ASIA
AFFINITY

GROUP STRUCTURE

The group develops schemes focused on small community, SME & gig economy sectors, geared towards building sustainable and resilient communities, accelerating financial inclusion, promoting health & wellness and technology solutions delivery.

Asia Affinity

BUILDING

kmb

MARI OCEANS

MICRA INDONESIA

PROTECTING

japanrisk SPECIALIST
AN ASIA AFFINITY HOLDINGS LIMITED GROUP COMPANY

ACACIA

COASTAL MARINE

ARIEL

GREEN OAK

EMPOWERING

SEA GREEN

GREEN REACH

3

TRIPLE BOTTOM LINE

PEOPLE
Social Responsibility

PLANET
Environmental
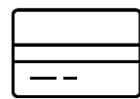Stewardship

PROFIT
Economic Value

SUSTAINABILITY

PEOPLE

Seaweed is a sustainable livelihood option for coastal communities around the world

POVERTY ALLEVIATION

- Increased earnings and diversified income streams

INCOME DIVERSIFICATION

- Multiplying revenue streams for coastal communities

JOB CREATION

- Employment opportunities via integrated coastal management approach

ACCESS TO FINANCE

- Incentivising international investment in projects at local and regional level

EDUCATION

- Digital platform facilitates access to courses for financial literacy and sustainable practices
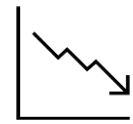
EQUITABLE GROWTH

- Increased share of end-product value for primary producers

5

PLANET

Seaweed aquaculture is proven to support a variety of restorative ecosystem benefits

DECARBONISATION

- Reduced CO_2 via production of seaweed products (bio-fertilizer, bio-plastics, blue food, animal feed etc.)

REDUCED COASTAL EROSION

- Protected wild seaweed and seaweed within commercially cultivated aquacultures act as wave breaks

BIODIVERSITY GAINS

- Rehabilitated marine ecosystems developed through sustainable practices and cultivation of seaweed
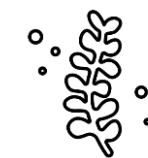
ECOLOGICAL ENHANCEMENT

- pH balance and stabilisation via nutrient reallocation

ENVIRONMENTAL MONITORING

- Improved yields through early detection of marine heatwaves from sensor capability
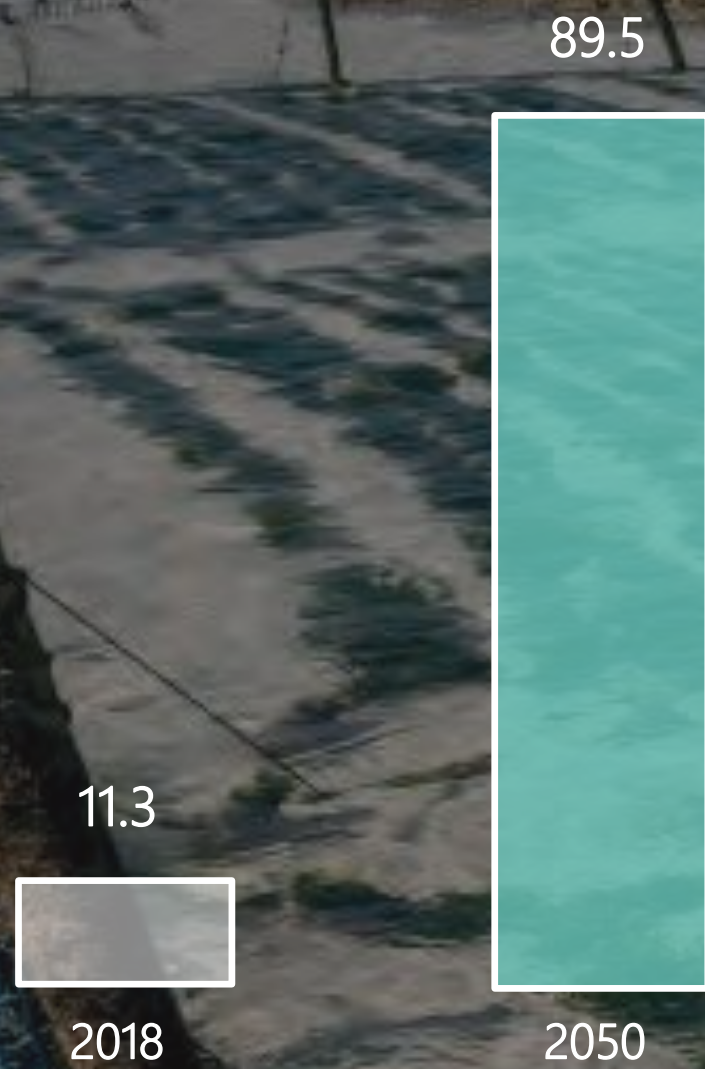
CARBON DIOXIDE REMOVAL

