



evök™

2025 | Impact Report

# Contents

<b>01</b>	<b>Introduction</b>		
<b>02</b>	<b>A Note from Our Founding Partner</b>		
<b>03</b>	<b>Our Story</b>		
<b>04</b>	<b>Our Investment Focus</b>		
<b>05</b>	<b>Our Methodology</b>		
<b>06</b>	<b>Our Footprint</b>		
<b>08</b>	<b>Our People</b>		
<b>09</b>	<b>Summary of Results</b>		
<b>12</b>	<b>Our Portfolio</b>		
	<b>Fund I</b>	<b>Fund II</b>	
<b>13</b>	ARIX Technologies	<b>22</b>	DISA Technologies
<b>14</b>	Ekona Power	<b>23</b>	Ebb
<b>15</b>	Expeto Wireless	<b>24</b>	e-Zinc
<b>16</b>	Kelvin Inc.	<b>25</b>	Karbonetiq
<b>17</b>	Quidnet Energy	<b>26</b>	Koloma
<b>18</b>	Sanctuary AI	<b>27</b>	MineSense
<b>19</b>	SensorUp	<b>28</b>	Planetary Technologies
<b>20</b>	Syzygy Plasmonics	<b>29</b>	Rodatherm
<b>21</b>	VEERUM	<b>30</b>	Summit Nanotech
		<b>31</b>	Zero Industrial
		<b>32</b>	ZwitterCo
<b>33</b>	<b>Case Studies</b>		
<b>33</b>	e-Zinc		
<b>35</b>	Syzygy Plasmonics		
<b>37</b>	MineSense		
<b>39</b>	<b>Conclusion</b>		



# Introduction

Since 2016, our core mission at Evok Innovations (Evok) has been to mitigate climate change by investing in and supporting exceptional entrepreneurs with bold visions and innovative technologies. Over the past 10 years, we have remained unwavering in this goal and have become more determined than ever to empower the next generation of entrepreneurs to develop transformative technologies capable of reshaping heavy industry and delivering outsized outcomes.

This report not only enables us to measure the impact of the entrepreneurs we invest in, but also strengthens our portfolio companies through their participation in our annual impact survey, reinforcing the high standards we share and enhancing their strategic clarity, operational discipline, and external credibility. In the pages that follow, we detail our impact measurement framework and the key outcomes achieved across our portfolio over the past year.

Impact reporting is undergoing a meaningful shift globally, particularly for climate and industrial transition investors, from narrative-driven disclosure to more standardized and decision-useful measurement driven by regulation, investor demand, and market maturity. We are proud that Evok's reporting framework, originally developed in 2021, has helped shape a standardized approach now adopted across much of the North American venture community to strengthen impact reporting for early-stage startups.

At Evok, we will continue advancing transparency and best practices in impact reporting across the climate investment ecosystem. We thank our investors, portfolio companies, and the broader community for your continued support. Your collaboration and guidance remain invaluable as we refine our reporting practices and continue advancing measurable climate impact in the years ahead.

—  
**Our mission is to empower the next generation of entrepreneurs to lead the charge in developing transformative technologies that redefine industries and drive meaningful change.**



## A Note from Our Founding Partner

As we reflect on the past year, it's clear that the global political and economic landscape remains dynamic. Shifting national priorities, evolving trade relationships, and renewed focus on domestic industrial capacity are reshaping energy markets and capital flows. While the headlines may change, the structural forces driving industrial reinvention are accelerating rather than receding, reshaping how energy, materials, and infrastructure are produced and deployed.

Across North America and around the world, governments and industry alike are responding to converging pressures. There is renewed emphasis on energy security, critical mineral independence, and resilient supply chains as nations seek to bolster economic stability and reduce strategic vulnerabilities. In parallel, capital markets have grown more selective, rewarding disciplined execution and technologies with clear pathways to commercialization and tangible operational impact. Overlaying these dynamics, the impacts of climate change are becoming more frequent and pronounced, with continued increases in extreme weather events and global temperatures reinforcing the urgency of industrial decarbonization and infrastructure resilience.

Against this backdrop, our commitment at Evok remains steadfast. Since our founding, we have focused on hard technologies that enable heavy industry to operate more efficiently, securely, and sustainably. Today, there is strong alignment between our sustainability objectives and the growing imperative for greater energy and critical mineral independence. The same innovations that reduce emissions, including advanced mineral processing, low-carbon fuels, and more efficient industrial systems, also strengthen domestic supply chains and economic competitiveness.

We believe this convergence creates a durable investment opportunity. Rather than relying solely on policy tailwinds, we invest in technologies that are cost-competitive, operationally robust, and essential to the future of industry. Our portfolio companies are modernizing mining and critical mineral supply chains, deploying scalable and secure energy systems, optimizing industrial processes, and building infrastructure designed for climate adaptation and long-term stability. In doing so, they are addressing both the climate imperative and the strategic realities shaping today's industrial economy.

As we look ahead, we remain confident that industrial innovation will define the next decade. The road forward will require pragmatism, partnership, and persistence. The opportunity before us is significant, and so is the responsibility. We remain focused on backing the entrepreneurs and technologies that will define the next era of industrial progress, and we value the trust of those who are building this future with us.

Marty Reed



# Our Story

Evok is a climate-focused venture capital firm investing in hard tech solutions for heavy industry. We partner with exceptional entrepreneurs to scale novel technologies across our focus areas of energy, critical minerals, industrial optimization, and adaptation & resilience.

Founded in 2016, Evok was built on the thesis of collaborating with industrial partners to scale transformative energy technologies across North America. By leveraging our experience as company builders, alongside a limited partner group that includes major financial institutions and industrial leaders, we deliver value beyond capital. With the launch of Fund II in 2022, we expanded our mandate and welcomed strategic partners from new industrial verticals, strengthening our ability to accelerate the success of our portfolio companies.

Since inception, Evok has backed 27 companies across 72 investment rounds and has realized several successful exits. We are now finalizing the deployment of Fund II, a \$284M USD fund focused on Series A+ companies advancing industrial decarbonization and resilience. As we look ahead, we are preparing to launch Fund III in 2026, a \$400M USD vehicle focused on delivering the same disciplined approach to investing in hard technologies that enable a more efficient, sustainable, and resilient industrial economy.

## OUR PORTFOLIO COMPANIES

### BRITISH COLUMBIA

DarkVision (exit)  
Ekona Power  
Expeto Wireless  
Rotoliptic Technologies (exit)  
Sanctuary AI  
MineSense

### ALBERTA

Osperity (exit)  
Rodatherm  
SensorUp  
Summit Nanotech  
VEERUM

### ONTARIO

e-Zinc  
  
NOVA SCOTIA  
Planetary Technologies

### WYOMING

DISA Technologies

### COLORADO

Koloma

### MASSACHUSETTS

ZwitterCo

### NORTH CAROLINA

Zero Industrial

### TEXAS

ARIX Technologies  
Quidnet Energy  
Syzygy Plasmonics

### CALIFORNIA

Ebb  
Karbonetiq  
Kelvin Inc.  
Mosaic Materials (exit)  
Twelve (exit)

## OUR OFFICES

- Vancouver
- San Francisco
- Calgary
- Toronto
- Washington DC



# Our Investment Focus

Evok partners with industrial majors and exceptional entrepreneurs to improve the environmental and economic performance of energy systems, mineral supply chains, and core industrial operations. Addressing the challenges of hard tech requires a deeply technical, thesis-driven approach, informed by real-world operating experience and a disciplined understanding of how complex industrial systems scale.

We are actively deploying capital across the U.S. and Canada, investing in companies driving industrial innovation that is both economically and environmentally sound. Our focus spans the broad energy value chain; the extraction, processing, and lifecycle management of critical minerals; industrial optimization across heat, materials, and process efficiency; and adaptation and resilience solutions that enable infrastructure and industry to operate reliably in a more volatile climate.



## Energy

- Low carbon fuels and hydrogen
- Baseload generation
- Long duration energy storage
- Behind-the-meter electrical infrastructure



## Critical Minerals

- Mineral extraction optimization
- Novel refining technologies
- Circularity solutions
- Efficiency and processes
- Advanced exploration tech



## Industrial Optimization

- Industrial heat and thermal management
- Molecular separation
- Advanced industrial hardware and software
- Low-carbon chemicals
- Industrial water treatment



## Adaptation & Resilience

- Infrastructure resilience
- Disaster prediction and mitigation
- CCUS

# Our Methodology

Throughout the year, we monitor developments in the impact reporting landscape to ensure our internal practices and metrics continue to evolve alongside industry best practices. Recently, we have seen a shift toward more standardized and decision-useful measurement, driven by regulation, investor demand, and the growing maturity of the climate investment ecosystem.

Against this backdrop, Evok's reporting framework, originally developed in 2021 to strengthen impact reporting for early-stage startups, helped shape a standardized approach now adopted across much of the North American venture community. This framework continues to serve as the foundation of our reporting practices today, while evolving alongside broader developments in the impact measurement landscape.

On an annual basis, Evok collects data from our portfolio companies through a structured impact survey capturing key indicators and outcomes. The information gathered is reviewed by the Evok team and used for this Impact Report, reporting to our limited partners, and the development of value-add resources for our portfolio companies. At the end of the reporting period, the Evok team reviews aggregated portfolio data to identify trends, highlight measurable outcomes, and support knowledge sharing across our ventures.

## Our Survey

Evok's impact survey was originally developed to establish a consistent framework for measuring the outcomes and practices of early-stage climate technology companies across a range of impact, demographic, and governance indicators. In the absence of widely adopted reporting standards at the time, this bespoke survey provided a practical structure for capturing comparable impact data across our portfolio.

In more recent years, Evok has worked alongside other leading investors to advance a more unified reporting approach, incorporating many of the foundational elements originally developed within Evok's framework. Today, this shared structure continues to serve as the foundation of our survey, with ongoing refinements made as reporting expectations, portfolio maturity, and measurement methodologies evolve.



### Impact

Evok collects information to understand both the operational footprint of our portfolio companies and the environmental outcomes enabled by the technologies they are developing. Our survey captures data across several key areas, including United Nations Sustainable Development Goal (SDG) alignment, operational metrics such as energy, water, waste, greenhouse gas emissions, and biodiversity, as well as supply chain practices and the projected impact of the company's technology as it scales.



### Demographics

For collecting demographic information, Evok continues to utilize the framework developed by the Business Development Bank of Canada (BDC), which is widely regarded as a benchmark within the Canadian venture capital community. This data helps us better understand team composition across the portfolio and supports our engagement with companies as they build and scale their organizations.



### Governance

Through our board participation, Evok promotes strong governance practices and works with portfolio companies to establish a solid foundation as they progress through future stages of growth. Our survey collects information on governance policies currently in place and allows us to provide recommendations and resources that support the continued strengthening of governance practices across the portfolio.

# Our Footprint

Due to the nature of venture capital, the largest contributor to Evok’s operational footprint is travel-related emissions. Evok has a 13-person team working across two U.S. states and three Canadian provinces. This geographically dispersed structure allows Evok to remain actively engaged across multiple North American climate technology ecosystems while limiting unnecessary travel. As a team, we continue to exercise discipline around travel and work to minimize avoidable emissions.

## Travel to the Office



5 employees are fully remote and do not commute to an office



8 employees operate on a hybrid schedule, working approximately 60% from the office and 40% from home

## Commuting Breakdown



1 employee drives an electric vehicle



4 employees commute via bus and/or walking



3 employees drive internal combustion engine vehicles, and the associated emissions are offset with durable carbon removals

## CO<sub>2</sub> Emissions

When travel is unavoidable, the Evok team prioritizes lower-carbon transportation options, including electric vehicles, public transit, and direct flights. All emissions associated with the fund’s activities, including both business travel and employee commuting, are tracked throughout the year and offset through the purchase of high-quality carbon removal credits.

## CO<sub>2</sub> OFFSET POLICY

To offset emissions from operations, Evok purchases high-quality carbon credits. Evok adheres to best practices for carbon credit procurement, as defined in our carbon credit policy. To qualify for purchase, a carbon credit must meet the following requirements:

- The carbon removal technology must be an engineered solution capable of accurately quantifying CO<sub>2</sub> removed.
- The CO<sub>2</sub> must be sequestered for a minimum of 100 years.
- Credits must be certified and registered with a reputable carbon registry.
- Credits must be retired within a reasonable time frame.

**For this year’s offsets, we have pre-purchased 26 tonnes of durable carbon removals from our own CDR portfolio companies. These credits are scheduled to be retired during the 2026 calendar year.**

## WATER USAGE

Given the industrial focus of Evok’s portfolio companies, water is often a critical metric when assessing both operational performance and technology impact. With this in mind, the Evok team also reviews its own water usage to maintain the same level of accountability expected from our ventures. However, due to the financial services nature of Evok’s operations, water usage at our headquarters remains negligible.

## ENERGY USAGE

Evok’s headquarters is based in British Columbia, Canada, where the electricity mix is predominantly low carbon: 89% hydroelectric, 6% biomass, 3% wind, 2.4% natural gas, 0.1% petroleum, and <0.1% solar.<sup>1</sup>

In 2025, Evok operated from a Vancouver office space of approximately 1,700 square feet, resulting in minimal energy consumption and correspondingly low associated emissions given the region’s electricity mix.

<sup>1</sup> Canadian Energy Regulator, Provincial and Territorial Energy Profiles

### Emissions from Travel

In recent years, Evok’s air travel emissions have increased modestly, as in-person conferences, board meetings, and portfolio engagements remain an important part of supporting early-stage companies. At the same time, emissions from ground transportation have declined slightly, largely driven by the increasing adoption of electrified transport.

While we expect some increase in travel-related emissions as our team and portfolio continue to grow, we remain committed to balancing the engagement demands of our industry with a disciplined approach to minimizing our operational footprint.

	2025	2024	2023
<b>NUMBER OF FLIGHTS</b>	146 ↓	158 ↑	135
<b>MILES FLOWN</b>	183,808 ↑	142,978 ↑	137,774
<b>NUMBER OF GROUND TRIPS</b>	298 ↓	319 ↑	293
<b>ICE MILES DRIVEN<sup>3</sup></b>	6,655 ↓	7,075 ↓	8,019
<b>TONNES OF CO<sub>2</sub></b>			
	22.61 ↑	20.93 ↑	17.18
	2.53 ↓	2.77 ↓	3.21
<b>TOTAL CO<sub>2</sub> EMISSIONS</b>	25.14 ↑	23.70 ↑	20.39

1 ICAO flight emissions tool used to calculate emissions  
 2 Passenger vehicle emissions from the EPA  
 3 ICE: Internal Combustion Engine

# Our People

## Building Diverse, High-Impact Teams

Operating in complex industrial markets requires a broad range of perspectives, skill sets, and experiences. At Evok, we believe strong teams combine diverse backgrounds with complementary expertise. By fostering a collaborative environment where varied perspectives contribute to decision-making, we aim to support better outcomes for both our fund and the entrepreneurs we partner with.

