Watersaving Solutions in Agrifood

SustainableSolutionsMatch

Welcome!

Welcome & Introduction

Who's moderating?

Cristina Cabezas

ANDALUCIA TRADE

Business Developer

SustainableSolutionsMatch

Welcome & Introduction

Let’s play by the rules: smooth sailing for our session!

- **Mute Policy:** Please remain muted unless speaking to avoid background noise.
- **Q&A Time:** After each pitch, there will be 1–2 minutes for questions. Please use the chat to ask questions.
- **Session Recording:** This session will be recorded.
- **Time management**: Pitchers, please keep track of your time. We will inform you if 5 minutes have passed.
- **Technical Issues:** If you encounter issues, use the chat to notify the host.

Session Agenda

- Welcome & Introduction
- Sustainable use of water in Agrifood
- **11:00 hours Introduction by Cristina Cabeza**
- Pitch Presentations:
- **11:05 hours Bihox**
- **11:13 hours Cubex Lab**
- **11:21 hours Topraq**
- **11:29 hours Digital Data Farm**
- **11:07 hours Biogreenroad`**
- **11:15 hours Blueming Biotech**
- **11:22 hours NOAH Water Solutions**
- **Closing remarks**

Sustainability in water use efficiency for agriculture

- **Efficient water use** in agriculture is crucial for conserving this vital resource and ensuring **sustainable farming practices**.
- By optimizing water usage, farmers can **reduce costs, enhance crop yields, and protect the environment**.
- Effective water management also helps **mitigate the impacts of climate change**, such as droughts and irregular rainfall, making agriculture more **resilient**.
- Ultimately, water-saving practices contribute to the **long-term sustainability of our food systems** and the health of our planet.

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Pitch Presentations

Time to meet the innovators!

Pitch 1

Bihox

Pelayo Fernández

SustainableSolutionsMatch

BIHOX, oxygenation solution for agricultural processes

BIHOX
SMART OXYGEN
Better Care, Better Value

Company name WATERHOX, S.L.

Pelayo Fernández
Co Founder

WE EMPOWER YOUR WATER SO YOU GET MORE VALUE.

With BIHOX® we **transform your water into SUPERWATER** so that you can make better use of your water, fertilizers and phytosanitary resources and **save money** in your harvest and post-harvest processes.

BIHOX

SMART OXYGEN

Better Care, Better Value

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THE PROBLEM

WE NEED A MORE EFICIENT, SUSTAINABLE AND PROFITABLE AGRICULTURE

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THE SOLUTION BIHOX®

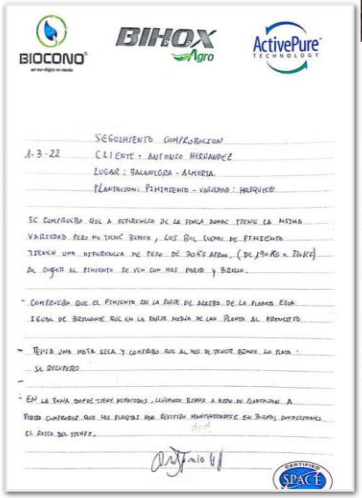
VALIDATION

2ª Inst 12-2-22

1ª INST 18-11-21

4ª INST 23-4-22

3ª Inst 3-3-22



5ª INST 11-5-22

IMPROVED WATER WITH:

- ❑ **Hydroxyl groups (OH^-) and (OH)**
- ❑ **Hydrogen peroxide (H_2O_2)** very low concentration (0.5 ppm)
- ❑ **Superoxide (O_2^-)**
  - ➢ Does not produce ozone.
  - ➢ No residual byproducts are generated.
  - ➢ Suitable for organic farming.

LOTS OF SCIENTIFIC EVIDENCE

OVER 300 CUSTOMERS

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BENEFITS of BIHOX®

LOWERS SUPERFICIAL TENSION OF THE WATER

IMPROVES TENSIOACTIVITY CAPACITY OF THE WATER

EXTRA OXIGEN ADDED

IMPROVES SOLVING CAPACITY OF THE WATER

BENEFITS of BIHOX®

SOIL: HEALTHIER, BETTER AVAILABILITY OF NUTRIENTS

CULTIVATION: IMPROVED ROOTS AND MORE PRODUCTION

WATER STORAGE: LESS PATHOGENS AND ALGAE

IRRIGATION: BETTER UNIFORMITY

MARKET TRACTION

Currently more than **300 customers,** mainly in the province of Almería,Spain.

