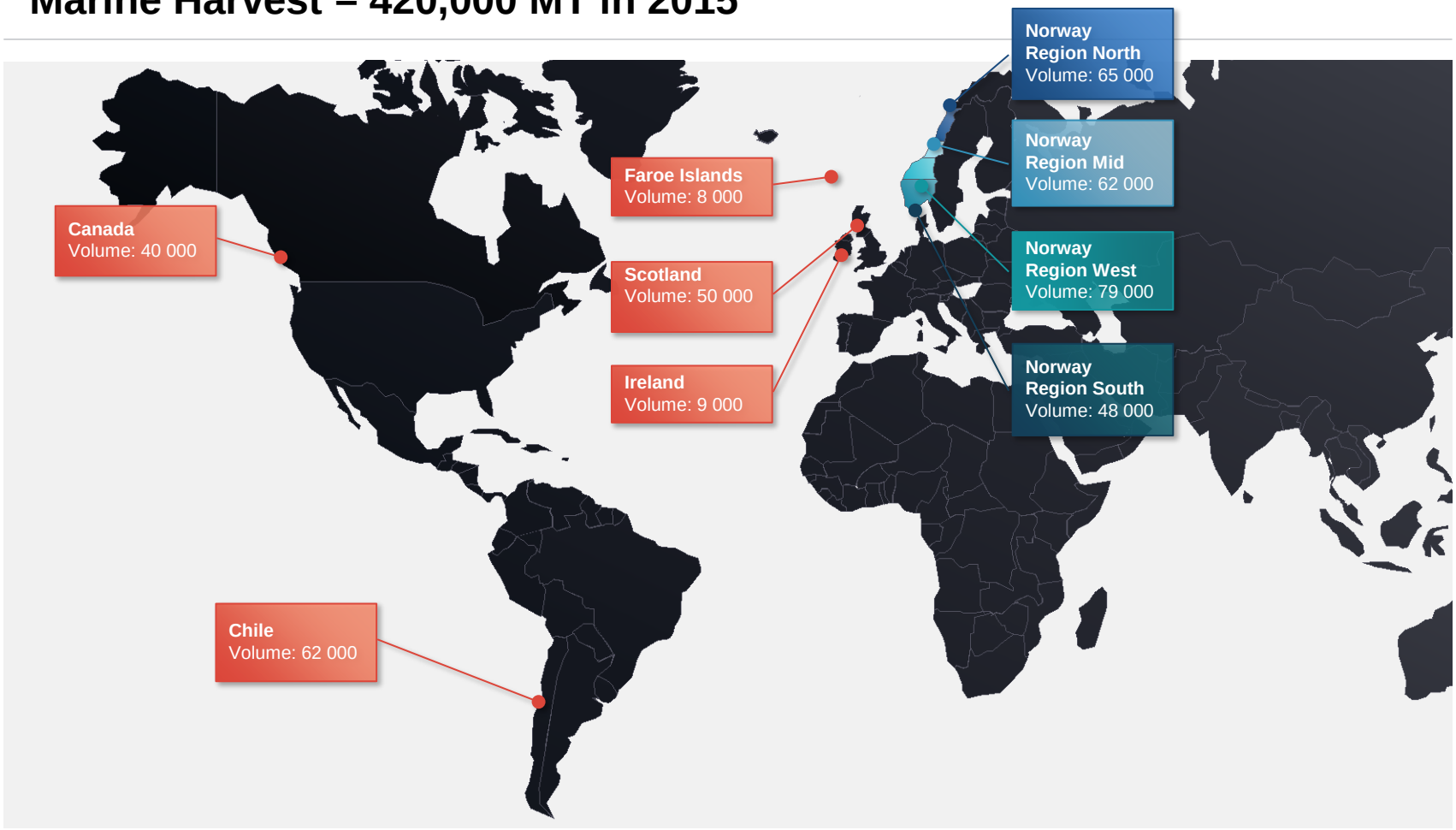
Salmon Transfer: Options for Pumping Entire Tank to Grade/Harvest

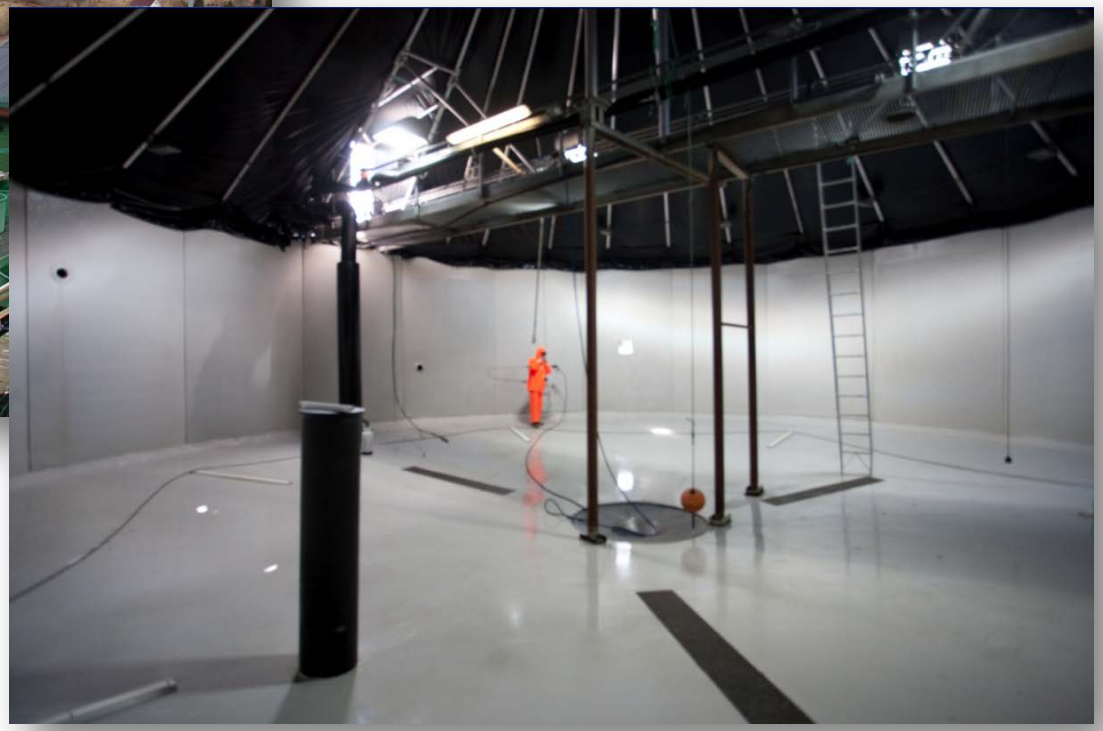
Ragnar Joensen, Group Technology Manager, Marine Harvest