- Bio-sequestration by seaweed within commercially cultivated aquaculture
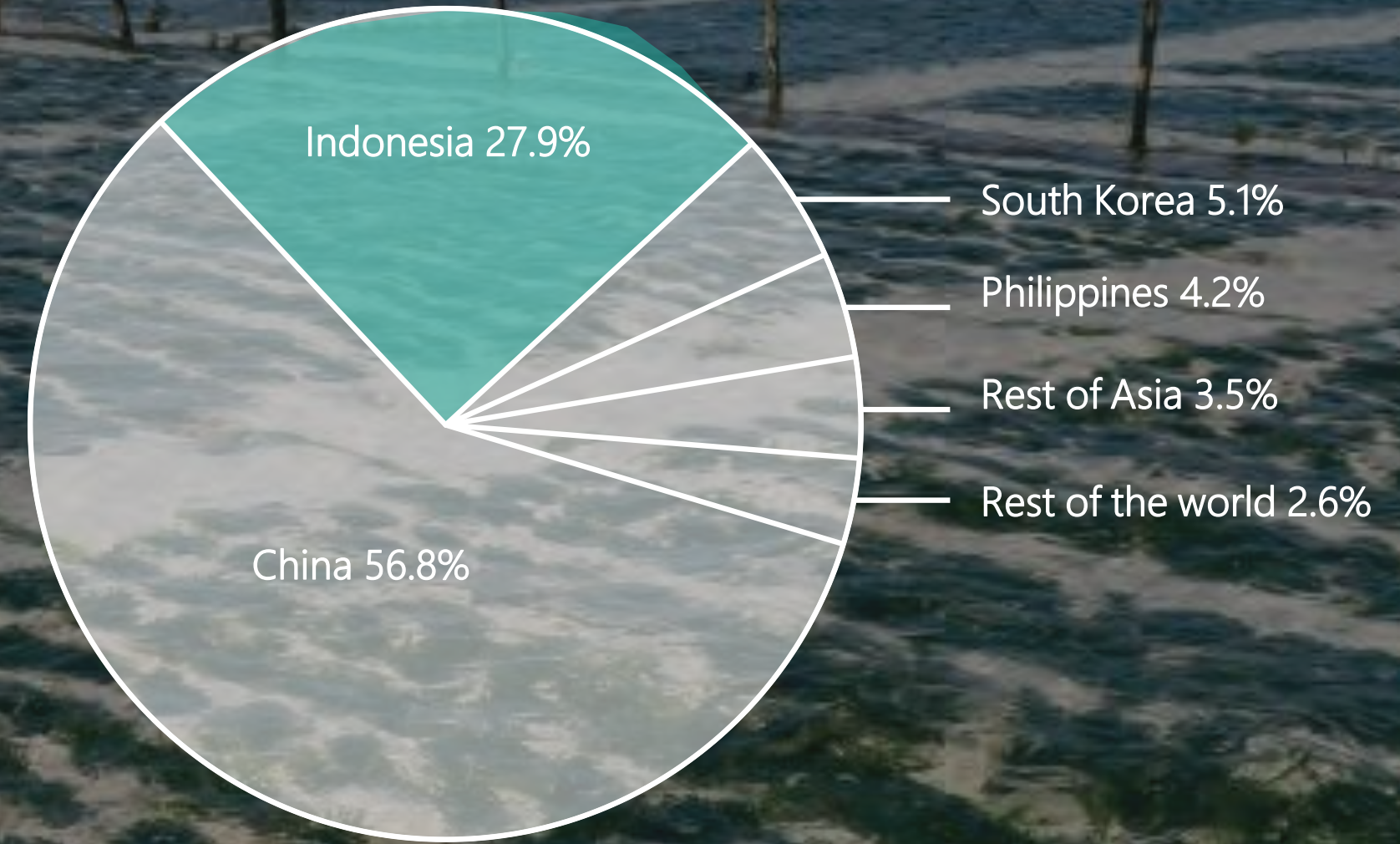
6

PROFIT

The pilot project located in Indonesia is the second biggest seaweed producing market in the world, with at most 20% of cultivable coastline currently being used for seaweed farming,

Projection of Global Seaweed Production
In US $ Billion

89.5

11.3

2018

2050

Global Seaweed Production 2019

- Indonesia 27.9%
- South Korea 5.1%
- Philippines 4.2%
- Rest of Asia 3.5%
- Rest of the world 2.6%
- China 56.8%

By 2050 the seaweed market is expected to grow to almost **8 times** since 2018.

ALIGNMENT WITH UN SDGs

Sea Green has been built around the United Nations Sustainable Development Goals

Together with its partner organisations directly contributes to 13 of the 17 goals while strongly focusing on the following four:

2. ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

8. DECENT WORK & ECONOMC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

13. CLIMATE ACTION

Take urgent action to combat climate change and its impacts.

14. LIFE BELOW WATER

Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

MARI OCEANS

Scaling Seaweed Growing Operations in Southeast Asia

OUR FOCUS ON INDONESIA

Sulawesi

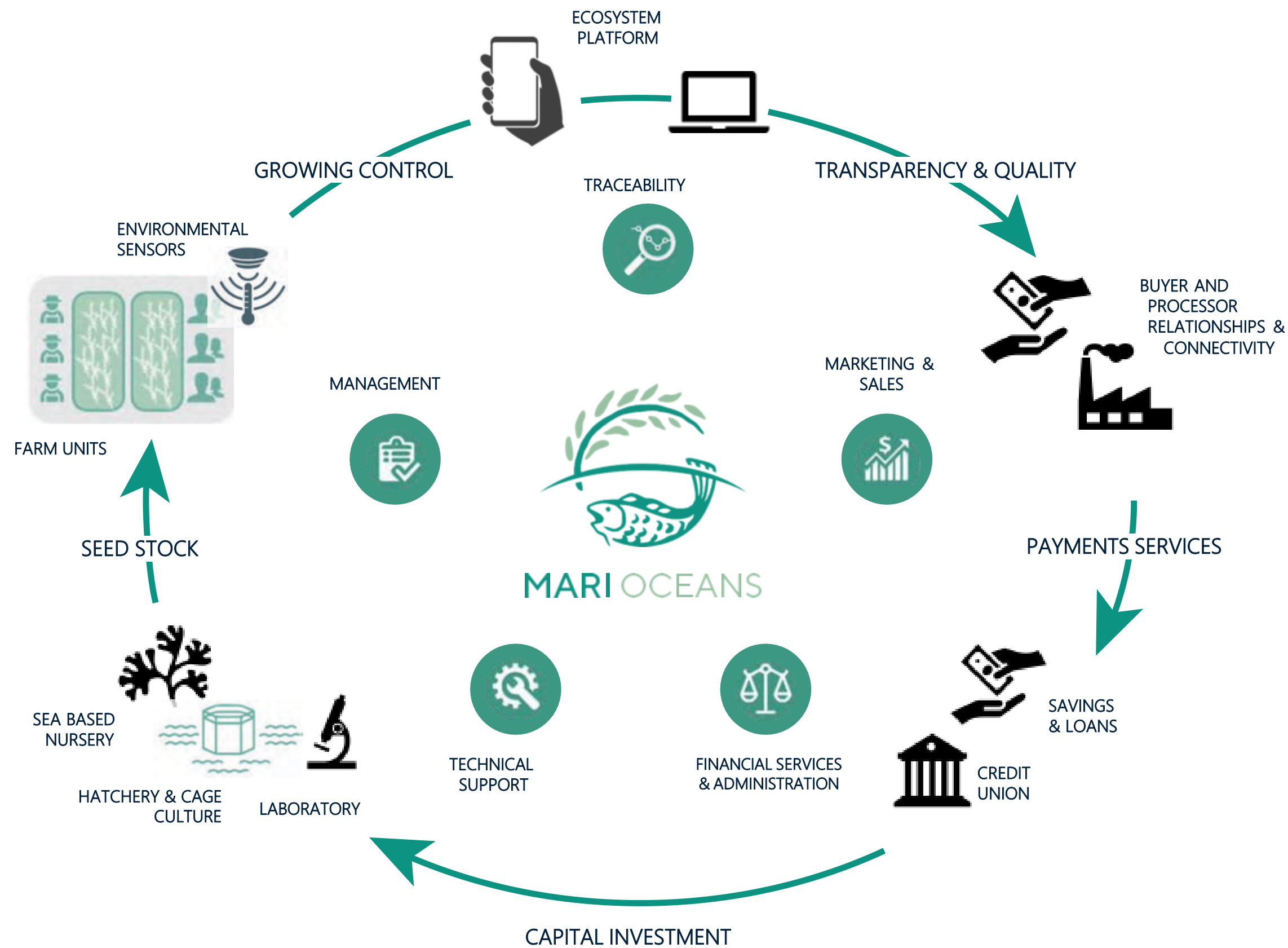- South Sulawesi's coastal communities have generational experience of seaweed farming