## Governance

Fostering a strong company culture begins with a foundation of sound governance. Evok's policies establish clear expectations for team members while outlining the standards they can expect from the organization. Relevant governance policies are also made available to portfolio companies to help promote best practices across the portfolio. At the fund level, Evok adheres to governance standards consistent with the Institutional Limited Partners Association (ILPA), working closely with the fund's Limited Partner Advisory Committee (LPAC).

## Human Resources

To ensure Evok continues to evolve its human resources (HR) practices, the fund engages a third-party HR firm that works closely with the team throughout the year, facilitating workshops and conducting 360-degree employee reviews. The firm also completes an annual review of Evok's HR policies and practices to ensure they remain aligned with evolving regulations and industry standards. Employees are advised of updates and are required to acknowledge employee-facing policies on an annual basis.

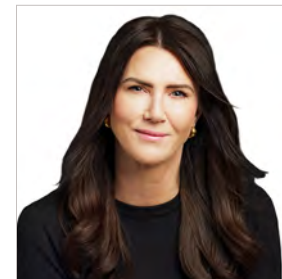
## Compensation Structure

Evok's strategy is to attract and retain industry-leading talent that advances the fund and its operations. To support this objective, Evok offers employees a well-rounded compensation package that includes:

- Highly competitive salaries
- Bonus pool open to all employees
- Carry pool open to all employees
- Unlimited vacation days
- Continuing education support
- Extended health benefits with flexible spending accounts



**Mike Biddle**  
Partner  
San Francisco, CA



**Michelle Chambers**  
Chief Financial Officer  
Vancouver, BC



**Naynika Chaubey**  
Partner  
Washington, D.C.



**Val Chiykowski**  
Senior Associate  
Vancouver, BC



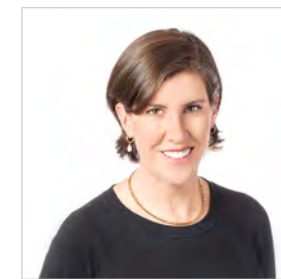
**Don Duval**  
Principal  
Sudbury, ON



**Emma Gaiger**  
Manager of Operations  
Vancouver, BC



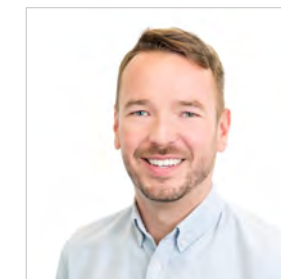
**Scott Gingrich**  
Analyst  
Vancouver, BC



**Jane Kearns**  
Partner  
Toronto, ON



**Natalie LeSage**  
Senior Analyst  
Vancouver, BC



**Darren Love**  
Senior Associate  
Vancouver, BC



**Erin Madro**  
Principal  
Calgary, AB



**Marty Reed**  
Partner  
Vancouver, BC



**Bill Shmygol**  
Associate  
Vancouver, BC

# Summary of Results

## Survey Results

The following section highlights data gathered from Evok’s portfolio companies for the 2025 Impact Survey. The information presented has been aggregated to the portfolio level in order to anonymize individual company responses. These results represent 20 companies across both Evok Fund I and Fund II, with a 95% survey response rate.

Within Evok’s portfolio, companies range from early-stage ventures with small teams and pre-revenue business models to growth-stage companies with several hundred employees and established commercial operations. The Evok team continues to iterate on the information collected from portfolio companies to ensure that the metrics we request remain meaningful, measurable, and practical for companies operating at different stages of development.

## Survey Highlights

**95%**

RESPONSE RATE

**9:11**

RATIO OF EARLY STAGE: GROWTH STAGE COMPANIES

**75%**

VENTURES THAT USE EVOK AS THEIR PRIMARY REPORTING STRUCTURE

**1000+**

FULL TIME JOBS CREATED BY EVOK PORTFOLIO COMPANIES, WITH NEARLY 300 ADDED IN 2025 ALONE

**60%**

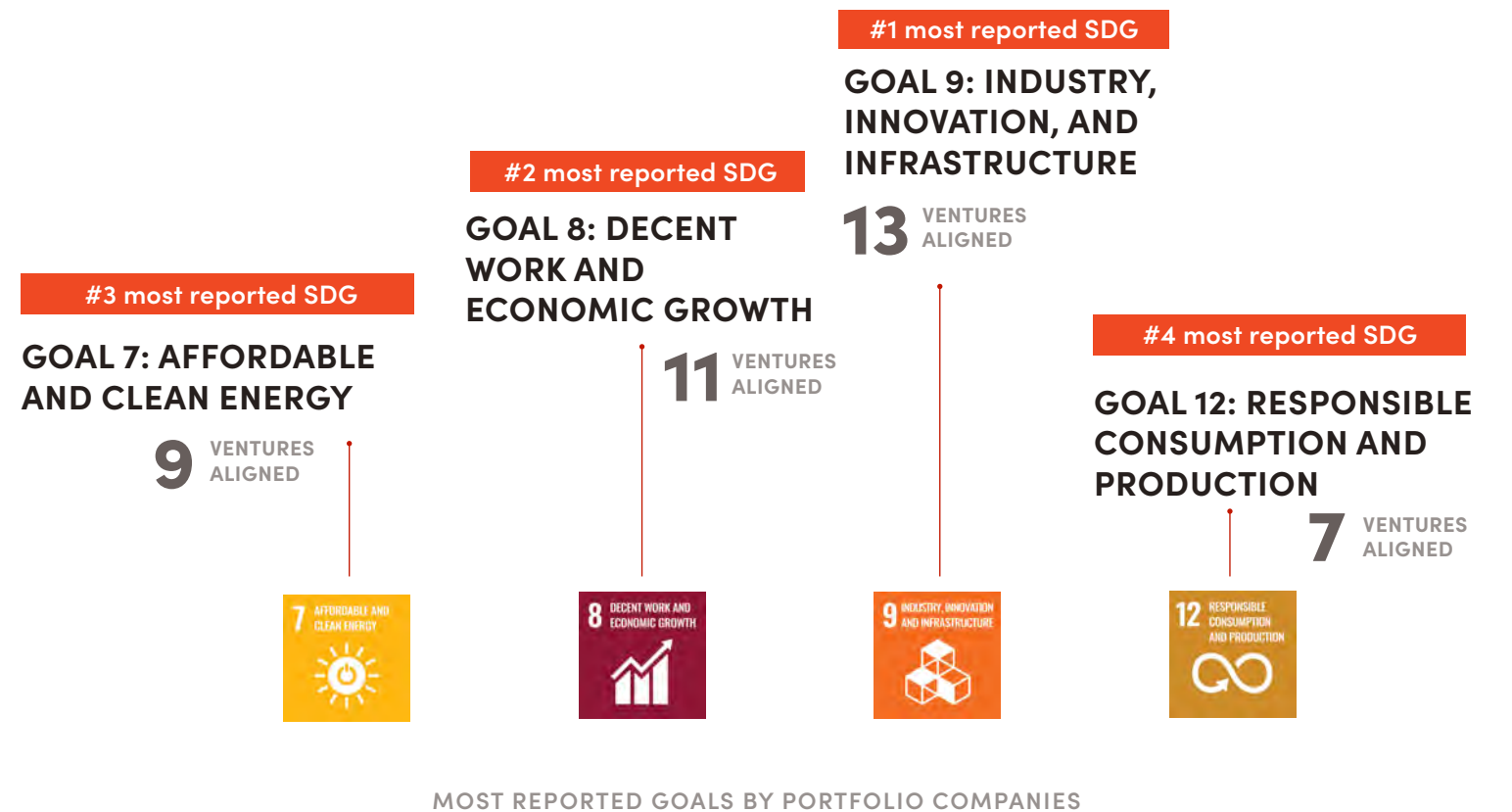
VENTURES WITH AN INDEPENDENT BOARD REP

**73%**

HARD-TECH VENTURES WITH ZERO WORKPLACE INJURIES IN 2025

## United Nations Sustainable Development Goals (UN SDGs)

The UN SDGs continue to serve as a widely recognized framework within the climate technology sector for communicating impact. Evok’s portfolio companies have identified the goals that best align with the technologies they are developing and the industries they serve, helping contextualize how these innovations relate to broader global sustainability priorities.



UN SUSTAINABLE DEVELOPMENT GOALS

**EVOK PORTFOLIO COMPANIES ALIGN WITH 62 SDGS**

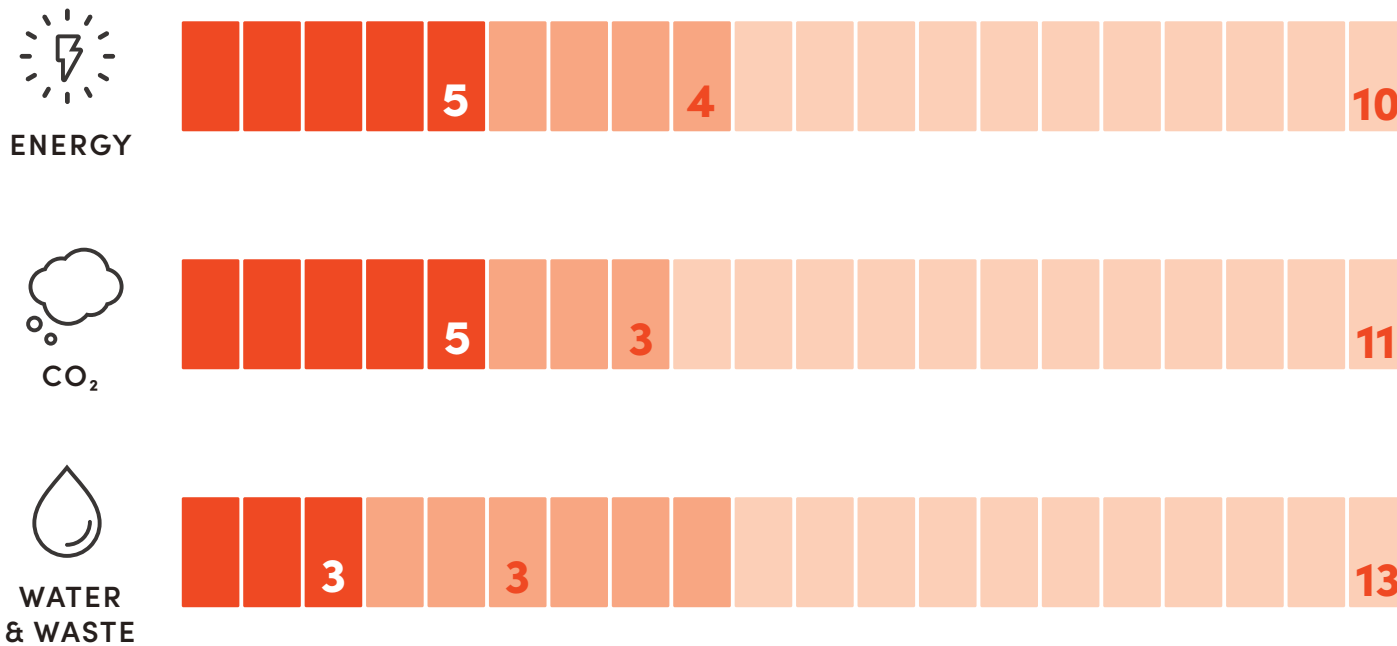
### Impact From Operations

Many of Evok’s portfolio companies are still in the early stages of development, with operational footprints that remain relatively small. As a result, monitoring of environmental metrics such as energy use, greenhouse gas emissions, and water and waste management varies across the portfolio. As the ventures scale, our goal is to work with them to implement monitoring plans and develop reporting practices aligned with industry best practices.

#### OPERATING METRICS

**20** PORTFOLIO COMPANIES

- Currently monitors
- Have a plan to monitor
- No plans to monitor



Metrics reflect responses from 19 of 20 portfolio companies, based on participation in the 2025 impact survey.

### Supply Chain

Supply chain resilience remains an important consideration for many companies operating in the climate technology sector. While many of our portfolio companies have not yet formally reviewed potential supply chain risks given their early stage, the Evok team works with founders to encourage early awareness and planning as companies scale their operations and global supply chains.

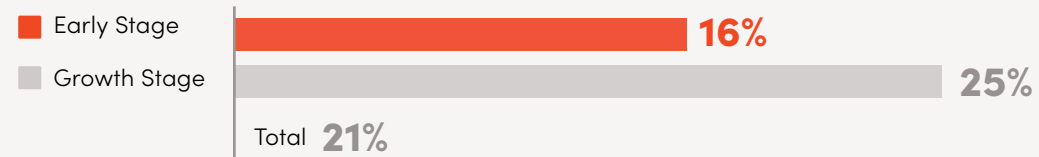
#### OVERSIGHT ON SUPPLY CHAIN RISK

	REVIEWED	EXPOSED	STRATEGY IF EXPOSED	NOT REVIEWED
CLIMATE RISK	5	1	1	14
HUMAN RIGHTS RISK	6	1	1	11
ENVIRONMENTAL RISK	5	0	0	11
SCARCE RESOURCE RISK	6	1	1	13

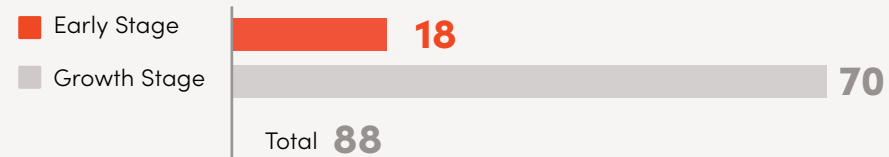
### HR Statistics

Across our portfolio, we track employee turnover, promotions, new hires, and workforce growth as part of our ongoing engagement with portfolio companies. Employee turnover averaged 21% across the portfolio, reflecting the natural evolution of teams within early-stage and high-growth companies. Despite continued volatility across the broader startup ecosystem, many of our ventures continue to grow their teams and invest in building the talent required to scale their technologies. In 2025, Evok’s portfolio companies employed over 1,000 people globally and created nearly 300 new full-time jobs.

