



**A TRUSTED PARTNER
IN AUTOMATION AND ROBOTICS**
Working with you to ensure safe, clean, profitable
food processing ... from start to finish

Shippingklubben Ålesund

March 6th 2018



1. Company introduction

2. Optimar value proposition

3. Segment overview

4. Optimar delivery model

5. Market, Business plan and financials

1. Company introduction

Optimar Group - a global leader in automated fish processing and handling solutions



*More than **80 years** experience*



***400+** employees*



***90+** within engineering and R&D*



***800+** installations worldwide*



***24/7** availability and service*



***>50%** of all production exported*



***40%** annual organic growth since 2014*

Optimar facilities:



Valderøya (199)



Vigo (57)



Stette (35)



Seattle (35)



Stranda (30)

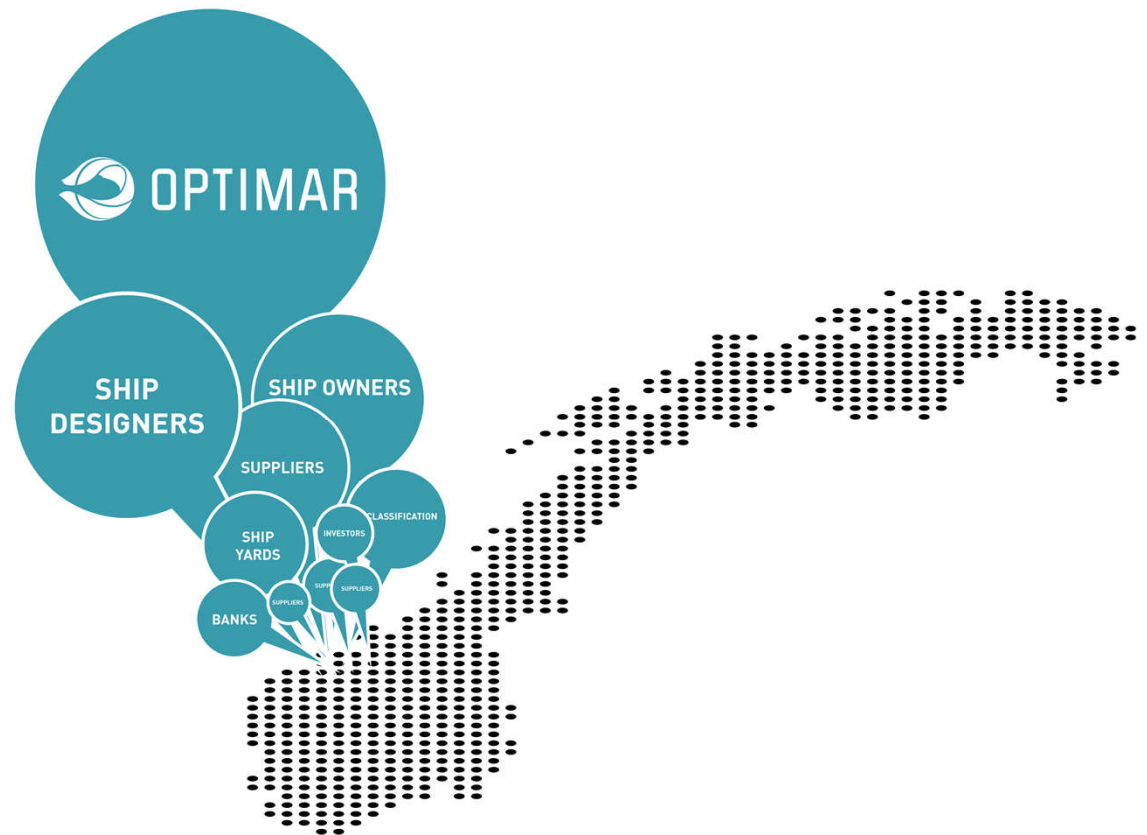


Galati/Braila (45)



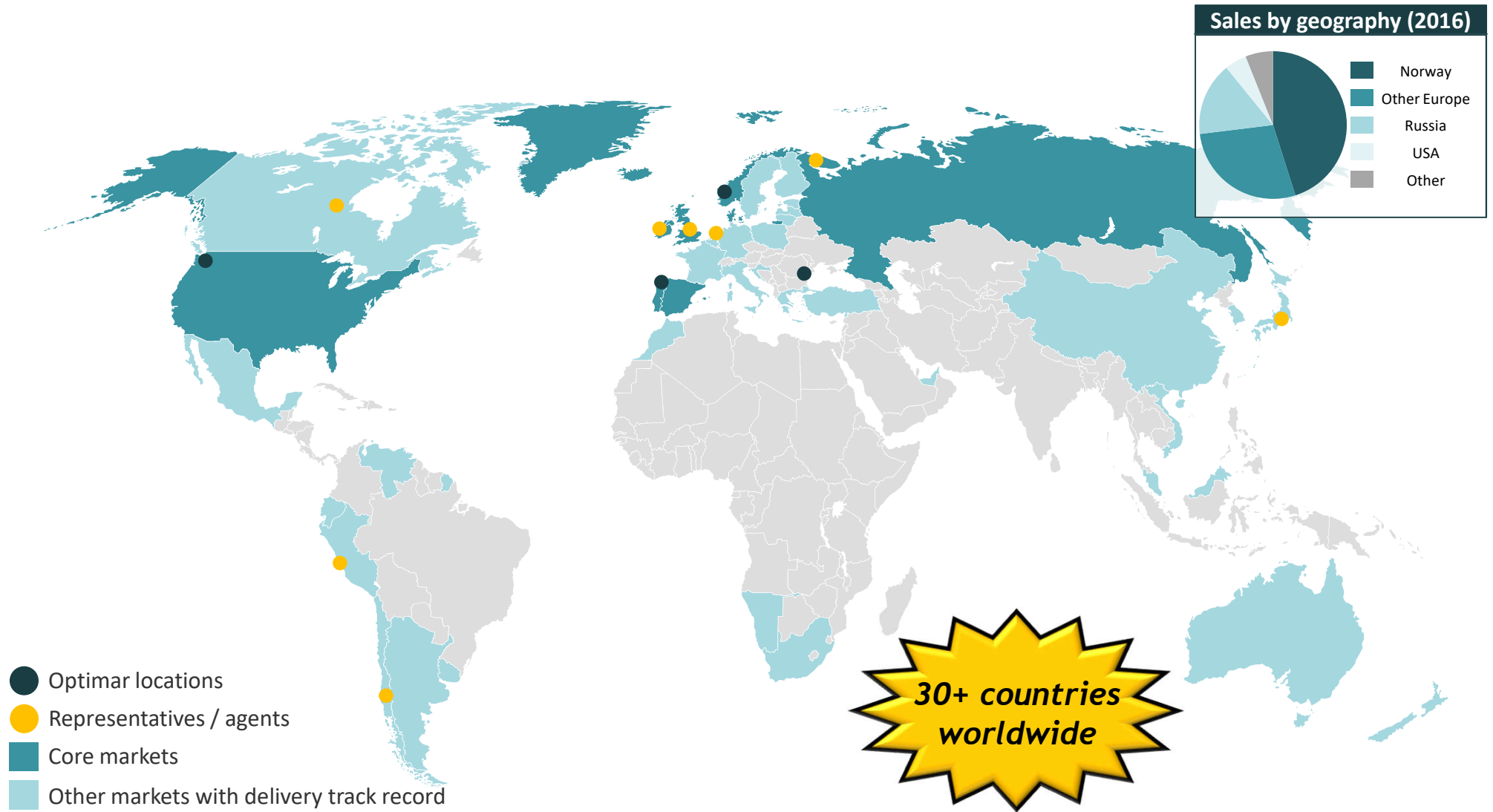
We are headquartered in the heart of the Norwegian maritime and seafood eco-system

A maritime cluster well known for sharing competence and expertise, making it possible to be at the forefront of innovation and product development

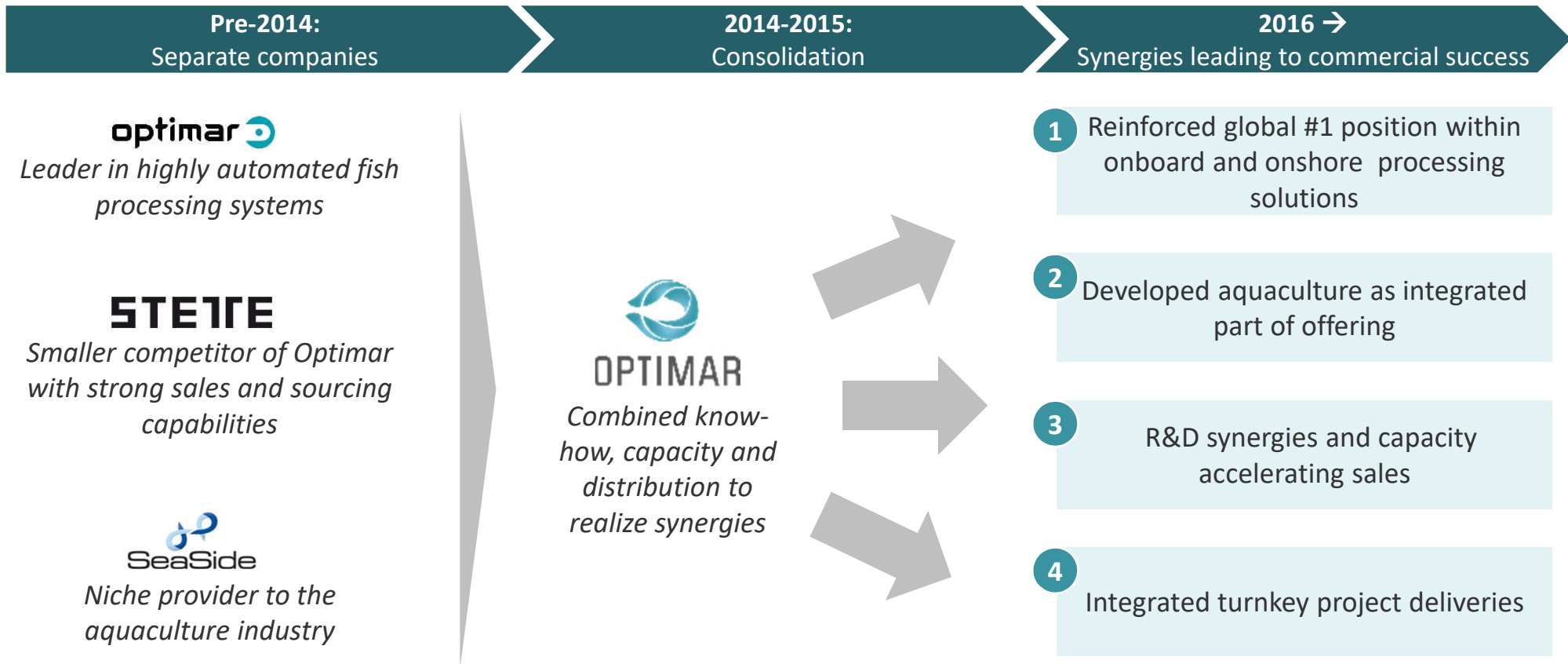


1. Company introduction

Optimar is a global technology leader, and we have experience from deliveries to all parts of the world



