



Margrét
Geirsdóttir

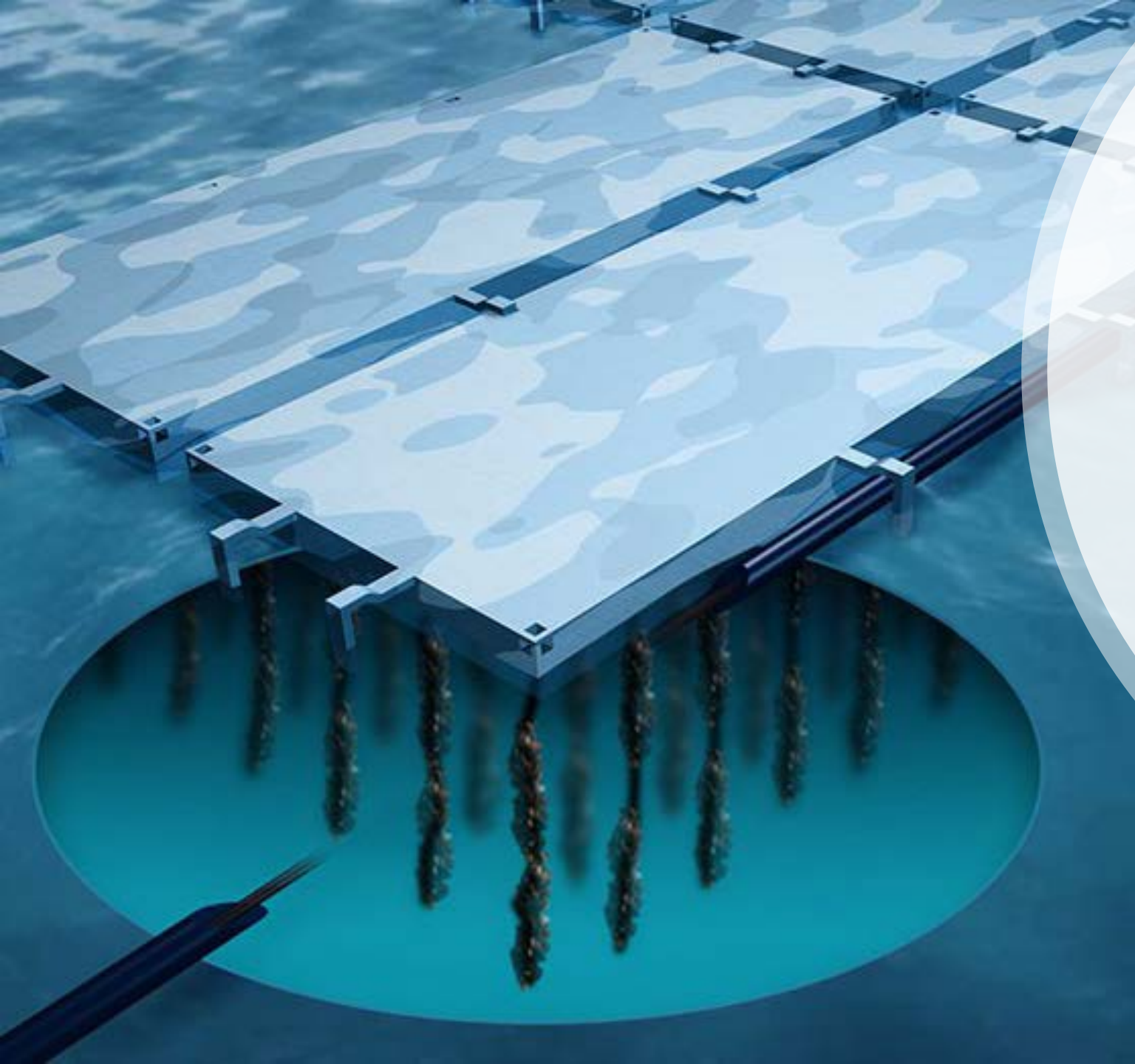
Matís
OBO - Northlight
Seafood

Blue Mussel cleaning and processing

*New cultivation and
processing in Iceland*

Blue Mussel Aquaculture

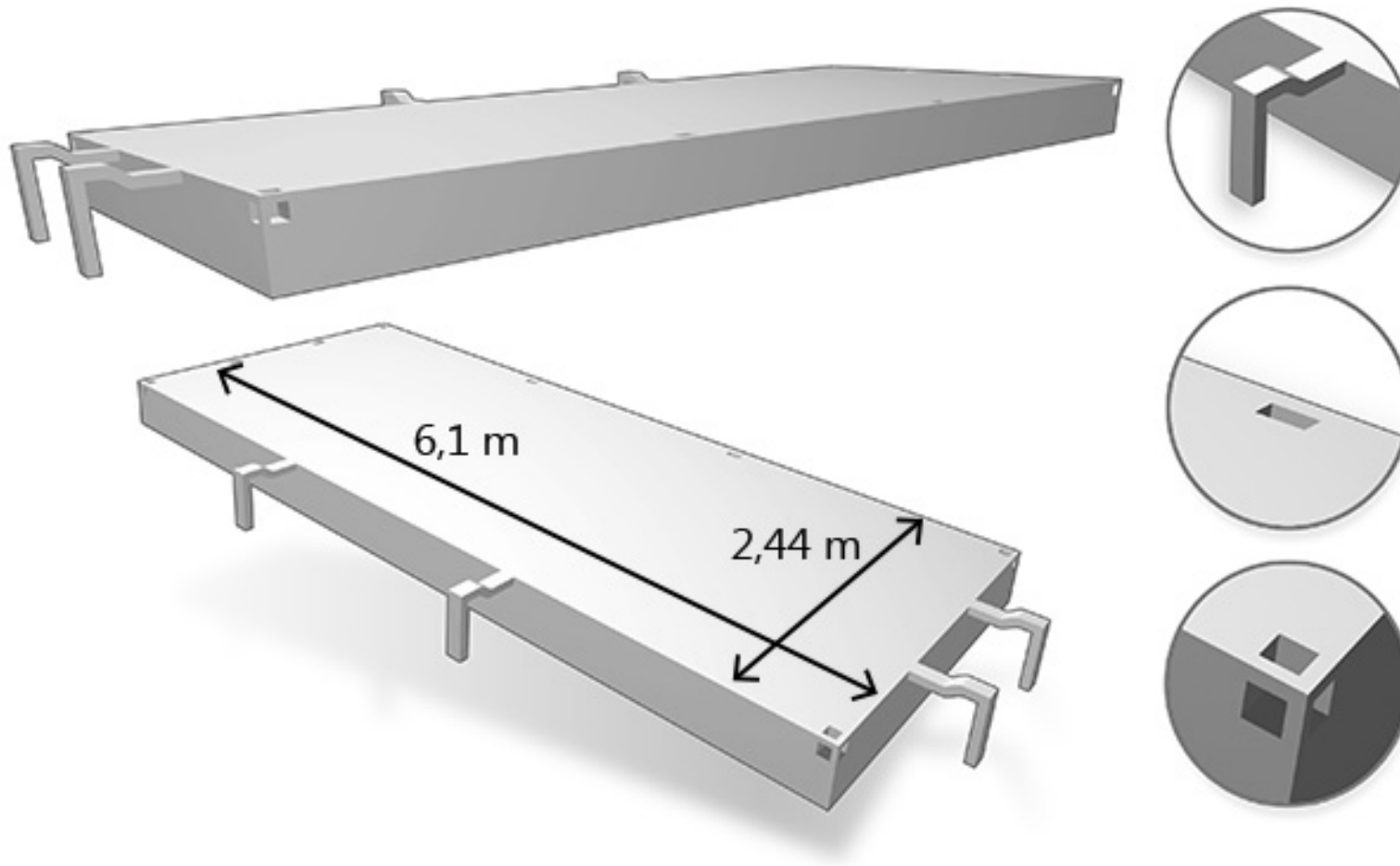