Potentially **any pressure irrigation system user in the world.**

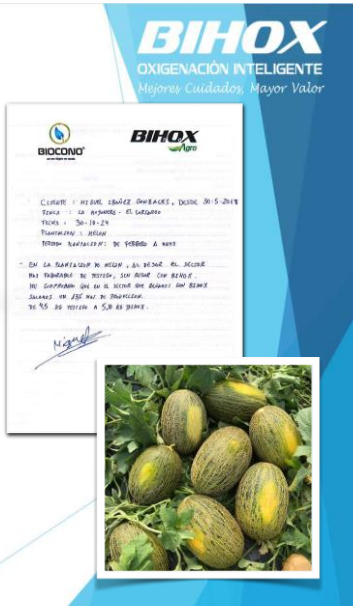
In Spain alone there are **2.3 million preasure irrigated hectares,** which is equivalent to about 120,000 installed BIHOX® units

2ª finca. Inst bihox 15-12-21

1ª finca. Inst bihox 7-9-21

3ª finca. Inst bihox 4-7-22

- CLIENTE DESDE MEDIADOS 2018.
- PLANTACIÓN DE MELÓN PIEL DE SAPO DE FEBRERO A MAYO 2024.
- DEJA DE TESTIGO EL SECTOR DE CULTIVO MÁS FAVORABLE. COMPRUEBA QUE EN EL SECTOR QUE SI RIEGA CON BIHOX SACA UN 13% MAS DE PRODUCCION. DE 4,5 KG TESTIGO A 5,10 KG BIHOX



- Prevención Plagas con Optimización de fitosanitarios.
- Reducción Significativa de Nematodos (Batatilla)
- Mejora importante radicular, planta, foliar y calidad de fruto.
- Mejora físico, química del agua. Reducción de 0,3 la Conductividad C.E. De 2,2 a 1,9 mg/ l.

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Book a meeting with: BIHOX www.bihox.es

Pelayo
Fernandez

BIHOX
Co-CEO, Waterhox, S.L

een.ec.europa.eu

BIHOX
SMART OXYGEN
Better Care, Better Value

Up2Circ

enterprise europe network

Pitch Presentations

Time to meet the innovators!

Pitch 2

Cubex Lab

Vladan Gligorijević

SustainableSolutionsMatch

AGROSPACE solution uses advanced AI, data analytics, and high-tech sensor technology to optimize agricultural productivity.

AGRO SPACE

CUBEXLAB

Vladan Gligorijevic
Co-Founder

AGRO SPACE

Problem

Farmers are faced with:

1. **30-50% revenue losses** due to microclimate change and weather conditions
.
2 **45% reduction in yield** due to soil degradation, pests and disease

3. **70% failure rate** in personal involvement of the farmers to investigate new Regulatory and Policy Changes and adaptation of sustainability and environmental requirements

Solution

1. Reducing farmer's **revenue losses by 35%** caused by microclimate change and weather conditions through an all-in-one comprehensive monitoring system for smart agriculture

2. **35% increase in yield** as a result of measuring and combining 8 various soil and air parameters with microclimate change information which provides insights on preventing soil degradation and early pest and disease detection

3. **100% success rate** in helping farmers to know, follow, and implement sustainable and environmental agricultural practices as well as to follow regulatory and policy changes

AGRO SPACE

Nutrients

CO2
(Carbon dioxide)

NPK
(Nitrogen, Phosphorus, Potassium)

pH
(Potential of hydrogen)

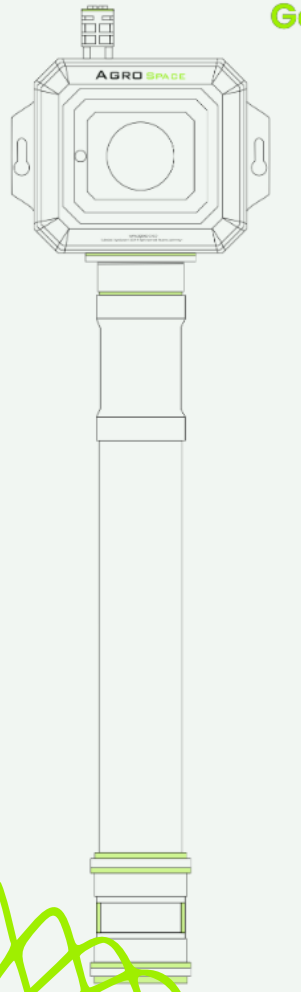
Working temperature
(-40°C to +85°C)

RH
(Relative humidity)

FS-EC
(Field soil-Electrical conductivity)

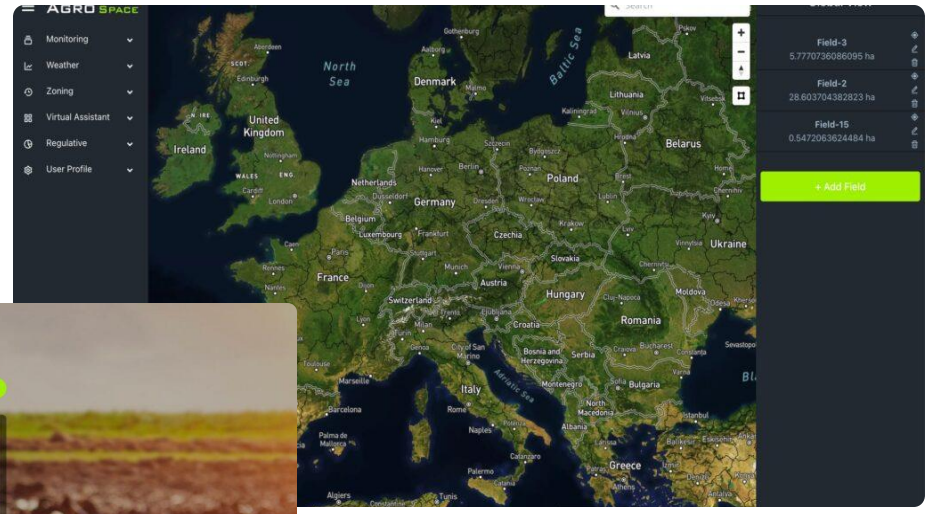
Measuring temperature
(-40°C to +85°C)

