LATAM Cleantech 25

Sustainable Innovation making an impact in Latin America

Supported by:

Breakthrough Energy FELLOWS

2025 Cleantech Group

Contents

Major Contributors:

Arianna Bernas
Analyst, Data & Ecosystems

Buff Lopez
Associate, Materials & Chemicals

Carole Jacques
Director of Marketing

Diana Rasner
Group Lead, Materials & Chemicals and Waste & Recycling

Natalie Cox
Events and Programs Manager

Nicole Cerulli
Associate, Transportation & Logistics

Sarah O'Connell
Director of Events & Programs

Sasha Bukhari
Associate, Data & Ecosystems

Sunena Gupta
Associate, Resources & Environmental Management

Zainab Gilani
Associate, Energy & Power

Cleantech Group Executive Editor:

Anthony DeOrsey — Research Manager

2025 LATAM Cleantech 25

01 Trend Watch

We are excited to bring you the second iteration of our LATAM Cleantech 25 report. In a world that has changed markedly since our last release, we see multiple tracks of cleantech innovation in Latin America – some converging with the global topics of the moment, and some unique to Latin America and strengthening.

If there is one thing that can be concluded from this year's cohort of LATAM Cleantech 25 awardees it is that the urgency for climate adaptation and resilience is firmly in the top priorities in Latin America. This is a striking contrast from the rest of the world, where, for the most part, the awakening to opportunity around adaptation and resilience challenges feels like it's only at its advent.

Research Manager, Cleantech Group:
Anthony DeOrsey

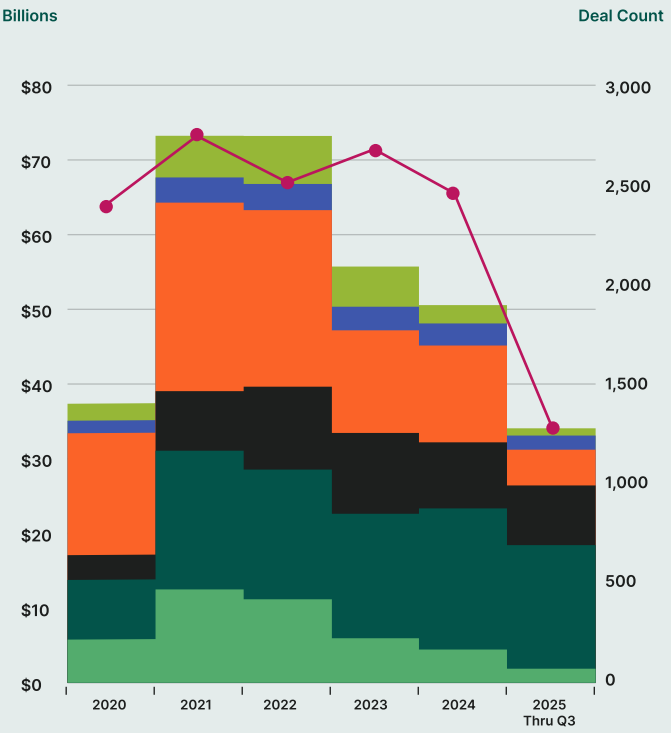
Venture & Growth Investments in Cleantech Innovators

Latin America

Waste & Recycling
Transportation & Logistics
Materials & Chemicals
Agriculture & Food
Energy & Power
Resources & Environmental Management
Total Deal Volume

*Seed, Series A, Series B, Growth Equity
**Includes outlier deals above $350M

Rest of the World



Waste & Recycling
Transportation & Logistics
Materials & Chemicals
Agriculture & Food
Energy & Power
Resources & Environmental Management
Total Deal Volume

*Seed, Series A, Series B, Growth Equity
**Includes outlier deals above $350M

While the investment numbers in Latin America show a downturn from previous years (especially last year's landmark year), there are developments at the policy level that are likely to stimulate more innovation in adaptation and resilience.

Policy activities from Brazil and Argentina are motivating resilience, with a focus on food systems:

- **Brazil's MAIS Program:**

  Brazil, a major food producer, is implementing the MAIS Program to help family farmers adapt to climate change. This program provides a "climate-smart toolkit" with best practices for animal nutrition, farm management, and restoring degraded pastureland, particularly in semi-arid regions. The World Bank also supports a $1.6B program in Brazil to increase agricultural productivity, market access, and climate resilience for family farmers across 12 states. These initiatives align with Brazil's updated Nationally Determined Contributions (NDCs), which commit to reducing greenhouse gas emissions by 48% by 2025 and 53% by 2030.

- **Argentina's National Plan:**

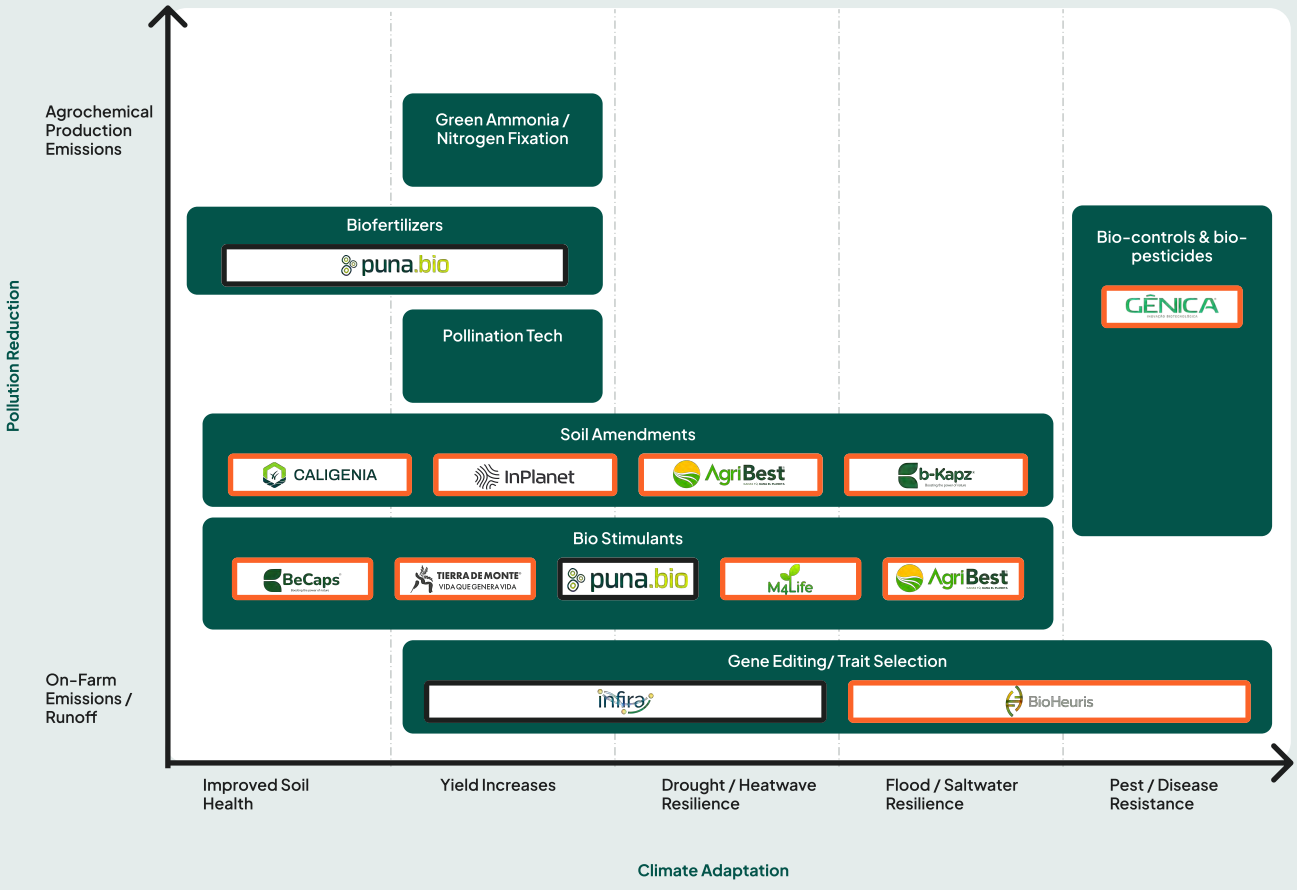
  Argentina has a National Plan for Adaptation and Mitigation to Climate Change that includes measures to improve sustainable management of food systems and forests. The plan aims to make industrial production systems more resilient to threats like floods, droughts, and rising temperatures. The government is also promoting the use of biofuels from organic waste.

