

# Lerøy Farming

BJARNE REINERT

CAPITAL MARKETS DAY

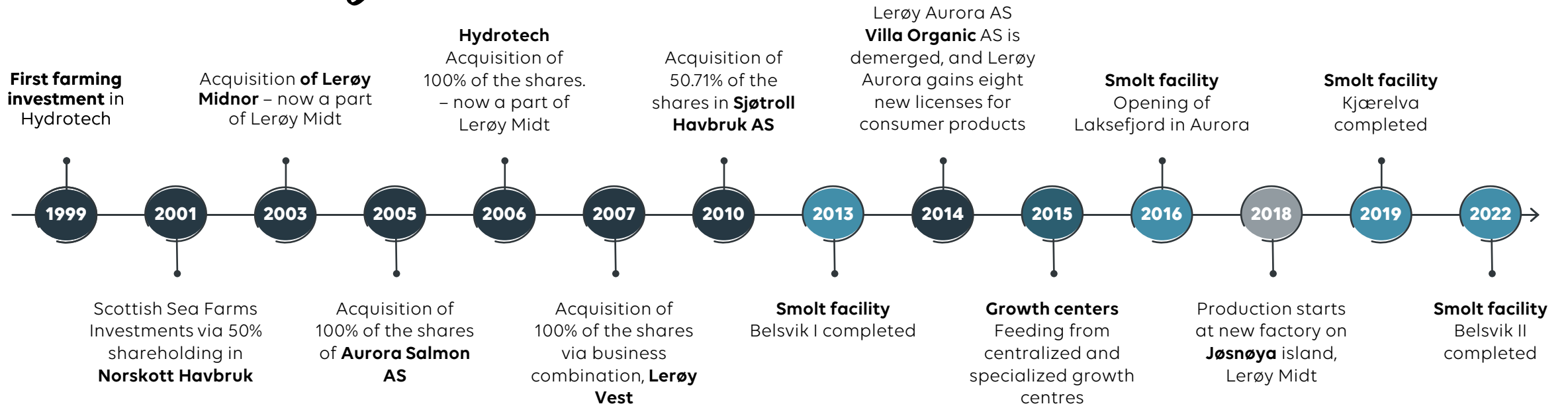
SEPTEMBER 22, 2022



1. **STRONG HISTORICAL PERFORMANCE**
2. Objectives and strategy for profitable growth

# Agenda

# Our growth journey



● Acquisition ● Processing ● Growth centers ● Smolt

GROWTH THROUGH  
ACQUISITION & LICENSES

INDUSTRIALIZATION & SCALE UP  
OF SMOLT PRODUCTION

STANDARDIZED FEEDING  
PRACTICES



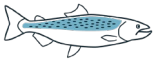
# Lerøy operates 100 farms across three regions in Norway...



**100**  
farms



**119.808**  
licenses (MAB)\*

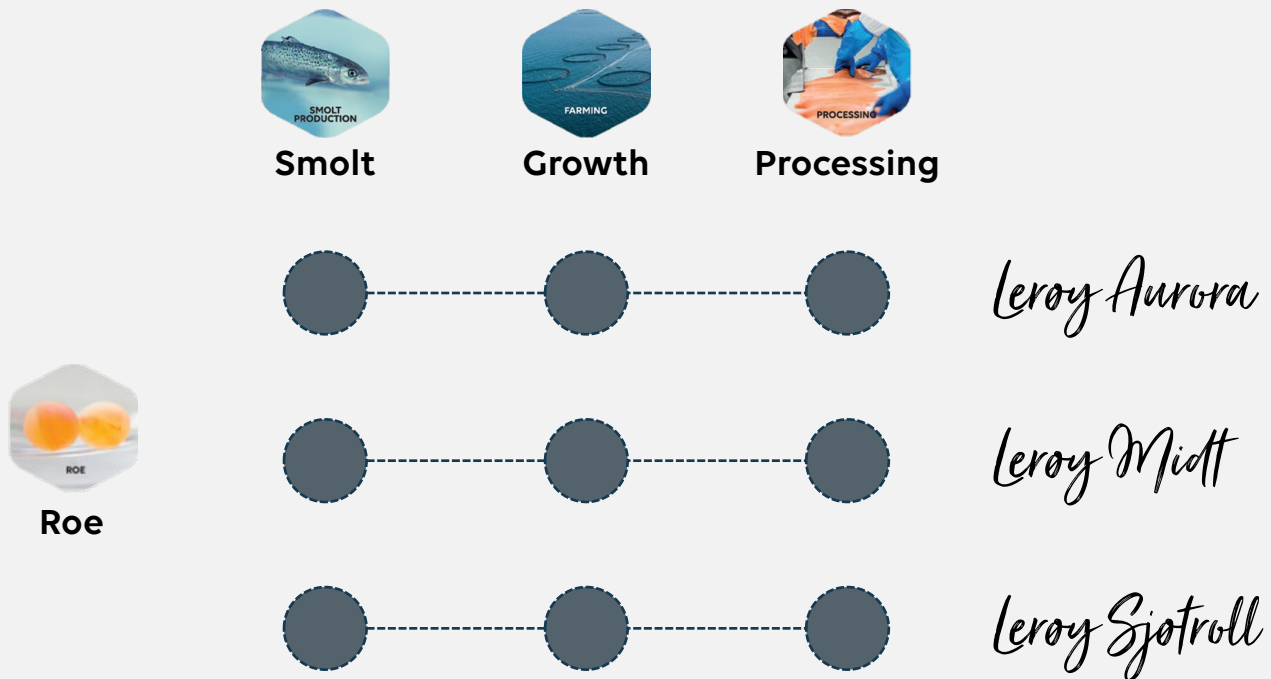


**186.600**  
tonnes harvest Norway (GWT)



\* Includes commercial permits, brood stock, display, R&D and education permits

# ...with geographically separated value chains to increase biosecurity and reduce risk, while still capturing synergies

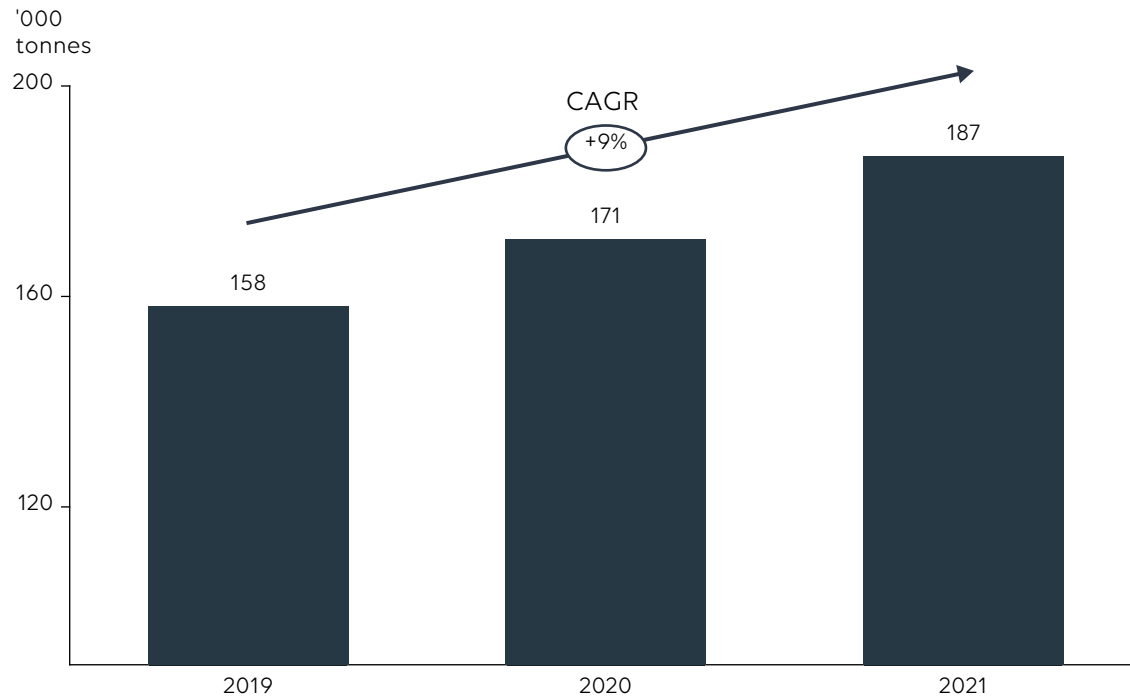


## Key strengths

- ▶ Independent value chains regionally separated to reduce biological and financial risk...
- ▶ ...while still capturing synergies including operational excellence, competency development and investment decisions

