

An aerial photograph of ocean waves, showing white foam and deep blue water, serves as the background for the slide.

# AquaBounty

## RAS - The Human Factor

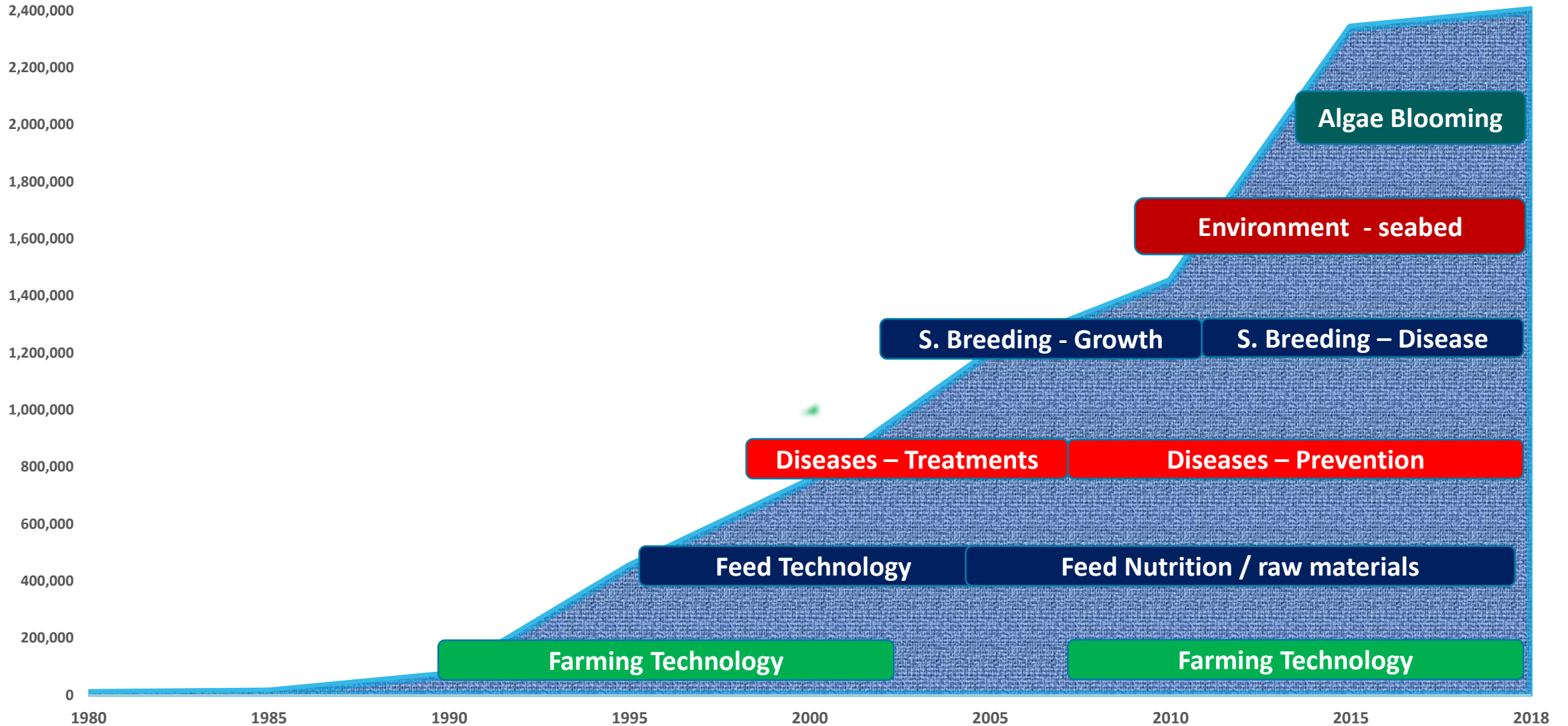
Exploring The People Management Side Of RAS Farming

