ORIGIN BY OCEAN

Turning ocean overgrowth into global regenerative growth

In accordance with the UN 2030 Agenda for Sustainable Development

Mari Granström, CEO

MERIUS

ORIGIN BY OCEANS

LIFE CYCLE IMPACT

1. BIOMASS AS FEEDSTOCK

Harvesting invasive seaweed species and Cultivating native seaweed species.

We remove nitrogen and phosphorus from the oceans by using invasive algae before it decomposes and emit greenhouse gases.

2. OUR BIOREFINERY

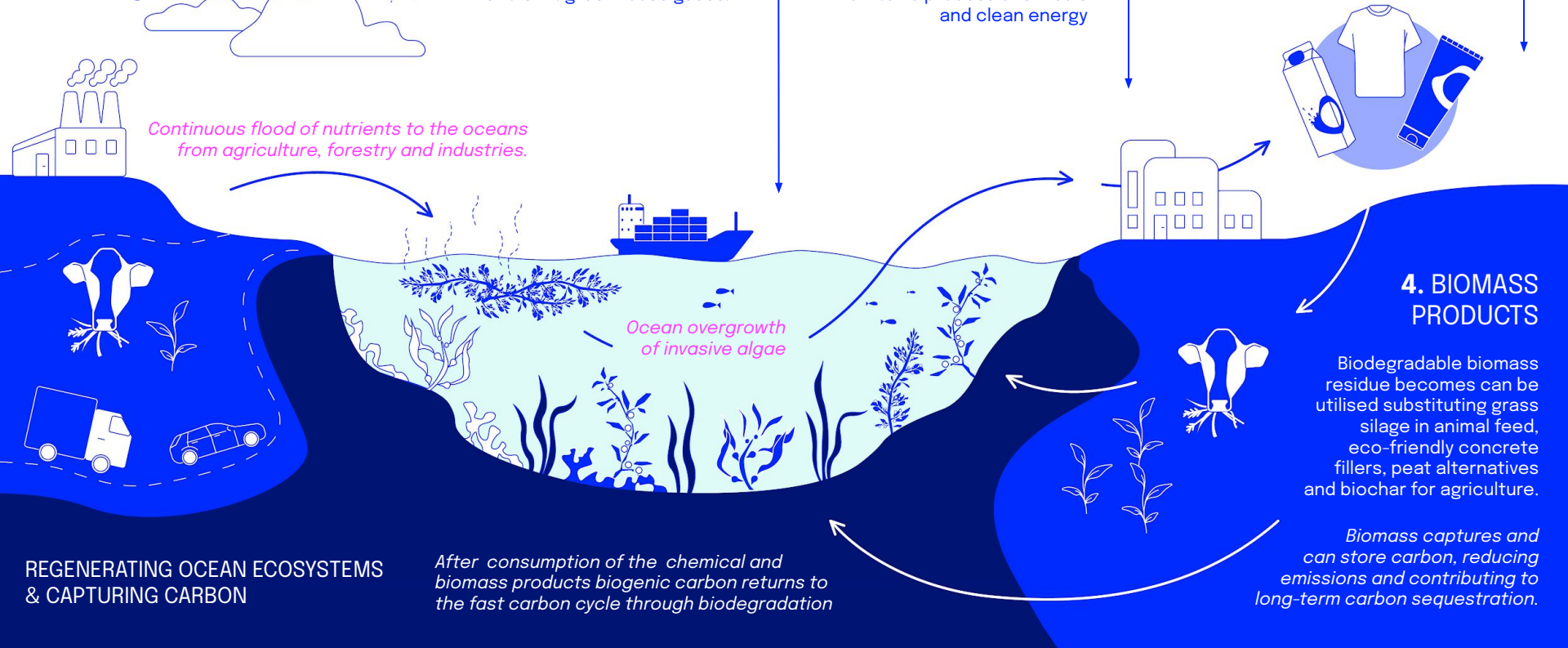
Environmentally sustainable technologies, multiproduct process value and resource utilization maximization

Closed loop production with non-toxic process chemicals and clean energy

3. CHEMICAL PRODUCTS

Biodegradable products enable substituting existing oil-based chemicals in everyday goods.