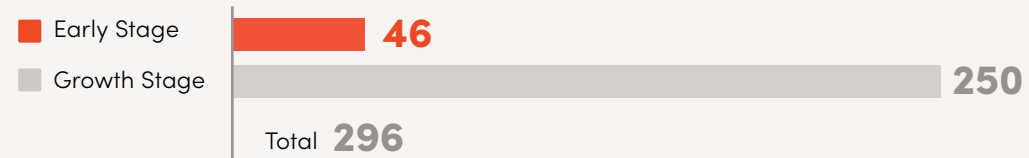
#### ANNUAL EMPLOYEE TURNOVER



#### NUMBER OF EMPLOYEES PROMOTED



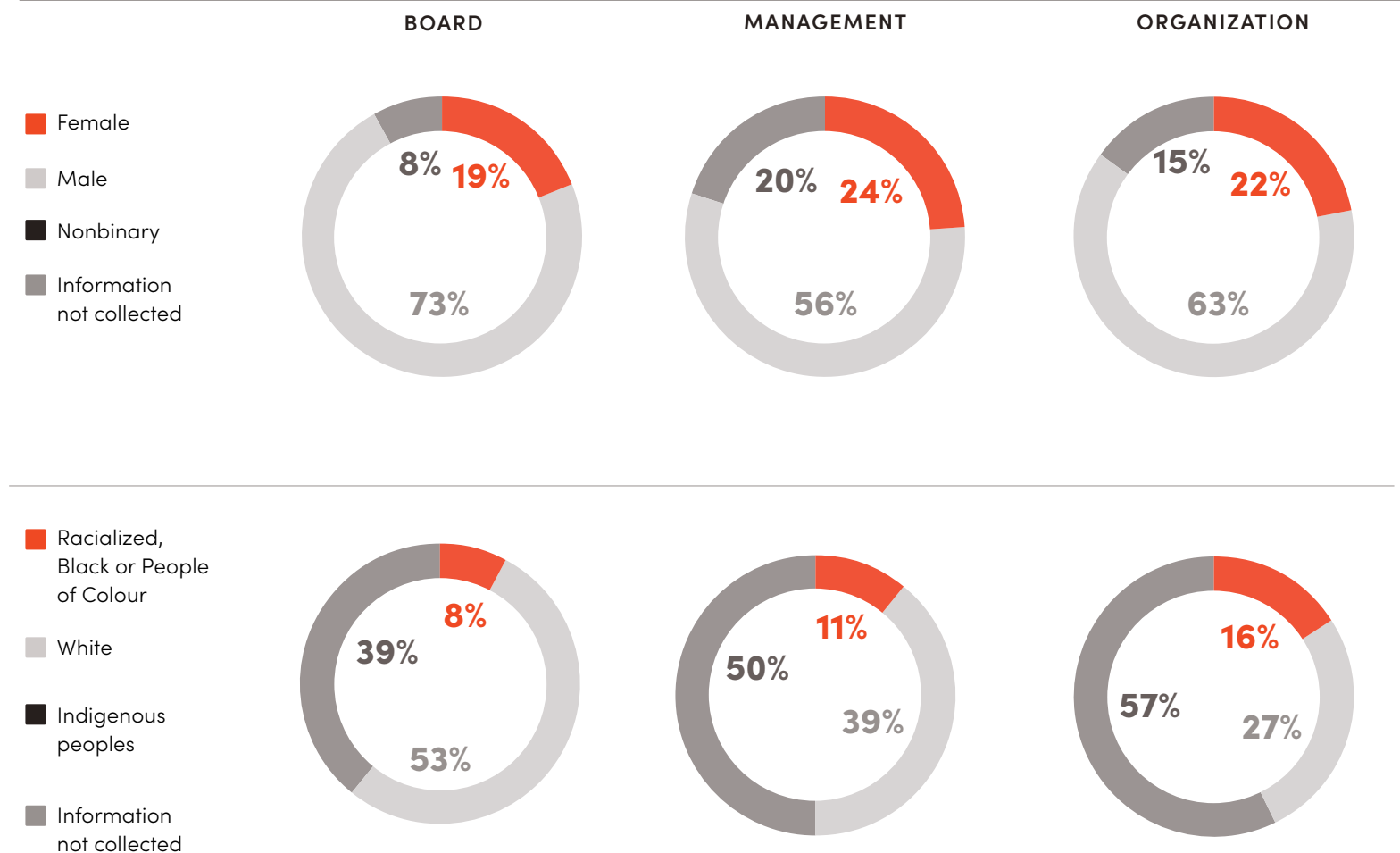
#### NUMBER OF NEW HIRES



### Measuring Demographic Data

To measure demographic data within our portfolio companies, Evok continues to utilize the best-in-class framework developed by BDC.<sup>1</sup> Through our board participation and engagement with portfolio companies, Evok encourages best practices in hiring and team development. We believe that assembling teams with a wide range of perspectives, backgrounds, and experiences strengthens decision-making, supports innovation, and builds the resilience required to scale transformative technologies.

#### OUR PORTFOLIO DEMOGRAPHIC OVERVIEW



<sup>1</sup> BDC demographic data reporting template

# Our Portfolio

The following section highlights each company in Evok's portfolio, providing a brief overview of the business, the impact of its technology, and the UN SDGs it supports. The information presented reflects the portfolio as of December 2025 and does not include investments made by Evok after this date.

## Our Portfolio Companies

### FUND I



### FUND II



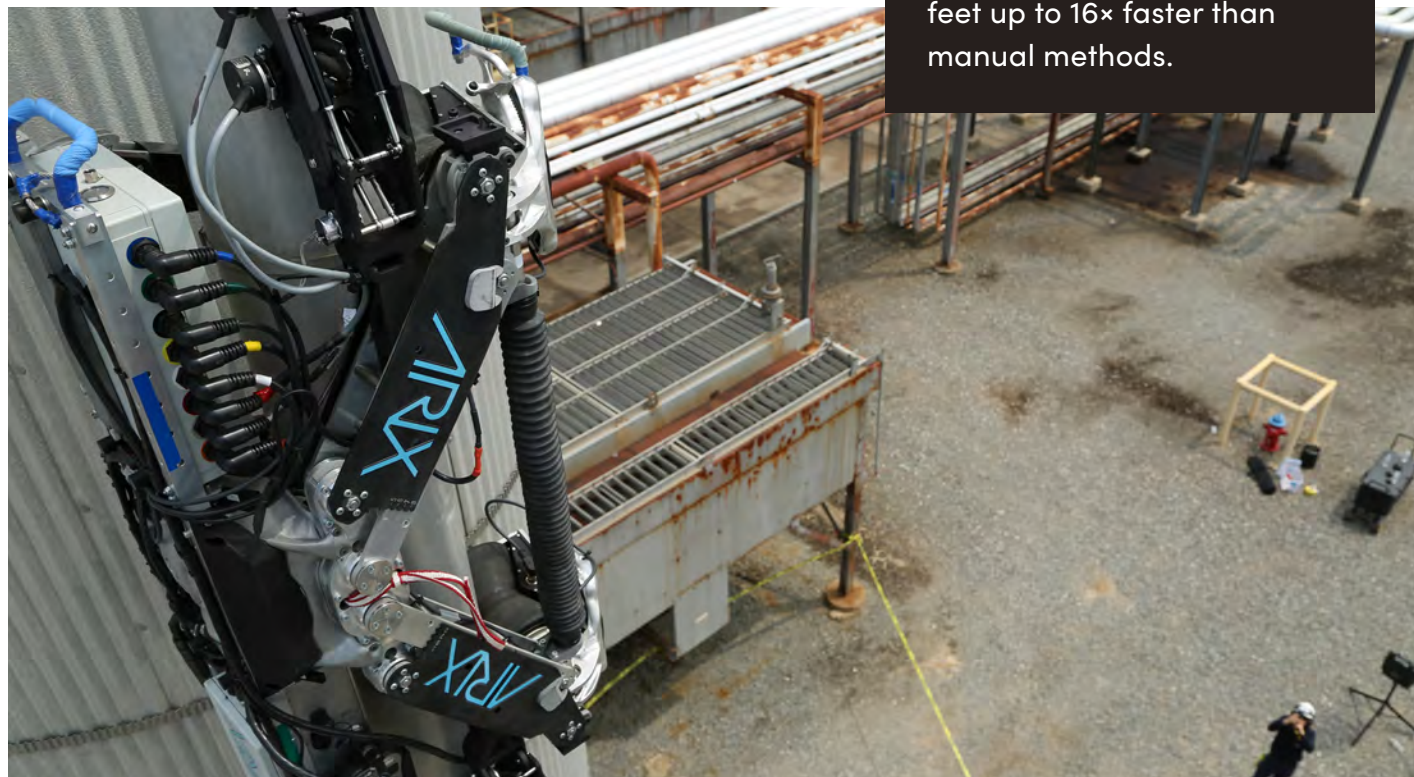
# ARIX

ARIX develops and operates specialized robotics to inspect pipelines and vessels for corrosion under insulation (CUI) without requiring excavation or shutdown. Their integrated hardware and data analytics platform streamlines detection, asset management, and repair planning while reducing costs and safety risks. ARIX serves petrochemical, refining, and energy clients with scalable CUI solutions and growing inspection deployments across North America.

## Robotic pipeline inspection technology preventing hazardous leaks and emissions

### 2025 MILESTONE

Completed robotic corrosion inspections across refinery and petrochemical facilities, collecting 6+ miles of pipe data and inspecting 2,600+ feet up to 16x faster than manual methods.



## Technology Impact

Currently, the inspection, maintenance and repair of energy infrastructure and pipelines rely on manual labour, which can result in preventable leakages and failures. ARIX's semi-autonomous robotic inspection technology provides the opportunity to detect and notify operators of GHG leakages, including methane and hydrogen sulfide, by delivering inspections, data representation, and supporting analytics to improve the productivity and safety of pipes.



### GOAL 3: GOOD HEALTH AND WELL-BEING

Preventative robotic inspections and corrosion analytics of pipes reduces the number of deaths and illnesses caused by petrochemical contamination in water and soil.



### GOAL 6: CLEAN WATER AND SANITATION

Using ARIX's technology to inspect waterlines for corrosion and leaks to prevent outages ensuring reliable, quality drinking water for communities.



### GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE

By ensuring conduits and pipes are operating within regulatory scope, and with increased efficiency, ARIX facilitates reliable and sustainable infrastructure development.



### GOAL 15: LIFE ON LAND

Inspection of pipelines using robots contributes to the prevention of petrochemical leaks in sensitive ecosystems and avoidance of natural habitat degradation.



Ekona Power has developed a scalable methane pyrolysis platform that splits natural gas into clean hydrogen and solid carbon with minimal emissions. Their process operates at low-cost relative to electrolysis and integrates with existing gas infrastructure, accelerating the transition to decarbonized hydrogen.

**Methane pyrolysis producing hydrogen with up to 90% lower CO<sub>2</sub> emissions**

**2025 MILESTONE**

Completed initial pilot project and advanced next-generation pilot construction toward commissioning.



**Technology Impact**

Ekona's pulsed methane pyrolysis (PMP) reactor produces hydrogen and solid carbon rather than CO<sub>2</sub>, significantly reducing CO<sub>2</sub> emissions compared with incumbent steam methane reformers (SMRs). Ekona's PMP solution has the potential to produce industrial-scale hydrogen at costs on par with industry standard SMRs, while reducing GHG emissions significantly. By-product carbon from the process can be used for downstream applications or disposed of in a safe and environmentally friendly manner.



**GOAL 7: AFFORDABLE AND CLEAN ENERGY**

Ekona's methane pyrolysis technology will generate low-cost hydrogen for decarbonizing large industrial sectors.



**GOAL 8: DECENT WORK AND ECONOMIC GROWTH**

The transition toward a hydrogen economy will strengthen energy markets while creating jobs and supporting economic growth across industrial regions.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

Ekona's approach to hydrogen generation will accelerate clean and environmentally sound industrial processes.



Expeto offers the “Nextworking” platform, combining private mobile networks, edge/cloud infrastructure, and Industrial Internet of Things (IIoT) applications to give enterprises secure, real-time control of distributed assets. The platform integrates seamlessly with existing public telecom networks and device ecosystems, enabling scalable, low-latency deployment for industries like utilities, manufacturing, and logistics.

**Industrial IoT platform improving operational efficiency and reducing energy use**

**2025 MILESTONE**

Advanced enterprise platform deployments with Tier 1 North American telecom partners, including AT&T and Rogers.

**Technology Impact**

Expeto’s technology is an IIoT platform that can be applied to increasing efficiencies in sectors such as automotive manufacturing, electrification of transportation, agriculture, and renewable energy deployments. By leveraging advanced 5G connectivity, Expeto’s technology can significantly improve energy efficiency in enterprise operations. 5G networks are designed to be more energy-efficient than their predecessors, reducing the overall energy consumption of network operations and the enterprises that rely on them. More efficient operations mean less waste, lower energy consumption, and reduced emissions.



**GOAL 2: ZERO HUNGER**

Expeto’s technology has the proven potential to enable advanced farming techniques to improve yields and reduce costs.



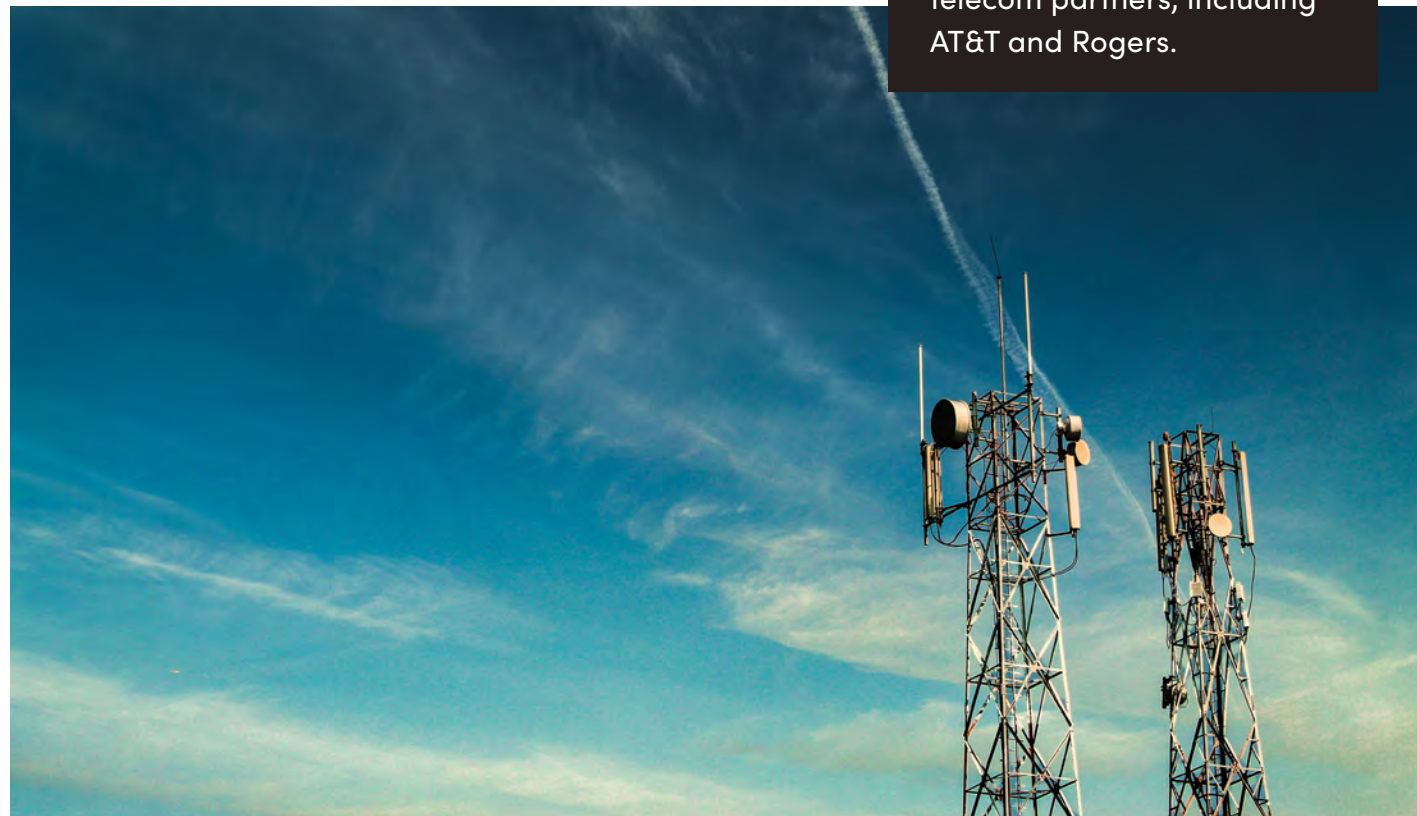
**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

For industries and organizations moving towards IIoT applications, Expeto provides platform technologies that optimize performance and reliability.