RAS-Network 2020

Alejandro Rojas – DVM - AquaBounty Chief Operating Officer

October 9, 2020

# World Salmon Production (Tons)



# Farming Technology

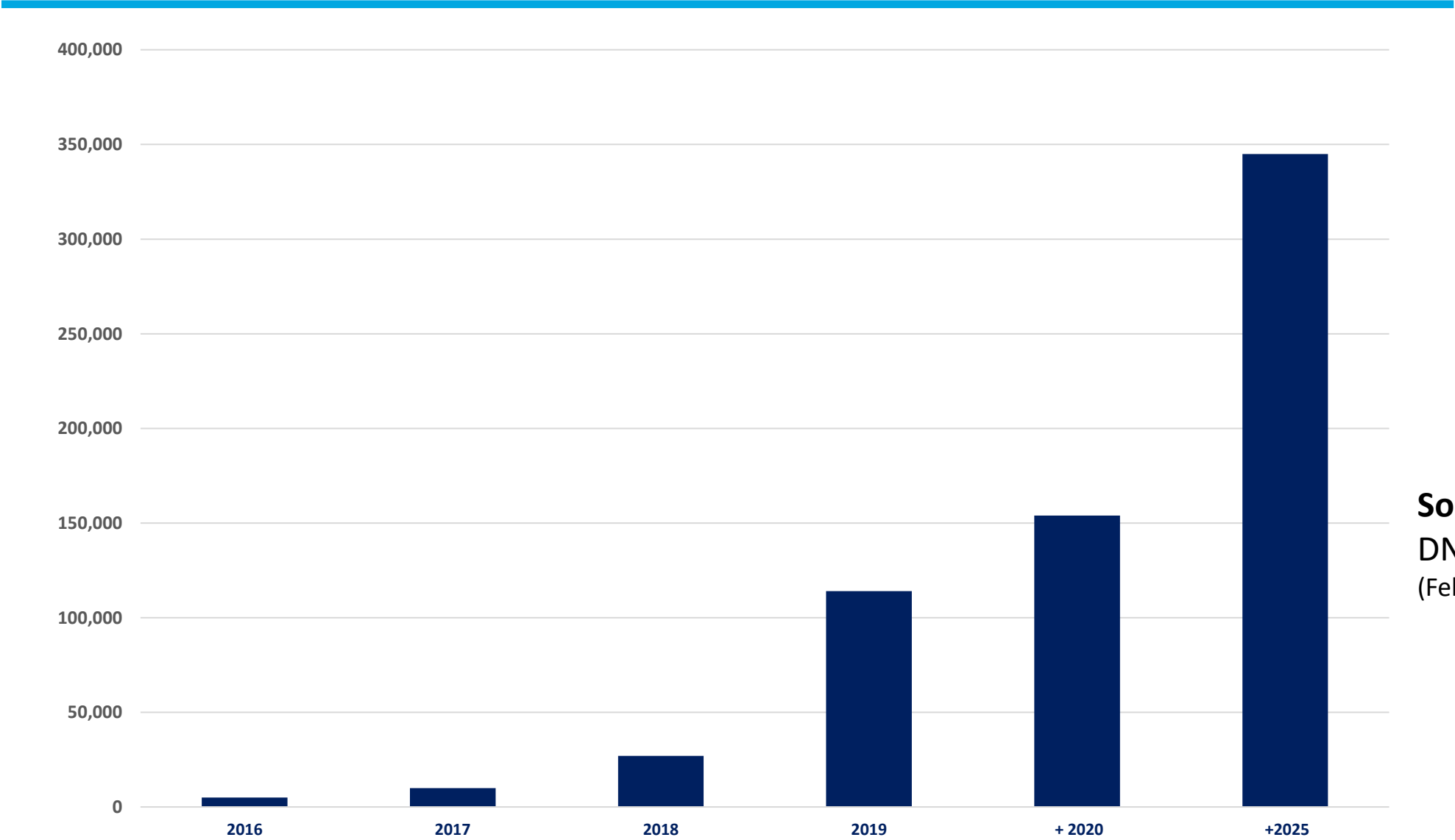
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- Traditional Cages
- New Engineering Designed Cages – Oceanic Cages – Open Ocean
- RAS
  - Smolts Production