Decarbonizing consumer products and reducing the carbon footprint.



4. BIOMASS PRODUCTS

Biodegradable biomass residue becomes can be utilised substituting grass silage in animal feed, eco-friendly concrete fillers, peat alternatives and biochar for agriculture.

Biomass captures and can store carbon, reducing emissions and contributing to long-term carbon sequestration.

REGENERATING OCEAN ECOSYSTEMS & CAPTURING CARBON

After consumption of the chemical and biomass products biogenic carbon returns to the fast carbon cycle through biodegradation

Global volume of ***invasive*** brown algae species is surging, ***requiring urgent*** commercial-scale local ***solutions***

By targeting Sargassum, we aim to leverage this *Underutilised and cost-effective resource* to address the environmental issues they pose and bring 100% biobased chemicals to the markets.

THE SOLUTION

TRANSFORMING OCEAN CHALLENGES INTO **REGENERATIVE BUSINESS SOLUTIONS**

Our patented biorefining process produces materials traditionally sourced from fossil fuels, climate-sensitive plants and land/water intensive renewable crops.

We remove nutrients from the oceans by harvesting invasive algae, reducing harmful emissions and unlocking the value of this unused resource. Our operations support local economies.

Transforming nearly 100% of the biomass into bio-based ingredients.

Alginate: Multi-functional biopolymer for cosmetics, food, and industrial applications.

Fucoidan: High-value compound for cosmetics and nutraceuticals.

Sustainable 100% bio-based & biodegradable ingredients reduce the carbon footprint of consumer goods.

Residuals are being repurposed into products and materials, capturing carbon.

OCEAN**THIX**™ *alginate*
OCEAN**BOOST**™ *fucoidan*

SARGASSUM

water-based biorefinery (non-toxic)

maximizing value from feedstock

VALUE PRODUCTS

can be used for animal feed

RESIDUE

OCEAN**RESIDUE**™
Seaweed residue

THE SOLUTION: REACHING COMMERCIAL VIABILITY WITH ALGINATE AND FUCOIDAN

FOAK production launch with high-performance *alginate* and *fucoidan* for cosmetics, food, and textile applications and seaweed residue repurposed into products and materials to support a circular economy approach.

OCEAN**THIX**™ Alginate

A multifunctional rheology modifier with optimized viscosity, texture enhancement, and hydration benefits.

TEXTILES | COSMETICS | NUTRITION | MATERIAL SCIENCE | DETERGENTS

OCEAN**BOOST**™ Fucoidan

A bioactive marine ingredient with antioxidant and anti-inflammatory properties for skincare and nutraceutical applications.

COSMETICS | NUTRITION

OCEAN**RESIDUE**™ Seaweed residue

An untapped resource of fatty acids,
fibres and seaweed proteins with diverse applications across