AIW Roanoke, Aug 2016

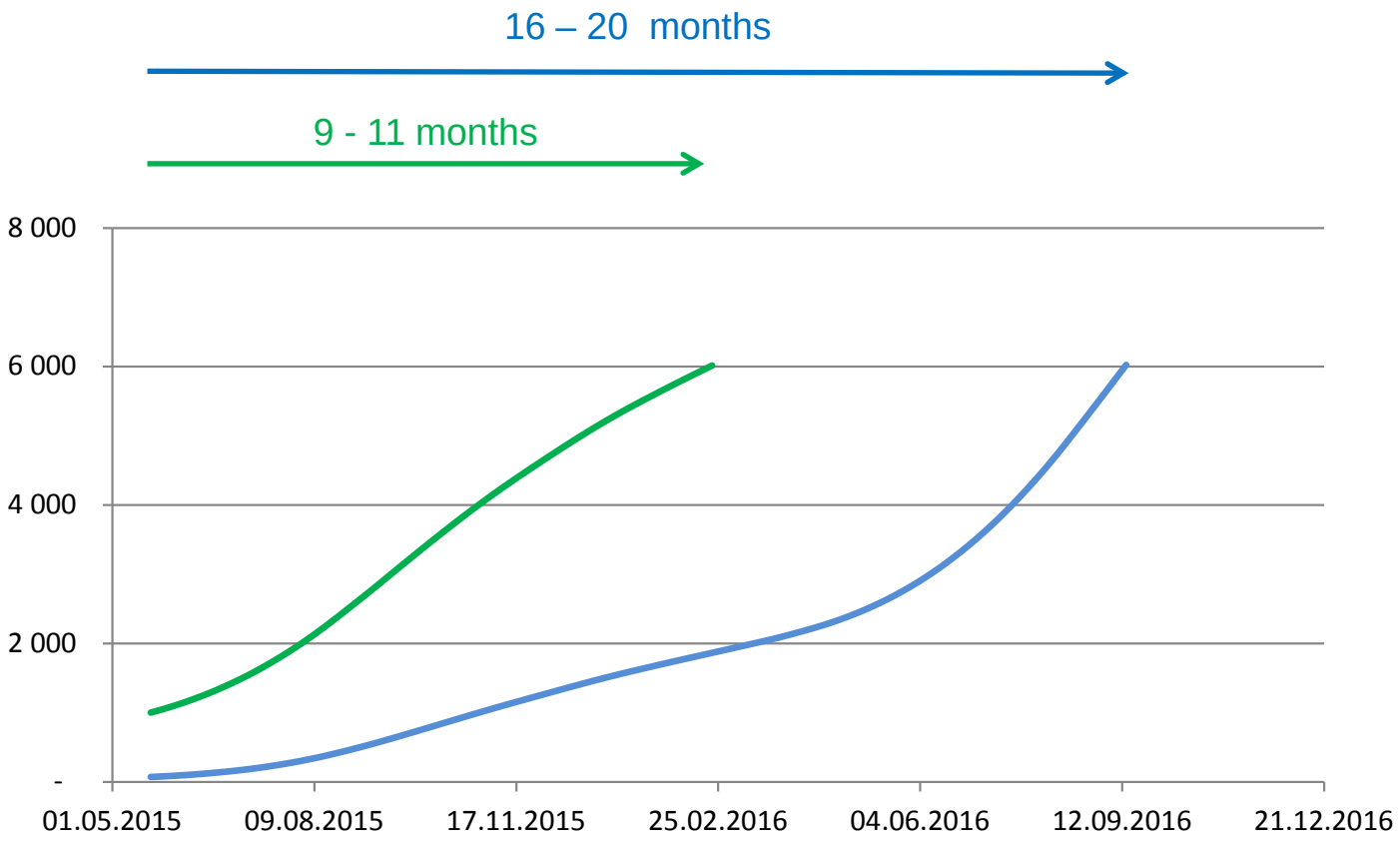
Marine Harvest – 420,000 MT in 2015



Landbased production – 15,000 MT



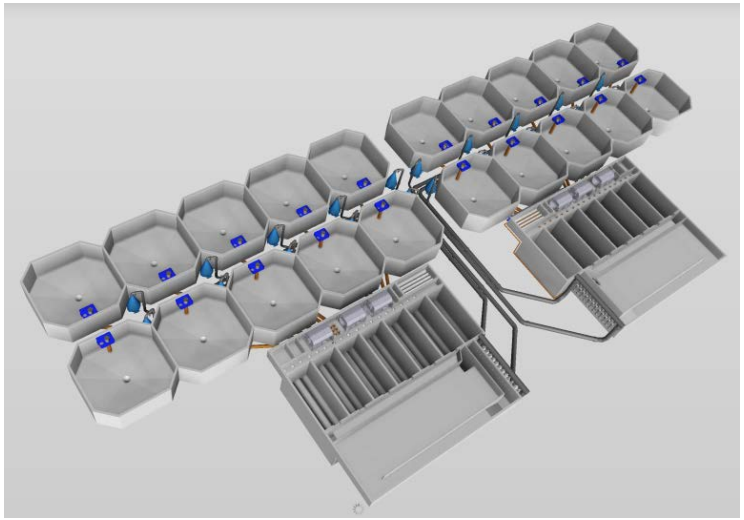
Production time in sea decreases with larger smolts – 1 kg vs 70 g



Increasing landbased smolt and post-smolt production

Marine Harvest FW smolt facility
“Steinsvik” in West Norway

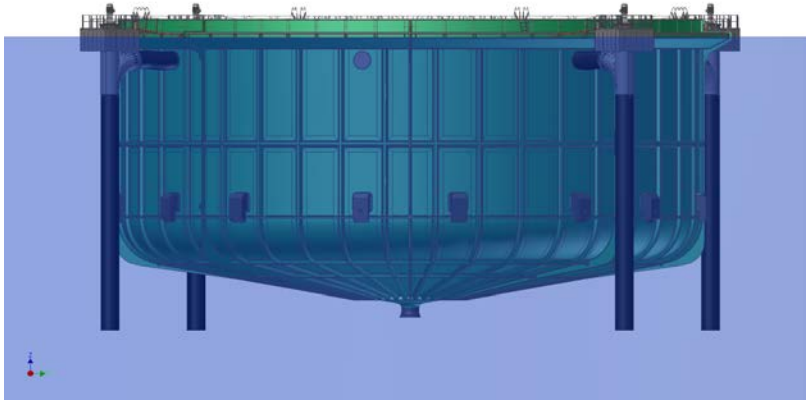
