

# When will fishfarming be operated with an iPhone?

Jostein Albert Refsnes



FISH Link

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# What a contrast!



Norway 1971: 98 tonn



Norway 2015: 1.400.000 tonn



Today – an advanced industry



# A complete primary industry with an industrial structure and advanced competence

- Biology
- Maritime sector (well boats, supply boats, feed vessels, workboats)
- Engineering technology
- IT (!)
- Oil & Gas Technology – cross over
- Management
- International marketing
- Veterinary service, medicine

# Farmed salmon's footprints in the food business

- Healthy and nutritional
- Tasty and attractive all over the world
- Very effective food production compared to chicken, pig and cattle
- Occupies very little area compared to other protein production
- Profitable industry incl. great effects to a wide business circle (the fish farming service industry)
- Keeps the coast alive (social sustainability)

# Very efficient feed factor!



8 kg fôr



3 kg fôr



1,2 kg fôr

Important to 10 billion people on earth!

# Salmon footprints in the environment

- The sea lice nightmare! € 0,50/kg minimum. Wild salmon suffers?
- Escapes! Genetic contamination?
- Salmon feed for humans?
- Feed waste
- Mortalities too high
- Faeces
- Discharge of dirty process water
- Dirty transport (airplanes, lorries)



# The hunt for better (greener) solutions!

## **New concessions (utviklingskonsesjoner)**

- Innovative solutions
- Green (a definite reduction in size of footprint)
- Favorable pricing! € M1,3/concession. (market value € M10)
- 43 applications under examination with Directorate of Fisheries.
- 1 company OK so far (Salmar), 4 rejected
- Ca. \$ 2 billions investment if all applications are accepted!

