envirosuite

Translating data into action at lightning speed

Why Envirosuite.

The world gets smaller and better connected every year. As populations grow, industries and communities increasingly collide.

This means regulations are only getting tighter, risks higher, and scrutiny more public. Now, thanks to social media, reputations built over years are destroyed overnight.

It means getting to the source of environmental issues fast is no longer a 'nice to have' — it's a must. Not knowing is no longer good enough.

That's why we've built Envirosuite.

It's the world's most intelligent real-time environmental management system.

Image: NASA

Who we are.

We're an innovative and exciting tech company with deep roots in science, engineering and consulting. Our decades of experience consulting to industry and government in multiple countries has shaped our belief that environmental management can be transformed, to everyone's benefit, through technology.

Our core scientific and engineering expertise is expressed in data analysis and modelling. It is designed and encoded into Envirosuite through the talents of our first-class development, design and implementation teams.

We continue research and development, including with collaboration partners, to ensure we keep advancing the boundaries of what is possible.

What we do.

We provide the most comprehensive and intuitive real-time monitoring, investigative and predictive environmental management software in the world.

Built on insights from 30+ years experience as environmental consultants, Envirosuite seamlessly converts data into action, enabling real action in real time.

Who we're for.

We're for clients in the following sectors who want to turn data into doing:

Wastewater
Manage and take action on odour complaints.

Port Operators
Keep things moving, while understanding the impact.

Mining
Minimise impact and keep to schedule without unnecessary interruptions.

Oil Refineries
Manage your environmental impact and avoid unwarranted scrutiny.

Government
Balance growing industry with community well-being.

We're for those operating close to communities or in urban areas who want to stay ahead of regulation, while turning environmental data into operational efficiencies.

We're for government regulators looking for a a solution that monitors industry impacts and helps locate sources of environmental issues.

We can help if:

Data's complex and difficult to action.

Your environmental impact is affecting your operation.

You spend too much time resolving complaints.

You want to get ahead of increasing regulation and scrutiny.

You need to manage a complex site with a large footprint.

Your operational efficiency is heavily reliant on weather.

Our Solutions at a glance.

Environmental Compliance

Keep below environmental thresholds for odour, noise, water or air pollutants - with way less effort.
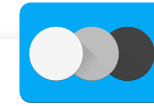
Risk Management

Translate advanced weather models and data into clear actions.

Incident Intelligence

Get to the source of an issue and act faster, with more confidence than ever before.

Impact Modelling

Visualise model predictions and simulations, and forward trajectories in a revolutionary way.

Blast Management

Get better insights into when you should be blasting and the impact it'll have on your site and surroundings.

Source Identification

Technology that allows you to act on issues immediately and sometimes even prevent them from happening.

Environmental Intelligence

The most comprehensive and intuitive environmental software package in the world.

Environmental Compliance

Environmental compliance without the headaches.

Technology that helps you keep your organisation below environmental thresholds for odour, noise, water, or air pollutants — with way less effort.

See issues simply.

Finally, beautiful dashboards that you can understand.

We visualise your data in real time using an easy-to-understand colour-coding system so you can see issues clearly, know how to fix them, who's responsible, and what to tell your community — instantly.

Take instant action.

Get clarity on internal actions needed to keep compliant.

Our proprietary source identification algorithm uses scientific methods and machine learning to pinpoint emission sources more accurately and faster than ever before, letting you know when you're on the brink of a breach and when you're in the clear.

Use the past to predict the future.

Handle weather's risk to compliance.

Our forecasting model not only gives you site-specific real-time weather data, but also historical weather trends so you can see how they impacted operations and better manage future impacts.

Reduce reporting and admin time.

Manage reporting and multiple stakeholders with ease.

Reduce your admin time with incorporated features like custom reporting that's done in a click, letting everyone in your organisation see and understand how you're tracking, without the complicated spreadsheets.

No site too large, no operation too complex.

Reduce time spent checking on compliance.