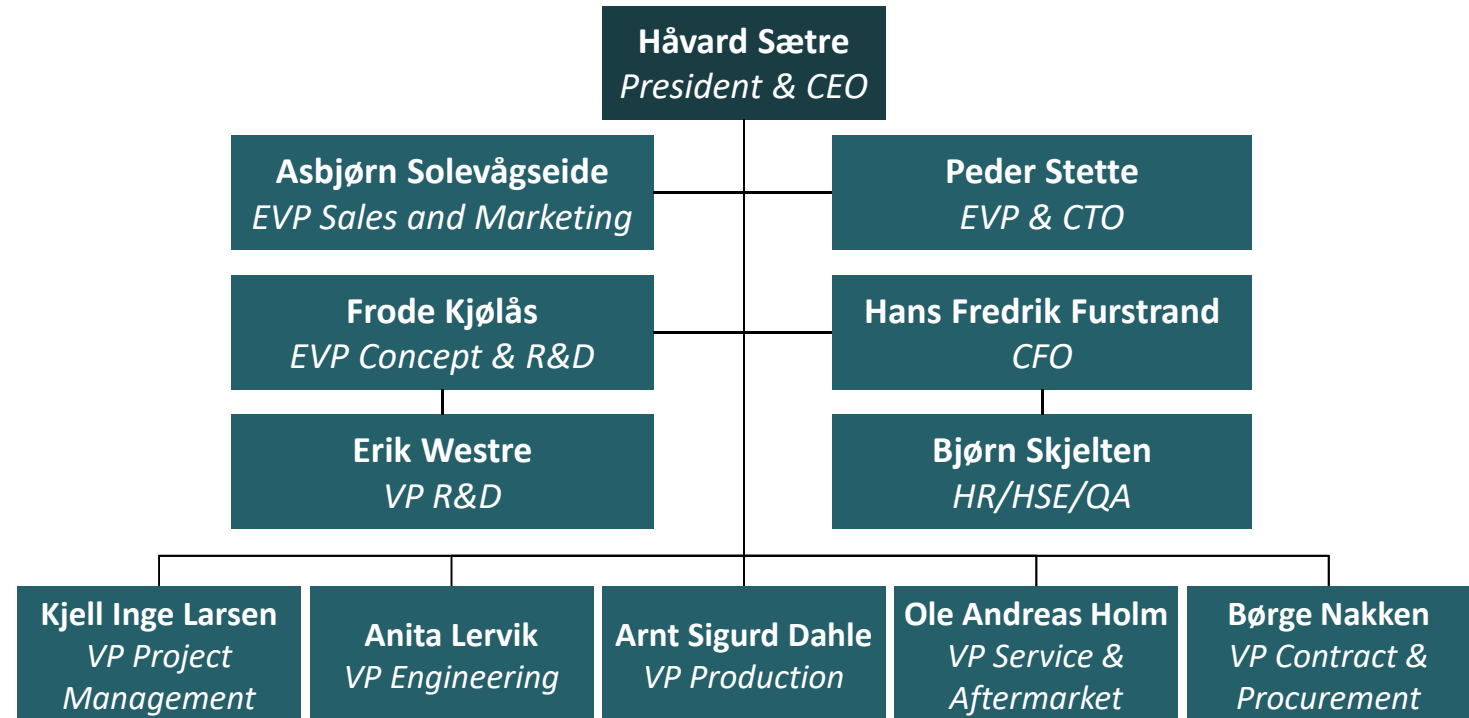
Key differentiation through reach and span of capabilities



Transformational shift from founder-oriented to corporate management structure

Pre-2014:
Founder-oriented structures

2016 →
Corporate management structure





1. Company introduction

2. Optimar value proposition

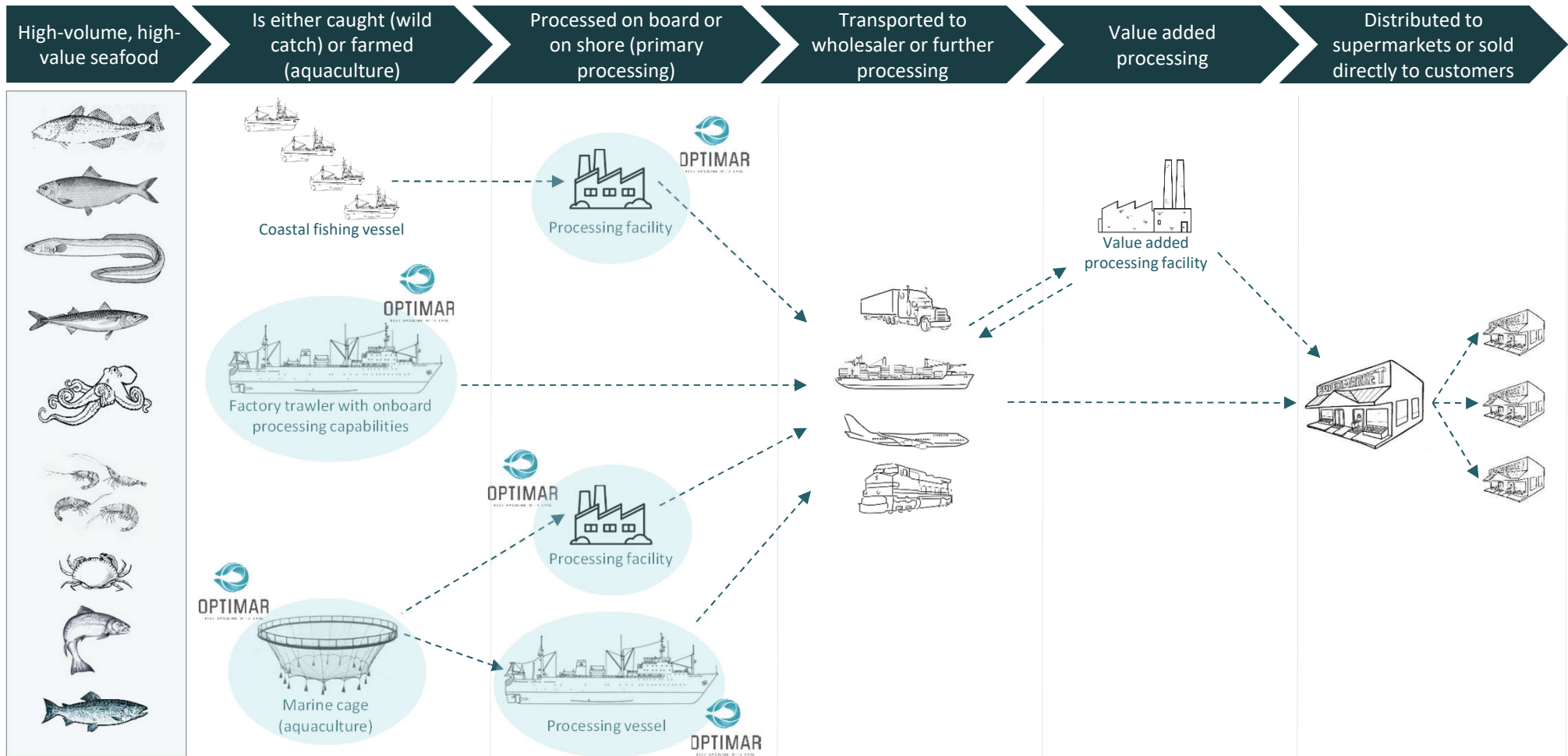
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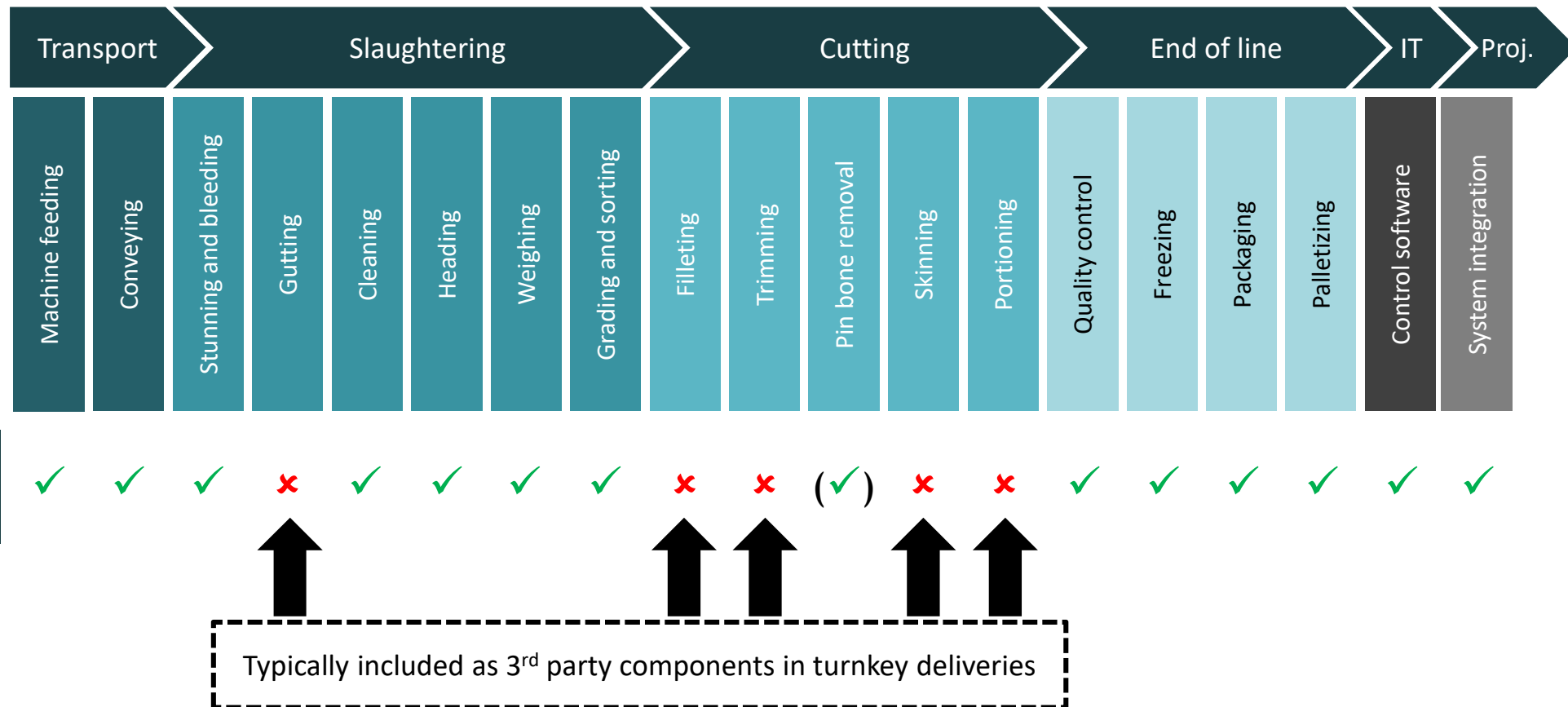
2. Optimar value proposition

