

# SENSOR GLOBE

## INTRODUCTION

Sedna has quickly become a brand well known for sensor technologies in the demanding environments of northern Canada. From a deep understanding of the commercial fishing and global aquaculture industries, we have developed a wireless, flexible and scalable Sensor Globe where you can add the sensors you require for your monitoring needs:

- **Oxygen**
- **pH**
- **Temperature**
- **Acceleration and Shock**



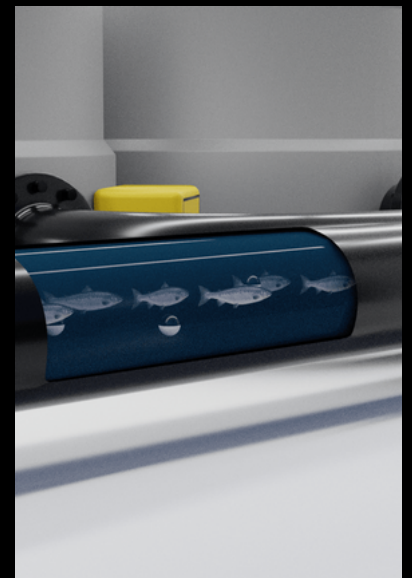
## ADDITIONAL FEATURES

In addition to a comprehensive list of sensors the Sensor Globe is able to collect and log data various depths in the water column. A combination of features included allows for simple and easy use through out your operations:

- **Bluetooth wireless communications**
- **Adjustable buoyancy and submersible levels**
- **100m depth rating**
- **90 day battery life (rechargeable)**

## FLEXIBLE & AGILE

*The Sensor Globe can have neutral buoyancy and follow the fish through pipes, fish pumps and treatment systems to ensure optimal fish welfare and identify problem areas of handling equipment.*



# Wireless Capabilities

## ANTENNA & CABLE

When the Sensor Globe is submerged in water an antenna and cable are needed to collect and view the readings in real time.

The cable can be ordered with custom lengths depending on your use case.



## DATA LOGGER AND SURFACE READINGS

The Sensor Globe is able to float on the surface similar to an iceberg. It will collect and report readings in real time, when it is submerged or placed in a remote area away from a smart phone, tablet or similar device. The Sensor Globe is able to log data files for up to 90 days.

This makes it a great tool for trouble shooting or providing diagnostic intelligence on environments in various areas in your operation.