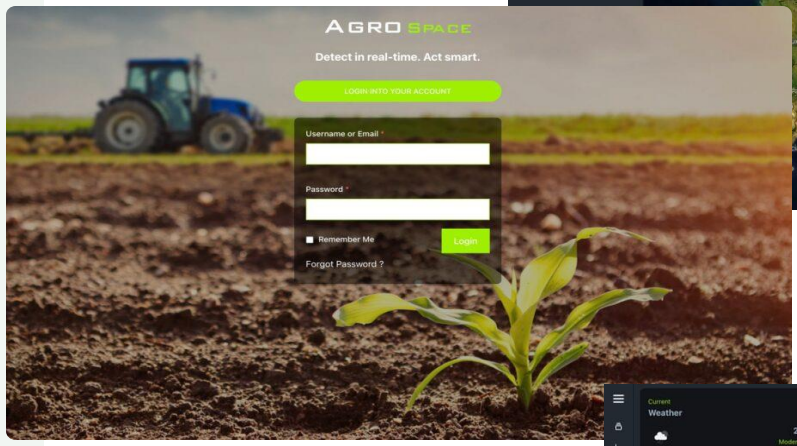
RH
(Relative humidity)



General Parameters

- Soil CO2
- Soil NPK
- Soil pH Value
- Soil Temperature
- Soil Moisture
- Soil Conductivity
- Air Temperature
- Air Humidity





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Competition comparasion

	AGRO SPACE	AgroSens	Farm21	agroNET	STENON
Soil CO2	✓	✗	✗	✗	✓
Soil NPK	✓	✗	✗	✗	✓
Soil Salinity	✓	✗	✗	✓	✗
Soil pH	✓	✗	✗	✗	✓
Soil Temperature	✓	✓	✓	✓	✓
Soil Humidity	✓	✓	✓	✓	✓
Air Temperature	✓	✓	✓	✓	✗
Air Humidty	✓	✓	✓	✓	✗
Real-time monitoring	✓	✗	✗	✗	✓
Regulatory support	✓	✗	✗	✗	✗
Early Warning System	✓	✗	✗	✗	✗
Decision support system	✓	✗	✗	✗	✗

AGRO SPACE

Customers

Direct Solutions for Large-Scale Agriculture

- Big Farmers
- Big grape producers
- Big greenhouse farmers
- Small farmers
- Small greenhouse farmers