If you're managing multiple sites, or the most complex ones, we can integrate all your operations' monitoring, alerts, reporting and incident management into a single interface, allowing you to see all in a single view.
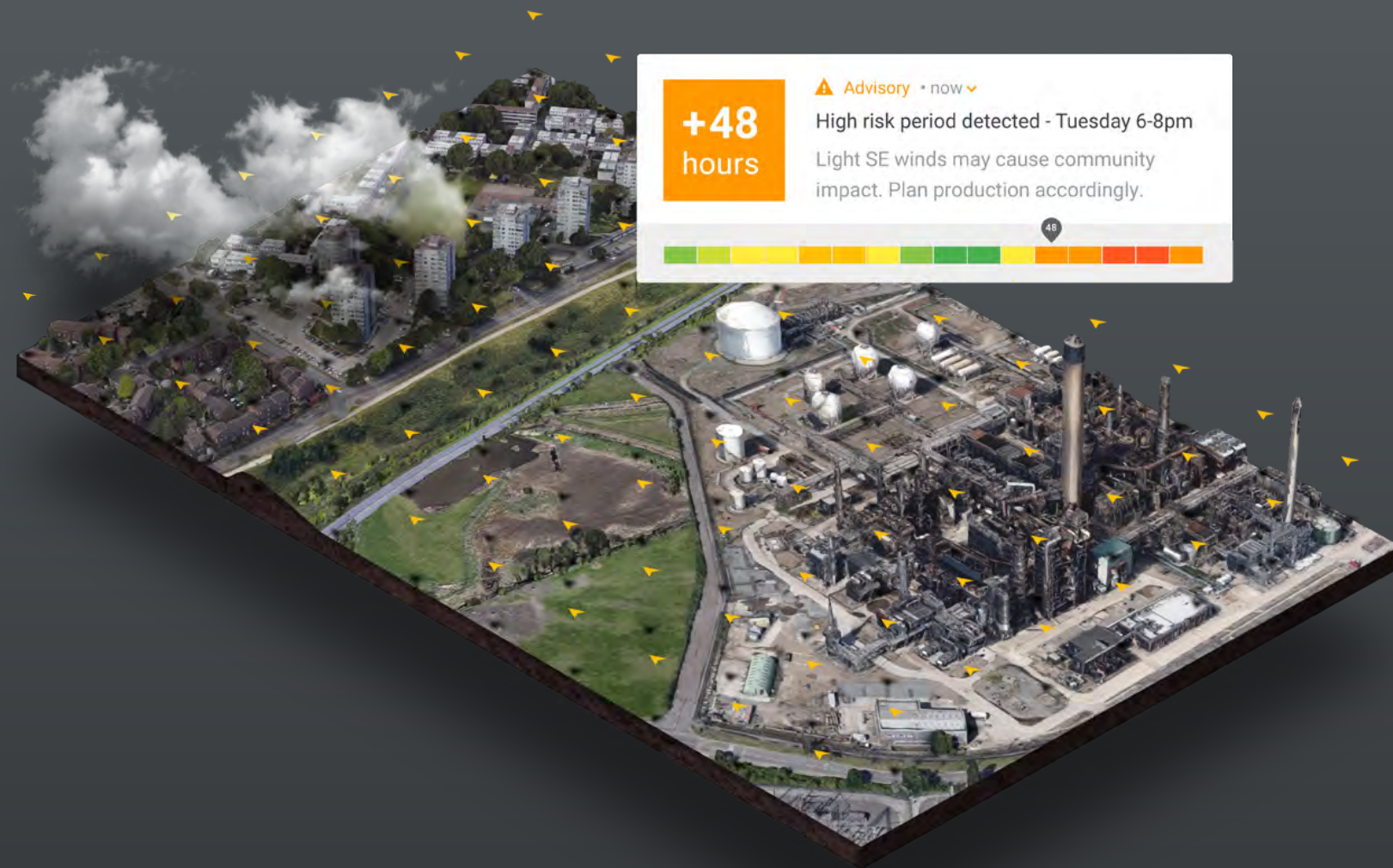
Risk Management

Master the weather. Lower your risk. Improve your operations.

Technology that translates advanced weather models and data into clear actions.

+48 hours

⚠ Advisory · now ⌄

High risk period detected - Tuesday 6-8pm

Light SE winds may cause community impact. Plan production accordingly.

High risk handled.

Keep everyone up to speed with automated reporting.

Get 72-hour risk reports delivered to your inbox daily, with easy-to-understand colour-coded reports and alerts, so you can avoid incidents, such as excess dust emissions, and plan ahead for times of high risk.

Avoid weather risks.

Know when the weather is putting you at real risk.

We continuously collect high-definition weather data, so whenever there's a weather threat, you can go from data to action quicker than ever before.

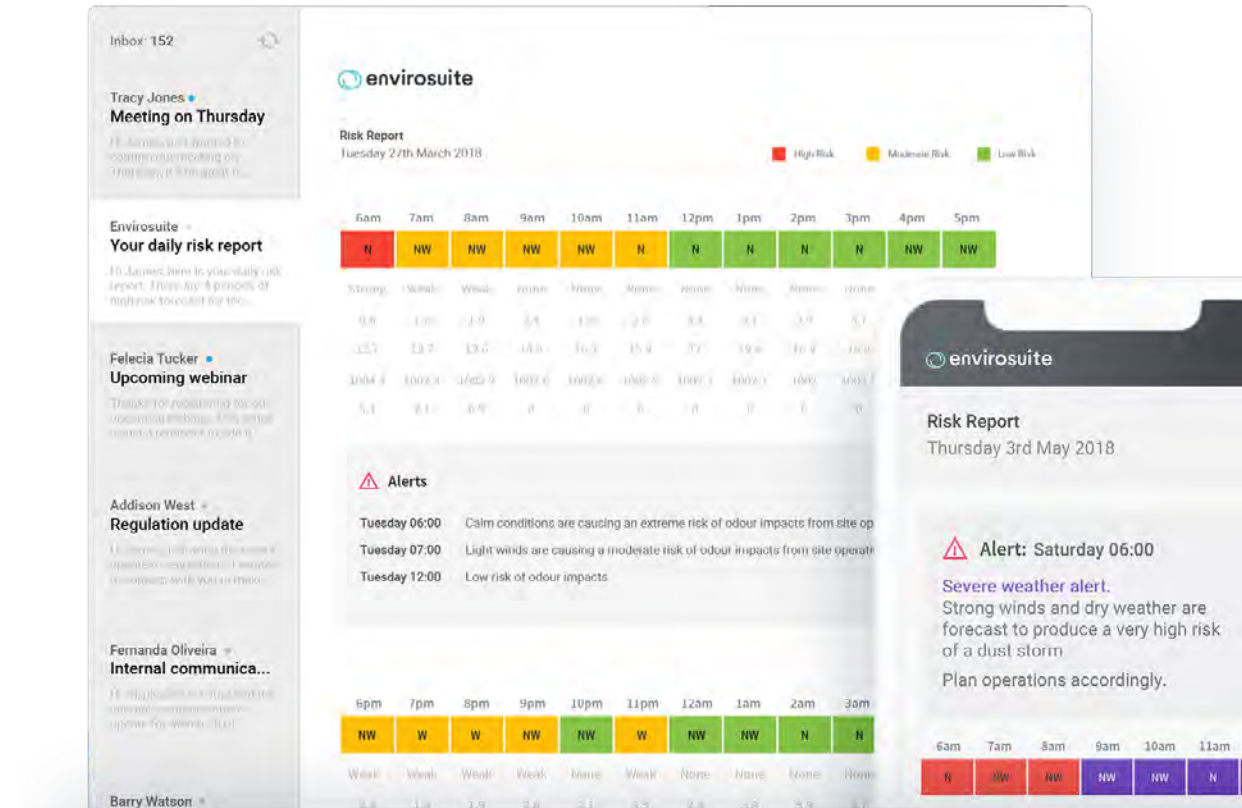## Use the past to predict the future.

