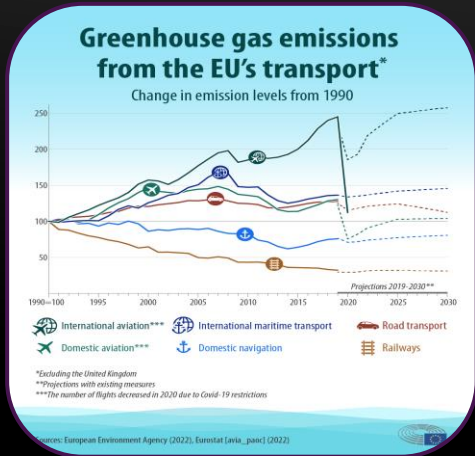# What is EMISSION-EYE ?

Welcome to EMISSION-EYE, a cutting-edge marine startup dedicated to transforming how the shipping industry monitors greenhouse gas (GHG) emissions. Our mission is to provide real-time, accurate and actionable emission data to help shipping companies reduce their carbon footprint and comply with international regulations while aiding regulators to benchmark their present standards and build emission impact/growth projections. By Utilizing IOT, AI for data analytics and Blockchain technology, we aim to set a new standard in sustainable maritime operations.

THE NEED AND OPPORTUNITY
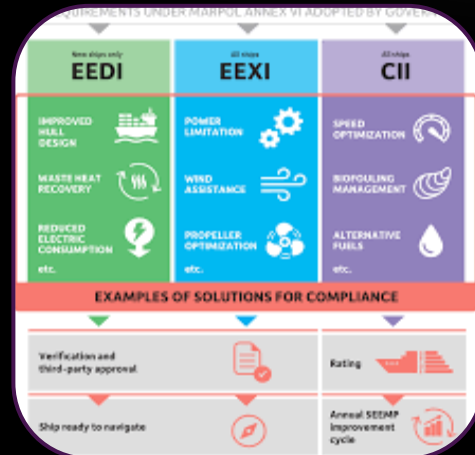
The Need for Real-Time and trustable data

1 - The shipping industry is a significant contributor to global greenhouse gas emissions, leading to adverse environmental impacts such as climate change and ocean acidification.

2 - International Maritime Organization (IMO) regulations require shipping companies to reduce their GHG emissions significantly. Compliance with these regulations is crucial for legal and operational sustainability.

3 - Finland, as a leading maritime nation, is strategically positioned to adopt and promote advanced emission monitoring technologies. Its commitment to environmental protection and innovation makes it an ideal partner.

4 - Reliable, real-time network of emission data is essential for shipping companies to meet regulatory requirements and implement effective carbon reduction strategies. Traditional methods are often inaccurate and do not provide the real-time insights needed for proactive management.
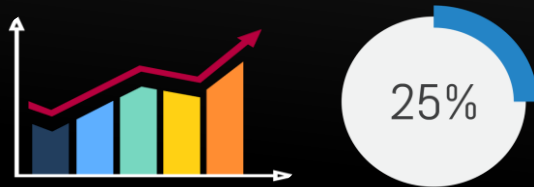
QUANTIFIED DATA
ON MARINE INDUSTRY GROWTH AND ITS IMPACT ON GHG EMISSION

INDUSTRY DATA

- **Overall Traffic:** The number of vessels passing through the Gulf of Finland has been steadily increasing. For instance, between 2007 and 2017, the number of ships transiting through the Gulf of Finland increased by approximately 25%.

25%

- **Port of Helsinki:** The Port of Helsinki, one of the busiest ports in the Gulf, has seen a consistent rise in both cargo and passenger traffic. In 2019, the port handled over 14 million tons of cargo and approximately 12 million passengers.
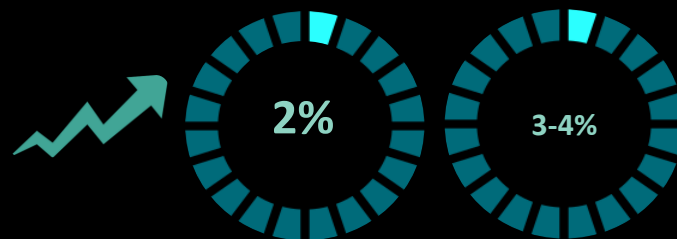
GROWTH PROJECTION