Optimar's solutions are relevant to all types of seafood, both wild catch and aquaculture



= segments where Optimar delivers products and solutions

Turnkey solutions combined with blockbuster products within a range of product categories

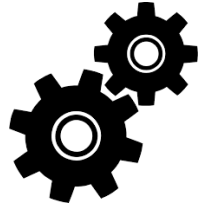


2. Optimar value proposition

Optimar enables customers to produce with higher quality, lower cost, in less time and in less space

1

Higher quality



- Superior quality to withstand high seas (vessels)
- Increased uptime
- Higher throughput

2

Less space



- Up to 50% better space utilisation
- Significantly reduced vessel/plant investment cost

3

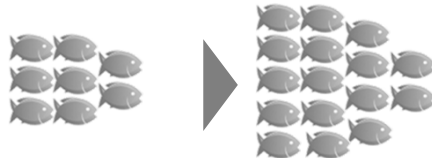
Cost reductions



- Up to 75% staff reduction
- Up to 20% lower energy consumption for freezing of fish
- Improves hygiene and traceability

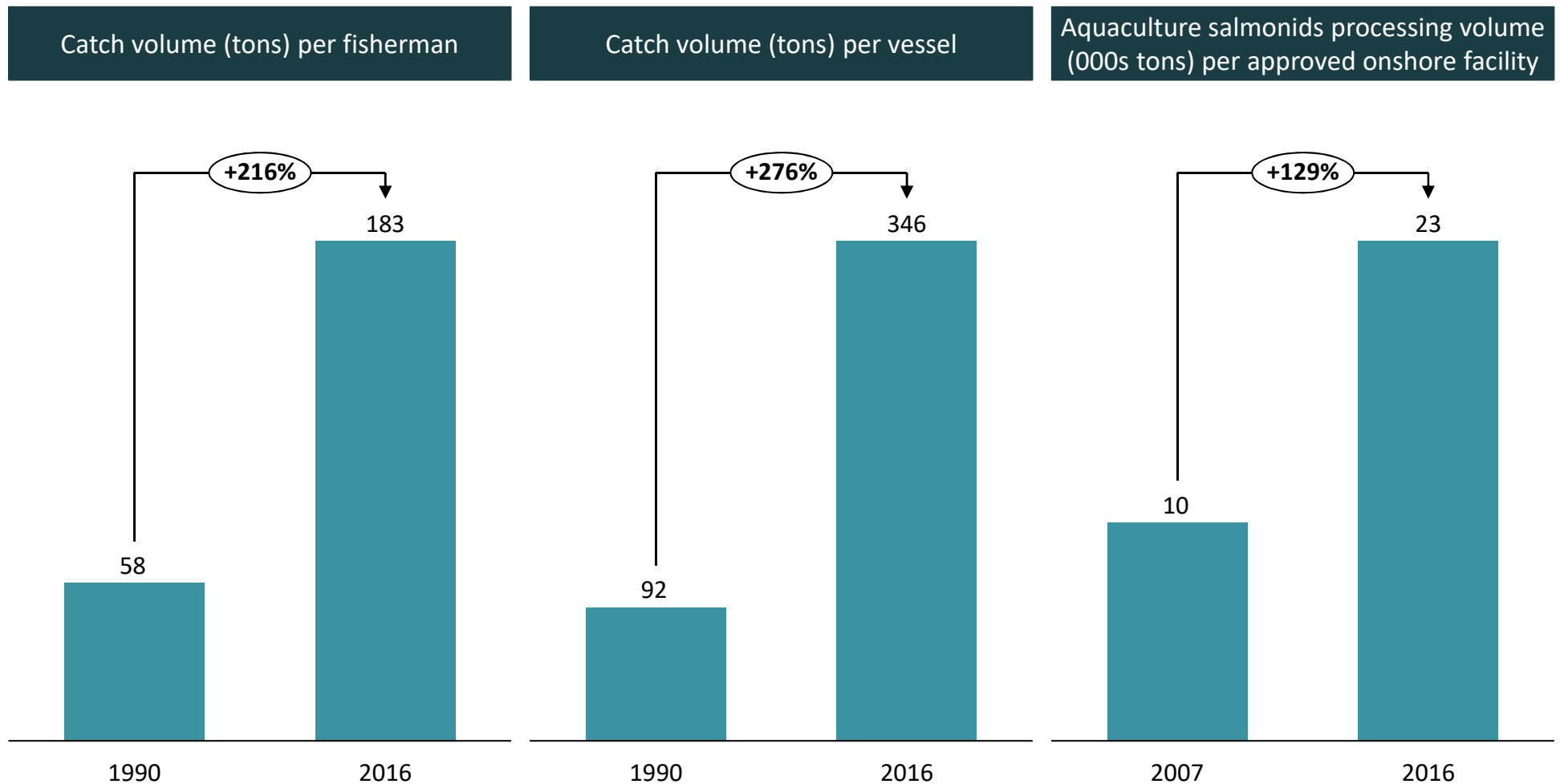
4

Efficiency gains



- Significantly improved capacity
- Processing time reduction improves end product quality
- Improved utilisation and reduced waste

The Norwegian seafood industry has achieved tremendous efficiency gains from automation