Understand what past weather data means to your future plans.

Our weather model not only gives you location-specific visibility on weather trends, but it also lets you see how previous weather events impacted operations, allowing you to better manage future incidences.

Use weather to your advantage.

Ensure adverse weather has minimum effect on throughput.

Our weather models combine hyper-local forecast data with 3D spatial mapping and minute-level time stamping with your site's operations so you can plan for how the weather may impact your operation.

Incident Intelligence

Stop incidents from slowing down your operation.

Technology that gets you to the source of an issue, acting on it faster and more confidently than ever before.

T - 20 minutes

Pollutant Position
T-36 mins

Real-time identification.

Immediately target who or what is responsible.

We continuously collect high-definition weather data, allowing almost-instantaneous back-tracking for more accurate and quicker source identification, allowing you to take action instantly.

Instant community engagement.

Communicate quickly whenever it's needed.

All our monitoring and data collection happens in real time, so you can act on complaints quicker than ever before, cutting off small problems before they become big ones, while building trust.

Operations meet environment.

Know more clearly and faster what caused an issue.

Our algorithms analyse the relationships between 3D spatial and time-based weather models, on-site operational data, and hyperlocal weather data, delivering you more confidence in knowing what in your operation could have caused an issue.
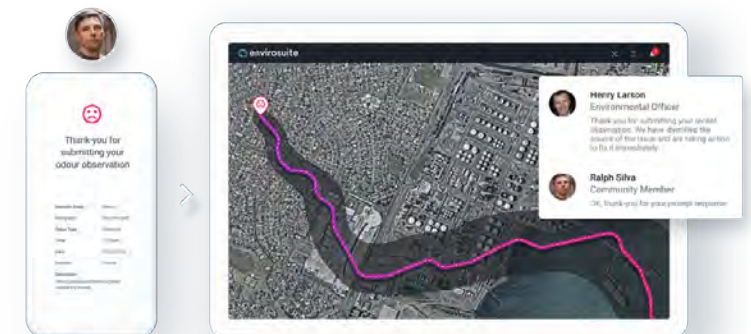
Complaints managed.

Reduce time inspecting and handling complaints.

We decrease inspection time and improve ticket handling with clear assignment of tickets, rigid sets of KPIs against communication and closure, and clear trails for auditors.

Beat the ticket race.

Forward Trajectory Workflow automatically creates steps needed to act on and close a ticket quicker.

You'll be impressed how we've added intelligence to the process of issuing, actioning, and managing tickets. The secret is in our Forward Trajectory Model, which gives Operations a much clearer view of the issue and the action.
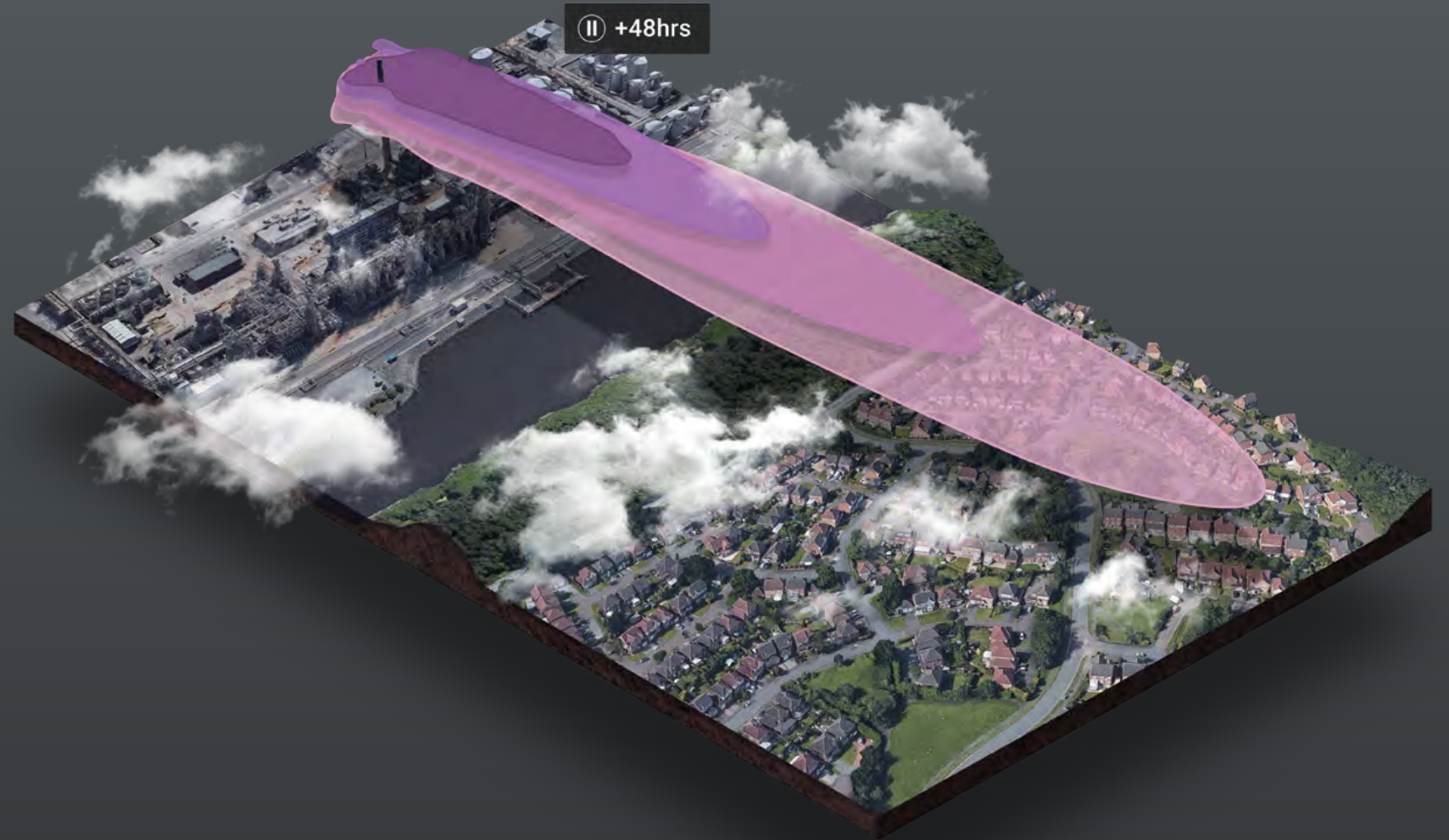
Impact Modelling