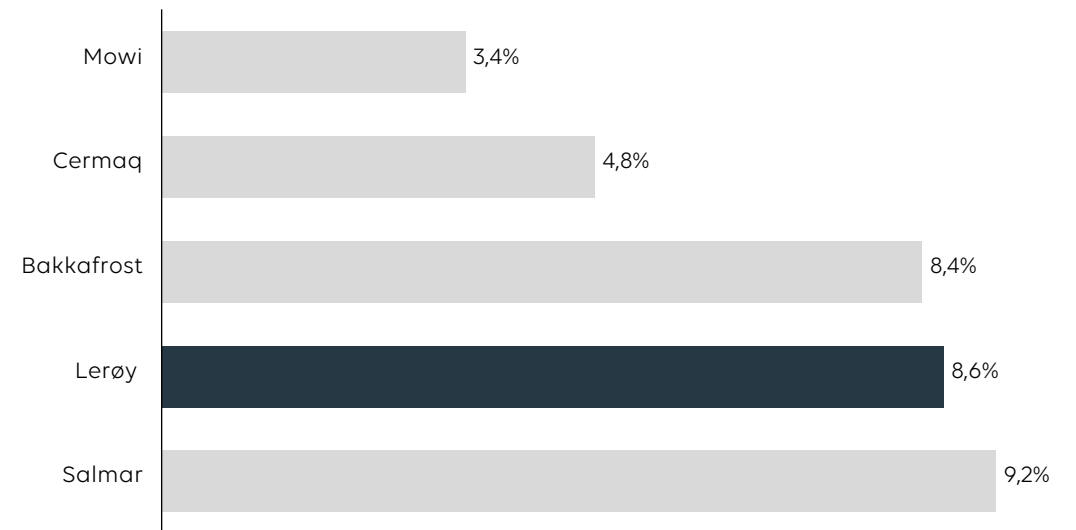
# We have grown significantly over the last three years

## Harvest volume, GWT



2022 expected harvest volume approx. 175.000 tonnes

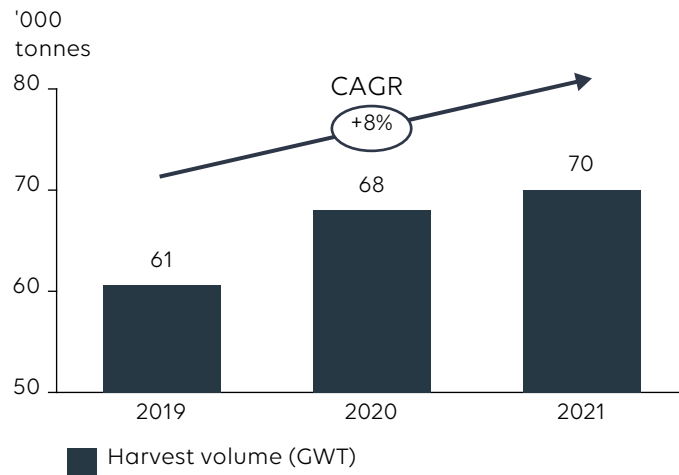
## CAGR, 2019-2021



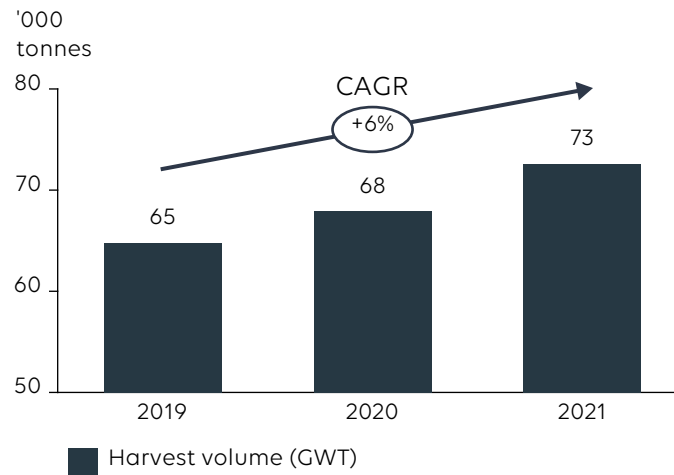
Source: Annual reports, Salmar, Bakkafrost Cermaq and Mowi