- Shells found in kitchen midden from 6000 BC
- Cultivation from 13th Century
- Pole vs Bottom cultivation



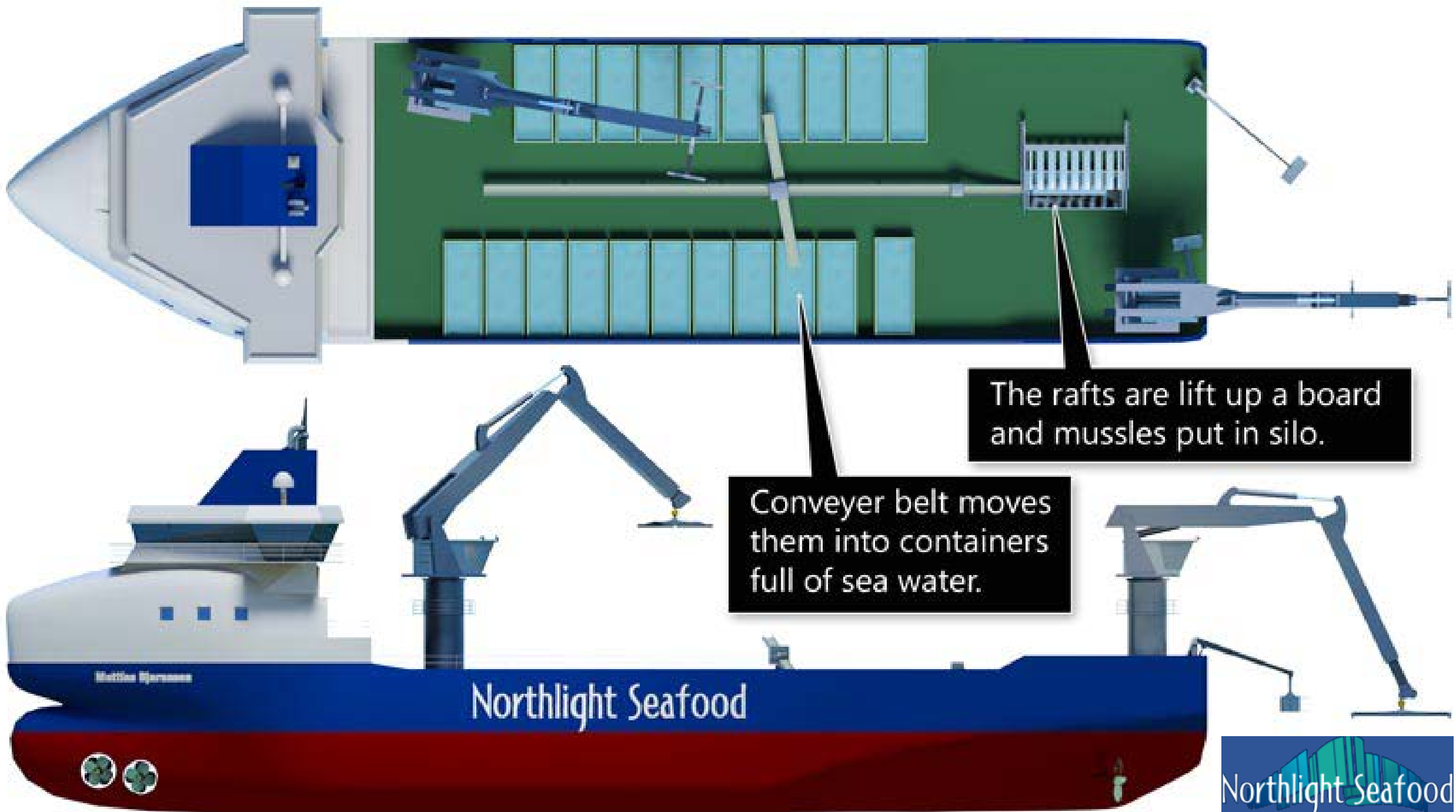
How to strengthen and upscale existing and new technologies?

