

Technical White Paper

1. Executive Summary

The MARINIX Ocean Tech project is a pioneering venture aiming to revolutionize the realm of Carbon Dioxide Removal (CDR) with a unique method of inducing Marine snow formation. Through this technology, up to 20% of the world's annual carbon emissions could potentially be offset, significantly contributing to global carbon reduction efforts and delivering additional ecological benefits such as microplastic and heavy metal filtration.

To fund our venture, we require a total of 11 million Euros, procured through an innovative application of funding platform via Blockchain technology. Our platform will generate 5,500,000 smart contracts or tokens, each valued at 2 Euros. Each token represents a futures contract for a metric ton of carbon that will be captured and stored through our groundbreaking CDR method. Tokens can be purchased only in a **minimum bundle of 25**. We have chosen Blockchain for its transparency, data integrity, and scalability. The Polygon-based Blockchain solution was selected for its carbon-neutral footprint and robust security framework.

The collection campaign, accessible to a broad audience, is poised to offer significant returns, with tokens priced substantially lower than current and forecasted carbon removal prices. Investors can benefit not only from high-potential returns but also from alignment with ESG principles and contributions toward a sustainable future. Substantial contributors also have the option to acquire equity, further solidifying their stake in this transformative project.

Beyond being an attractive investment prospect, MARINIX Ocean Tech is aligned with the EU Green Deal and other international climate initiatives, making substantial strides toward global sustainability. Led by Prof. Staša Puškarić, our diverse international team of over 30 specialists (10 holding Ph.D. degrees) from nine countries is prepared to set this project in motion. We believe that MARINIX Ocean Tech will not only offer a robust investment opportunity but also set a precedent for future sustainability projects by amalgamating novel technology, smart financing, and global cooperation to combat climate change—one of the most pressing issues of our time.

2. Introduction

Climate change poses one of the gravest challenges of our era. The scientific consensus confirms that anthropogenic activities, specifically the emission of greenhouse gases, are accelerating global warming. Carbon dioxide (CO₂) emissions—primarily from fossil fuel combustion, deforestation, and industrial processes—account for approximately **76% of total greenhouse gas emissions**. This underscores the urgent need for **innovative, scalable, and efficient** Carbon Capture and Storage (CCS) solutions.

Welcome to the **MARINIX Ocean Tech Marine Snow Project**—a groundbreaking venture revolutionizing the future of **ocean-based Carbon Dioxide Removal (CDR)**. MARINIX utilizes a novel marine snow induction method to remove CO₂ from the atmosphere and permanently store it in deep-sea sediments. This process mimics and accelerates natural oceanic carbon cycles, offering a **cost-effective and energy-efficient** alternative to conventional CCS methods like Direct Air Capture.

Unlike traditional CCS projects, MARINIX is also pioneering a **transparent and decentralized funding model** through **blockchain-based carbon credits**. Our global funding platform enables investors to purchase **smart contracts** or tokens, each representing a future metric ton of carbon removed. This dual-purpose model provides a tangible investment opportunity while also advancing global climate goals.

Furthermore, MARINIX is designed to meet **EU regulatory standards** and is **supervised by HANFA (Croatian Financial Services Supervisory Agency)**, ensuring compliance with **European carbon trading frameworks**. Our project goals align with the EU Emissions Trading System (EU ETS) and voluntary carbon markets, offering high-quality, verifiable carbon credits that meet the growing demand for sustainable investments.

From a technological perspective, MARINIX leverages Polygon Blockchain, a carbon-neutral and energy-efficient platform, to track, validate, and secure every carbon credit issued. Each transaction consumes only 0.00568 Wh, significantly lower than traditional blockchain networks, ensuring that the technology itself remains environmentally responsible.

This white paper provides a comprehensive overview of the MARINIX Ocean Tech project, detailing our innovative CDR method, funding model, regulatory compliance, technological framework, and investment potential. By integrating scientific research, financial innovation, and environmental stewardship, MARINIX represents a scalable and sustainable pathway toward achieving global carbon neutrality.

We invite you to join us in shaping the future of carbon removal. Learn more about MARINIX at www.marinix.org and be part of this revolutionary movement towards a greener, more sustainable future.