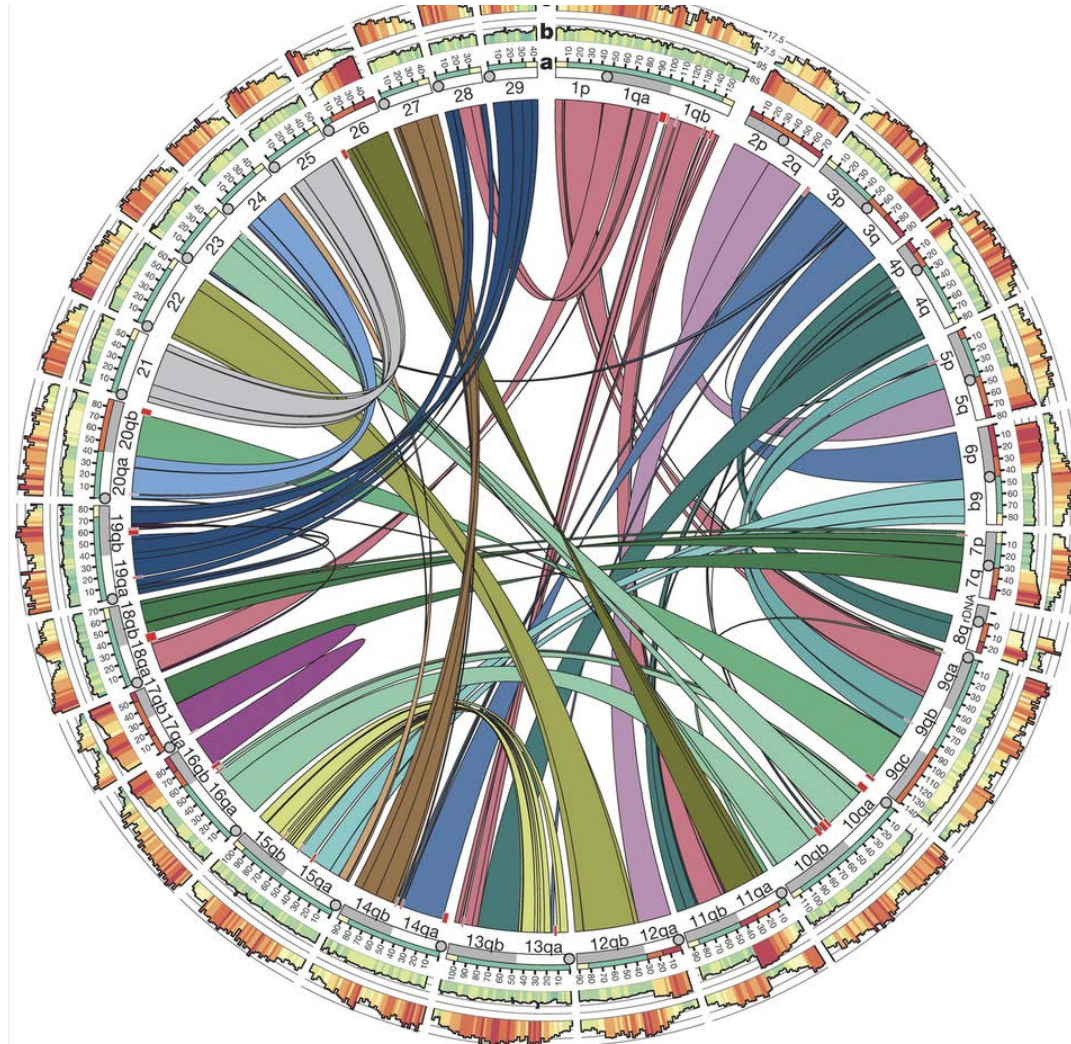


# Dominant characteristics with new salmon farming concepts

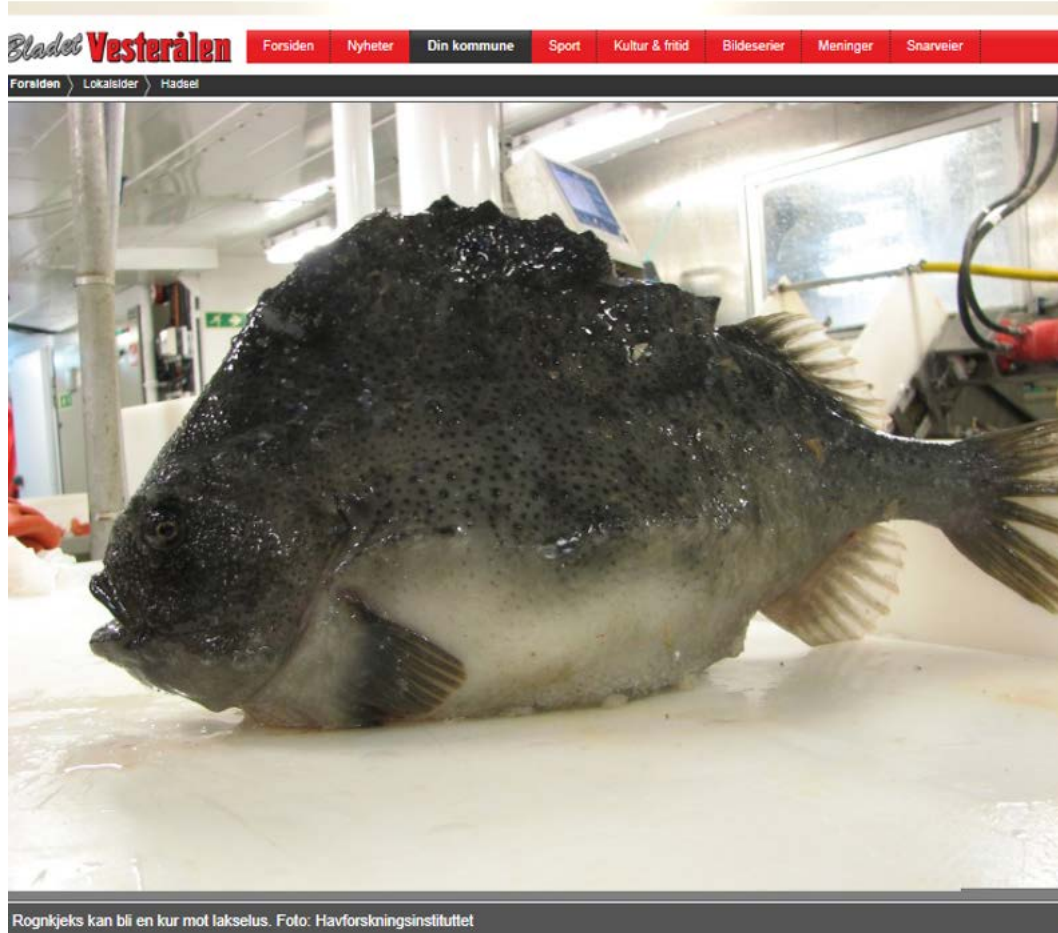
- Fight sea lice and hinder escapes
- Application of oil industry technologies
- Combination of different methods
- Move from fjords to open sea
- Use of deep sea water without lice
- Closed or semi closed systems
- Larger smolt (400-500 grams) – shorter sea life
- On shore on-growing constructions (Fredrikstad, Rjukan)

# Next Revolution – CRISPR technology!

## Gene editing



# The natural Janitor (bergylte, rognkjeks)



**Nordlaks tester rognkjeks mot lus**

+  
Fresh  
water !