- **Annual Vessel Traffic Increase:** It is projected that the number of vessel passages in the Gulf of Finland will increase by approximately 2-3% annually By 2030 which means an increasing of 15% in the next 6 years.
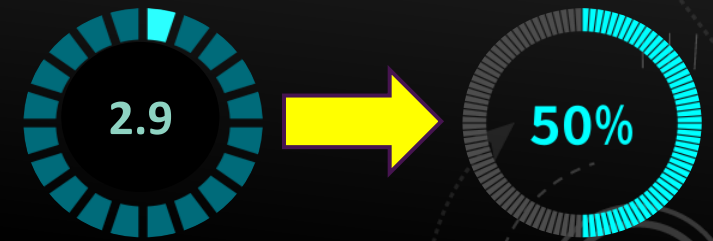
15%

- **The Port of Helsinki:** It is expected to see a cargo volume growth of around 3-4% per year. By 2030, it could handle close to 20 million tons of cargo annually .
- **Passenger Traffic Growth:** Passenger numbers at the Port of Helsinki are anticipated to rise by about 2% per year, potentially reaching 15 million passengers by 2030 .
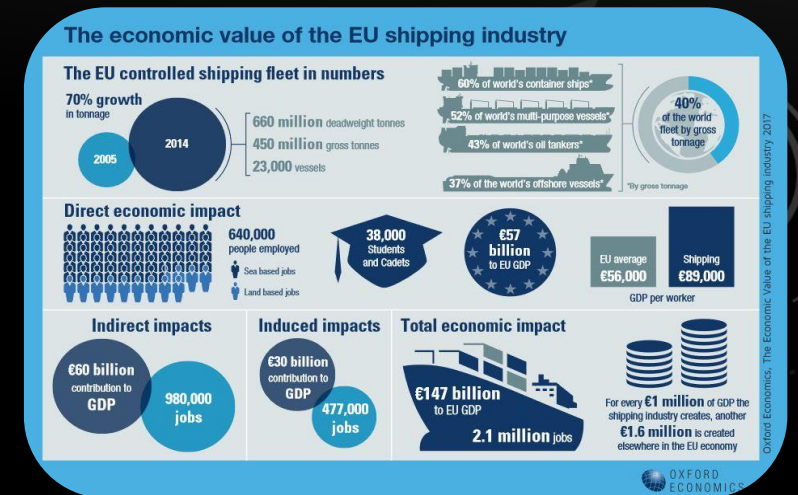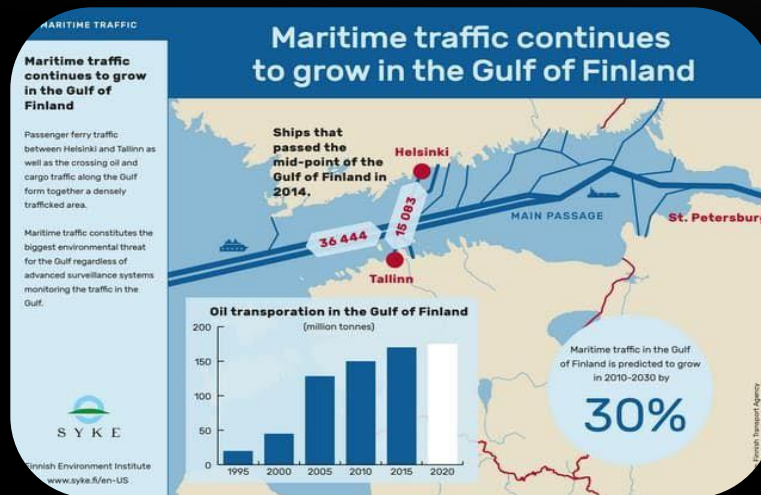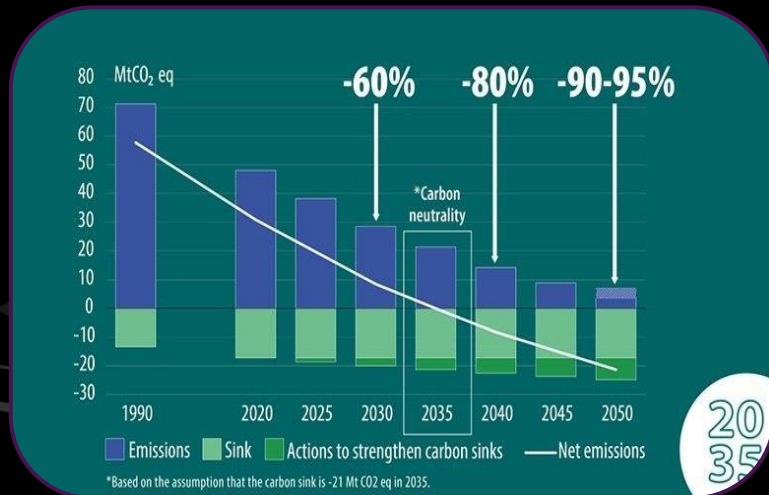
2%   3-4%