# Our volume growth is primarily driven by larger smolt – improving operational efficiency...

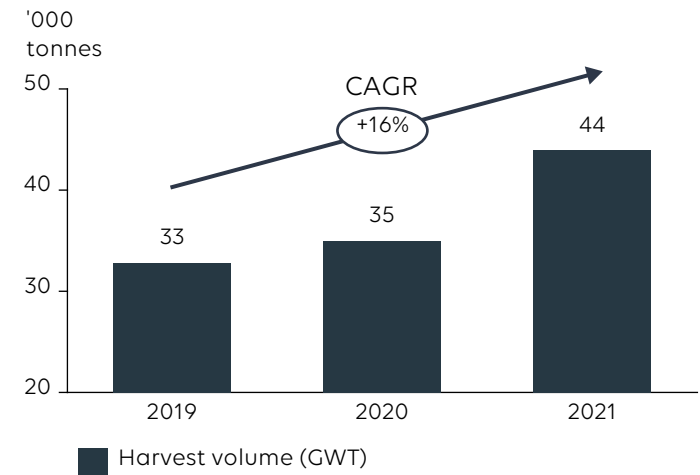
### Lerøy Sjøtroll



### Lerøy Midt



### Lerøy Aurora



## Value drivers



### GROWTH RATE

Increased growth rate drives turnover rate



### SURVIVAL RATE

Increased survival rate and lower volume loss



### MAB UTILIZATION

Efficient utilization of license capacity



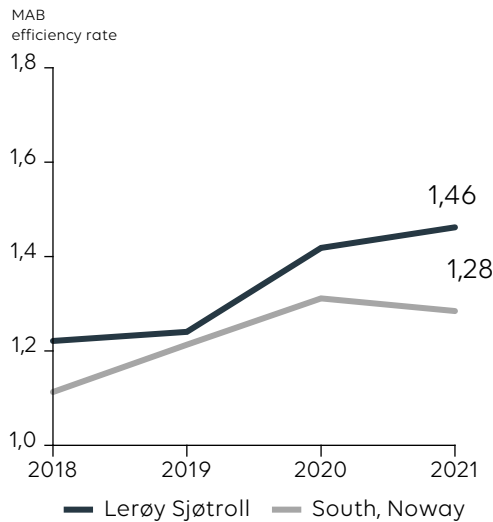
### QUALITY

Superior (SUP) quality improves price realization

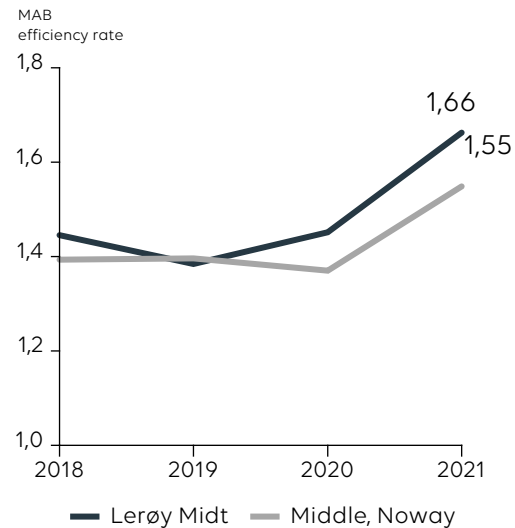


# ...which has increased our license efficiency rate – with performance better than regional average

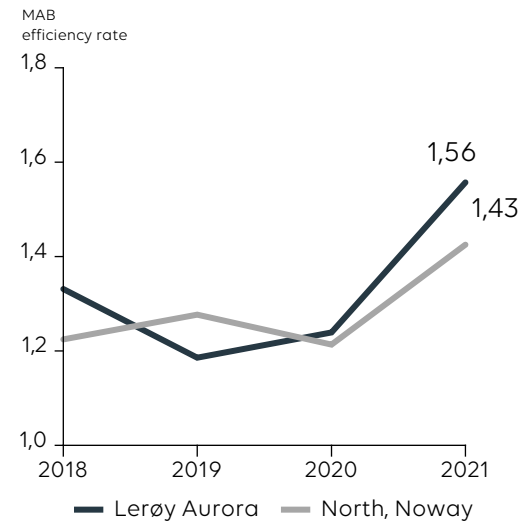
### Lerøy Sjøtroll



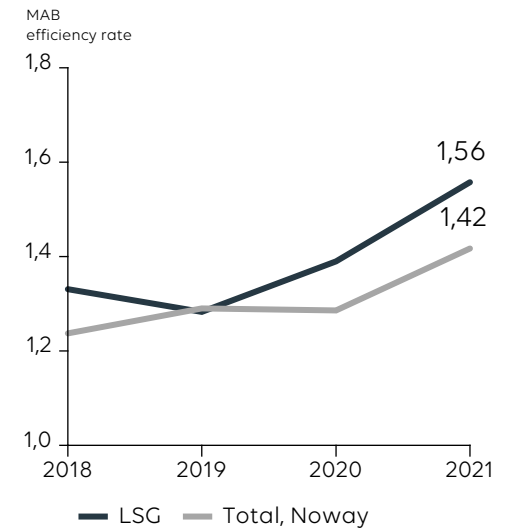
### Lerøy Midt



### Lerøy Aurora



### LSG



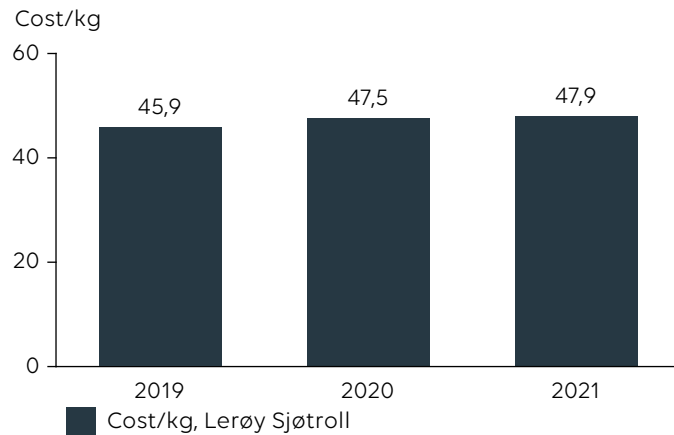
Source: Fiskeridirektoratet - Includes commercial permits, brood stock, display, R&D and education permits

License (MAB) efficiency rate is a measure of how many kg (GWE) you are able to produce each year for every kg of license capacity

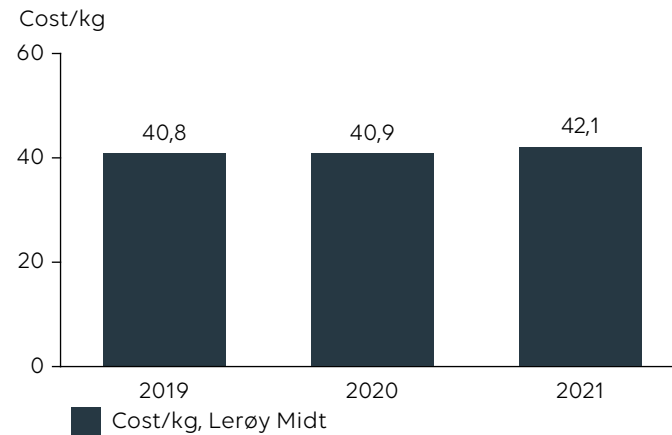


# Improving our biological performance will reduce our variable- and fixed cost / kg

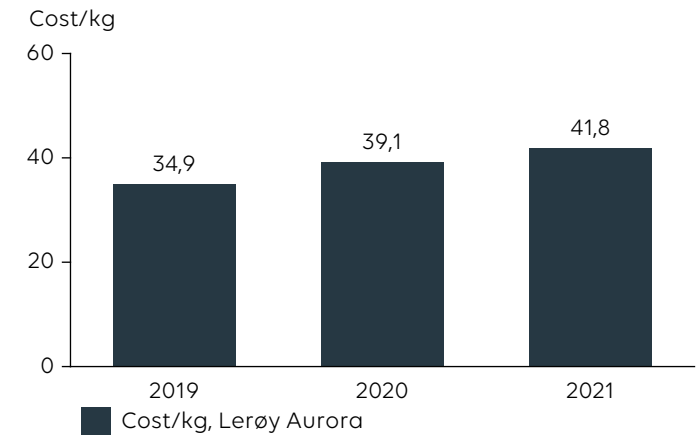
### Lerøy Sjøtroll



### Lerøy Midt



### Lerøy Aurora



\*) 2021 excludes governmental production fee of 0,4 NOK / kg

*Cost levers*

€

*Challenges*



## BIOLOGY

Biological challenges incl. mortality and growth rate increase our variable costs and limits our volume



