haizea ANALYTICS

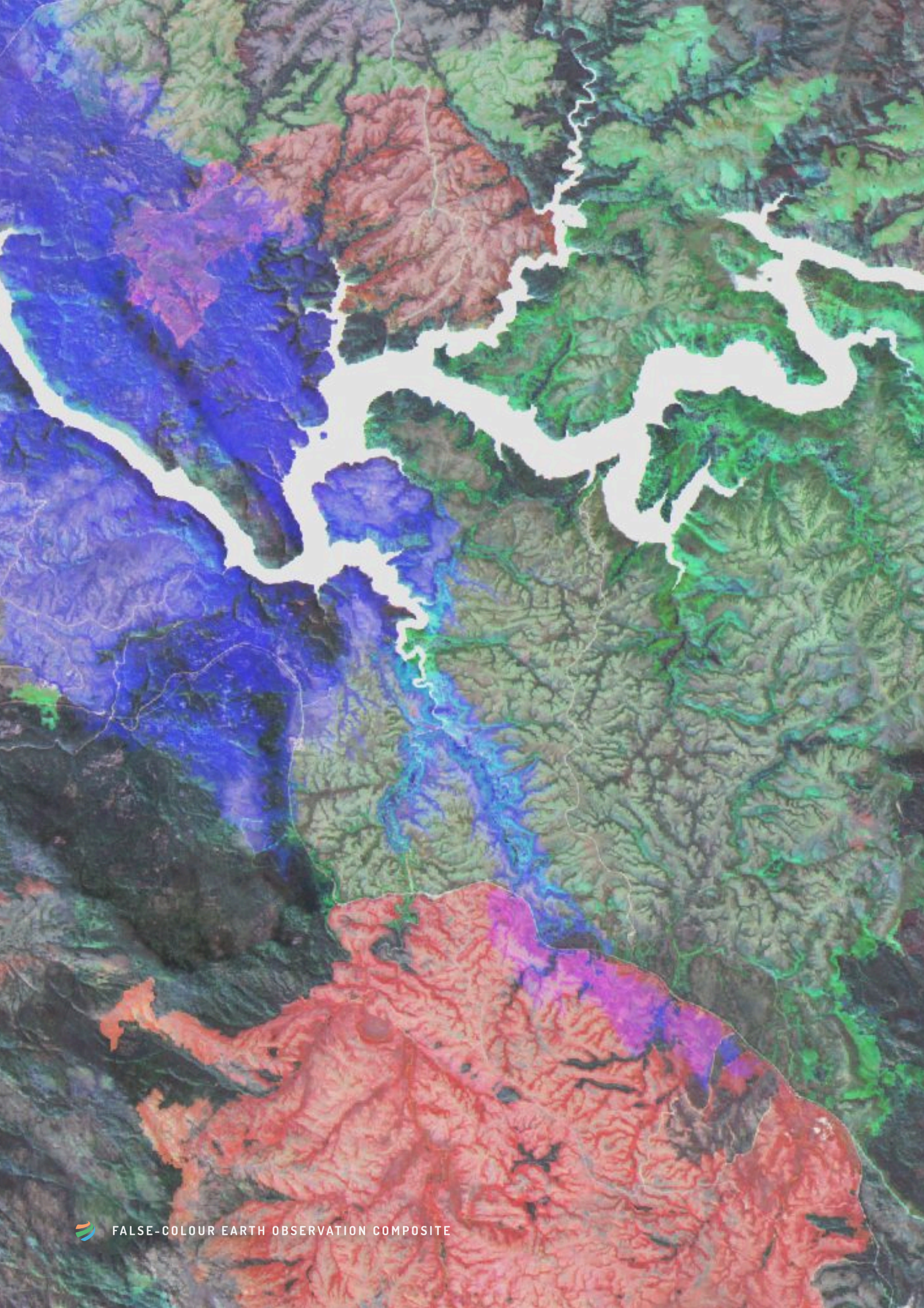
COMPANY BROCHURE

EARTH DATA, *LIGHTNING* FAST

Turning the complexity of Earth data into answers you can act on.

