Biodiversity & Tech

Presentations and panel discussion

March 31st 2025

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LAB_

Welcome

by Christina Juell-Sundby, ConTech Lab

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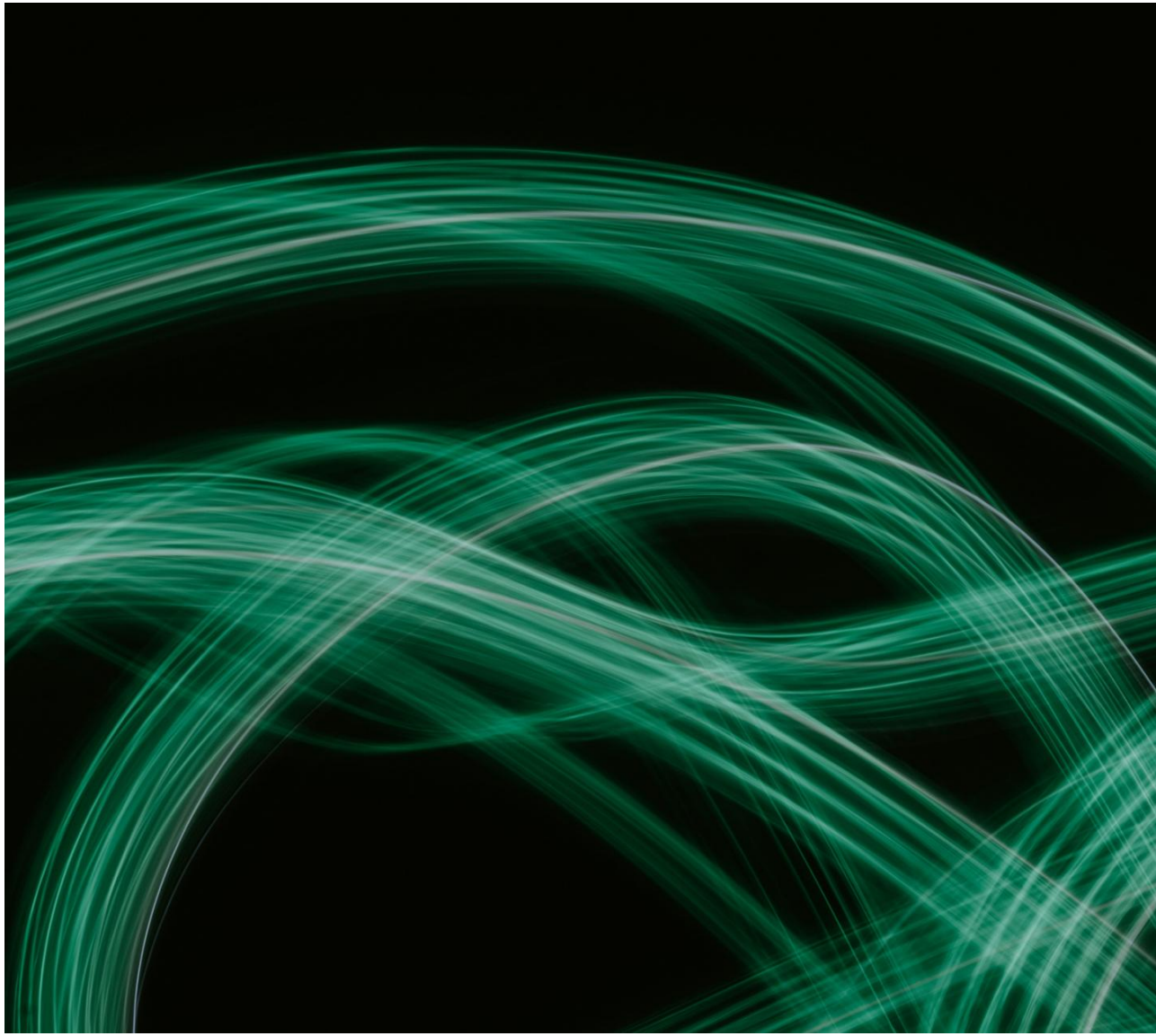
Biodiversity & Tech

- How can tech help us mitigate biodiversity loss?
- How are tech companies working to develop innovative solutions to monitor, collect data, analyze and so much more?
- What’s goiong on at the start up scenes at the Universities?
- How can we grow tech’s interest in biodiversity?



Agenda

13.00	Opening remarks	Christina Juell-Sundbye, ConTech Lab
	Presentation	Laurids Sund, Gismap
	Presentation	Hjalte M. R. Mann, Tecology
	Presentation	Ejgil E. Andersen, Arter.dk
	Presentation	Nejc Novak, Anemo Robotics
	Presentation	Bolette Brix Pedersen, Aeon Group
14.00	Panel discussion	Tillie Johansson, Copenhagen School of Entrepreneurship
		Jonas Eliasson, DTU Skylab
		Christina Juell-Sundbye, ConTech Lab
15.00	Thank you	

ConTech Lab

ConTech Lab er byggebranchens fælles udviklingsplatform, hvor byggeriets virksomheder sammen kan udvikle og eksperimentere med nye måder at benytte data, digitalisering og teknologi på til at skabe fremtidens byggeri – et mere bæredygtigt og produktivt byggeri.

Her deles al viden og læring, så det kommer hele branchen til gode.

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Realdania INDUSTRIENS FOND KNUD HØJGAARDS FOND RAMBØLL FONDEN MOLIO viden, du bygger på

Vores arbejde er fokuseret omkring fire kerneområder for at skabe den største impact i branchen

Pionerprojekter

Implementering

Analyse

Formidling

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Biodiversity loss and ecosystem collapse

World Economic Forum 2025 rangerer* *global risks* på kort og lang sigt.

Tab af biodiversitet og kollaps af økosystemer er gået fra #37 (2009) til:

- #21 på kort sigt (2 år)
- #02 på lang sigt (10 år) – kun overgået af ”extreme weather events”

**Rangeringen går på, hvor alvorlige konsekvenser en given risiko vil få, hvis den indtræffer.*

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“Biodiversity could affect business - ecosystem collapse could cause significant operational risks”

“Investors are moving to redirect capital - businesses causing adverse biodiversity impact could find it harder to access capital”

EY

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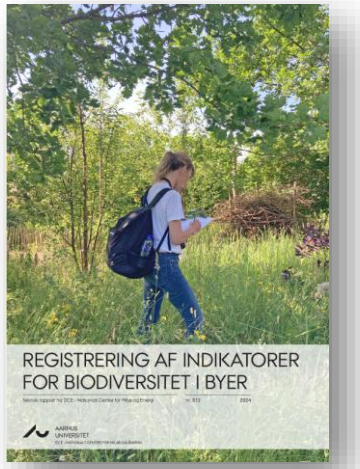
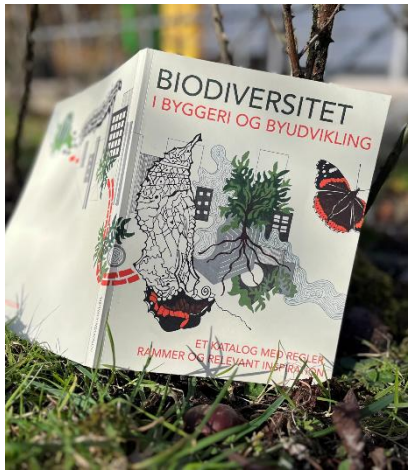
On-site



Metode udviklet i pionerprojekt med et bredt konsortie* af partnere - AU som lead og finansieret af ConTech Lab.

Bynatur.app til indsamling af biodiversitets data udviklet af ConTech Lab på baggrund af metoden.



Inspirationskatalog – fra politisk overblik til konkrete værktøjer. Inspirerer arbejdet med biodiversitet i byggeri – udgivet sammen med Habitats og Realdania.

UrbanBioScore udviklet med AU og finansieret af ConTech Lab og Rambøll fonden. Giver branchen fælles udgangspunkt for at score biodiversitet.

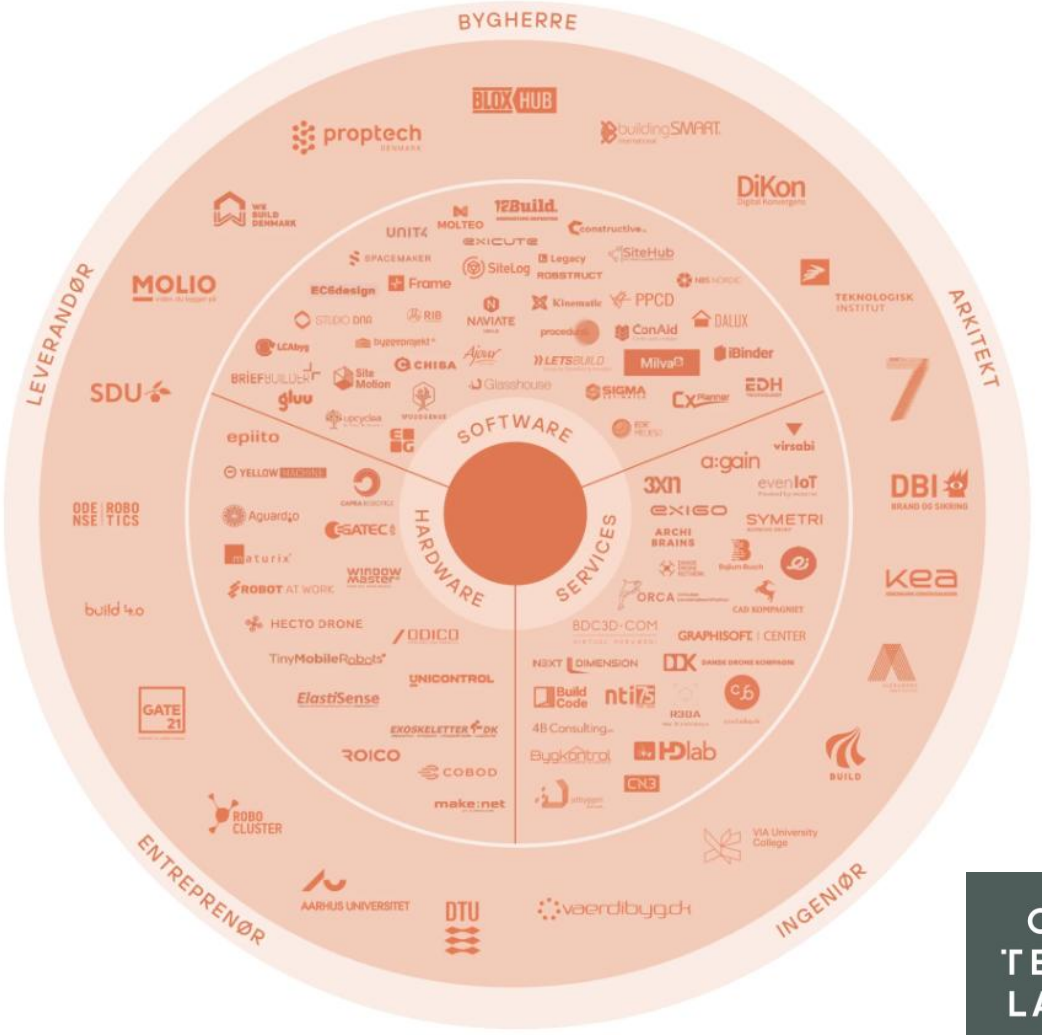
Gismap digitalt værktøj til kortlægning og afrapportering på biodiversitet. Udspringer af AEC Hackathon og udvikles med idverde, BUUS, Fælleshaven, BioCircular og Care4Nature

En brancheindsats



ConTech Økosystemet

Vi tror på, at samarbejde på tværs af hele økosystemet i den danske byggebranche er vejen til et mere produktivt og bæredygtigt byggeri.