## FIXED COSTS

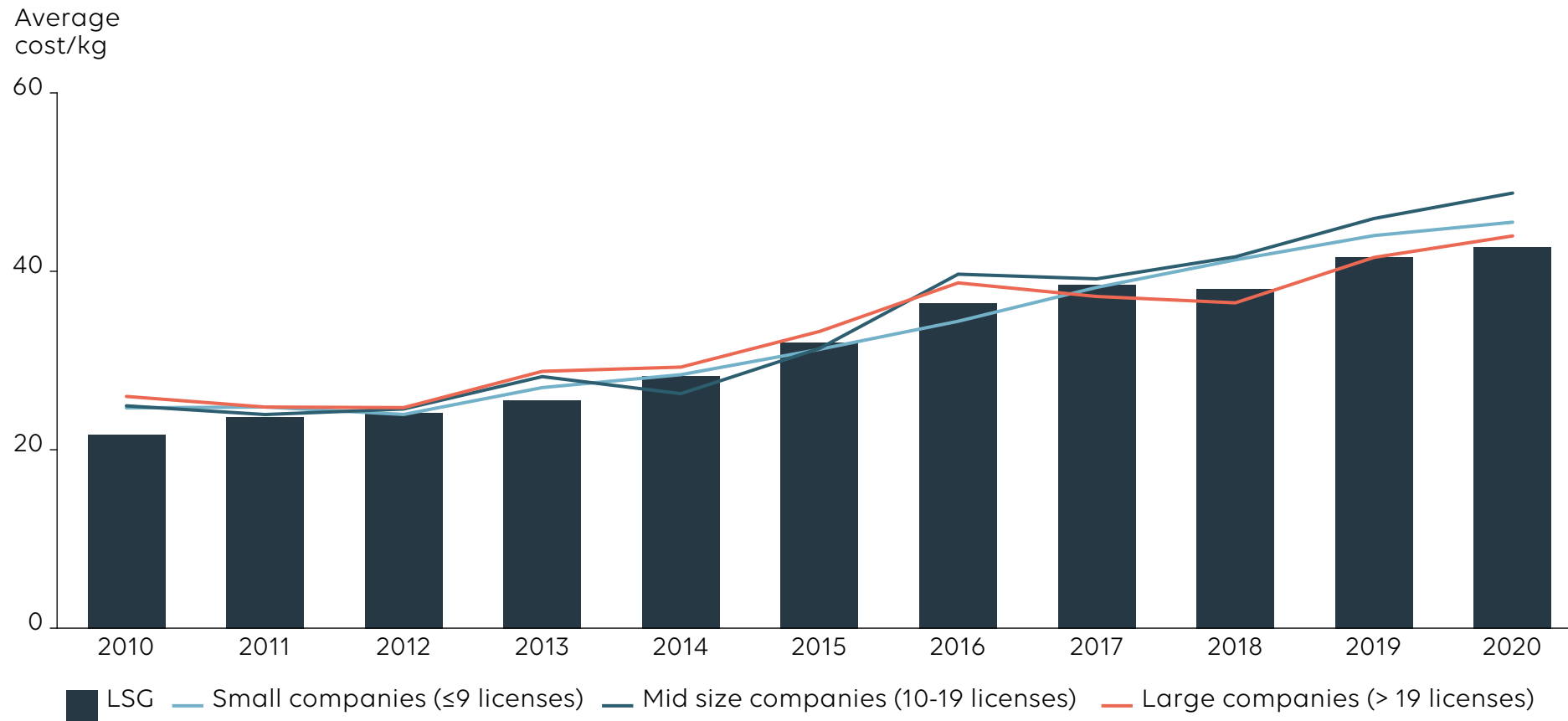
Infrastructure rigged for a higher volume increases fixed cost per kg



## INFLATION

Inflation on feed and processing costs

# On cost / kg we have performed slightly better than average – with further opportunities to improve



Data for 2021 not available

Cost pr kg includes both salmon and rainbow trout for LSG and industry average

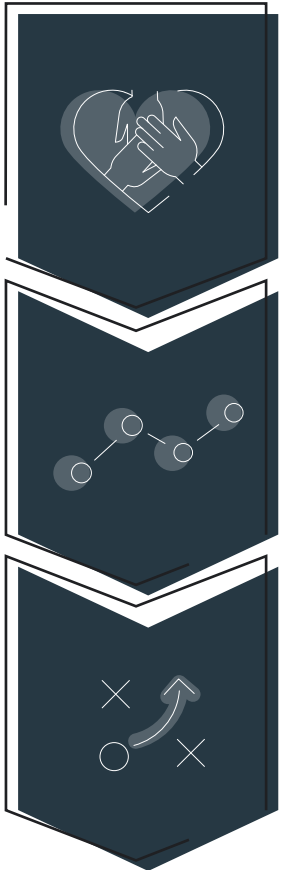
Source: Fiskeridirektoratet - Profitability study for salmon and rainbow trout 2021

1. Strong historical performance
2. **OBJECTIVES AND STRATEGY FOR PROFITABLE GROWTH**

# Agenda



# A solid foundation for growth



## **OUR EMPLOYEES**

Pioneering competency within smolt production, farming and analytics

## **OUR VALUE CHAIN**

Capturing operational synergies while reducing biological and financial risk

## **OUR STRATEGY**

A common direction with clear strategic priorities for growth and operational efficiency





# Farming has set ambitious targets for profitable growth

## Targets for 2025

**205.000**

Tonnes harvest volume  
(Norway)

**93%**

Superior quality

**4,5**

Average harvest weight  
(GWE)

**1,19**

Economic feed  
conversion rate

**-4,6**

NOK/kg  
reduced production cost

Baseline 2021 | Target 2025

Superior quality includes ordinary quality for rainbow trout | Superior quality is based on total harvest volume

Reduced production cost represents a cost reduction from 2021 level, based on 2021 input cost

# Growth levers



## STRENGTHEN CORE

Operational efficiency:

- Growth rate
- Survival rate
- MAB utilization
- Harvest quality

... with focus on cost and risk management in everything we do



## DEVELOP CORE

- New technology
- Lice prevention
- Industry leading on sustainability

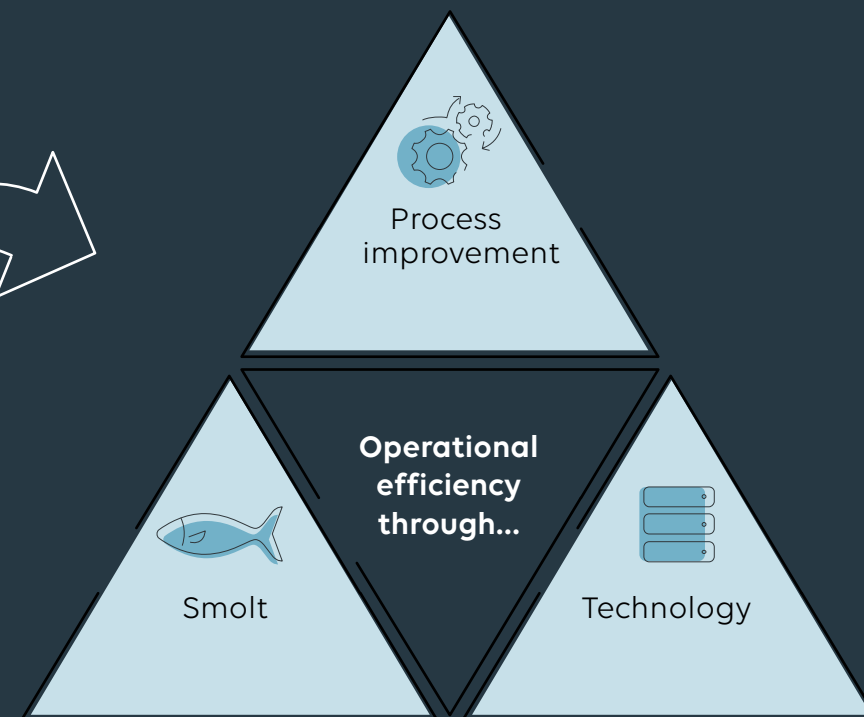


## NEW GROWTH PLATFORMS


- Develop technology for exposed farming
- Positioned for offshore and onshore farming