SPATIAL DATA ANALYTICS · CANBERRA, AUSTRALIA

HAIZEA.COM.AU



FALSE-COLOUR EARTH OBSERVATION COMPOSITE

WHO WE ARE

THE HAIZEA ANALYTICS MISSION

We are a spatial data analytics company that turns decades of Earth data into actionable intelligence at the speed your decisions demand.

Earth data has always been too big and complex to leave the hands of specialists and supercomputers, keeping it out of reach of the people responsible for the land, water, and risk it describes. We built Haizea Analytics to close that gap.

We understand both the science and the engineering behind large-scale Earth data: how landscapes behave, and how to interrogate large amounts of information. Combining the two is what turns a query into a clear answer. Terrak.io is the product of that expertise — continental-scale questions answered with rigour in seconds, through one interface.

Our answers provide evidence for decisions that carry weight — irrigation compliance, biodiversity markets, and forest change. Each answer we provide is transparent and traceable: the sources it draws on, the methods applied, and how it has been validated against ground truth.

Our clients are government agencies, research institutions, industry bodies, and private landholders — across water, fire, forests, biodiversity, and property. We are scientists, but our value is measured by what our clients achieve, not by what we publish. You understand your problem; we understand the data. We work together to find the answers.

EARTH OBSERVATION, RENDERED LEGIBLE

LEGAL NAME HAIZEA ANALYTICS PTY LTD | FOUNDED 2021 | ABN 27 648 451 969 | HQ CANBERRA ACT

THE CHALLENGE

WHAT'S GETTING IN THE WAY?

The data is not the problem. Neither is your team's understanding of what needs to be done. The problem is what sits in between: petabytes of imagery to store, align, and validate before a single answer is reached — and the complexity only grows when the next question arrives. This is why capable organisations end up with one-off studies and out-of-date maps.

THAT LOOKS LIKE…

Fragmented sources

Hundreds of missions and sensors, each with its own format, resolution, and gaps to reconcile.

Heavy preparation

Cleaning, aligning, and validating before a single question can be asked of the data.

Serious investment

Storage, compute, and specialists — the standing capability needed before any of it produces an answer.

Start again each time

The next question means repeating much of that work, so the effort never becomes a lasting capability.

Which means decisions are made on old information, at higher cost, carrying more risk than necessary.

OUR SOLUTION

FROM ONE-OFF STUDY TO STANDING CAPABILITY

You do not need Earth observation. You need the answers it contains. We built the infrastructure — the archive, the workflows, the models — so that you don't have to. Bring us the question and we return an answer that is current, defensible, and ready to use.

01

Ask in your own terms

Describe the place and the question — a property, a catchment, a season, a decade. Not the datasets, projections, or processing steps behind it. Any location in Australia, drawn from decades of observation.

02

Answers that stay current

Not a map with a date on it. As new observations arrive, the answer updates — so the information you relied on last quarter still holds this one.