Grow Out – Market Size Fish

# RAS Projects - Volume (Tons)



**Source:**  
DNB Markets  
(Feb.2019)





AKVA – Land Based Facility

## FINDING FISH FARMERS

# Running The Operation



10 x 1,000 tons  
10,000 tons  
100,000 tons

**VISION  
LEADERSHIP**

**PRODUCTIVE**

**ECONOMICAL**

**QUICK LEARNING CURVE**

**NO MISTAKES PLEASE**

# RAS - The Difference

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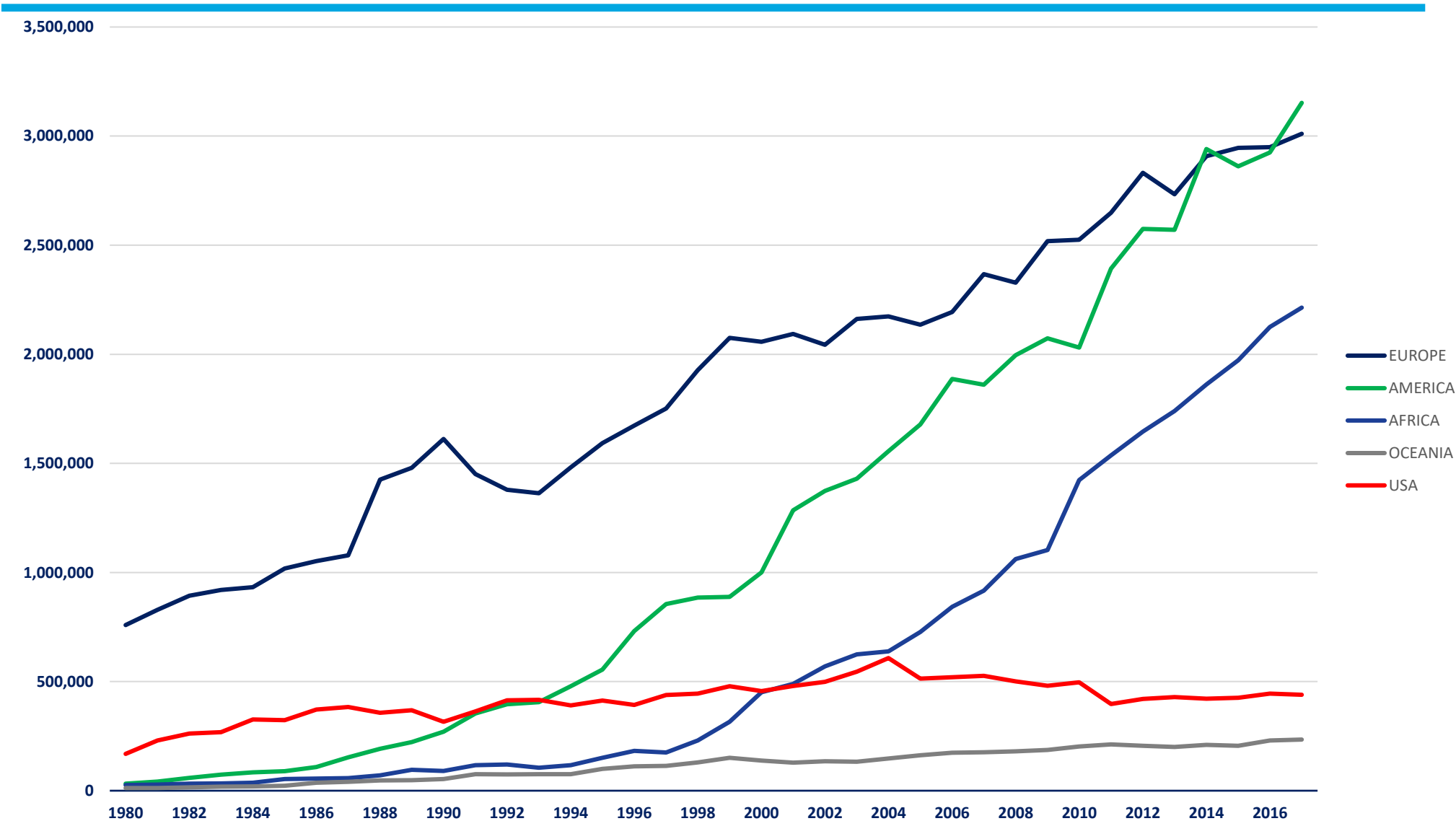
**Magnitude of Mistakes**

**Reaction Time**

**Complete Knowledge of Your Own System**

**No Time to Learn from Mistakes**

# Aquaculture Production (Tons)- (FAO)





# Google Search: Aquaculture Degree

Universities	Degree
Colorado State University	Fish, Wildlife and Conservation Biology
University of North Dakota	Fisheries and Wildlife Biology
Eastern New Mexico University	Wildlife and Fisheries Science
The University of Georgia	Fisheries and Wildlife
Michigan State University	Fisheries and Wildlife
Mississippi State University	Wildlife, Fisheries and <b>Aquaculture</b> , Conservation Law Enforcement
Texas State University	Aquatic Biology
University of Minnesota	Fisheries, Wildlife and Conservation Biology
University of Nebraska - Lincoln	Fisheries and Wildlife
Duke University	Environmental Science with Marine Science and Conservation
Oregon State University	Fisheries and Wildlife Science
Clemson University	Wildlife and Fisheries Biology
Manfield University	Fisheries
Ohio State University	Forestry, Fisheries and Wildlife
University of Alaska	Biology and Fisheries Science
Auburn University	Fisheries, <b>Aquaculture</b> and Aquatic Science - Marine Resources
University of South Florida	Marine Biology
University of Wisconsin	Fisheries and Water Resources
Louisiana State University	Fisheries and <b>Aquaculture</b>
Ball State University	Aquatic Biology
University California	Wildlife, Fish and Conservation Biology

# AquaBounty Purpose Driven Culture Will Change The Future Of Food



## People

**Create Value for Customers, Shareholders, Employees, and Communities**

Respect all people, invest in employees and revitalize local rural communities.  
Be transparent with our consumers, stakeholders and the public.