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Segment introduction

Onboard



Onboard processing solutions for wild catch

Onshore



Onshore processing solutions for wild catch

Aquaculture – processing solutions



Onshore and onboard processing solutions for aquaculture

Aquaculture – biological control



Salmon delousing solutions for aquaculture

Services and aftermarket

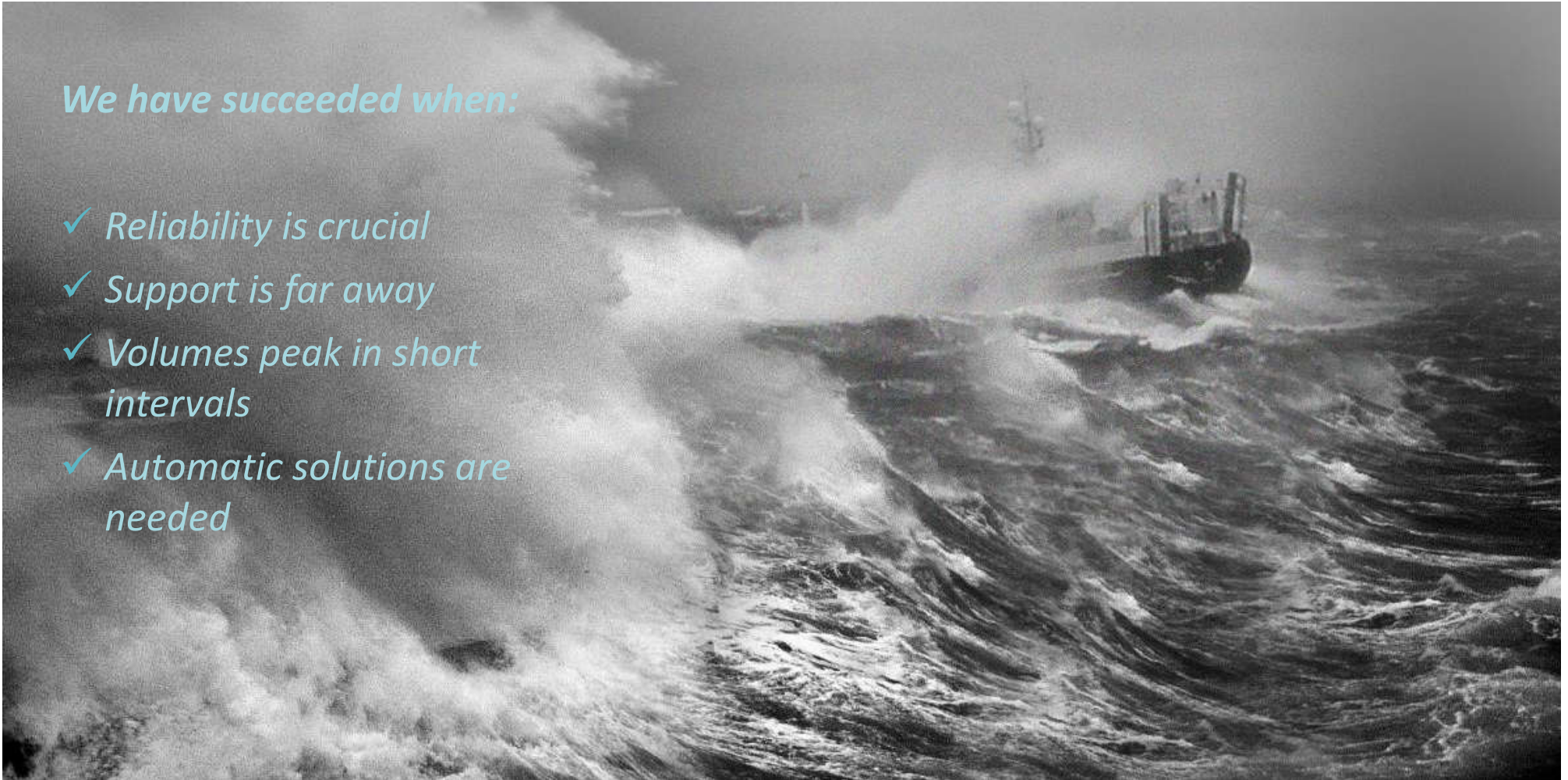


Smaller projects and spare parts across all major segments

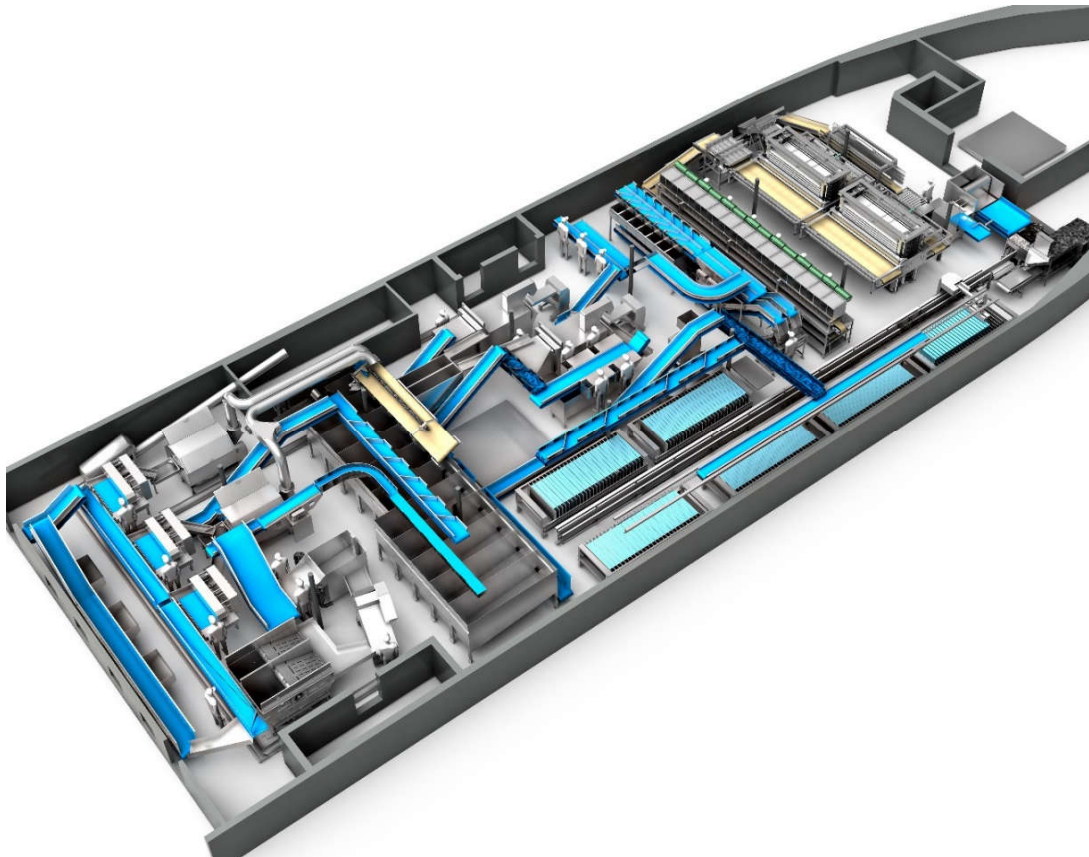
Onboard production – succeed in extreme conditions

We have succeeded when:

- ✓ *Reliability is crucial*
- ✓ *Support is far away*
- ✓ *Volumes peak in short intervals*
- ✓ *Automatic solutions are needed*



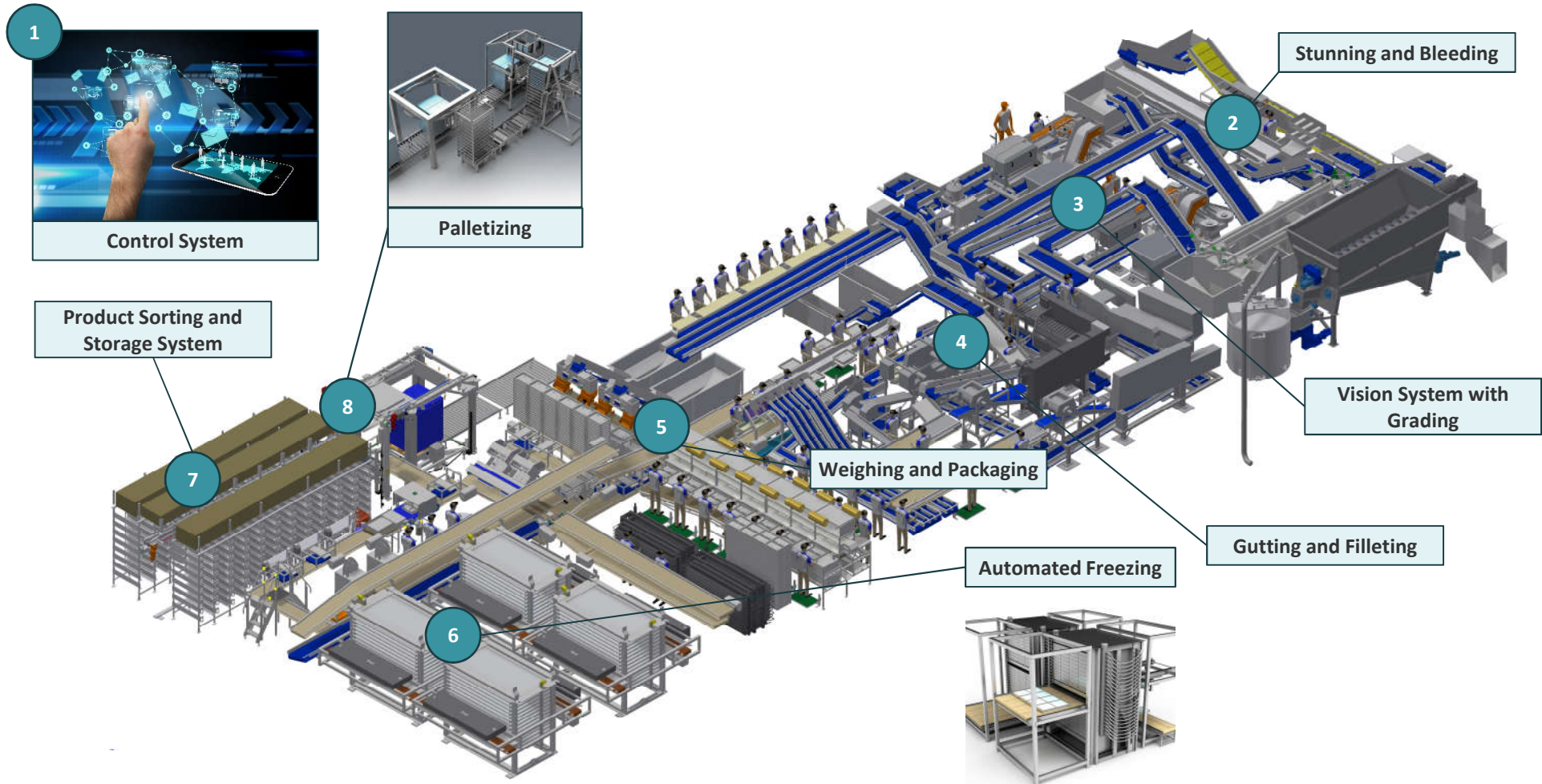
Make the most out of your space



An onboard factory from Optimar will:

- ✓ *Reduce production area*
- ✓ *Reduce manual heavy load handling*
- ✓ *Maximize total processing line speed*
- ✓ *Improve your efficiency*
- ✓ *Improve HSE results*

Optimar's land-based factories are designed to process high quantity of fresh fish with highest possible quality



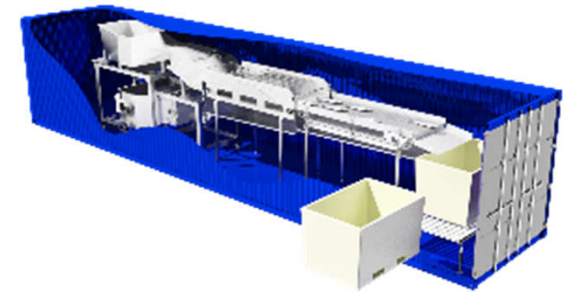
We bring innovation to practice – Optimar products are designed to solve problems, both for our customer, the environment and the consumer

- ✓ *Increasing focus on system deliveries*
- ✓ *Main products include stunners and bleeders, by-product handling and water treatment*
- ✓ *Customers are primarily salmon and trout producers*
- ✓ *Key factors for aquaculture customers include animal welfare, product quality, efficiency and quality of equipment, hygiene and technology*