03

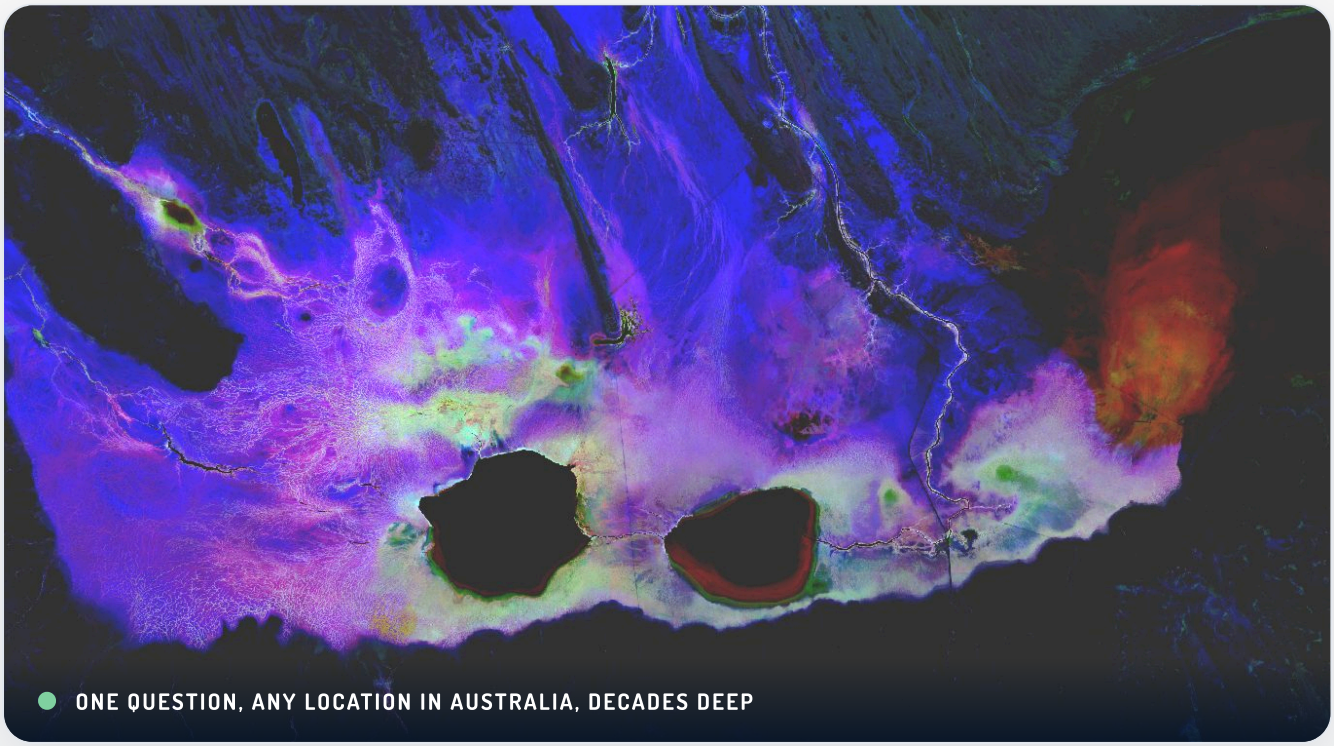
Delivered the way you work

A report for your executive, a live map for your team, or a feed into a system you already use. The answer arrives where the decision gets made.

04

Nothing to build

No cluster to provision, no specialists to recruit, no infrastructure to maintain. You pay for the answers you need, not the capacity to produce them.



ONE QUESTION, ANY LOCATION IN AUSTRALIA, DECADES DEEP

THE RESULTS

WHAT BECOMES POSSIBLE

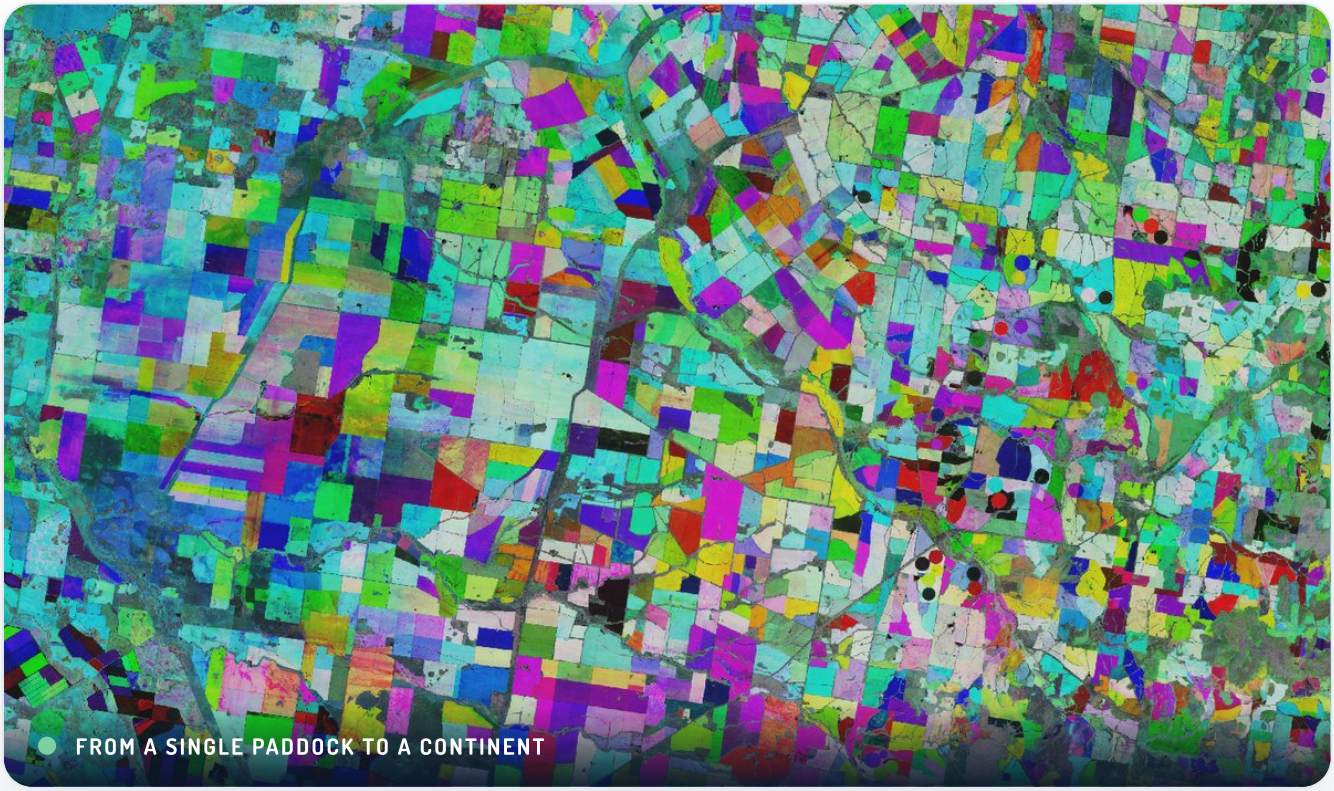
When a question is easy to ask, the first answer is rarely the last. A finding on one property prompts the same look at forty others. Your team follows up on a suspicion, and checks whether last year's conclusion still holds. The value turns up in places nobody planned for.