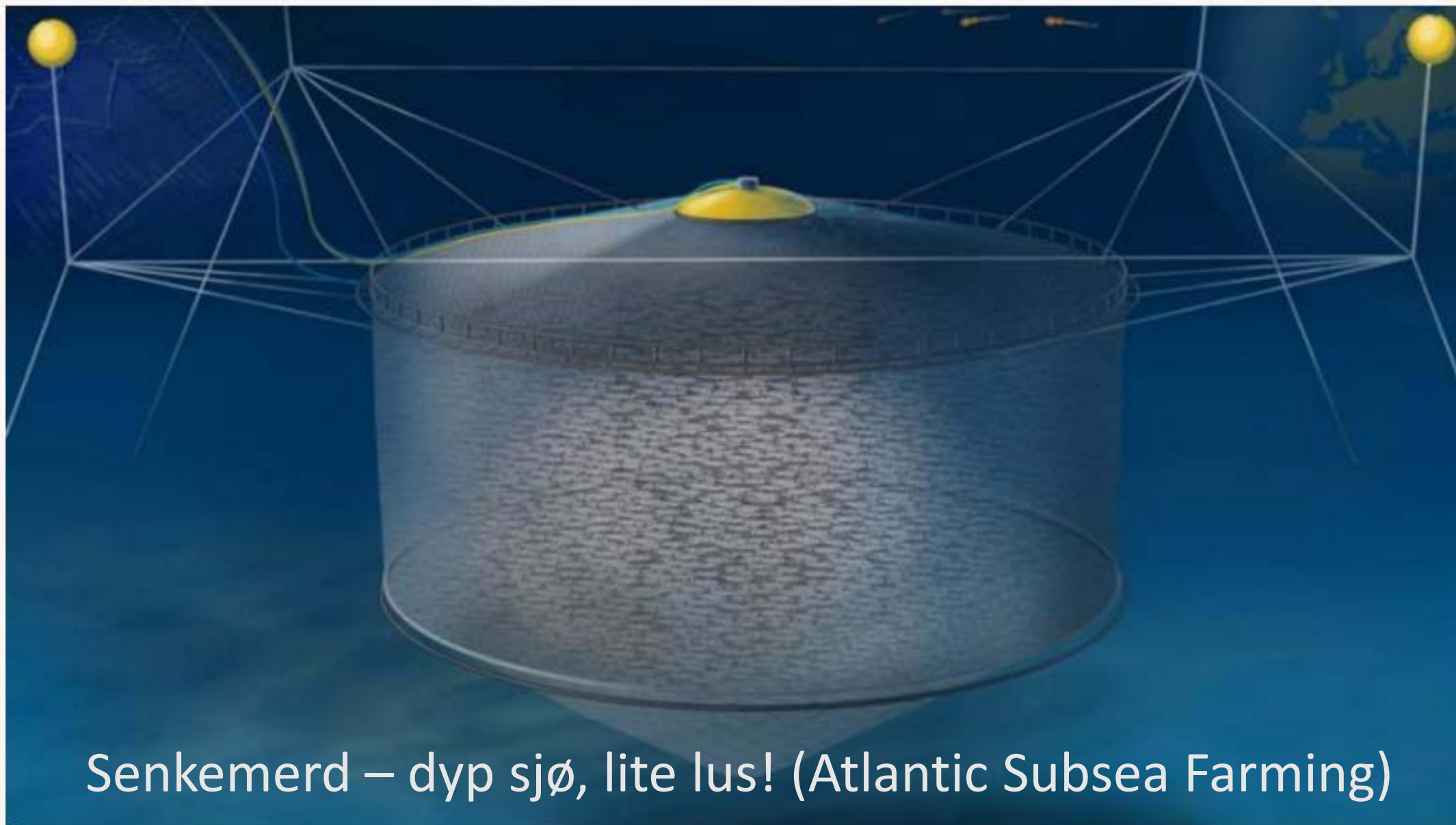
# Sting Ray *lazer* shoots lice!