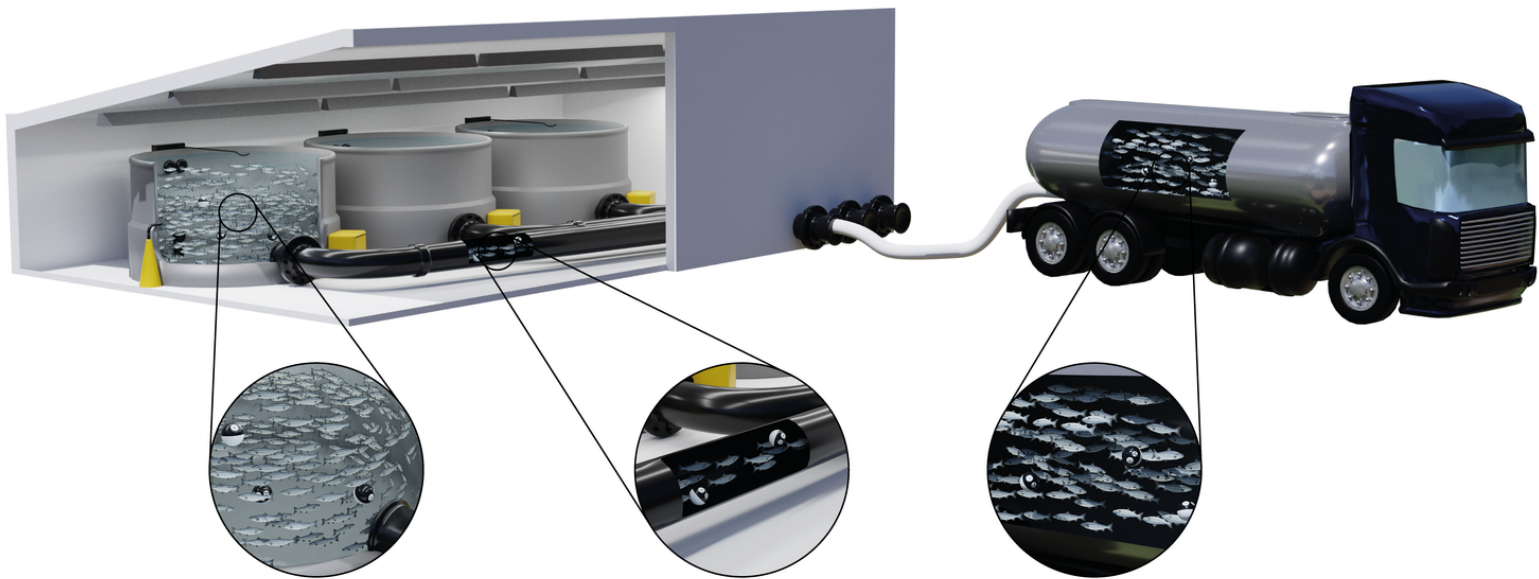


# Monitor and Automate

## LAND BASED FARMING AND FISH TRANSFERS

The ultimate tool for monitoring and optimizing RAS systems, hatcheries, fish handling and transfers to ensure excellent fish welfare. Monitor critical water parameters as well as water movements being tracked by our accelerometer at the core of the unit.

Throughout the transfer process, actionable intelligence on the environmental conditions is made available via wireless transmission to your smartphone or tablet.