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Presentation

by Laurids Sund, Gismap

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gismap

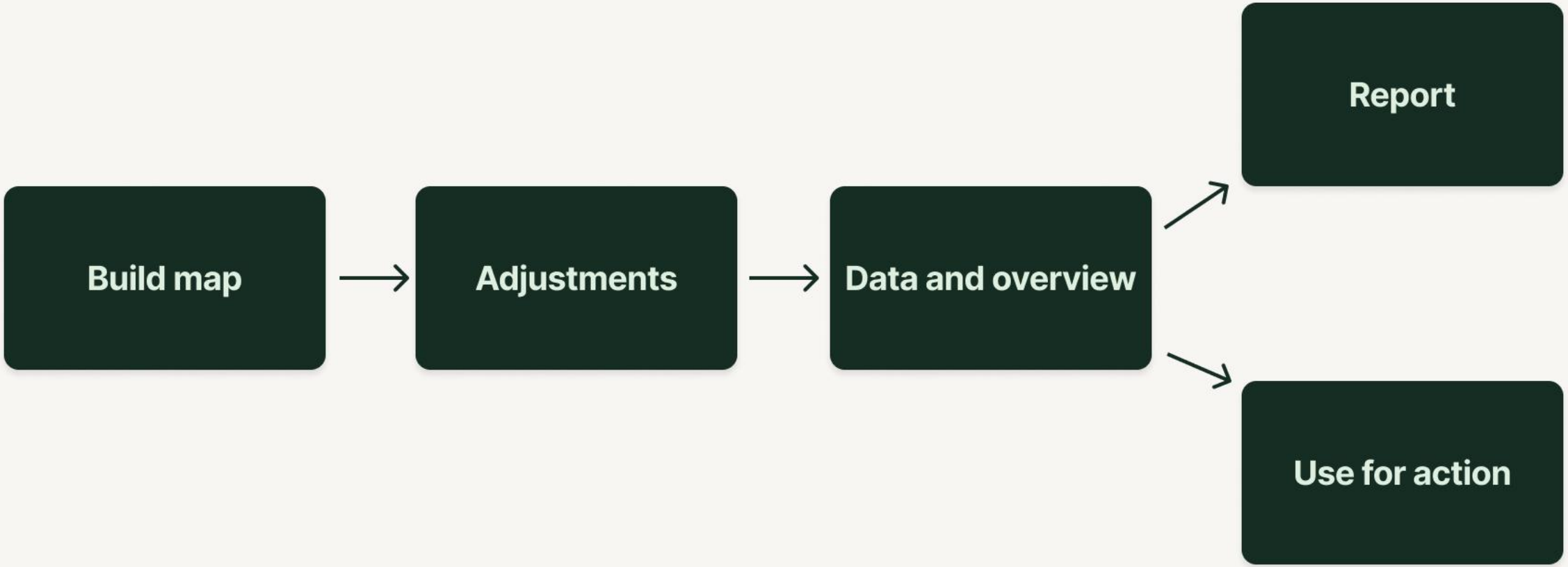

Empowering planners, constructors,
consultants and portfolio holders to turn
biodiversity insights into action!

Problem

If you can't **measure** it, you can't plan, report, or improve.

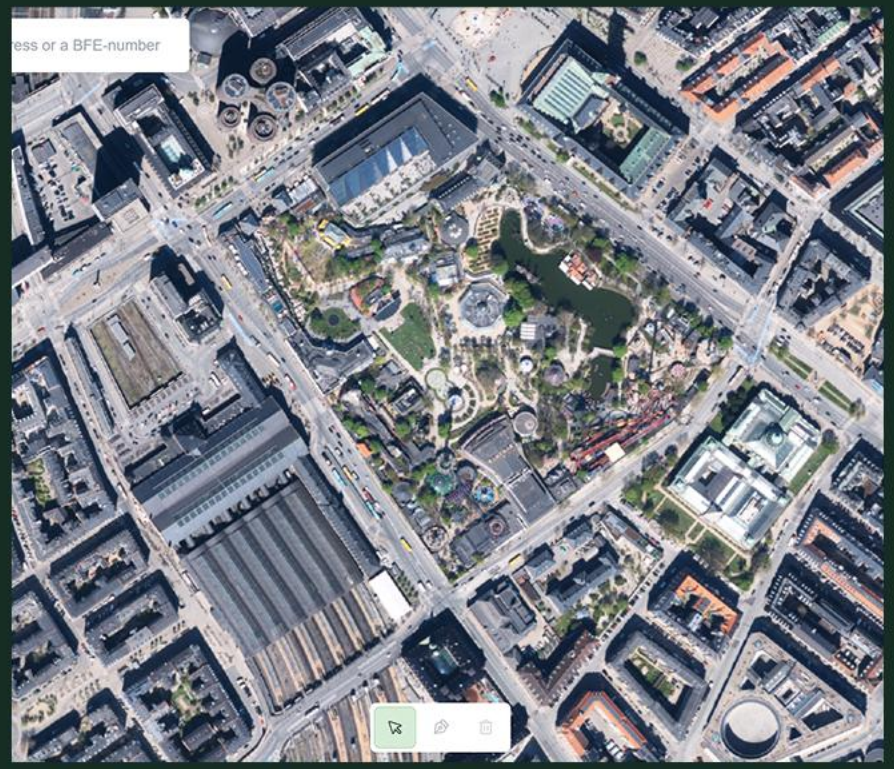

gismap
Home
Map Builder
Map Summary
API
Add element
New map
Untitled
Map year
2023
Analysis
Land Cover
Species
Protected Nature
Save Changes
Go to Report
200 m

The platform - how does it work?

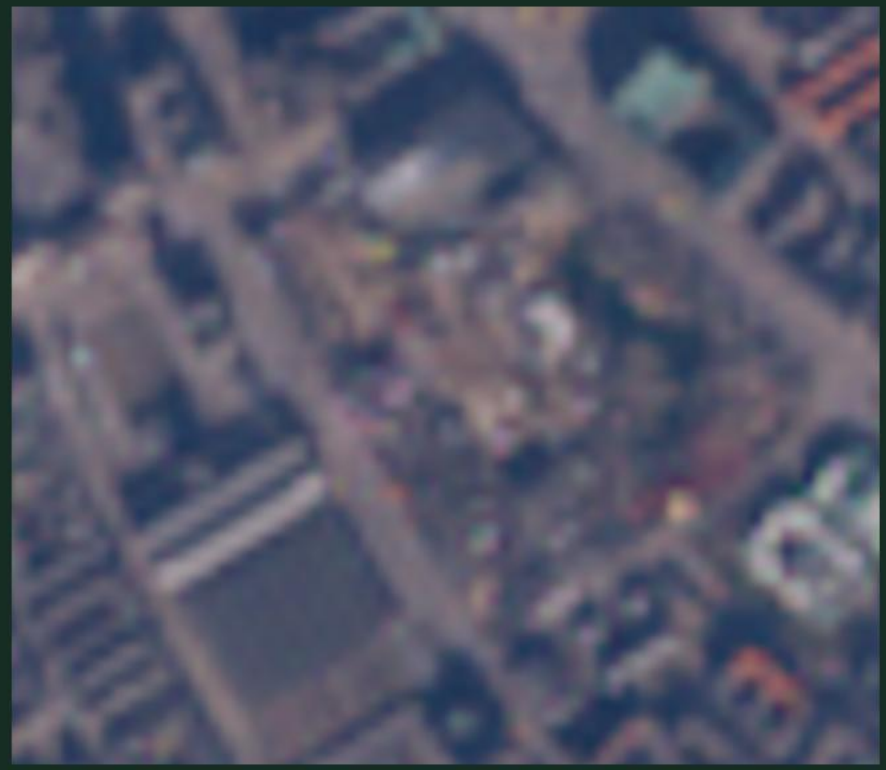



AI Analysis
DEM
Area of interest
Aerial image

Data quality

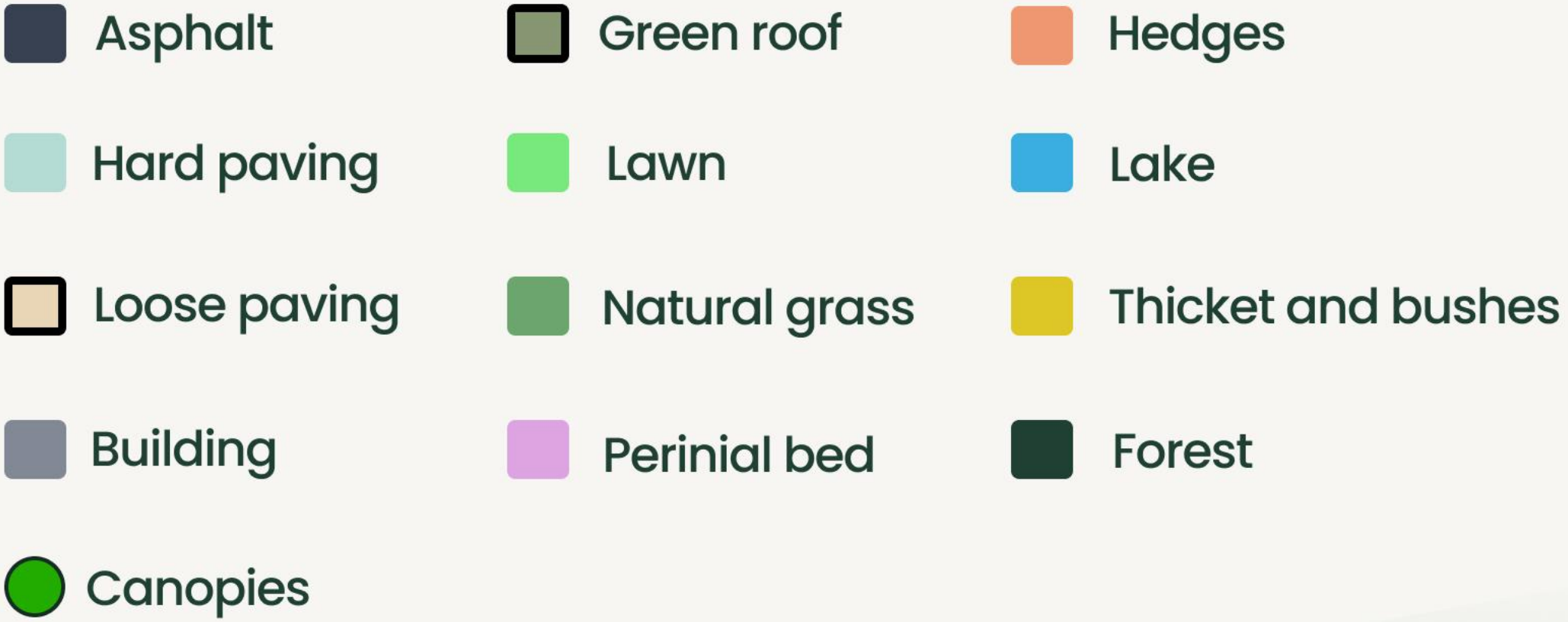


Arial image - Ortophoto - 12,5 cm resolution - Tivoli



Satellite - Sentinel 2 - 10 m resolution, Tivoli

The platform - how does it work?