- Vast knowledge base provides the perfect setting to combine artisanal skill with the latest technologies and innovations

- MARI Oceans' target initial sites are in Bone, South Sulawesi - a major centre for the seaweed industry – **up to 50% of national production**
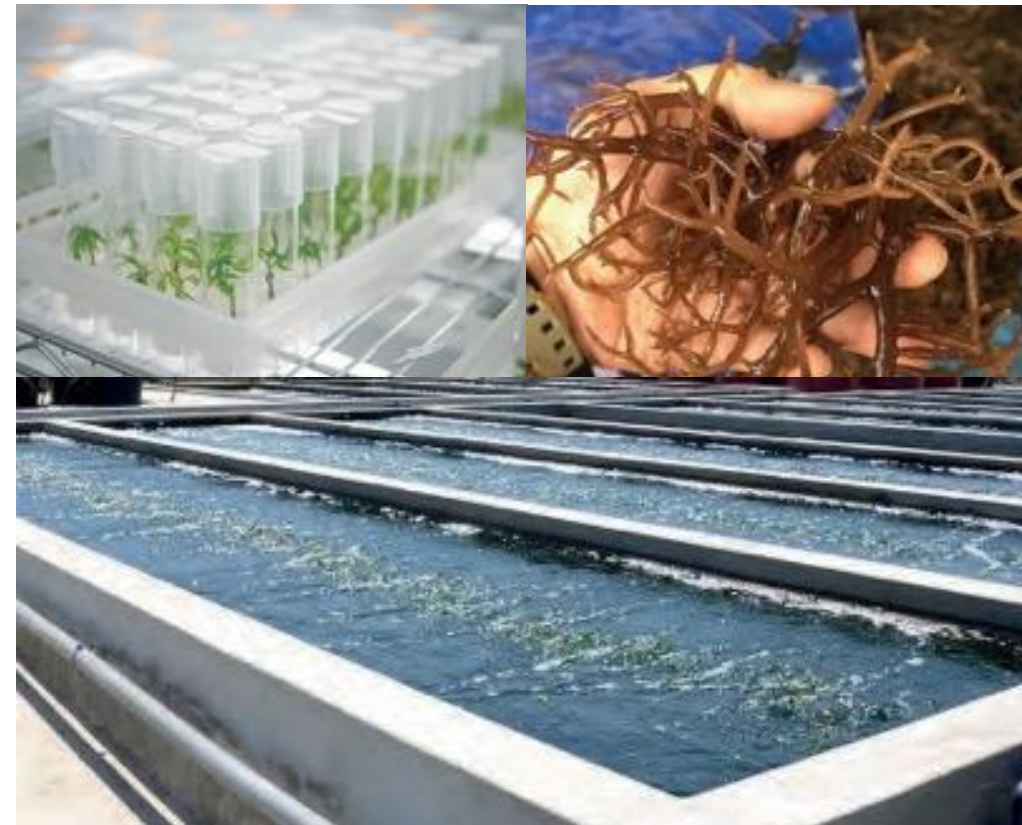
BUSINESS MODEL

The MARI model is circular, with operational and process improvements at each stage creating compound effects from end to end.
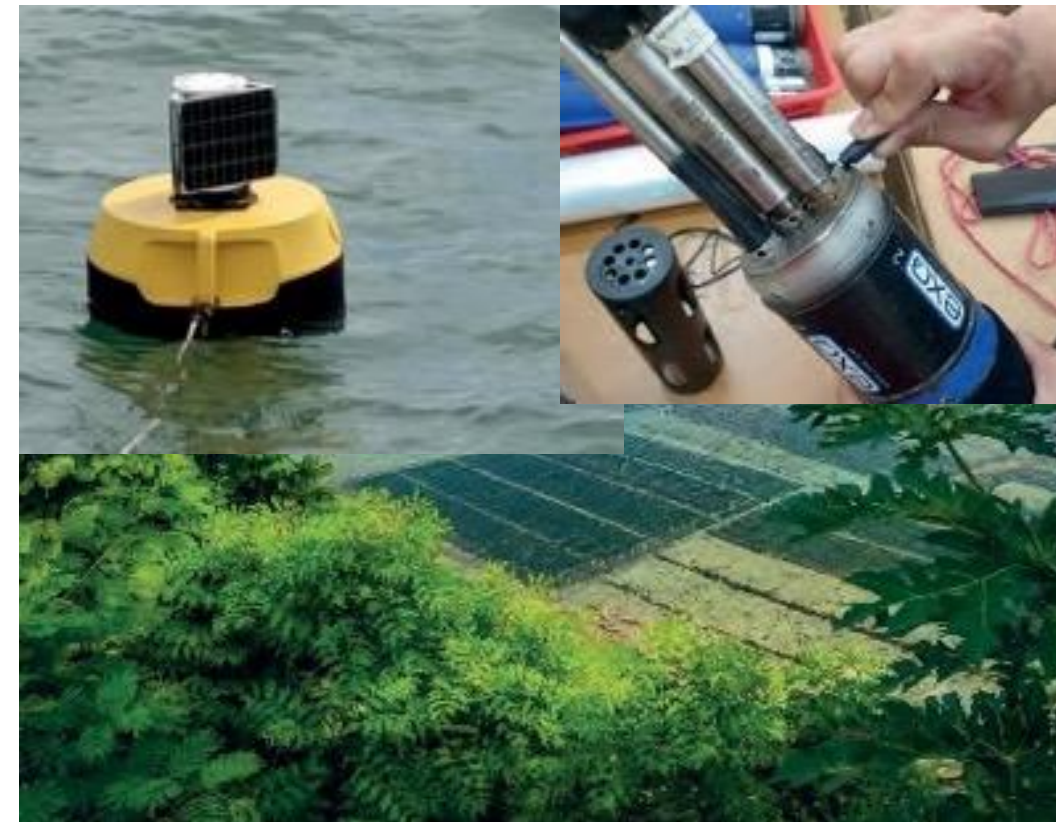
ECONOMIES OF SCALE