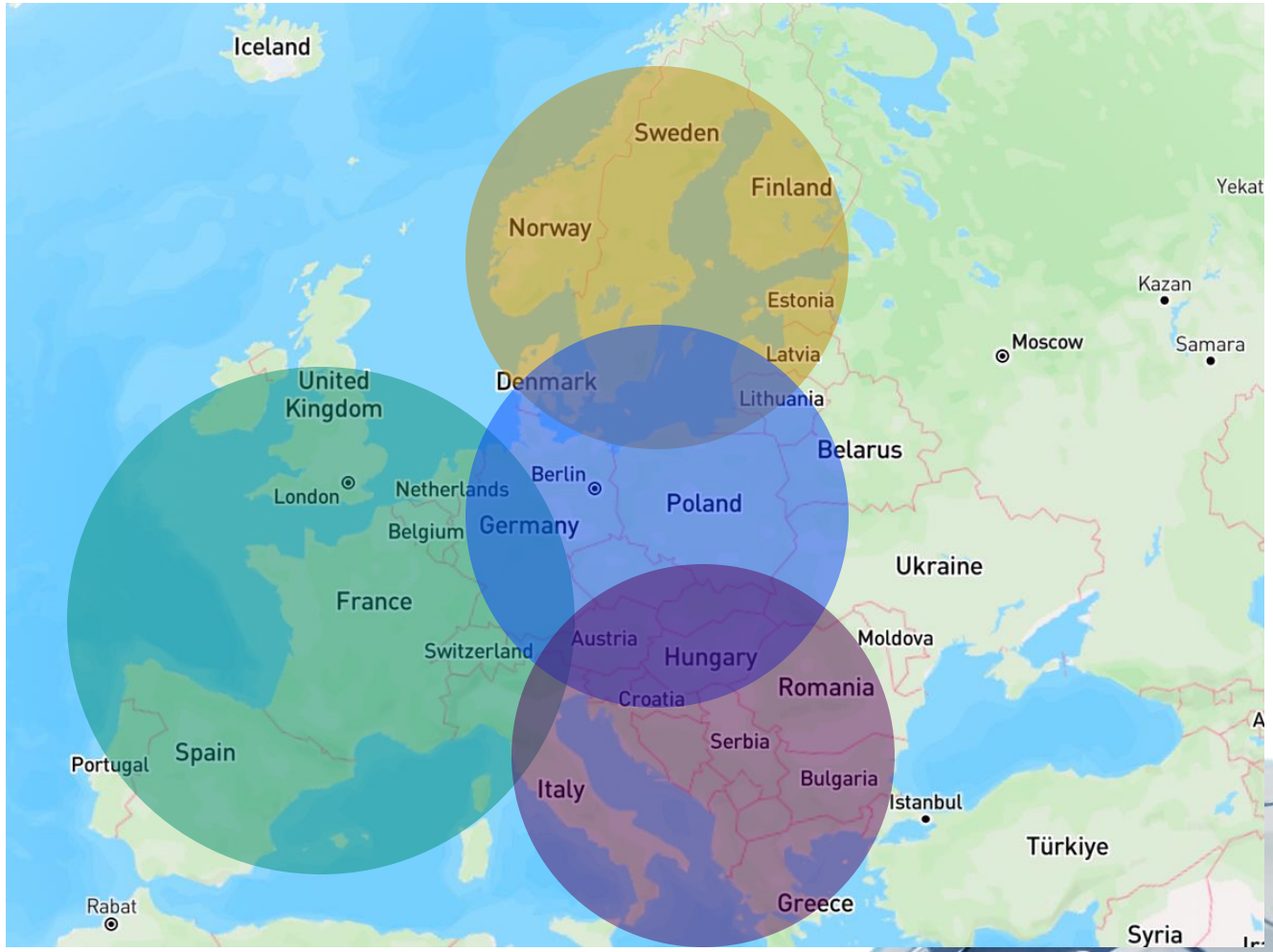
Value proposition for producers will be technology solution that will improve **20-30%** soil health, **35%** increase of yield and provide resilience against unpredictable climate conditions but also assist in ensuring compliance with regulatory policies, thereby securing their operations' sustainability and profitability.

Sustainable impact: AgroSpace's solution provides to farmers data-driven decision making help to cut pollution and enhance soil health by **27%**, streamlining irrigation and energy use by **23%**, and empowering rural communities by **20%**.

AGRO SPACE

Business operations

- Finland, Helsinki
- Netherlands, Amsterdam
- Hungary, Budapest
- Serbia, Belgrade



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AGRO SPACE

Thank you!

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Vladimira Popovica 40, 11070, Belgrade, Serbia

#EENCanHelp

Book a meeting with: CUBEXLAB

Vladan Gligorijevic

Co-Founder

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een.ec.europa.eu

AGRO SPACE Up2Circ

enterprise europe network

Pitch Presentations

Time to meet the innovators!

Pitch 3

Topraq

Hilal Şahin

SustainableSolutionsMatch

T-Irrigate: Irrigation Optimization Station

TOPRAQ

Hilal Şahin
Sales & Marketing Director

Revolutionizing Irrigation Management

T-Irrigate is a **precision irrigation system** leveraging sensors, **AI-driven algorithms**, and **cloud technology** to optimize water use and improve agricultural efficiency. It addresses critical global challenges like water scarcity and energy inefficiency while empowering farmers to meet economic and environmental goals.

Proven Impact:
- Conserved **134+ million liters of water.**
- Saved farmers an average of **45% on water** and **52% on electricity.**
- Analyzed **36 million minutes of irrigation data** to drive smarter irrigation practices.

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Precision in Every Drop: How T-Irrigate Delivers Results

How it Works:
- **Data Collection:** Monitors soil moisture, temperature, water flow, meteorological data and system performance via smart sensors.
- **AI-Driven Analysis:** Incorporates crop specific needs, weather forecasts, and historical data for optimized schedules.
- **Real-Time Adjustments:** Alerts for leaks or inefficiencies with remote control via a user-friendly interface.

Adaptability Across Contexts:
- Suitable for diverse crops, climates and farming scales.
- Integrates seamlessly with existing infrastructure.
- Ideal for industries beyond agriculture, such as landscaping and urban green spaces.

Sustainability at Its Core:
By combining precision technology with ease of use, T-Irrigate supports scalable, resource-efficient irrigation solutions worldwide.

SustainableSolutionsMatch

Precision Irrigation for a Sustainable Future

What makes T-Irrigate Different?
- **Precision Technology:** Combines sensors, AI, Algorithms, and cloud-based platform to optimize irrigation schedules.
- **Actionable Insights:** Delivers meaningful, real-time data to farmers, enabling instant action on inefficiencies.
- **Adaptability:** Works across diverse crops, climates, and farm sizes, integrating seamlessly with existing systems.
- **Proven Results:** Saves **45% water,** and **52% electricity** on average, reducing costs and environmental impact.