**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

Expeto’s solutions enable smarter manufacturing, which can lead to greater efficiency and reduced environmental impact.



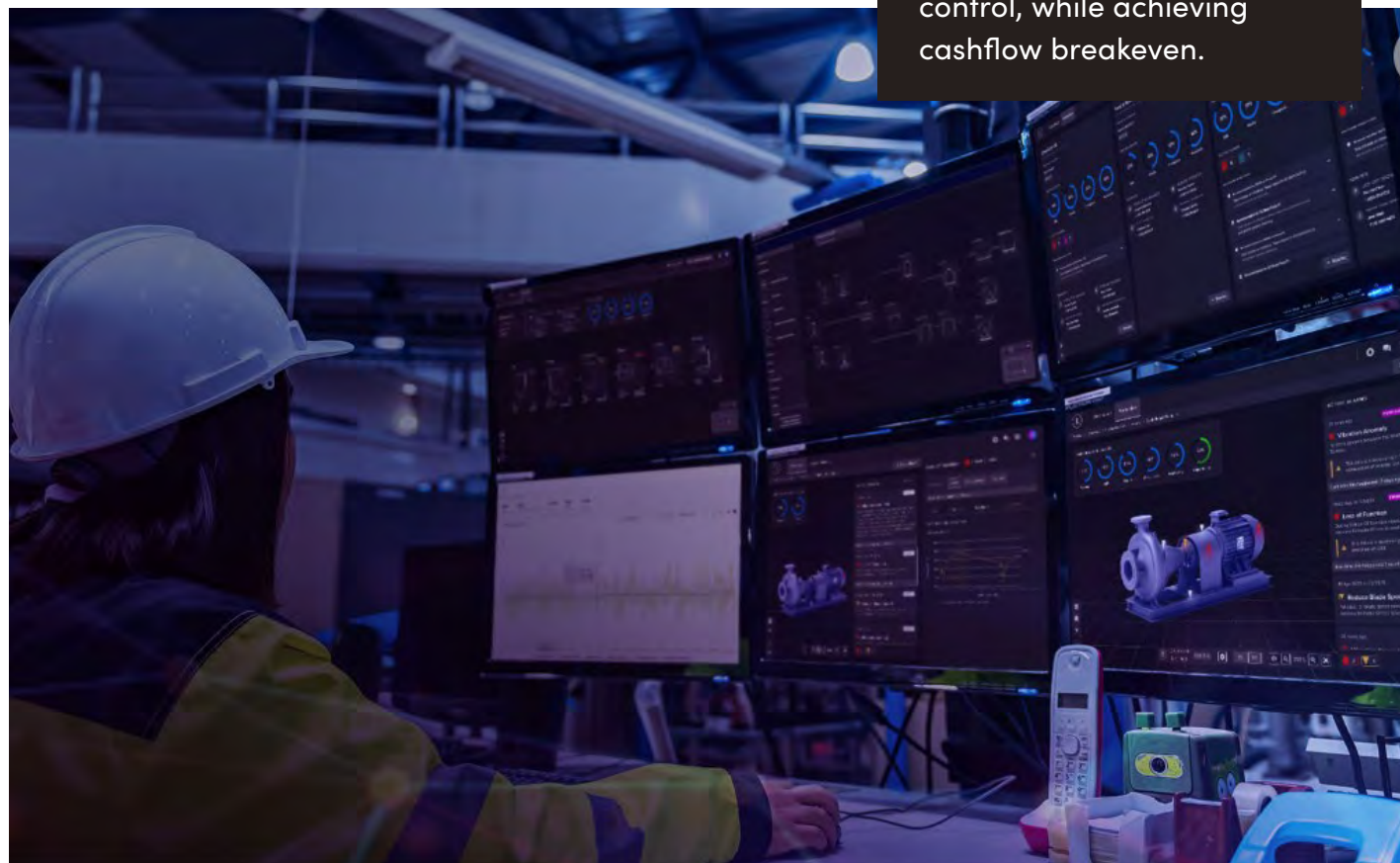


Kelvin Inc. provides SaaS-based control software powered by AI/ML that allows engineers and operators to build, deploy, and run real-time control “SmartApps” across industrial assets. Their platform offers scalability on any cloud or edge hardware, full operational visibility, and emissions tracking embedded in applications to reduce carbon footprint.

**AI-driven operational optimization reducing industrial emissions by 20-30%**

**2025 MILESTONE**

Secured Santos as a customer for autonomous well optimization and control, while achieving cashflow breakeven.



**Technology Impact**

Kelvin’s software and automation solutions are intended for a wide array of industrial sectors including mining, renewables, manufacturing, and oil & gas. The platform aids in the visualization, simulation, and identification of emission bottlenecks. It provides critical information to equipment operators and control engineers to codify solutions. Kelvin’s flagship products contribute to increased operational efficiencies that drive down power demand and carbon emissions by 0.08–0.10 tonnes, or 20–30% per well, while increasing monitoring capabilities to identify and prevent accidents, leaks, and spills.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

Kelvin’s technology processes and analyzes data from industrial assets to enable intelligent control for more sustainable and resilient operations.



**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

Adoption of Kelvin’s integrated software platform results in benefit to human health and the environment by reducing spills and leaks on industrial sites.



Quidnet’s geomechanical energy storage (GES) system pumps water into deep rock formations during periods of excess renewable energy and releases it later to generate electricity, offering multi-day storage with minimal water loss.

**Geomechanical pumped storage enabling multi-day renewable energy storage**

**2025 MILESTONE**

Completed a 35 MWh discharge test after 6 months of holding charge with no loss.



**Technology Impact**

Quidnet’s GES facilitates increased wind and solar penetration and replaces fossil fueled peaking generation, which allows for a significant reduction in harmful greenhouse gas emissions. In its 2021 Net-Zero Power / Long Duration Energy Storage report, McKinsey estimates 1.5-2.5 TW of deployment of long duration technologies like Quidnet’s by 2040, resulting in the reduction of 1.5-2.3 Gt of CO<sub>2</sub> equivalent per year. That works out to be approximately 900-1,000 kt per GW per year.



**GOAL 6: CLEAN WATER & SANITATION**

Quidnet’s technology uses non-potable water from existing reservoirs deep beneath the surface, not otherwise being used.



**GOAL 7: AFFORDABLE AND CLEAN ENERGY**

Quidnet’s technology offers a low-cost, reliable, and sustainable long duration energy storage solution to enable renewable energy penetration.



**GOAL 8: DECENT WORK AND ECONOMIC GROWTH**

Quidnet’s technology can repurpose existing oil & gas workforce, supply chain, and infrastructure for low-carbon markets.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

Geomechanical energy storage enables renewable energy use during peak demand to promote resiliency of grid infrastructure.

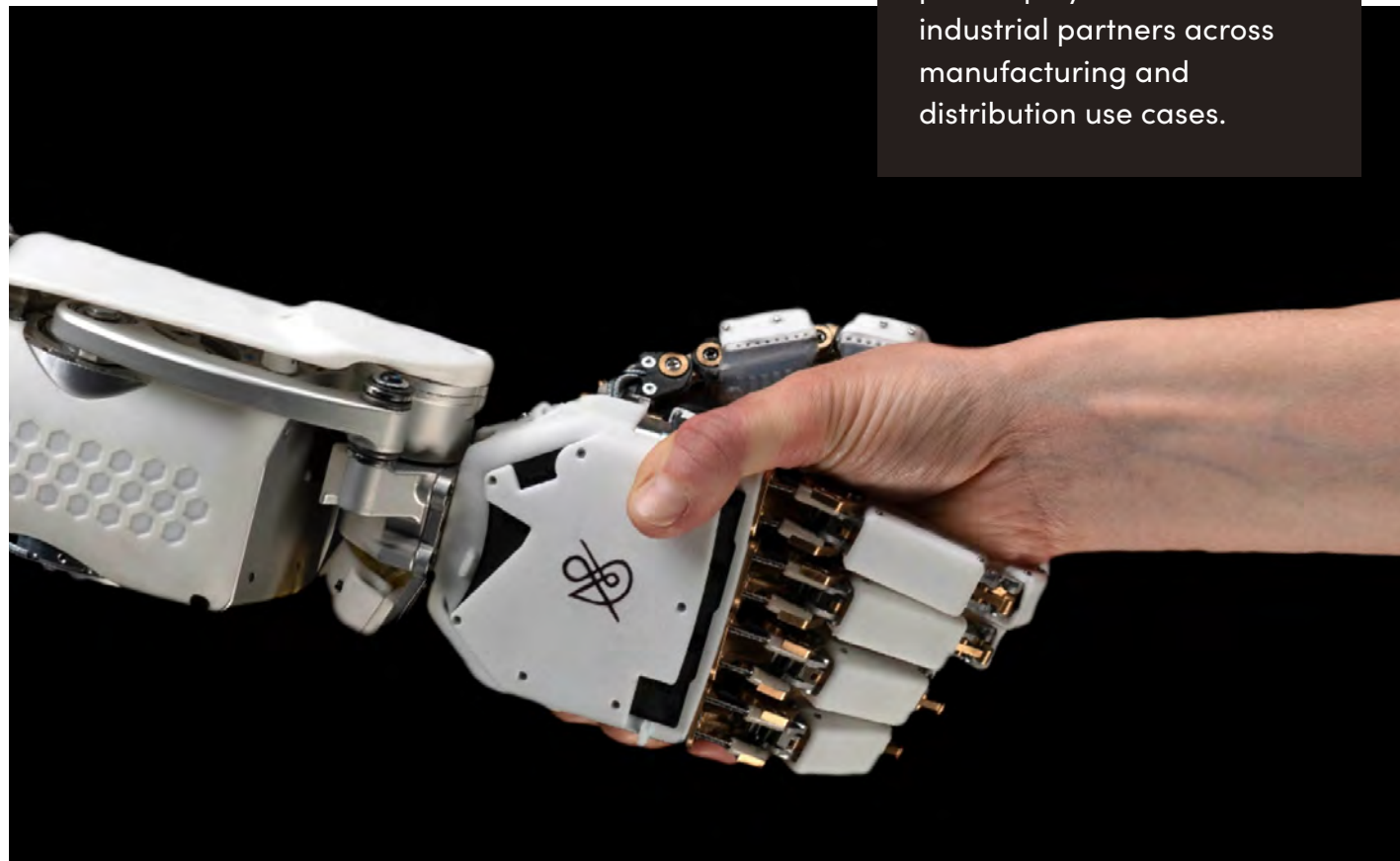


Sanctuary AI creates general-purpose robots designed with human-level dexterity, sensory capability, and AI-driven decision-making to perform economically meaningful work across industrial, logistics, and extraterrestrial environments. Founded by robotics and AI pioneers, Sanctuary's robots aim to support safer, more productive workforces and enable new frontiers in productivity.

— **Advanced robotic dexterity enabling automation of complex industrial tasks**

**2025 MILESTONE**

Advanced physical AI pilot deployments with industrial partners across manufacturing and distribution use cases.



**Technology Impact**

General-purpose robots can replace human workers in potentially hazardous environments, removing employees from harm's way and making work safer, more efficient, and more sustainable. Sanctuary's remotely piloted robots can also decrease emissions from remote operations by reducing workforce travel and open new labour pools in fields where geography or physical capabilities previously limited participation.



**GOAL 3: GOOD HEALTH AND WELL-BEING**

Sanctuary aims to reduce the number of deaths and illnesses caused by hazardous work tasks by using general-purpose robots.



**GOAL 8: DECENT WORK AND ECONOMIC GROWTH**

Sanctuary seeks to achieve higher levels of economic productivity by developing and deploying their general-purpose robots to labour-intensive, dangerous and/or dirty jobs.



**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

Implementing a synthetic workforce can significantly reduce energy consumption using Sanctuary's hybrid-AI training approach, significantly reducing the GHG emissions caused by a human workforce.

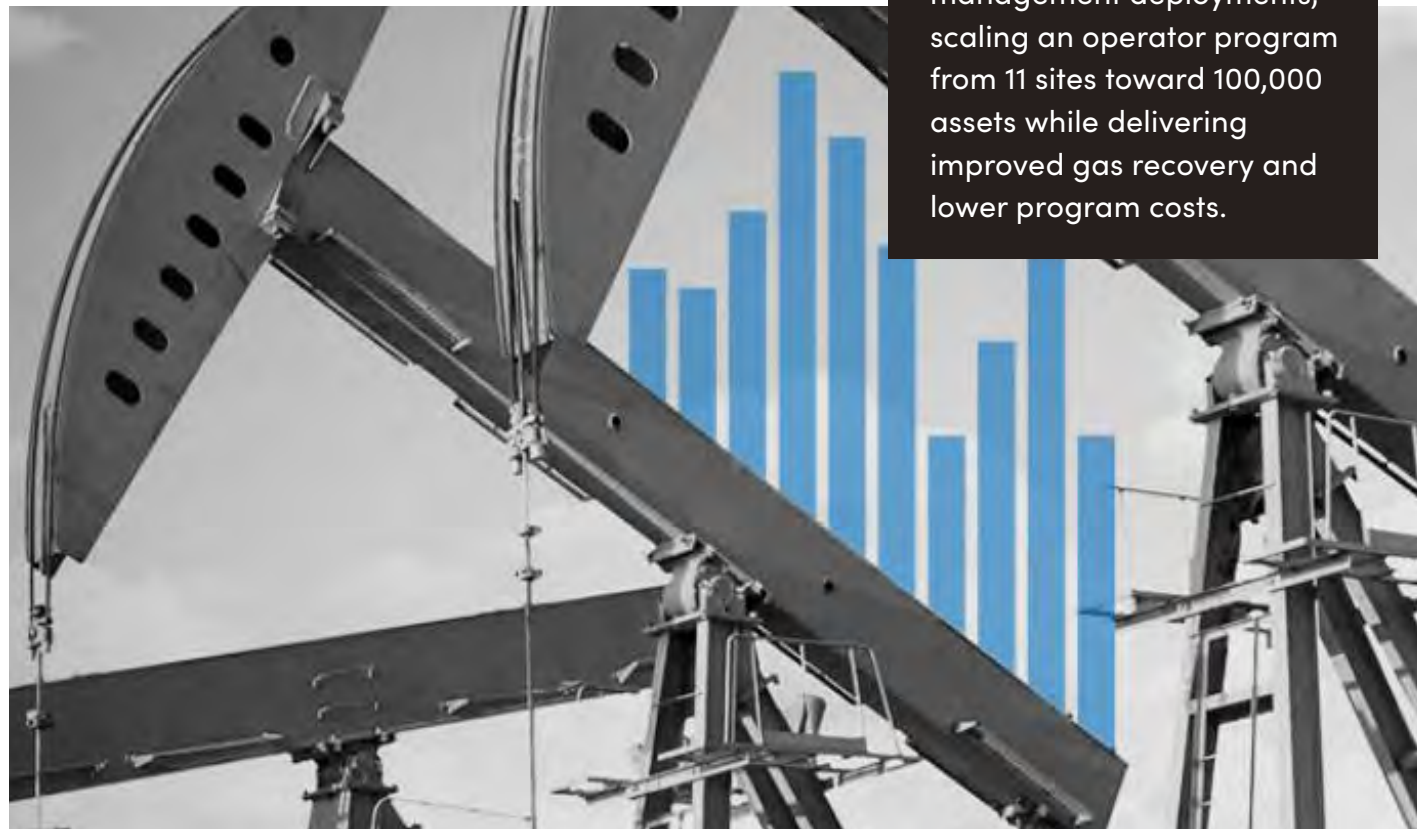


SensorUp offers methane emissions management solutions tailored to the oil and gas industry, combining geospatial data and environmental metrics to support emissions monitoring and compliance. Its emissions intelligence platform enables operators to detect methane leaks, benchmark performance, and reduce environmental impact. The company leverages advanced data analytics to help energy producers meet regulatory requirements and decarbonization goals.