Illustration of post-smolt facility in MH Faroes, increasing smolt size to 650 g



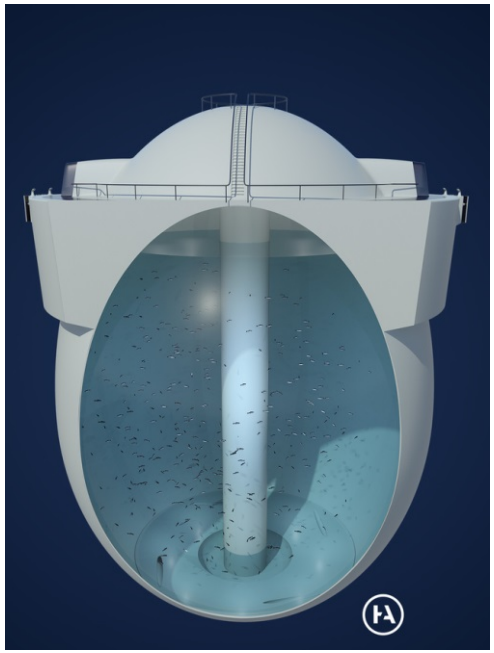
Marine Harvest also test semi-closed production in sea

Floating semi-closed tank at Marine Harvest Norway site “Molnes”

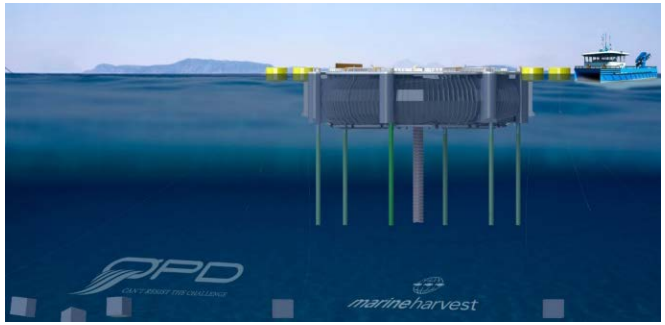
The tank is 21 000 m3, water being pumped in from 30 m depth to prevent sealice and stabilizing temperature



