
ORIGIN BY
OCEAN



Origin by Ocean turns harmful marine biomass into valuable bio-based products, addressing environmental degradation, industrial fossil fuel reliance, and economic challenges.

Origin by Ocean is a Finnish biotech scale-up regenerating oceans through a commercially viable innovation









Management team:

Mari Granström
CEO

Heikki Heiskanen
COO

Timo Korhonen
CFO

Noora Westerlund
Commercial Director

28 experts in biotech, chemistry & commercialization with a proven track record in science, scale-up, and market entry.

TRL 6–7 achieved in demo, POC:s ongoing with global brands and offtakes for future production secured.

Active in EU projects **Horizon Europe & Algae Pro Banos** advancing the scientific development of algae-based novel ingredients

Funded by the European Union

THERE IS AN URGENT NEED TO DECOUPLE OUR SOCIETY'S FROM OIL

Two global crises converging

Fossil-based chemistry and ocean overgrowth represent a dual opportunity for sustainable intervention.

FOSSIL CHEMICALS CRISIS

FOSSIL-BASED INGREDIENTS ARE BURYING OUR WORLD

- Oil-derived solutions no longer meet regulatory or consumer expectations
- Over 70% of global consumers seek sustainable ingredients
- EU legislation (2027)* requires full supply chain transparency & validated green claims
- Brands face a 3-5 year window to transition away from fossil-derived materials

*(EU Chemicals Strategy for Sustainability E 142/2020 and EU Plastic Strategy)

OCEAN OVERGROWTH CRISIS

OCEANS ARE LOSING BIODIVERSITY DUE TO EUTROPHICATION CAUSED BY HUMAN ACTIONS

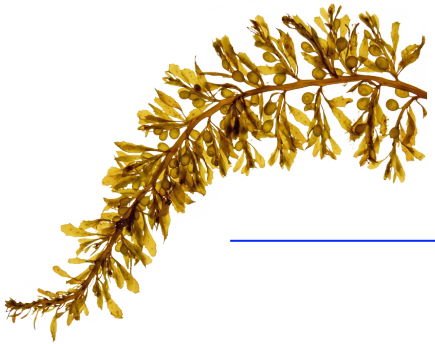
- Sargassum – world's largest harmful algal bloom: up to 60M tonnes/year of unused biomass
- Coastal communities lose up to $120M/year due to unusable beaches
- Sargassum disrupts marine food chains, threatening fisheries & local livelihoods
- Nutrient runoffs & warming seas accelerate algal blooms with no viable solution at scale

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OUR SOLUTION

Our innovative solution refines algae-based functional ingredients to decarbonize consumer goods

Our patented biorefining process produces materials traditionally sourced from fossil fuels.







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

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

Fucoidan: High-value compound for cosmetics and nutraceuticals.

And other valuable compounds: MAA Fucoxanthin and Ocean Sugars



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.

By treating our low value 'by-product' as a valuable side stream, repurposed into products and materials, capturing carbon, we achieve near 100% biomass valorization, contributing to circular economy

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OUR PRODUCTS

Renewable & regenerative multifunctional ingredients outcompeting traditional polymers



OCEAN**THIX**™
Next-generation Alginate

A versatile, multifunctional biopolymer delivering sensorial enhancement, smoother texture, and improved stability.

- **COSMETICS & PERSONAL CARE:** provides hydrating bioactivity while acting as a natural alternative to synthetic thickeners.
- **FOOD:** helps to replace animal-derived ingredients like gelatin.
- **PACKAGING**: enables the development of novel biodegradable plastic-film alternatives.
- **TEXTILE PRINTING**: offers a sustainable alternative to synthetic thickeners.

OCEAN**BOOST**™ LF
Cosmopack Winner 2026 Sustainability Category

EUROPEAN NATURAL BEAUTY AWARDS
OCEAN**THIX**™ LV
Natural Raw Ingredient of the year 2025

COSMETICS & PERSONAL CARE: provides deep hydration and proven* skin barrier support, alternative to hyaluronic acid with stronger anti-inflamatory and immune-boosting effect.

NUTRACEUTICAL: bioactive compound covering multiple high-demand wellness categories including gut health, immunity boost, cardiovascular support, and anti-inflammation.

OCEAN**BOOST**™
High-purity fucoidan

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

*) validated through Evonik's clinical trials platform with 17 performance claims across 7 product categories.