Real-time 360° clarity on your impact.

Technology that visualises model predictions and simulations, and forward trajectories in a revolutionary way.

+48hrs

Contain your impact.

Thoroughly model your impact before you act.

Our high-definition site-specific forecasts run multiple scenarios to more effectively model plumes or ground-level concentrations, helping you determine the best time to take action with minimum impact.

See your impact.

Track your impact on our dashboard in real time.

Gone are the days of collecting data days after an event. Our system is constantly collecting and visualising data so that you can watch and monitor actions that will impact the environment in real time.

The weather factor.

Take into account detailed weather data.

Our weather models combine hyperlocal forecast data with 3D spatial mapping and minute-level time stamping, so you can use the weather to your advantage and know its impact on your operation.
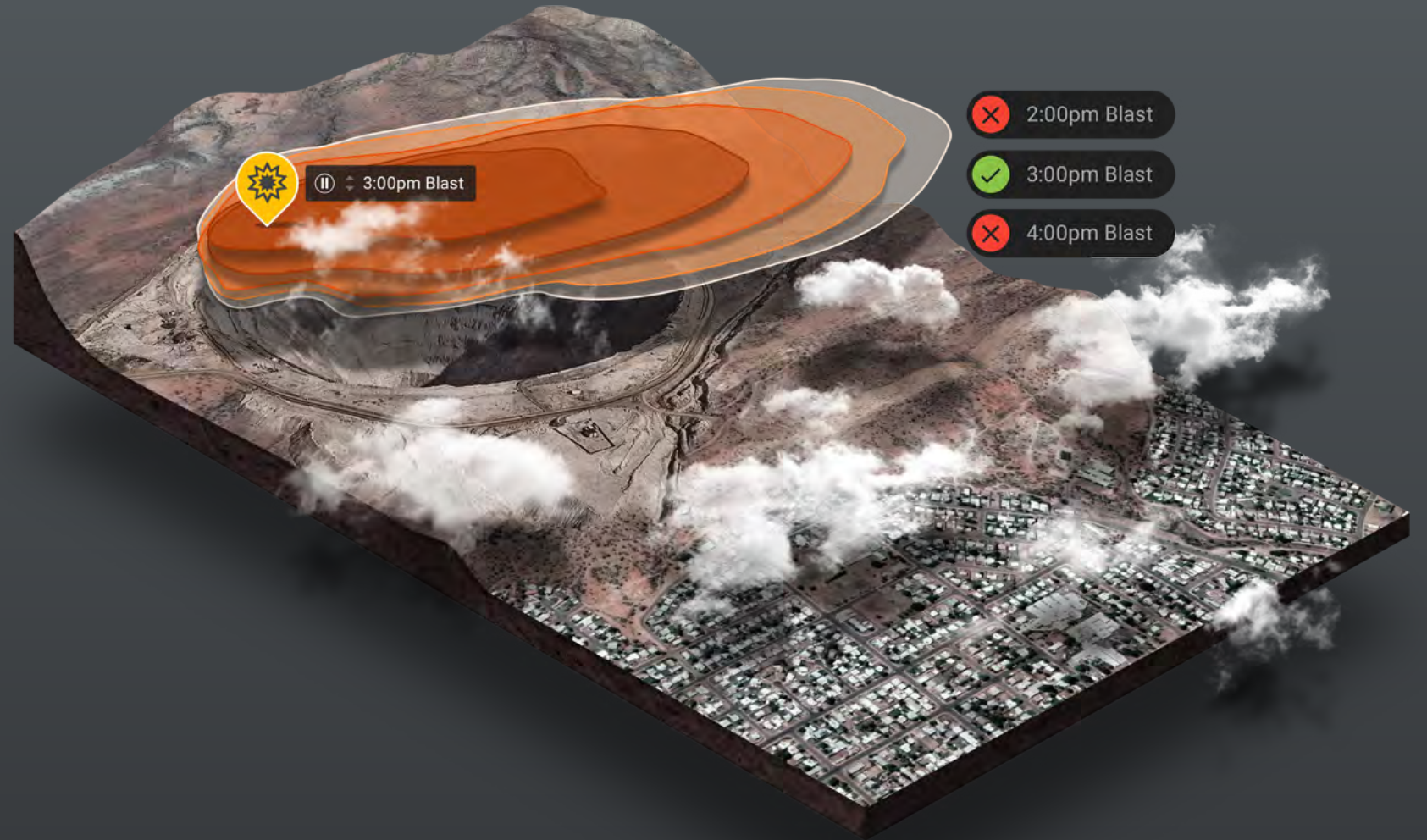
Blast Management

Be the good neighbour and operate efficiently.