RISK MANAGEMENT Detect change early enough to act on it, rather than reporting it afterwards.

COMPLIANCE Monitor continuously and demonstrate compliance, without putting anyone on the ground.

DUE DILIGENCE Support a valuation, a claim, or an investment case with spatial evidence.

OPERATIONS Replace manual analysis and automate reporting with something that runs on its own.



FROM A SINGLE PADDOCK TO A CONTINENT

You know, rather than assume. Current information, evidence behind it, available when the question comes up.

WHAT WE DO

OUR CORE CAPABILITIES

We work across sectors that have little in common on the surface — a water regulator, a fire agency, a conservation NGO, a rural underwriter. What they share is the need to know what is happening across more ground than anyone can cover, and the same capability answers it in every case: one archive, one engine, and one team that understands both the data and the landscapes they describe.

Resources

Water authorities, land and resource agencies, and agribusinesses. Monitoring use, compliance, and productivity across areas too large to inspect on the ground.

Hazards

Emergency and hazard agencies. Continuous monitoring of fire, flood, and other hazards, turning scattered detections into early situational awareness.

Environment

Environmental agencies, NGOs, and conservation organisations. Tracking vegetation, forests, biodiversity, and condition over time.

Land and property

Buyers, sellers, underwriters, and insurers of rural land, alongside farmers, land managers, and project developers. Detailed information at the level of a single property.

CAPABILITIES BUILT AROUND YOUR NEEDS

Custom geospatial solutions

- Tailored web applications for interactively exploring your own data.
- White-label deployments, where our technology powers your branded product.
- Integration with existing digital, enterprise, and scientific systems and infrastructure.

Data services

- Data streams blended across missions and models, driven by AI.
- Imagery that's cleaned and prepared for use by analysts, models, and dashboards.
- Access to 150+ datasets, including decades of satellite missions, all queryable through a common interface.

AI environmental intelligence

- Predictive analytics using decades of archival data, offering insights into drought, weather, vegetation, and more.
- Anomaly detection to flag unusual conditions at pixel, property, or catchment scale.
- Audit-ready reporting and compliance monitoring that reduce the need for manual inspections.

OUR PLATFORM

FROM RAW OBSERVATIONS TO ANSWERS

Behind every answer are two things: decades of Earth observation, curated into one coherent archive, and an analytics engine that scales with your curiosity. The complexity stays with us — you ask a question, and the answer comes back.