## Purpose

**Be a Good Steward of the Planet and the Natural Resources Entrusted to Us**

Safeguard the welfare of our fish with BAP certified feed, a better nutritional profile and no medicines or chemicals.  
Align with the UN Global Compact.



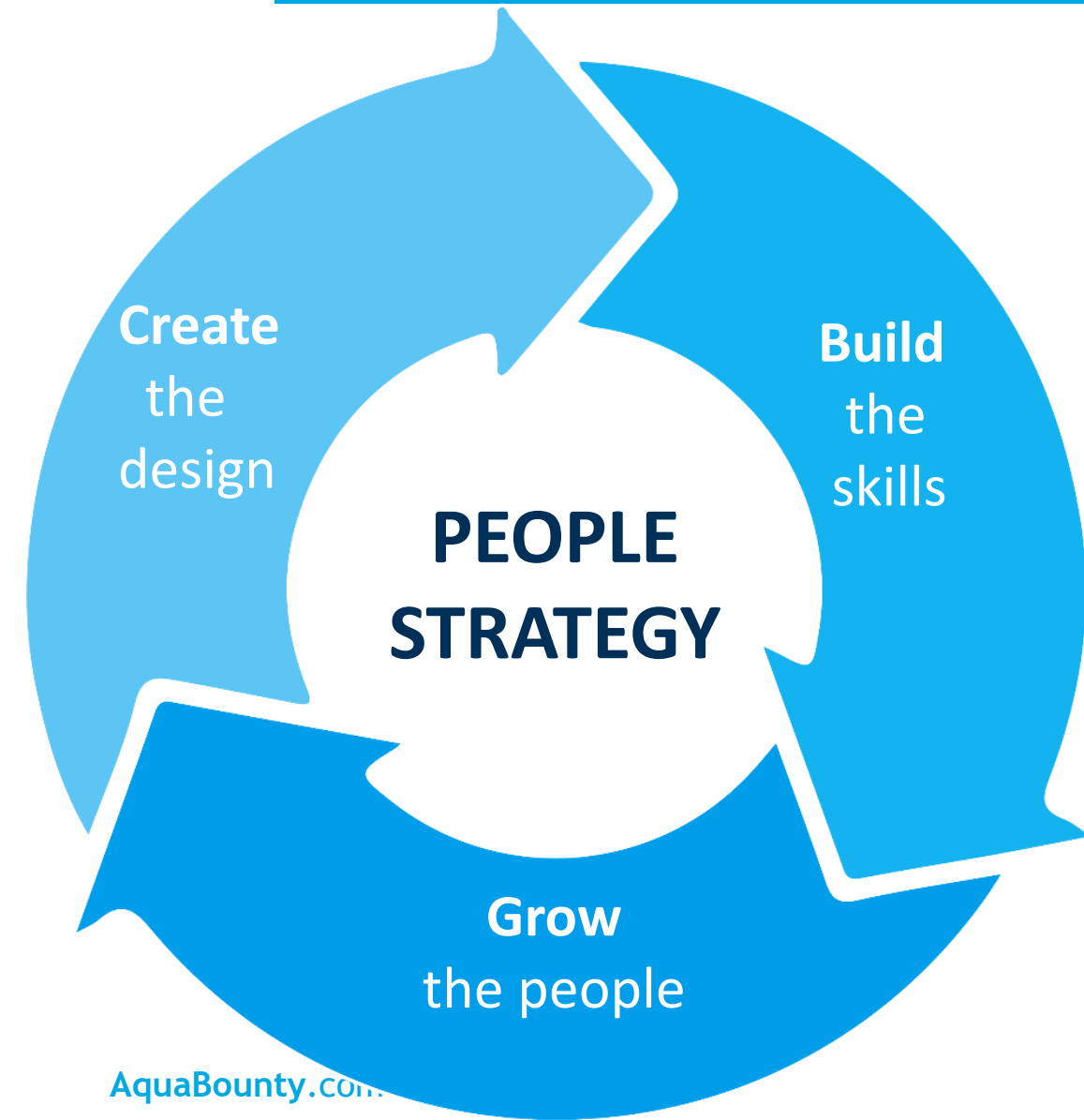
## Performance

**Maximize Utilization of Operations and Resources**

Invest in energy efficient equipment, explore efficient use of energy, and employ alternative energy options.  
Reduce, reuse and recycle waste and minimize waste sent to landfills.