Technology that gives you better insight into when you should be blasting and the impact it'll have on your site and surroundings.

2:00pm Blast

3:00pm Blast

4:00pm Blast

3:00pm Blast

Contain your impact.

Blast with the best knowledge that you won't affect the surrounding communities.

Our high-definition site-specific forecasts run multiple scenarios to determine the best time to conduct blasting operations with minimum impact.
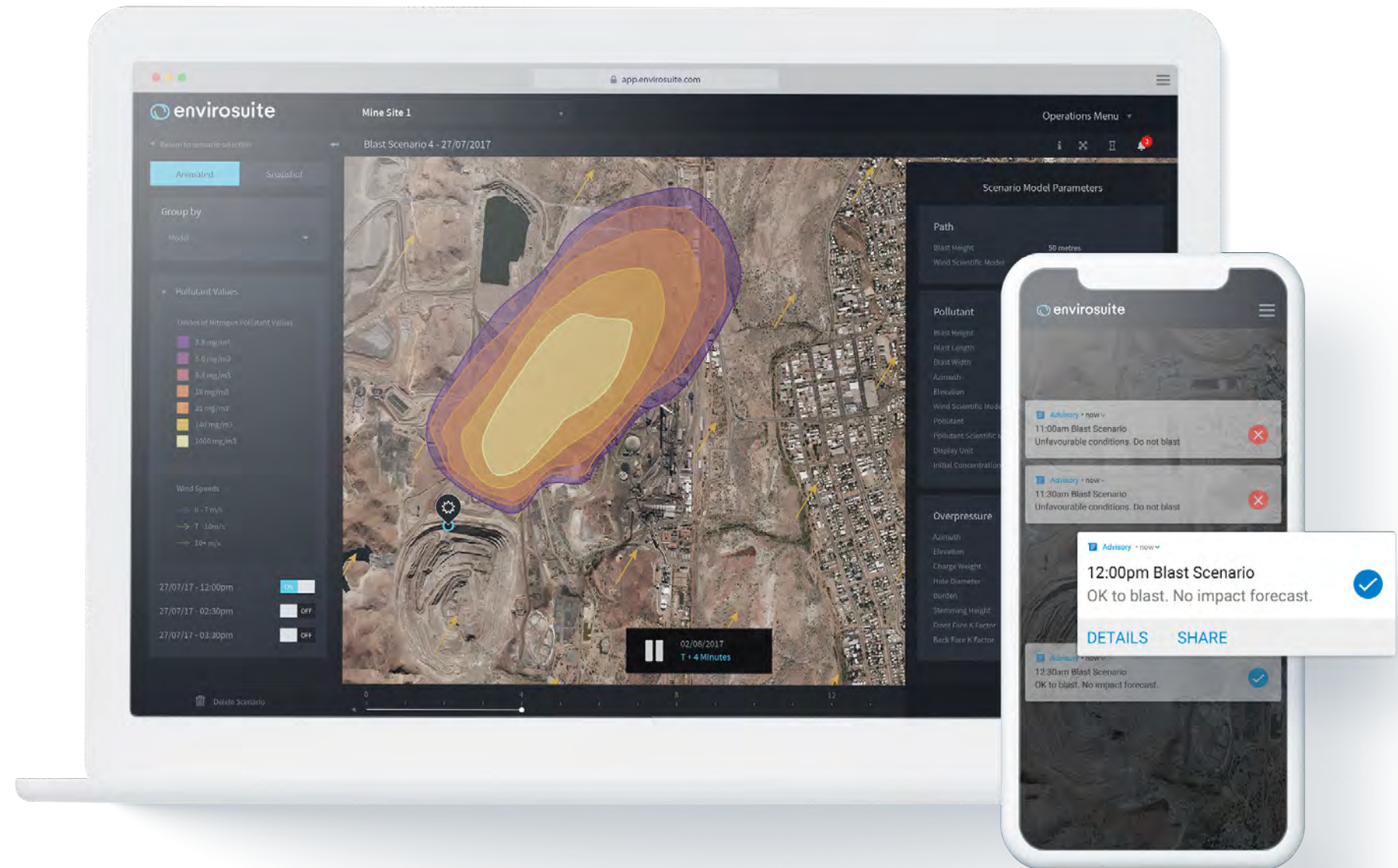
We'll give you the tools to plan ahead and easily predict your fume and overpressure impacts — so the communities surrounding you won't feel the blast too.

Complete operations control.

Ensure that operations don't shut down due to fume or overpressure when they don't have to.

Our algorithms model the relationship between environment, your site's operations, and your upcoming blasts, so you'll know exactly how to manage your site when it comes blasting time.

You'll know when to tell your operator to drive miles back to base or beyond the fence.

Source Identification

Software that drives action now.

Technology that allows you to act on issues immediately and sometimes even prevent them from happening.

Advisory · now

Source Identified

S2 identified as probable source of higher emissions.

86% confidence | Severity increasing

SHARE | GENERATE REPORT

Next-level source identification.

Be confident of where the fault lies.

Our proprietary source identification algorithm combines back-tracking, arcs of influence, emission source information and machine learning to pinpoint problem emission sources more accurately and faster than ever before.

Real-time identification.

Act on issues fast.