Hatchery Operations

Seed stock control facilitates, quality improvement, crop resilience and end use diversification

Use of cutting edge biotechnology, advanced tissue & cage culture, delivers higher yields for end customers

Managed Cultivation

Deployment of water quality sensors enables visibility of quality vectors:

Long term trend analysis facilitates iterative improvements to practices, and development of new site selection

Optimised Collectivisation

Contract structures for farmers and their communities allows for shared use of specialised equipment e.g. solar drying domes and Procedural enhancement to improve quality.

Aggregation at community level stimulate greater shared negotiating power, improving market access and competitiveness

Shared initiatives for compounded product improvement across primary community farming operations
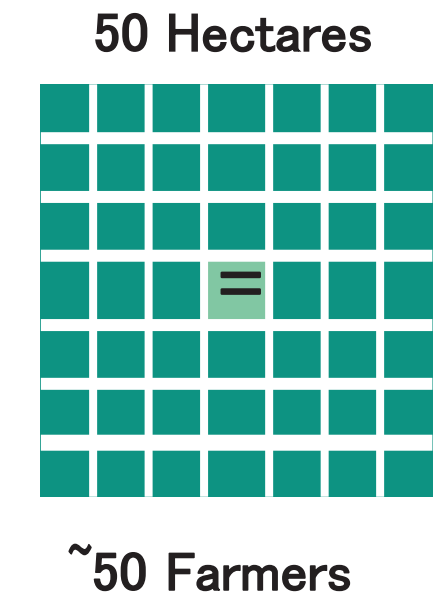
FARM SITE STRUCTURING

ARTISANAL FARMS

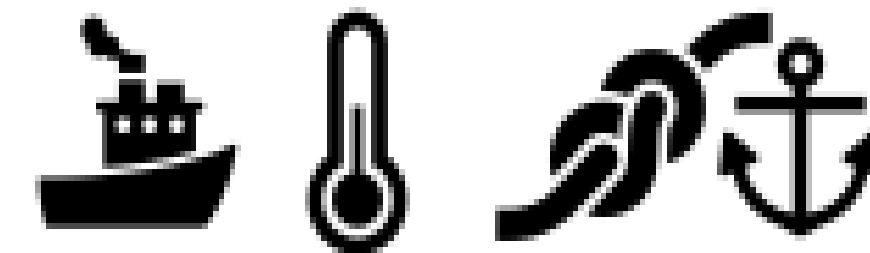- Smallholder farms of ~1ha are grouped into MARI site blocks of approximately 50 hectares

LARGE-SCALE OPERATIONS

- As MARI farming communities grow in efficiency and capacity, scaling options become available

- The first of these sites will begin at 250 hectares. Leveraging new technology and using custom built vessels will increase yields up to 2x
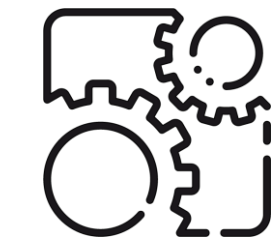
ECOLOGICAL SUSTAINABILITY

For all MARI Oceans operations, expansion can only occur in an ecologically sound manner:

- Every new site is subject to a feasibility study, carried out prior to establishment, whether onshore, nearshore or offshore

- Aquaculture operations are paired with community regeneration activities to achieve an integrated coastal cooperative model
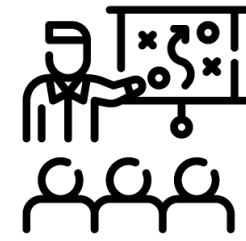
50 Hectares

~50 Farmers

Prospective 4ha Hatchery Site
Warehouse Site

50 250 +500
50 +250
50*

Indonesia
BONE
Sulawesi

*hectares

Advanced technology to mechanise and automate

MARI COOP

RESEARCH & TRAINING

TA & TRAINING
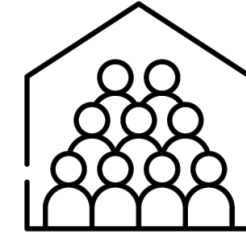
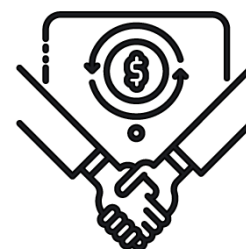**COMMUNITY DEVELOPMENT**

PROTECTION
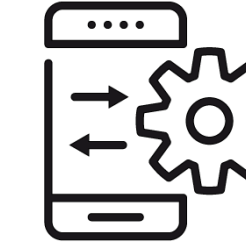
FARM STORE

FINANCIAL SERVICES

BUSINESS INCUBATION

ENABLING TECHNOLOGY
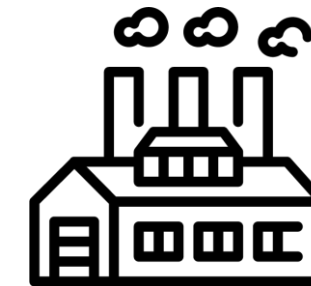
WAREHOUSE

TRANSPORTATION

2022

National Level Cooperative
100 members
Financial Services
Protecting Product

2023

500 members
TA Training
Community Development
Farm Store

2024

1000 members
Warehousing
Transportations
Enabling Technology

2025

2000 members
Business Incubations

SEA
GREEN

Commercial Infrastructure & Blockchain Technology
for the Seaweed Industry

ECOSYSTEM OPPORTUNITY

Artisanal seaweed farmers are often:

- Indebted to traders
- Unbanked
- Ill-equipped to grow their businesses

The opportunity for Sea Green is to empower all actors in the value chain and to create the infrastructure that facilitates the change needed in the seaweed industry.