— **IoT methane monitoring platform enabling faster leak detection and response**

**2025 MILESTONE**

Expanded methane management deployments, scaling an operator program from 11 sites toward 100,000 assets while delivering improved gas recovery and lower program costs.



**Technology Impact**

SensorUp enhances environmental sustainability in oil and gas operations through real-time methane monitoring, automated leak detection, and regulatory compliance support. By integrating SCADA, IoT sensors, and optical gas imaging, the platform enables faster leak detection and response to reduce methane emissions. Its OGMP 2.0-aligned measurement system generates audit-ready emissions inventories, enabling companies to meet EPA methane regulations (OOOOb) and voluntary market standards. SensorUp also supports management of flaring and venting through operational data integration and analytics that reduce greenhouse gas emissions. By automating compliance workflows and improving data transparency, the platform helps oil and gas companies advance decarbonization goals while strengthening stakeholder confidence.



**GOAL 7: AFFORDABLE AND CLEAN ENERGY**

SensorUp's emissions management platform helps energy producers detect methane leaks early, reducing greenhouse gas emissions and improving operational efficiency.



**GOAL 8: DECENT WORK AND ECONOMIC GROWTH**

By equipping field teams with real-time coordination tools, SensorUp enhances operational efficiency, productivity, and workforce safety, supporting economic growth, decent work, and sustainable employment practices.



**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

By improving leak detection and operational efficiency, SensorUp reduces waste and emissions while providing data that supports more responsible resource use.



Syzygy Plasmonics is decarbonizing the chemical sector, responsible for 20% of industrial CO<sub>2</sub>, by building light-powered reactors that replace thermal combustion. Its Rigel reactor channels light into high-efficiency photocatalysts to power reactions for e-fuels and hydrogen production. Designed for multiple chemistries, the platform supports ammonia cracking and CO<sub>2</sub>-to-fuel applications.

**Light-driven reactors enabling low-carbon sustainable aviation fuel production**

**2025 MILESTONE**

Began development of NovaSAF-1 in Durazno, Uruguay, the world's first electrified biogas-to-SAF facility producing RFNBO-compliant fuel.



**Technology Impact**

Syzygy's electrified, light-driven biogas-to-SAF pathway can deliver net-negative lifecycle GHG intensity in the best-case scenario and materially lower water footprint versus Jet A and other SAF pathways, while converting waste methane/CO<sub>2</sub> into fuel (reducing fugitive methane via utilization where applicable).



**GOAL 7: AFFORDABLE AND CLEAN ENERGY**

Syzygy's photocatalytic reactor and catalyst platform will use biogas sources and CO<sub>2</sub> for SAF/e-fuels/methanol production, and reduce overall emissions associated with hydrogen and ammonia production.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

Syzygy's technology is electrifying processes for the production of commodity chemicals and fuels that conventionally require high carbon industrial heat.



**GOAL 11: SUSTAINABLE CITIES AND COMMUNITIES**

By converting landfill and digester biogas into fuels, Syzygy supports circular waste-to-value pathways that improve waste management outcomes for communities.

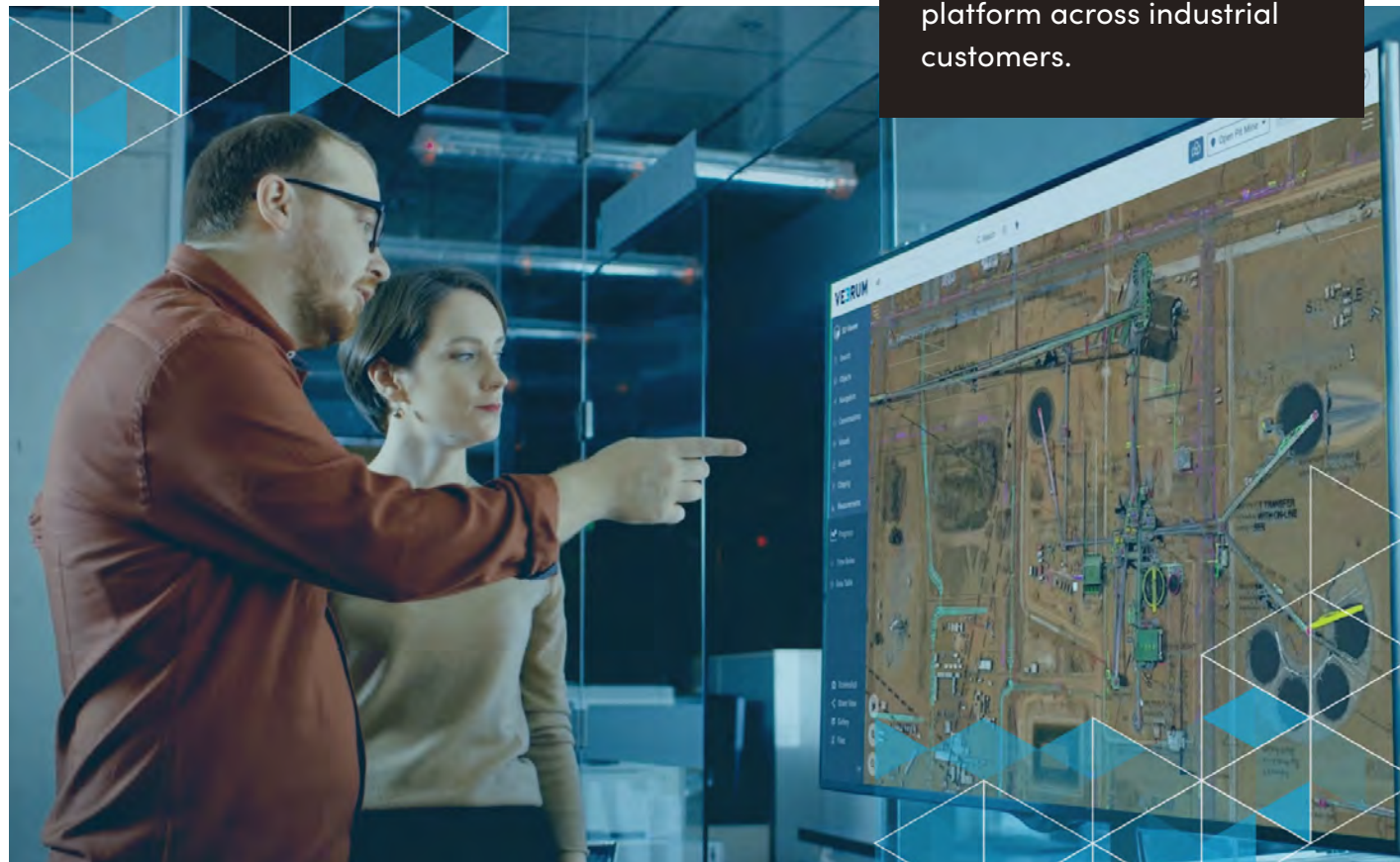
# VEERUM

VEERUM's Visual Operations (VisOps) platform transforms industrial 3D and reality capture data into real-time, collaborative insights that improve performance and reduce site visits. It enables teams to visualize, manage, and analyze complex project environments from anywhere. Trusted by global operators in mining, energy, and infrastructure, VEERUM is redefining asset intelligence at scale.

## Digital twin platform for industrial assets delivering up to 15x productivity gains

### 2025 MILESTONE

Strengthened commercial execution, expanding adoption of its VisOps platform across industrial customers.



## Technology Impact

Traditional asset visualization platforms often suffer from data siloing and poor integration across systems. VEERUM's digital twin technology integrates industrial data and 3D reality capture to improve operational efficiency, reduce on-site hours and associated travel emissions, and enable increased monitoring to prevent accidents and leaks with negative environmental impacts. By allowing personnel to view and manage remote sites virtually, the platform reduces the need for travel while enabling globally distributed teams to collaborate more effectively. Data can be securely managed in the cloud and accessed by teams anywhere, improving both operational efficiency and site safety.



### GOAL 8: DECENT WORK AND ECONOMIC GROWTH

VEERUM customers have reported that digital twin integration has enhanced productivity up to 15x through technological upgrading and innovation enablement in labour-intensive industries.



### GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE

Applying accurate digital twins, while integrating formerly siloed data into one platform, enables industrial sites to be better managed, monitored, and optimized.



### GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Digital twin tools can reduce on-site hours by half, resulting in lower fuel consumption and GHG emissions for on-site and fly-in, fly-out workers.



DISA Technologies is transforming mineral recovery with its patented High-Pressure Slurry Ablation (HPSA) technology, which employs high-pressure slurry jets to fracture ore particle by particle, without grinding media or chemicals. This innovative method is being deployed across mining and remediation applications to recover copper, nickel, uranium, lithium, rare earths, and more from conventional ore and mine tailings while reducing waste and lowering energy use. Their skid-mounted systems enable rapid deployment and retrofit, significantly cutting capital expense and installation time.



**Novel slurry ablation technology recovering minerals from tailings and uranium sites**

**2025 MILESTONE**

Received a first-of-its-kind license from the U.S. Nuclear Regulatory Commission to begin remediation of over 15,000 abandoned uranium mines across the United States.

**Technology Impact**

DISA's High-Pressure Slurry Ablation (HPSA) technology differs from traditional comminution by selectively liberating target minerals from host materials rather than relying solely on mechanical grinding. This approach can reduce energy consumption in milling circuits by 30–50% in pilot deployments, while improving mineral liberation and downstream processing efficiency.

Beyond mineral processing, DISA is applying HPSA to the remediation of abandoned uranium mines. In the United States alone, more than 15,000 such sites contribute to legacy uranium contamination that poses risks to nearby communities and ecosystems. By enabling recovery of residual minerals while reducing waste and environmental impacts, the technology supports both resource recovery and remediation of contaminated sites.



**GOAL 8: DECENT WORK AND ECONOMIC GROWTH**

Based on DISA's successful NRC commissioning, the company will create multiple full-time longstanding positions in the Navajo Nation to support the design and operations of the new HPSA system.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

DISA's technology can be utilized to upgrade and retrofit existing milling operations while increasing resource-use efficiency.



**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

In remediating abandoned uranium mines, DISA can achieve the environmentally sound management of waste uranium.



**GOAL 15: LIFE ON LAND**

DISA's technology can be used to remediate abandoned uranium mines to restore degraded land and soil.

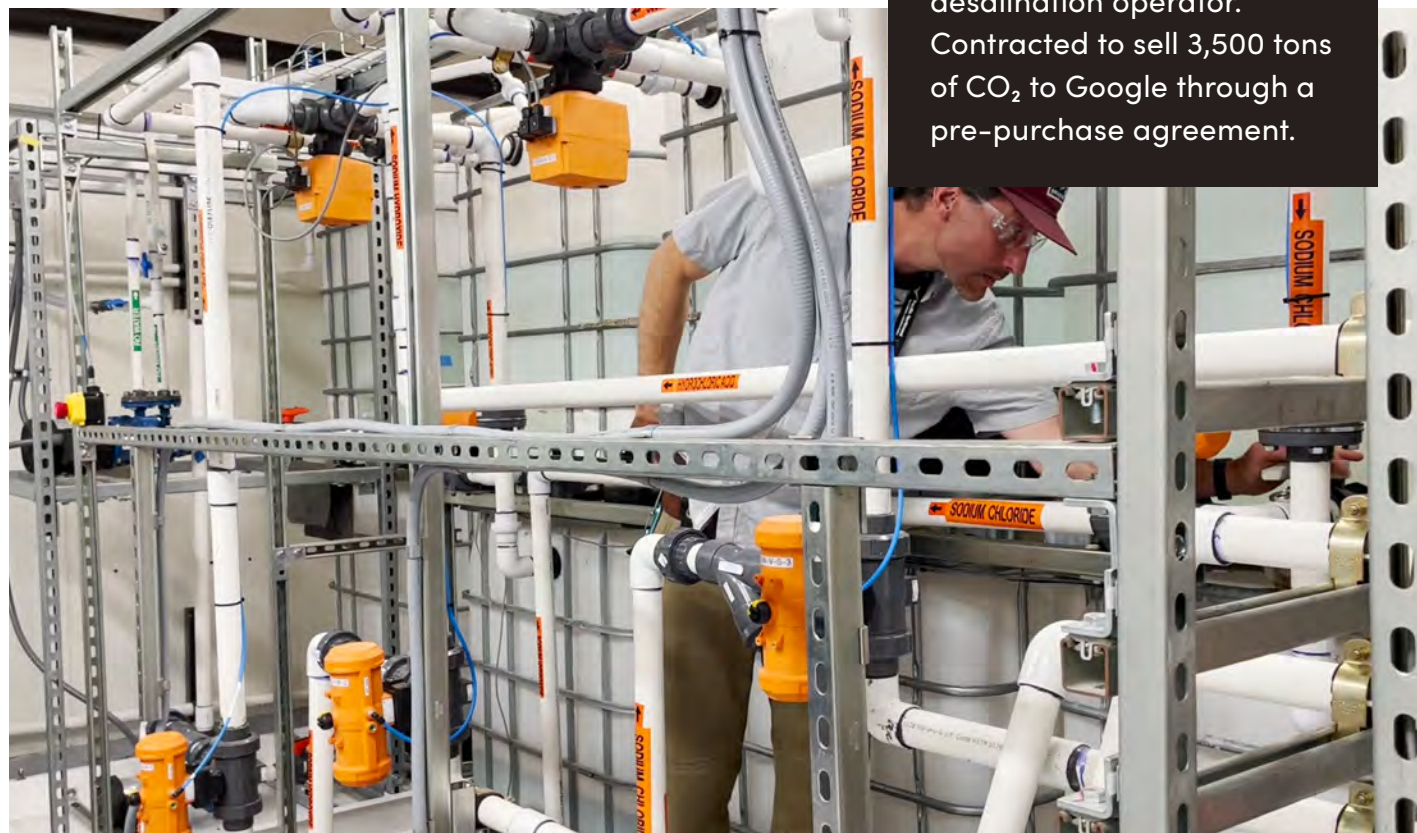


Ebb is pioneering electrochemical water technology that tackles two of the world’s most urgent problems: growing demand for freshwater and excess CO<sub>2</sub> in the atmosphere. Ebb partners with desalination plants to transform brine into additional freshwater, permanent carbon removal, and valuable industrial products. Ebb turns waste into a resource which helps desalination operators become more efficient while advancing water security, decarbonization, and ocean health.