SATELLITES · CLIMATE · ELEVATION

DATA FOUNDATION

THE LIVING ARCHIVE

Aligned · validated · continental · decades deep

THE ENGINE

TERRAK.IO

One question, however large — answered in seconds, at full detail

ANSWERS · REPORTS · LIVE MAPS · FEEDS

The living archive

Hundreds of satellite, climate, and elevation sources, reconciled by our scientists and engineers into one coherent archive: aligned, validated, ready to be analysed. Decades of history, current to the latest observation.

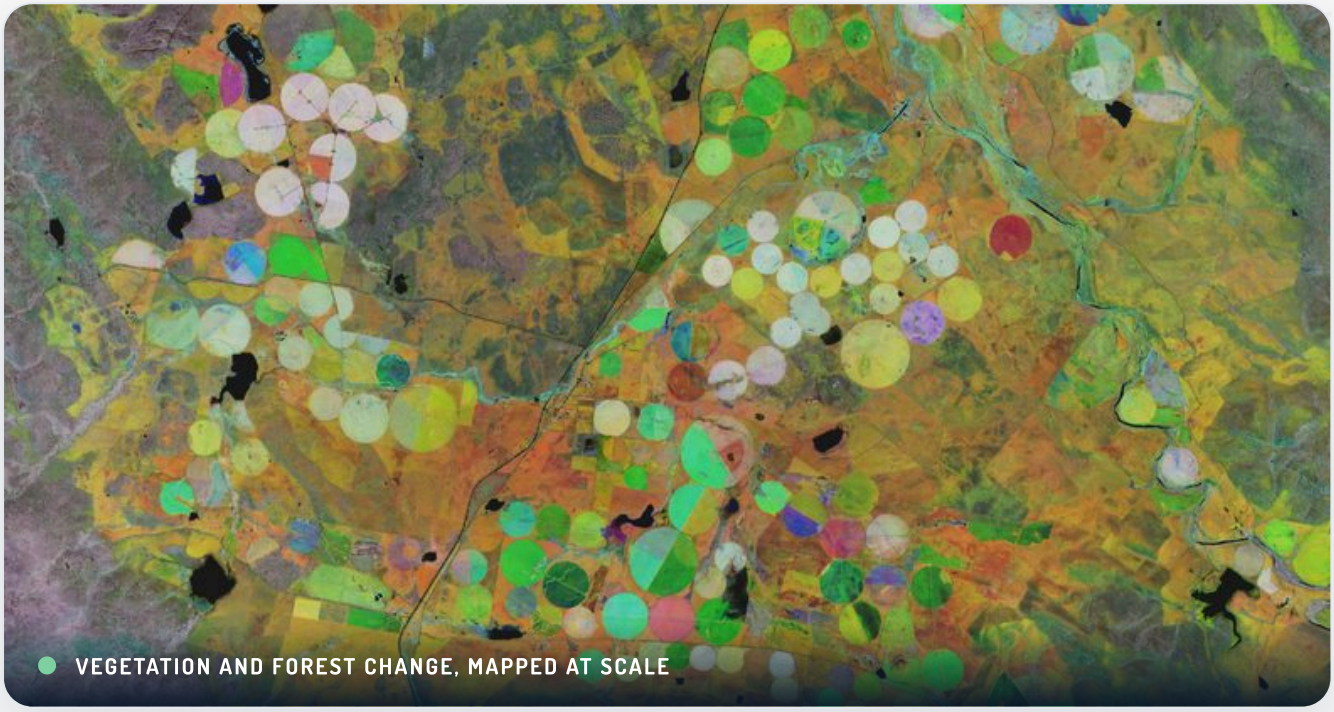
Terrak.io

The engine that brings the archive to life — one question, however large, answered in seconds and at full detail. Delivered into the systems you already run, so the answer arrives where the decision gets made.

OUR TECHNOLOGY IN ACTION

VEGETATION MONITORING & ASSESSMENT PROGRAM (VMAP)

A collaboration between Haizea Analytics and the Australian National University, tracking changes in Australia's forests and vegetation to inform carbon emissions and removals monitoring.