Potential closed production systems in sea



The Egg



The Marine Donut

Farming in Ship

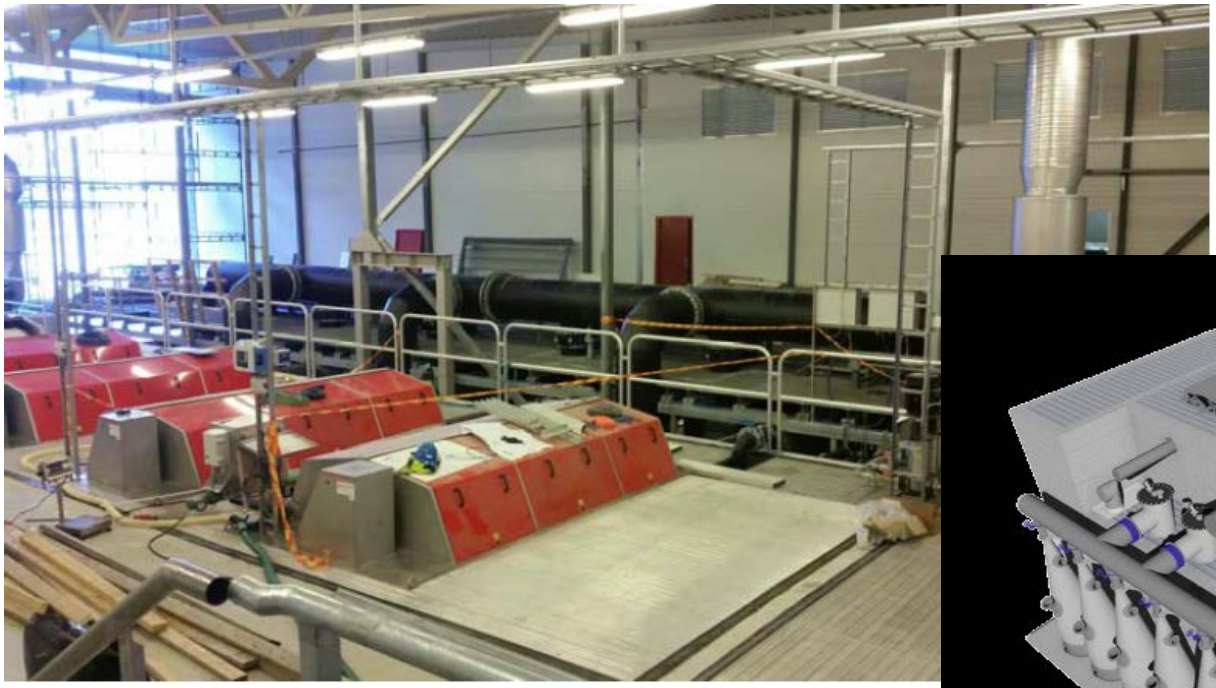
FW facility Steinsvik 2015

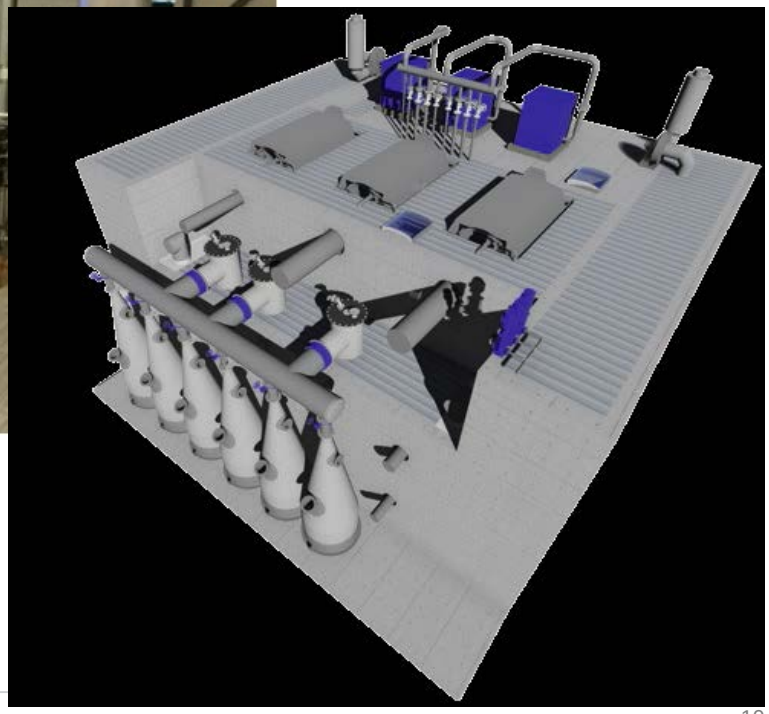
MH Norway

Main hall:
Two systems with 6 x 800 m^3 tanks

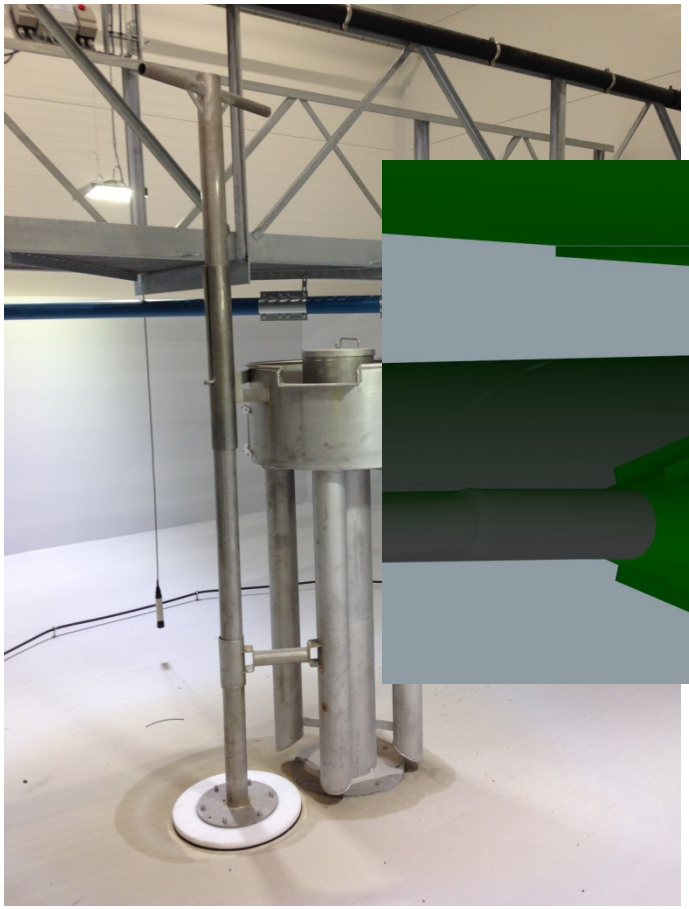
Tank volume: **11,000 m^3**
Annual prod: **1,200 MT**