**Electrochemical technology turning desalination brine into freshwater and carbon removal**

**2025 MILESTONE**

Partnered with and sold a pilot system to Saudi Water Authority, the world’s largest desalination operator. Contracted to sell 3,500 tons of CO<sub>2</sub> to Google through a pre-purchase agreement.



**Technology Impact**

The ocean absorbs large quantities of CO<sub>2</sub> from the atmosphere and can serve as a pathway for long-term carbon storage through a natural process that initially forms a weak acid before slowly storing carbon as inert dissolved ions that remain stable for thousands of years. As atmospheric CO<sub>2</sub> has increased, levels of ocean acid have also risen much faster than the ocean can naturally transform it into stable forms, leading to the acidification of marine environments. Ebb is developing a safe, effective, low-energy electrochemical system to remove this excess ocean acid, enabling additional carbon from the atmosphere to be stored in the ocean as dissolved inorganic forms such as bicarbonate.



**GOAL 6: CLEAN WATER AND SANITATION**

Ebb partners with desalination plants to transform brine, the salty waste stream left behind after freshwater is extracted, into additional freshwater, permanent carbon removal, and valuable industrial products.



**GOAL 13: CLIMATE ACTION**

Ebb’s process can enable the large-scale removal of atmospheric CO<sub>2</sub> using less energy and at a lower cost than other methodologies like direct air capture.



**GOAL 14: LIFE BELOW WATER**

Ebb helps to reverse ocean acidification locally in the regions where they operate, helping to restore marine environments that have been damaged by climate change.



e-Zinc develops a zinc-based battery system engineered to store clean energy reliably for multiple days using abundant, recyclable materials. Their technology supports remote, off-grid, and grid-interconnected environments with scalable, low-cost storage that reduces reliance on fossil fuels. e-Zinc's safety, availability, and minimal environmental footprint underpin their sustainability-first approach.

**Long duration zinc batteries enabling reliable renewable energy grids**

**2025 MILESTONE**

Validated its next-generation battery architecture, demonstrating a scalable path to low-cost, multi-day energy storage for grids, industrial operations, and remote sites.



**Technology Impact**

e-Zinc has developed an electrochemical cell that stores electricity in zinc metal, a highly abundant and low-cost material with high energy density. The systems and materials are entirely recyclable, fire resistant, durable for long lifetimes and can operate in a wide range of temperatures.

e-Zinc's energy storage solution replaces legacy diesel generators used in remote and resiliency applications resulting in a 120t/kWh reduction in GHG emissions per kWh of diesel generators replaced by e-Zinc batteries. LDES solutions like e-Zinc's batteries will also enable greater renewable energy penetration in both the grid & utility and consumer & industrial markets with long-term implications on the carbon intensity of energy generation.



**GOAL 7: AFFORDABLE AND CLEAN ENERGY**

e-Zinc offers a low-cost, reliable, and sustainable LDES solution to enable renewable energy penetration.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

Electrochemical energy storage enables renewable energy at times of peak demand to promote resiliency of grid infrastructure.

# Karbonetiq

Karbonetiq develops a low-capex carbon dioxide removal (CDR) solution that permanently mineralizes CO<sub>2</sub> using alkaline industrial residues, such as steel slag and other calcium- and magnesium-rich materials. The process accelerates natural mineral weathering by optimizing material preparation, exposure, and reaction conditions, converting CO<sub>2</sub> into stable carbonate minerals within weeks. Karbonetiq’s model is infrastructure-light and partner-integrated, leveraging existing industrial sites, equipment, and logistics to enable rapid deployment without dedicated capture facilities.



## Permanent carbon removal by mineralizing CO<sub>2</sub> using industrial waste

### 2025 MILESTONE

Issued 125 CORCs (CO<sub>2</sub> Removal Certificates) through Puro for their Contrecoeur project, validating Karbonetiq’s MRV framework and registry-verified carbon removal.

## Technology Impact

Karbonetiq’s technology provides a scalable, low-cost carbon dioxide removal solution by mineralizing CO<sub>2</sub> using alkaline industrial residues such as steel slag and lime kiln dust. The process is designed to maximize CO<sub>2</sub> sequestration per square meter while integrating directly into existing mill services workflows, allowing the system to leverage shared crews and infrastructure.

The passive mineralization system relies on natural airflow and thermal gradients, minimizing energy consumption compared to more energy-intensive CDR approaches. By converting industrial by-products into stable carbon sinks, the technology also reduces waste, prevents harmful runoff, lowers land-use pressures, and supports ecosystem restoration.



### GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE

Karbonetiq’s innovation contributes to sustainable industrialization by utilizing steel slag and other waste streams for durable carbon removal, transforming waste into value while reducing greenhouse gas emissions.



### GOAL 15: LIFE ON LAND

Karbonetiq repurposes industrial by-products such as steel slag and lime kiln dust that are often landfilled or stockpiled. The mineralization process reduces environmental risk, prevents harmful runoff, and supports restoration of degraded land.

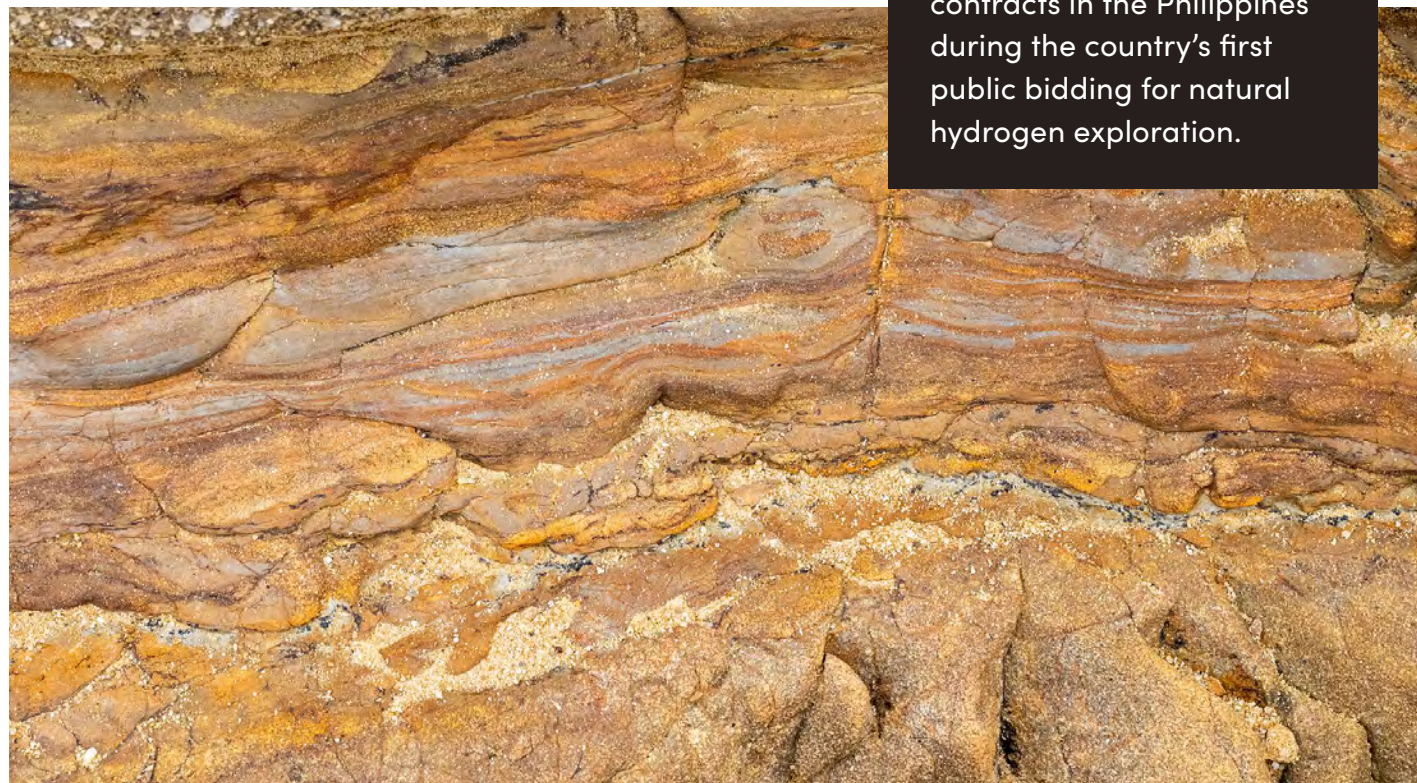


Koloma applies proprietary geological data analytics and exploration methods to unlock naturally occurring hydrogen trapped in subsurface rock formations. Their low-carbon, cost-effective hydrogen extraction platform provides a scalable source of clean energy that avoids electrolysis or fossil feedstocks. With leadership rooted in energy and geoscience expertise, Koloma is actively appraising assets to commercialize natural hydrogen resources for global decarbonization.

**Geologic hydrogen production with >98% lower emissions than incumbent methods**

**2025 MILESTONE**

Expanded globally with subsidiaries in Australia and Canada and secured two contracts in the Philippines during the country's first public bidding for natural hydrogen exploration.



**Technology Impact**

Conventional hydrogen production, via steam methane reforming or electrolysis, poses challenges due to high emissions, energy, land, and water requirements, creating environmental and geographic barriers to large scale production. Geologic hydrogen production offers several environmental advantages compared to both current and emerging hydrogen production methods. It has a significantly lower carbon intensity of 0.1 kg CO<sub>2</sub>e per kg H<sub>2</sub>, substantially reduced water usage at 0.02 gallons per kg H<sub>2</sub>, and a notable decrease in energy consumption, requiring only 3 kWh per kg H<sub>2</sub>.



**GOAL 7: AFFORDABLE AND CLEAN ENERGY**

Geologic hydrogen has the potential to unlock incredible quantities of low-cost, clean energy on a global scale.



**GOAL 8: DECENT WORK AND ECONOMIC GROWTH**

Koloma's process leverages expertise from, and has a strong overlap with, the conventional energy sector, allowing for the participation of existing skilled workers in the energy transition.



MineSense's ShovelSense system integrates sensors, machine learning, and hardware to deliver real-time ore grade feedback during excavation, enabling miners to maximize metal recovery while minimizing waste and environmental impact. Their platform supports precise material sorting, blending, and processing control, resulting in increased operational efficiency and profitability. Headquartered in Vancouver and serving the global mining industry, MineSense is a trusted partner in modernizing mineral operations.



**Real-time ore sensing technology reducing waste and energy in mining**

**2025 MILESTONE**

Expanded global deployments of its Mine-to-Mill platform to more than 20 operating mine sites worldwide.

**Technology Impact**

MineSense has developed a suite of services that utilizes a proprietary and ruggedized x-ray fluorescence (XRF) system. The Mine-to-Mill service utilizes MineSense's two flagship products ShovelSense and BeltSense. ShovelSense is installed on excavation equipment allowing operators real-time insights into each bucket, this allows for improved mining efficiency by reducing the variability of feed materials to the mill. While BeltSense scans mineral content on conveyor belts to assess the grade and ore characteristics, enabling downstream process control of reagents and water, optimization of energy use and product control.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

MineSense's technology drives innovation in the mining industry, moving towards increased resource-use efficiency.



**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

MineSense's technology improves sustainability in mining by optimizing efficiencies that result in reduced use of energy, water, and chemical reagents.



Planetary introduces purified alkaline minerals into coastal outfall water to raise buffering capacity, enabling atmospheric CO<sub>2</sub> to permanently convert to bicarbonate and remain sequestered in the ocean. Their technology delivered the world's first verified Ocean Alkalinity Enhancement (OAE) carbon credits (sold to Shopify, Stripe, and British Airways), along with a published measurement, reporting, and verification (MRV) protocol, making them an industry pioneer. OAE integration with wastewater or desalination infrastructure enables scalable gigaton-scale carbon removal, while mitigating acidification and enhancing ocean health.



**Ocean carbon removal platform 150x more energy efficient than direct air capture**

**2025 MILESTONE**

Delivered over 3,000 tonnes of verified carbon removals from its Halifax facility and signed \$31.3M in offtake agreements for >100,000 tonnes of removals between 2026–2030.

**Technology Impact**

Planetary's Ocean Alkalinity Enhancement (OAE) process removes atmospheric CO<sub>2</sub> by converting it into stable bicarbonate ions stored in the ocean for over 10,000 years. A single commercial-scale deployment is projected to remove up to 50,000 metric tons of CO<sub>2</sub> annually while requiring very little external energy input, supporting a scalable pathway for carbon removal. In addition to removing CO<sub>2</sub>, OAE also counteracts local ocean acidification and promotes healthier marine ecosystems.



**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

Planetary repurposes industrial by-products and existing infrastructure to reduce waste and resource extraction through a circular approach to carbon removal.



**GOAL 13: CLIMATE ACTION**

Planetary's OAE technology can be a significant contribution to combating climate change by removing carbon dioxide from the atmosphere and storing it in the ocean for thousands of years.



**GOAL 14: LIFE BELOW WATER**

By introducing alkalinity into ocean waters, Planetary counteracts ocean acidification in coastal ecosystems caused by rising CO<sub>2</sub> levels, supporting healthier marine life and biodiversity.