Measurable Sustainable Impact
- **134M+ liters of water conserved** through the analysis of 36 million minutes of irrigation data.
- **Lower energy use, reduced carbon emission,** and enhanced crop health.
- Supports UN sustainable Development Goals for water and climate resilience.

SustainableSolutionsMatch

A Solution for All Scales

Farmers Across All Scales:

- From small family farms to large corporate operations, T-Irrigate optimizes water usage in pressurized irrigation systems such as drip, sprinkler, pivot irrigation.
- Ensures sustainable resource management, cost savings, and improved crop yields.

Urban Applications:

- Ideal for parks, gardens, and landscaping projects where users seek maximum visibility and control over irrigation activities

Why T-Irrigate?

- Adaptable to diverse needs, climates and setups.
- Provides actionable insights and real-time control for efficient, sustainable irrigation management.

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Building Networks for Sustainable and Circular Innovation

Expanding Beyond Customers
To drive sustainable and circular innovation, we seek to establish partnerships along the value chain, including:

- **Channel Partners and Distributors:**
  - Collaborating with **regional and international partners** to expand the reach of T-Irrigate.
  - Focus on countries across the **European Union** to create robust distribution networks for our products and services.

- **Why These Partnerships Matter:**
  - Enable localized support for customers through trusted partners.
  - Enhance accessibility of sustainable irrigation solutions to farmers and urban users.
  - Foster innovation through shared expertise and market insights.

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Book a meeting with: TOPRAQ

Hilal Şahin
Sales & Marketing Director
TOPRAQ
hilal.sahin@Topraq.ai

een.ec.europa.eu

Pitch Presentations

Time to meet the innovators!

Pitch 4

Digital Data farm

Pablo Berríos

SustainableSolutionsMatch

Irriman Platform: Revolutionizing Sustainable Water Management

Digital Data Farm S.L.

Pablo Berrios Reyes
PhD Agricultural Engineer

enterprise europe network

Digital Data Farm

Digitalization and precision agronomy to increase water sustainability

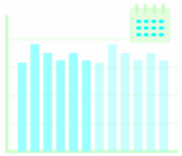
PRODUCTS & SERVICES

Redefine irrigation management with our patented digital Irriman Platform that combines agronomic management and Artificial Intelligence.

Irriman Platform

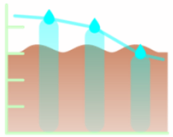
Real time soil water status monitoring

Prediction of soil water status and irrigation



Applied water and irrigation scheduling

Monitoring of crop water status and growth



Optimization of the ecological footprint

Reducing costs and increasing competitiveness

WHAT MAKES US DIFFERENT?

✓ ***Integrated technology***
Real-time monitoring, advanced AI forecasting and crop-specific modelling in one system.

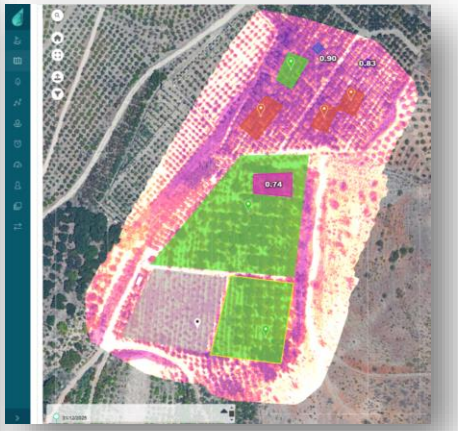
✓ ***Customized solutions***
Flexible design adapted to the needs of water users at farm and macro scale.

✓ ***Economic and environmental sustainability***
Minimizing environmental impact without affecting competitiveness

Continuous support in the irrigation decision making process.

Precision agricultural management

Water digital transformation



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enterprise europe network

Digital Data Farm

Digitalization and precision agronomy to increase water sustainability

MARKET OPPORTUNITIES

Demand for Digitalization in Water Management

Public and private incentives exist for the adoption of precision technologies, opening up opportunities with **irrigation communities**, **agricultural companies**, **cooperatives** and **companies seeking to reduce their water footprint.**

Irriman Platform

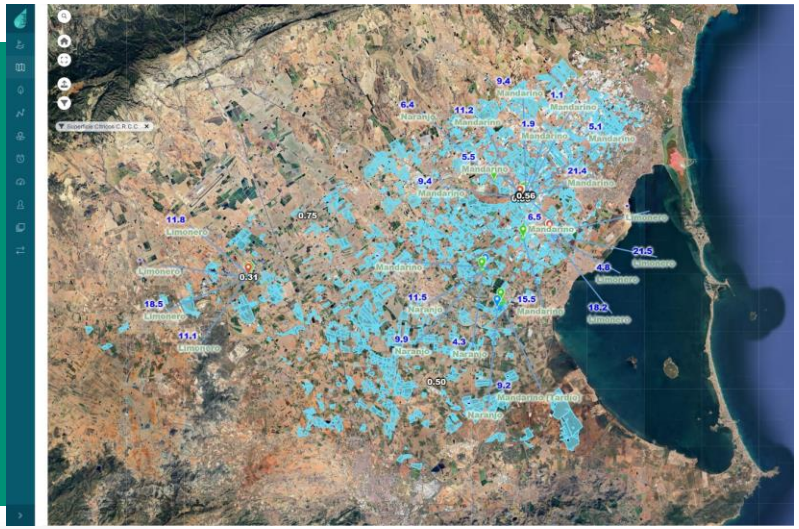
MAIN RESULTS

+40% ***Irrigation water productivity***

-30% ***Fertilizer doses***

-25% ***CO_2 Emissions***

-20% ***Overall costs***



Commercially validated in outdoor and greenhouse crops on +35,000 ha.