This is likely impactful on the innovation ecosystem, given that these two countries' innovators comprise over half (Brazil: 4, Argentina: 10) of this year's awardees. Nevertheless, there is observable momentum on adaptation and resilience across Latin America, most substantially in crop resilience.

Crop Science in LATAM – Regional Ability with Global Relevance

We wrote last year that Latin America's talent pool in biotechnology and horticultural sciences was crystallizing into an innovation advantage around crop science. This strength has only solidified further in the past year–a stunning 8 out of this year's LATAM Cleantech 25 have some type of tie-in to crop resilience.

Innovation in Crop Inputs



2025 LATAM Cleantech 25 Awardees

2024 LATAM Cleantech 25 Awardees

While some crops actually respond positively to higher carbon content in the atmosphere, it's the downstream effects of climate change that are posing multi-pronged threats. **A 2024 report by the Food and Agriculture Organization (FAO) of the UN** stated that 74% of countries in Latin America and the Caribbean are highly exposed to extreme weather events, such as droughts and floods. Given that these effects are already in motion, it's not surprising to see the urgency with which Latin American innovators are tackling these threats.

This year's LATAM Cleantech 25 boasts a variety of approaches to supporting crop resilience and, in most cases, improving yield:

01 Tierra de Monte (Mexico)

Tierra de Monte (Mexico) develops and sells biological products, such as biofertilizers and biopesticides, for regenerative agriculture.

Why it matters: Tierra de Monte's products regenerate soil and protect crops using natural microorganisms, which increases productivity while reducing the use of harmful agrochemicals.

02 Genica (Brazil)

Genica (Brazil) produces bioinputs, such as bioinsecticides and inoculants, to enhance agricultural productivity.

Why it matters: Farmers using products like Genica's can improve soil health, reduce their reliance on synthetic chemicals, and mitigate the negative environmental impacts associated with conventional agriculture, such as water pollution and harm to non-target species.

03 BeCaps (Argentina)

BeCaps (Argentina) has developed a microencapsulation platform to transform liquid bioinputs into solid, highly stable formats.

Why it matters: This addresses a major limitation of bioinputs: their instability. By transforming liquid bioinputs into stable, solid formats, BeCaps makes them easier to store, transport, and apply. This increases their shelf life and allows them to be mixed and used alongside traditional chemical fertilizers, making them more accessible and efficient for farmers.

04 BioHeuris (Argentina)

BioHeuris (Argentina) uses a heuristic breeding platform to develop non-GMO crop traits, such as herbicide tolerance.

Why it matters: By developing crops that tolerate low-dose, broad-spectrum herbicides, they enable a more precise and efficient application of chemicals. This reduces the total amount of herbicide used, which in turn lowers the risk of environmental pollution and helps to delay the development of herbicide-resistant weeds.

05 Caligenia (Argentina)

Caligenia (Argentina) specializes in soil restoration through biotechnology, using organic amendments and microorganisms to create a product called Bacterchar.

Why it matters: This approach transforms degraded soil into productive land, generates renewable energy during production, and helps store carbon for hundreds of years.

06 M4Life (Argentina)

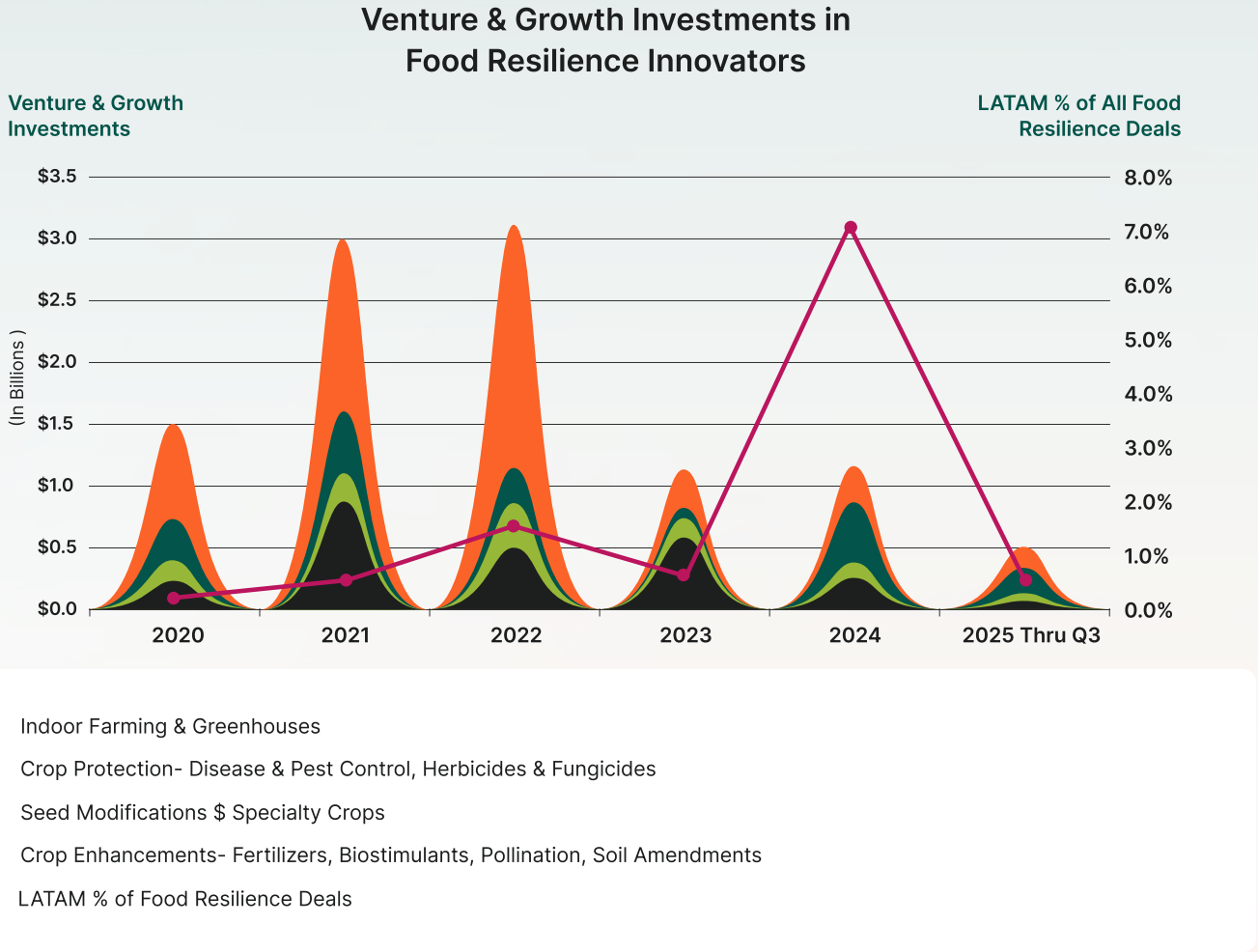
M4Life (Argentina) develops products using microorganisms produced in high-stress environments to create products for various applications, including food, health, and environmental restoration.

Why it matters: By isolating microorganisms from plants that already thrive in stressful conditions, then further enhancing their capabilities, this product creates a natural shield for crops from the very start. When applied directly to seeds, these "bio-trained" microbes promote robust plant growth and actively restore the beneficial biodiversity of the soil.

The Latin American crop science space is set to benefit from the latest advances in AI as well. See Calice's (Argentina) proprietary computational field trials platform (NODES) to help agri-food companies simulate and optimize trials digitally, reducing the uncertainty of real-world outcomes.