The platform - data and analysis

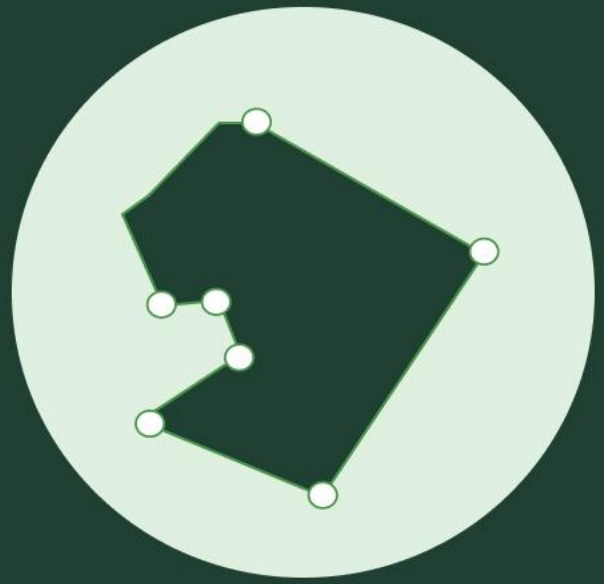
Comparison

Facade vegetation

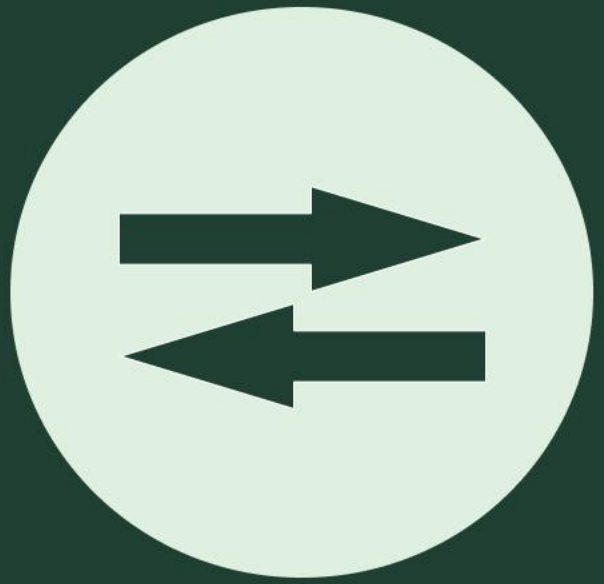
0,6

Biofactor

The platform - Editor



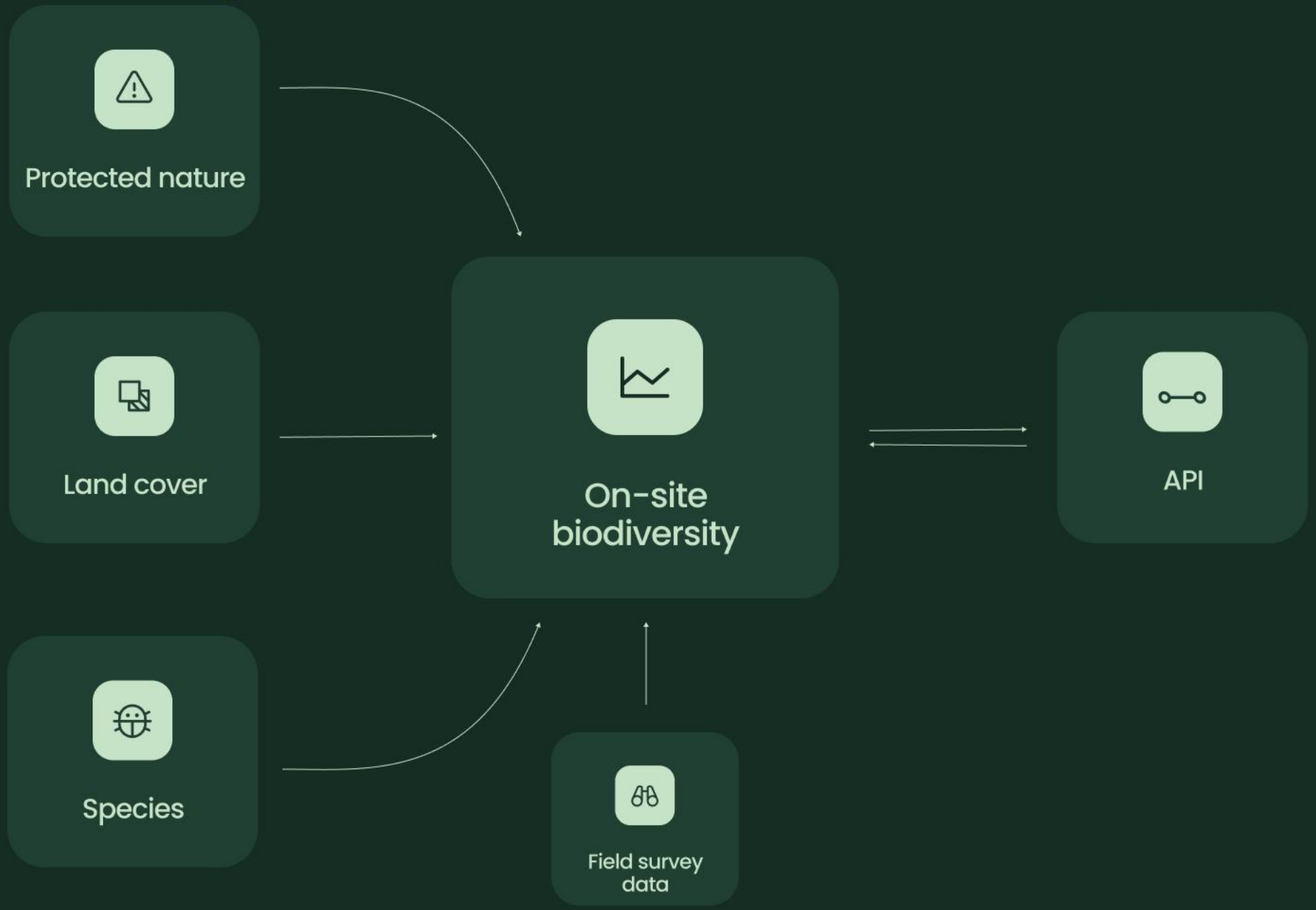
Edit polygon



Change classification

Add element

Data and integration



Report

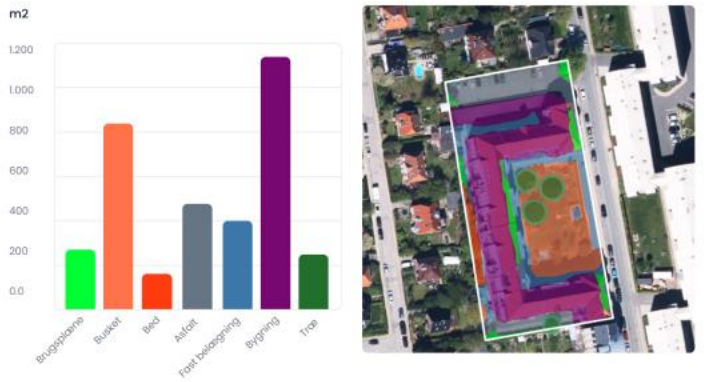
gismap

18 January 2025

Baseline report

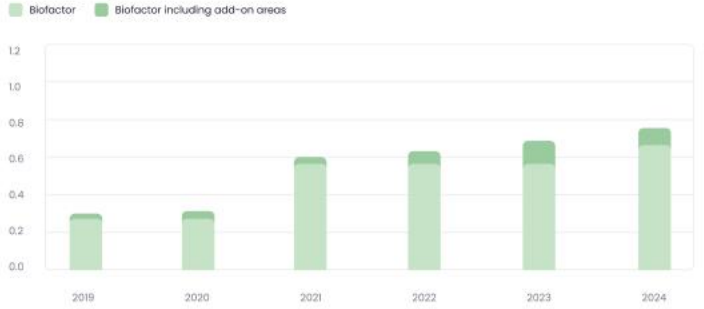
Name	Total Area	Date of generation
Hørsholmgade 18	5663.75 M²	18 January 2025 12:35

Land Cover Analysis



Biofactor

Biofactor development



Field Survey

Habitatoplysninger 6

ID	Type	Areal
14	Græs og urter: Græsland	23 m2

Primært billede

Yderligere billeder

Beskrivelse

Ekspertvurdering	Koordinat
	55.7018821,12.5473778

Vegetationsstruktur 9

Græs- og urter < 10 cm	Græs og urter 10-50 cm	Græs og urter > 50 cm
30-75%	5-10%	75-100%

Tuet vegetation	Mosser forekommer	Laver forekommer
☑	På sten	Nej

Svampe	Invasive arter	Forekomst af eksotiske arter
På jord	0-5%	10-30%

Ressourcer 15

Blomstrende nektar/pollen-planter på < halvdelen af arealet	1-3 arter, der blomstrer	1-10 blomster pr m2
●	●	●

Dødt ved	Stående dødt ved, antal stammer, DBH...	Stående dødt ved, antal stammer, DBH>...
Stående	3-10	> 10

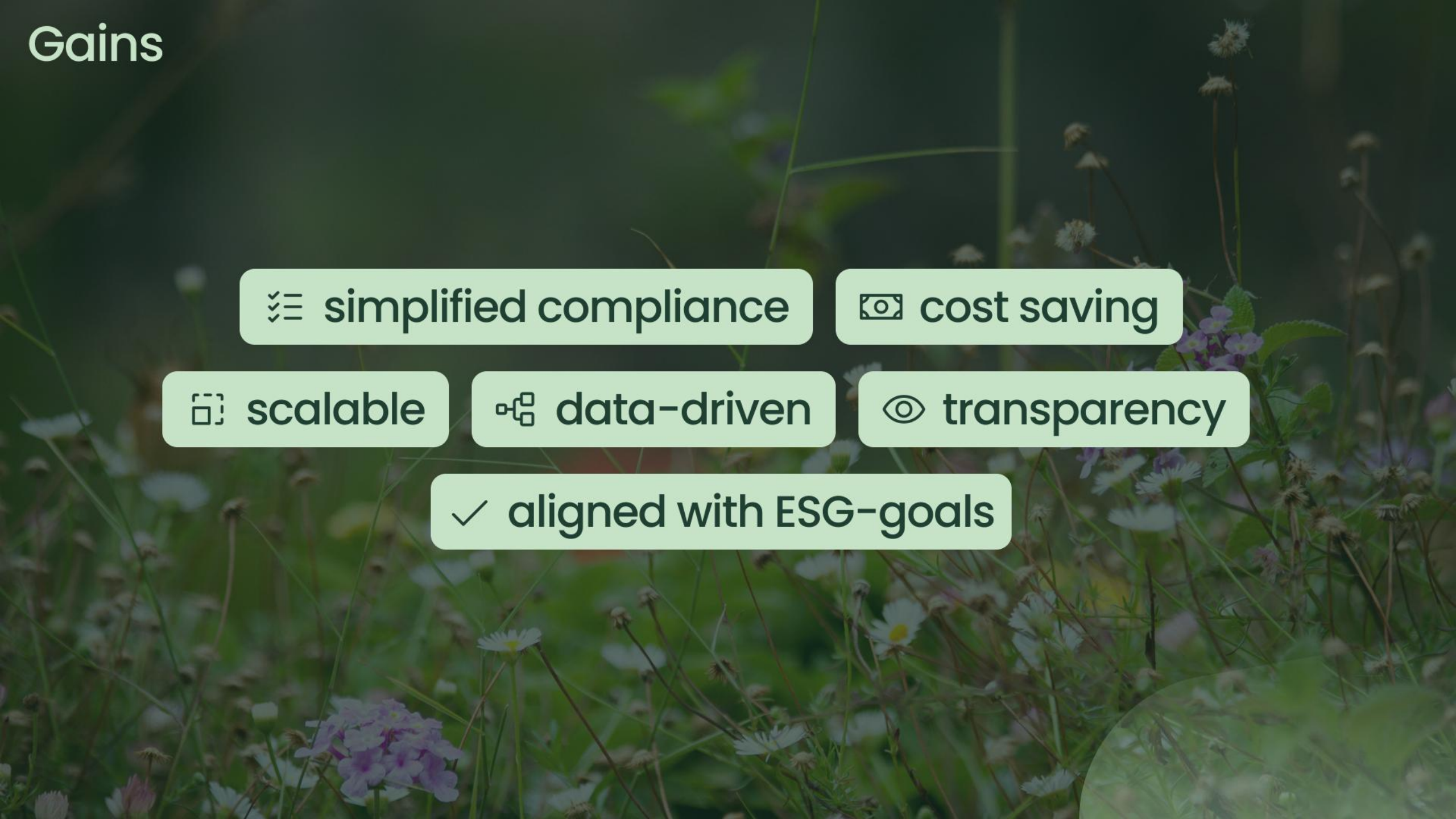
Solution

An AI-powered platform for

fast scalable cost-effective

urban nature and biodiversity data collection

Gains


simplified compliance
cost saving
scalable
data-driven
transparency
aligned with ESG-goals