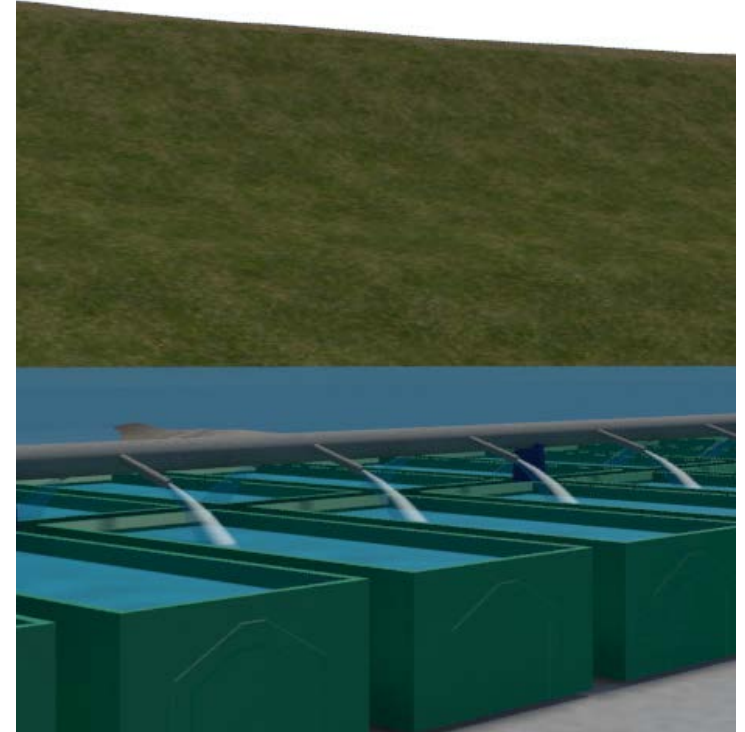
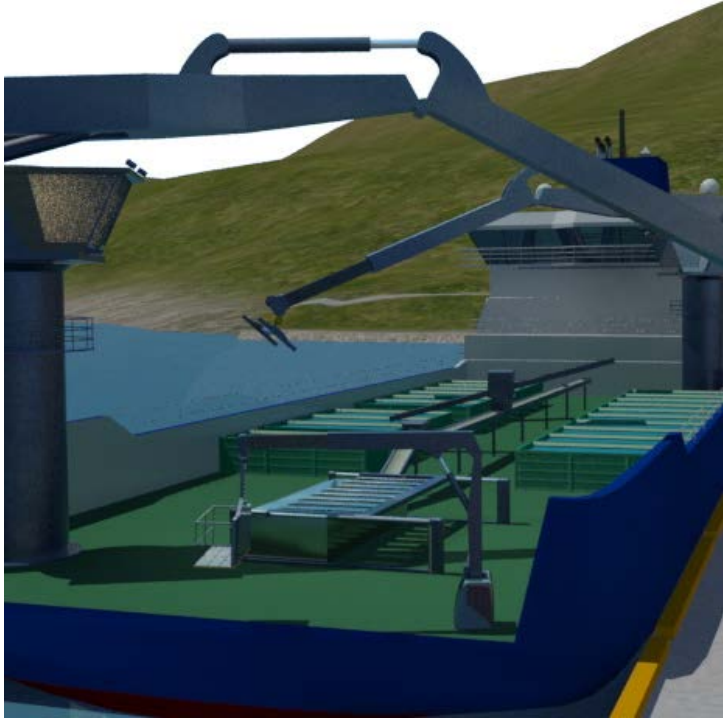
- Northlight Seafood aims at using a new method, developed by Kristján Ingi Daðason.
- The rafts float on the surface of the sea and are in sea camouflage.
- The larvae sticks to breeding lines underneath the rafts, where they grow for two years before harvesting and put on market.