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Digital Data Farm

Digitalization and precision agronomy to increase water sustainability

BUSINESS MODEL

We offer a **B2B model**, providing long-term technology with precision agronomic consultancy. The **SaaS** service includes the Irriman Platform with various subscription levels, from basic monitoring to advanced analytics.

WHAT ARE WE LOOKING FOR?

Water user/managers that want to join the digitalization of water and increase their competitiveness.

ABOUT US

We are an innovative technology-based company and spin-off of the UPCT. We have positioned ourselves in the main agricultural areas of Spain, having leading clients in the industry and we are in a process of internationalization.

Alejandro Pérez Pastor

PhD Agricultural Engineer

Irrigation scheduling and physiological and agronomic response of crops to water deficit.

Pablo Berríos

PhD Agricultural Engineer

Agricultural systems fertigation and applied statistics for crop science.

Manuel Ruiz

PhD in Mathematics

Data analytics and development of predictive models based on ML and AI

Abdelmalek Temnani

PhD Agricultural Engineer

Crop fertigation management, GIS and Remote Sensing.

www.digitaldatafarm.com

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Book a meeting with: Digital Data Farm

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Digital Data Farm

Up2Circ

enterprise europe network

Pitch Presentations

Time to meet the innovators!

Pitch 5

Biogreenroad

Rafael Herena

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Pitch Presentations

Time to meet the innovators!

Pitch 6

Blueming Biotech

- Sandra Cermeño Olmos

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ECOMETRY: INNOVATION IN WATER MONITORING

BLUEMING BIOTECH

Blueming Biotech

Sandra Cermeño Olmos
CTO

UNIQUE ANALYSIS TECHNOLOGY

WHAT DO WE ANALYZE?

NUTRIENTS
(NPK)

BASIC WATER PARAMETERS
(pH, CE, hardness)

WHY IS IT UNIQUE?

NO CALIBRATIONS REQUIRED

NO CHEMICALS REQUIRED

SINGLE SENSOR (ALL IN ONE)

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WHO NEEDS OUR TECHNOLOGY?

Every productive activity must control Nitrogen (N) and Phosphorus (P) for two main reasons:

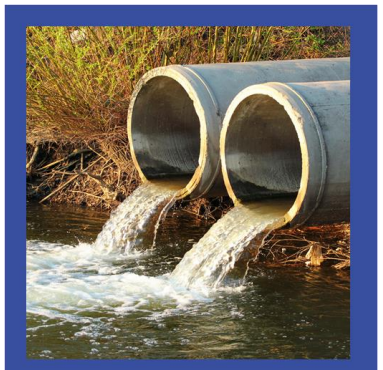
1. To improve operations (i.e., reduce losses and increase production).
2. Environmental regulations (increasingly restrictive).

N P SAME ELEMENTS, DIFFERENT IMPACT

NP=Toxics

NP=Nutrients

NP=Nutrients/Toxics

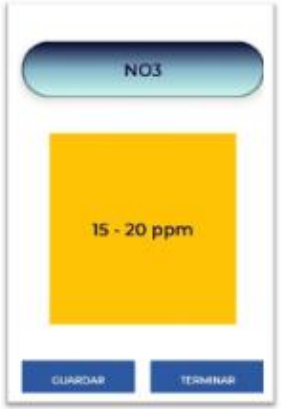


NP=Contaminants

NP=Wastes

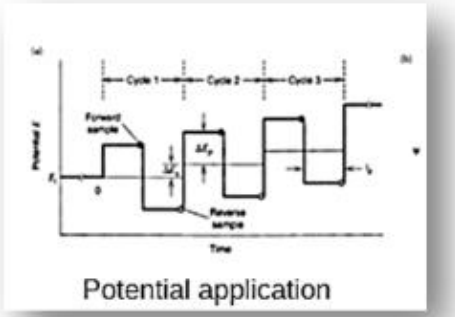
HOW DO WE DO IT?