AGRICULTURE/FEED | NUTRITION | COSMETICS | MATERIAL SCIENCE

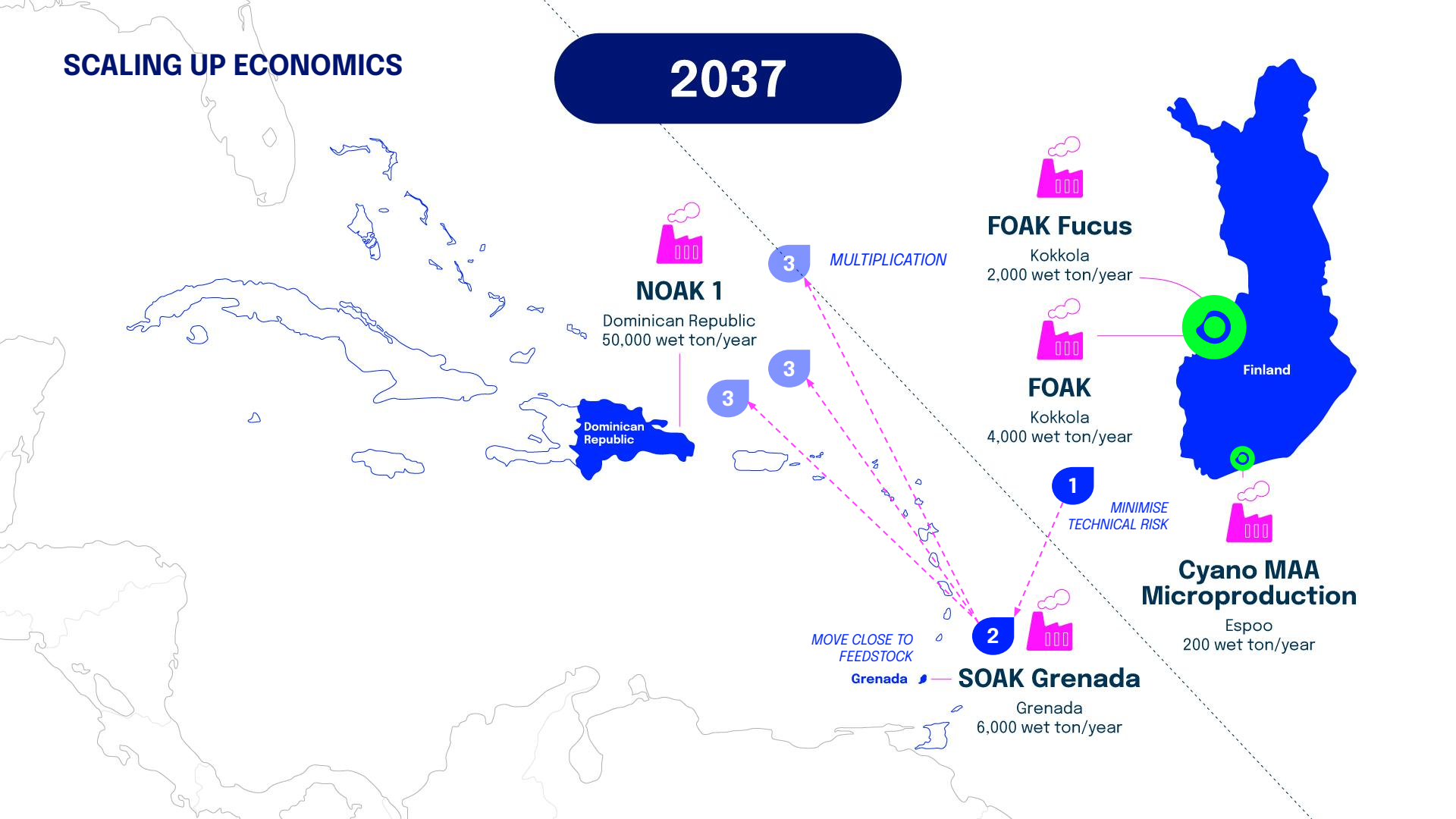
SOURCING
Harvested invasive algae (supporting ocean restoration).

BIOREFINING
Patented, green chemistry
-based process.

FOAK
First-of-a-kind industrial-scale production for biopolymers sourced from invasive algae. Scalable production through strategic partnership.

COST EFFICIENCY FOR SCALE
Designed for a broad-market penetration beyond niche segments.