Complete factories onshore



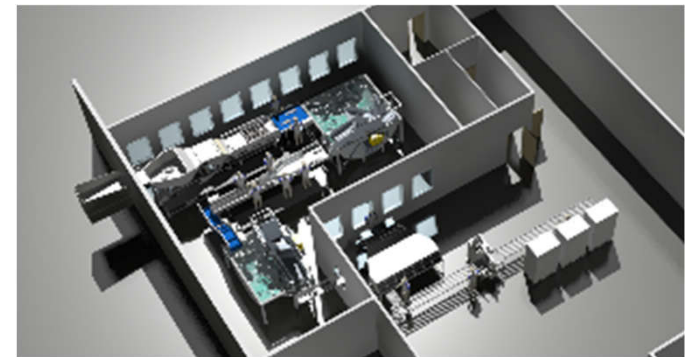
Containerized solutions



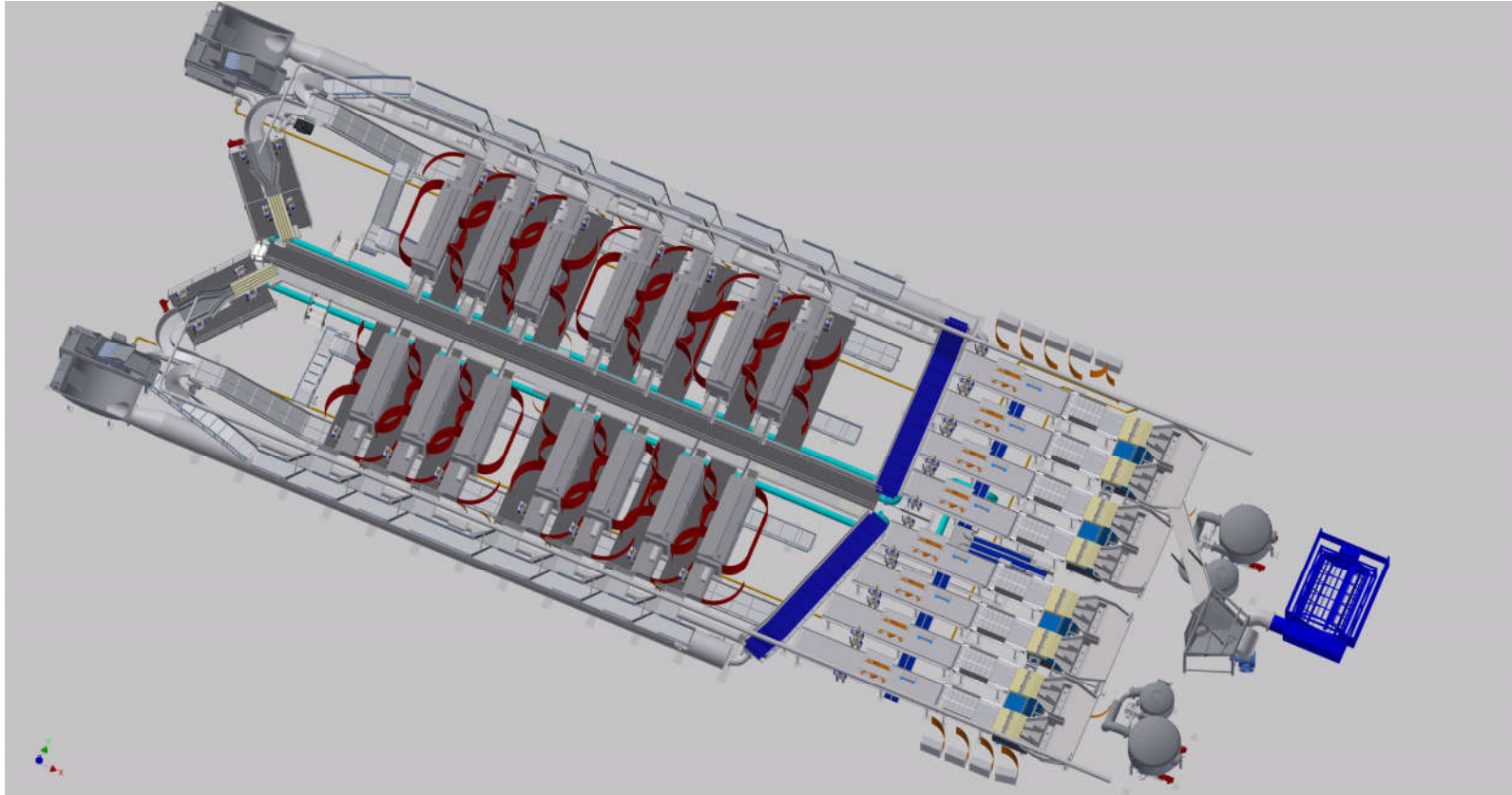
Onboard processing



Stun and bleed



Complete salmon factories – revolutionizing modern farming practices



Core Optimar products

- Stunning & killing
- Bleeding & cooling
- Freezing & packing
- By-product handling

Other Optimar products

- Fish net cleaning & impregnating equipment
- Logistics & control systems

Third party products

- De-heading, gutting and filleting equipment
- Pumping systems
- Scales and graders
- Refrigeration systems



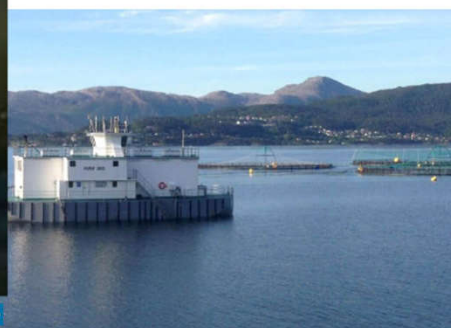
53 millioner oppdrettslaks
døde i norske merder i fjor

IRDA

Sport Synspunkt Kjøp billetter

ONSDAG 7. JUNI

OPPDRETT



+

**Åtte tilfelle av alvorleg
sjukdom til no i år**



**Spøkelsesoppdrett
flyt isigen i Flør**



ly kunnskap om postsmolt i resirkuleringsanlegg

idig flere produserer stor postsmolt i resirkuleringsanlegg, men vi vet enda lite om denne produksjonsmåten
tydning for postsmoltens utvikling og velferd. Ny forskning skal undersøke dette og teste ut praktiske tiltak for
optimalisere denne produksjonsformen.



raftig prisfall



**Jobber med omdømmet fremfor
konsumrettede tiltak**



Lanserte ny undervannsdroner



Les siste utgave av
Norsk Fiskeoppdrett HER.

Pressemeldinger



Eksportverdien økte med 13 %



**Få overskridingar for importer
sjømat**



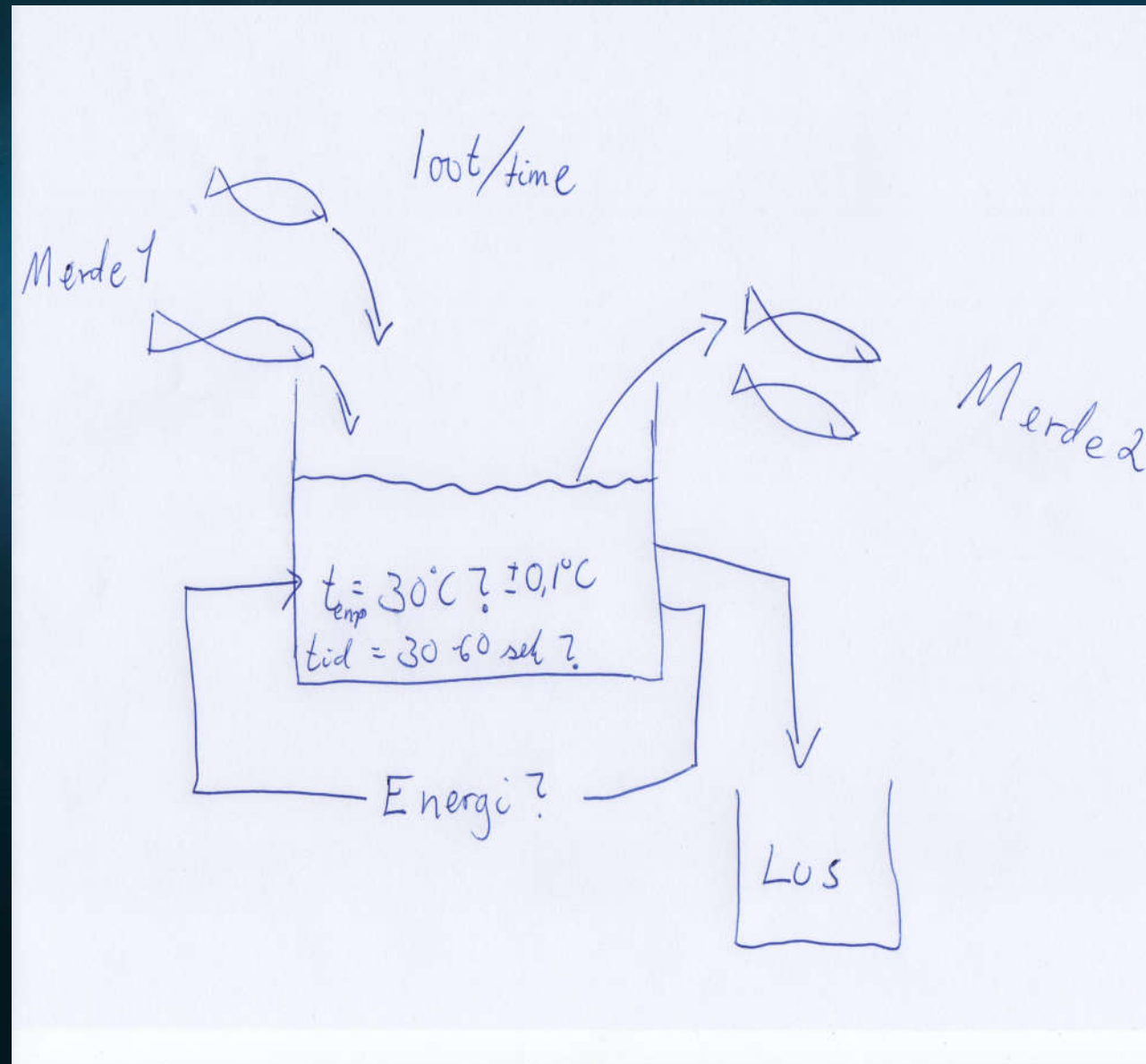
**FMV skal levere arbeidsbåt til
Finnsnes Dykk og Anleggservi**