*Graphics/source: Stingray Marine Solutions*

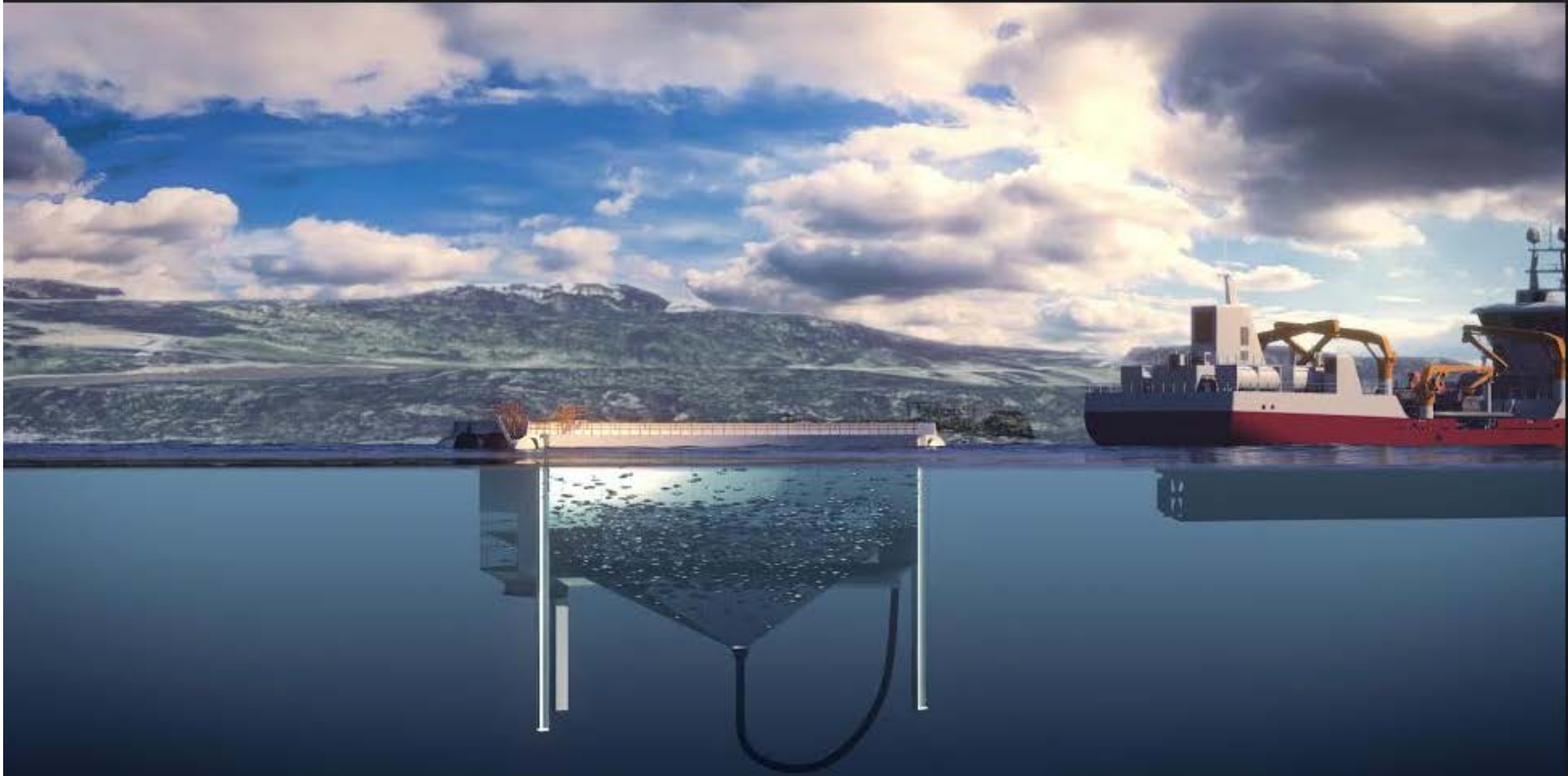
Tomorrow!





## Senkemerd – dyp sjø, lite lus! (Atlantic Subsea Farming)

*Å senke merden under vann skal løse flere av oppdrettsnæringens problemer. Illustrasjon: Atlantis Subsea Farming*



Aquatraz – Midt Norsk Havbruk og Servan Marine (riggselskap)



# Marine Harvest «Egget»







## Salmar off shore salmon farming

Ferdigprodusert: En brønnbåt henter laks fra merden. Fisken sendes i store slanger fra merd til båt før den fraktes til landanlegget for slakting. (Foto: Ocean Farming)

Passion for Salmon



Pure Atlantic. 46 concessions. L-521m, W-96m.  
Wind power. 30 crew on board. Estimated cost  
>€ 353 million!!