VEGETATION AND FOREST CHANGE, MAPPED AT SCALE

THE CHALLENGE

Satellite data can show land managers, regulators, and researchers where forest is being lost across a continent. The challenge is keeping that picture current: a one-off map dates quickly, and repeatedly commissioning new monitoring projects is unsustainable.

What's needed is a consistent, detailed picture of forest extent and loss that is reliable, transferable across roles and departments, and kept up to date.

THE SOLUTION

In partnership with the ANU, Haizea Analytics developed VMAP — an annually updated, AI-driven Australian forest and vegetation map that dates back to 2020. The model that powers the program is trained on airborne Light Detection and Ranging (LiDAR) and runs over the full Sentinel-2 Earth observation archive via Terrak.io at 10-metre pixel resolution across 7.7 million square kilometres. This enables detailed, consistent mapping, even in areas where forests or vegetation are sparse.

THE OUTCOME

VMAP reduces the operational inefficiencies, time, cost, and labour involved in commissioning a new map every year. It uses the same engine — Terrak.io — every time, forming a living record of change, rather than a snapshot of a particular period.

For stakeholders, this facilitates better access to data at a much lower cost than running an expensive field study or individual monitoring project, and easier decision-making as a result.

10 m
PIXEL RESOLUTION

2020
COMMENCEMENT OF OPERATION

7.7M km²
NATIONAL COVERAGE

OUR TECHNOLOGY IN ACTION

NATURE REPAIR MARKET (PLANR)

The Nature Repair Market is a national framework that rewards landholders and investors for delivering measurable improvements to Australia's biodiversity, creating new opportunities to invest in nature.

THE CHALLENGE

A national Nature Repair Market can only succeed if landholders across Australia have fast, affordable access to credible estimates of their land's biodiversity potential.

Without a robust, data-driven system, each property would require a bespoke ecological assessment, making participation slow, costly, and difficult to scale. This would mean fewer projects entering the market and disrupted progress towards Australia's biodiversity goals.

THE SOLUTION

Haizea Analytics used its Terrak.io engine to develop a system that generates carbon and biodiversity assessments for any property in Australia. The assessments are available on demand, offer full national coverage, and come at no cost to landholders.

THE OUTCOME

By removing key barriers for project proponents, the system makes participation in nature repair projects faster and more accessible, supporting Australia's broader biodiversity goals. The Market aims to "deliver high-integrity biodiversity outcomes and increase investment in nature," and Haizea Analytics' technology supports that goal.

For landholders, it removes a significant barrier to participation. For the Nature Repair Market, it provides a scalable operational capability with benefits across the market.

100%
NATIONAL COVERAGE

Free
C+B ASSESSMENTS

1,000+
MONTHLY USERS

OUR TECHNOLOGY IN ACTION

AUSTRALIA'S ENVIRONMENT REPORT

Australia's Environment Report provides a comprehensive summary of the state of our land, natural resources, and ecosystems. Each year, it evaluates critical changes and their implications for audiences ranging from environmental scientists and land managers to farmers and the wider public.

THE CHALLENGE

Reporting on the state of a country's environment each year once meant booking time on a national supercomputer and running batch jobs — an expensive, slow, rigid, and hard-to-repeat process.

Australia's Environment Report needed a robust solution that enabled continental-scale reporting on decades of environmental change and made it accessible beyond a small handful of specialists.

THE SOLUTION

Working with Australia's Terrestrial Ecosystem Research Network (TERN) and the ANU, we built the data infrastructure behind Australia's Environment Report.

Our technology transforms continental-scale monitoring from supercomputer batch processing into on-demand analytics and insights. Drawing on more than 25 years of satellite observations and over 20 TB of spatial data, the same continental analyses now run interactively and can be rerun or extended as new data becomes available.

THE OUTCOME

Reaching almost 10 million readers, Australia's Environment Report provides an accessible annual account of the nation's land and ecosystems for researchers, land managers, and the general public. Haizea's technology has made producing the Report more straightforward, resilient, and efficient, removing the need for expensive and complex specialist exercises.

25+
YEARS OF SATELLITE OBSERVATIONS

20+ TB
SPATIAL DATA

10 million
READERS AND COUNTING

A SINGLE WAY IN

THE SAME ENGINE, EVERY PROJECT

The three projects above address different questions, audiences, and scales. Yet every answer comes through the same platform. From a continental forest map to a single property's biodiversity assessment, Terrak.io provides one flexible way in: your problem shapes the analysis.