# We have defined a clear roadmap with strategic initiatives to increase operational efficiency and profitability

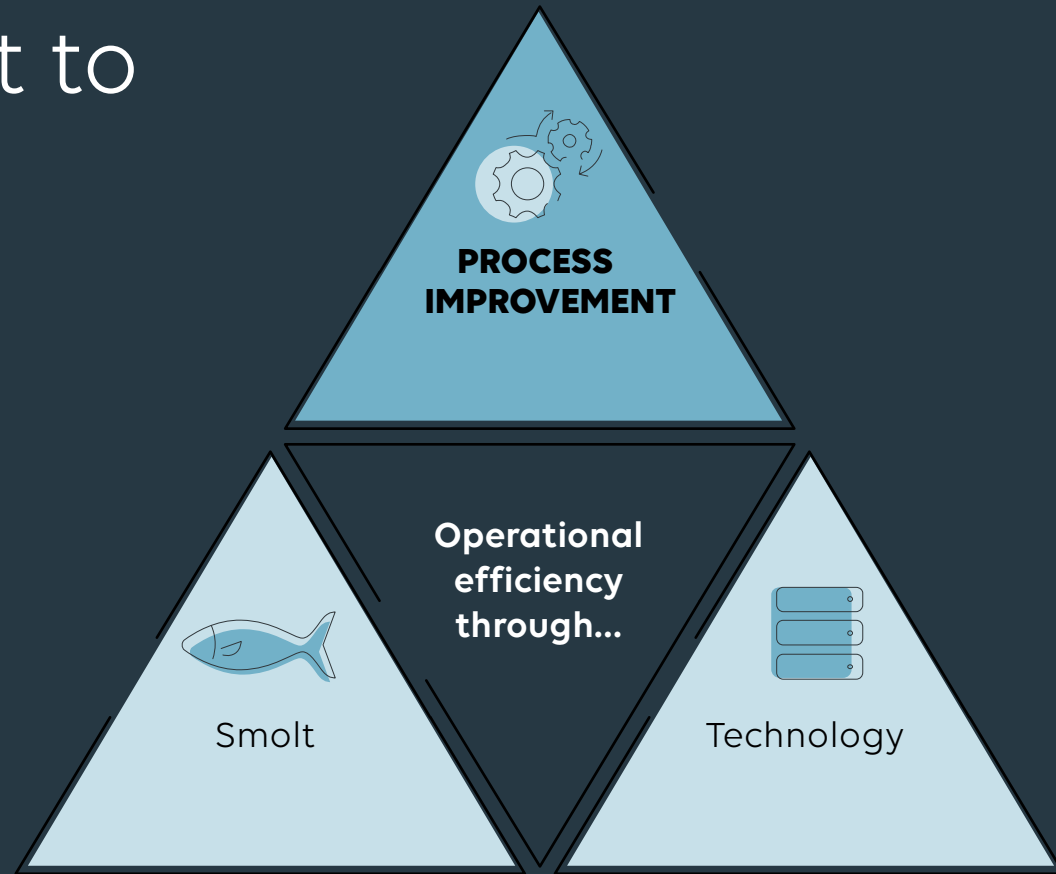


Our portfolio of strategic initiatives that are followed up every month – targeted financial effect estimated to **0,8 – 1,2 bn NOK**

 Ongoing strategic initiatives

 Effect realization phase

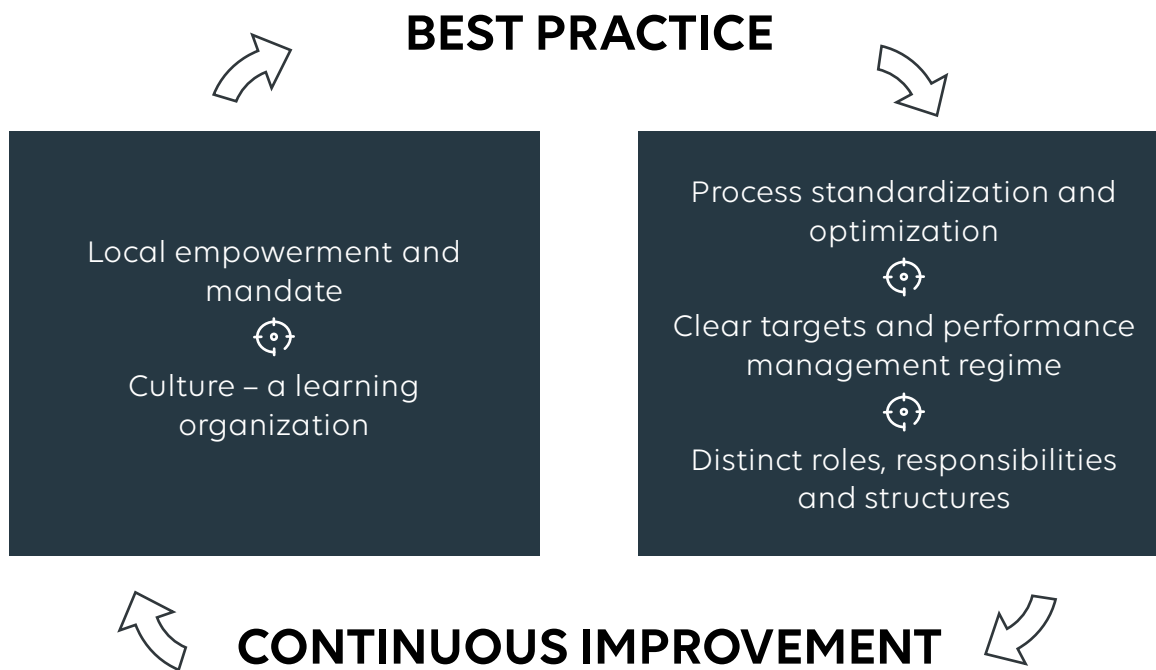
How do we work with process improvement to increase operational efficiency and profitability?