We continuously collect high definition data, allowing almost-instantaneous back-tracking for more accurate and quicker source identification so you can take action immediately.
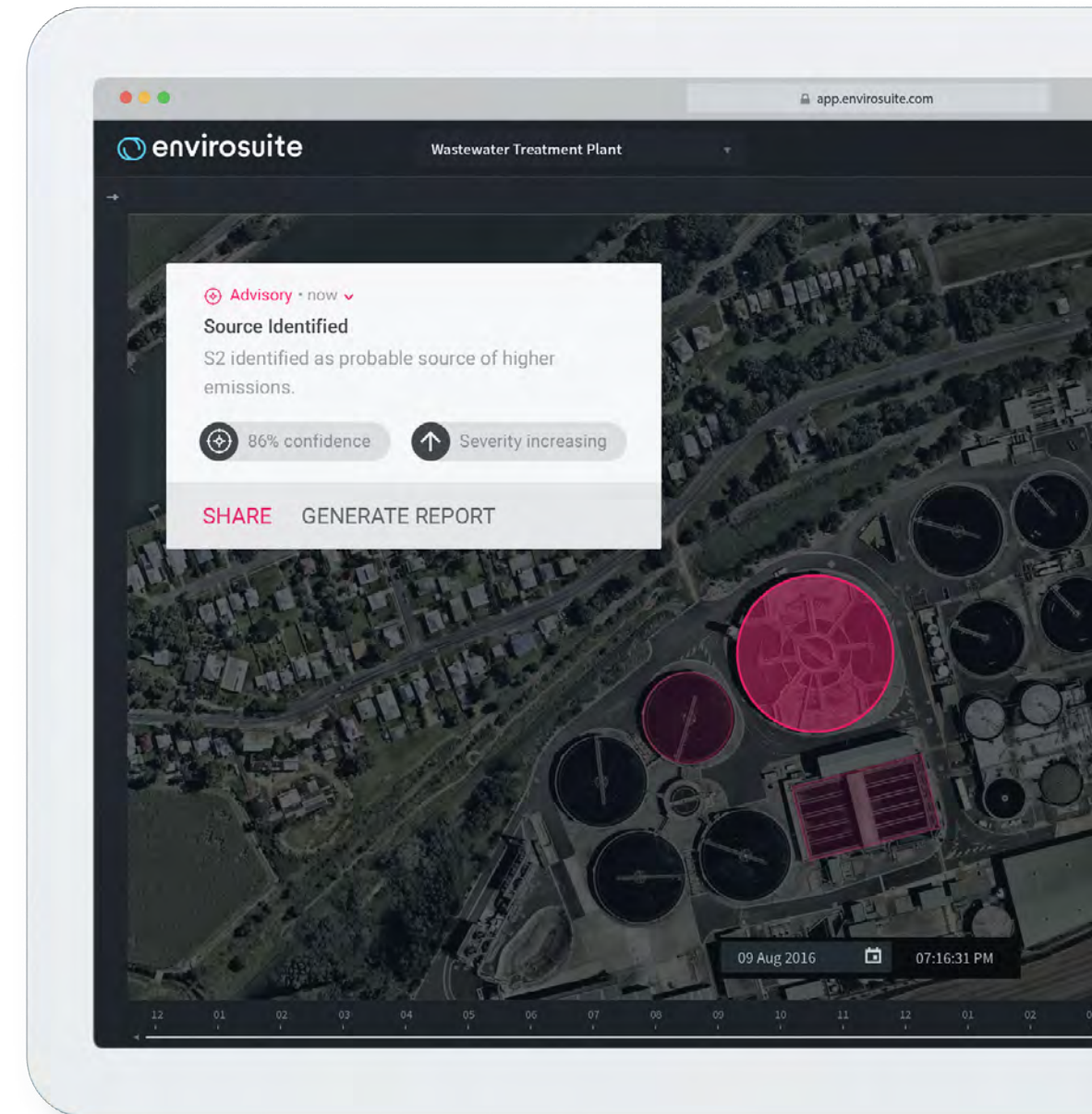
Operations meet environment.

Manage your assets and keep your people accountable.

Our algorithms model the relationship between environmental factors and operations, helping you manage people, processes, and equipment across your operation.

Instant community engagement.

Engage the community without delay.