### FISH WELFARE ASSURANCE

The motion and health of the water is critical for healthy fish.

This is how the Sensor Globe is able to provide consistent insight into the well being of your premium product throughout the entire process.

### TRANSFER WITH CARE

This compact Sensor Globe of science and engineering doesn't stop at the facility.

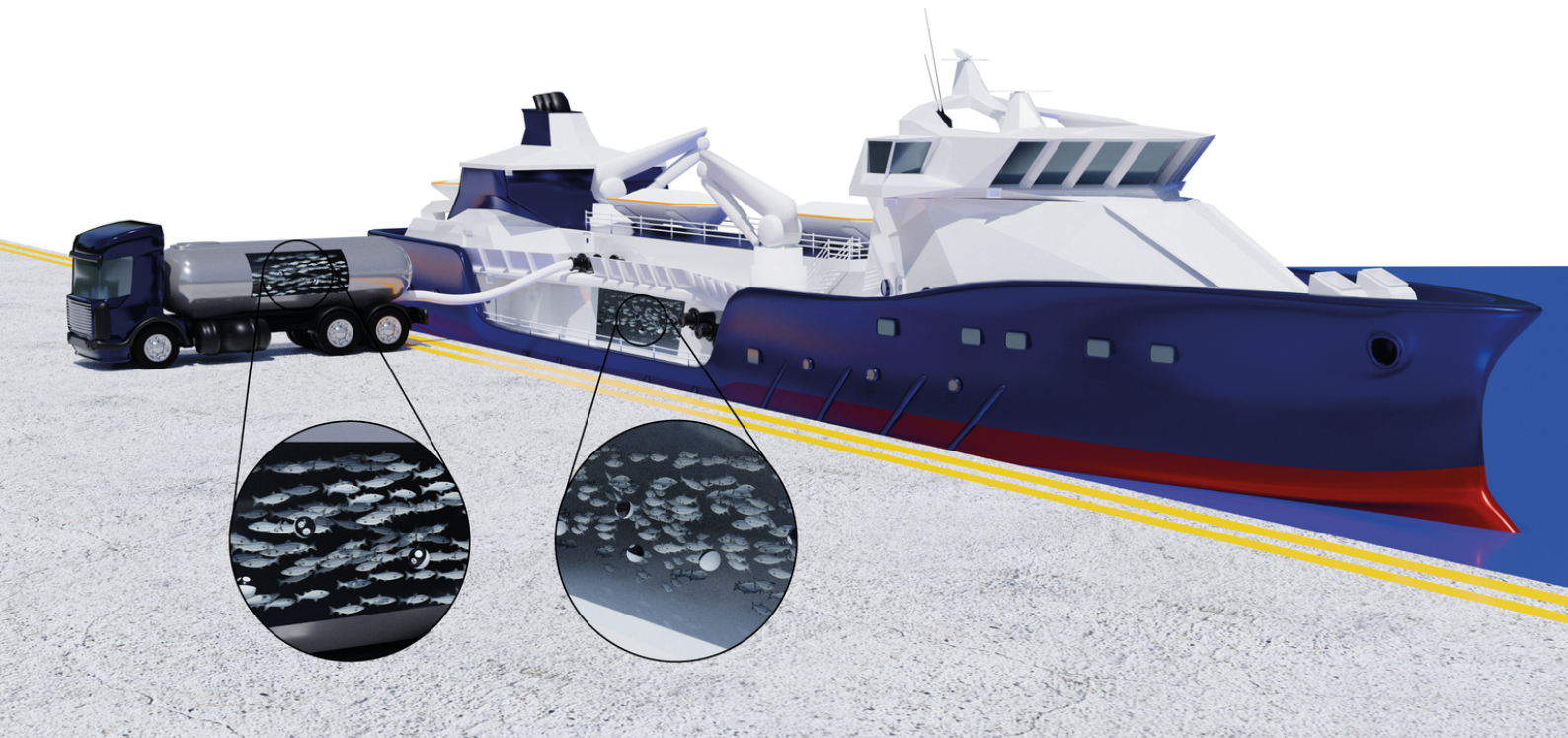
The Sensor Globe can travel with your fish throughout the entire transfer process, providing early warnings to avoid fish losses, as well as full traceability on the conditions your fish experienced throughout the process.