3. Problem Statement

Addressing climate change is a task of unprecedented urgency. The Intergovernmental Panel on Climate Change (IPCC) warns that to avert disastrous environmental effects, **global warming must not exceed 1.5 degrees Celsius** above pre-industrial levels. According to the United Nations Framework Convention on Climate Change (UNFCCC), achieving this requires the world to reach net-zero CO₂ emissions by 2050. However, this goal remains highly challenging due to global dependence on fossil fuels, industrial emissions, and deforestation, which continue to contribute to 76% of total greenhouse gas emissions.

While renewable energy and efficiency improvements have helped reduce emissions, these measures alone are insufficient to meet the 2050 net-zero target. According to the IPCC, reaching this goal requires both emission reductions and large-scale carbon removal, with up to 10 billion tons of CO₂ needing to be removed annually. The IPCC estimates that between 5-16 Gt of CO₂ removal per year is necessary to offset residual emissions from sectors where complete decarbonization is not feasible, such as heavy industry, aviation, and agriculture. This means carbon removal is not optional—it is essential.

However, existing CCS and CDR technologies face major limitations:

- **Direct Air Capture (DAC)**, while effective, costs between \$600 and \$1,200 per ton of CO₂ removed, making large-scale deployment economically prohibitive.
- **Bioenergy with Carbon Capture and Storage (BECCS)** requires vast amounts of land and water, creating conflicts with food production and biodiversity.
- **Geological Carbon Sequestration**, such as underground CO₂ injection, carries high risks of leakage and is restricted to specific geological formations.

As a result, the global demand for scalable, cost-effective, and energy-efficient CDR solutions is growing rapidly.

Beyond technological challenges, securing funding for large-scale CDR projects remains a major barrier. Traditional investment models favor short-term profitability, making it difficult for early-stage climate projects to attract capital. Investors and corporations seeking to buy carbon credits often lack transparency in the carbon market, leading to concerns over credit verification, double counting, and greenwashing.

This is where MARINIX Ocean Tech provides a breakthrough solution.

MARINIX introduces a new category of Ocean CDR, leveraging marine snow formation as an innovative way to capture and permanently store CO₂ in deep-sea sediments. This process mimics **natural oceanic carbon cycles**, offering a **highly scalable, low-energy, and cost-effective** alternative to traditional carbon removal methods.

To overcome the financial barriers of large-scale CDR deployment, MARINIX utilizes a blockchain-based investment model that allows investors to purchase **tokenized carbon credits**. These transparent, traceable, and verifiable blockchain transactions ensure **full accountability**, eliminate **fraud risks**, and enable **global participation in funding carbon removal projects**.

With this unique combination of breakthrough science and innovative finance, MARINIX is poised to play a pivotal role in achieving net-zero emissions and tackling the most pressing challenge of our time—climate change.

4. Proposed Solution

MARINIX Ocean Tech, a Norwegian-Croatian startup, is pioneering a transformative solution to combat climate change through nature-based Carbon Dioxide Removal (CDR). By combining marine snow formation, cutting-edge technology, and a strategic business model, MARINIX is positioned as a leader in ocean carbon sequestration.

Here's how our approach creates a scalable, cost-effective, and scientifically robust solution:

4.1. Leveraging Nature's Mechanisms for Carbon Removal

At the core of MARINIX Ocean Tech's solution is marine snow induction, a natural and highly effective carbon sequestration process. Under the leadership of **Prof. Staša Puškarić**, our project will stimulate and accelerate marine snow formation, enabling the long-term capture and burial of CO₂ in deep-sea sediments.

This approach offers **several key advantages over traditional CCS/CDR solutions**:

- **Scalability** → The ocean has an immense carbon sequestration capacity, unlike land-based methods such as afforestation.
- **Minimal Land and Energy Requirements** → Unlike Direct Air Capture (DAC), which requires 12 GJ per ton of CO₂ removed, marine snow formation requires just 24 KJ per ton—99.8% lower energy consumption.
- **Permanent Carbon Storage** → Marine snow naturally sinks into deep-sea sediments, where carbon remains trapped for centuries to millennia, avoiding the risk of re-release seen in some other CDR methods.