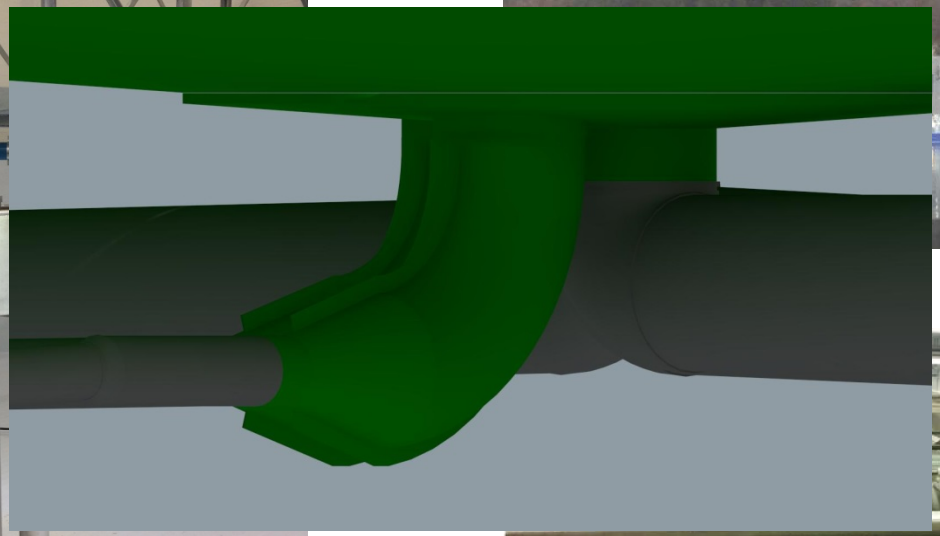
Kruger Kaldnes - recirculation

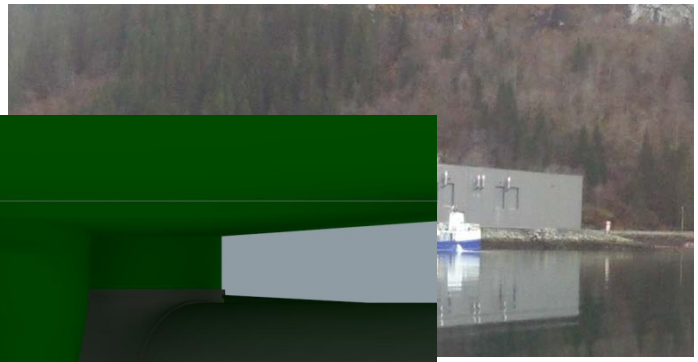




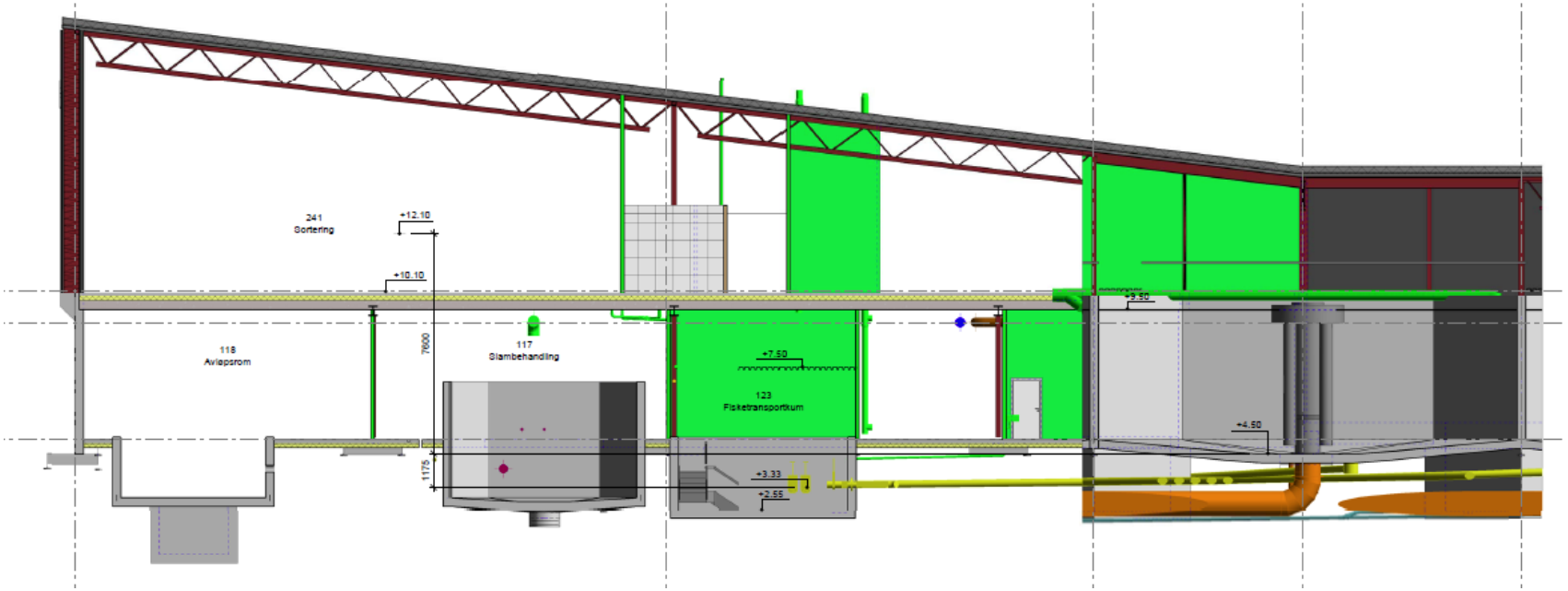
800 m^3 tank with built-in fish transfer system