System-Wide Food Resilience Innovation Crystallizing in LATAM

Insulating the wider food system against climate change effects will of course require the crop science innovation discussed earlier, but a diversification of inputs and supply sources will also be necessary. Not just in Latin America, the food resilience innovation space at large has stalled since the boom and bust of indoor farming at the beginning of the decade. Still, we see in this year's LATAM Cleantech 25 a few peeks at new approaches that are solving highly relevant local problems.



*Seed, Series A, Series B, Growth Equity

**Includes outlier deals above $350M

07 Cellva Ingredients (Brazil)

Cellva Ingredients (Brazil) uses a biotechnology platform for microencapsulation and biofabrication to create sustainable food ingredients.

Why it matters: Cellva's approach allows for the development of natural flavor carriers, reduced-fat alternatives, and bioactive compounds, helping food manufacturers create healthier products but also creating new sources of supply for food manufacturers.

08 Kran Nanobubble (Chile)

Kran Nanobubble (Chile) leverages "nanobubbles" to improve production processes that rely on liquids. Their solutions are designed to enhance efficiency and sustainability for businesses, particularly in the agriculture, industrial, and aquaculture sectors.

Why it matters: The enhanced soil penetration of nanobubble-enhanced water allows for more efficient irrigation, enabling significant cuts in water consumption (up to 50% in some cases). Better oxygenation improves root health and nutrient uptake, leading to increased caliber, firmness, and overall yield. This strengthens a farm's ability to maintain productivity despite environmental stress.

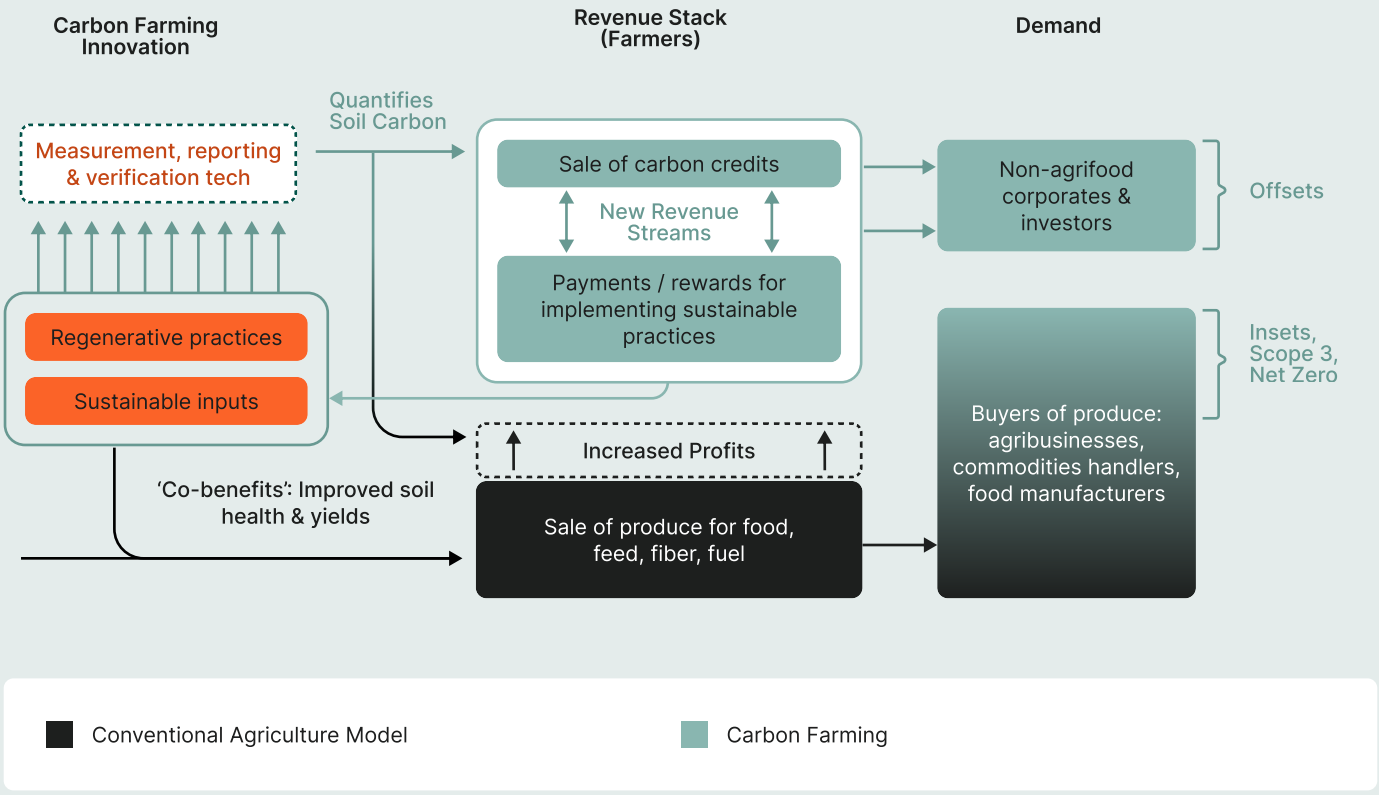
Carbon Farming

Can LATAM Crack the Co-Benefits Equation?

We have observed, in recent years, a number of highly vaunted but not-yet-proven innovations in the carbon farming space. The promise of carbon farming is that one can use natural inputs to soil that capture carbon, providing a source of revenue for the supplier of inputs from carbon credits.

The demand for carbon credits alone is unpredictable and has suffered from credibility challenges in recent years due to scandals in voluntary carbon markets. However, those companies that provide carbon farming techniques with proven co-benefits (i.e., the ability to increase farmer yields) will be most likely to experience market uptake.

Carbon Farming – Can LATAM be the Testbed for Profitability?



InPlanet (Brazil) applies basalt rock dust to agricultural lands and not only captures and removes CO_2 from the atmosphere but also acts as a natural fertilizer. This regenerative approach improves soil health and fertility, which in turn leads to higher crop yields, increasing the likelihood that farmers will adopt the solution (i.e., a revenue-increasing motivation, versus just carbon removal).

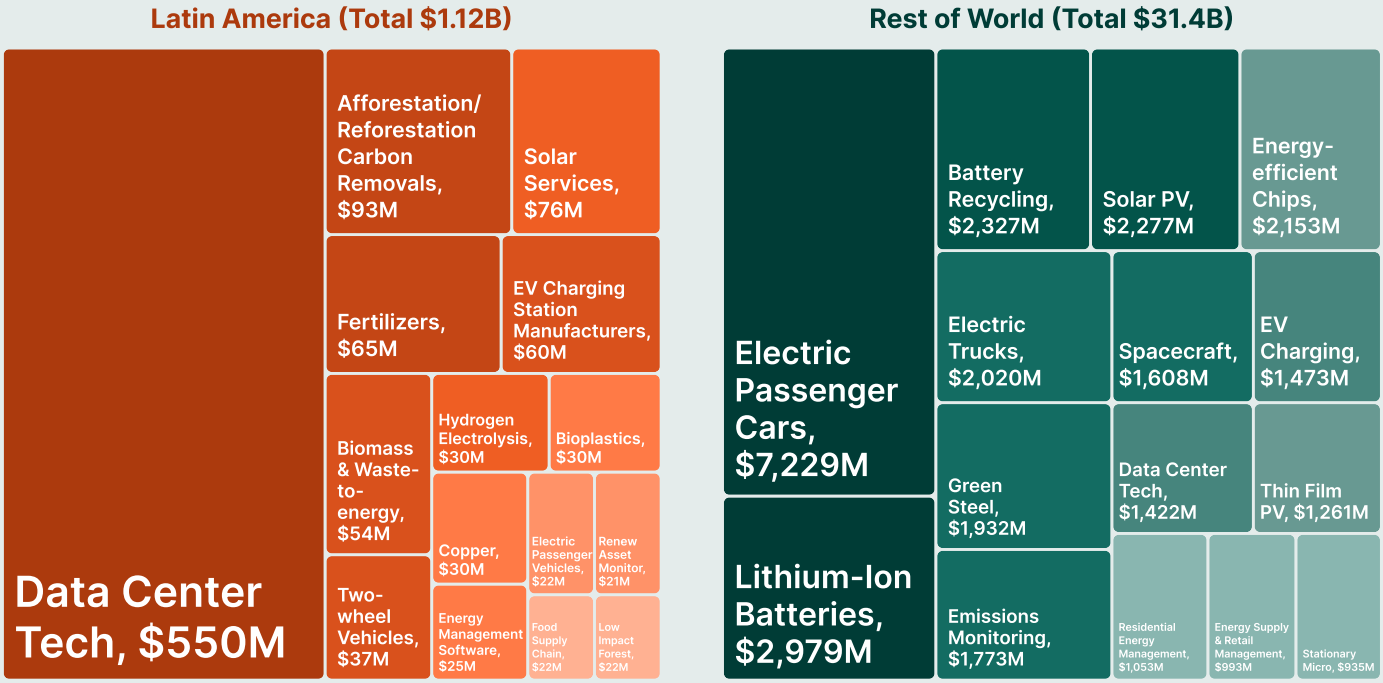
Soil improvement is a material food security issue in Latin America. The FAO estimates that 75% of soils in Latin America and the Caribbean are at risk of degradation. Many of the region's tropical soils are naturally acidic and nutrient-poor, a problem exacerbated by deforestation and intensive farming practices.