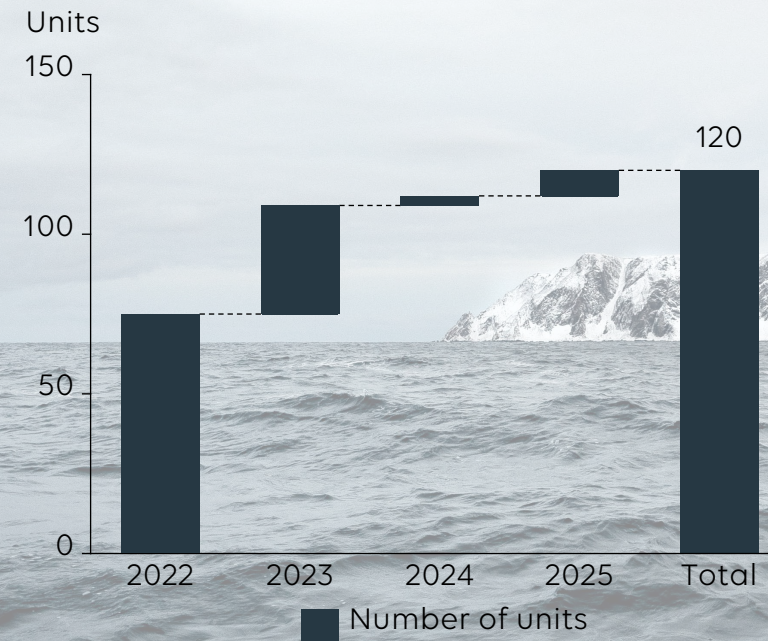




# Lerøy Way – our approach to drive best practice and performance



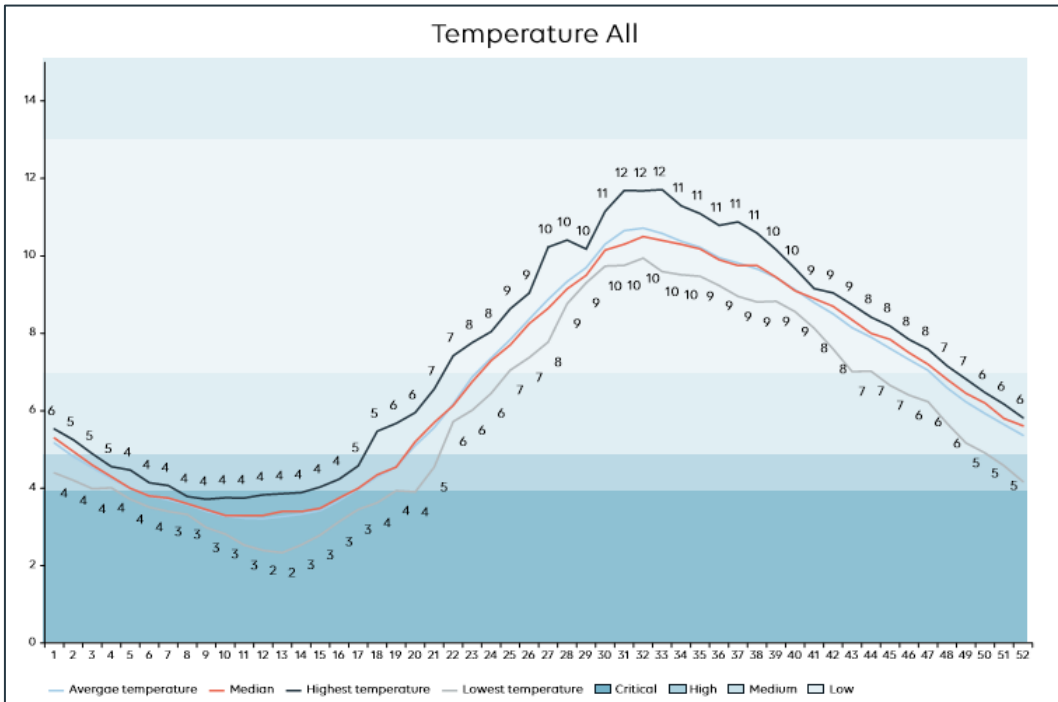
## LERØY WAY RAMP UP PLAN



Operational efficiency – Process improvement

Delivering increased efficiency, engagement and profitability

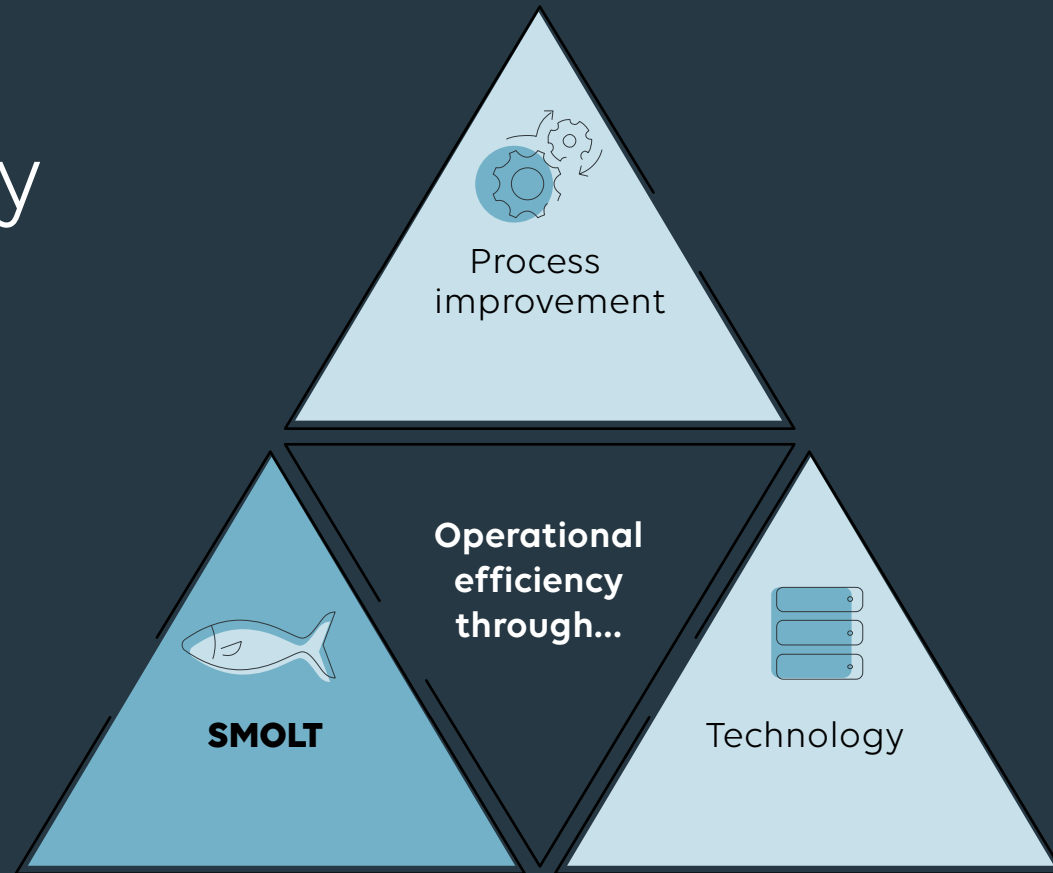
# Case study - Lerøy Aurora



## LERØY WAY – BEST PRACTICE

- ➔ Risk management model based on temperature, daylight, current and environmental factors implemented across all farming units
- ➔ Avoid handling of fish, and choosing tender handling methods
- ➔ **23% improvement** in superior quality in Q1-Q2 2022
- ➔ **95% reduction** in smolt mortality rate first six months in sea (Q1-Q2 2022)

How do we work with smolt to increase operational efficiency and profitability?



# Lerøy is a pioneer in industrializing smolt and postsmolt production...



Belsvik

Capacity: 14 M



Laksefjord (step 3)

Capacity: 15 M

2013

2019

2020

2022



Kjærelva

Capacity: 20 M



Belsvik 2.0

Capacity: 14 M

## *Impact of land investments*

- Increased smolt and postsmolt volume while creating independence of spot-market
- Reduced number of onshore facilities from 31 to 10 between 2005 and 2020 – enabling scale benefits
- Increased flexibility in production planning – can now stock fish up to 10 months a year vs. five months previously
- Survival rate first 100 days in the sea increased from 91% to 98% due to higher quality smolt

# ...and we are on our way to realize stronger biological performance with postsmolt

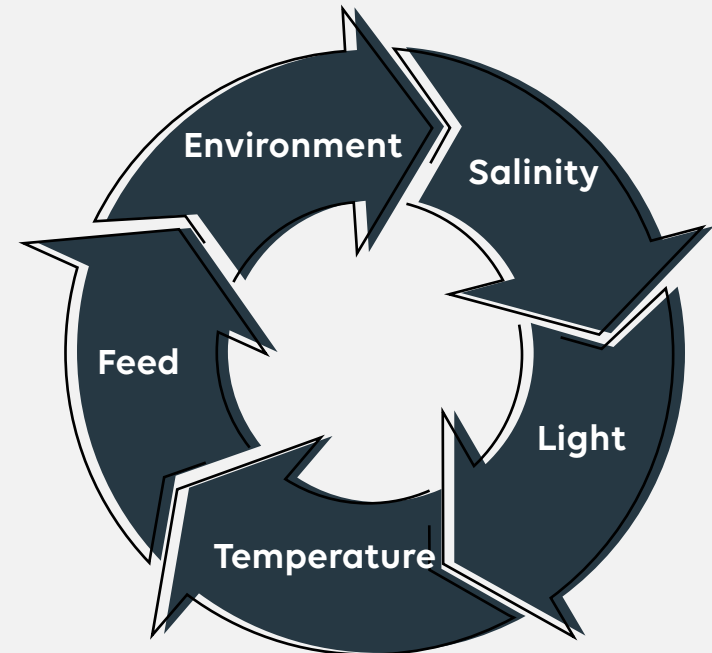
## Opportunity

- We have completed >10 production cycles with postsmolt and developed unique capabilities
- We experience varying growth rates for postsmolt in the sea-phase, 50% perform higher than normal smolt – unrealized potential

- Increased control of environmental parameters through RAS technology
- Onshore management tool optimizing postsmolt production – strengthened biological performance



## Onshore management tool



**STRENGTHENED BIOLOGICAL AND FINANCIAL PERFORMANCE**

How do we work with technology to increase operational efficiency and profitability?