INDUSTRY'S IMPACT

- **The global shipping industry** emits approximately 1 billion metric tons of CO_2 annually, accounting for about 2.9% of total global anthropogenic CO_2 emissions. Projected Increase: Without significant intervention, these emissions are expected to increase by 50-250% by 2050, depending on economic growth and energy use.
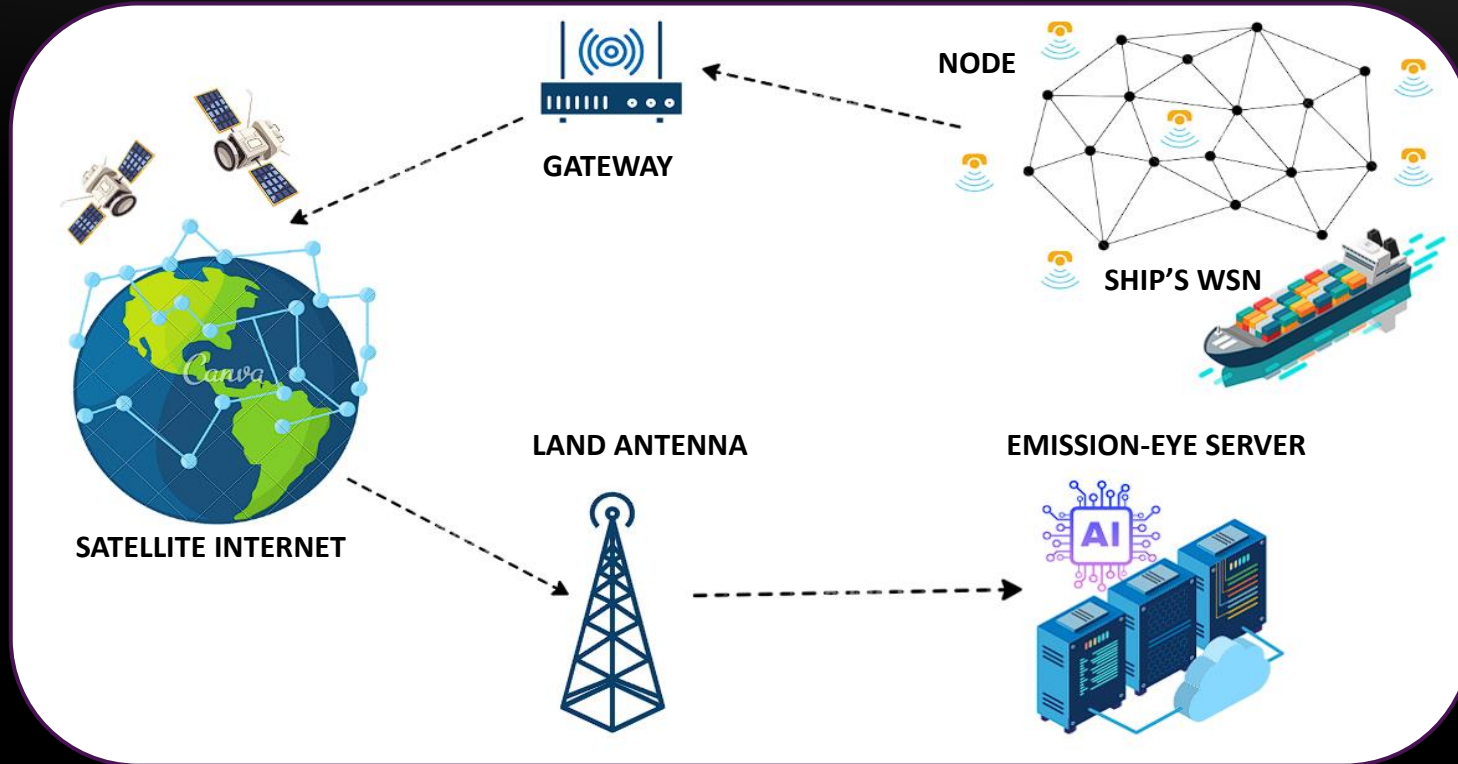
2.9   →   50%

WHY FINLAND?