Sea Green combines mobile app and platform capabilities to optimise usage of seaweed value chain data.

Mobile App Services

- Traceability
- Payments & commerce
- Environmental monitoring

Platform Features

- Supply chain visualization & analytics
- Iterative research tools
- Ecosystem interoperability

RESEARCH, DEVELOPMENT, AND FINANCE
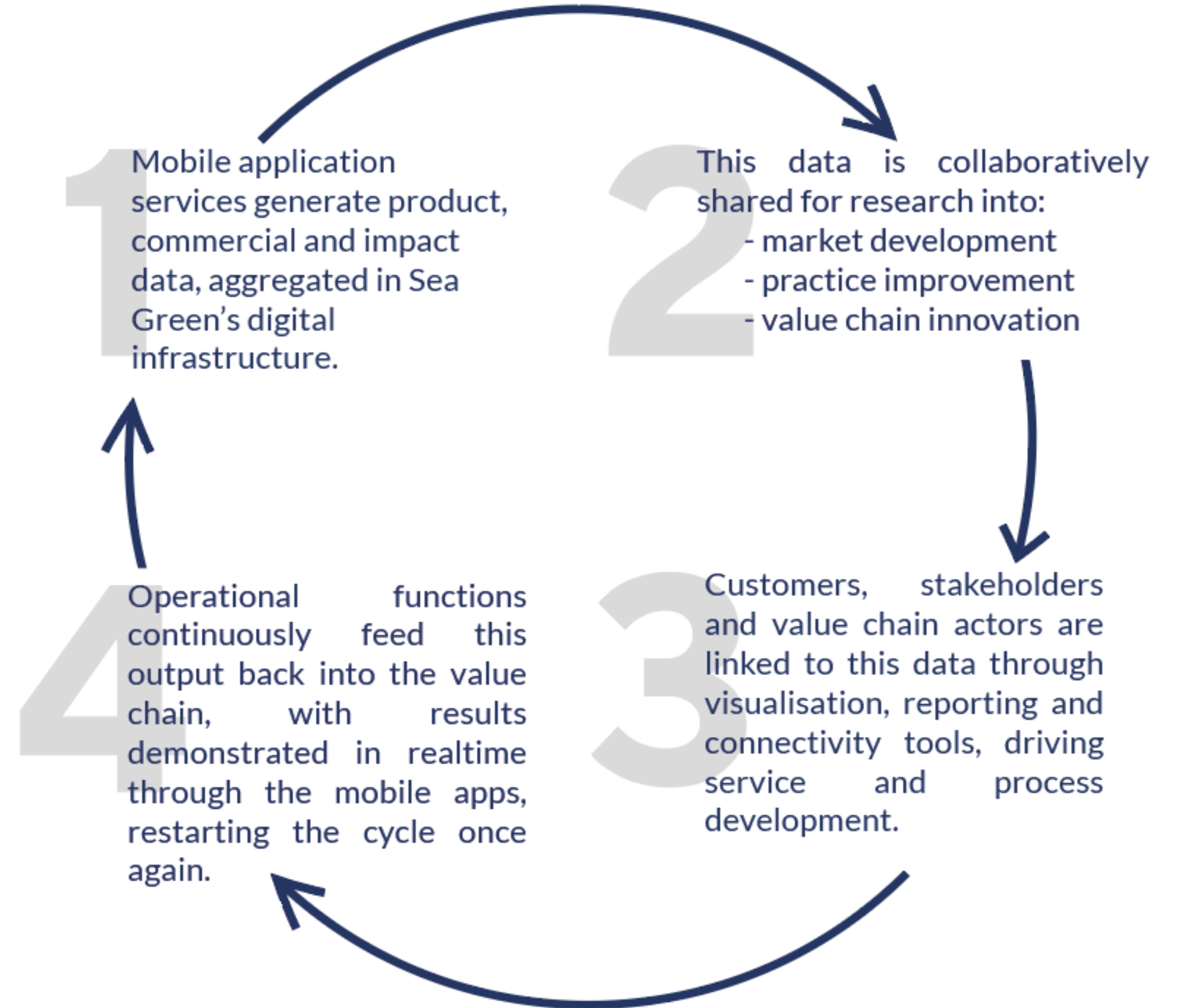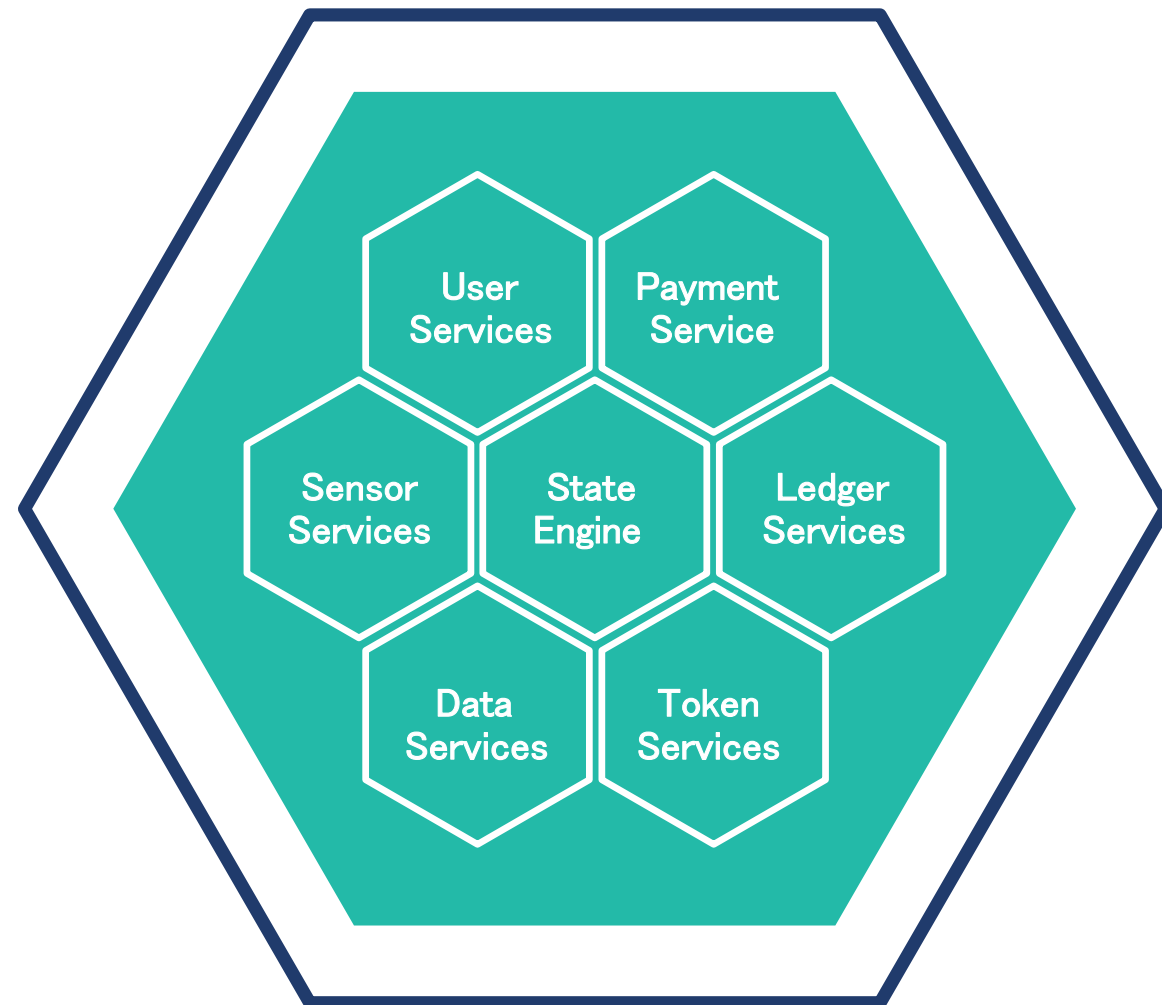
SEA GREEN