# Technology is already playing a key role in driving operational efficiency – also important for future license growth

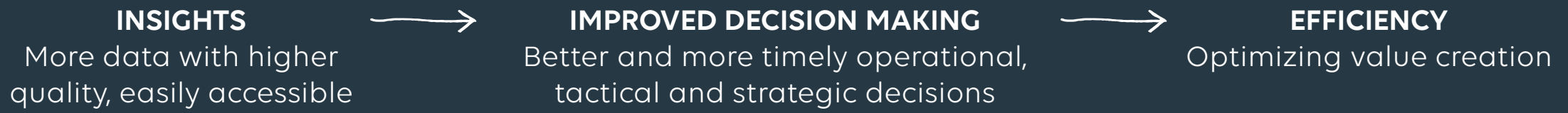


Sensor technology that collect, store and process data from our farms – improve operational, tactical and strategic decision making



New farming concepts that protect the growth environment including closed and semi-closed containment systems (SCCS), and submersible fish farm infrastructure

# Digital technology and data analytics improve operational, tactical and strategic decision making







# We have 7+ years of experience with testing semi-closed containment systems – engaged in several development tracks

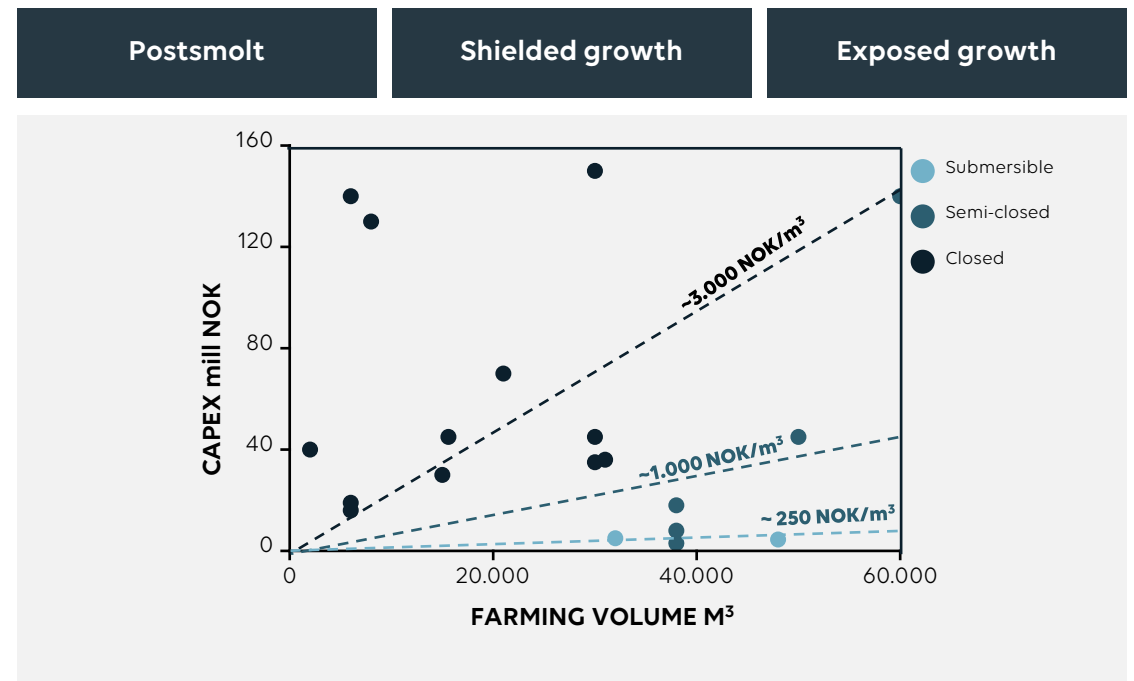
## OUR EXPERIENCE – PRELINE



7+ years  
experience

12  
batches

## USE OF SHIELDING TECHNOLOGIES



Leverage our experience to develop **smart and targeted combinations** of shielding technologies – increase biological performance, reduce production costs and enable exposed growth

# New technology also enables new farming practices

## GROWTH CENTRES

Feeding across 100% of our production units delivered by centralized and specialized growth centres

**Increased growth rate and reduced feed conversion rate**



## REMOTE FARMING

Enabling remote control of daily operations and surveillance of biological, technical and environmental conditions

**Cost efficiency and new farming capabilities**



# NEW GROWTH PLATFORMS

We also see future potential in new growth platforms – onshore & offshore



ONSHORE  
FARMING

OFFSHORE  
FARMING


# Traditional farming will not meet the future demand for Atlantic Salmon – we are monitoring new growth platforms closely

## DEMAND

Global increase in demand as a result of population growth, increasing middle class and demand for more sustainable sources of protein

## SUPPLY

Limited growth in supply from traditional coastal farming as major producers (Norway, Chile, Canada, UK) are strongly regulated due to lice and environmental concerns



**Commercial**

- Compelling volume potential
- Relatively low financial attractiveness compared to

**Technology**

- Technology in concept verification phase (TRL 3)
- Significant technology investment

We will continue to follow

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**Commercial**

- Significant volume potential – positive outlook for production in close proximity to overseas markets
- Financial attractiveness still at question – CAPEX and energy consumption challenging

**Technology**

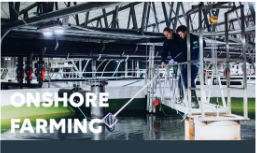
- Technology in industrial verification phase (TRL 6)
- Energy consumption and CAPEX key drivers of technological development

**Biology**

- Uncertainty related to biological performance – growth rate, quality, survival rate and fish welfare
- High risk related to acute biological incidents (i.e. H<sub>2</sub>S)

**Capabilities**

- Synergies to smolt production, particularly use of RAS technology
- Requires international expansion of farming and capability build-up



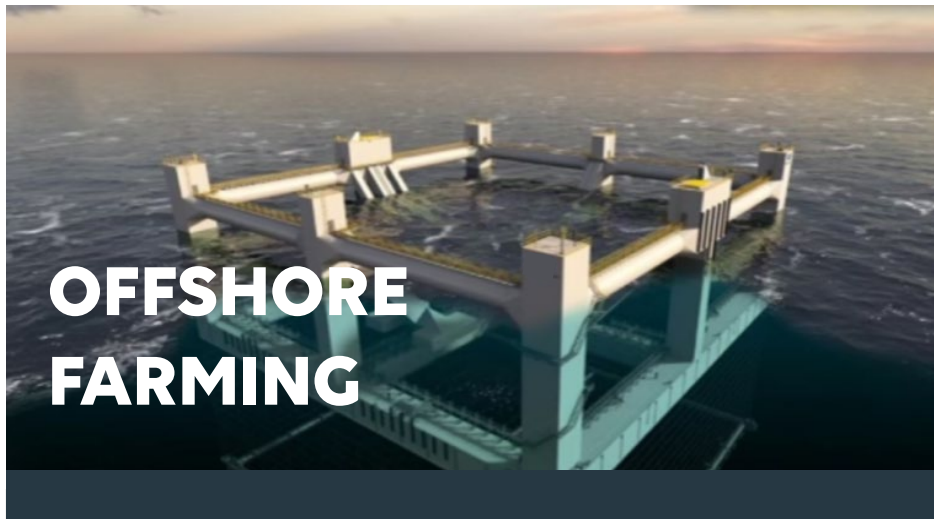
**ONSHORE FARMING**

Onshore farming is a maturing concept where salmon is grown full-cycle on land, using RAS or hybrid technologies – enables complete control of the water inflow

We monitor development in CAPEX, energy consumption and biological performance – plan for limited capital exposure short term

Growing demand and limited supply can make new growth platforms financially attractive

# We regard offshore farming as interesting with a compelling volume potential – technology immature and regulations unclear



**Offshore farming is an emerging approach to aquaculture where the farms are positioned offshore in challenging environmental conditions (>12m HS)**

## Commercial

- Compelling volume potential
- Relatively low financial attractiveness compared to e.g. coastal farming
- Regulations of significant importance – remain unclear

## Technology

- Technology in concept verification phase (TRL 3)
- Significant technology investment, development and testing required

## Biology

- Relatively high biological risk and uncertainty – particularly related to extreme weather conditions
- Requires larger and more robust post smolt