# Our People Strategy Is Rooted In Continuous Improvement

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## **CREATE The Designs**

- ✓ Job Design
- ✓ Hiring Design
- ✓ Performance Review
- ✓ Strategy Design
- ✓ Policy Design
- ✓ Culture Design
- ✓ Training Design
- ✓ Feedback Design
- ✓ Compensation Design

## **BUILD CORE Leadership Skills**

- ✓ Translating Goals
- ✓ Performance Leadership Cycle
- ✓ Creating Habits

## **GROW Continuous Improvement**

- ✓ Lean Process Implementation
- ✓ Facilitation Skills
- ✓ Problem Solving
- ✓ Team Formation

# Recruiting

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- People with Knowledge (Science, Mechanics, Technology Applications)
  - RAS Farming Experience
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- People Management
- Teaching Capacity – Language Barrier
- Dedication - Commitment



# Training

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- Formal Education
  - Internal Knowledge Transfer
  - Exchange of Experiences
  - External: Workshops, Conferences
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- Career Development  Retention

# Designing An Education Program With Focus On Aquaculture - RAS

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## INDUSTRY – ACADEMIA ALIANCE

### \*\*\*Cluster: Norwegian Centre For Expertise (NCE)

Development of Education Program to Meet Industry Needs:

- Skilled People
- New Production Technologies
- Learning Platform To Be Used In Teaching
- Student Exchange Between Universities and Co-ops Programs
- Training Programs For Teachers

# U.S. - RAS - Farm

## SALES & MARKETING

- Communication
- Advertising
- Printing

## PROCESSING

- Design
- Equipment
- Packaging
- Cold Storage

## TRANSPORTATION & LOGISTIC

- Trucking, Air cargo & Train

## FARM TECH

- Construction & Maintenance
- Cleaning & Disinfection (Biosecurity)
- Health & Safety
- Electromechanical
- Piping
- Feeding & Fish Handling
- Water Treatment – RAS
- Engineering design
- Power generators
- AC – Chillers – Refrigeration
- IT

## FARM BASICS

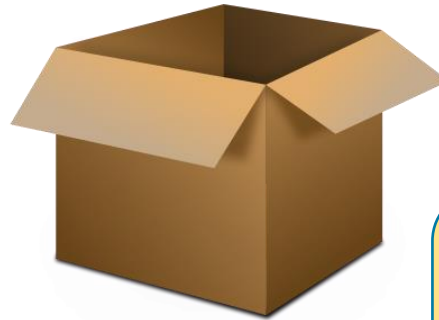
- Feed
- Oxygen
- Fuel & Gas

## Regulatory Agencies

- DNR
- DEM
- FDA
- Others

## SERVICES

- Financial
- Insurance
- Communication
- Certifications
- Legal



## TRAINING & EDUCATION

- Aquaculture Programs
- Universities
- Community Tech Colleges
- HR – Recruiting
- Research Institutes

## COMMUNITY

- Economic Development Counites
- Community Programs (Youth)
- Hotels & Restaurants
- Local Shops

## HEALTH & ENVIRONMENT

- Vet. Services
- Laboratories
- Water Chemistry
- Environmental monitoring
- Biotech Companies
- Research Institutes

# AquaBounty Is Committed To...

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**DEMONSTRATING** world class expertise operating land-based RAS facilities in the U.S. and Canada

- First Indiana Harvest of Conventional salmon Q3 2020
- First AquAdvantage Salmon Harvest Expected Q4 2020

**DEVELOPING PEOPLE** based on utilizing our rigorous regulatory requirements ensuring excellent care and husbandry at our farms

**FOCUSING ON CUSTOMERS** needs and commercial development progressing in anticipation of 2020 harvest

**IDENTIFYING POTENTIAL PARTNERS** and sites for development of RAS farms in the U.S. and abroad





# Thank You!

AquaBounty uses next-generation land-based aquaculture technology that supports ocean conservation and provides consumers with regional access to nutritious, fresh and affordable salmon with no added chemicals or antibiotics.

## HQ Address

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## Phone & Email

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