SEAWEED VALUE CHAIN
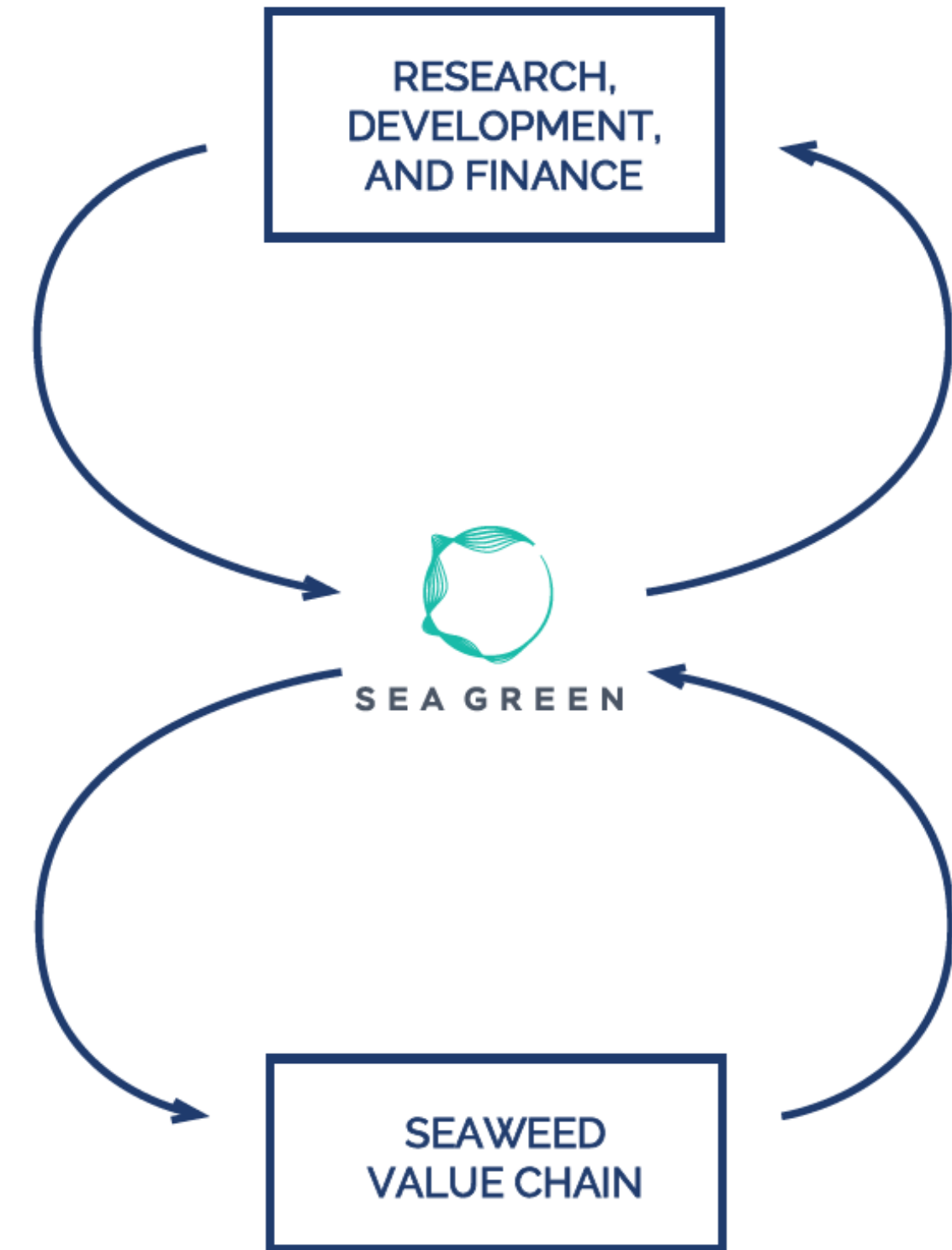
PLATFORM CAPABILITIES

The Sea Green platform connects multiple services into one central hub for transactions, knowhow and insights.

CORE PLATFORM SERVICES

1 Mobile application services generate product, commercial and impact data, aggregated in Sea Green's digital infrastructure.

2 This data is collaboratively shared for research into:
- market development
- practice improvement
- value chain innovation

3 Customers, stakeholders and value chain actors are linked to this data through visualisation, reporting and connectivity tools, driving service and process development.