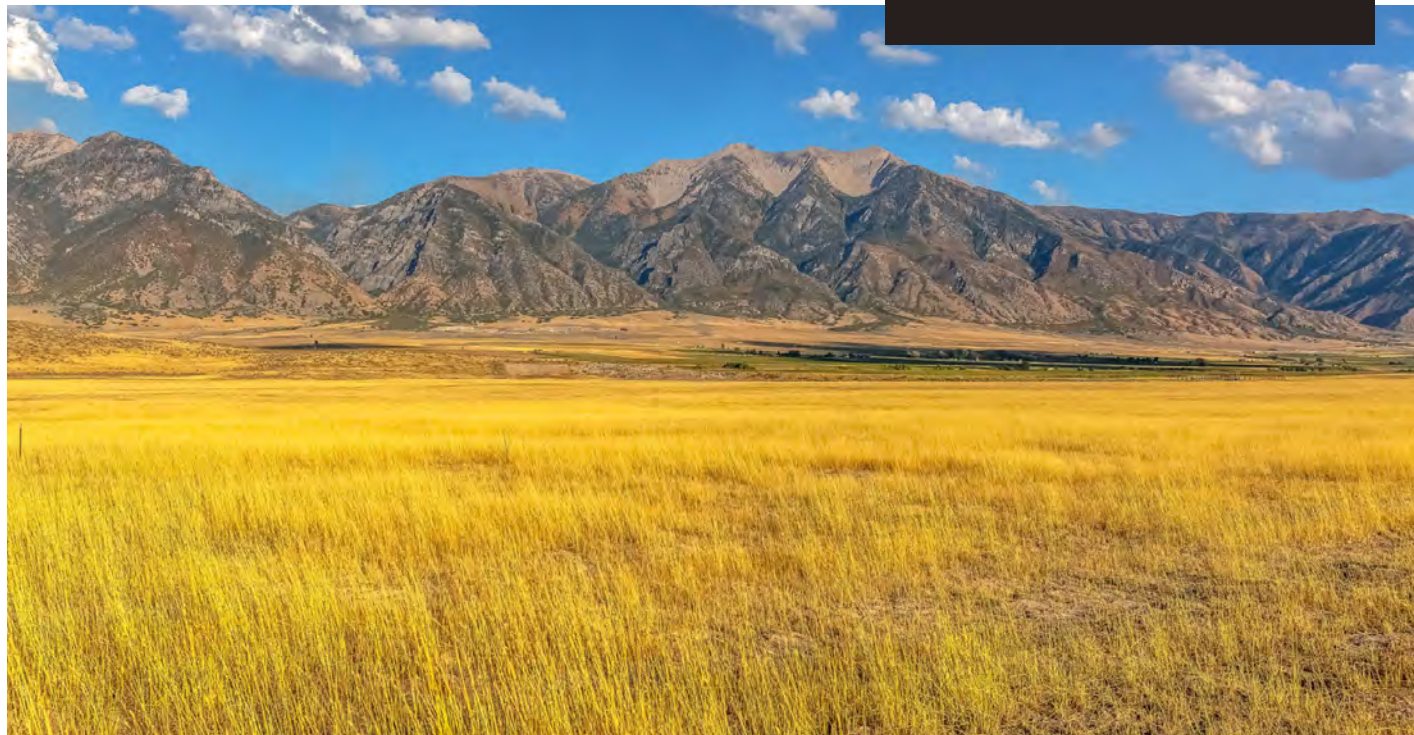


Rodatherm’s Waterless Geothermal System (WGS) transforms the Earth’s natural heat into on-demand, clean energy using closed-loop, engineered subsurface reservoirs. Unlike conventional geothermal, WGS does not require naturally occurring hydrothermal resources and can be deployed in a wide range of geologies. Rodatherm’s system delivers both high-temperature process heat and baseload electricity, offering a flexible and zero-emissions alternative to fossil fuels for heavy industry and the power grid. Modular design supports scalable deployments across North America, while enabling 24/7 clean energy aligned with decarbonization goals.

**Closed-loop geothermal enabling baseload clean energy without water use**

**2025 MILESTONE**

Closed an oversubscribed Series A to accelerate deployment of their first pilot system.



**Technology Impact**

Rodatherm provides zero-combustion, zero-emissions baseload electricity, displacing fossil-fuel generation on a 24/7 basis. Lifecycle greenhouse gas emissions are estimated at ~10–20 gCO<sub>2</sub>e/kWh, comparable to or better than conventional geothermal and significantly lower than natural gas (~400–500 gCO<sub>2</sub>e/kWh). The closed-loop design requires near-zero consumptive water use, unlike open-loop geothermal or thermal power plants that rely on water for injection, cooling, or steam generation. System efficiency is enhanced through direct turbine expansion, resulting in parasitic loads of <5% versus ~25–35% for closed loop WGS.



**GOAL 7: AFFORDABLE AND CLEAN ENERGY**

Rodatherm delivers firm, dispatchable, zero-carbon geothermal electricity that complements intermittent renewables. Its focus on cost efficiency and baseload reliability directly supports access to clean and resilient energy systems.



**GOAL 8: DECENT WORK AND ECONOMIC GROWTH**

The company supports skilled job creation in drilling, engineering, and power operations while repurposing oil & gas capabilities for clean energy. Local project development contributes to regional economic growth.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

Rodatherm applies proven oil & gas drilling and completion technologies in a novel geothermal configuration, advancing industrial innovation. The platform enables scalable, resilient clean power infrastructure.



Summit Nanotech has developed a leading direct lithium extraction (DLE) platform that extracts lithium from brine faster and with minimal water consumption, supporting commercial-scale EV and battery supply chains. Its modular denaLi™ system uses advanced sorbent chemistry to produce high-purity lithium at low-cost while reducing reliance on traditional evaporation ponds. Summit is targeting deployment across the Americas, including brine operations in Chile, Argentina, and the United States.



**Direct lithium extraction technology reducing freshwater use by up to 60%**

**2025 MILESTONE**  
 Completed a field test with a top-tier lithium producer in Chile, demonstrating industry-leading lithium recovery, impurity rejection, and water efficiency while operating 24/7.

**Technology Impact**

Summit’s DLE platform improves lithium production efficiency using a high-performance sorbent, proprietary flow sequencing, and an integrated water recovery system. Third-party validated results from its demonstration project show a 50% reduction in freshwater use, 95% lithium recovery, and up to a 50x reduction in land use compared to conventional production methods. When paired with brine reinjection, the process can also reduce solid waste generation by up to 95%, significantly lowering the environmental footprint of lithium extraction.



**GOAL 6: CLEAN WATER AND SANITATION**

Summit’s DLE technology reduces water use compared with evaporation ponds and DLE methods through proprietary flow sequencing and closed-loop recovery systems eliminating external water inputs in lithium chloride production.



**GOAL 9: INDUSTRY, INNOVATION, AND INFRASTRUCTURE**

Adoption of Summit’s technology results in upgrading incumbent lithium-extraction infrastructure, like evaporation ponds, by replacing them with more resource-efficient processes and equipment.



**GOAL 15: LIFE ON LAND**

Summit’s DLE technology minimizes the physical footprint required for lithium extraction by eliminating the need for evaporation ponds, minimizing chemical inputs for the extraction step, and producing significantly less waste when paired with reinjection.



Zero Industrial develops and deploys electrified industrial heat solutions that decarbonize process heat in heavy industry without requiring customer capital investment. The company is technology-agnostic, deploying the optimal combination of thermal energy storage (TES), electric boilers, mechanical vapor recompression (MVR), and related electrification technologies based on site-specific requirements. Zero Industrial delivers full project lifecycle execution, from engineering and permitting through operations, under long-term Heat-as-a-Service contracts. The platform enables rapid deployment across North America to replace fossil-fired industrial heat with flexible, electrified alternatives.

**Industrial heat electrification platform cutting process emissions by up to 90%**

**2025 MILESTONE**

Signed its first exclusivity agreement for an electrified heat project at an ethanol plant and expanded its project pipeline across North America.



**Technology Impact**

Zero Industrial’s technology enables the electrification of industrial process heat, delivering material reductions in Scope 1 greenhouse gas emissions by displacing fossil-fuel combustion with stored electric heat. Across typical industrial applications, projects can achieve 30–90% reductions in direct CO<sub>2</sub> emissions, depending on the baseline fuel, grid mix, and operating profile. In addition to carbon reductions, replacing on-site combustion significantly lowers criteria air pollutants such as NO<sub>x</sub>, SO<sub>x</sub>, and particulate matter, improving local air quality and reducing regulatory and permitting constraints for industrial facilities.



**GOAL 7: AFFORDABLE AND CLEAN ENERGY**

Zero Industrial enables electrification of industrial heat using off-peak and renewable electricity, lowering energy costs for customers while increasing the use of clean power.



**GOAL 8: DECENT WORK AND ECONOMIC GROWTH**

Supports sustainable industrial growth by lowering operating costs and emissions for heavy industry while creating high-quality jobs in project development, engineering, construction, and energy markets.



**GOAL 11: SUSTAINABLE CITIES AND COMMUNITIES**

By reducing emissions and air pollution from industrial facilities located near population centers, Zero Industrial contributes to cleaner, more resilient communities, particularly in industrial corridors.



ZwitterCo’s advanced polymeric membranes use zwitterionic channels to resist fouling and restore filtration capability in challenging industrial effluents heavy in organics such as BOD/COD (biochemical and chemical oxygen demand) and FOG (fats, oils, and grease). Their technology supports high-performance reuse and recovery applications across food, energy, and manufacturing sectors while lowering operational costs and chemical reliance. Built by a multidisciplinary team of over 60 membrane engineers and water treatment experts, ZwitterCo is driving scalable water innovation in high-strength process streams.



**Fouling-resistant membranes processing 10,000x higher organic loads than conventional membranes**

**2025 MILESTONE**

Achieved 25 reference installations across key industrial markets, validating ZwitterCo’s technology and establishing repeatable commercial traction.

**Technology Impact**

ZwitterCo’s membrane technology enables cost-effective treatment and reuse of industrial wastewater, helping reduce freshwater consumption and waste discharge. Compared to conventional membranes, ZwitterCo’s solution can tolerate 10,000x higher organic loads without irreversible fouling, extending membrane lifespans and reducing waste sent to landfills. The technology also lowers chemical use and energy consumption in wastewater treatment and industrial separations while improving access to unconventional water resources. In addition, ZwitterCo’s membranes support waste-to-revenue applications, including more efficient renewable natural gas production from organic feedstocks.



**GOAL 6: CLEAN WATER AND SANITATION**

ZwitterCo enables the efficient treatment and reuse of wastewater, reducing freshwater consumption and preventing pollutant-laden discharge from harming the environment.



**GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION**

ZwitterCo contributes to the environmentally sound management of chemicals and waste throughout their lifecycle by reducing the chemical-intensity of membrane separation and waste treatment processes.



**GOAL 15: LIFE ON LAND**

ZwitterCo minimizes chemical use in membrane separation, enables waste-to-revenue in food manufacturing, and supports minimum or zero liquid discharge wastewater solutions, reducing water consumption and limiting pollutant discharge.

# Case Study

## e-Zinc Powering the Energy Transition With Affordable Long Duration Energy Storage

e-Zinc is developing a long duration energy storage system based on an earth-abundant, non-flammable zinc chemistry. The technology delivers 12 to 100 hours of storage for applications where safety, cost, and duration are critical, including grid infrastructure, microgrids, and industrial and commercial energy systems. Designed for manufacturability and scale, e-Zinc targets low-cost, durable energy storage to enable clean energy integration, optimize behind-the-meter energy use, and deliver resilient power for grid, commercial, and remote applications.



As electricity systems integrate higher levels of renewable generation and electrification, reliability challenges from variability, extreme weather, and congestion are increasing. These trends create a structural need for energy storage capable of delivering power reliably for many hours to multiple days.

Lithium-ion batteries perform well for short-duration storage but become cost-prohibitive beyond roughly twelve hours, limiting their suitability for multi-day applications and prolonging reliance on fossil-based backup generation.

e-Zinc addresses this gap with a zinc-based energy storage system purpose-built for 12–24 hour and multi-day operation. By leveraging abundant materials, simplified system architecture, and long operating life, e-Zinc enables a fundamentally lower-cost pathway to scalable long duration energy storage across grid and industrial applications.



### Target Markets

e-Zinc’s technology is designed to serve three distinct use cases, each aligned with a specific customer segment and value proposition.

#### RESILIENCE AND BEHIND-THE-METER BACKUP

Focus on customers who require multi-day coverage rather than short runtime battery bridging. This could be driven by geography and outage risk like in California, or by business need (e.g., data centres and hospitals). e-Zinc’s system can deliver both energy benefits — peak shaving, time-of-use shifting, and grid services — as well as multi-day backup during outages to provide resilience.

#### REMOTE AND OFF-GRID POWER

Target remote power markets where diesel is the primary source of power, and where customers seek lower cost, lower emissions, and higher energy security. Key segments include off-grid mining operations, military bases, island communities, and telecom towers. e-Zinc enables a shift away from diesel-heavy architectures toward much higher renewable penetration (wind/solar + storage), with significant cost savings.

#### RENEWABLE INTEGRATION AND GRID FIRING

Address the long-term energy transition needs as grids require hardening and increased stability. Increasing renewable penetration and aging infrastructure create a scenario where multi-day storage becomes a critical asset for reliability, curtailment reduction, and system stability. This represents the largest long-term market and e-Zinc’s end-state vision as long-duration storage becomes an essential grid asset.

## DEPLOYMENT, IMPACT, WHAT'S NEXT?

### Demonstrating Scalable Long Duration Energy Storage

With support from Evok, e-Zinc is moving to commercial validation through field demonstrations and system integration efforts. These projects will validate performance, durability, and operational readiness under real grid conditions.

- **California Energy Commission–Supported Pilot:** Deployment of the world’s first 24-hour duration battery energy storage system (BESS) at a California military base, designed to validate long duration performance, safety, and system integration under real-world operating conditions. This project will demonstrate e-Zinc’s ability to provide critical energy and avoid diesel backup power for customers who suffer from Public Safety Power Shutoffs in California, a beachhead market within e-Zinc’s broader resilience and behind-the-meter backup market.
- **Toyota Tsusho Partnership:** Pilot deployment with Toyota Tsusho Canada of a ~0.5 MWh 24-hour system. This commercial partnership will highlight system operation, manufacturability, and cost pathways for future scale-up. This project is the foundation of a partnership with Toyota Tsusho to deploy systems globally across its asset base and to the organization’s portfolio companies.

In parallel, e-Zinc is progressing through successive system generations focused on manufacturability, cost reduction, and commercial scalability.



### Impact Highlights

#### CLIMATE IMPACT

Long duration energy storage enables higher renewable energy penetration by providing reliable power during extended periods of low generation, reducing reliance on fossil-fuel backup generation.

#### SYSTEM IMPACT

e-Zinc’s solution provides secure and dispatchable capacity that supports grid reliability during periods of system stress.

#### ECONOMIC IMPACT

By targeting materially lower system costs than lithium-ion at long durations, e-Zinc makes long-duration energy storage economically viable at scale.

#### SUPPLY CHAIN IMPACT

e-Zinc’s use of abundant, zinc-based materials and a purpose-built long duration architecture reduces reliance on constrained critical minerals and supports a more resilient, scalable supply chain.