Contact

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www.gismap.dk

LinkedIn
https://www.linkedin.com/company/gismap-aps

gismap


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Presentation

by Hjalte M. R. Mann, Tecology

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TECOLOGY

AUTOMATED BIODIVERSITY INSIGHTS

monitor · communicate · report

hjalte@tecology.ai
www.tecology.ai

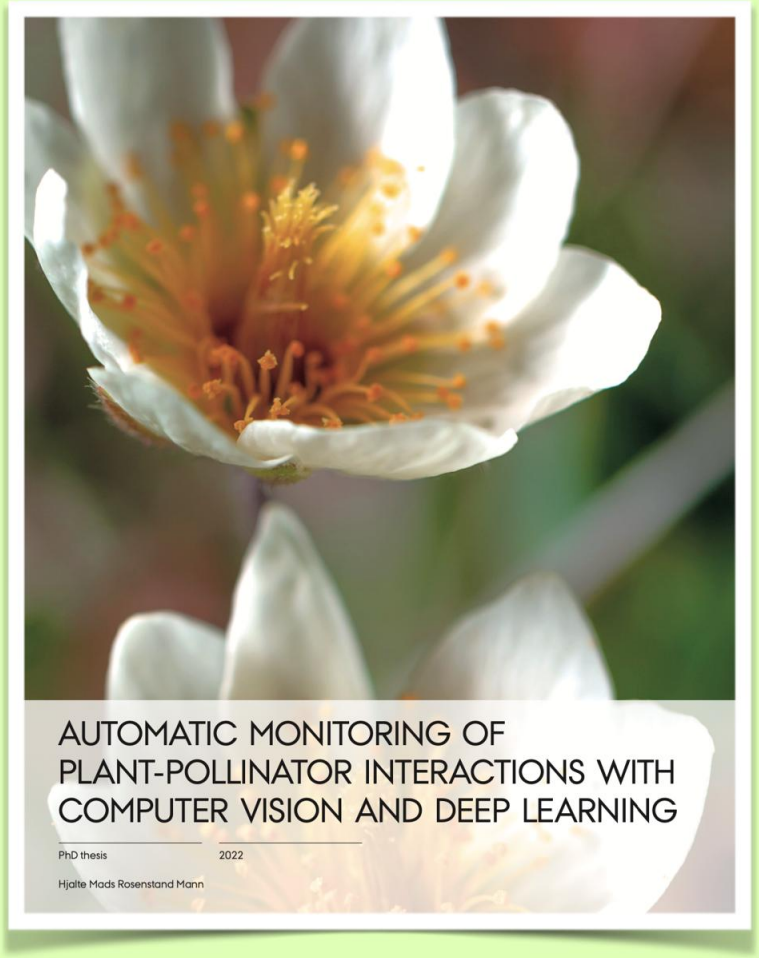
TECOLOGY

Hjalte

Biologist

Founder

PhD



BIODIVERSITY IS IMPORTANT

BUT HARD TO MEASURE

COLLECTING

We lack methods to measure biodiversity across time and space

We need more data but have limited resources

We need methods that reflect true temporal and spatial dynamics

SCALING

We want innovative solutions but lack technical resources

We need scalable methods for different environments

We want a method we can rely on for years

ANALYSING

We lack the resources and know-how to analyze collected samples

We need results that can be validated

We need current results and cannot wait for analyses

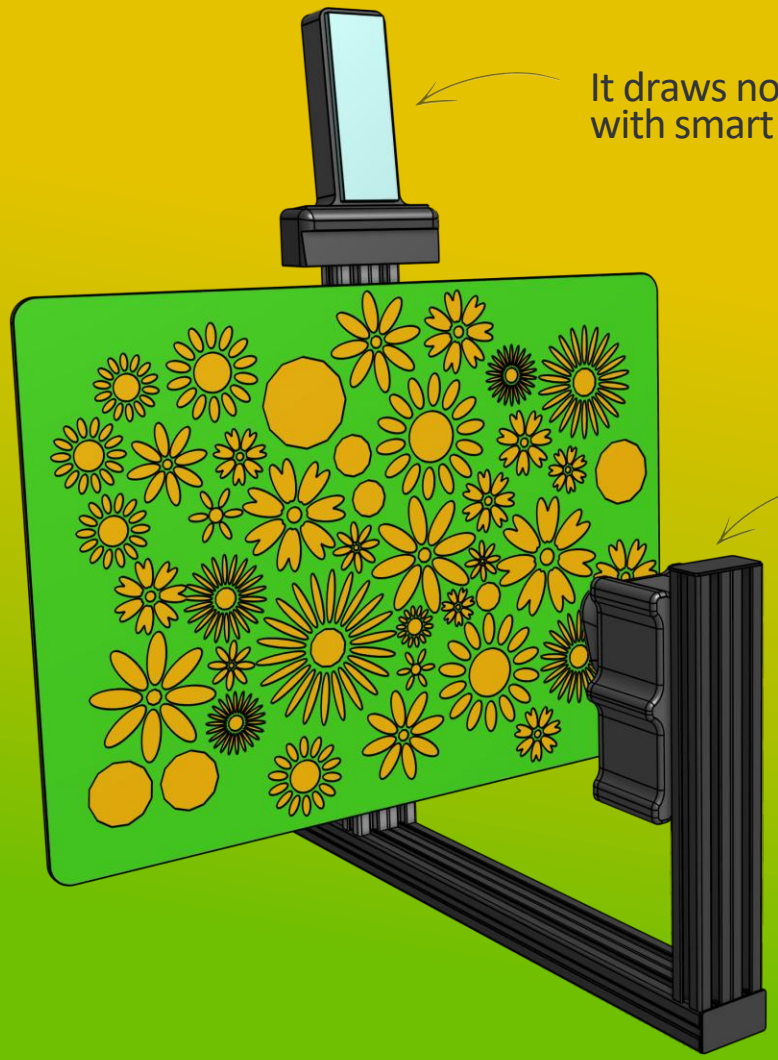
COMMUNICATING

We need to document the effect of nature-positive investments

We need results that are easy to communicate

We need biodiversity input for ESG/CSRD but don’t know where to start

This is Atlas



It draws nocturnal insects with smart UV lighting

It detects and identifies insects with deep learning…

…and saves high resolution images of them for validation and communication

It runs on 12 volts from mains, battery or solar power

It attracts insects to a background plate

Records activity and diversity of insects every few seconds

Delivers continuous nature insights throughout seasons

Designed for flexible mounting (ground, roof, pole, green wall)

Ongoing integration of sensors for birds, bats, and microhabitat




Prototype tested in 2024

Including pilot project with Nationalpark Thy

Documented functionality

Hundreds of thousands of insect visits detected

Optimized system in 2025

Updated IoT platform based on insights from the field tests

cubio

Roof (Atlas 1) Active

⌘K 4

INSIGHTS

Overview

REPORTING

ESG/CSRD

CONFIG

Atlas units

Add unit

Remote sensing

Free

hjalte@testmail.com

Upgrade to Pro

Insect visits detected

18,765

+2.6% last 7 days

Insect species observed

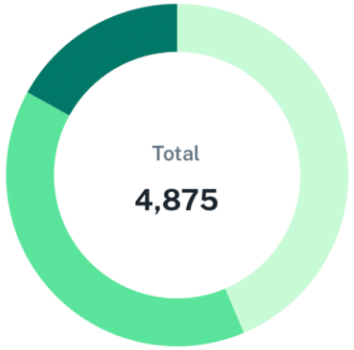
18

+0.2% last 7 days

Insects observed

Top 3 species groups

Last 7 days



Hoverflies Bees Butterflies

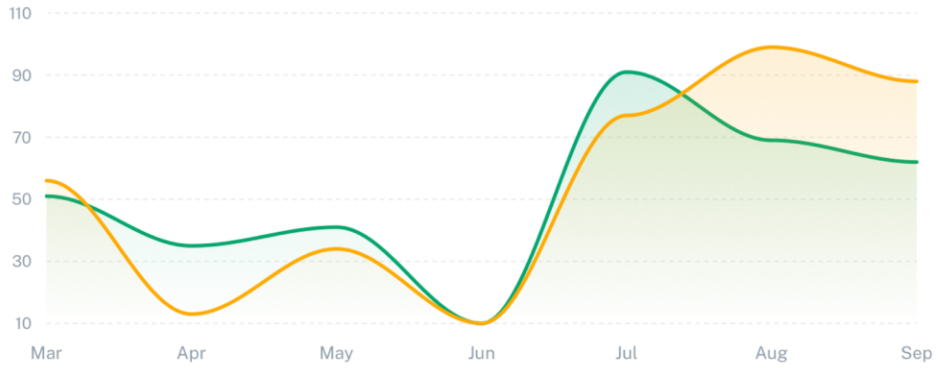
Seasonal activity

2023

(+7%) than last year

Day 1.23k

Night 6.79k



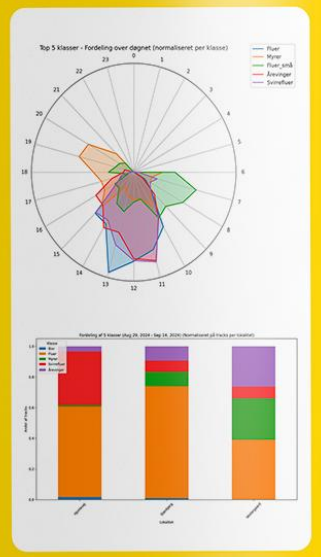
TECOLOGY

754.259
Total insect observations

THE YEAR IN FIGURES

Tecology delivers an advanced IoT platform for automated biodiversity monitoring, providing real-time, continuous nature insights to document and communicate the impact of nature-positive efforts, empowering informed decisions and sustainability compliance.

Tecology addresses the significant challenges of biodiversity monitoring and reporting faced by businesses, organizations, and public institutions, by providing a end-to-end monitoring service enabled by sensor-based, automated data collection.



73.121
Most observations in a day

2.921
Total hours monitored

Eristalis syphix
Most seen species

BEHIND THE SCENES

Tecology's IoT biodiversity monitoring station, Atlas, combines computer vision, artificial intelligence, and multi-sensor capabilities to redefine how biodiversity is monitored. Atlas measures insect activity and diversity using a high-resolution camera, an insect-attracting UV light, and a background plate. Recorded insects can be automatically identified using our classification model. To further ensure data integrity, manual expert validations can be incorporated to document accuracy.

With continuous, automated monitoring, Atlas delivers reliable measurements over time and across locations, enabling precise documentation of biodiversity. Looking ahead, Atlas will integrate additional sensors for bird and bat monitoring and environmental measurements, delivering a comprehensive and contextual picture of biodiversity–ushering in the future of autonomous nature monitoring.

Live results

Remember that you have access to live results with you Cubio dashboard. Log in now and get the latest biodiversity insigths from your area.

end-to-end

BASIC

- ✓ Full season monitoring with Atlas
- ✓ Setup and teardown
- ✓ Live communication dashboard
- ✓ Species group tracking
- ✓ 4G data included

PRO

- ✓ All in basic
  - ✓ Full species tracking
  - ✓ Expert validation
  - ✓ Service
  - ✓ Report (digital & printed)
  - ✓ Digital material for communication and sustainability reporting

Multiple units **Multiple years**

Our relevance for the construction industry

Measure biodiversity differences between sites and changes over time

Document and communicate biodiversity impact

Sustainability reporting · Tender products · Environmental assessments · DNGB · public relations

Share live insights from your green areas

Use biodiversity dashboards in lobbies, websites, or marketing

Engage public with biodiversity screens or QR codes in green areas

Put numbers and images on the impact of green initiatives

Show biodiversity recovery in post-construction landscapes

Include dashboard or highlights as part of building handovers or marketing material

TECOLOGY

www.tecology.ai

hjalte@tecology.ai

Presentation

by Ejgil E. Andersen, Arter.dk

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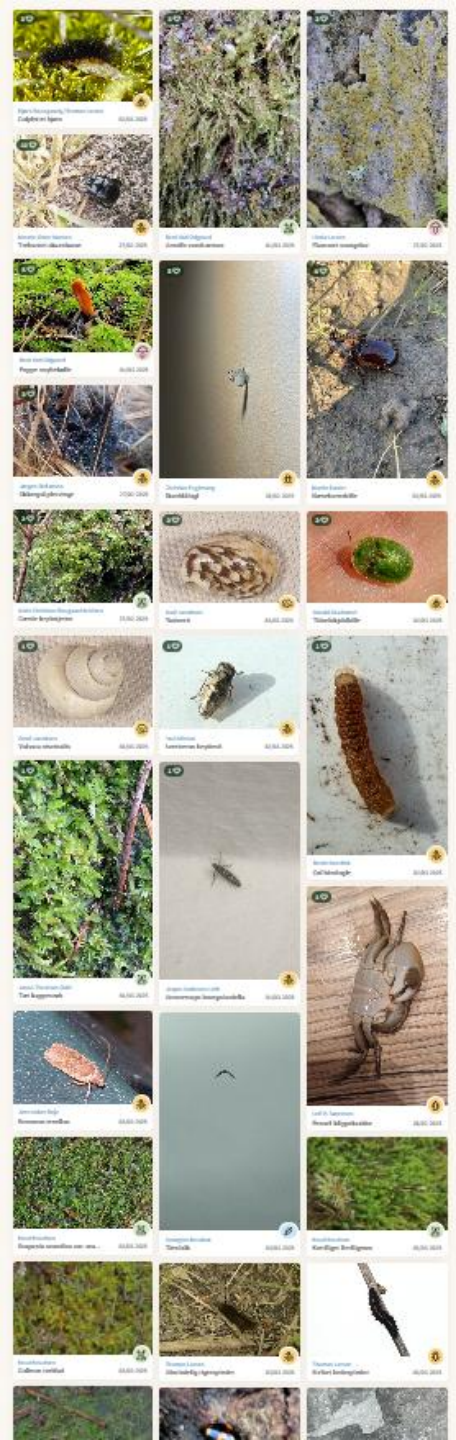
ARTER

Arter

31. Marts 2025



Ministeriet for Grøn Trepart
Styrelsen for Grøn
Arealomlægning og Vandmiljø

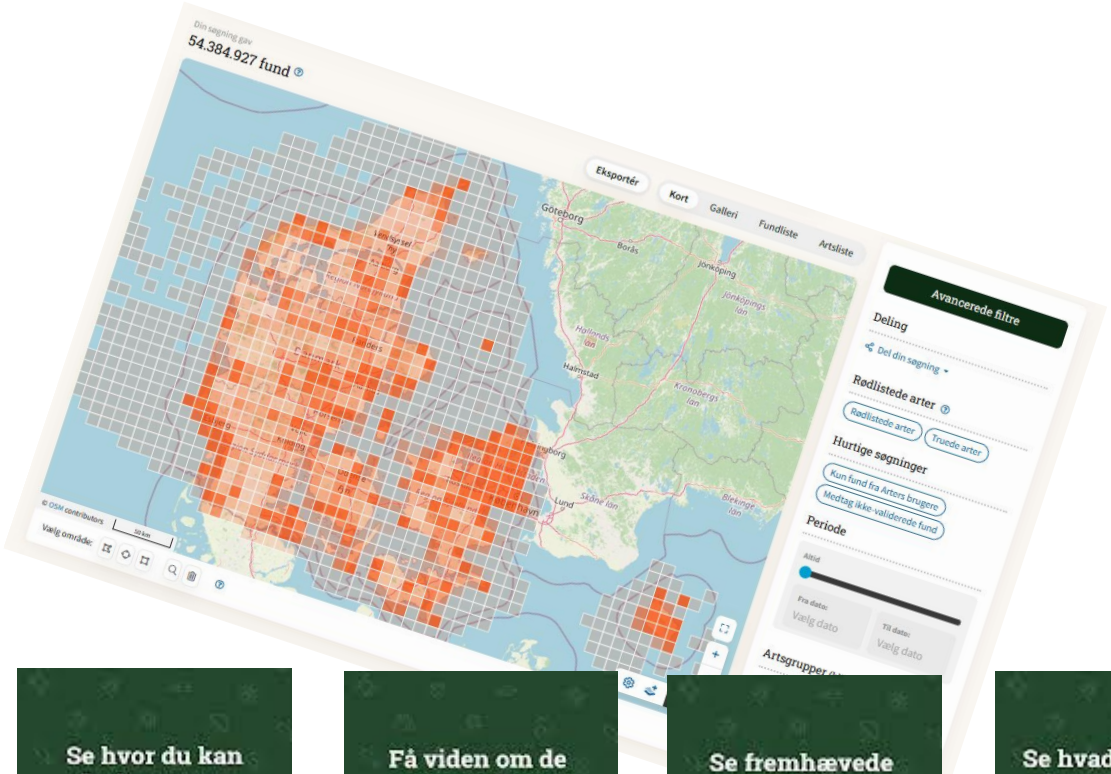
STATENS NATURHISTORISKE MUSEUM

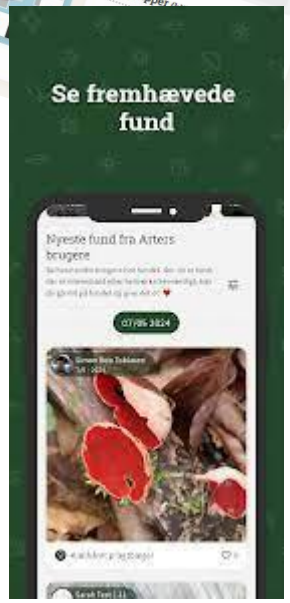
AAGE V. JENSEN NATURFOND

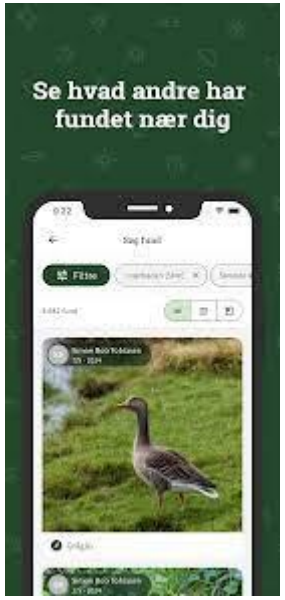
15. Juni Fonden

What is Arter?