An Emerging AI Economy in Latin America

Mirroring the motivation seen globally to create more, and more efficient, infrastructure for the AI economy, we see data center tech as a major theme in cleantech investments in Latin America.

Similar to approaches seen elsewhere, there is a drive to make use of existing energy infrastructure to power AI. Unblock Computing (Argentina) is powering distributed data centers with otherwise flared natural gas and curtailed renewables.

Top 15 Investment Areas (2023 – H1 2025)



Using AI to solve for one of the major challenges of the AI revolution–grid congestion–Sentrisense (Argentina) has developed monitoring and optimizing for overhead power grids, including quick incident detection and dynamic line rating.

It's worth noting that grid monitoring AI is taking hold globally, with new innovators launching seemingly every day to tackle specific grid challenges or geographies. Note that 2024 LATAM Cleantech 25 awardee Splight (Argentina) went on to raise a $12.4M round in August 2025 during its push into the U.S. market.

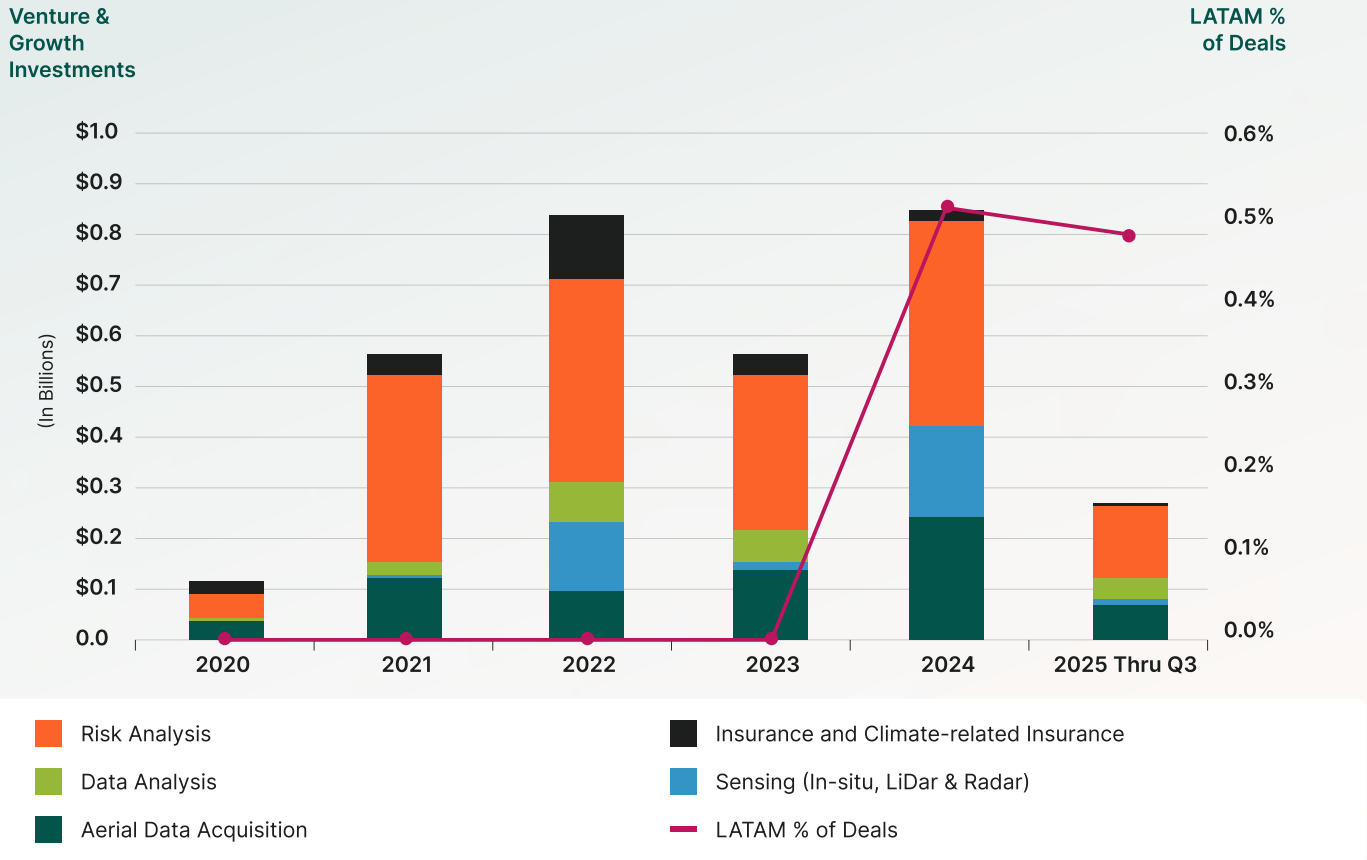
Local industries are benefitting from advanced AI as well. Allie AI (Mexico) is highly active in the food & beverage industry, providing AI that monitors and adjusts variables like temperature and mixing in real time to prevent errors and waste.

Perhaps more importantly, Allie is moving AI tools from data scientists and CFOs to the factory floor with FactoryGPT, that allows plant managers and engineers to interact with factory data using natural language, making complex data accessible for better decision-making.

AI Provides a Boost to Risk Management and Adaptation Proactivity

2024 was a landmark year globally for innovation and investment in Earth observation, both in the furthest upstream of unique sensors and satellites but also the downstream of risk management tools aimed at faster, more detailed insights. This year's LATAM Cleantech 25 highlights a variety of application spaces being pursued in Latin America.

Venture & Growth Investments in Earth Observation & Environmental Risk Analysis Innovators



- Satellites on Fire (Argentina) provides an early and rapid wildfire detection and monitoring platform. Their technology combines satellite imagery and a network of ground-based cameras with proprietary AI algorithms to detect fires faster than conventional public systems like NASA's. Their platform provides real-time alerts and monitoring to help prevent small fires from escalating into catastrophes.

  - **Note**
    This is the second wildfire detection company to land on the LATAM Cleantech 25–2024 saw Umgrauemeio (Brazil) on the list. Umgrauemeio is an AI-powered risk management and analysis solution in surveillance cameras to detect fire outbreaks in forests and plantations in an average time of 3 minutes.

- Raincoat (Puerto Rico) is an insurtech company that develops and delivers scalable climate insurance products for natural disasters. Using a parametric insurance model, their technology enables automated, end-to-end solutions for governments, financial institutions, and insurers. This means payouts are triggered automatically when a pre-defined event occurs (like a hurricane reaching a certain wind speed), without the need for a lengthy claims process.

Indeed, adaptation and resilience require the most forward-looking innovation perspective, but those with early solutions in the field will be best positioned to iterate and improve as climate change effects evolve. Latin American innovators in these fields are likely to find themselves increasingly globally relevant in coming years. And adopters from outside of LATAM should increasingly look toward LATAM for real-time evidence of technology success in facing down these challenging problems.