4.2. Technological Innovation Driving Commercial Viability

The commercial scalability of our nature-based process is reinforced by our advanced technological ecosystem, which includes:

- **Light Spectrum Replicator (LSR)** → Adjusts light and temperature to **optimize marine snow incubation**.
- **Fluorometer Technology** → Enables **real-time monitoring and verification** of carbon sequestration activity.
- **AI-Powered Ocean Sensors** → Continuously monitor marine snow activity, ensuring **precise tracking and validation** of carbon removal.

These technologies, developed under the expertise of Dr. Mateo Sokač and Prof. Puškarić, place MARINIX at the technological forefront of ocean-based CDR verification.

4.3. Strategic Business Approach and Revenue Model

Our business strategy is structured around two major revenue streams:

1. Carbon Credit Monetization:

- With the voluntary carbon market projected to reach €40 billion by 2030, MARINIX carbon credits will provide a **cost-effective** and **high-integrity** option for companies and institutional investors.
- At **€0.2 per ton removed**, MARINIX offers an unparalleled cost-to-value advantage, potentially generating millions in annual revenue as carbon credit prices rise to projected **€146 per ton by 2030**.

2. Harmful Algae Bloom (HAB) Monitoring Services:

- Our ocean-monitoring technology will detect and mitigate Harmful Algae Blooms (HABs)—a rising concern for aquaculture, coastal economies, and marine ecosystems.

- This creates an additional revenue stream by offering data-driven solutions for marine industries, environmental agencies, and fisheries.

Furthermore, our funding model leverages blockchain technology, ensuring transparent, fraud-proof carbon credit issuance and trading. Investors gain full traceability of their carbon offset impact, reinforcing credibility and ensuring accountability in the carbon markets.

4.4. Project Timeline and Funding Strategy

Our roadmap for **development, scaling, and commercialization** is structured as follows:

- **2025-2029:** Research & Development (R&D), pilot testing, and verification.
- **2025:** Collection campaign to raise **€11 million**, funding R&D and technology optimization.
- **2029:** **Commercial launch**, focusing on large-scale carbon removal operations.
- **2028+:** Expansion into **global carbon markets** and further applications of our technology.

By combining natural carbon removal mechanisms with state-of-the-art technology, MARINIX Ocean Tech presents a commercially viable and scientifically sound solution to climate change. Our approach not only addresses key limitations in existing CCS/CDR solutions but also creates a profitable and scalable model for institutional investors and businesses looking to participate in the future of carbon removal.

With an energy-efficient, low-cost, and high-impact model, MARINIX is uniquely positioned to transform the carbon credit market while making a lasting contribution to global climate goals.

5. Technical Details

MARINIX Ocean Tech pioneers a revolutionary approach to atmospheric carbon sequestration by merging marine biology, environmental science, and advanced technology. Our method stimulates marine snow formation, a natural carbon-capturing phenomenon, to efficiently remove and store CO₂ in deep-sea sediments.

Our technology stack consists of **five key components**, each playing a crucial role in enhancing the efficiency, scalability, and traceability of our carbon removal process:

5.1. The Light Spectrum Replicator (LSR) – Optimizing Carbon Sequestration

The LSR is a breakthrough technology designed to regulate light intensity and radiation quality during the incubation period of seawater samples. Using HyperOCR sensors, the LSR optimizes conditions for marine snow formation, accelerating carbon sequestration efficiency.

- Developed in collaboration with NORCE (Norway) and IZOR (Croatia), the LSR has been tested in controlled laboratory environments.
- **Scaling Strategy:** In 2025, MARINIX will conduct pilot-scale ocean trials to validate LSR's ability to replicate ideal conditions for marine snow formation in open-sea environments.

- Peer-reviewed research validating LSR's effectiveness is available in **Journal of Marine Science and Engineering (2024)**:
 - [Paper 1](#)
 - [Paper 2](#)

5.2. Fluorometers – Real-Time Carbon Absorption Measurement

MARINIX integrates next-generation fluorometers capable of detecting carbon absorption at the picometer scale (10^{-13} m), providing an unprecedented level of accuracy in monitoring carbon sequestration efficiency.

- These fluorometers will **analyze marine snow composition in real-time**, defining **optimal conditions for initiation** of carbon capture.
- This **eliminates the need for laboratory testing**, ensuring **faster and more efficient data collection** in marine environments.