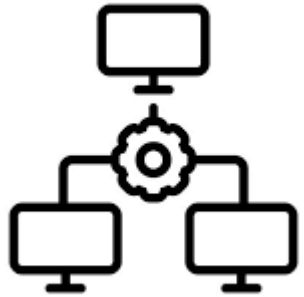
- All species records gathered on one map
- 54 million records
- Website: arter.dk
- Expanded search options
- Data extraction
- Communities and activities
- App: Arter – Indberetning
- Species registration
- Image recognition



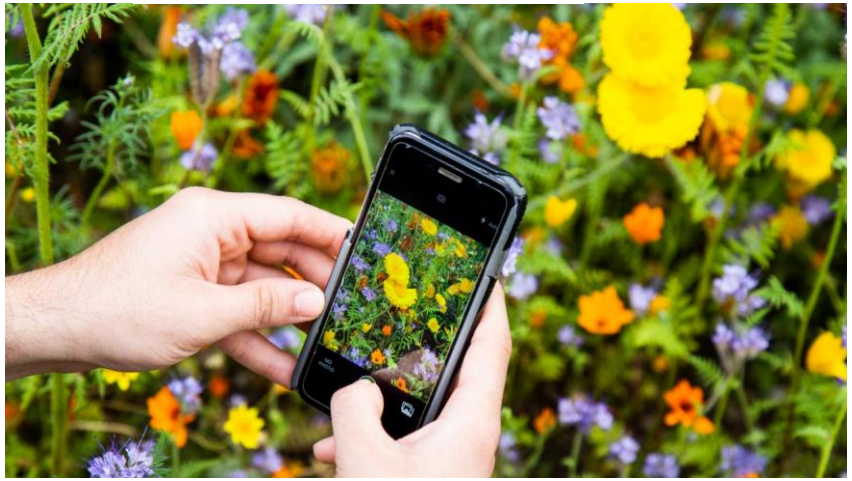




Where does the data come fro

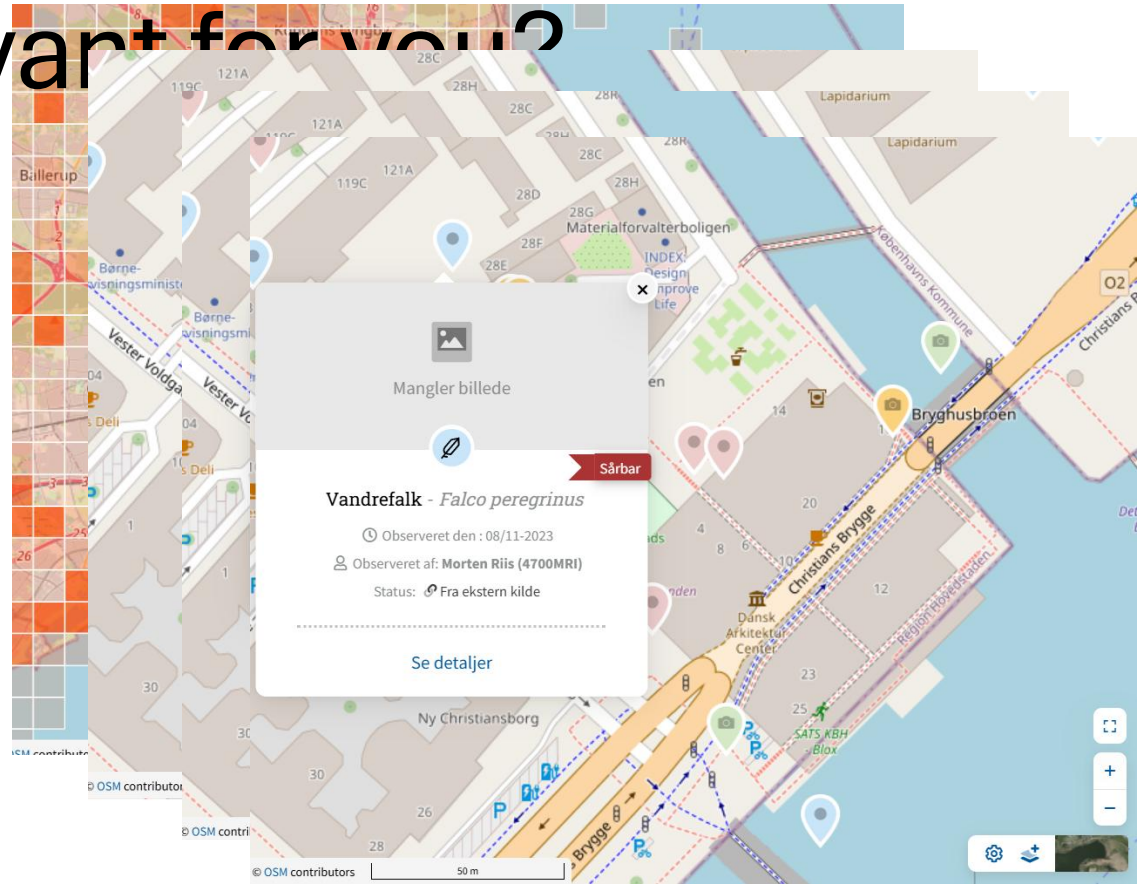


- External datasets
- Citizen science



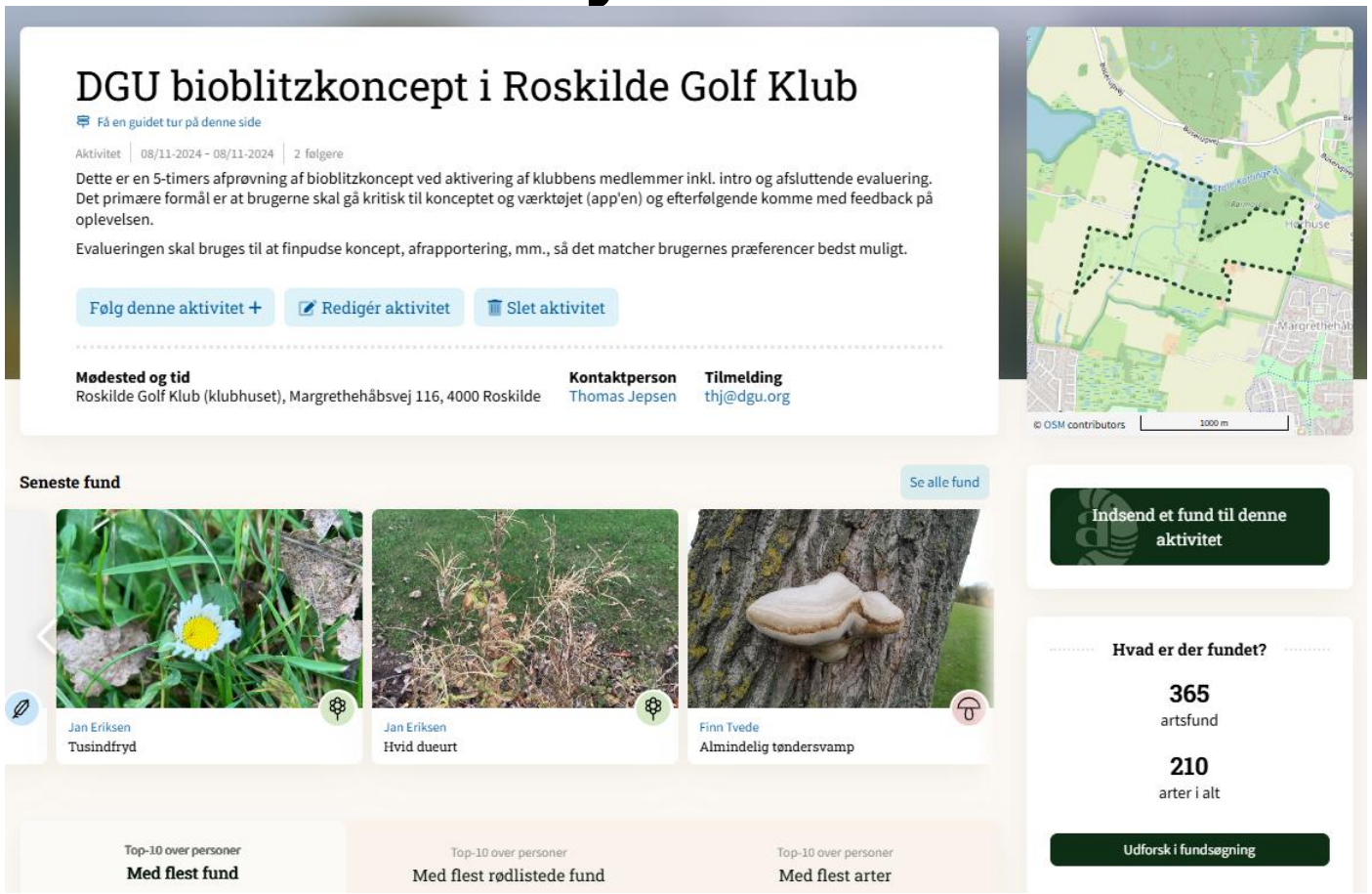
What makes Arter relevant for you?

- See what is already there – prior to a project



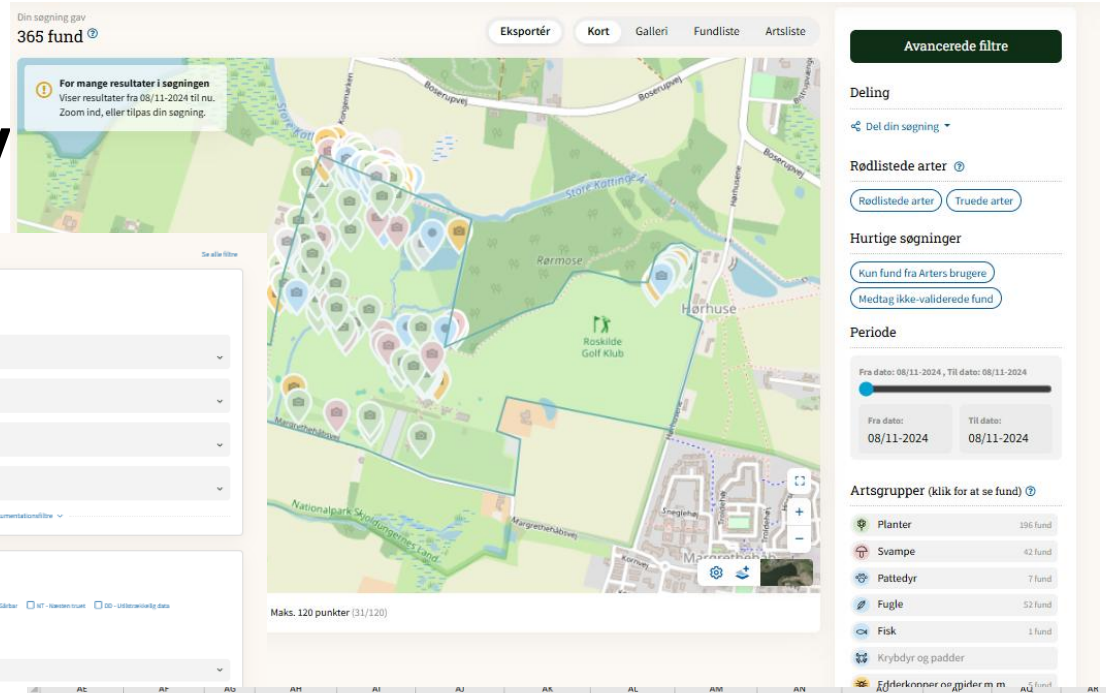
What makes Arter relevant for you?