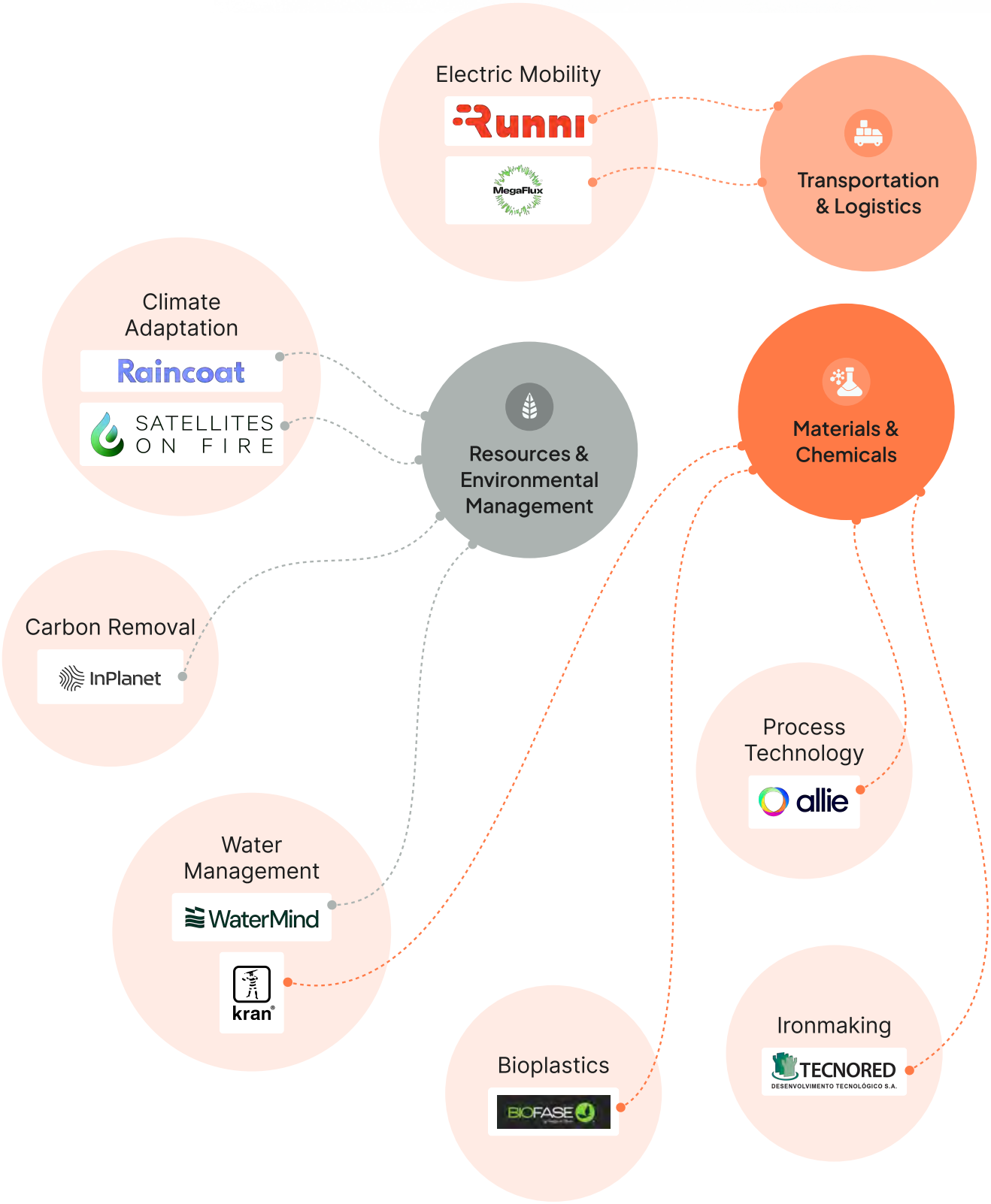
We once again extend our congratulations to this year's awardees, and our thanks to the expert panelists that helped us arrive at this list.

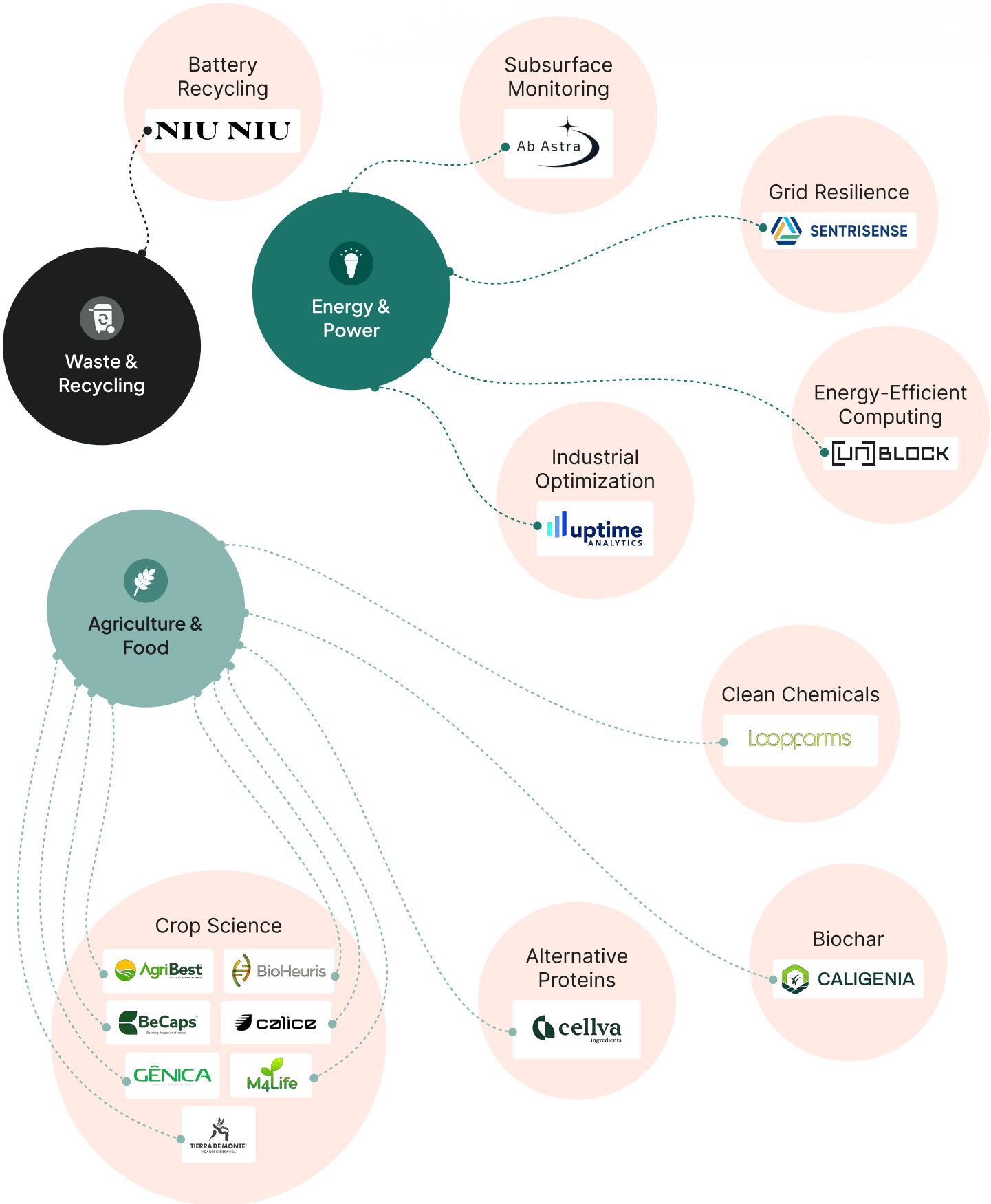
The LATAM Cleantech 25

02 Company Map

Company Map

Presenting the 2025 LATAM Cleantech 25 by Sector




Battery Recycling
NIU NIU
Subsurface Monitoring
Ab Astra
Grid Resilience
SENTRISENSE
Energy & Power
Waste & Recycling
Energy-Efficient Computing
UNBLOCK
Industrial Optimization
uptime ANALYTICS
Agriculture & Food
Clean Chemicals
Loopfarms
Crop Science
AgriBest
BioHeuris
BeCaps
calice
GÊNICA
M4Life
TIERRA DE MONTE
Alternative Proteins
cellva ingredients
Biochar
CALIGENIA