4 Operational functions continuously feed this output back into the value chain, with results demonstrated in realtime through the mobile apps, restarting the cycle once again.
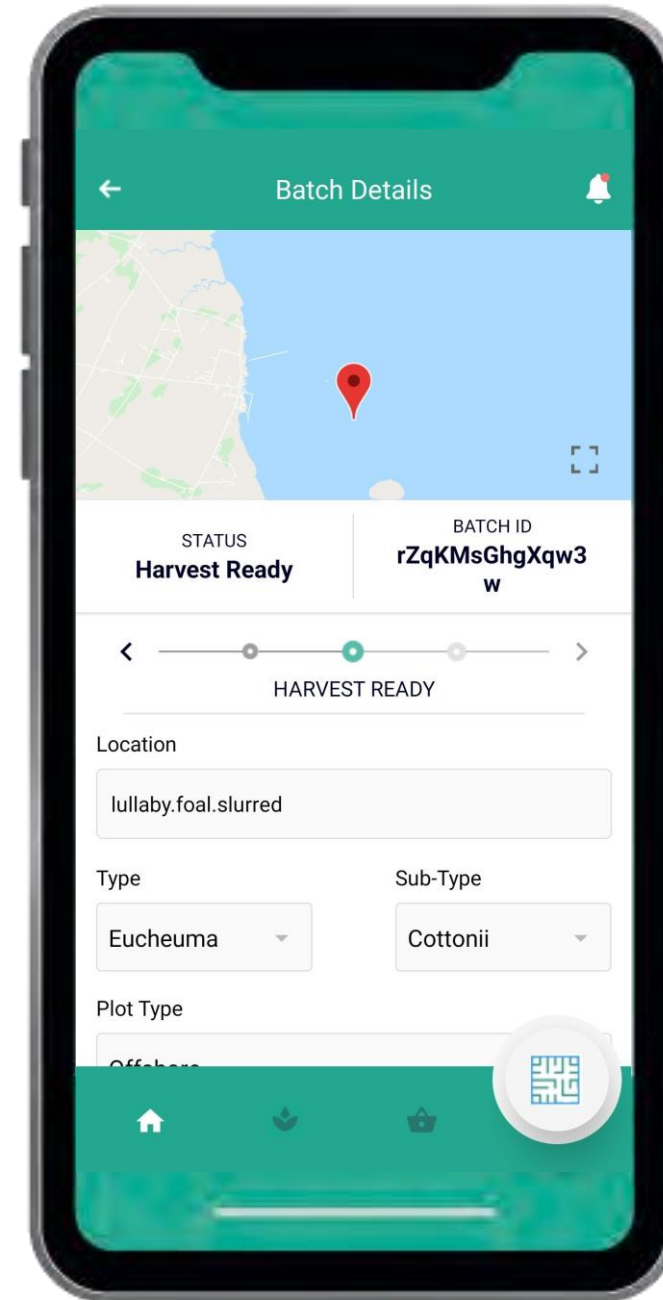
APPLICATION SERVICES

The bundling of environmental monitoring, traceability and payment features incentivises the adoption of the Sea Green platform across the value chain and ensures connectivity.

· Temperature
· Salinity
· Acidity
· Light intensity
· Chemical (DO)
· Biological (nutrient)

1 TRACEABILITY

- Standardised & staged product description and attribution
- Ownership control & tracking
- Locational and authenticity verification
- End-to-end best practice and process management

2 COMMERCE

- Controlled provenance
- Free and direct goods exchange mechanism
- Payment rail & mobile wallet integration
- Consignment system to ensure timely accurate funds dispersal

3 ENVIRONMENTAL MONITORING

- API integration of ocean data & insights hardware and services
- Increased visibility of water quality metrics relevant to seaweed cultivation
- Facilitates improved methodologies for growing site selection management Increased transparency for customers and consumers
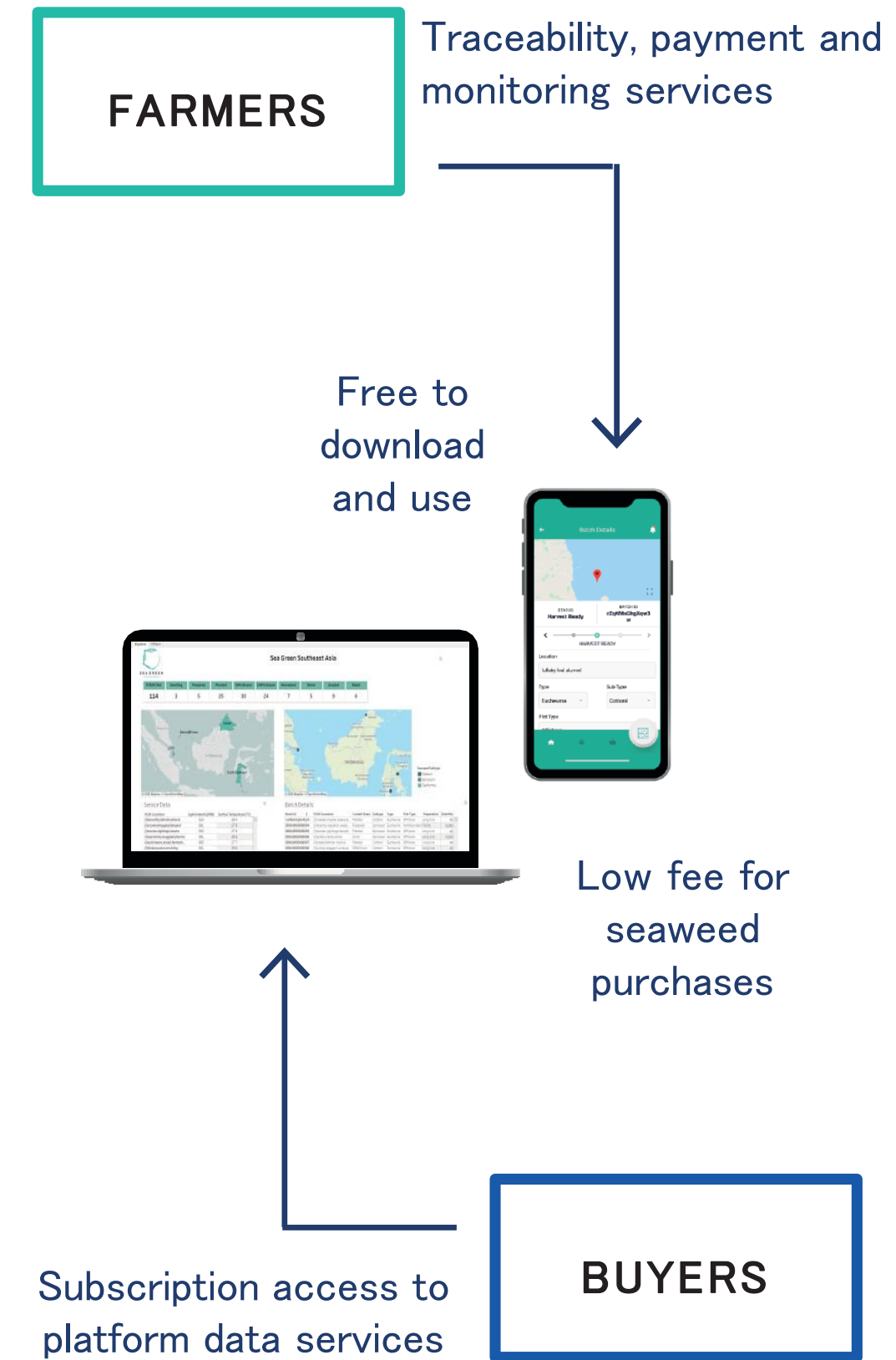
REVENUE MODEL