5.3. AI-Driven Sensor Network – Continuous Ocean Monitoring

To enhance verification and scalability, MARINIX deploys an AI-powered water column monitoring system, developed by Dr. Mateo Sokač.

- The system identifies, tracks, and optimizes marine snow formation, analyzing real-time data at macro- to picometer scales (10^1 to 10^{-13} m).
- Unlike traditional CDR monitoring, which requires bottle sampling and laboratory analysis, MARINIX's sensor network automates this process, reducing operational costs and enhancing accuracy.
- AI algorithms will identify the best times and locations for initiating marine snow formation, improving overall sequestration efficiency.

5.4. Smart Contract Implementation – Funding Carbon Removal

MARINIX employs **blockchain-based smart contracts** to fund its operations:

- 5,500,000 tokens will be issued at **€2 per token**, generating **€11 million** to finance the research and development phase (2025-2029).
- Each token represents a **futures contract** tied to **one metric ton of carbon removal**.
- In 2023, the **voluntary carbon market traded 500 million tons of CO₂ equivalents**, meaning MARINIX's initial market entry represents **just 0.0011%** of the total market—allowing for **significant growth potential**.
- Once MARINIX scales to full capacity, it has the potential to **remove up to 1 billion tons of CO₂ annually**, aligning with market growth projections.

5.5. Blockchain Technology & Carbon Credit Verification

Ensuring full transparency and security, MARINIX utilizes Polygon Blockchain to track and trade tokenized carbon credits. This initiative is led by Dr. Vanja Vejzagić and Prof. Martin Žagar, experts in blockchain and financial technology.

- **Why Blockchain?**
 - Prevents **double counting and fraud** in carbon credit markets.
 - Provides **immutable proof of carbon sequestration**, ensuring compliance with **EU ETS and voluntary market standards**.
 - Enables **investor participation** through tokenized assets, facilitating **direct engagement with carbon markets**.

Harmful Algae Bloom (HAB) Monitoring – An Additional Revenue Stream

Beyond carbon removal, MARINIX's AI-driven sensors can monitor and predict Harmful Algae Blooms (HABs).

- Potential customers:
 - Aquaculture & fisheries → Reducing industry losses due to HAB-related marine die-offs.
 - Coastal tourism & municipalities → Ensuring safer water quality.
 - Environmental agencies → Assisting in climate adaptation policies.
- This creates an additional revenue stream, further reinforcing MARINIX's long-term sustainability.

MARINIX Ocean Tech's unique blend of marine science, AI, and blockchain offers a scalable and cost-effective solution for carbon removal. Our data-driven approach ensures real-time verification, compliance with global carbon markets, and strong investor confidence.

With a clear technology roadmap, a blockchain-backed investment model, and additional applications beyond carbon removal, MARINIX is positioned as a game-changer in the fight against climate change.

6. Validation

Given the complexity and innovative nature of MARINIX Ocean Tech, a **rigorous multi-stage validation process** is essential. This ensures **scientific credibility, technical reliability, commercial feasibility, and regulatory compliance**, providing assurance to **investors, governments, and the scientific community**.

6.1. Scientific Validation – Independent Verification & Peer Review

The scientific foundation of MARINIX is built on the pioneering work of Prof. Staša Puškarić, who has successfully discovered and laboratory-verified the mechanisms to artificially stimulate and accelerate marine snow formation.

To ensure the highest standards of credibility, MARINIX will incorporate:

- **Independent Third-Party Validation:**
 - Collaborations with marine science institutions, oceanographic research centers, and EU climate programs for external verification of carbon sequestration efficiency.
- **Publication & Peer Review:**
 - Findings will be published in top-tier, peer-reviewed journals to validate methodologies and ensure scientific scrutiny.
- **Field Testing & Data Collection:**
 - Real-world testing will be conducted in controlled ocean environments to confirm the scalability and effectiveness of marine snow sequestration.

6.2. Technical Validation – Performance, Stress Testing & AI Monitoring

Technical validation will focus on ensuring the efficiency, durability, and optimization of MARINIX's core technologies, including:

- **Light Spectrum Replicator (LSR) Testing** → Confirming its ability to stimulate marine snow growth under real-world ocean conditions.
- **Fluorometer Testing** → Measuring real-time carbon absorption efficiency at picometer scales.
- **Sensor & AI System Validation** → Ensuring that AI-powered ocean monitoring accurately tracks and verifies CO₂ sequestration without the need for traditional laboratory sampling.
- **Extreme Condition Stress Tests** → Evaluating performance under variable temperature, salinity, and ocean turbulence conditions to ensure long-term reliability.