The LATAM Cleantech 25

03 Case Studies

01 **AgriBest by Nicole Cerulli**
Associate, Transportation & Logistics
Cleantech Group

02 **Kran Nanobubble by Diana Rasner**
Group Lead, Materials & Chemicals and Waste & Recycling
Cleantech Group

03 **Loopfarms by Buff Lopez**
Associate, Materials & Chemicals
Cleantech Group

04 **Satellites on Fire by Sunena Gupta**
Associate, Resources & Environmental Management
Cleantech Group

05 **Uptime Analytics by Zainab Gilani**
Associate, Energy & Power
Cleantech Group

Case Studies

Case Study

Agriculture & Food

AgriBest

Company Name: AgriBest

Country: Mexico

Company Founded: 2013

Number of Employees: 70

TRL: 9

Key Facts

36 soil regeneration, biofertilization, biostimulant, and pest-control products; tailored treatment plans for over 130 crops.

AgriBest has helped train over 7,000 growers from across LATAM on bio-inputs and regenerative agriculture solutions through its digital platform for agricultural transformation.

What Is the Company and What Do They Do?

AgriBest is an agrobiotechnology innovator combining biotech with digital solutions to promote sustainable, regenerative agriculture. AgriBest develops tailored crop bio-inputs to improve soil health and increase crop production, accompanied by satellite monitoring services for precision application and tracking.

Nicole Cerulli
Associate, Transportation & Logistics, Cleantech Group

How It Works

AgriBest provides a two-part solution, combining satellite diagnostics (iCrop) and biotech for bio-restoration (Doctor Terra). Users upload soil analyses to the Doctor Terra platform, which creates a personalized "bio-restoration" plan combining biostimulants, inoculants, and biofertilizers to improve soil health and crop productivity. AgriBest's iCrop service leverages satellite remote sensing (EOSDA), enabling remote monitoring and diagnosis for optimized soil treatment, weather and vegetation tracking, and real-time impact reporting.

Distribution is handled mostly through an official distributor network plus a private agronomist network called TransformAgro. They also partner with universities, ministries, and growers to adapt, test, and scale their solutions.

Key Differentiator

AgriBest bundles soil diagnostics, bio-inputs, and satellite analytics for an end-to-end solution for soil bioremediation and crop productivity. The Doctor Terra platform goes beyond supplying crop inputs and restores soil health, including microbiota, soil structure, and organic matter. Additionally, integration of EOSDA crop monitoring provides clients with clear data on product impact and optimization of product deployment.

Potential Impact

Use of chemical inputs for agriculture releases carbon and other climate-warming emissions as well as air pollutants, and causes a negative cycle of chemical dependency, requiring more chemical inputs each season. AgriBest's non-chemical solutions can be paired with, or entirely replace, chemical fertilizers, pest treatment, and crop productivity solutions, breaking the cycle of chemical use and chemicals-related emissions while improving crop productivity.

Increased crop productivity, soil health, and digitally-enabled farm operations provide clear economic benefits, particularly to small growers, addressing a key barrier to the adoption of regenerative agricultural practices.

Ambition/Next Steps for Company

AgriBest aims to scale both domestically and internationally—in September 2025, they opened their first market in Honduras via their distributor partner, Ecoinversiones. They plan to expand manufacturing infrastructure to meet growing demand and are seeking financial investment for market expansion and capacity

building. Internally, they are investing in continuing R&D and strengthening the TransformAgro agronomist network. They also recently secured a regulatory milestone (Cofepris certification for their bio-herbicide) which will likely open up wider regulatory compliance and market access.

Key Things to Watch in This Space

Investment levels in crop inputs have not experienced the pronounced downturn seen in some other areas of deep cleantech, suggesting a recognition among investors that crop input innovations present a significant opportunity to quickly adapt existing agricultural systems to climate realities. Additionally, geopolitical tensions are driving investment into localized fertilizer production solutions while regulatory headwinds are doing the same for biological alternatives to chemical crop protection products.

AI/ML is emerging as a key space to watch in crop inputs innovation, accelerating conventional discovery, R&D, and compliance processes to significantly reduce time-to-market for new products where conventional commercialization timelines could reach over 10 years.

Why AgriBest Made the List

AgriBest's solution reduces chemical fertilizer and pesticide use, improves crop production, enables higher soil carbon sequestration, and reduces nitrous oxide emissions, while optimizing field operations and on-farm emissions through remote sensing.

By providing a cost-effective, non-chemical solution, the company plays a pivotal role in increasing the accessibility of agricultural cleantech solutions, empowering local agricultural communities, and integrating biotech, digital solutions, and cleantech into the agriculture sector.

> **"AgriBest's goal is to democratize cleantech and biotechnology, making it accessible to all growers, and to increase awareness on the benefits of biotech in agriculture, both in terms of productivity and sustainability."**
>
> – Obed Mayoral Fernández, CEO

Case Study

Materials & Chemicals

Kran Nanobubble

Company Name: Kran Nanobubble

Country: Chile

Company Founded: 2016

Number of Employees: ~50

TRL: 8-9

Key Facts

In a pilot with Salmones Camanchaca, Kran's nanobubble technology cut chiller disinfectant use by 70% and detergents by 50%, making them the first salmon farming company in Chile to use nanobubbles for hygiene.

Kran Nanobubble has won awards for their impact in water management, including the World Economic Forum Zero Water Waste Challenge (2024) and Siemens Chile's Water Innovation Challenge.

What Is the Company and What Do They Do?

Kran Nanobubble develops and deploys nanobubble systems that enhance the chemical and physical properties of water—improving oxygenation, treatment, reuse, and process efficiency. Their team engineers each nanobubble solution to be specifically adapted to their customer's pain points, whether it be in reducing overall chemical usage or improving energy efficiency and overall reclamation of water as a diminishing resource. With applications in industrial processes, agriculture, aquaculture, and wastewater sectors, Kran Nanobubble treats water as a universal link that connects everything and everyone, with nanobubbles there to help make all processes more circular and efficient.

Diana Rasner
Group Lead, Materials & Chemicals and Waste & Recycling, Cleantech Group

How It Works

Kran designs customized systems that inject different types of gas into water, forming stable ultrafine bubbles (~70–150 nanometers) that remain suspended in the liquid medium, enhance mass transfer, and influence chemical reactions. They integrate this technology into existing infrastructure ("drop-in" modules), minimizing retrofit costs. Kran emphasizes the need for tailored design: they evaluate flow, pH, volume, gas dosage, operating parameters, and propose system maintenance to all their customers to ensure delivered target improvements.

Key Differentiator

Kran Nanobubble distinguishes itself through its modular and adaptable approach to water optimization. Its systems are designed as plug-in solutions that integrate seamlessly into existing industrial, agricultural, or aquaculture infrastructure—eliminating the need for costly or disruptive retrofits. This flexibility allows clients to adopt nanobubble technology without halting operations or redesigning core processes. Moreover, Kran's technology stands out for its cross-sector versatility, capable of addressing diverse challenges such as water treatment, oxygenation, and process efficiency across industries.

Potential Impact

Kran Nanobubble's technology has the potential to transform how industries manage water, energy, and chemical resources. By improving oxygenation, enhancing cleaning efficiency, and enabling water reuse, their systems can substantially reduce chemical consumption, lower energy demand, and minimize freshwater use across multiple sectors. As water scarcity intensifies and sustainability pressures grow, Kran's proven ability to achieve measurable efficiency gains positions it as a key contributor to global decarbonization and resource resilience efforts.