➢ **Strong Environmental Commitment** : Finland aims for carbon neutrality by 2035

➢ **Government Initiatives on Maritime Sustainability :** Eco-friendly shipping technology projects and collaborations

➢ **Strategic Location and Market Access :** Access to the EU market and proximity to Arctic shipping routes and growing marine traffic in gulf of Finland

➢ **Supportive Government Policies and Funding :** Grants, subsidies, and funding through agencies like Business Finland

➢ **Collaborative Innovation Culture :** Vibrant startup community with networking events, incubators, and accelerators

➢ **Robust Research and Development Ecosystem :** High global ranking in innovation, strong university and business collaboration

➢ **Ease of Doing Business :** Transparent, efficient regulatory environment, straightforward setup process

OUR SOLUTION
Innovative and Scalable Emission Monitoring

EMISSION-EYE installs a network of sensors on ships' main and auxiliary engines, providing real-time data on GHG emissions. The data goes through target sensors in wireless sensor network (WSN) to the gateway, from there by utilizing Satellite internet the data is sent to our advanced analytic servers and we process the data. This way we ensure transparency and efficiency, aiding shipping companies in reducing their carbon footprint and meeting stringent environmental regulations plus providing actionable data for insight generation and impact projections for authorities and regulators.

BENEFITS OF EMISSION-EYE

EYES ON EMISSIONS, MINDS ON SOLUTIONS

➢ **Regulatory Compliance:** Helps meet IMO GHG strategy and other international regulations such as MARPOL.
➢ **Environmental Impact:** Significant reduction in GHG emission, contributing to global climate efforts.
➢ **Scalability :** We offer a super scalable approach which provides possibility for expanding the monitoring process beyond GHG emissions without the need for complicated installations or purchasing extra panels and by just adding more wireless sensors.
➢ **Operational Efficiency:** Enhances transparency and efficiency through precise data analytics and storage.
➢ **Simplicity :** Our approach is designed in a simple yet durable manner to reduce the initial purchase and maintenance costs and this way we guarantee a robust sale due to the lower prices of our products.
➢ **Real Time :** Instead of periodic inspections it provides live data for continuous monitoring and data collection.
➢ **Automation :** Removes chances of human error in calculation and recording data, thus provides trustable metrics and insights.

VISION AND IMPACT
PAVING THE WAY FOR SUSTAINABLE SHIPPING

Vision :

- Lead the shipping industry towards sustainability.
- Promote environmental conservation and reduce carbon footprints.
- Ensure strong returns for investors through innovative technology and strategic market expansion.

Impacts :

- **Environmental Conservation:** Significant reduction in carbon footprints, promoting sustainability.
- **Regulatory Compliance:** Helps shipping companies meet global emissions standards
- **Operational Efficiency:** Enhances operational efficiency and reduces downtime by up to 20% through data analytics and predictive maintenance.
- **Cost Savings:** Up to 5% fuel savings and potential annual savings of $500,000 for medium size vessels also, avoidance of compliance costs ranging from $100,000 to $500,000 per incident.

FIRST YEAR ROADMAP INFOGRAPHICS

Month 10-12: Final Development and Pre-Launch Activities

Finalize GHG monitoring system design based on feedback, secure necessary certifications for IMO GHG compliance, expand marketing efforts, and set up sales and distribution channels for product launch.

Month 7-9: Testing and Refinement

We'll field-test prototypes on ships to gather feedback and data, refining design and software based on results. Simultaneously, we'll develop marketing materials and engage potential customers through workshops and demonstrations to recruit early adopters for testing and feedback.

Month 4-6: Prototype Development and Market Research

To start, we'll develop MVP prototypes for our network system, conduct market research for customer feedback, initiate regulatory compliance, and build partnerships with maritime and environmental sectors.

Month 1-3: Foundation and Initial Development

To launch the startup, we'll incorporate the company, secure initial funding, assemble a core team, design the GHG monitoring prototype, and set up our workspace and IT infrastructure.

CONCLUSION AND CALL TO ACTION:
PARTNER WITH EMISSION-EYE

Conclusion:

Our groundbreaking solution for GHG emissions monitoring is set to revolutionize the shipping industry. By leveraging IoT and blockchain technologies, we provide unmatched accuracy, reliability, and ease of use. Our commitment to sustainability not only helps shipping companies meet stringent global regulations but also promotes environmental conservation and operational efficiency.

Call to Action:

- **Join Us:** Become part of a significant environmental shift in the shipping industry.
- **Invest in Innovation:** Support a technology that offers strong returns and a sustainable future.
- **Collaborate for Change:** Partner with us to drive compliance, reduce carbon footprints, and ensure a healthier planet for future generations.

Together, we can lead the charge towards an eco-friendly and profitable shipping industry. Invest in EMISSION-EYE and be at the forefront of this transformative journey.

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