The rafts



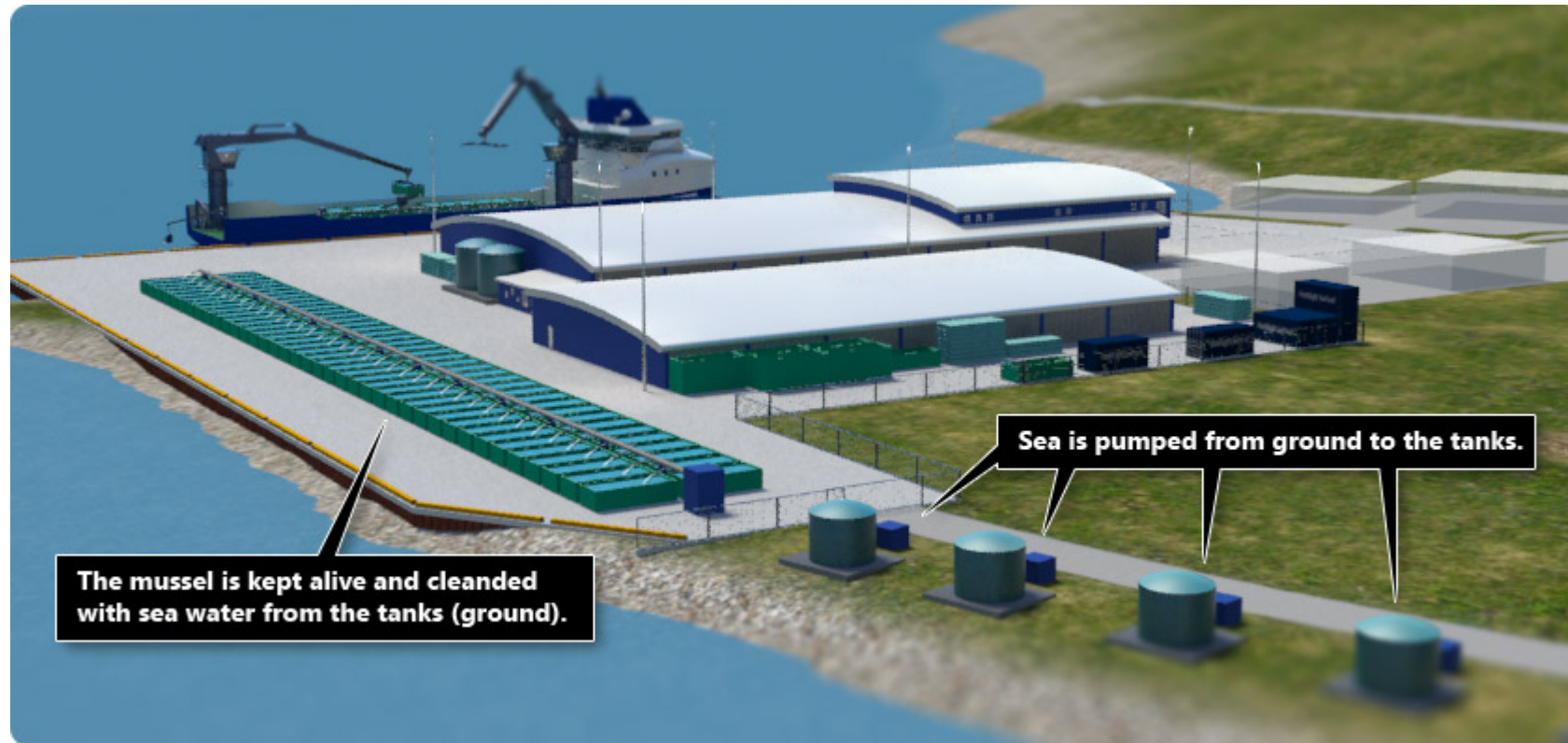




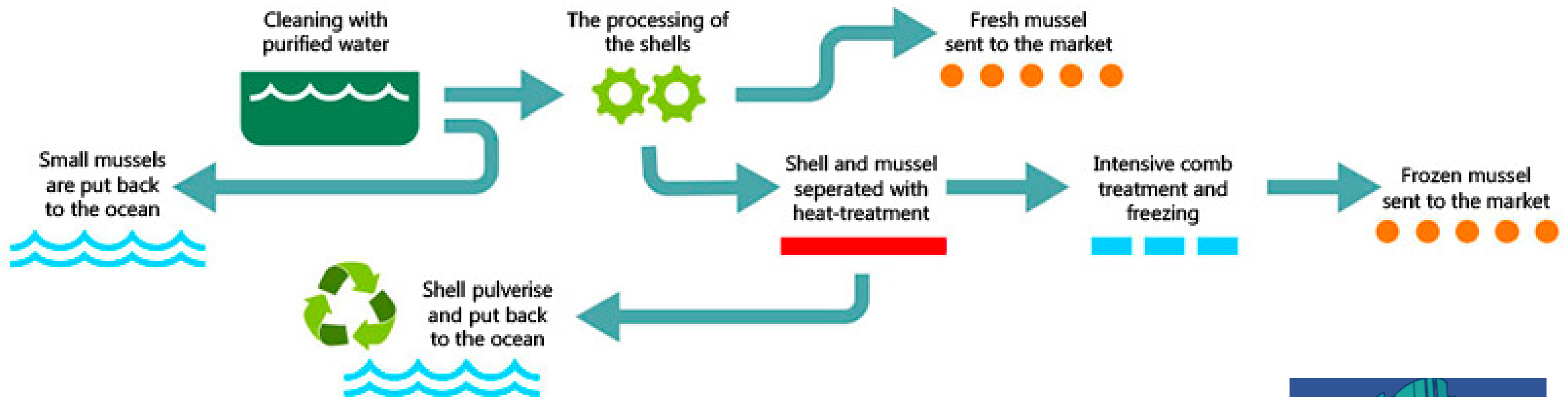


Process

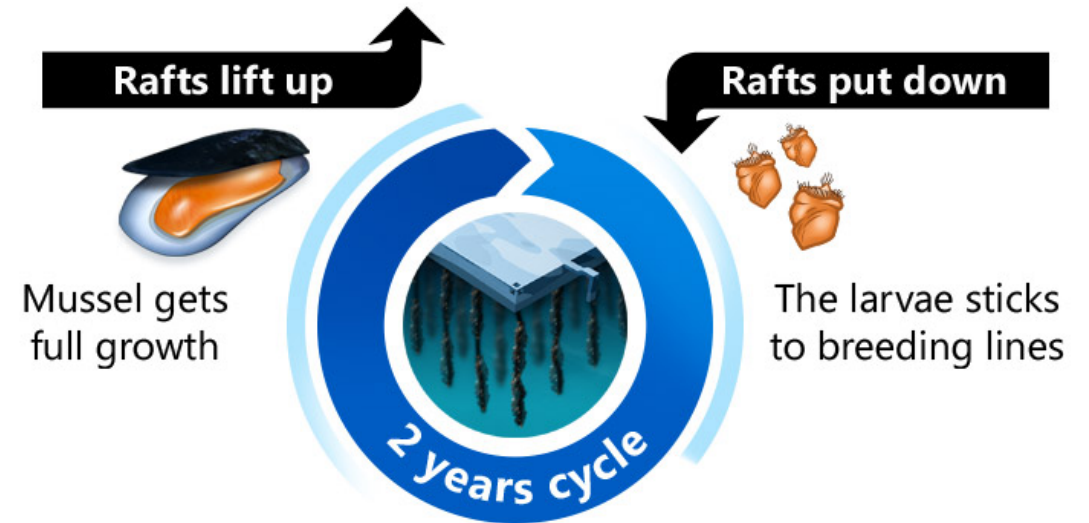
Process