Ambition/Next Steps for Company

Building on a strong foundation of validated pilots, Kran Nanobubble is entering a strategic scaling phase. The company's immediate priorities include deepening its presence in Latin America, mainly in the food and beverage industries, expanding its manufacturing capacity in the U.S, and advancing new partnerships in key industrial sectors that have water-intensive processes to manage.

Key Things to Watch in This Space

As global water scarcity intensifies, water management is becoming a strategic imperative across sectors—from agricultural irrigation to the growing cooling demands of data centers. Access to clean water is now a critical resource challenge, driving investment and innovation toward technologies that enhance efficiency, circularity, and resilience throughout the water cycle.

Solutions that enable decentralized treatment, closed-loop reuse, and reduced chemical dependence are emerging as essential components of sustainable industrial operations. At the same time, governments and corporations are tightening water-related ESG metrics, prioritizing solutions that deliver measurable reductions in both water consumption and pollution.

Why Kran Nanobubble Made the List

Kran Nanobubble is bridging high-tech science and practical sustainability. Kran's ability to deliver modular, cross-sector water optimization positions it as a critical enabler of circular water management and resource efficiency. With credible pilots, global expansion, and institutional recognition, it demonstrates that emergent water-tech can scale beyond niche applications and have a massive impact on the use of water now and in the future.

> **“If you went back 5 years and told people what we did at Kran, they would go nano-what? Today, people recognize nanobubbles and we get to share their incredible potential.”**
>
> – Catalina Pfenniger, CEO

Case Study

Agriculture & Food

Loopfarms

Company Name: Loopfarms

Country: Argentina

Company Founded: 2021

Number of Employees: 3

TRL: 6

Key Facts

For every 1.2 L of biostimulant, only 1 kg of waste is produced, while recovering:

- 850 L of water
- Nitrogen, phosphorus, and potassium (essential nutrients)
- Electrical & thermal energy

40–60% reduction in fixed costs for microalgae cultivation compared to using chemical fertilizers and commercial CO_2 for the formulation of culture media.

What Is the Company and What Do They Do?

Loopfarms accelerates climate change mitigation in cities by valorizing food waste using microalgae—a sustainable raw material with high CO_2 mitigation capacity, under an urban biorefinery model. Its decentralized cultivation approach contributes to the transition to regenerative agriculture and the decarbonization of supply chains across various industries.

Buff Lopez
Associate, Materials & Chemicals, Cleantech Group

How It Works

The process valorizes food waste streams into high-value products for animal feed, biofertilizers, feed additives, and more. Food waste is broken down via anaerobic digestion to produce digestate and biogas. The biogas is then used to grow microalgae in photoreactors through a closed-loop system with precise control. Its photobioreactors operate on non-potable water, avoiding competition with agriculture. The end products are low-cost alternatives to open systems.

Key Differentiator

Generally, synthetic culture media required for open systems are formulated with chemical fertilizers, but these inhibit large-scale production due to high costs and poor sustainability footprints. Loopfarms developed a patent-pending biogas process for the use of undiluted digestate as a microalgae culture medium, along with cyanobacteria strains.

The process does not require digestate to be diluted with freshwater, rather it operates on non-potable water. The use of digestate replaces the requirement for chemical fertilizers, thereby reducing harmful chemicals waste. What's more, Loopfarms' vertically integrated solution means it can deliver low-cost products for farmers. Cost is dependent on a number of variables including location, regulation, and logistics.

Potential Impact

Loopfarms has a pilot micro-biorefinery in Córdoba, Argentina. Its demonstrated 40%–60% reduction in fixed costs for microalgae cultivation compared to using chemical fertilizers and commercial CO_2 for the formulation of culture media. For every kilogram of waste produced, Loopfarms recovers resources like thermal and electrical energy, nutrients, and carbon dioxide. These are transformed into microalgae that are formulated into high-value products like agricultural biofertilizers—currently the most attractive application.

Ambition/Next Steps for Company

The potential of microalgae is enormous for decarbonizing supply chains for various industries while collaborating on climate mitigation. In the medium-term, Loopfarms is focused on adding value to the active ingredients obtained from microalgae to enter other sectors like biofuels. The company also aims to integrate and sell its know-how to operational biogas plants. Loopfarms is also part of a Horizon Europe project, specifically contributing microalgae expertise to a cluster of companies aiming to produce sustainable aviation biofuels from biogas industry by-products.

Key Things to Watch in This Space

The South American Recycle Organics (RO) Program has significantly expanded its efforts to curb methane emissions by partnering with the Climate and Clean Air Coalition (CCAC). This collaboration, marking Argentina's second RO project, focuses on developing national and local policies for organic waste recovery.

This strategic, high-level support enables the success of innovative waste treatment technologies that convert organic waste into valuable byproducts, such as compost, digestate, and biogas. The move signals strong backing from international organizations, providing a clear path for sustainable, long-term waste management strategies in the region.

Why Loopfarms Made the List

In 2023, the UNDP Latin America and the Caribbean estimated that over 70% of emissions in South America were attributed to Latin American agriculture, forestry, and other land use. What's more, as much as 8% of global greenhouse gas emissions arise from food system emissions. In this region, farmers are desperately exploiting valuable resources across Indigenous lands and rainforests to feed the globe. Even livestock require large amounts of land for grazing and water that further perpetuates this cycle. These industries are booming at the production end, supplying most of the globe's food demands, while consuming vast amounts of land and resources. Very little innovation exists to help farmers mitigate their emissions or to improve their sustainability footprints.

Loopfarms' biorefineries are not a new innovation in North America, Europe, or even Asia. But in Central and South America, this innovation is desperately needed to help reinforce regenerative agriculture and to deliver low-carbon macronutrients to farms and livestock production.

> **"The biggest lesson is to first consider what problem one can solve for a potential market and then see how it aligns with your climate technology—not the other way around."**
>
> – Mauro Barberis, Founder

Case Study

Resources & Environmental Management

Satellites on Fire

SATELLITES ON FIRE

Company Name: Satellites on Fire

Country: Argentina (operating globally across Latin America, North America, and APAC)

Company Founded: 2020

Number of Employees: 17

TRL: 7-8

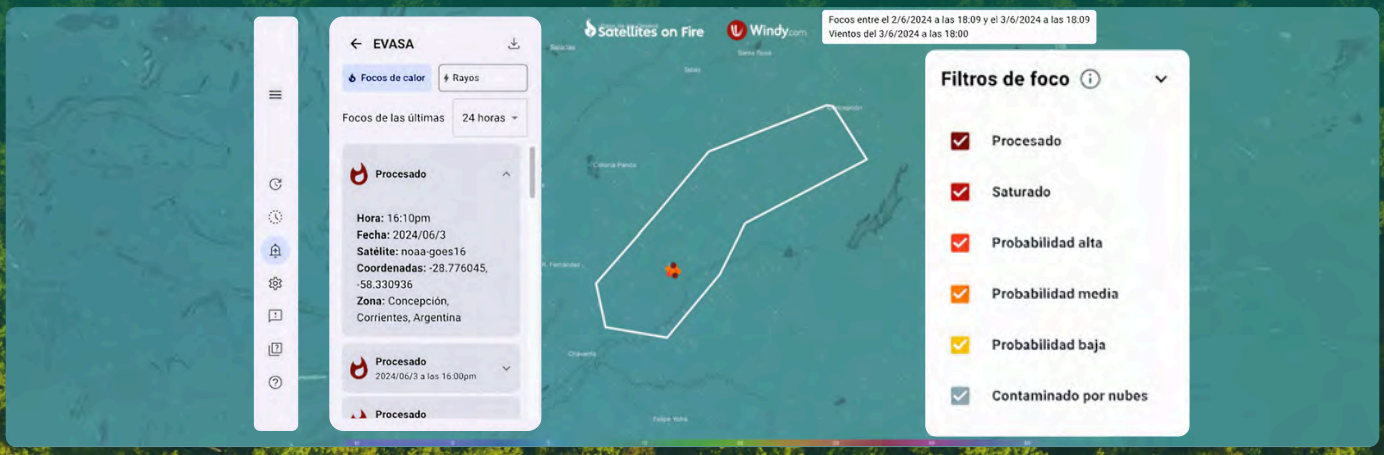
Key Facts

Satellites on Fire's AI system detects wildfires an average of 35 minutes faster than public satellite systems, enabling earlier interventions.