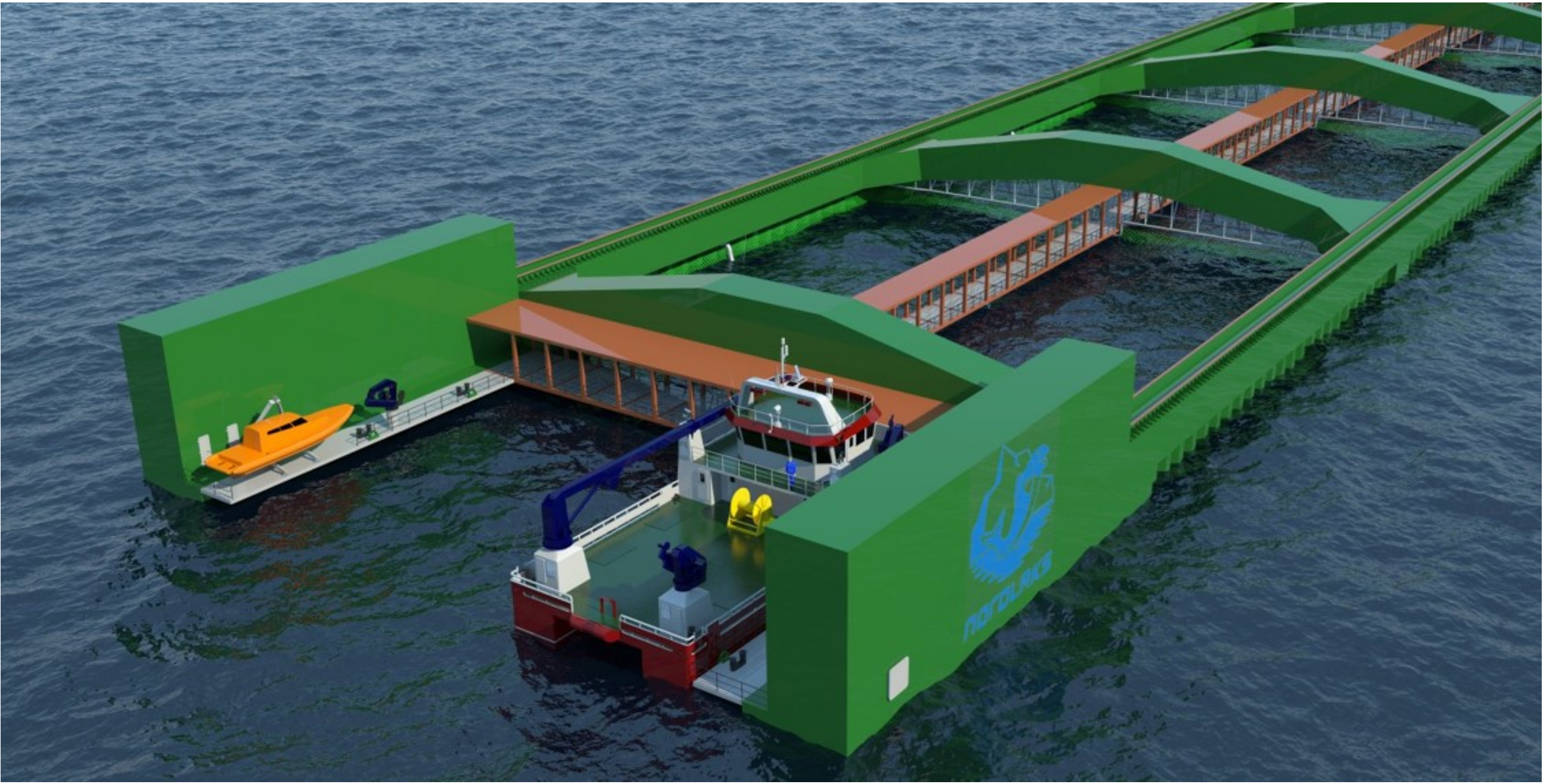


NORDLAKS SeaFarm – offshore  
Length 430 meter, width 54 meter, 10.000 tonn



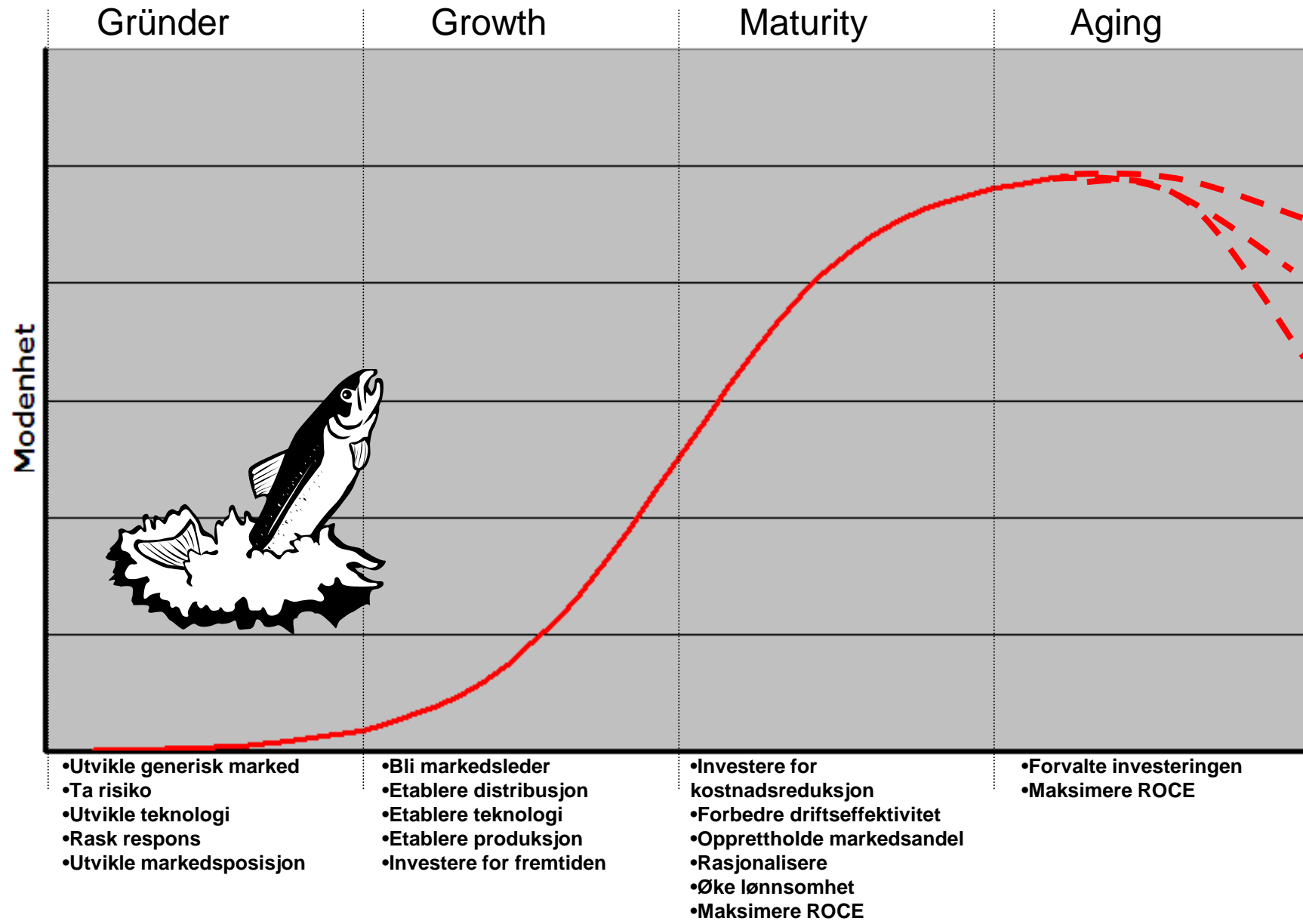






***NOGDLAKS***

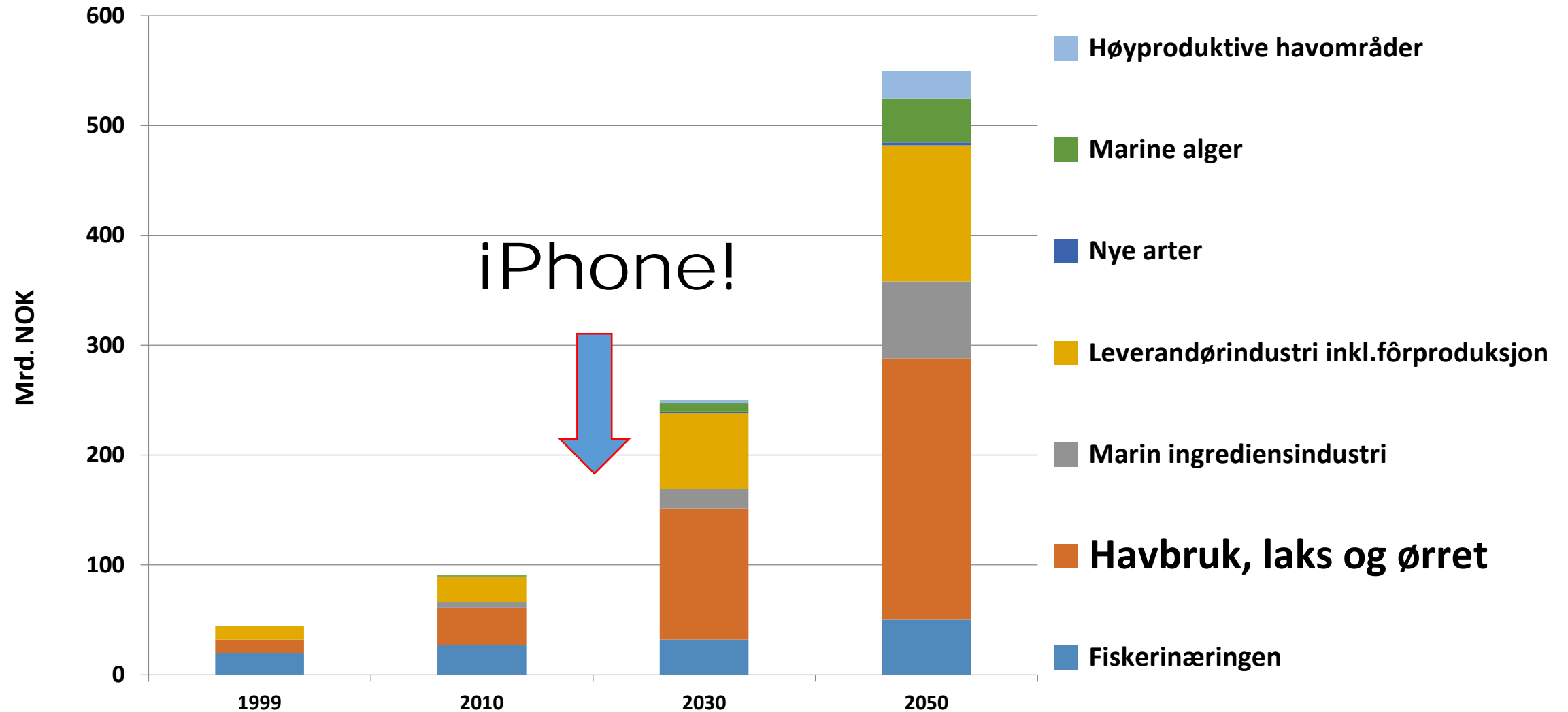
# Industrial Maturity





# Values from Norwegian Ocean 2050

• (SINTEF –report, 2012)