- See what is already there – prior to a project
- Engage local citizens in data collection - bioblitz



What makes Arter relev

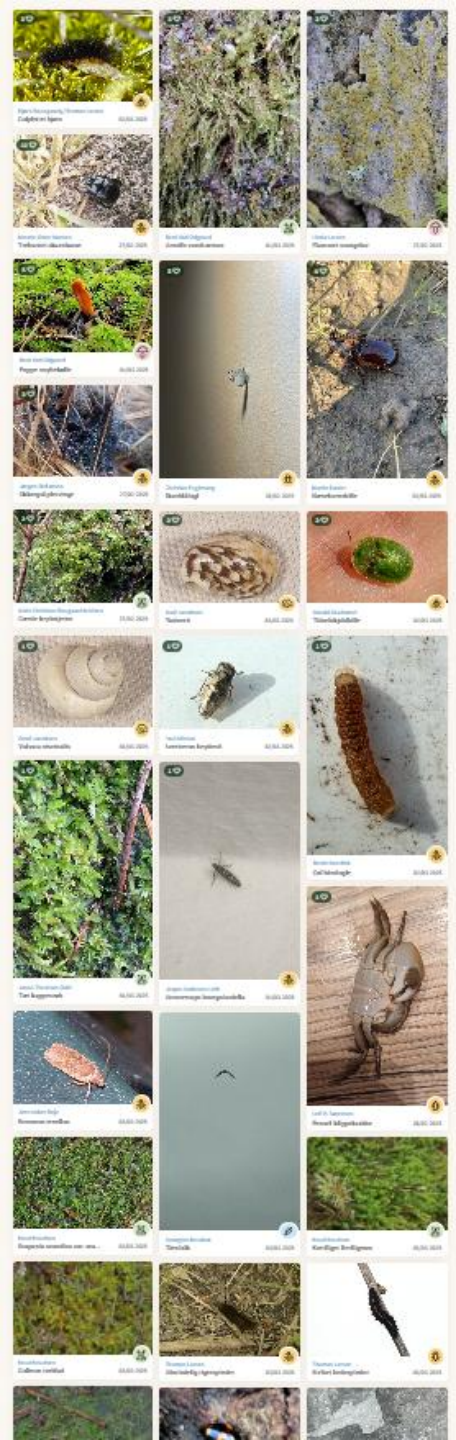
- See what is already there – prior to a project
- Engage local citizens in data collection - bioblitz
- Follow development of biodiversity – data extraction



GIS

Quality of data

- All external datasets must provide validated data
- Arter's own data is validated by volunteer species experts from Danish natural history associations



Presentation

by Nejc Novak, Anemo Robotics

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Anemo Robotics

DANISH TECH CHALLENGE

Making biodiversity measurable: AI powered underwater cameras for tracking fish


NEJC NOVAK • CEO
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BIEL FERNANDEZ • COO
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MATIAS BURVAD • PARTNERSHIP MANAGER
matias@anemorobotics.com

WE ARE IN BIODIVERSITY CRISIS

It's crucial to strengthen marine biodiversity now

IMPACT ON WILDLIFE

73% Decline

We are in the midst of biodiversity crisis.

IMPACT ON PEOPLE

3 Billion

Over 3 billion people depend on marine and coastal biodiversity

IMPACT ON GLOBAL ECONOMY

$3 Trillion

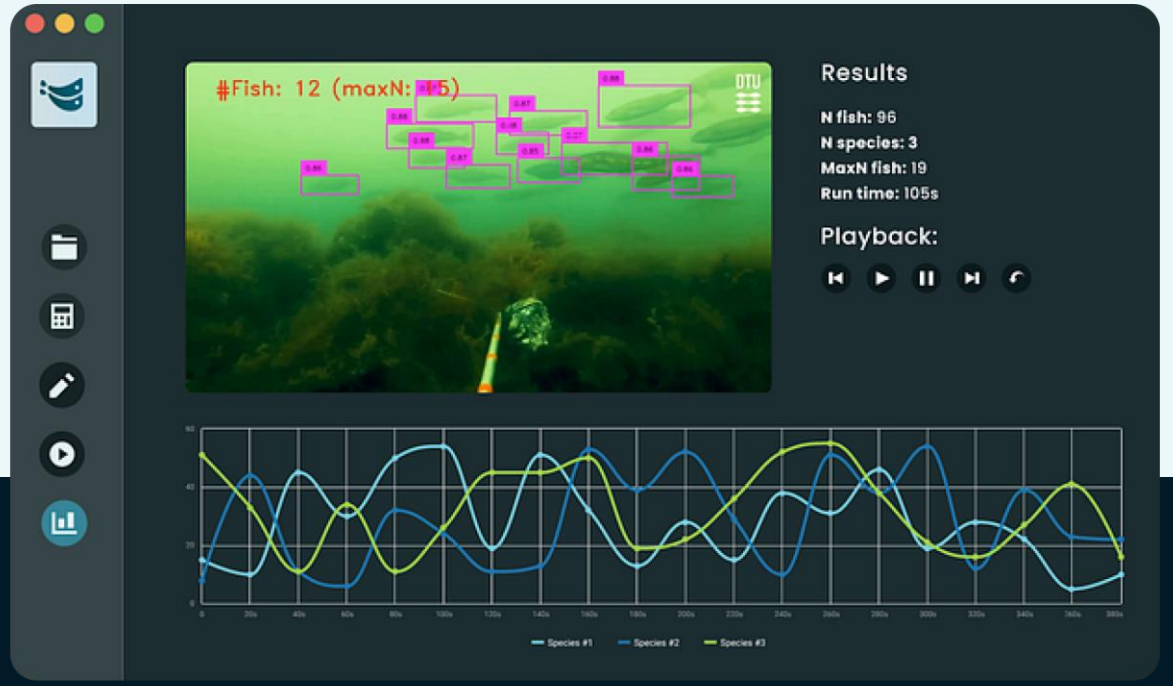
Marine resources and industries account for 5% of global GDP.

TECHNOLOGY SOLUTION

Camera system paired with AI marine recognition & analysis tech

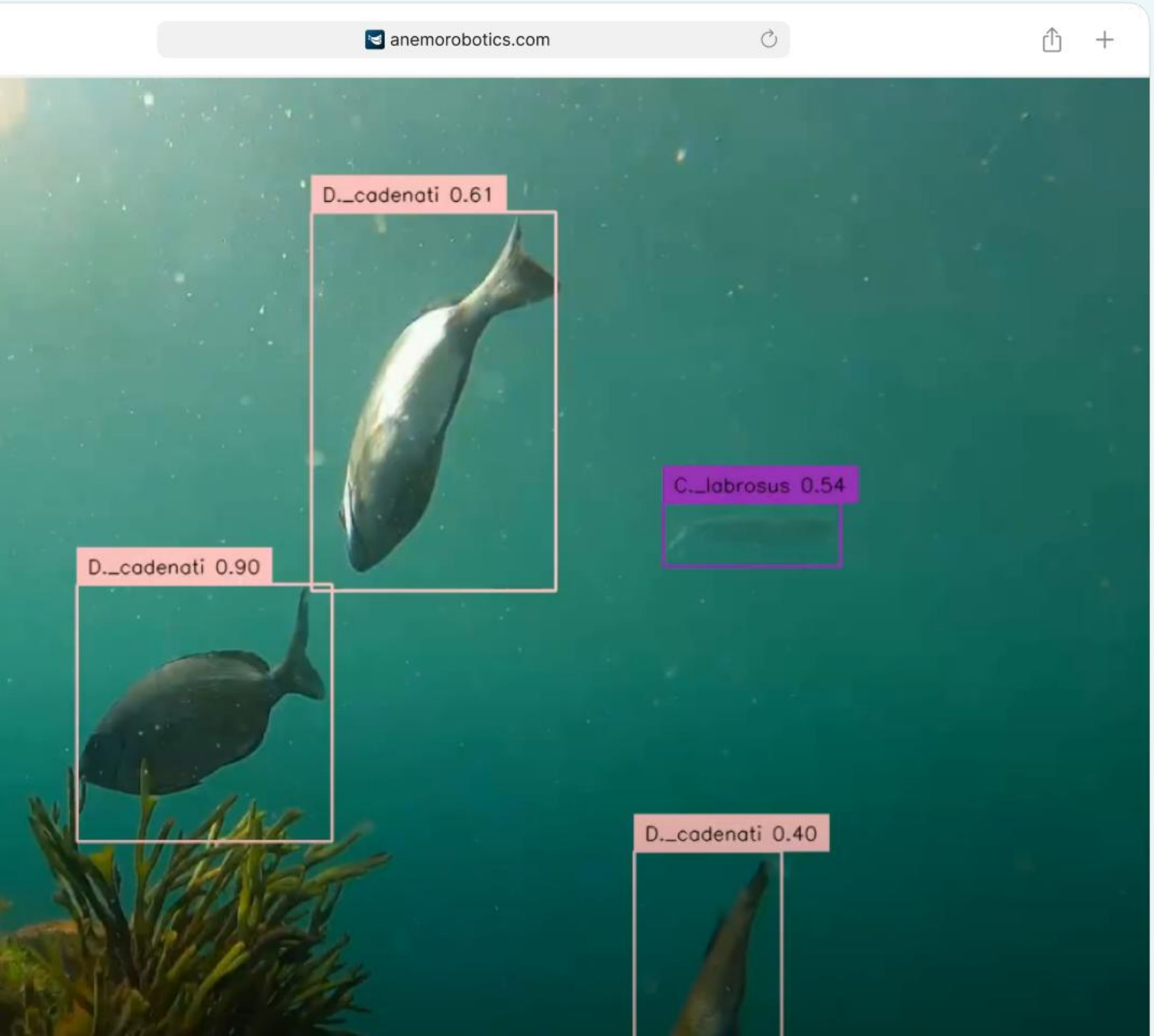
Underwater camera system

- 3 Months deployment
- Day & Night modes
- Up to 100m depth



Anemo AI platform

- Trained on our proprietary data
- Time saving
- Biodiversity Score



HOW DOES IT WORK?

Our 5 step process for marine analysis

STEP 1
Project Specification

STEP 2
Data Collection & Video Recording

STEP 3
Data Annotation & AI training

STEP 4
AI Analysis

STEP 4
Data Analysis & Visualization

HOW IT WORKS - STEP 1

Project Specification

MOSAR project

Sponsored by: Dansk Industri

6
ANEMOCAMS DEPLOYED

12
MONTHS OF MONITORING

864 h
FOOTAGE FROM ANEMOCAMS

2500 h
WORK HOURS SAVED WITH AI

2.6 M
DETECTIONS OF 12 SPIECIES

1.1 M DKK
BUDGET FOR PROJECT

COLLABORATION BETWEEN:

Anemo Robotics

REEF CIRCULAR

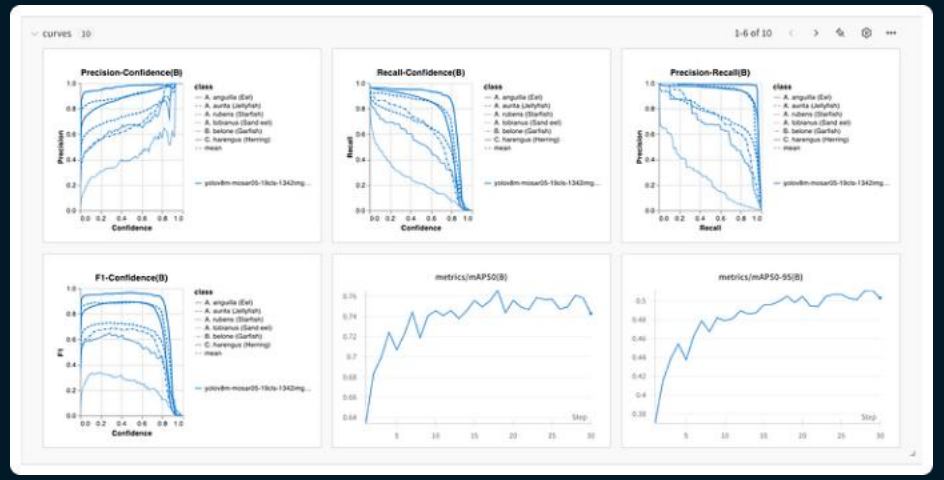
DTU

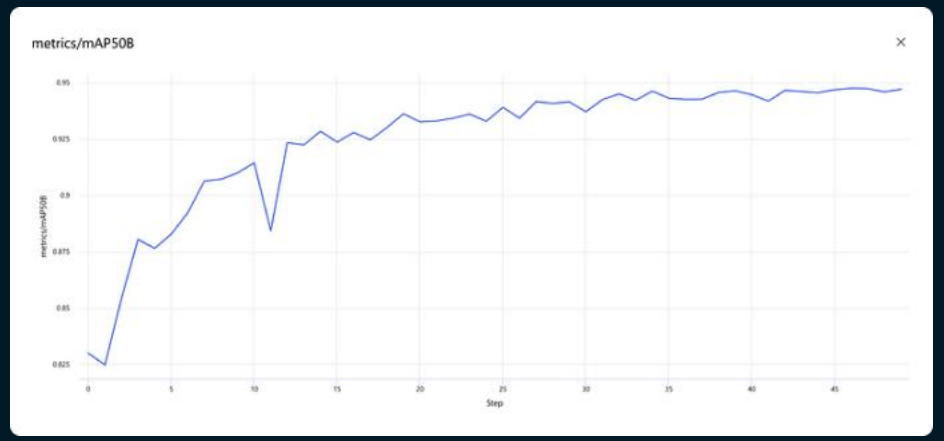
HOW IT WORKS - STEP 2

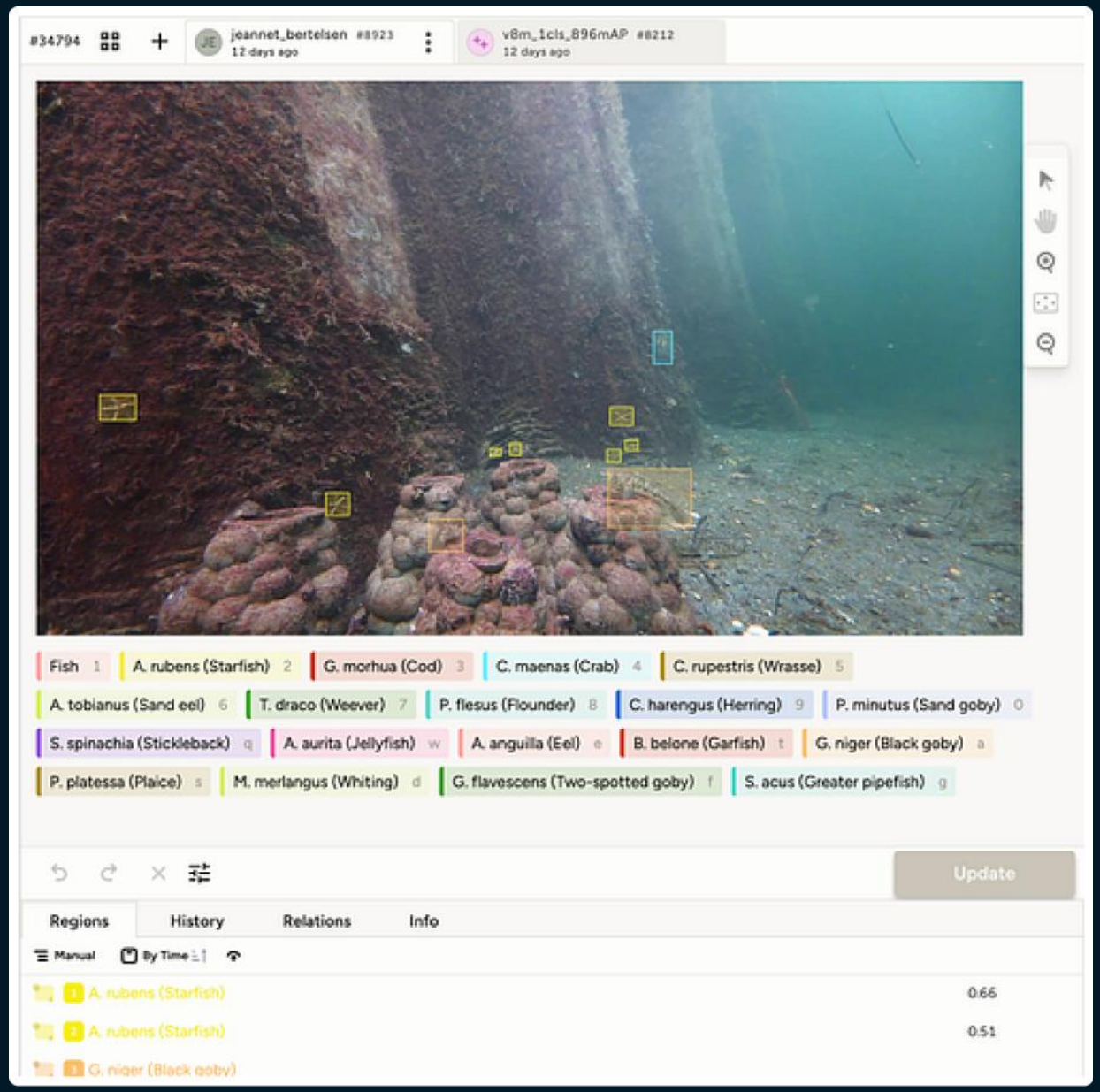
Data Collection

HOW IT WORKS - STEP 3

Data annotation & AI model training







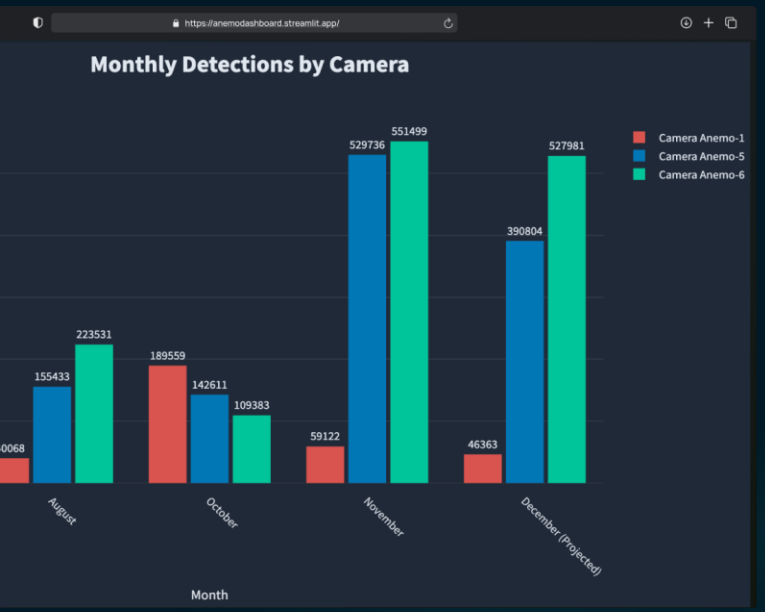
HOW IT WORKS - STEP 4

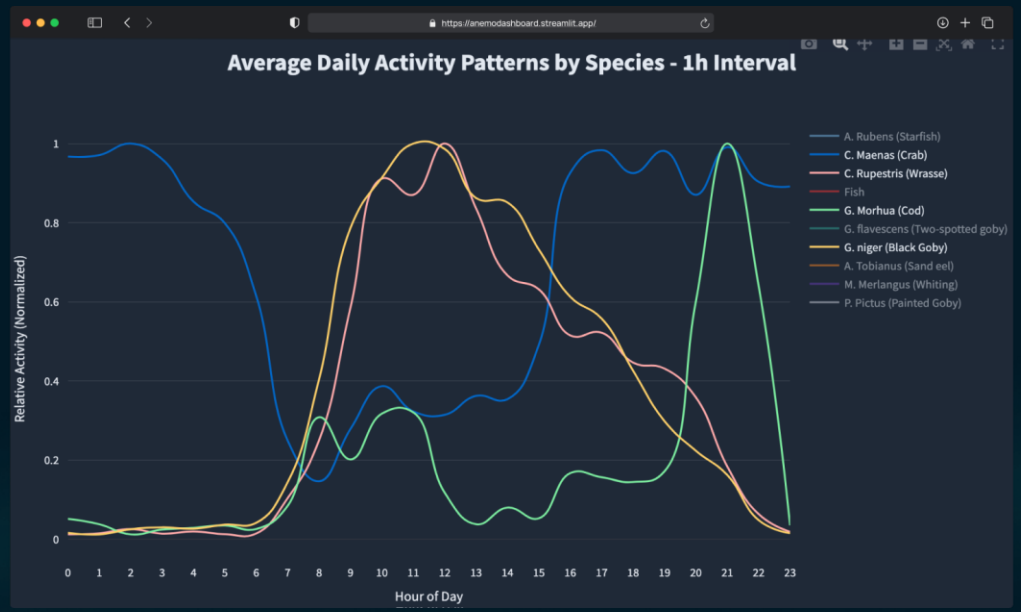
AI analysis

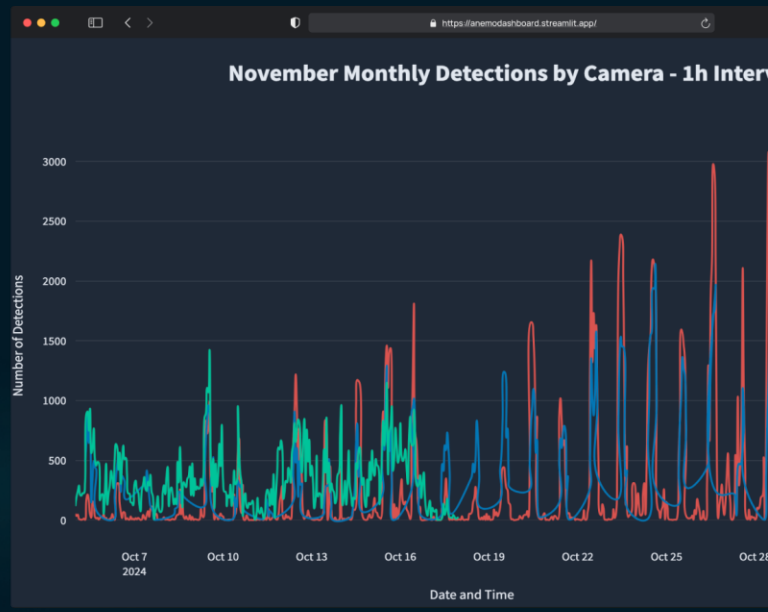
HOW IT WORKS - STEP 5

Data visualization

- Accurate fish count for regulatory reporting
- Fish activity patterns - hourly, daily, custom
- Species data - total count, unique distribution