VOLTAMPEROMETRY

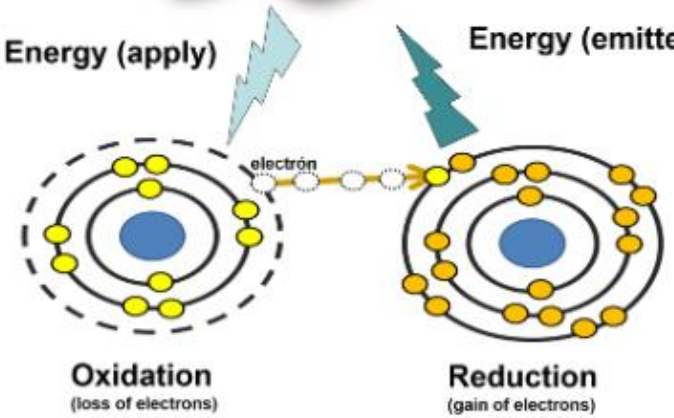


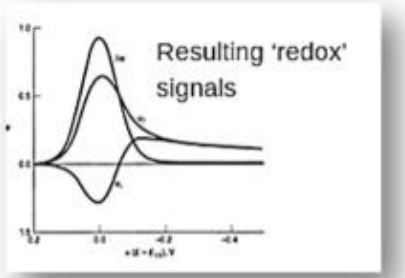
Our Technology
(International Patent WO/2024/008992)

Ecometry (interpretation)



Potential application





OUR PRODUCTS

WE CAN AUTOMATIZE

NO CALIBRATION

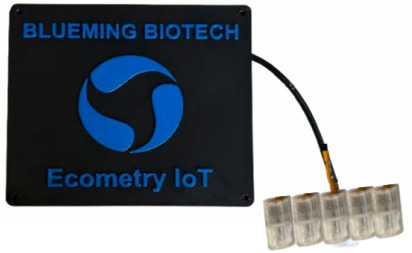
NO CHEMICALS REQUIRED

ECOMETRY NANO

A pocket size laboratory

USER FRIENDLY

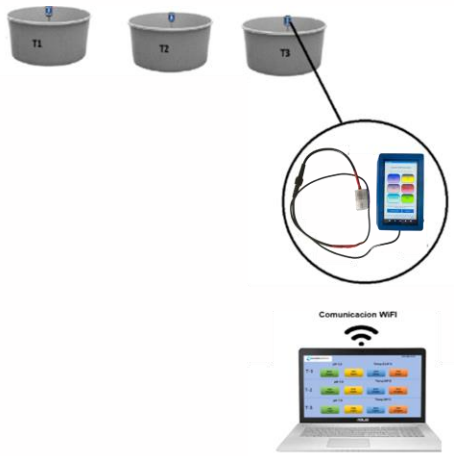
ECOMETRY 4logger



ECOMETRY IoTouch

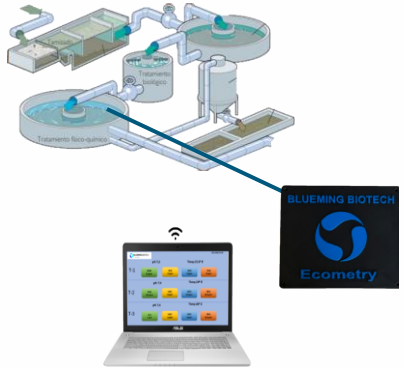
OUR TECHNOLOGY PROMOTES:

Environmental safety



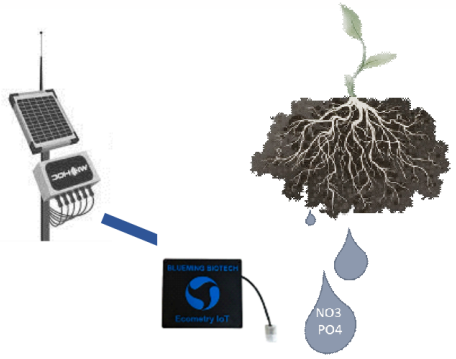
AQUACULTURE

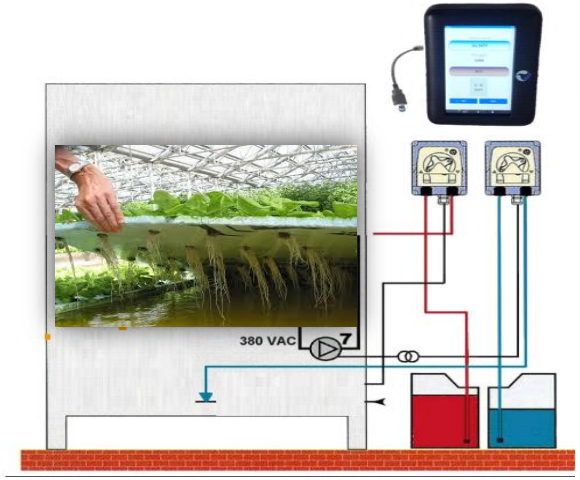
Secure production processes



WASTEWATER

Increasement on production yields





AGROTECH

INCOME

VALIDATION

UNIVERSITIES

RESEARCH CENTRES

DIRECT SALES

R&D PROJECTS

FINAL CUSTOMERS

INDIRECT SALES

DISTRIBUTORS

INTEGRATION INTO

THIRD-PARTY PRODUCTS

(SENSOR COMPANIES)

PCT PATENT

WO/2024/008992

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Book a meeting with: BLUEMING BIOTECH

RAFAEL HERENA
CEO and FOUNDER
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BLUEMING BIOTECH

Up2Circ

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Pitch Presentations

Time to meet the innovators!