Our monitoring, data collection, and historical matching happen in real time, so you can act on complaints quicker than ever before, cutting off small problems before they become big ones and getting straight to the heart of an issue.
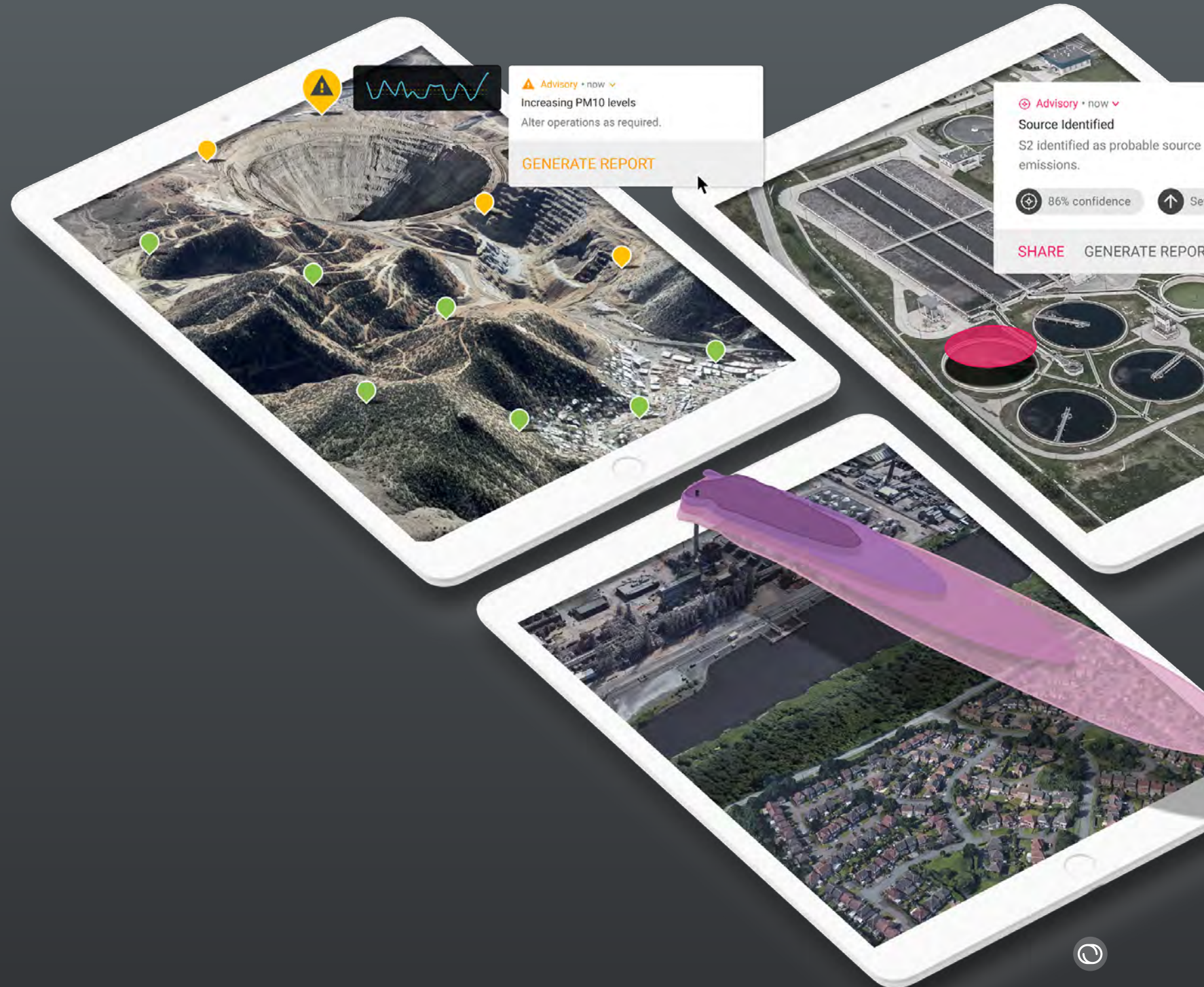
Environmental Intelligence

Introducing the future of environmental management.

Technology that offers the most comprehensive and intuitive real-time environmental monitoring, investigation, prediction, and control software in the world.

Powered by advanced algorithms.

Our proprietary algorithms, built on more than 30 years of environmental consulting experience, enable us to identify and interpret the data that really makes a difference — reducing investigation times and making action easy.

Proactive guidance.

We combine high-definition site-specific forecasts that factor local geography and historical data with operational insights to get ahead of issues before they happen.

Lightning-fast response.

We continuously collect high-definition weather data so you'll have almost-instantaneous analysis and issue identification — allowing you to respond to issues in just seconds.
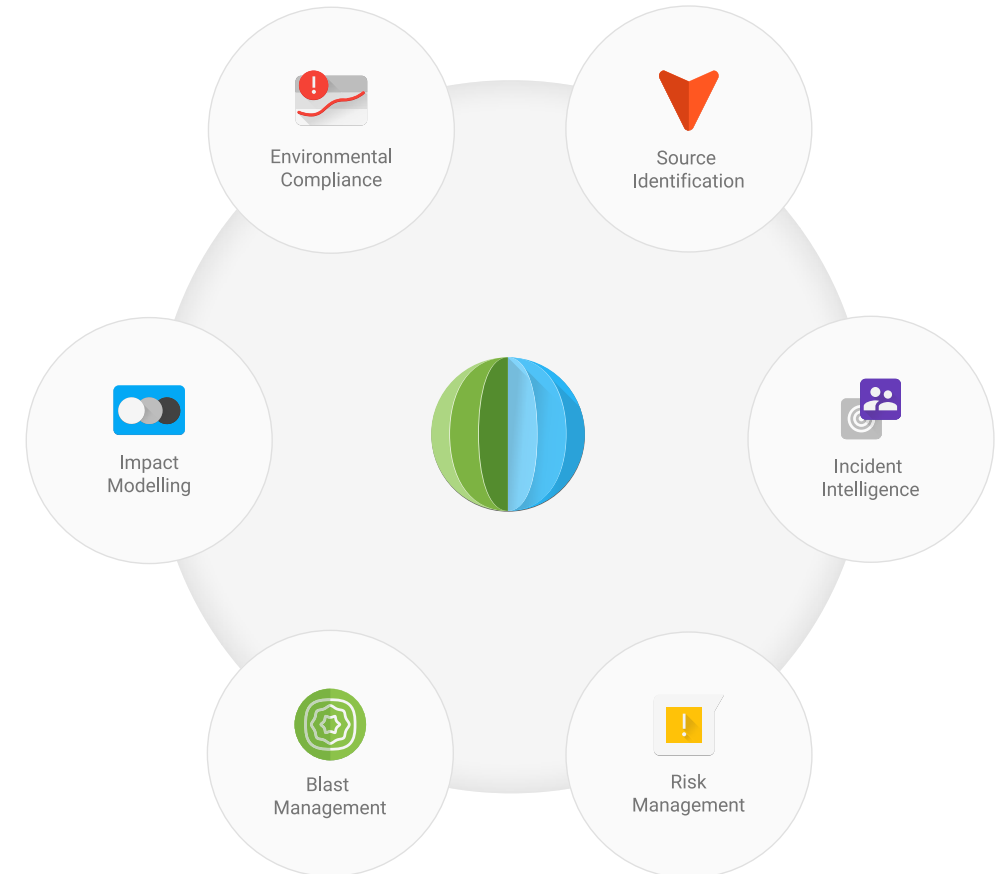
Built beautiful.

We've obsessed over building the most intuitive user interface, with a simple traffic light system and analytics, letting you see issues clearly, instantly.