# Transfer with Care

## LOGISTICS

Fish can be exposed to many unknowns while they are either transferred through pipes from land based farms or trucks to well boats and net pens.

The Sensor Globe allows for timestamped logging offline as well as remote monitoring via cloud computing to understand the environmental conditions they were exposed to, ensuring fish welfare throughout the entire transfer process.

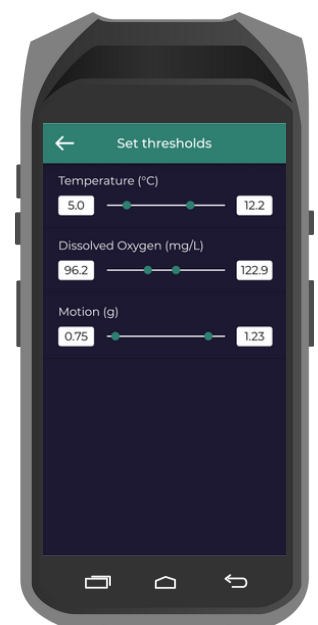


## WELLBOATS

From treating fish to transporting to and from the ocean, monitoring these areas at pertinent times is essential for the safeguarding of your fish.

Monitor dissolved oxygen, temperature, pH, acceleration and shock with ease.

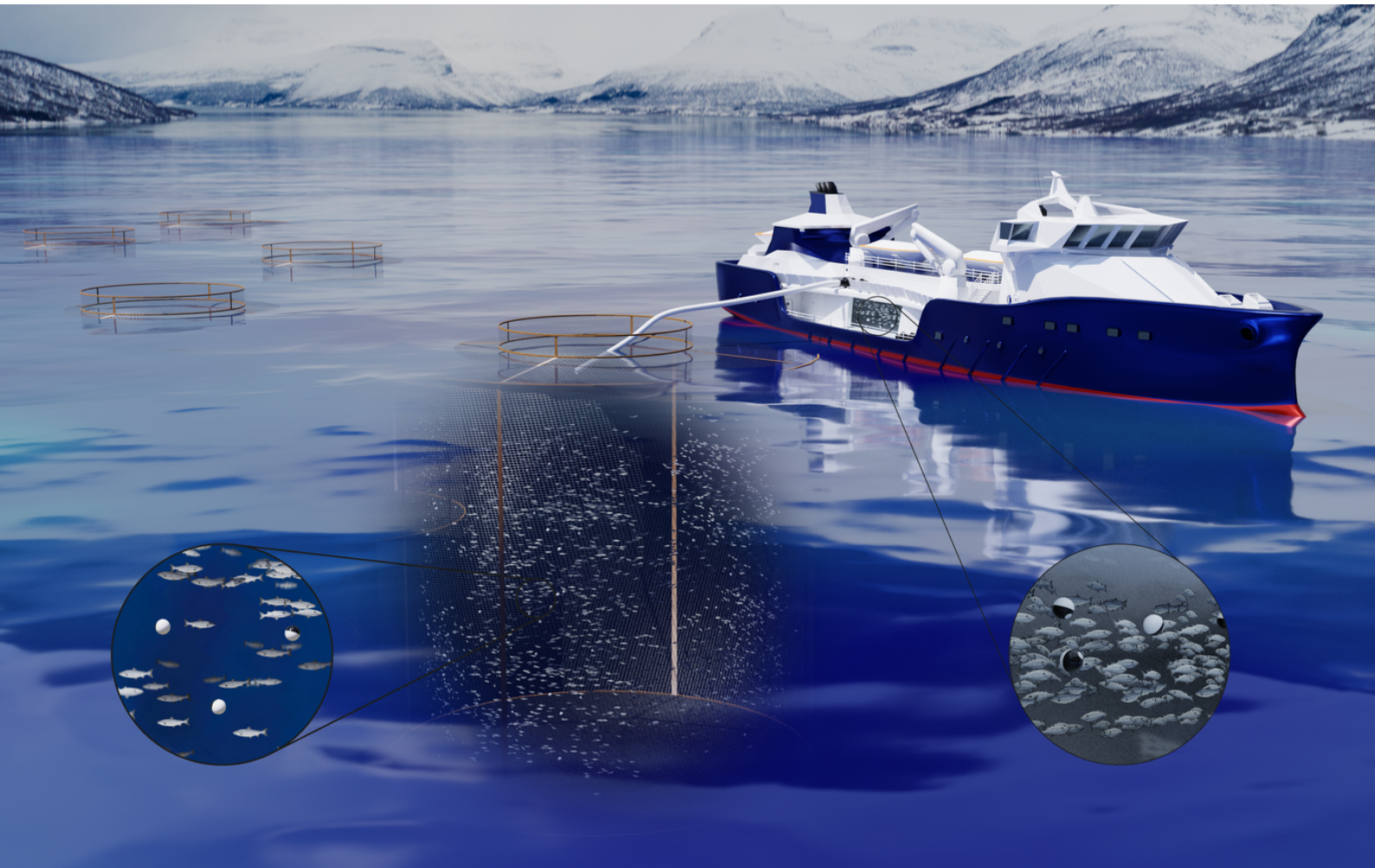
Customize notifications to meet your needs for high and low thresholds to ensure your fish welfare standards are met.



# To The Ocean And Back

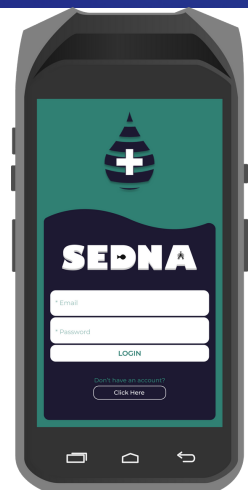
## NET PENS

Easily place a Sensor Globe unit from where you receive your juvenile or smolt supply and collect relevant data to ensure only healthy fish are procured and transported. Monitoring the environment fish are exposed to is critical to their welfare, leading to the biological and financial performance throughout your production cycle. Put your worries at ease with heightened monitoring of all your operations from juveniles and smolt to harvesting.