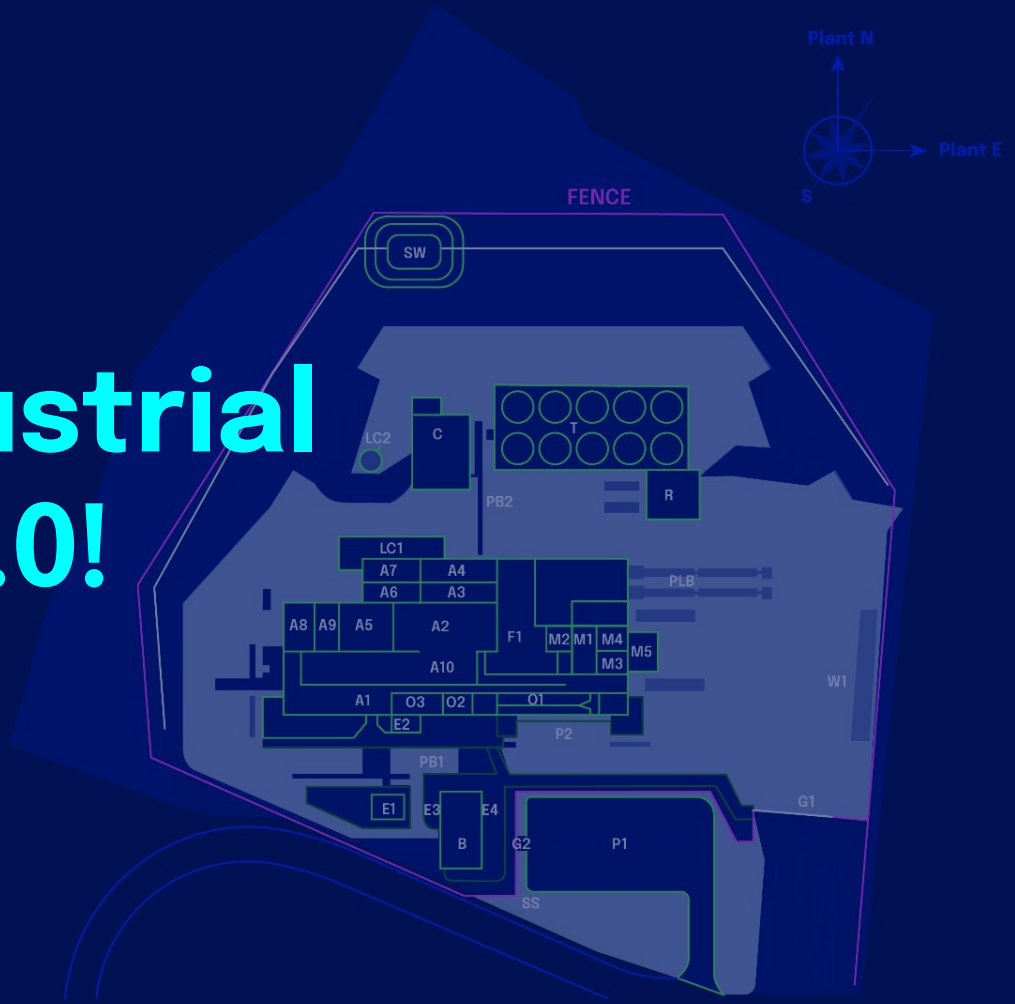
PREMIUM MARKET ADOPTION
Aligns with sustainability standards for high-value applications.


SCALING UP ECONOMICS
2037
NOAK 1
Dominican Republic
50,000 wet ton/year
Dominican Republic
3
MULTIPLICATION
3
3
FOAK Fucus
Kokkola
2,000 wet ton/year
FOAK
Kokkola
4,000 wet ton/year
Finland
1
MINIMISE
TECHNICAL RISK
Cyano MAA
Microproduction
Espoo
200 wet ton/year
MOVE CLOSE TO
FEEDSTOCK
2
Grenada
SOAK Grenada
Grenada
6,000 wet ton/year

Scale up and Commercialisation

- Investments into scale-up phase to reach First-Of-A-Kinds commercial operations - more industrial investment - supports EU's security of supply
- Balanced investment pipeline to cover the whole development phase of the startups - from R&D to commercialisation
- Green transition strategy should include all the industrial sectors providing concrete solutions for the national targets - not only energy
- National strategy for bio and circular economy should include clear targets from each market sector
- The UN Agenda 2030 should be the driver of the green transitions
- Priority to companies supporting national sustainability strategy targets-not just job creation, but ecosystem creation

Join the Industrial Revolution 2.0!



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