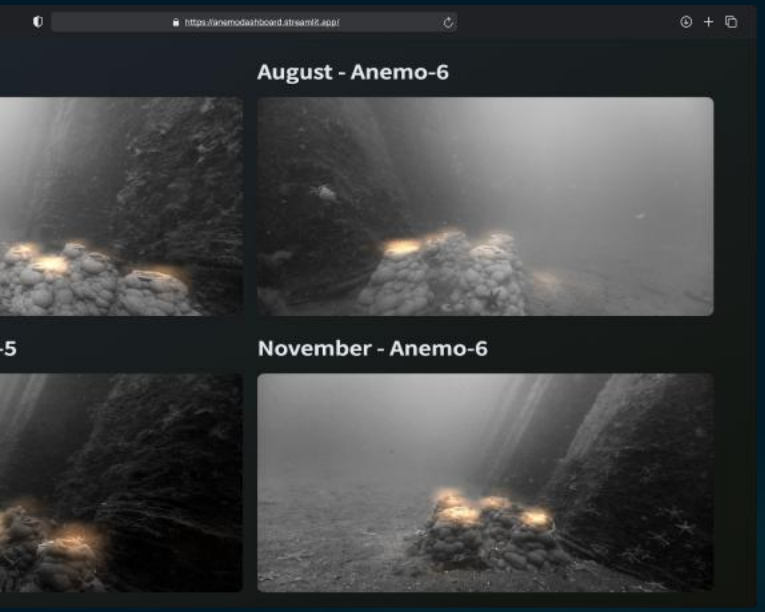




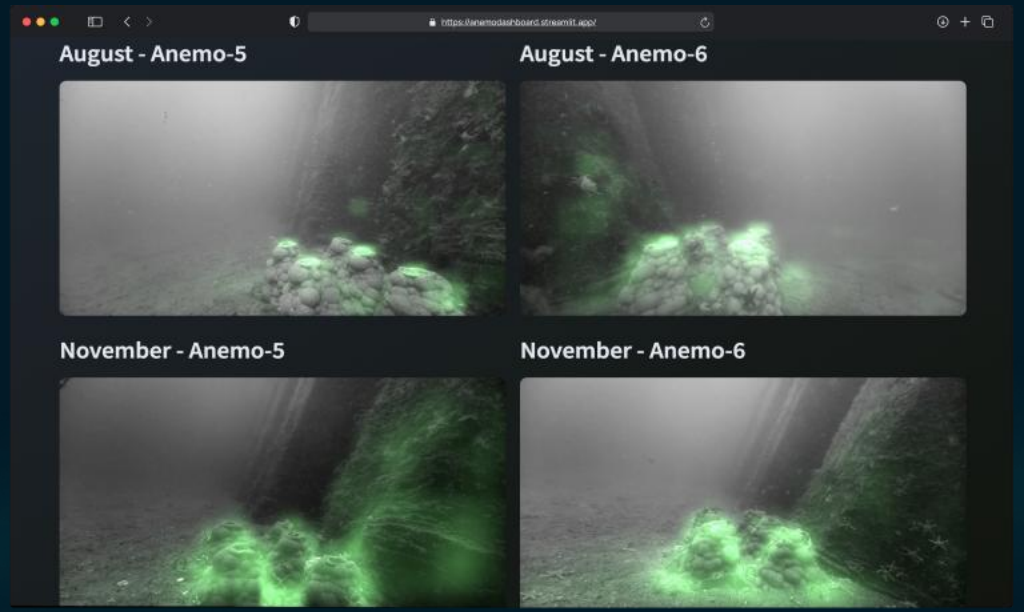


HOW IT WORKS - STEP 5

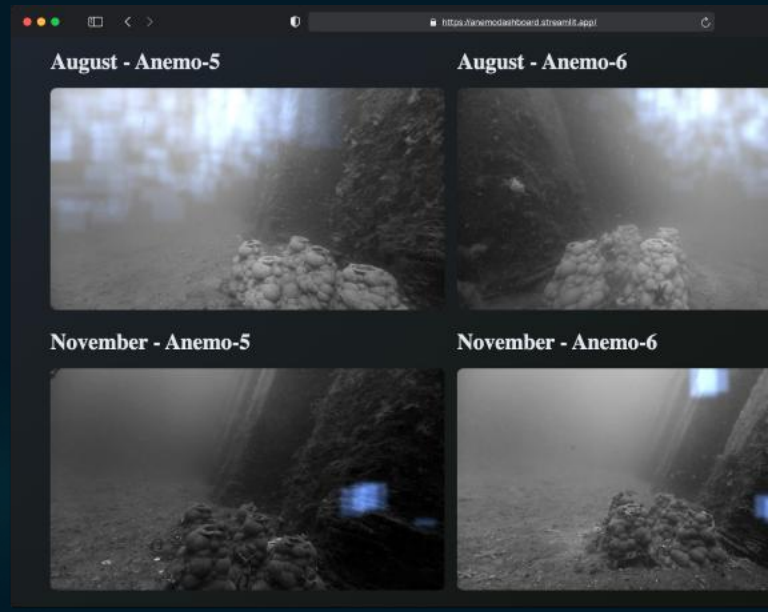
Currently the only Behavioral Heat Maps in marine monitoring



BLACK GOBY



CRAB



SAND EEL

AI & IP DIFFERENTIATION

Our proprietary data and unique adaptivity gives us strong IP protection

QUICK MODEL FINE TUNING

Quickly adapt and train AI models for specific underwater environments

ALL-IN-ONE SOLUTION

Seamless hardware/software integration for autonomous monitoring

PROPRIETARY DATA

Exclusive, hard-to-get underwater data from stationary monitoring stations

VALUE & OFFER

Robust offer that outperforms standard GoPro setups and competitor technology

VALIDATION THROUGH CLIENT DEMAND

Fast growing client base with real-world deployments

Backed by successful pilots and industry partnerships with DTU Aqua, Arc Marine & DHI

Current monitoring clients

CLIENT	AMOUNT	LOCATION	CONTRACT LENGTH
ECONCRETE	DKK 225.000	Bilbao, Es	12 Months
BY&HAVN & WWF	DKK 200.000	Copenhagen, Dk	12 Months
Fredericia Kommune & stone reefs	DKK 125.000	Fredericia, Dk	12 Months
ECOWENDE Windpark Hollandse Kust West *Purchase order for 2026	DKK 785.000	Hollandse Kust West Offshore Wind Farm, Nl	12 Months +
NORDSØEN OCEANARIUM	DKK 150.000	Hirtshals	12 Months
AALBORG UNIVERSITY	DKK 35.000	Camera purchase	–
DTU Kemi Institut for Kemi	DKK 35.000	Camera purchase	–
WATER PROOF	DKK 63.000	Camera purchase	–

SCALING MARINE BIODIVERSITY

From reefs to a global biodiversity network

	Reefs	Offshore	Governments
MARKET			
SCALE	Harbors 20 cameras	 Denmark 100 - 500 Cameras	 World 5 000+ units
VALUE	Monitor & asses fish diversity and behaviors in harbors and reefs	Support sustainable marine operations & easy reporting	Underwater weather stations for informed decisions globally

2 years — NOW

OUR VISION IS - UNDERWATER WEATHER STATIONS

Track ocean biodiversity changes in real-time all over the world

Anemo Robotics

Join us on our mission to make biodiversity transparent

The industry is evolving, and biodiversity monitoring is no longer optional - **it's a necessity!**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Presentation

by Bolette Brix Pedersen, Aeon Group

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aeongroup
...Powering the aeonconnect platform

Introduction

Bolette Brix

CEO, Aeon Group

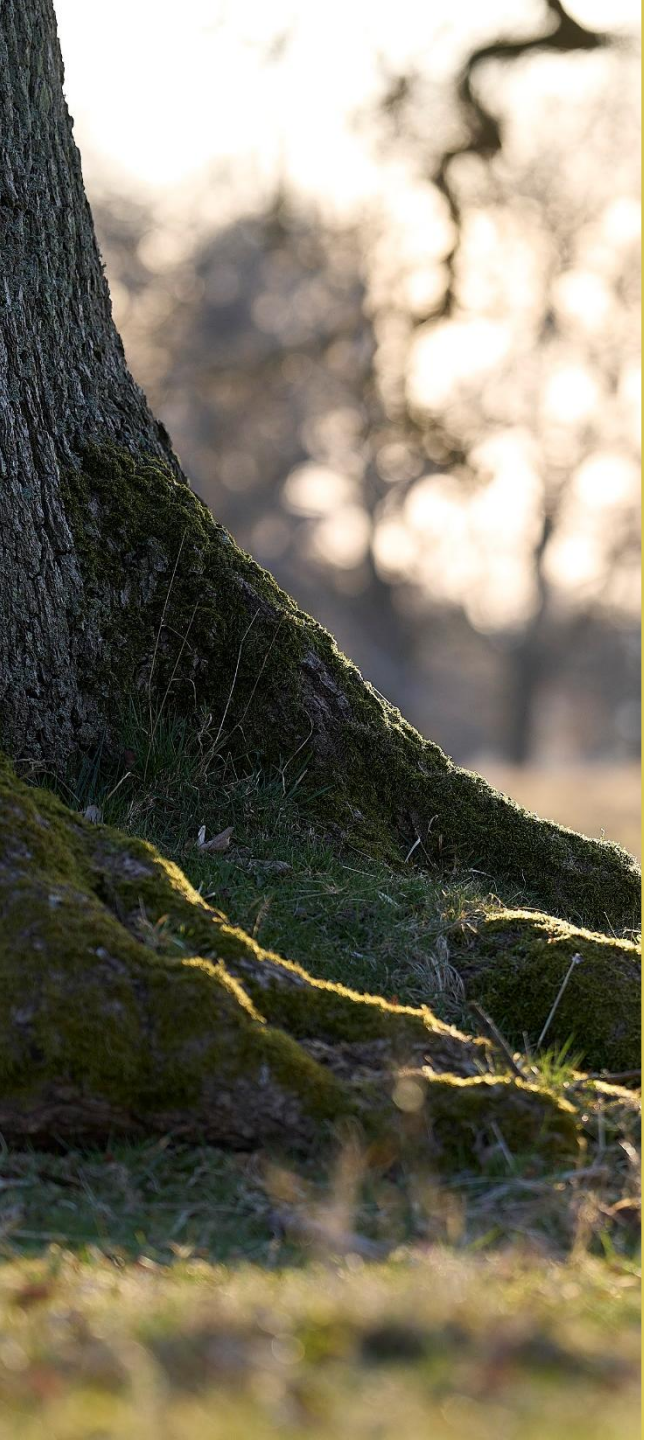
Contact: Bbr@aeongroup.io

Agenda

About us

Our services

Use cases



About Aeon Group

Advisory & Technology solutions for impact investing

Who we are

We are a Danish start-up collaborating with private and public organizations to drive the acceleration of the green transition.

What we do

We provide expertise in sustainable business practices and land-use management to create meaningful, lasting impact.

How we work

We analyze organizational goals and identify opportunities for sustainable change, developing a robust business case supported by a solid technical foundation of data

Our services

Advisory

Enabling you to capture sustainability data and deliver transparent insights

Impact Change Tracking

Enabling cost efficient land change and impact tracking with multifunctional purposes.

Impact Investment Model

Modelling investment opportunities for maximizing impact and minimalizing cost

Sustainable Materials in Construction

Advisory

Environmental & economic analysis

- **Track data and evaluate** the environmental impact of alternative construction materials, like wood and hemp.
- **Collect and integrate** key metrics, such as CO2 storage, nitrogen reduction, and water protection.
- Highlight the **environmental benefits** of alternative materials.
- Build a sustainable business case supporting local ecosystems.
- Promote **long-term sustainability** in construction practices.

Tech

Impact tracking & transparency

- Supports the entire process from production to application**, tracking and reporting impact data.**
- Ensures **transparency** by sharing real-time metrics with stakeholders, including farmers, builders, and regulators.
- Facilitates **collaboration by enabling stakeholders** to monitor progress and align on sustainability goals.
- Drives **measurable environmental outcomes** through shared data and coordinated efforts.

Nature Restoration beyond value chain

Advisory

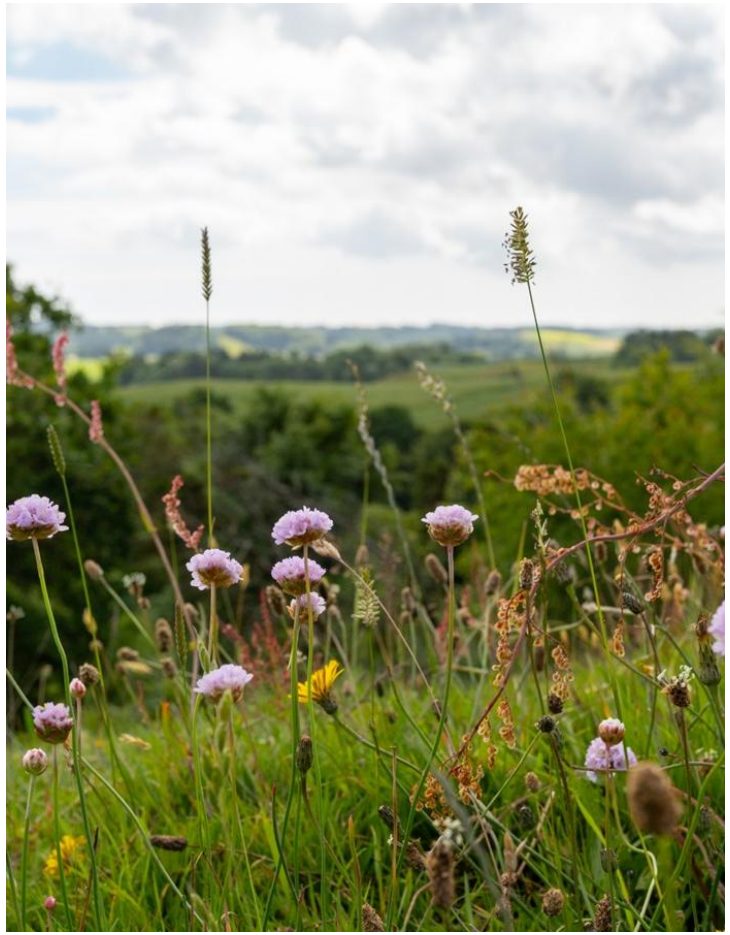
Quantifying offsite biodiversity

- Connect with experts to **track and quantify biodiversity impact**.
- Using the Danish Nature Indicator (DNI), we forecast biodiversity changes under different land-use scenarios.
- Design models **balancing economic returns** and **environmental impact.**
- Applying the biodiversity metrics to enhance Natural Capital Scores.
- **Continuous evaluation** helps businesses align with ecological goals.

Tech

Impact-driven compensation

- **A centralized data hub** for stakeholders to access data.
- **Track progress** over time with up-to-date metrics on impact.
- Generate reports and **share documentation** effortlessly for board meetings and external communication.
- Support data-driven strategies by **visualizing** financial and ecological outcomes.
- **Enable cross-team** and external stakeholder engagement in impact tracking.



Integrating biodiversity into business operations through technology


Sign up for ConTech Lab's newsletter:
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Panel discussion

Tillie Johansson, Copenhagen School of Entrepreneurship
Jonas Eliasson, DTU Skylab
Christina Juell-Sundbye, ConTech Lab

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Panel
Tech
Trends
Support

Want to know more?

Analyse:
Modenhedsmåling 2025

Årlig måling af byggeriets grønne og digitale omstilling.

Udgivet af ConTech Lab i samspil med ConTech Alliance.

Analyse:
Biodiversitet ibyggeriet

Biodiversitet i byggeriet – status og tendenser.

Udgivet af BLOXHUB og ConTech Lab

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Join the event on April 29th

Event: AI-genereret præregistrering af on-site biodiversitet

29. april kl. 09:00-11:00,

BLOXHUB, København K

Tilmeld dig her:

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