## LOGIN AND SECURITY

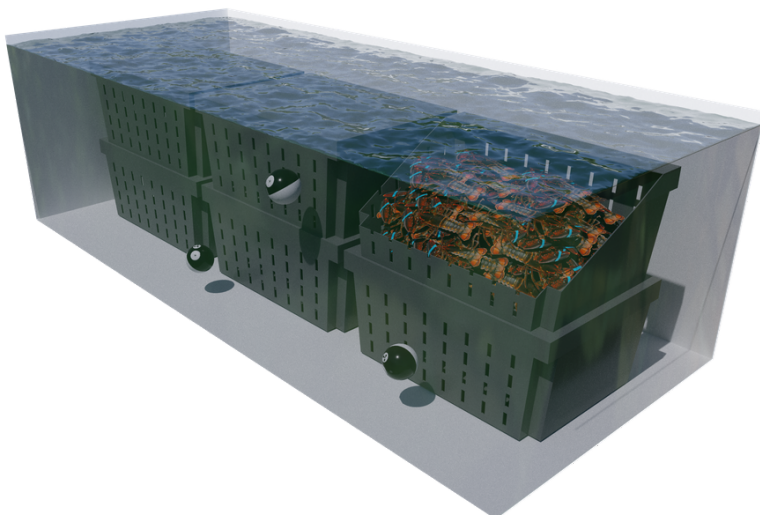
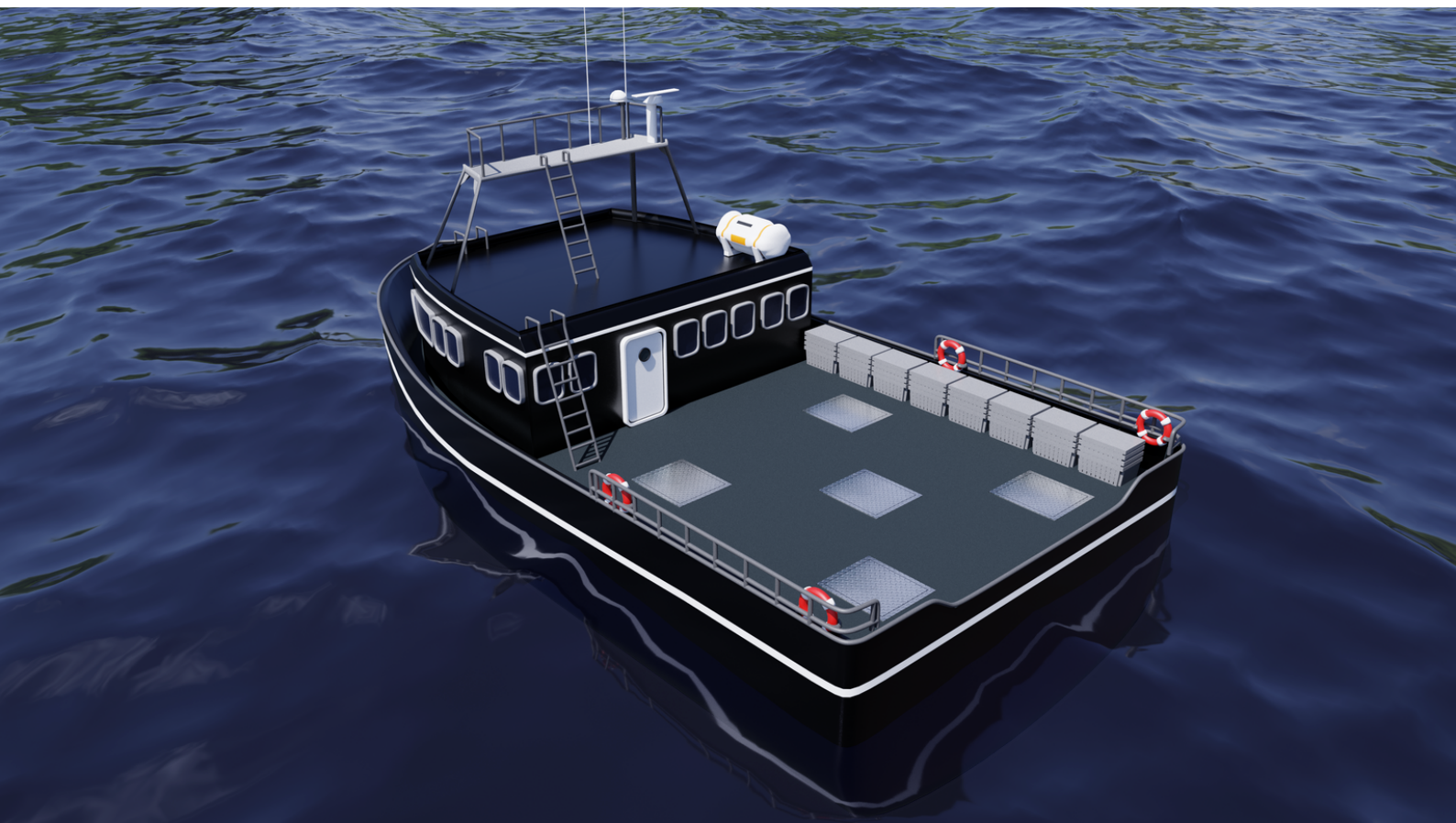
When accessing your sensor globes you are able to control who views the data through login credentials and authentication. Analyze, view and share your data with the comfort of security.