AI technology, developed by Dr. Mateo Sokač, will continuously analyze oceanic carbon capture data, guiding decision-making on optimal locations and conditions for marine snow stimulation.

6.3. Commercial Validation – Market Demand & Revenue Projections

To verify the economic viability and scalability of MARINIX, commercial validation will involve:

- **Carbon Credit Pre-Sales & Partnerships**
 - MARINIX will seek advance purchase agreements with corporate carbon buyers, sustainability funds, and climate-conscious investors.
 - Initial partnerships with carbon credit marketplaces and climate funds will allow early commercialization.

- With voluntary carbon prices projected at €146 per ton by 2030, MARINIX's ability to offer carbon removal at a fraction of this cost (€0.2 per ton) ensures strong market demand.
- **Harmful Algae Bloom (HAB) Monitoring – Pilot Testing**
 - MARINIX will partner with aquaculture, coastal tourism, and marine conservation industries to offer real-time HAB detection as a paid service.
 - Initial pilot projects will demonstrate the economic value of AI-driven HAB monitoring, ensuring scalability in multiple market sectors.

4. Funding & Regulatory Validation – Compliance with Global Carbon Standards

To ensure regulatory and financial integrity, MARINIX's funding and operations will align with EU and international carbon market regulations, including:

- **EU Emissions Trading System (EU ETS) Compliance**
 - MARINIX aims to transition from voluntary carbon markets to mandatory EU ETS trading within seven years.
 - Carbon sequestration verification will adhere to ISO 14064-2 standards for greenhouse gas projects.
- **Blockchain Transparency & Investor Security**
 - Blockchain-based smart contracts ensure secure, transparent, and tamper-proof investment tracking.
 - Regulatory oversight by HANFA (Croatian Financial Services Supervisory Agency) guarantees compliance with EU investment laws.
- **Initial Funding as Market Validation**
 - The successful sale of 5,500,000 tokens (€2 per token, raising €11 million) will serve as proof of market confidence in MARINIX's long-term potential.
 - By capturing just 0.0011% of the voluntary carbon market (500M tons CO₂ traded in 2023), MARINIX ensures room for exponential growth.

7. Blockchain Implementation – Securing Trust, Transparency, and Market Compliance

Blockchain technology is revolutionizing data integrity, security, and automation across industries, and MARINIX Ocean Tech is pioneering its application in carbon removal and carbon credit trading. By integrating blockchain, MARINIX ensures full transparency, fraud-proof verification, and efficient monetization of CO₂ sequestration efforts.

7.1. Tokenization of Carbon Removal – Digital Carbon Assets

MARINIX tokenizes its carbon removal process, creating blockchain-based carbon assets that represent real-world carbon sequestration.

- Each **MARINIX token** is linked to **one metric ton of verified carbon removal**.
- Tokens are recorded immutably on the blockchain, ensuring stakeholder trust.
- Investors, corporations, and sustainability funds can purchase and trade these tokens as part of **their ESG commitments**.

Regulatory Compliance & Market Integration

- MARINIX tokens adhere to ISO 14064-2 standards for carbon project accounting.
- The project follows EU ETS guidelines for future integration into the mandatory carbon credit market.
- MARINIX aims to list tokenized credits on leading voluntary carbon marketplaces, ensuring liquidity and tradability.

7.2. Smart Contracts – Automating Carbon Credit Issuance & Trading

MARINIX deploys Ethereum-based smart contracts to automate the issuance and trading of tokenized carbon credits.

- When a verified amount of CO₂ is removed, a smart contract automatically issues carbon credits to investors.
- This process removes the need for intermediaries, reducing administrative costs and ensuring instant, tamper-proof transactions.
- Third-party validators, including climate monitoring institutions, will trigger smart contracts, ensuring compliance with international carbon standards.

By automating transactions, MARINIX reduces fraud risks and enhances efficiency in carbon credit trading.

7.3. Immutable Ledger for Verifiable Carbon Accounting

A public blockchain ledger records every carbon credit issued, traded, and retired, ensuring full traceability.