INCI and COSMOS approved • Traceable origin • EU-ready • Carbon-negative feedstock • Invasive seaweed based • Ocean regeneration impact

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Total Market Opportunity – The Blue Bio-Ingredients Revolution



$300 B

COSMETICS & PERSONAL CARE

OCEAN**BOOST**™
OCEAN**THIX**™

Bioactives & PLFs



$430 B

NUTRACEUTICALS

OCEAN**BOOST**™

Immune & Gut health



$10 B

FOOD & HYDROCOLLOIDS

OCEAN**THIX**™

Texturizers & stabilizers

$10 B SERVICEABLE OBTAINABLE MARKET

Target market through OCEAN**THIX**™ (Alginate) and OCEAN**BOOST**™ (Fucoidan).

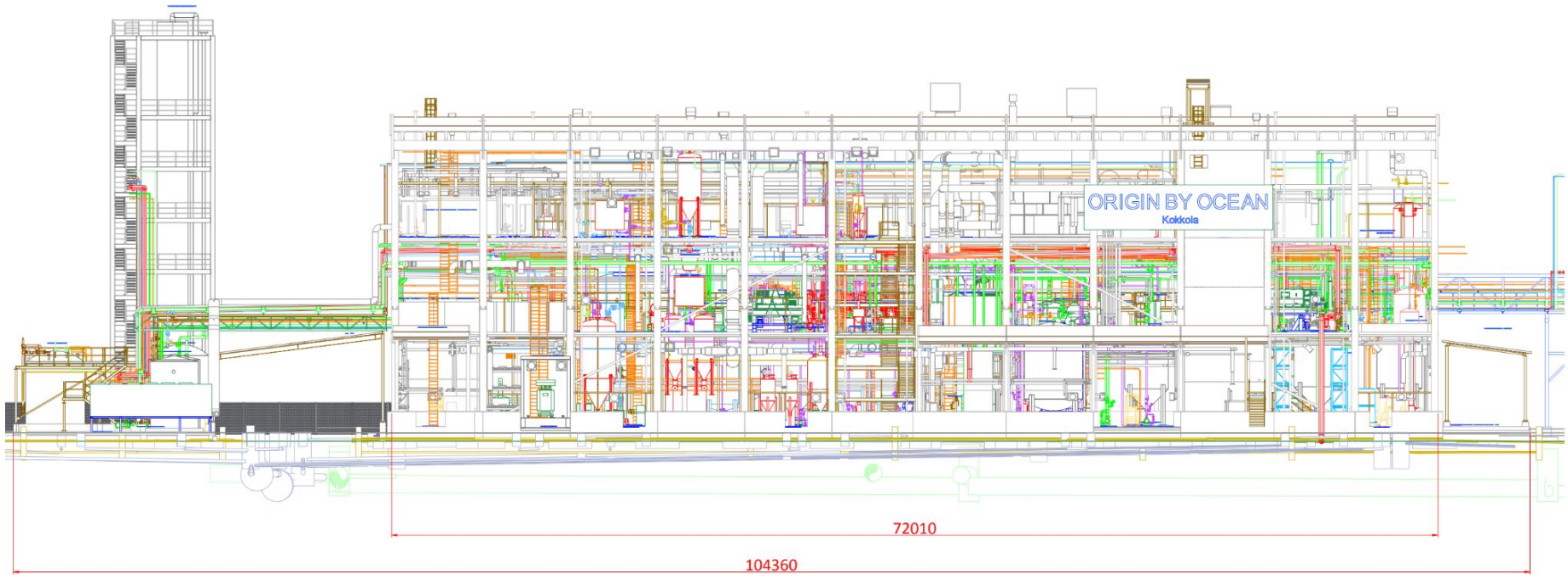
FOAK Finland

ORIGIN BY OCEAN
FOAK FINLAND

The world's first industrial biorefinery turning invasive marine biomass into high-value regenerative ingredients.



FOAK: FEL3 completed – FID decision taken



FOAK biorefinery to be built at Kokkola Industrial Park.

Full Commercial Production Capacity Reached 2029

Operated under Manufacturing as a Service with CABB Oy.