Pitch 7

Noah Water Solutions

Dries Parmentier

SustainableSolutionsMatch

Electro-chemical waste water treatment by a exchangable cartridge for treatment at source

Noah Water Solutions

Dr. Dries Parmentier
Head of research

SustainableSolutionsMatch

The hart of the NOAH cartridge exist of a 2 tubular electrodes positioned co-axially and vertical where in between the waste water flows

Applying sacrificial electrodes (electro-coagulation) results in phosphate, pCOD and heavy metal removal
Applying inert electrodes (electro-oxidation) results in nitrogen, micro-pollutant removal and disinfection

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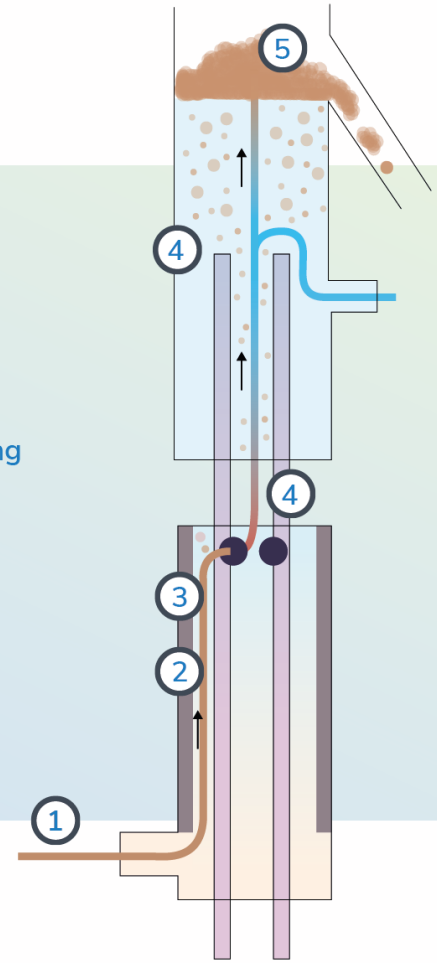
HOW DOES IT WORK?

1. Wastewater is pumped through the gap between the two coaxial electrodes.
2. An iron or aluminium **sacrificial electrode** releases metal ions which speciate depending on pH.
3. The produced metal ions react with water producing metal hydroxides, which encapsulate, adsorb & co-precipitation colloidal particles and pollutants.
4. The inner **inert electrode** produces very fine hydrogen bubbles which cause a flotation effect.
5. The iron- aluminium hydroxide **floc**, is floating by produced H^2. There is no mechanical separation only gravitational.



SustainableSolutionsMatch

Differential value and sustainable impact

Treatment at source: - Avoids GHG from storage and biological treatment
- Facilitates resource recovery
- Avoids overload existing WWTP

Fully electric: - Can be fully automated/autonomous
- Accelerates reuse treated water
- Easy switch on/off

SustainableSolutionsMatch

Market/Target audience – Who can apply your solution?

Decentral manure treatment
Inline treatment of concentrated streams from the food industry
Disinfection of water (slaughter houses)
Machine builders in the dying industry (printing)

SustainableSolutionsMatch

Currently, we are looking for a strategic partner?

- Trail customer

or

- active in (decentral) (waste) water treatment

or

- local as well as international distributor in a market of interest

or

- Cartridge or pump manufacturer

SustainableSolutionsMatch

#EENCanHelp

Book a meeting with: Noah Water Solutions

Dr. Dries Parmentier
Hear of research
Noah Water Solutions
dries@noahws.be; +32 472/83.59.54

een.ec.europa.eu

NOAH
CLOSING THE WATER LOOP

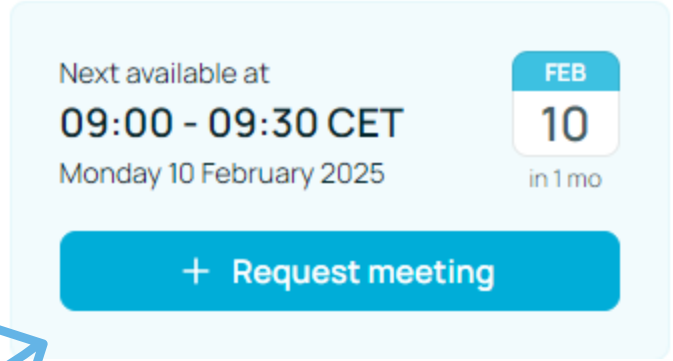
Up2Circ

enterprise europe network

Closing Remarks

A big thank you to all pitchers and attendees!
We appreciate your participation today.

If you'd like to connect with any of the pitching companies, please use the matchmaking tool to **book a meeting**!



Need support? **Enterprise Europe Network is here to help!**

Reach out to your local Network partner:

https://een.ec.europa.eu/local-contact-points

#EENCanHelp

Thank you!

Name session lead
Role
Organisation
Email

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