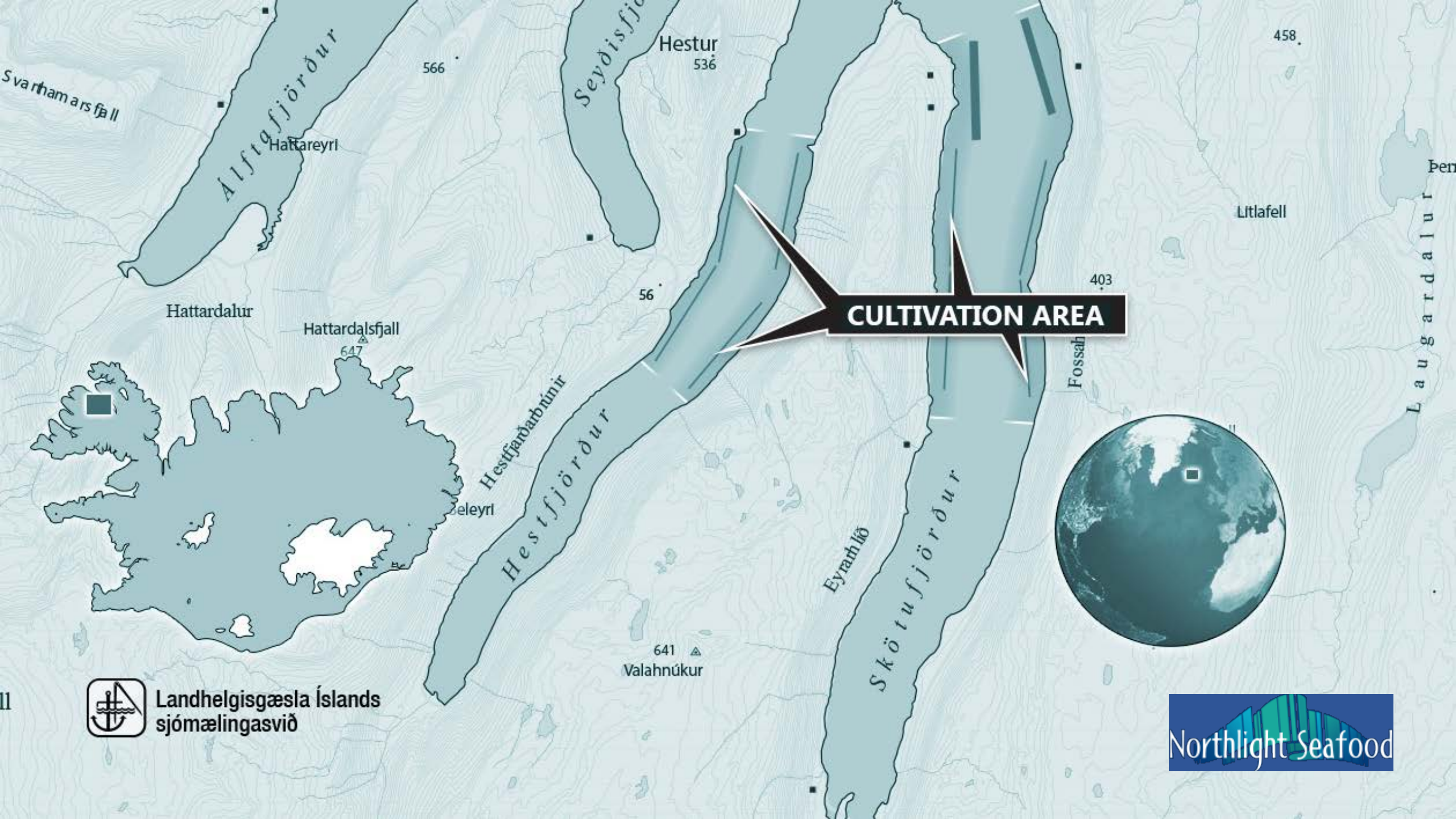


Processing steps



Utilisation of the shell





Landhelgisgæsla Íslands
sjómælingasvið

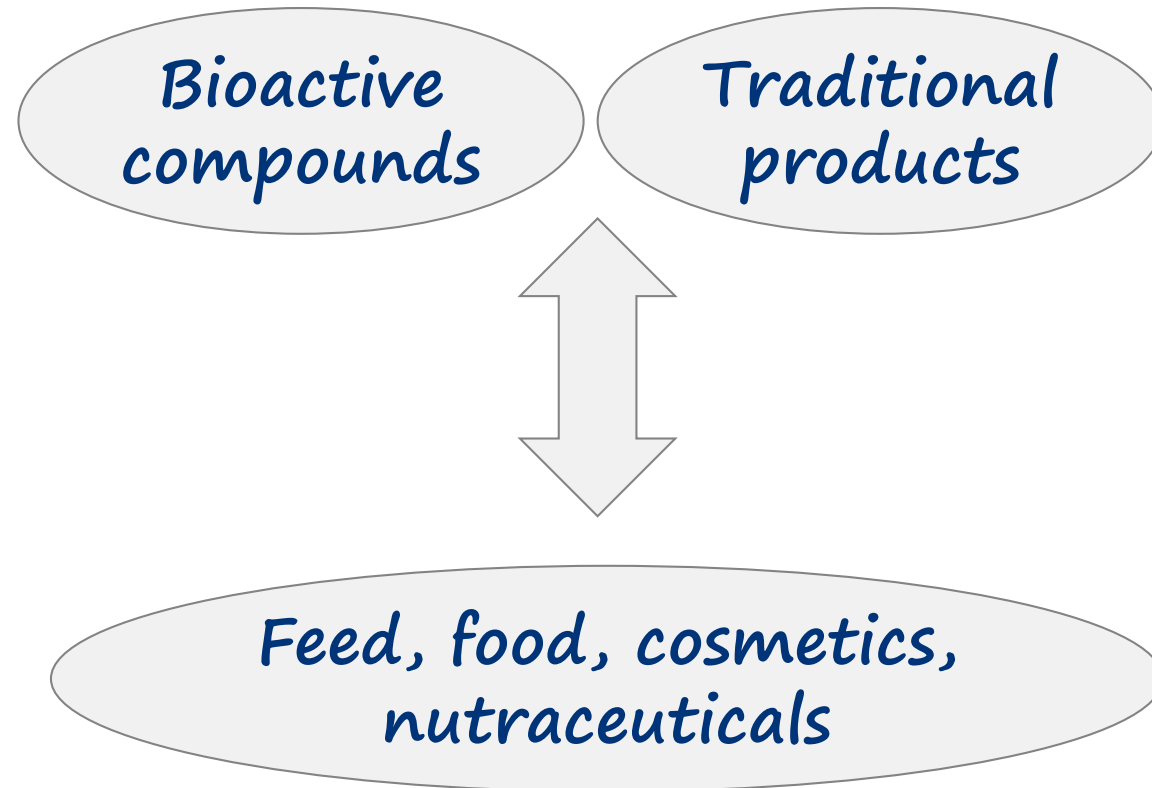