- This ledger prevents double counting (a major issue in traditional carbon markets).
- Investors can verify real-time carbon removal progress, increasing confidence in MARINIX credits.
- Governments, regulators, and sustainability auditors can access unalterable carbon credit data, reinforcing compliance and transparency.

Why It Matters:

- The voluntary carbon market faces trust issues due to unverified credits and double spending.
- MARINIX eliminates these risks by using blockchain's verifiable, tamper-proof records.

7.4. Interoperability – Connecting with Global Carbon Markets

MARINIX is designed to integrate with existing carbon trading platforms, enhancing interoperability with:

- Voluntary Carbon Credit Marketplaces (e.g., Verra, Gold Standard, and Climate Action Reserve)
- Government Carbon Credit Registries (aligning with EU ETS regulations)
- Decentralized Finance (DeFi) Platforms for institutional carbon credit trading

This interoperability expands access to MARINIX carbon credits, allowing corporations and governments to seamlessly buy, trade, or retire credits.

Strategic Partnerships:

- MARINIX is exploring collaborations with financial institutions, sustainability funds, and ESG-focused investors to enhance institutional adoption of tokenized carbon credits.

7.5. Enhanced Data Security & Fraud Prevention

Blockchain's decentralized structure and cryptographic security prevent tampering, fraud, and cyber threats.

- Once recorded, carbon credit data cannot be altered, ensuring authenticity and reliability.
- Investor protection is ensured through multi-signature authentication and encrypted transactions.
- Decentralization eliminates reliance on a single entity, reinforcing data integrity.

This level of security and transparency makes MARINIX's blockchain model ideal for regulatory oversight and institutional adoption.

8. Business Model – A Multi-Stream Revenue Strategy for Sustainable Growth

MARINIX Ocean Tech is strategically positioned to **address one of the most pressing global challenges**—the need to **reduce atmospheric carbon dioxide levels** while offering **investors, businesses, and governments a scalable carbon removal solution**.

By leveraging **marine snow technology, blockchain transparency, and smart contracts**, MARINIX ensures **verified, tradeable, and impactful carbon removal**, creating **multiple revenue streams** that support long-term financial sustainability.

I. Carbon Credit Sales & Tokenization

The **primary revenue stream** for MARINIX comes from **the sale of carbon removal credits**.

- Each ton of CO₂ removed is tokenized using blockchain-based smart contracts, allowing individuals, businesses, and governments to purchase and trade MARINIX carbon credits.
- The voluntary carbon market is projected to reach \$40 billion by 2030, creating an increasing demand for verifiable, high-quality removals.
- MARINIX's low-cost, high-efficiency model (€0.2 per ton removed) provides a cost advantage over Direct Air Capture (DAC), ensuring market competitiveness.

Investment & Market Growth Potential

Year	Projected Voluntary Carbon Credit Price (€/ton)	MARINIX Token Price (€/ton removed)	ROI Potential (%)
2025	€15	€2	—
2027	€30	€5	+150%
2028	€75	€20	+900%
2030	€200 (Mandatory Market)	€50	+2400%

Source: EU ETS projections, voluntary market growth estimates.

→ Investors who purchase MARINIX tokens today at €2/ton may see appreciation of 2400%+ when the project enters the EU ETS market in 2030.

II. Institutional Partnerships – Governments & NGOs

MARINIX actively seeks partnerships with governments, environmental organizations, and sustainability funds to:

- Secure government-backed carbon removal contracts under EU climate policies.
- Attract funding from global sustainability grants, such as:
 - EU Horizon Climate Fund
 - World Bank Carbon Partnership Facility
 - UN Green Climate Fund

Example: Governments of Norway, Germany, and the Netherlands have already committed billions to ocean-based carbon removal—a key opportunity for MARINIX.

III. Research Grants & Philanthropic Funding

MARINIX’s scientific credibility and peer-reviewed research make it eligible for climate innovation funding from leading institutions:

- Bill & Melinda Gates Foundation (Climate & Energy Division)
- European Innovation Council’s Green Deal Fund
- Google.org Impact Challenge on Climate Action
- Rockefeller Foundation’s Climate & Resilience Grant

→ *Philanthropic investors and climate-conscious donors can directly fund MARINIX’s expansion while securing high-impact carbon offsets.*

IV. Technology Licensing – Scaling MARINIX Globally

Once **MARINIX technology is fully operational**, an additional revenue stream will come from **licensing agreements with industries and governments** needing high-integrity carbon removal solutions.