**Vil ha mer økologisk laks i nor
butikker**

PRODUKTIDÉEN

- ❑ Fiskehelse
- ❑ Fiskehelse
- ❑ Fiskehelse
- ❑ Temperatur og nøyaktighet
- ❑ Oppholdstid



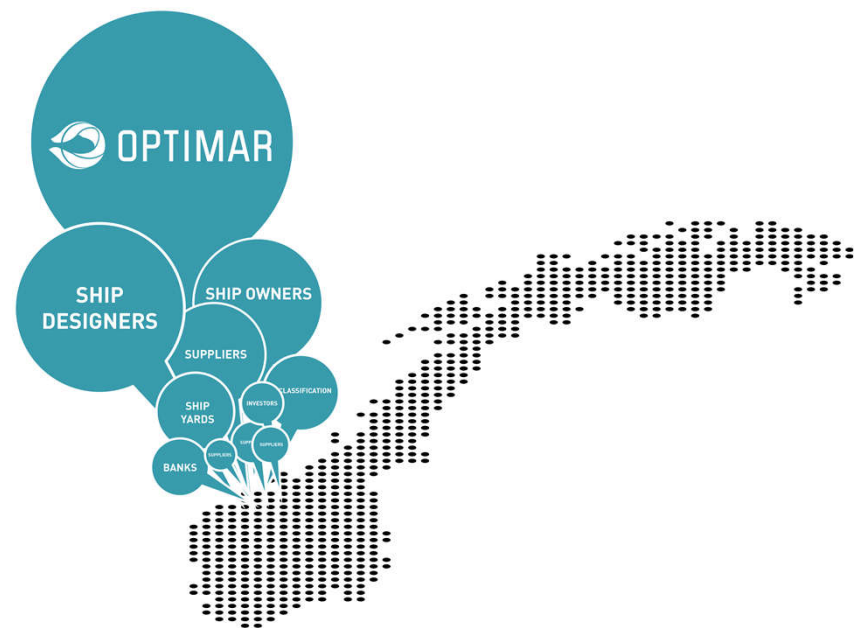
Samarbeid mellom lokasjoner

- Stranda
 - Produktide
 - Markedskompetanse
 - Service
- Valderøya
 - Engineeringskapasitet
 - Automasjon/Software
- Stette
 - Prosjektledelse
 - Montasje



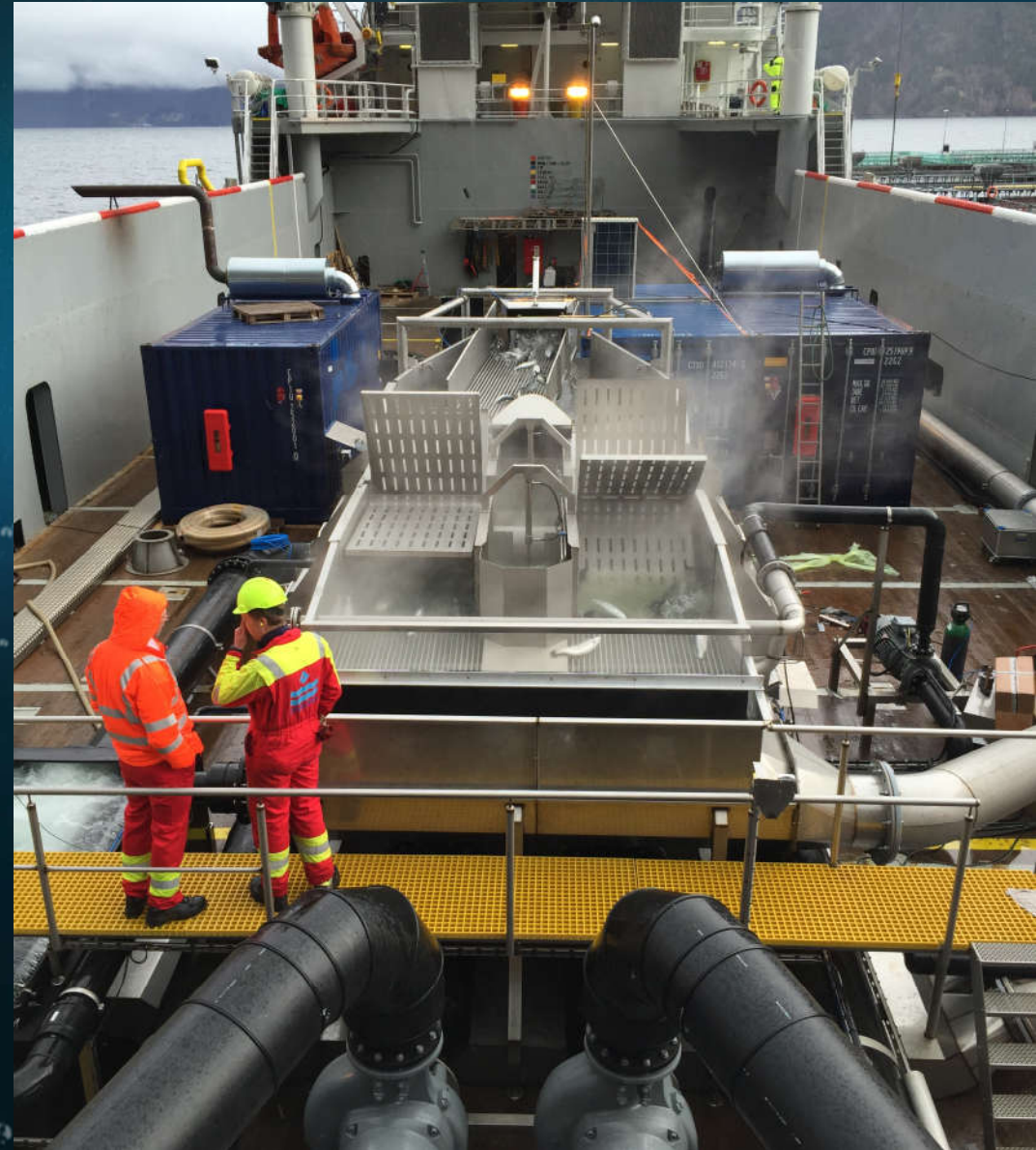
DEN MARITIME KLYNGA

- ❑ Innovasjon Norge
- ❑ OPTIMAR
- ❑ Fjordlaks
- ❑ Farstad
- ❑ NOFIMA
- ❑ Andre leverandører



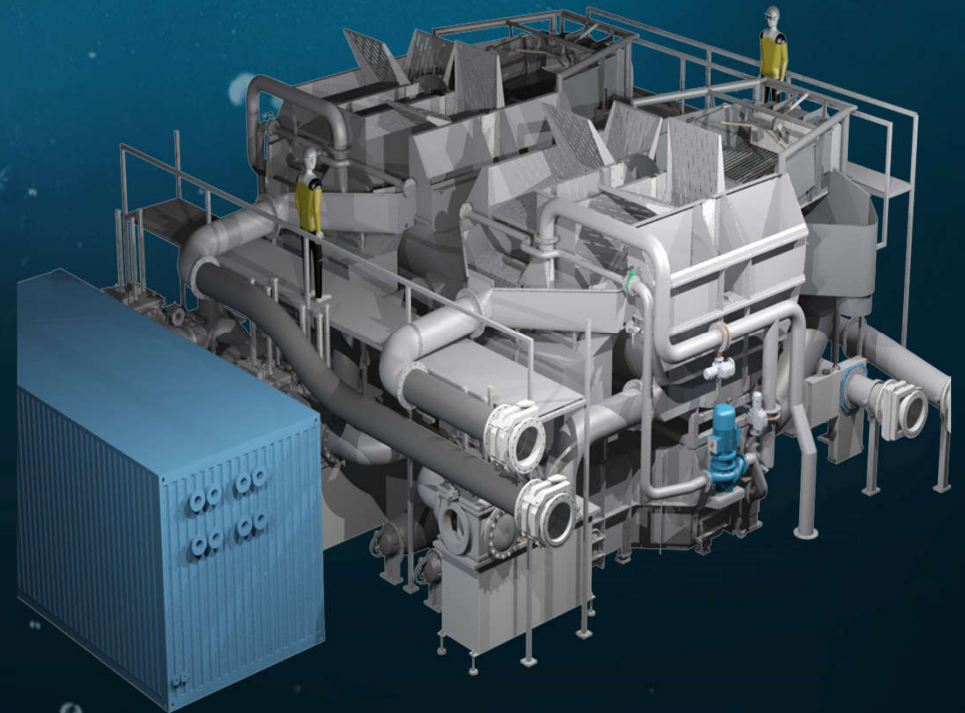
PILOT- INSTALLASJON

- ❑ Pilotinstallasjon ombord i Far Server (våren 2016)
- ❑ Uttesting av systemet sammen med Fjordlaks
- ❑ Tett samarbeid med NOFIMA
- ❑ Mye testing/tuning
- ❑ Systemet ble senere flyttet over til flåte



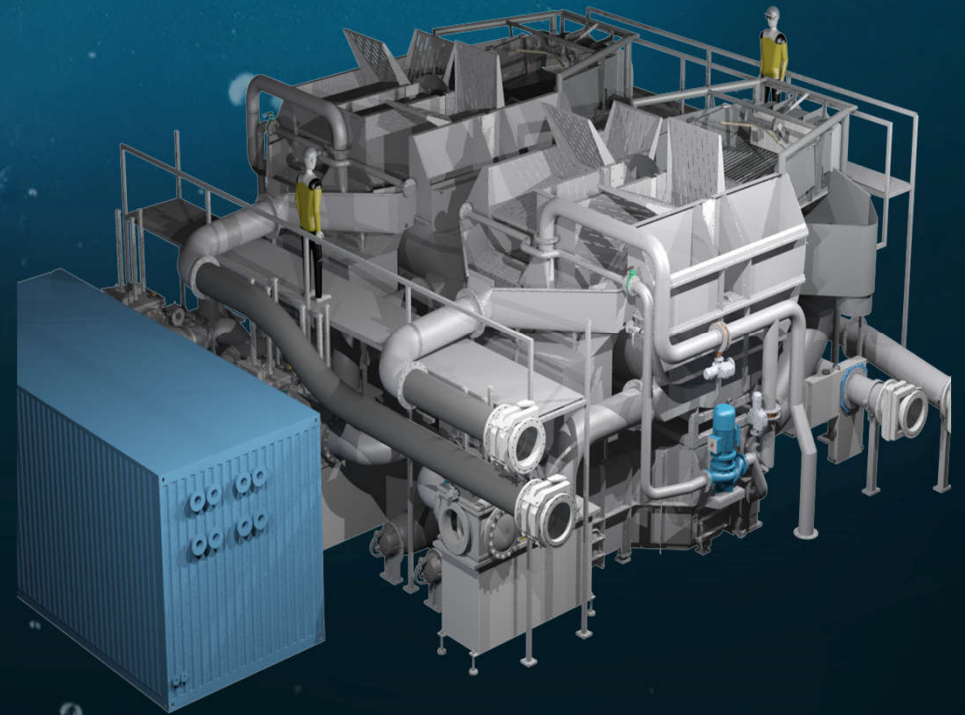
Godkjent produkt

- November 2016; NOFIMA rapport bekrefter at Optilicer tilfredsstiller kravene til Mattilsynet
- Aktivt salgsarbeid starter