Northlight Seafood



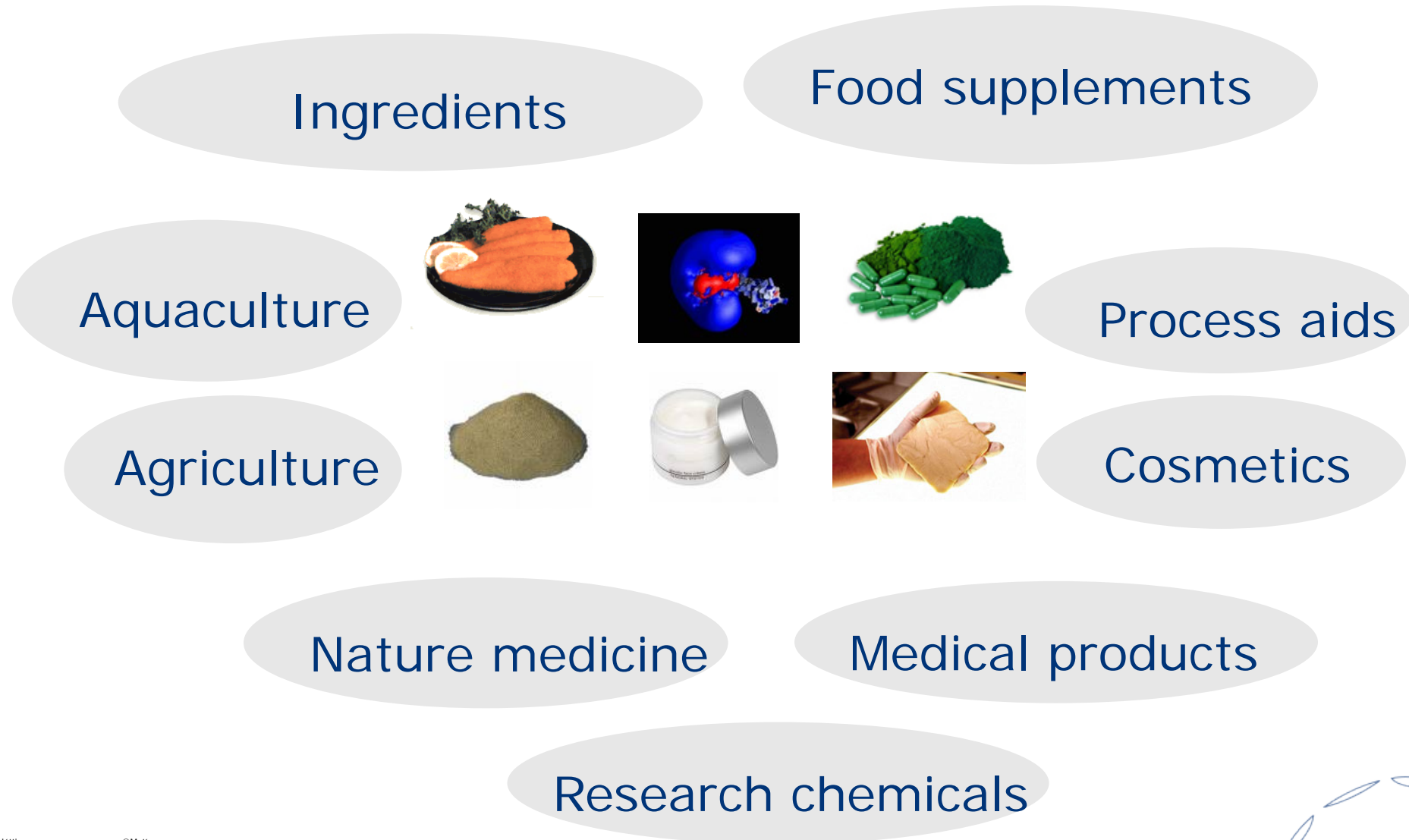
More information:
<http://www.northlightseafood.is>

Can all streams from the
refineries be utilized or
recycled?