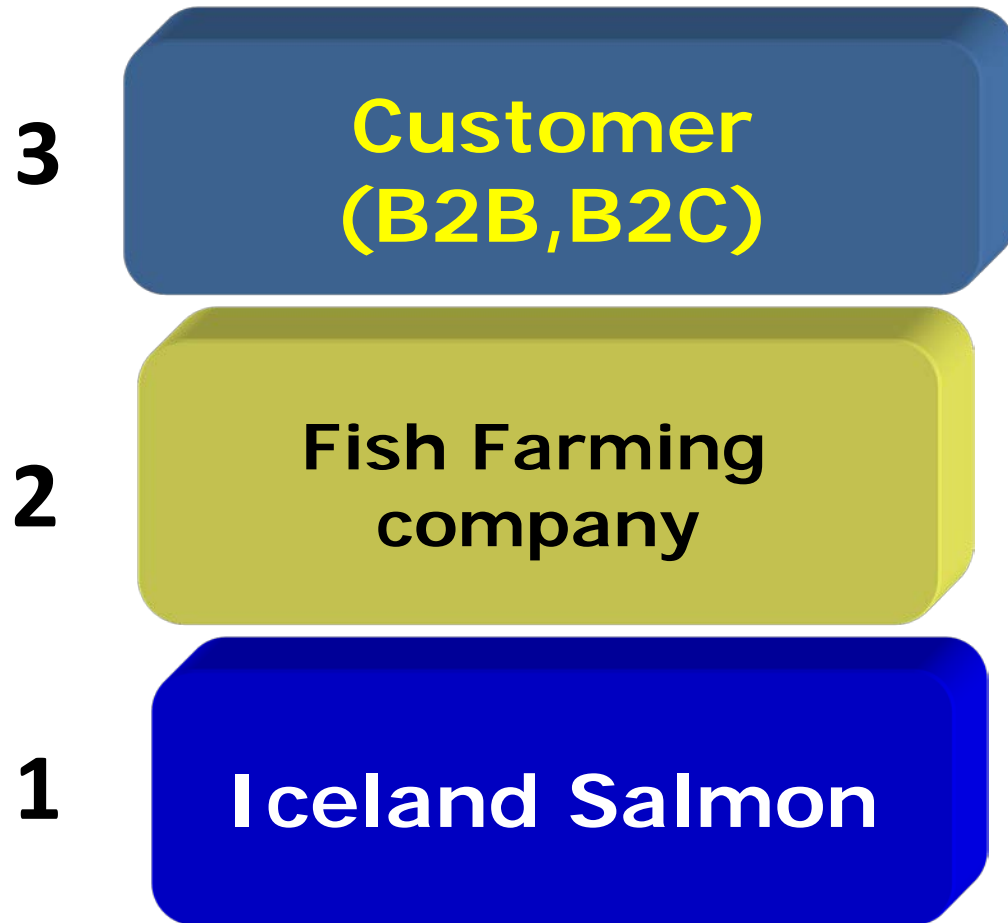
**What now Iceland Salmon ?  
– let's go for a fresh restart!**

## **Solution = de-commoditizing the commodity**

- The Commodity (Atlantic Salmon from Iceland) needs hallmarks, characters and descriptions which all together creates an identification and peculiarity in the market place
- Create a wonderful combination of facts and feelings
- Present a good and true story –easy to remember

**Perception = Reality x Communication**

# Lego bricks in the positioning of Iceland Salmon



## Hallmarks:

- *Health & wellness*
- *Food Safety*
- *Fish welfare*
  - *Natural*
  - *GMO free*
- *No antibiotics*