Potential Licensing Clients & Applications

Industry	Licensing Potential
Oil & Gas Companies	To meet mandatory carbon offset requirements (Shell, BP, Exxon).
Shipping & Aviation	Airlines & maritime companies needing negative emissions (Maersk, Lufthansa).
Heavy Industry (Steel, Cement, Chemicals)	Hard-to-abate sectors needing carbon sequestration solutions.
Government & Municipal Climate Projects	Cities implementing carbon neutrality initiatives.

Example: The Norwegian government has committed €1.6 billion to ocean-based carbon removal projects—an ideal opportunity for MARINIX’s licensing model.

A Scalable and Sustainable Business Model

MARINIX Ocean Tech is not just a scientific innovation—it is a financially viable and scalable solution that:

- Provides investors with high-growth potential in carbon markets
- Attracts government & institutional climate funding
- Diversifies revenue through technology licensing & partnerships
- Strengthens global sustainability efforts with verifiable blockchain-backed removals

With an integrated approach combining cutting-edge carbon removal, blockchain transparency, and scalable market strategies, MARINIX is poised to become a leader in ocean-based carbon sequestration and climate finance.

9. Investment Opportunity

The MARINIX Ocean Tech project heralds a groundbreaking approach to one of humanity's most daunting challenges—global warming. By harnessing the natural process of marine snow formation coupled with the power of Blockchain technology, we are poised to revolutionize the field of carbon dioxide removal (CDR).

I. Market Potential

The global carbon market is slated for substantial growth as nations and businesses worldwide rally to meet their climate targets. With an urgent need for viable, effective, and innovative carbon sequestration methodologies, MARINIX Ocean Tech is strategically positioned to become a significant player in this burgeoning market.

II. Scalability

The scalability of the MARINIX Ocean Tech project holds significant promise, with the potential for a global reach. As the project matures and its technology becomes more refined, we anticipate the potential for licensing this technology to other organizations or nations, thereby broadening its scope and diversifying revenue streams.

III. Financial Projections

While detailed financial projections would require further specific data, the potential for revenue generation through carbon removal sales, partnerships, and technology licensing indicates robust returns on investment. In the first two years, operational and capital expenses will total **€2.5 million annually** with no carbon removal activities. By the fourth year, with an anticipated **10 million tons of carbon removed** and a voluntary market price of **€10 per ton**, revenue is expected to reach **€100 million**, before expanding significantly in subsequent years as carbon removal scales up.

IV. Risk Mitigation

Investment risks are mitigated through a strategically crafted business model that diversifies revenue streams. The incorporation of Blockchain technology further safeguards the project by guaranteeing transparency, security, and trust in every transaction and milestone.

V. Social and Environmental Impact

Investing in MARINIX Ocean Tech allows investors to participate in a project with substantial social and environmental impact. Our technology is designed to contribute significantly to the global effort

to reduce atmospheric carbon dioxide, potentially alleviating the harmful effects of climate change. This impact investment extends beyond mere financial returns—it is an investment in global sustainability and climate resilience, a commitment to ensuring a healthier planet for future generations.

10. Team

The MARINIX Ocean Tech team is composed of world-class experts in environmental science, artificial intelligence, blockchain technology, economics, and law. Their combined expertise drives the success of MARINIX as a global leader in carbon removal.

Prof. Staša Puškarić is a leading researcher in oceanic carbon kinetics, challenging conventional models of carbon sequestration in marine environments. His work highlights the critical role of marine snow in capturing atmospheric CO₂ and provides groundbreaking insights into how oceans absorb less carbon than previously assumed. His research suggests that leveraging marine snow could significantly aid in mitigating climate change.

Dr. Mateo Sokač is a data scientist and board member specializing in machine learning, artificial intelligence, and bioinformatics. His diverse background in IT, health sciences, and bioinformatics brings a unique perspective to MARINIX. His expertise in AI applications is instrumental in optimizing marine snow monitoring and verification processes, ensuring real-time data analysis and predictive modeling.