Complete & configurable.

We're the next step in environmental management best practice, giving a complete view of the past, present, and future, with a solution that integrates monitoring, modelling, alerts, and incident management, while enabling instant access to historical archived data.

You're in good company.

We're the environmental management system of choice of world-leading mining companies like BHP; Anglo American; the largest water utility in Europe, Thames Water; and the two biggest air quality regions in the US, the San Francisco Bay Area and South Coast (Los Angeles).

Environmental
Compliance

Source
Identification

Impact
Modelling

Incident
Intelligence

Blast
Management

Risk
Management

Pro-actively managing dust and stakeholder expectations at a Port in Western Australia

Client: Port Authority in Western Australia

Value ROI: Efficient environmental reporting with a social licence to operate

Duration: 2+ years

Environmental Compliance

Incident Intelligence

Situation:

Due to the high risk of dust impacts, a port authority in Western Australia has an environmental licence with strict compliance conditions around dust management. To meet these licence requirements, staff at the port must complete routine internal reports, as well as external reports that are submitted to the regulator. The port also needs to demonstrate transparency with the surrounding community by maintaining a 'complaints register'.

The operations team was spending a significant amount of time and effort on manually collecting and reporting the data. They looked for an effective and efficient system to assist with this process.

Task:

The Port Authority had a number of dust monitors operating around the site and were also planning to add more to meet licence requirements. Operations staff were at that time were manually taking data from these monitors to compile that data into reports.

Action:

Envirosuite 'Environmental Compliance; and 'Incident Intelligence' solutions have been implemented at the site. The Environmental

Compliance solution provides the operations team with up-to-the-minute data on operational status and performance by visualising recorded dust levels in real time. The system also provides automated reporting to the operations team to assist with regulatory reporting requirements.

The Incident Intelligence solution generates a backwards trajectory model for a past time period. Using on-site weather data, this solution generates a model to help identify the source of any complaints registered in the community immediately. This data is able to be used for investigation as well as historical and reporting purposes.

Result:

The port's operations team is now empowered with easy access to real-time dust monitoring data. This access allows them to instantly identify areas of high risk that might cause licence conditions to be breached. The data is also archived and readily retrievable if needed as evidence to satisfy regulatory concerns about compliance.

If there are any complaints from the community, the port authority is now able to base feedback to the community on a backwards trajectory model for the relevant time period. This allows the authority to instantly form a view about its responsibility for reported dust impacts.

Determining likely source of air quality issues in the San Francisco Bay Area

Client: Bay Area Air Quality Management District (BAAQMD)

Value ROI: Greatly reducing investigation times for air quality issues affecting the community

Duration: 1+ years

Incident Intelligence

Situation:

The Bay Area Air Quality Management District (BAAQMD) is a public agency that regulates the stationary sources of air pollution in the nine counties of California's San Francisco Bay Area, which is home to 8 million people. BAAQMD conducts ambient air monitoring, both through a fixed-station network and special, short-term studies.

BAAQMD routinely receives from members of the community complaints about odors that can come a large variety of emission sources. It is often difficult to determine the cause of these issues.

The San Francisco Bay Area is home to many industrial facilities whose operations and impacts can be adversely affected by weather conditions.

Task:

BAAQMD's number one priority is to protect community health through effective air pollution regulation. It is required to act on complaints received from the community to determine the responsible source and take appropriate action. By the time a complaint is received and acted on, the cause may no longer be active. Detailed investigation of complaints can be time-consuming and inconclusive.

Action:

BAAQMD signed on to Envirosuite's Incident Intelligence module to improve the management of air quality-related complaints. BAAQMD is now empowered by Envirosuite's fully auditable workflow management system that enables logged community complaints to be instantly backtracked to their likely source.

The Incident Intelligence backtracking solution is based on real-time fine-scale meteorological modelling. This allows staff to instantly plot and visualise the trajectory of a complaint, identifying its likely cause.

The community portal of Envirosuite's Incident Intelligence module also provides a platform for ongoing communication between the community and BAAQMD on each item of concern.

Result:

Envirosuite's Incident Intelligence solution is helping BAAQMD improve the management of investigations by greatly reducing the time taken to deliver critical information on complaints or incidents across the San Francisco Bay Area which is now home to approximately 8 million people.

Boosting operational efficiency while minimising impact on community

Situation:

The mine has experienced periodic stoppages due to air quality exceedances. A community on its boundary coupled with a desire to further expand its operations also poses a significant challenge. It is undertaking extensive air quality monitoring and one monitor has consistently showed an exceedance of the annual average particulate matter PM limit. Additionally, routine blasting is required to open new sections of the open cut.

Task:

The mine faces the daunting challenge of minimising environmental impact while keeping to schedule without interruptions. Strict regulatory requirements also state that the nearby community must not be impacted by air quality exceedances from activities associated with production, including haul road trucks and blasting.

Action:

Envirosuite assessed the mine's conditions and set up a proactive dust management system. This informs mine operators if dust events likely to cause PM exceedances are predicted from particular operational activities. The system also can produce blast models that enable mining operators to anticipate environmental impacts from blasting prior to planned events and adjust the blast plan appropriately if needed.

Result:

The coal mine can now assess potential environmental impacts and evaluate risks in advance. The operators can minimise community and environmental impacts by scheduling operations at the right time. They can now limit their operation's impact on the community by maintaining a balance between operational efficiency and regulatory compliance. Real-time monitoring and trigger action plans linked to specific thresholds have been established with the aim to ensure that the limits are never exceeded.

Client: A large South American coal mine

Value ROI: Boosting operational efficiency while minimising risk of the community incidents

Duration: 2+ years

Environmental Intelligence

You're in good company

For more information please contact:
Email: info@envirosuite.com

www.envirosuite.com