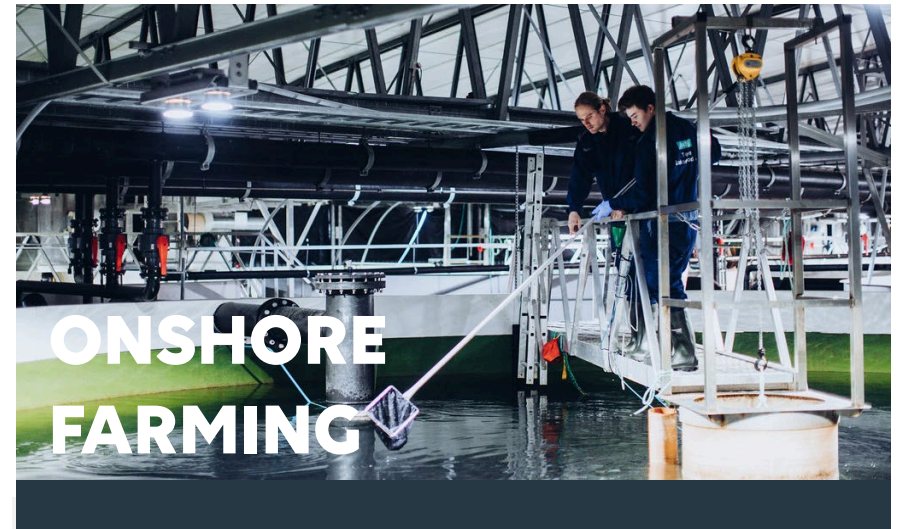
## Capabilities

- Requires new capabilities, organization and operating model
- Limited synergies to coastal farming

We will continue to follow technological and regulatory developments closely and evaluate upcoming opportunities

# Onshore farming has significant volume potential – biological risk, CAPEX and energy consumption still regarded as high

Commercial	<ul style="list-style-type: none"> <li>• Significant volume potential – positive outlook for production in close proximity to overseas markets</li> <li>• Financial attractiveness still at question – CAPEX and energy consumption challenging</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Technology in industrial verification phase (TRL 6)</li> <li>• Energy consumption and CAPEX key drivers of technological development</li> </ul>
Biology	<ul style="list-style-type: none"> <li>• Uncertainty related to biological performance – growth rate, quality, survival rate and fish welfare</li> <li>• High risk related to acute biological incidents (i.e. H<sub>2</sub>S)</li> </ul>
Capabilities	<ul style="list-style-type: none"> <li>• Synergies to our established capabilities within smolt production, particularly on RAS technology</li> <li>• Requires international expansion of farming and capability build-up</li> </ul>

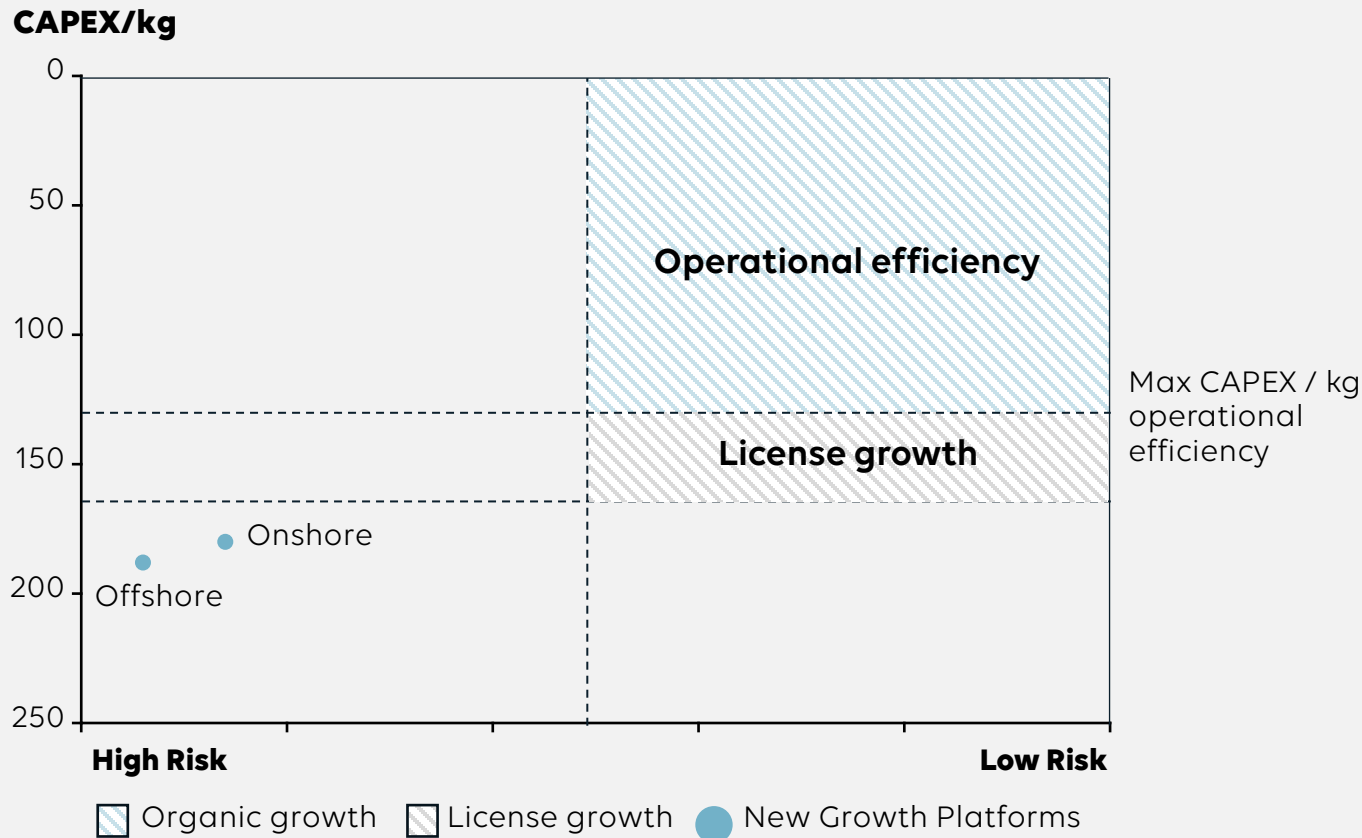


**Onshore farming is a maturing concept where salmon is grown full-cycle on land, using RAS or hybrid technologies – enables complete control of the water inflow**

We monitor development in CAPEX, energy consumption and biological performance – no significant investments planned short term



# Our primary focus is to strengthen our core business and drive profitable growth



## STRENGTHEN AND DEVELOP OUR CORE



Process



Technology



Smolt



M&A

## MONITOR NEW GROWTH PLATFORMS



Onshore farming



Offshore farming

# To drive performance and growth beyond 2025 targets, we will continue to invest in our value chain

## *Future investments*



### ROE

Increase in roe capacity and operational improvements to strengthen quality and biosecurity

**Up to 500**  
mill. NOK



### SMOLT

Increase in smolt capacity and quality to prepare for future growth and smolt demand

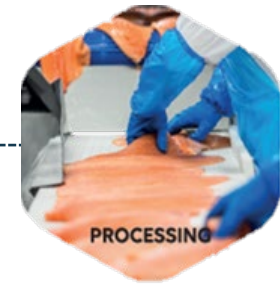
**Up to 1.000**  
mill. NOK



### GROWTH

Production technology targeting areas challenged with high treatment frequency and lice exposure – and position ourselves for new production areas

**500 – 1.000**  
mill. NOK



### PROCESSING

Increase in filet capacity in Lerøy Aurora and Lerøy Sjøtroll

**600 – 800**  
mill. NOK





# We look forward to updating you regularly on our strategy and plan towards profitable growth

## Targets for 2025

**205.000**

Tonnes harvest volume  
(Norway)

**93%**

Superior quality

**4,5**

Average harvest weight  
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Q & A

The Norwegian  
Seafood Pioneer