Capacity to process

4.000t

biomass annually, producing

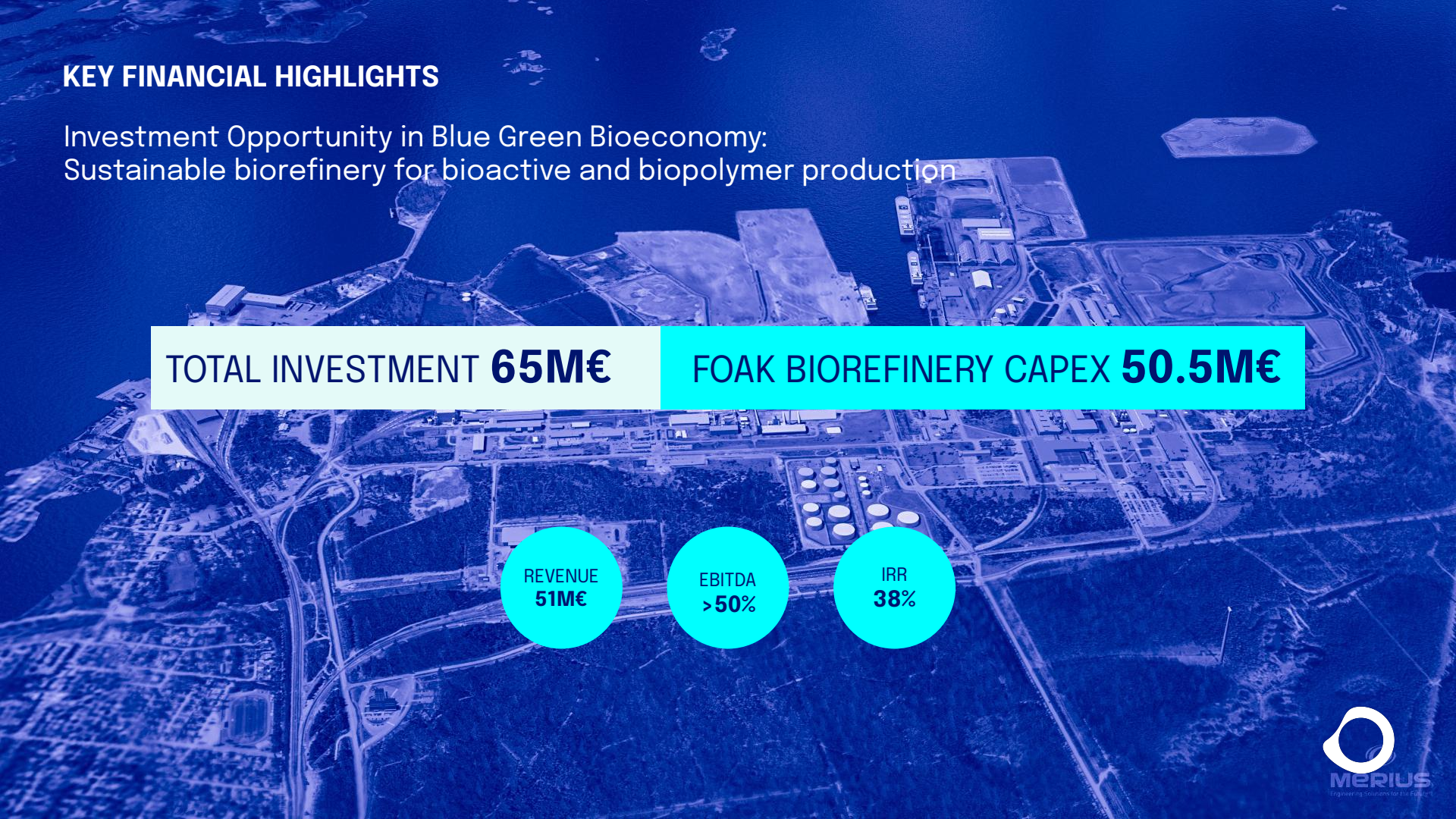
137t *alginate*

47t *fucoidan*



KEY FINANCIAL HIGHLIGHTS

Investment Opportunity in Blue Green Bioeconomy:
Sustainable biorefinery for bioactive and biopolymer production



Industrial impact at scale generated from Sargassum



	DE-RISK TECHNOLOGY & BUSINESS MODEL	*MOVE CLOSE TO FEEDSTOCK APPLY FOAK LEARNINGS OPTIMISE INDUSTRIAL PRODUCTION*	*ENSURE SUCCESSFUL SCALING & TAP INTO THE POTENTIAL OF ADDITIONAL BIOCOMPOUNDS*
UNIT ECONOMICS	**1. FOAK FINLAND**	**2. SOAK CARIBBEAN**	**3. NOAKs**
	First-of-a-Kind	*Second-of-Kind*	*Nth-of-Kind*
FEEDSTOCK CAPACITY	**4 000 t/a (wet)**	**20 000t/a (wet)**	**50 000 t/a (wet) - 100 000 t/a (wet)**
Fucoidan output	47	235	
Alginate output	137	687	
Biomass output	906	4500	
FACTORY LEVEL			
TURNOVER	39-51M€	200-250M€	
FEEDSTOCK PRICE €/ton (at plant gate)	418€/ton	100€/ton	
OPEX/ton (incl. Feedstock)	1 887 €/ton	1 650 €/ton	
EBITDA margin	>50%	>50%	
Capex total	50,5M€	180 - 220M€	
Project IRR	38%	48%	
Project NPV	155M€	625M€	

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