Hvordan fungerer Optilicer

- ☐ Fisken pumpes til behandling
- ☐ Fisken telles
- ☐ Fisken bades i temperert vann, 30-35 grader C
- ☐ Oppholdstid i det tempererte vannet er 25-35 sekunder
- ☐ Fisken pumpes ut igjen i sjøen og er klar til foring
- ☐ All lus filtreres og destrueres
- ☐ Optilice har kapasitet til å behandle ca. 100 tonn pr time pr linje



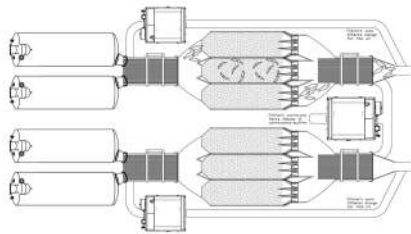
Effekt og fiskevelferd

- Kontinuerlig forbedring sammen med kunder
- Leverer nå generasjon 3 og 4 Optilicer
- Dokumentert fiskevelferd fra NOFIMA for bruk på laks og ørret (ISBN 978-82-8296-458-6)
- 98-100% effekt på bevegelige lus
God virkning på skottelus

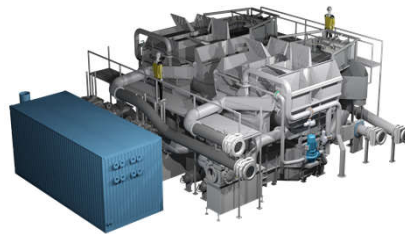
150 tonn Dødlighet Understiger 0,5
SalmoSalar Effektiv Ivaretar Fiskevelferd
Avlusningseffekt: 98 til 100 %
Oppvarmet Sjøvann **Sikker**

Additional farming growth is linked to biological control – Optimar is uniquely positioned to tap into an attractive new market

Optilice development cycle – 6 months from initial concept to sales



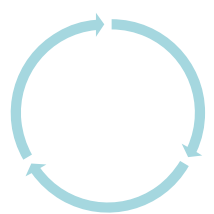
Conceptualize



Design and test



Commercialize



Develop

*Established
position as number
one provider of
delousing solutions*

*~20 solutions (45 lines)
delivered since
introduction in 2016*

**98-100%
efficiency**

R&D and innovation capabilities allow us to continuously introduce new products and upgrades to always stay one step ahead of competition

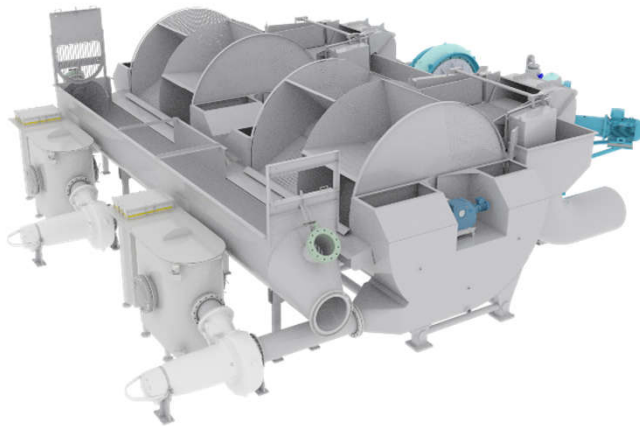
Optilice V3 vs. V4

Optilice V4

Optilice V3



Optilice V4

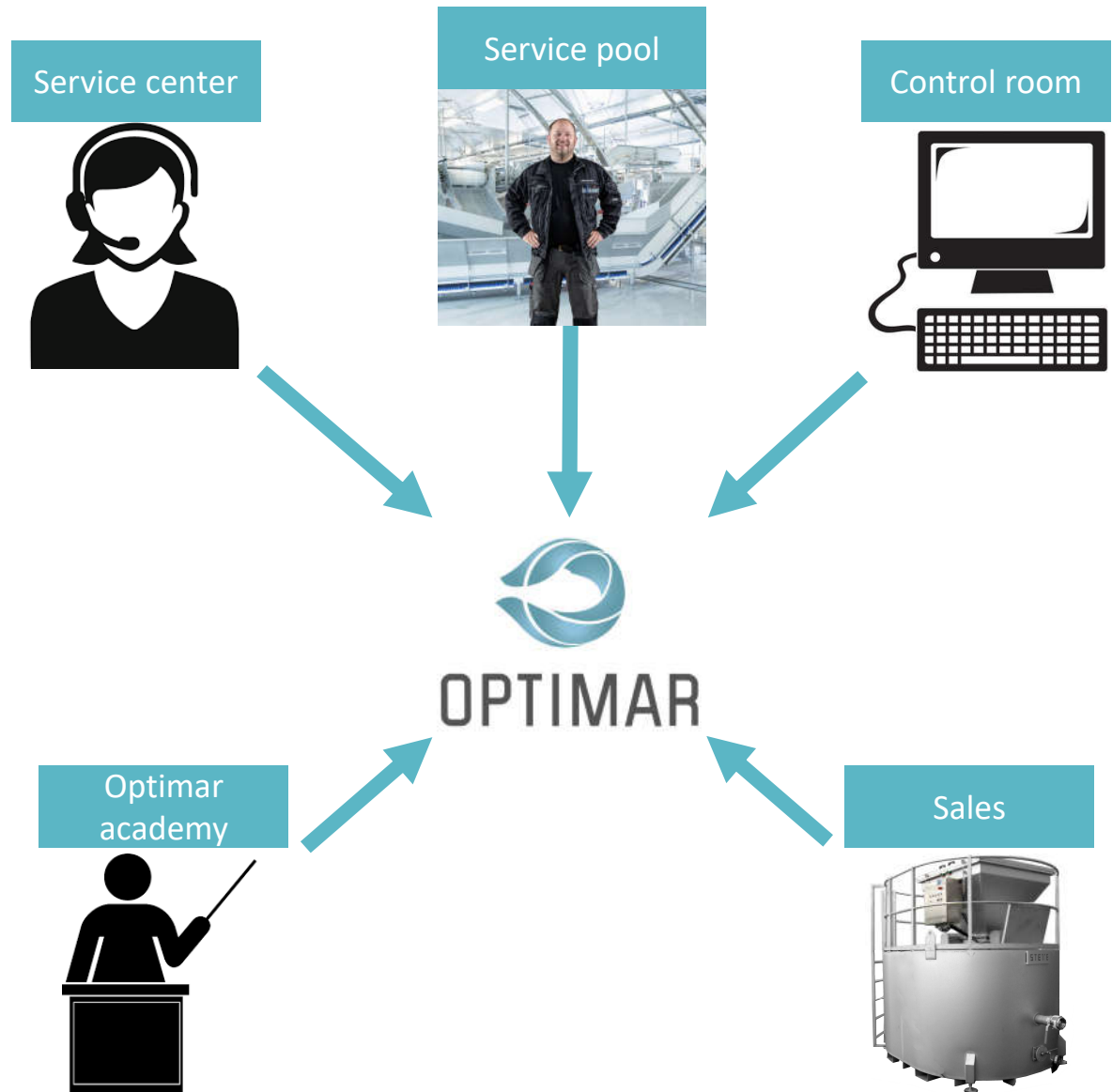


- ✓ *More gentle handling of fish*
 - Easier entry to treatment-tank
 - Better space for fish
- ✓ *Less movable parts*
- ✓ *Less height*
- ✓ *More hygienic design*
 - No separate buffer-tank
 - Totally renewed construction
- ✓ *Better outfeed system*
- ✓ *Improved filtration*

Significant opportunities in developing services and aftermarket

Key initiatives for development:

- ✓ Tiered service agreements
- ✓ spare parts program
- ✓ Loyalty-enhancing preventive maintenance programs
- ✓ Increased use of OEM components
- ✓ Digitalisation to unlock 24/7 tracking and assistance





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2. Optimar value proposition