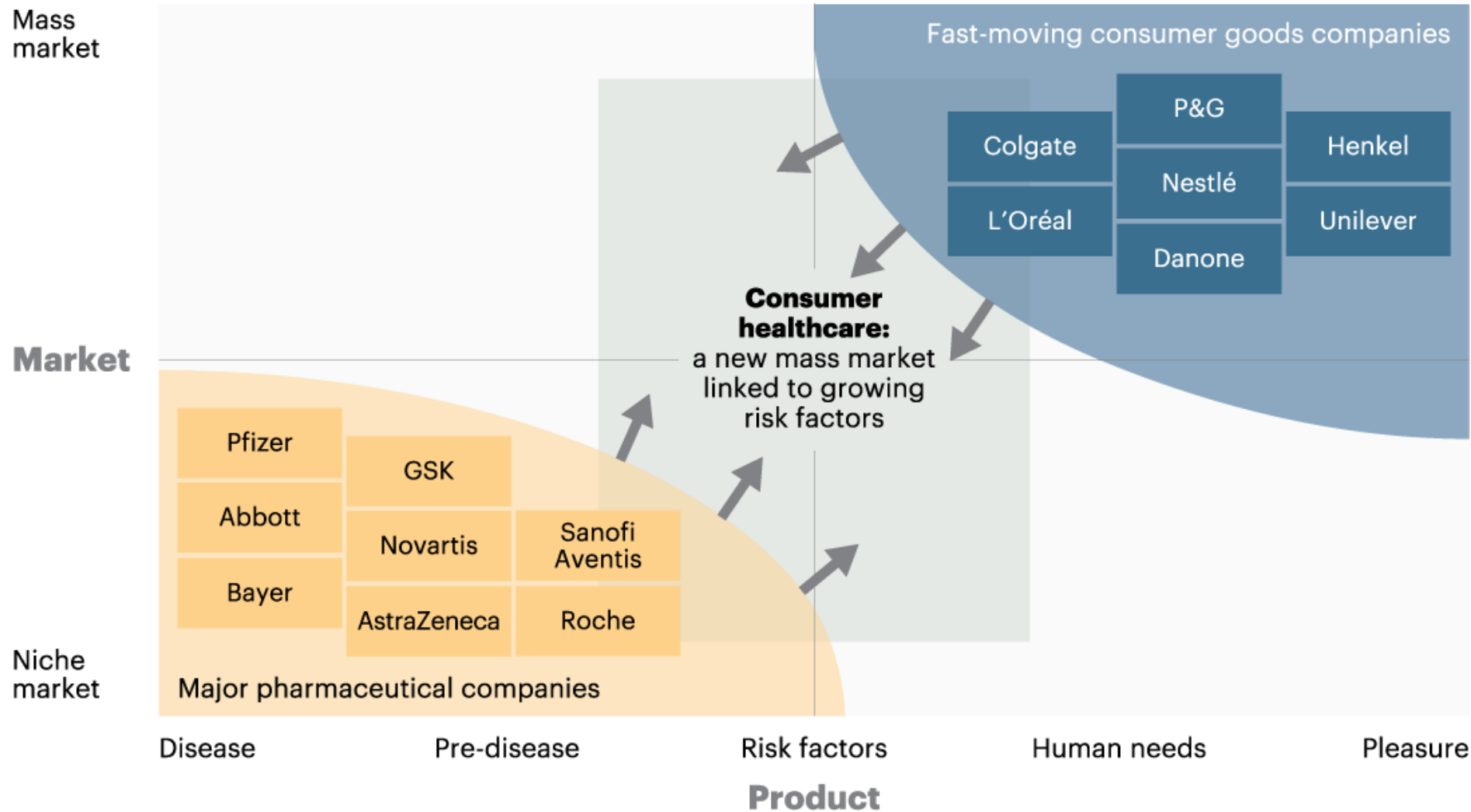
Research activities



Many different applications

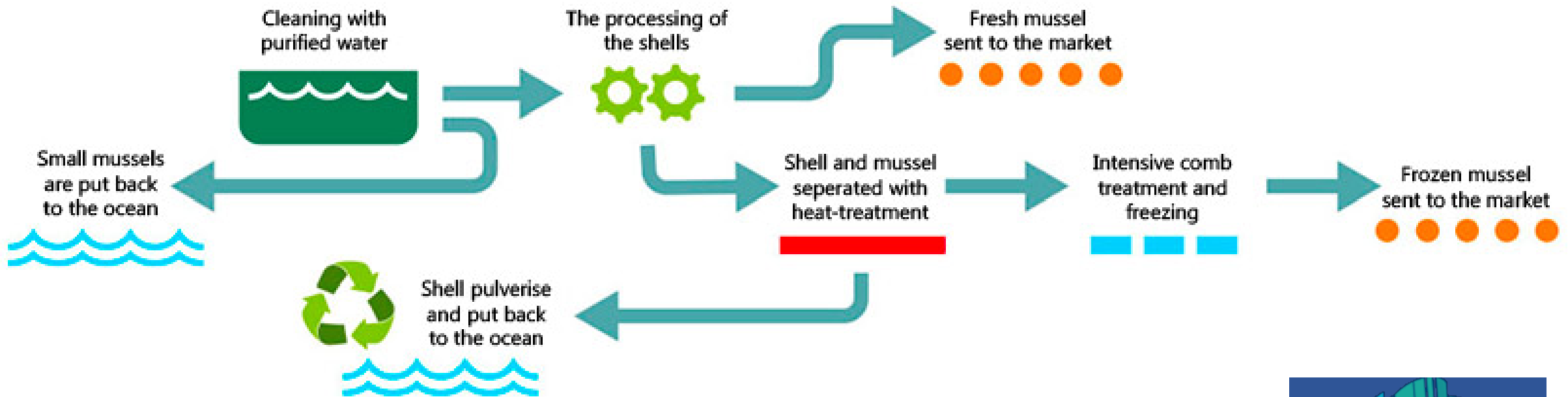


Developing and Fast Growing Market



Processing steps

Protein – Lipids - Shells



Proteins



=> Bioactive peptides

- Antimicrobial peptide
- Antioxidant
- Antihypertensive
- Anticoagulant activity
- Anti-inflammatory
- Therapeutic applications



www.stuff.co.nz

PROCESSING

COMPANIES

MUSSELS

NZ blue mussel firm wins funding for protein production plant

By Undercurrent News Aug. 17, 2018 09:26 BST

On it's way to commercialization?



Lipids

Mainly from Green Mussel

- ✓ Several anti-inflammatory and anti-arthritic dietary supplements
- ✓ The best known products are Seatone and Lyprinol

Blue mussel

- ✓ Lower lipid content