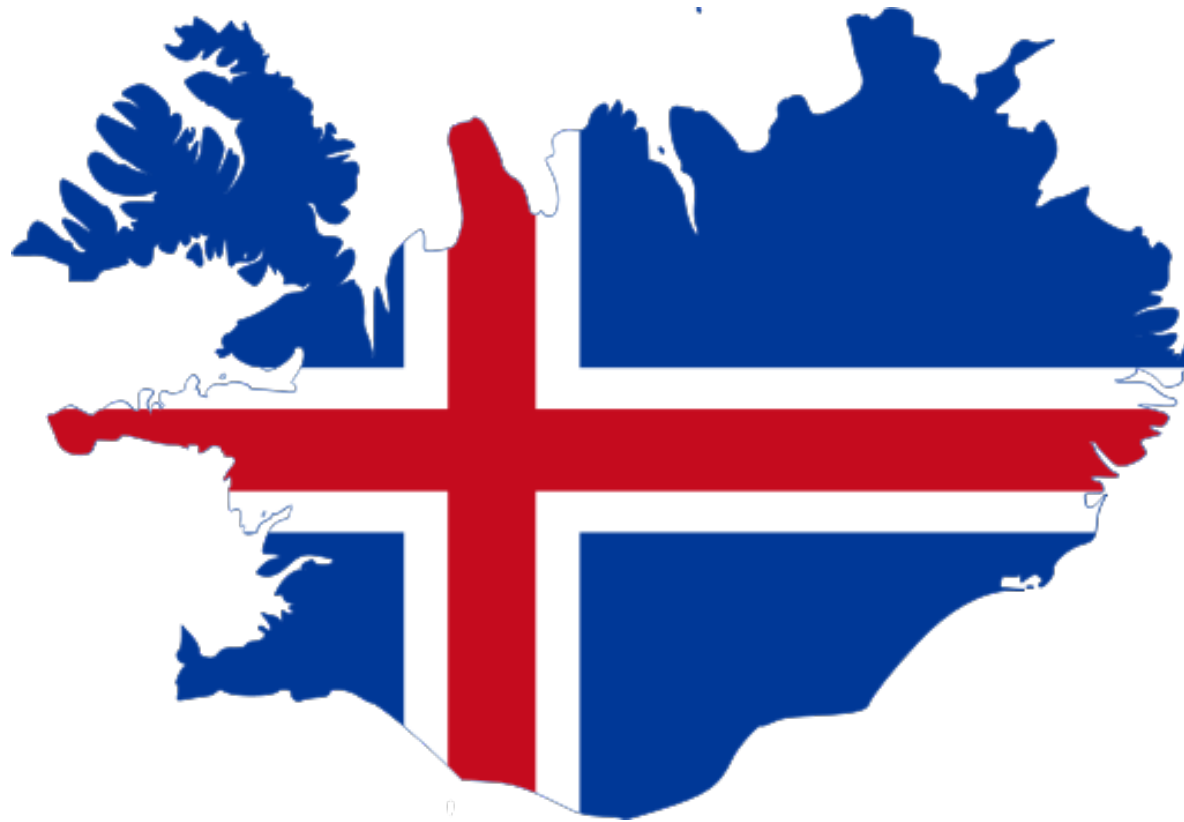
# Elements in a NEW strategic platform for Iceland salmon farming industry.

1. A no.2 strategy might be smarter than no.1
2. Join up with Norway (Northern Norway)
3. Extreme focus on being consumer friendly (to be defined - not organic!)
4. Create a new unique salmon segment in the global fish market
5. Aim for a market preference in the high price segment (communicate factual and emotional hallmarks)
6. Build a *visningsanlegg* in Reykjavik!

# Create The Iceland Salmon Story

- Salmon welfare – top priority
- «Natural» solutions (perceived natural and acceptable among consumers)
- «Green operations»- hydroelectric/vulcano power, electric driven service boats
- Extreme clean and tidy sites («Singapore standard»)
- Modern technology (*salmon farming keeps fjords clean*)
- «Best in class» - benchmarking with Norway, Faroe Islands, Irland, Scotland)

# Communication – a key factor in the strategy plan



Always tell about the origin! Steel from the tourist industry.

# Product Identification – the care takers of salmon welfare!



Lisa Fredriksen og Randi Busch Bøkestad. Foto: Trygve Førde.



# Imports of foreign names in the food business

- Pizza
- Kebab
- Taco
- Hamburger
- Entrecote
- Spaghetti
- Wiener Schnitzel
- Sushi
- Sashimi
- Bacalao
- Pommes Frites

## Export the Icelandic language!!

Brand name of the Icelandic salmon

IceLax<sup>®</sup>

**Slogan**

IceLax ?

Jà takk !!

Takk fyrir athyglina!