# Prove Your Quality

## COMMERCIAL FISHING

The most important metric for live wild caught seafood is the ability to make it through the complex supply chain. With the Sensor Globe you can understand the conditions the product was held in from catch to dock, ensuring the highest quality product.



## DELIVER WITH CARE

Conditions beneath your deck change with time and volumes of product. Commercial fishing is a challenging and demanding position. Let the Sensor Globe relieve pressure by ensuring all systems are operational and your product is being held in the optimal environment.

# Simple and Easy Software

## REAL TIME MONITORING

Whether you have cellphone or internet connection it does not matter for the Sensor Globe. You are able to view your data on your smartphone, tablet or similar device even in remote locations. Once you have a cellphone or internet connection you can send your data to your home base through our cloud functionality.



## LABEL AND MANAGE SENSOR GLOBES

Moving your Sensor Globes to another operation is easy. Our user friendly interface allows you to change the name of the device and manage push notifications with simple to set threshold settings.

# Specifications

Parameter	Unit of Measure	Accuracy	Sensor Drift	Range
pH (PK7)	pH value	0.05	<0.005/day	6.0 to 8.0
pH (PK8)	pH value	0.05	<0.005/day	7.0 to 9.0
Oxygen	% saturation & mg/l	0.1% saturation & 0.1 mg/l	<1%/year	0 to 250
Temperature	Celsius	0.5 to 1.0	N/A	-40 to 350

Specifications	Value	Comment
Operational maximum depth	100m	Product will be tested at this depth by the manufacturer
Sensor components, max depth	4000m	Based on depth rating of sensing components
Subsea cable plug, max depth	3500m	Option: Cable plug version IE55-12-BCR (Teledyne Impulse)
Battery Life	60 Days	Based on temperature and measuring frequency
Measurement frequency	Adjustable	Adjusted by the user in the software for each Sensor Globe
Data storage capacity	8GB	Micro SD
Data Download	Bluetooth 5.0	Mobile application and custom integration available
Battery Type	N/A	Lithium Ion

## DATA AND SOFTWARE

Sedna Software is currently available as a mobile application only. In the base package, you are able to view the readings in real-time from the device as well as historic reporting. Upgrades and custom integrations into data management systems are available upon request.

Sedna Sensor Globe mobile application is available on the app store as well as google play





# Contact Us



**SEDNA TECHNOLOGIES NORWAY AS**



**TROND@SEDNATECH.IO**



**+47 - 923 35 041**



**27 PARKER STREET, DARTMOUTH,  
NOVA SCOTIA, CANADA B2Y4T5**



**INFO@SEDNATECH.IO**



**(902) 903-6424**

**SEDNA** 