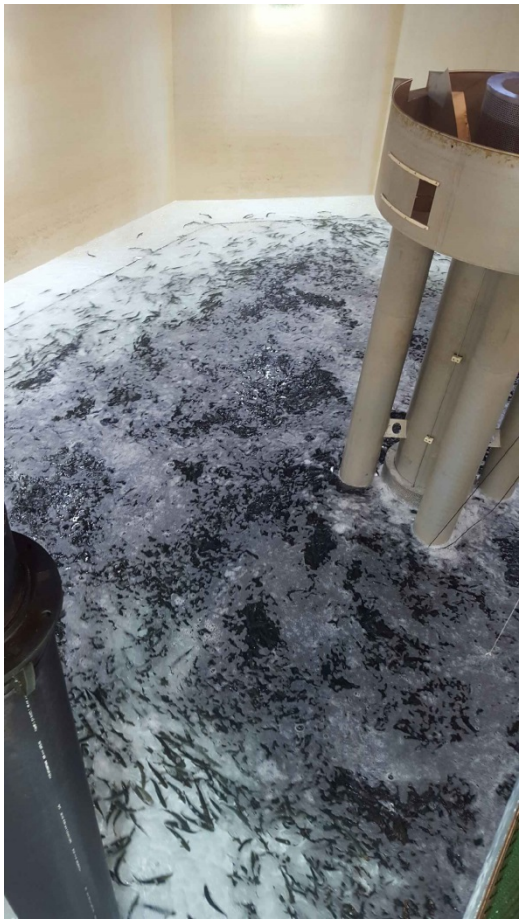


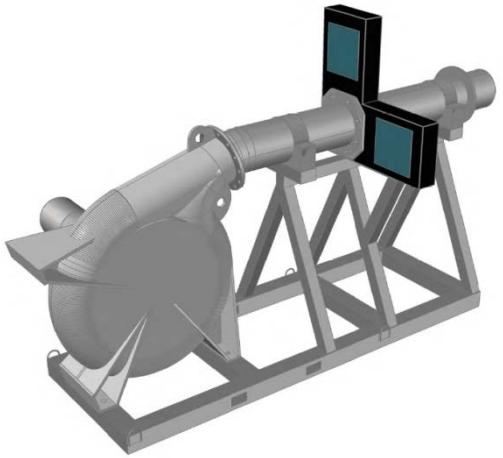


Fish pumped from tank to size grading or sea



Echo sensor for crowding fish



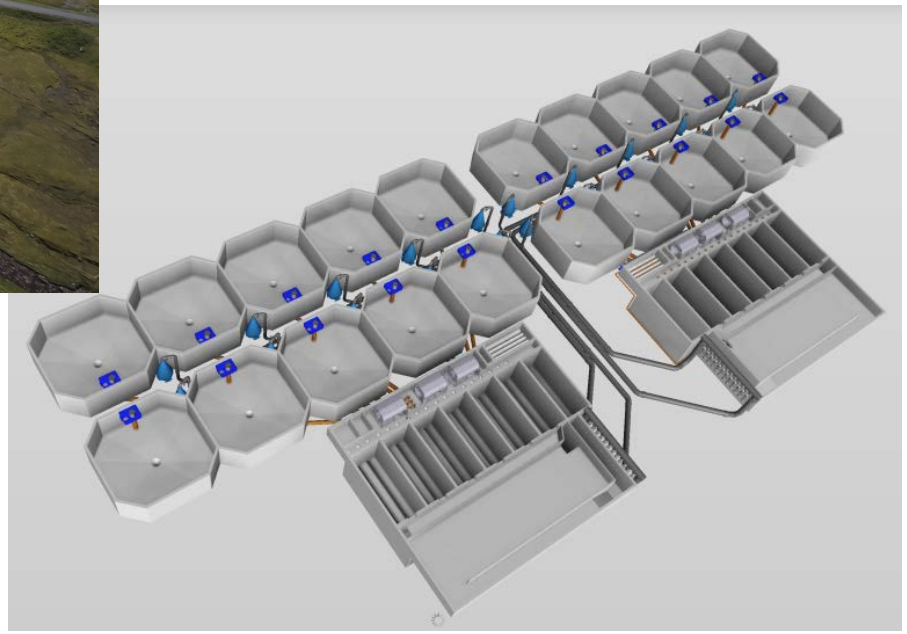


Postsmolt facility Laxa 2017

MH Faroes

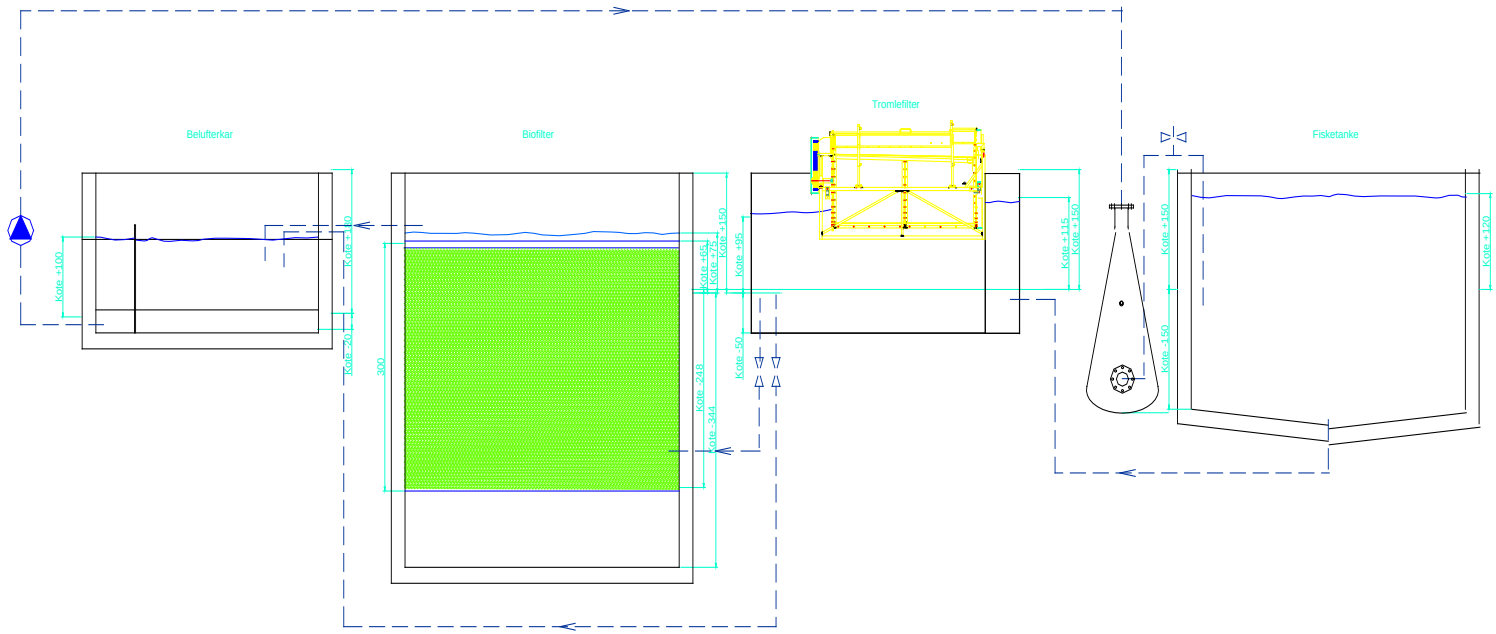
Postsmolt facility Laxa – Finalized 2017