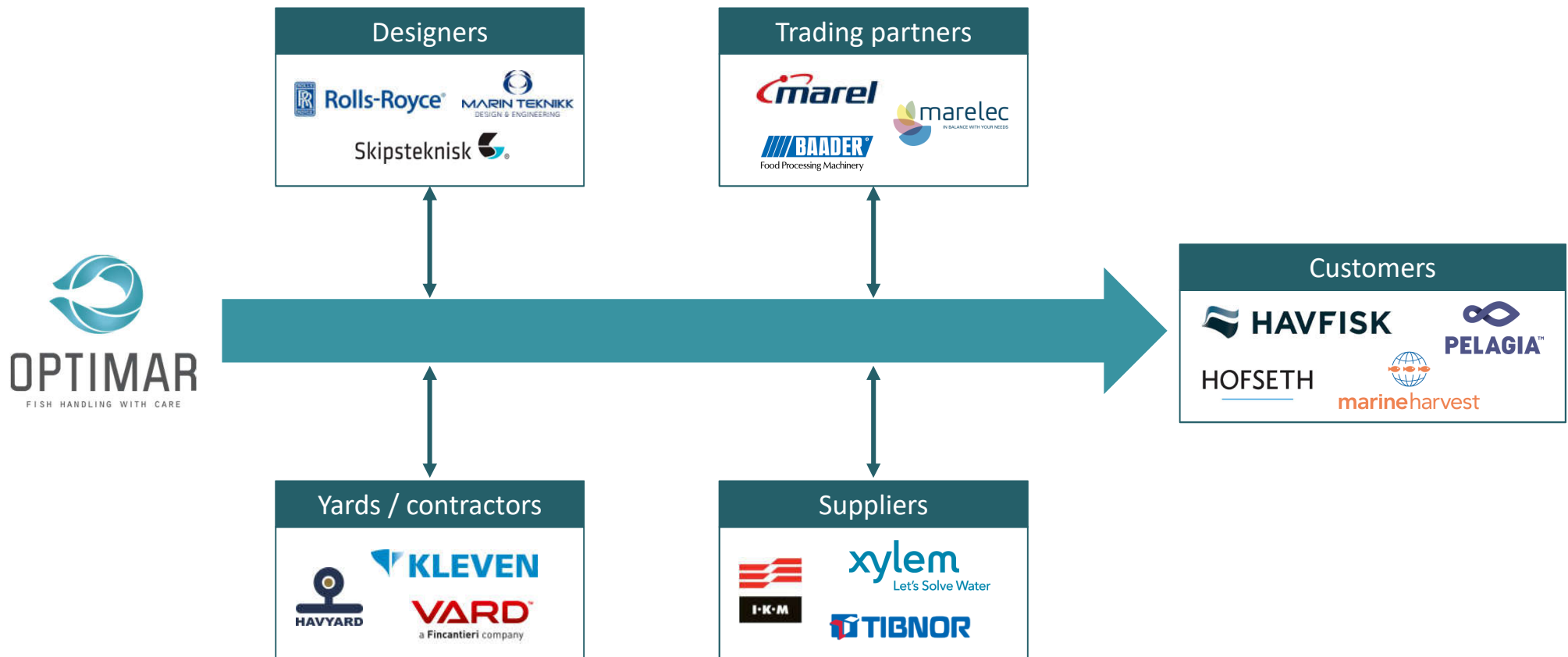
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We are experienced in working with a number of sub-suppliers and trading partners to ensure the best possible end product for our customers



4. Optimar delivery model

Optimar's role as system integrator – solving challenges that call for a combination of several engineering and commercial disciplines

Aker BioMarine krill vessel

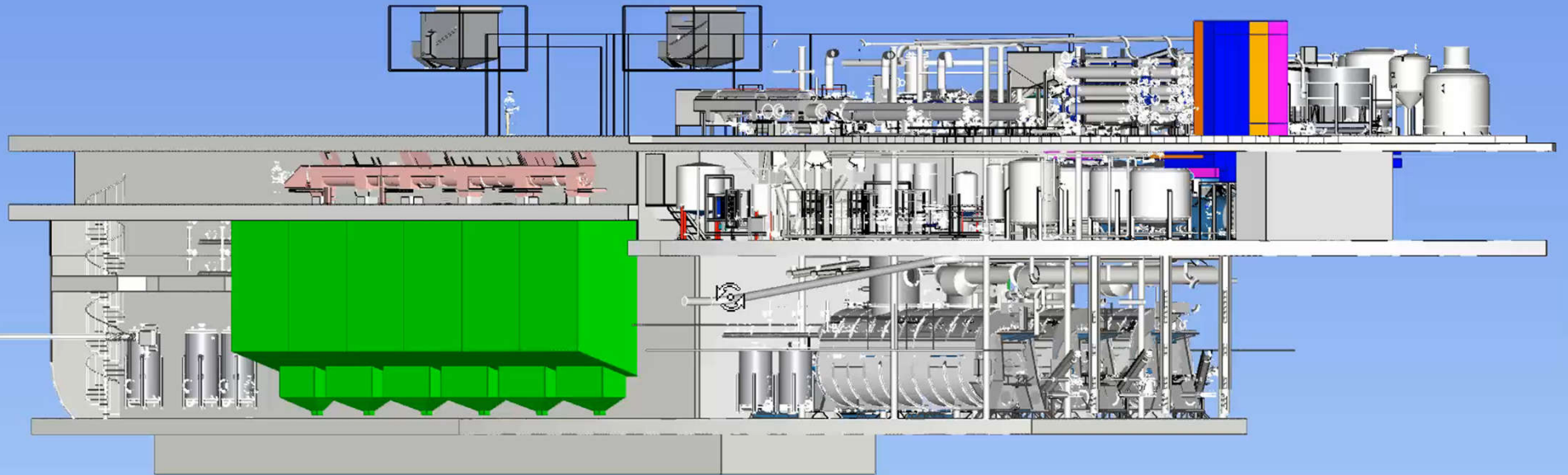


Hav Line processing vessel



Our teams has depth and diversity within:

- ✓ *Project Management*
- ✓ *Design*
- ✓ *Fabrication*
- ✓ *Programming*
- ✓ *Installation*
- ✓ *Steelwork*
- ✓ *Electrical installation*
- ✓ *Automation*
- ✓ *Robotics*
- ✓ *Training*
- ✓ *Service*



4. Optimar delivery model

New integrated digital system will allow for live tracking of all Optimar deliveries worldwide including 24/7 remote diagnostics and support

Illustration of virtual reality service instructions



Optimar value

- ✓ Remote diagnostics and support
- ✓ Roll out data for similar products
- ✓ Input for R&D
- ✓ Key and unique selling points
- ✓ Design of new factories
- ✓ Data evaluation and production optimization
- ✓ Data ownership/rights

Customer value

- ✓ Increased up-time and technical support
- ✓ Safety and efficiency
- ✓ Predicted maintenance
- ✓ Fish catching diary and traceability
- ✓ Optimizing production modes

Unparalleled track record of repeat business from satisfied customers

Example of repeat business from customer: Havfisk project deliveries since 2000



2001



2004



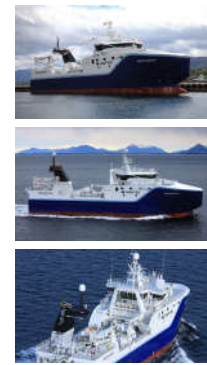
2006



2008



2010



2013



2016



2018



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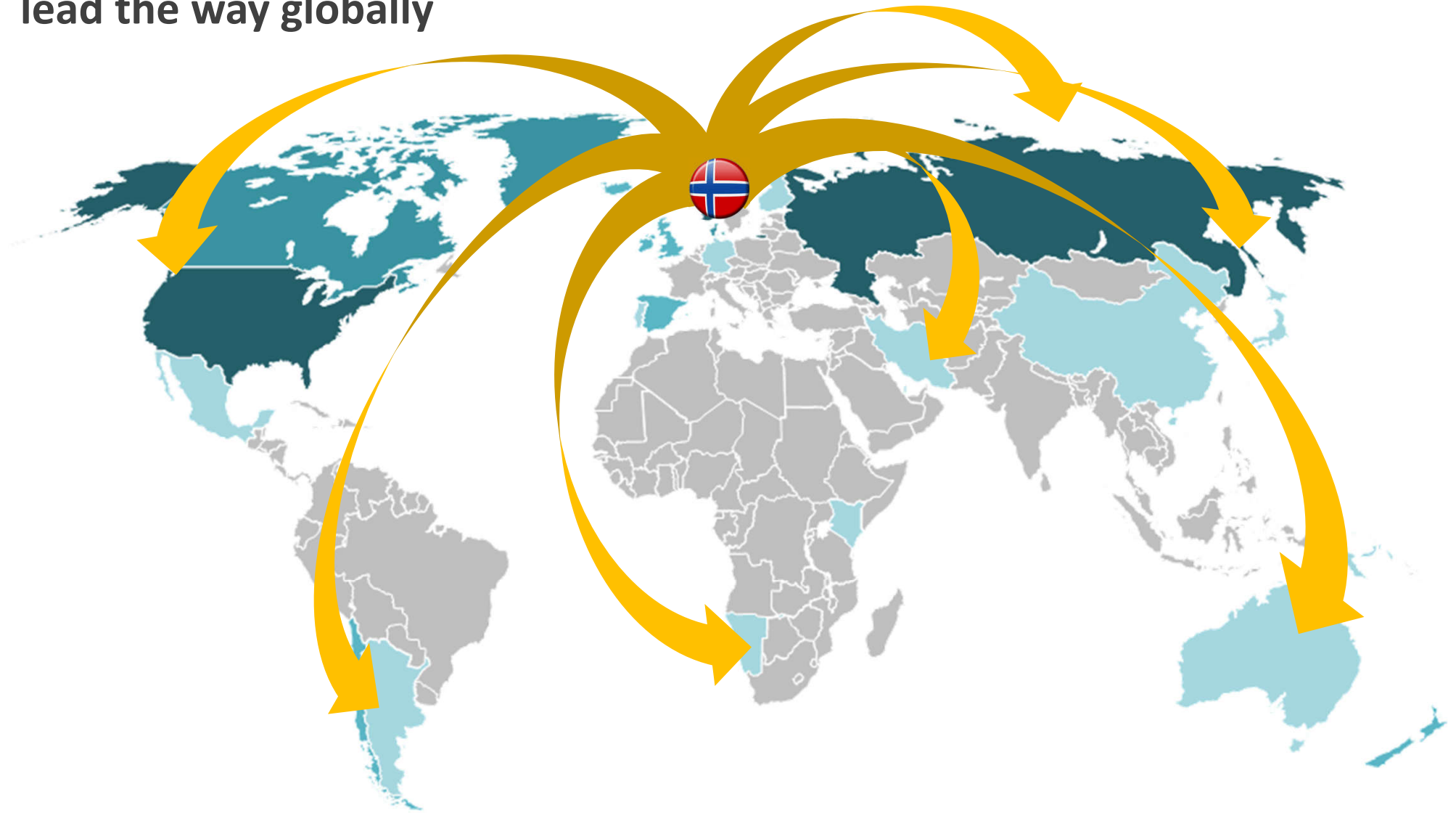
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New markets are emerging rapidly, and Optimar is ideally positioned to lead the way globally





fish handling
with Care