Ask the questions you actually have

Combine datasets, define your own indices and thresholds, and build the analysis your problem requires. Over 150 datasets, yours to work with.

Bring your own data

Your cadastre, field records, and proprietary layers, analysed alongside the Terrak.io archive.

Answers in the format you need

From map tiles, GeoTIFFs, and JSON to spreadsheet summaries, answers arrive in the format you expect.

As deep or as brief as you need

Interrogate a single paddock over decades, or reduce a continent to one figure a board can decide on. The same engine supports both, with the answer delivered at the level your decision requires.

CONTINENTAL TO PADDOCK — THE SAME ENGINE

THREE PROJECTS, THREE DIFFERENT PROBLEMS, ONE ENGINE.

SCIENTIFIC RIGOUR

ANSWERS THAT STAND UP

Our answers end up in compliance cases, valuations, and public reports. The confidence you place in them is backed by science.

01

Research, made operational

The methods behind our answers come from published, peer-reviewed science. We add the engineering that turns a paper into a continental-scale product.

02

Measured against reality

Stream gauges, flux towers, field sensors, airborne LiDAR. Results are validated against physical measurements, not modelled estimates.

03

Uncertainty stated

Every satellite and climate model carries uncertainty. Our outputs make that uncertainty transparent, so you know how far to trust a result.

04

Traceable to source

Missions, dates, and methods travel with every answer, so any figure can be traced back to the record behind it.

Science you can check, in answers you can defend.

THE PEOPLE BEHIND THE ANSWERS

SCIENCE AND ENGINEERING, WORKING AS ONE

Haizea brings together a team of scientists, engineers, and geospatial specialists with a shared purpose: turning the complexity of Earth data into answers people can use.

Our team combines decades of environmental research with expertise in artificial intelligence, software engineering, and large-scale geospatial systems. We work side by side — the people who understand how landscapes behave with the people who know how to interrogate enormous amounts of data. That combination is what takes an idea from a scientific question to a solution that works in the real world.

WHERE IT STARTED

Haizea grew from two decades of environmental research and continental-scale monitoring at the Australian National University, led by co-founders Dr Pablo Rozas Larraondo and Professor Albert Van Dijk. What began in research became the scientific and technological foundation for the team and platform we have today.

PRL

Dr Pablo Rozas Larraondo

CO-FOUNDER · AI AND GEOSPATIAL ENGINEERING

Pablo is an artificial intelligence scientist specialising in large-scale geospatial systems. His work in AI, spatial data, and large-scale computing helped shape the technology behind Terrak.io and continues to guide its development today.

AVD

Professor Albert Van Dijk

CO-FOUNDER · ENVIRONMENTAL SCIENCE

Albert is Professor of Water Science and Management at the Australian National University's Fenner School of Environment and Society, where he established the Centre for Water and Landscape Dynamics. His two decades of continental-scale environmental research and monitoring underpin much of the science behind Haizea today.

DECADES OF OBSERVATION, ONE SHARED ARCHIVE

Different disciplines. One team. Turning your questions into answers you can act on.

WHAT COMES NEXT?

IT ALL STARTS WITH A CONVERSATION

You know your domain and the questions that matter; we know what Earth data can — and cannot — tell you. Together, we'll work out what's possible, what's useful, and where the data can take you.

1

We start with the question

What are you trying to understand, measure, or decide? We work with you to turn the problem into a question the data can answer.

2

We test what's possible

We start small: one place, one question, one useful answer. See what the data can tell you before committing to something bigger.

3

We build it together

Our teams come together to combine your domain expertise with our science and engineering, shaping an answer that works in the real world.

4

We make it operational

When the answer proves useful, we build your solution around it. As new questions emerge, the solution grows with them — without rebuilding from the ground up.

LET'S BEGIN

BRING US ONE QUESTION.

Something worth knowing, understanding, or changing. We'll show you what the data can reveal.

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SCAN TO ACCESS

CONTACT US

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Detailed technical documentation for Terrak.io is available upon request.