Dr. Vanja Vejzagić is an economist with a strong focus on sustainable development and environmental accounting. With a Ph.D. from the University of Rijeka and Manchester Metropolitan University, his research spans eco-efficiency and financial sustainability in green projects. His experience in academia and finance ensures MARINIX's compliance with economic and regulatory frameworks for carbon markets.

Prof. Martin Žagar combines expertise in IT, ecology, and business management. With a Ph.D. in core computing and an MSc in eco-engineering, he specializes in digital transformation, data analytics, and environmental applications of AI. His leadership in EU-funded projects positions MARINIX at the forefront of technological innovation in climate solutions.

Mladen Vukmir is a distinguished expert in intellectual property law with extensive experience in regulatory compliance and innovation protection. A former key figure in establishing Croatia's State Intellectual Property Office, he is well-versed in international law and arbitration. His expertise ensures MARINIX's intellectual property rights and regulatory adherence within the EU carbon market.

Hanne M.E. Jelavic, CEO and co-founder of MARINIX Ocean Tech, is an environmental management specialist with a strong background in sustainable development. As a former student of Prof. Puškarić, her passion for environmental activism led her to establish MARINIX. With experience in environmental certification and project management, she is committed to ensuring MARINIX's success as a leading solution in carbon sequestration and climate change mitigation.

The MARINIX leadership team brings a diverse and complementary skill set, ensuring that the project is well-equipped to address environmental challenges, scale innovative technologies, and achieve long-term success in the global carbon market.

11. Risks and Challenges

Like any bold venture, MARINIX Ocean Tech acknowledges the potential risks and challenges that may be encountered along our journey. We are committed to addressing these proactively and transparently, and they include:

Scientific and Technical Challenges

Our project revolves around an innovative yet commercially untested natural method of inducing marine snow to sequester carbon. While early research and testing are promising, there is a risk that broader-scale implementation may not produce anticipated results or may pose greater complexity than initially considered. Moreover, our reliance on specific, continuously developing technologies like the Light Spectrum Replicator (LSR) and AI algorithms might present unforeseen technical difficulties.

Regulatory Risks

The voluntary carbon market is unregulated, and every supplier must take responsibility and be accountable for the carbon dioxide removals they sell on the market. One of our main priorities is to ensure that we develop a strong verification standard in collaboration with a third-party verification body while also working to influence the development of industry-wide standards and regulations. The regulatory environment for Ocean Carbon Dioxide Removal (CDR) currently restricts commercial ocean CDR by marine snow under the London Protocol. However, scientific research on the topic is permitted. Through continued scientific research and demonstrable results, we aim to provide evidence to organizations such as the IPCC and the International Maritime Organization (IMO) that Ocean CDR by marine snow is safe. If our methodology is validated through scientific findings, we anticipate future legislative changes in our favor. We remain actively engaged in understanding and adapting to these potential shifts.

Market Risks

Our business model is heavily dependent on the value of carbon removals and their acceptance in global markets. Variations in carbon credit markets, regulatory shifts, or changes in the perceived value of such carbon removals could have implications for our financial model. We continuously assess market trends to ensure adaptability and financial resilience.

Environmental Impacts

Though our mission is firmly rooted in combating climate change, the large-scale induction of marine snow could potentially lead to unforeseen environmental consequences. We are fully committed to continuous environmental impact assessment and close collaboration with regulatory bodies to ensure our methods are not only safe but also beneficial to marine ecosystems. Notably, marine snow has been shown to filter heavy metals and potentially microplastics from the water column, which could present an additional environmental benefit.

Technological Integration and Implementation

Our solution requires the integration of multiple technologies, including artificial intelligence, fluorometer systems, sensor technology, and Blockchain. This complex technological ecosystem could present challenges in achieving a seamless, holistic functioning of the system. Ensuring full compatibility, efficiency, and scalability remains a key focus in our development strategy.

Commitment to Risk Mitigation

Aware of these challenges, we are fully dedicated to addressing them proactively. Our team of seasoned scientists, technologists, and business professionals are actively developing robust risk mitigation strategies to ensure the project's success and resilience. We will continue to engage with regulators, scientists, and industry stakeholders to create a responsible and scalable solution that advances carbon removal efforts while maintaining environmental and financial sustainability.