Two systems with 10 x 400 m³ tanks

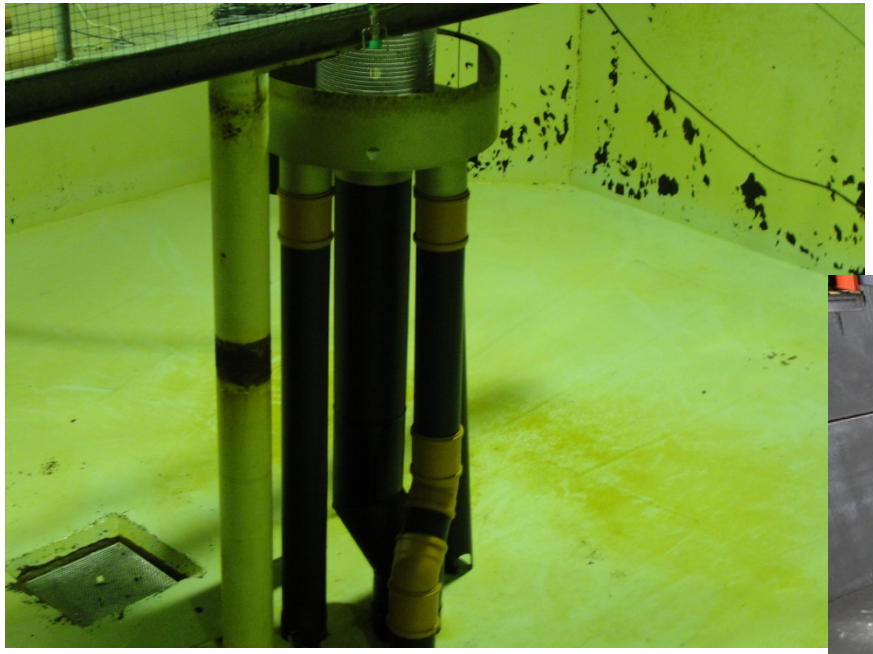


Tank volume: **8,000 m³**
Annual prod: **1,200 MT**

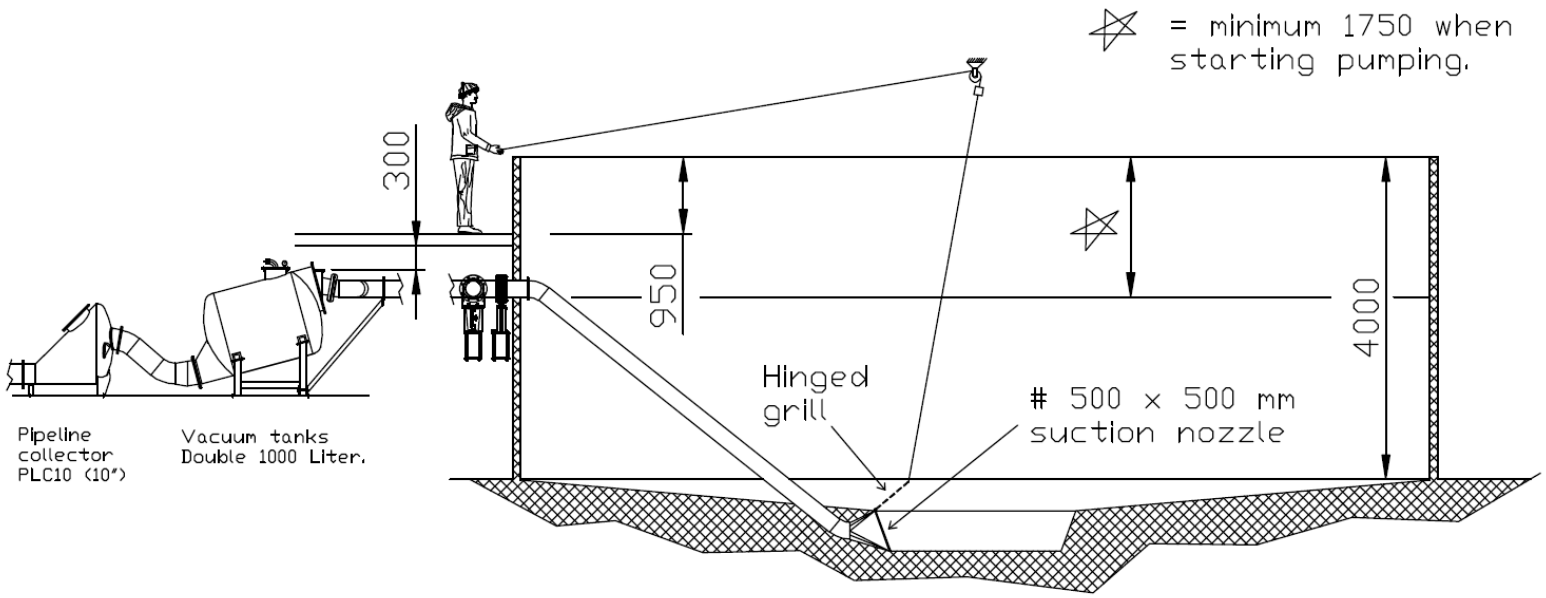
Recirculation system

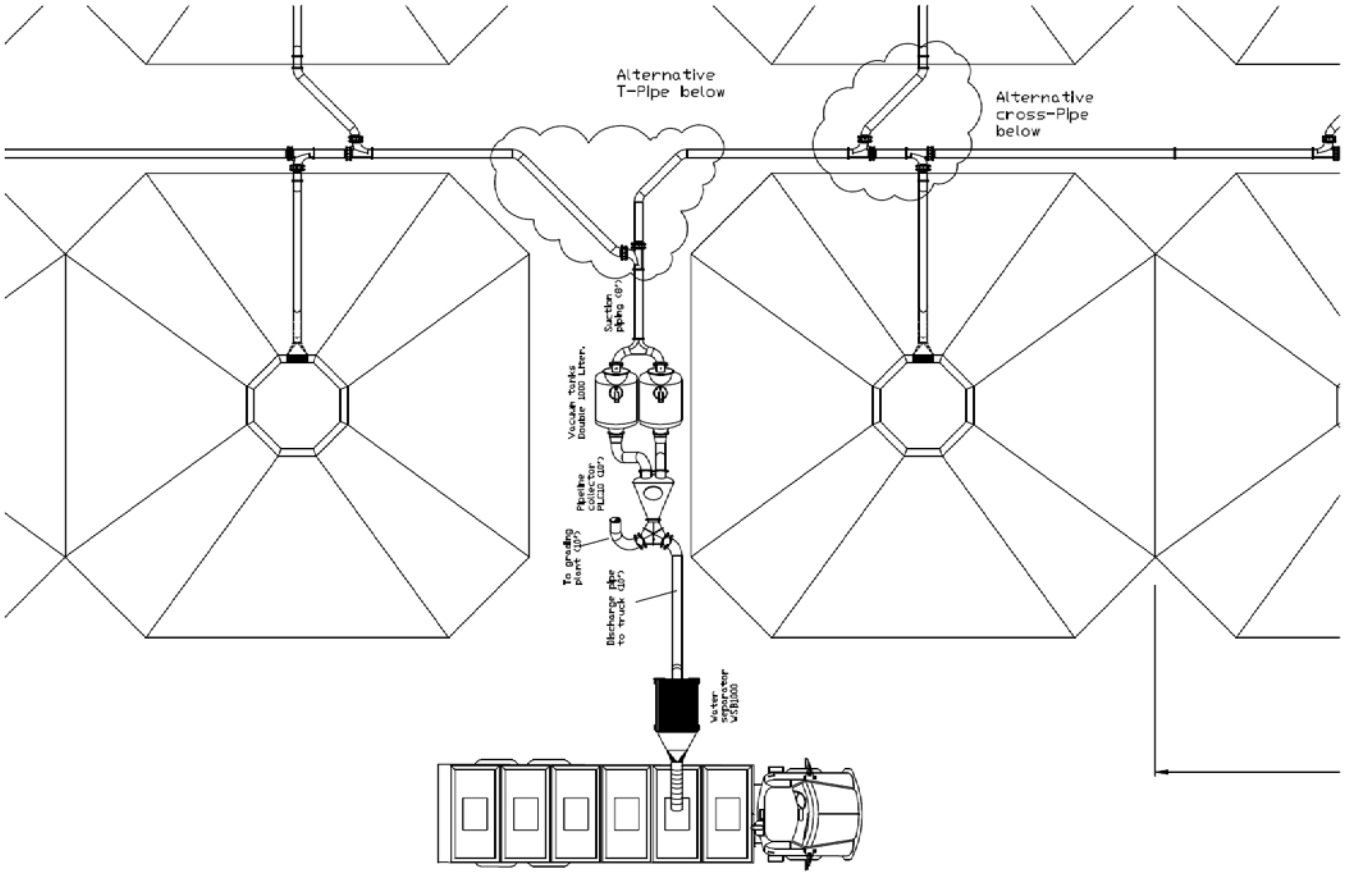


Lowered area in tank to collect fish for pumping



Fish pumped from tank to size grading or to truck




Alternative
T-Pipe below
Alternative
cross-Pipe
below
Suction
pipes (8")
Vacuum Tanks
Double 1000 Liter.
Flexible
Connector
PLC10 (10")
To grading
plant (10")
Discharge pipe
to truck (10")
Water
separator
WS1000