### Key Benefits of e-Zinc’s Technology Include

- **Structurally Lower Cost Floor:** Zinc is one of the most abundant industrial metals globally, reducing exposure to critical mineral constraints, geopolitics and price volatility.
- **Reduced Fire Risk:** Zinc-based systems avoid the fire propagation and thermal runaway concerns associated with lithium-ion batteries, making siting and safety planning much simpler.
- **Designed for Long Duration:** The system is optimized for 24-hour and multi-day discharge.
- **Flexible and Modular:** The modular approach allows capacity and duration to scale seamlessly, enabling projects of any size with disciplined cost control.
- **Long System Life and Deep Discharge:** e-Zinc’s technology supports deep cycling and long operational life, improving lifetime energy delivery and reducing replacement costs.
- **Simplified Manufacturing Pathways:** The technology leverages established industrial processes, enabling scalability without the ultra-high-precision manufacturing required for lithium-ion cells.
- **Grid and Industrial Compatibility:** e-Zinc systems are designed for integration with grid infrastructure and renewable energy assets.

# Case Study

## Syzygy Plasmonics A Breakthrough, Years in the Making

Decarbonizing aviation is widely recognized as essential to achieving global climate goals, yet progress has lagged other sectors. Sustainable aviation fuel (SAF), a drop-in replacement for conventional jet fuel produced from lower-carbon pathways, is broadly viewed as a viable near-term solution.

Despite this consensus, adoption has been limited by high costs, constrained scalable pathways, and regulatory complexity. Syzygy's technology represents a breakthrough pathway that avoids feedstock or regulatory prohibitors at a cost point well below other SAF. It is now reaching commercial relevance as a solution that can address the supply gap and define the industry.



### When Climate Policy Collides with Airline Economics

Over 40 countries have policies that advance decarbonization efforts in the aviation industry. In 8 countries, especially across Europe and the UK, these requirements are mandatory. However, the aviation industry is characterized by narrow profit margins and heightened cost sensitivity. Many current SAF production pathways face challenges in meeting both rigorous regulatory standards and achieving cost competitiveness with traditional jet fuel, resulting in a continuing disparity between climate objectives and market feasibility.

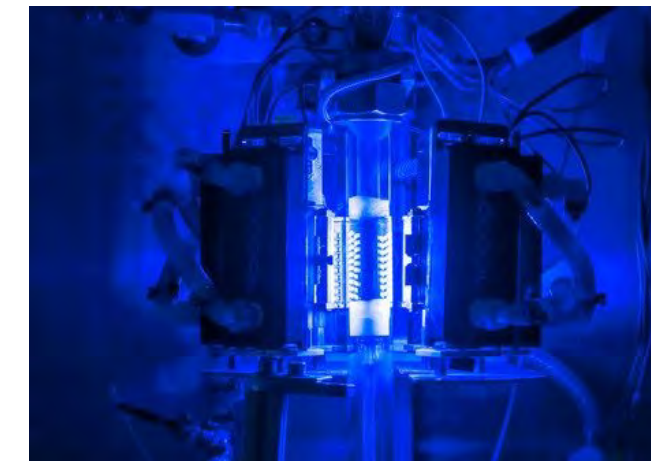
### Replacing Combustion with Light

Syzygy's core innovation is a new chemical manufacturing system that replaces combustion with light. Using an electrified, photocatalytic reactor, and a proprietary photocatalyst, Syzygy enables chemical reactions to occur without fossil-fired industrial heat. This platform approach fundamentally changes the cost and carbon profile of chemical production, enabling more efficient conversion (over 80%) of low-carbon feedstocks into fuels. By decoupling fuel synthesis from combustion, Syzygy unlocks a pathway to scalable, lower-emissions chemicals that would not be feasible using conventional thermal processes.

### Finding the Right Commercial Beachhead

Syzygy initially validated its reactor platform across hydrogen and other industrial reaction pathways, proving the underlying technology at scale. As the team assessed where this breakthrough could generate the strongest near-term impact, they identified SAF production using waste biogas as a feedstock as the right commercial beachhead—an application where waste-derived feedstocks, electrified conversion, and regulatory demand intersected. By advancing the technology to TRL 8 and focusing on regions with favorable feedstock availability and power economics, Syzygy translated a general-purpose platform into a clearly defined, commercially grounded market entry.

In parallel with advancing SAF toward first commercial deployment, the company continues to develop and validate adjacent applications, including low-carbon hydrogen production and ammonia decomposition, using the same core reactor architecture. This platform flexibility provides additional commercial pathways over time, while allowing Syzygy to remain tightly focused on executing its SAF beachhead.



By decoupling fuel synthesis from combustion, Syzygy unlocks a pathway to scalable, lower-emissions chemicals that would not be feasible using conventional thermal processes.

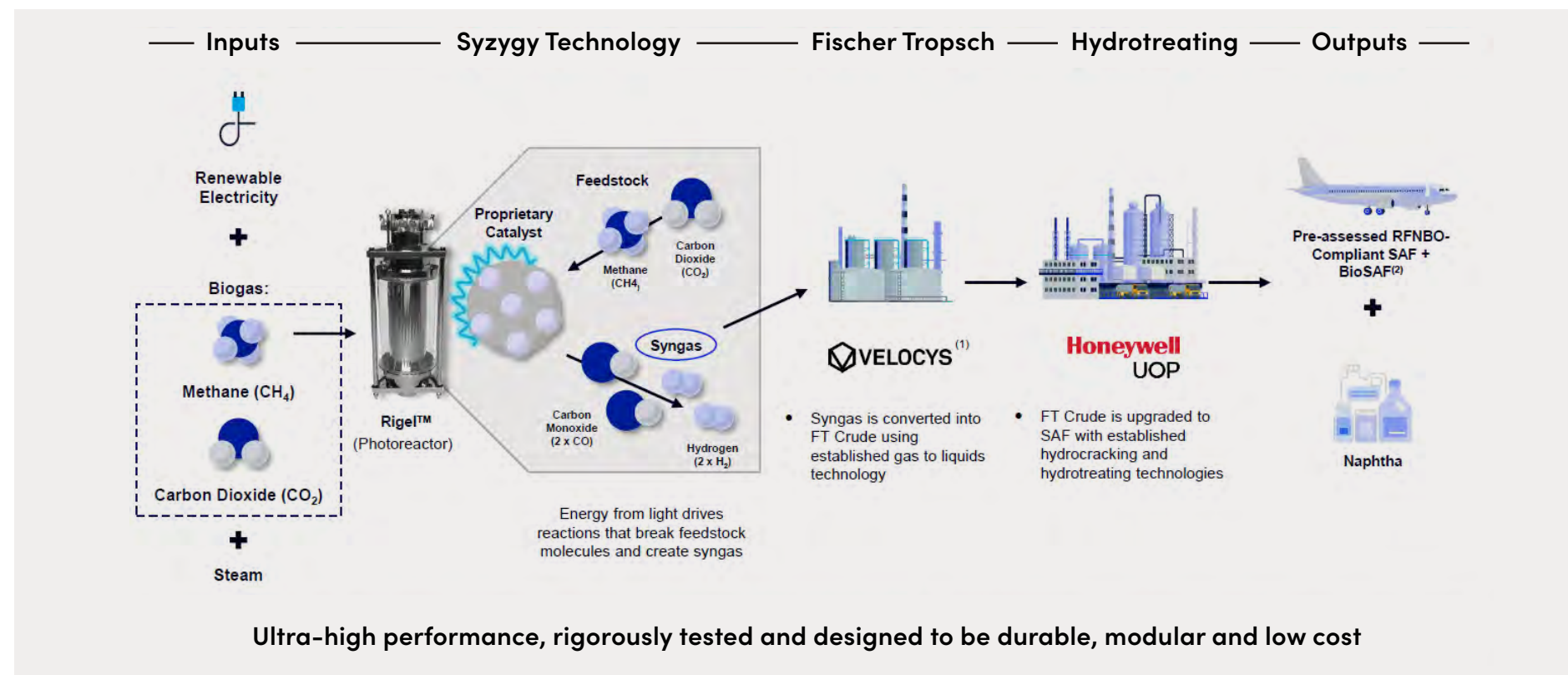
## Syzygy's Advantage in SAF

Syzygy's NovaSAF pathway addresses the core barriers that have historically constrained SAF adoption:

- Designed to meet Europe's stringent RFNBO SAF requirements, including formal regulatory approval pathways.
- Ability to allocate SAF output across compliance categories, unlocking multiple demand pools.
- Positioned to deliver SAF at or near jet-fuel price parity in U.S. incentive markets.
- Uses 80% less electricity than required for competing e-fuel pathways.

This combination of regulatory compliance and competitive economics has driven strong interest from airlines and fuel offtakers seeking both certainty and affordability. Syzygy's approach stands out by aligning policy requirements with real-world purchasing behavior.

### SYZYGY REACTOR AND SUSTAINABLE AVIATION FUEL PRODUCTION PROCESS



## From Technical Validation to a De-Risked Commercial Pathway

Syzygy has reached a key inflection point with the execution of its first commercial NovaSAF project in South America, supported by Honeywell as a technology provider, and the execution of an offtake agreement with Trafigura. The offtake covers 100% of the initial facility's production and the option for future project volumes, providing independent validation of pricing, product quality, and market demand.

The transaction confirms that Syzygy's pathway has simultaneously cleared critical commercialization risks, including technology performance, regulatory compliance, and customer acceptance. With a committed, investment-grade buyer in place, Syzygy has moved beyond technical demonstration to delivering bankable, infrastructure-scale assets. This milestone marks the transition from development risk to execution risk and positions the company to scale a cost-competitive SAF platform with durable economics and measurable decarbonization impact.

In addition to strong offtake, Syzygy has cultivated a pipeline of projects that can produce 700 mmgpy SAF at or below HEFA parity. These sites exist globally with their primary focus on South America, Asia and the United States.

## Syzygy's Impact

- Enables a credible decarbonization pathway for aviation, one of the hardest sectors to abate.
- Lowers the cost barrier to sustainable aviation fuel, supporting adoption at airline scale.
- Translates climate mandates into economically viable fuel supply.
- Reduces lifecycle emissions by shifting fuel production away from combustion-based processes
- Expands the supply of SAF by leveraging waste-derived feedstocks and electrified conversion.
- Demonstrates how industrial chemistry can be electrified to support the broader energy transition.
- Supports SAF today, unlocking applications across hydrogen and ammonia pathways in the future.

**Syzygy's impact lies not only in producing lower-carbon fuel, but in making aviation decarbonization economically viable at scale.**



# Case Study

## MineSense Unlocking More Copper from Existing Mines

### Seeing the Ore Before it Becomes Waste

Every day, mining operators make thousands of decisions about where material should go. A truckload of rock may contain waste, or it could contain valuable copper ore.

Traditionally, those decisions rely on geological models built from limited drilling samples, leaving room for error along complex ore boundaries.



MineSense gives operators a clearer answer in real time. As of March 2026, its systems have already identified more than 24,000<sup>1</sup> tonnes of copper that would otherwise have been lost to waste.

By measuring ore directly on mining equipment as material is excavated and transported, MineSense allows mines to identify valuable material before it is misclassified and discarded. The result is simple: more copper recovered from the same rock already being mined.

### Real-Time Intelligence at the Mine Face

MineSense integrates sensing technology directly into mining equipment to measure ore composition in real time.

Its core technologies operate directly within mine operations:

**ShovelSense** - mounted on electric rope shovels, analyzes every bucket of material as it is excavated.

**BeltSense** - installed on conveyor belts, scans ore before it reaches the processing plant.

Together, these systems provide continuous visibility across the mine-to-mill process. Instead of relying solely on static mine plans built from drilling samples, operators can redirect trucks and adjust blending decisions as material moves through the mine.

Better information at the point of extraction leads to better decisions downstream.



# 825,000

TONNES OF DILUTION REMOVED  
FROM THE ORE STREAM

# 1.6M

TONNES OF ORE RECOVERED  
FROM 'WASTE' MATERIAL

**MineSense shows how better information, delivered directly at the mine face, can unlock meaningful new copper supply without expanding the footprint of mining.**

<sup>1</sup> As calculated by the MineSense team using the client's operational datasets.

## Turning Data Into More Metal

The impact of this visibility is already evident in operating mines.

At Newmont's Red Chris mine in British Columbia, ShovelSense enabled operators to redirect trucks based on real-time grade measurements. Over twelve months of operation:

**1.6 million tonnes** of ore were recovered from material previously classified as waste

**825,000 tonnes** of dilution were removed from the ore stream

The mine's strip ratio improved by **0.40 tonnes** of waste per tonne of ore recovered<sup>1</sup>



At Freeport-McMoRan's Chino copper mine in New Mexico, real-time XRF measurements identified misclassified material along complex ore boundaries. The result was more than 10% of trucks being redirected<sup>2</sup>, reducing dilution and ore loss.

At AMSA's Centinela operation in Chile, the company reports that ShovelSense allows operators to monitor, in real time, the quality of ore being loaded by mining shovels.

In each case, the change is the same: identifying valuable material at the moment it is mined rather than after it has already been processed or discarded.

## Scaling Across the World's Copper Regions

MineSense systems are now operating across major copper-producing regions including Canada, the United States, Chile, Peru, Brazil, and Australia.

Mining companies often begin with a single installation and expand across multiple shovels and sites once the operational value becomes clear.

## Unlocking Copper Supply Without New Mines

Copper demand is rising rapidly as electrification, grid expansion, and renewable energy systems scale worldwide. At the same time, ore grades are declining and new mine development is becoming slower and more complex.

Improving recovery at existing mines offers one of the fastest ways to increase supply.

By helping operators recover more metal from the material they already move, MineSense enables mines to produce more copper without expanding pits or developing new projects.

As demand for critical minerals grows, improving the efficiency of existing mines will be as important as developing new ones.

MineSense shows how better information, delivered directly at the mine face, can unlock meaningful new copper supply without expanding the footprint of mining.

“This innovation [ShovelSense] has significantly improved the efficiency of ore dispatch to processing plants, enhancing selectivity, improving ore recovery and preventing waste material from entering the ore stream.”

— Antofagasta Minerals S.A. (AMSA),  
Centinela Operations



<sup>1</sup> Red Chris Mine figures, Fitcher et al., AUSIMM Mill Operators' Conference (2024).

<sup>2</sup> Freeport-McMoRan Chino Mine, ShovelSense bulk ore sorting use cases.

# Conclusion

This report reflects Evok's continued commitment to measuring and communicating the real-world impact of the companies we support. Across our portfolio, entrepreneurs are developing technologies that strengthen energy systems, improve industrial efficiency, secure critical mineral supply chains, and help infrastructure adapt to a changing climate. While many of these companies remain in the early stages of growth, their innovations are already contributing to meaningful environmental and economic outcomes.

As the climate investment ecosystem continues to mature, so too must the way impact is measured and reported. Evok remains committed to advancing practical and transparent reporting practices that allow early-stage companies to track meaningful metrics while continuing to focus on building transformative technologies.

We are grateful to our portfolio companies for the time and effort they dedicate to participating in this survey, and to our limited partners and ecosystem partners whose feedback continues to strengthen our reporting approach.

If you have any questions about this report, please contact [info@evokinnovations.com](mailto:info@evokinnovations.com)





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