MOBILE APPLICATION

- Free to download and use. Commissions only charged at the time of a commercial transaction
- Consignment model allows for continued ownership by farmer during seaweed placement by MARI or other agent. Funds dispersal is automatic at final sale to end consumer

PLATFORM DATA SERVICES

- Supply chain data service for commercial clients on a monthly subscription basis
- Target clients across producer, buyer and financial segments

ADOPTION TARGETS & NEW VERTICALS

- Adoption target of 20,000+ farmers in five years
- Platform services segregated from mobile application, allows for support of new verticals/value chains
- Ecosystem services (carbon/nutrient and biodiversity credits)

FARMERS

Traceability, payment and monitoring services

Free to download and use

Low fee for seaweed purchases

BUYERS

Subscription access to platform data services

PROTECTION & RESILIENCE

PROTECTION SOLUTIONS

1 FARMER & FAMILY PROTECTION

3 types of policies in 1 for farmers and their families

- Life protection
- Personal access & protection
- Catastrophe protection

2 CORPORATE & SMEs PROTECTION

Would cover from harvest all the way to the process to refining and usage

- Aquaculture catastrophe cover
- Aquaculture stock through-put

Harvest → Processing → Refining → Usage

Aquaculture catastrophe cover

Aquaculture stock through-put
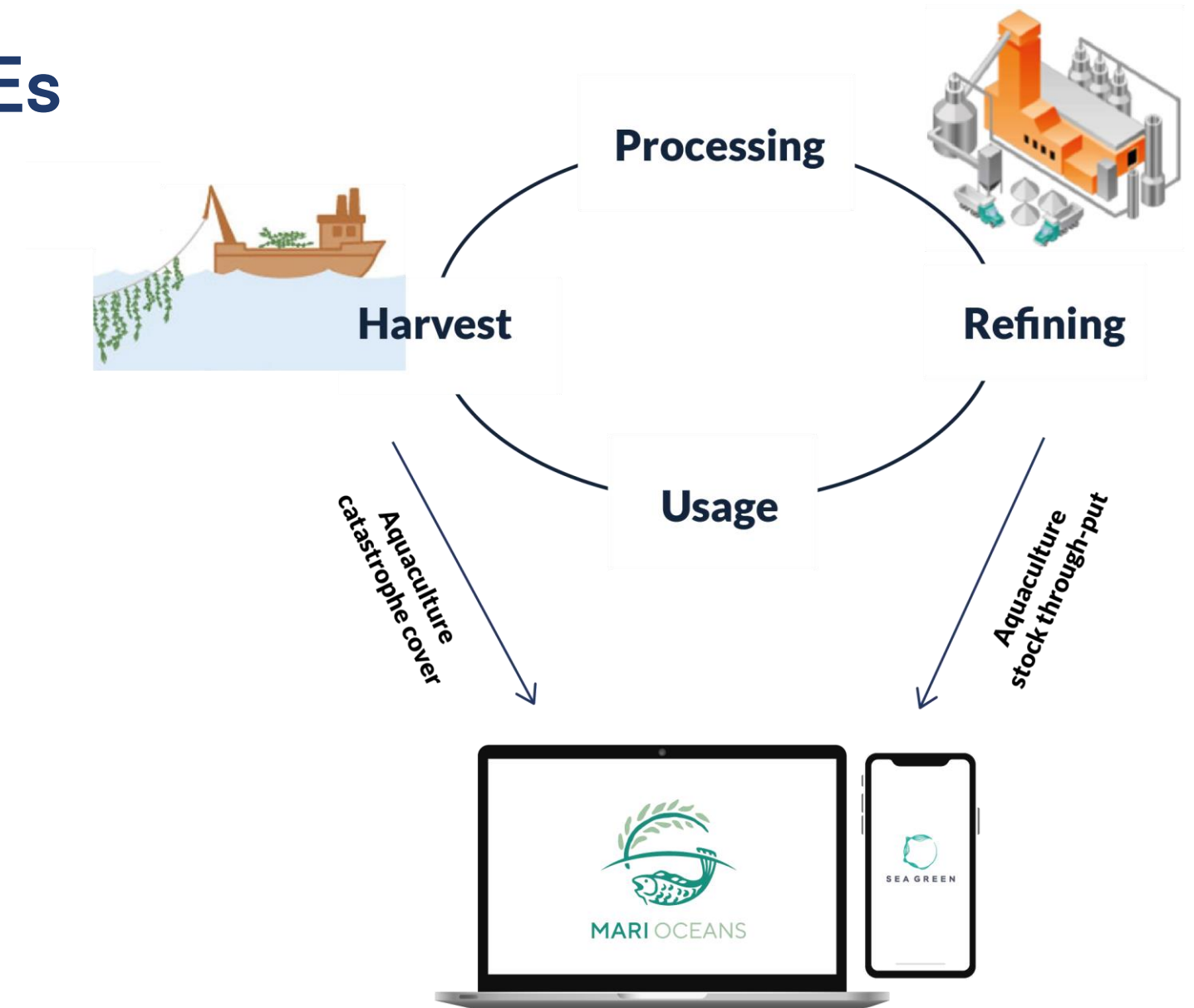
Join us as we empower and protect coastal livelihoods across Asia.

CONTACT DETAILS

Graham Clark:

graham.clark@asiaaffinity.com

Naoyoshi Araki:

naoyoshi.araki@japanriskspecialist.com

Q&A