- ✓ Possible for skin care and / or anti-arthritic

Shells

Bio-Concrete

- ✓ Aggregates & concrete additives
- ✓ Decorative concrete



Shell, S (without treatment).
Large: 76mm -wide: 37mm



Mussel Shell gravel, MG (heat treatment)



Coarse mussel shell sand, CMS
(heat treatment, crush and sieve)

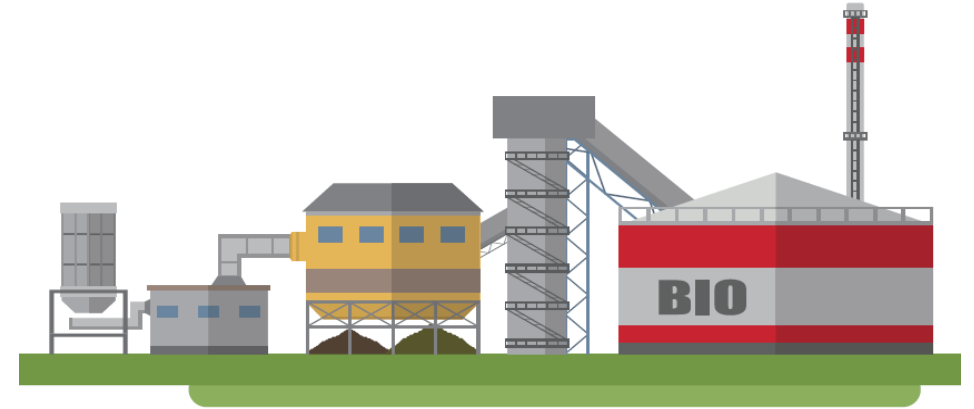


Fine mussel shell sand, FMS
(heat treatment, crush and sieve)

Which new and old technologies may create leapfrog developments in the refineries?

Biorefining - Challenges

- ✓ Novel processing technologies
- ✓ Optimization of bioprocessing
- ✓ Product development and confirmation of benefits via in-vivo testing (human studies)
- ✓ Marketing
- ✓ Need of open access biorefineries or scale-up facilities





Takk fyrir