The platform currently monitors over 56M hectares across 19 countries and supported responses to more than 400 wildfires in a single quarter.

What Is the Company and What Do They Do?

Satellites on Fire is an AI-powered wildfire and deforestation early alert system designed to detect fires significantly faster than public systems. Its mission is to transform wildfire detection from a slow, reactive process into a proactive, intelligence-driven system that prevents loss of life, biodiversity, and economic stability. Today, the platform protects over 56 million hectares and has already supported responses to more than 400 wildfires in a single quarter. The company has grown into a 17-person team operating in 19 countries across Latin America, North America, and Asia-Pacific.



Sunena Gupta
Associate, Resources & Environmental Management, Cleantech Group

How It Works

The platform integrates multiple real-time data streams such as satellite imagery updated every five minutes, tower-mounted optical cameras, weather forecasts, and ground reports from over 50,000 users, which all goes into a single AI-powered system. This combination enables detection an average of 35 minutes faster than NASA's public systems and a 30% increase in fire detection overall. Alerts and fire spread simulations are sent directly to fire brigades via WhatsApp or SMS, allowing teams to see how fires might evolve in the next hours and deploy resources more effectively.

Key Differentiator

Unlike most wildfire solutions that rely on a single approach, Satellites on Fire consolidates multiple technologies (satellites, cameras, and ground user reports), into one platform. This hybrid model accelerates detection and provides predictive intelligence on fire spread, giving responders a critical time advantage. With very low computing costs (under $2,000 per month while serving 45,000+ users), the software-first approach enables affordable, scalable global deployment that hardware-heavy competitors cannot match.

Potential Impact

The stakes are immense: In Chile alone, the 2024 wildfire season caused an estimated $4.39B in damages, while across Latin America wildfires drove record tropical forest loss of nearly 2.84 million hectares of primary forest in Brazil, Bolivia, and Mexico. Globally, wildfires now burn more than twice the land they did two decades ago, with each hectare lost costing roughly $17,000 in damages and requiring 20 years to regenerate.

What was once a seasonal risk has become a year-round crisis, driven by climate extremes and human activity, making wildfires both more predictable and, in theory, more preventable. Satellites on Fire has demonstrated the power of earlier detection, such as reducing firefighter mortality to zero in Mexico by providing real-time intelligence, showing how technology can help mitigate biodiversity collapse, economic loss, and community displacement on a global scale.

Ambition/Next Steps for Company

The company aims to consolidate its position as the market leader in Latin America while expanding into North America and other wildfire-prone regions. Over the next 18 months, Satellites on Fire

plans to scale its ARR to $3.5M, grow partnerships with insurers like AON, and move beyond detection into fire suppression technologies, including drones. With backing from organizations such as MIT, the UN Green Climate Fund, and global investors, the team is preparing for a Series A to accelerate this vision.

Key Things to Watch in This Space

As wildfires intensify globally, there is rising demand for unified detection-to-response platforms that integrate AI-driven alerts with IoT sensors, drones, and even suppression actions, rather than siloed solutions. Satellites on Fire is well-positioned for this trend given its existing integrations across satellites, cameras, and user reports, with ambitions to expand into drone-enabled suppression. Insurers, forestry companies, and governments are increasingly seeking data-driven wildfire risk products, such as the parametric insurance solutions Satellites on Fire is co-developing with AON.

At the same time, new entrants like FireSat, backed by Google, are set to intensify competition, bringing rapid scaling capabilities and potentially reshaping the detection landscape. Beyond wildfires, these detection technologies are finding applications in flood monitoring, agriculture, and national defense, broadening both use cases and investor appeal.

Why Satellites on Fire Made the List

Satellites on Fire exemplifies fast fusion and low-friction delivery of diverse data sources. Its low-cost, flexible subscription model is lowering adoption barriers and enabling wider access to advanced wildfire intelligence. The company's software-first approach is particularly relevant for immediate, real-time fire detection and south-to-south technology transfer, offering a scalable solution for regions not yet ready for costly, hardware-heavy deployments.

> **"On average, we detect wildfires 35 minutes faster than public satellites and 30% more fires overall. In Mexico, firefighter mortality dropped to zero thanks to better intelligence from our system."**
>
> – Franco Rodríguez Viau, Founder & CEO

Case Study

Energy & Power

Uptime Analytics

Company Name: Uptime Analytics

Country: Colombia

Company Founded: 2019

Number of Employees: 15

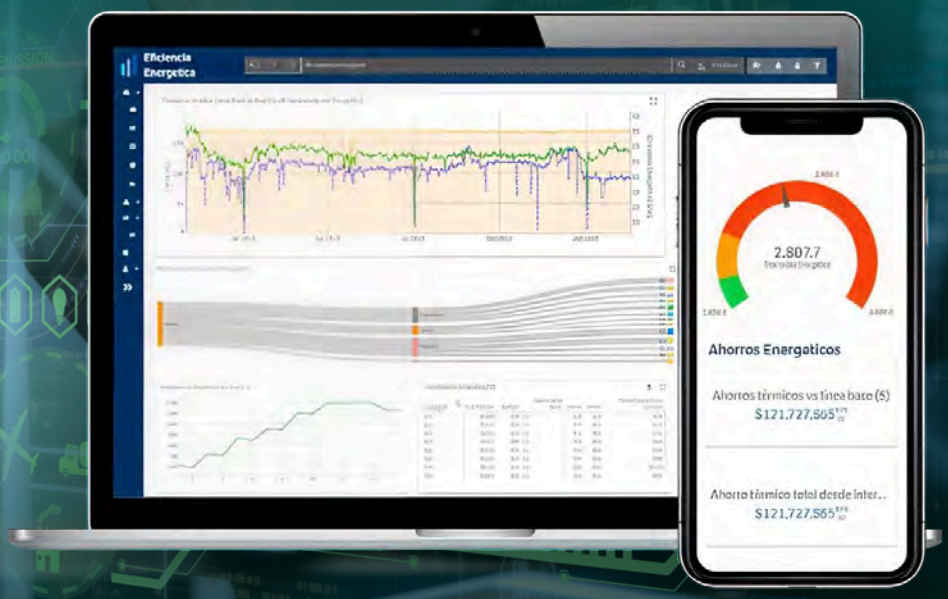
TRL: 9

Key Facts

Uptime Analytics technology has delivered up to 20% reductions in energy costs and predicted equipment failures up to 20 days in advance, with maintenance cost reduction up to 30%, avoiding costly downtime. In one case, the company achieved a 10x ROI by reducing unplanned stoppages and optimizing energy-intensive assets.

What Is the Company and What Do They Do?

Uptime Analytics is supporting industries and commercial partners through AI SaaS applications to reduce energy consumption. Industries supported include oil & gas, steel, ceramics, lime, cement, and water. Uptime Analytics is expanding across Argentina, the U.S., Guatemala, and the Dominican Republic.



Zainab Gilani
Associate, Energy & Power, Cleantech Group

How It Works	The Uptime Analytics solution is a software-only, cloud-based platform powered by AI and ML models. It works by integrating operational, energy, and condition data from existing industrial plant systems. The Analytical Twins library is used to optimize industrial process behavior to achieve higher efficiency, reduce energy costs, and predict failure for equipment such as furnaces, pumps, and compressors, among others. The system provides real-time recommendations to operators or can send signals directly to machines to adjust performance. Predictive maintenance algorithms detect anomalies and anticipates failures before they occur.
Key Differentiator	Hardware agnostic tools mean no additional sensors are required, and implementation can be done remotely using the client's existing data. Models are updated automatically as new data comes in or operations change, so they stay accurate and reliable over time.
Potential Impact	Impact on various industries with data trained on various pieces of equipment that are used in these industries. Energy savings with limited hardware implementation will allow for faster deployment.
Ambition/Next Steps for Company	The company aims to to triple sales in coming years. Projects will be scaled following successful pilots. The goal will be to expand further into the U.S. and strengthen partnerships with utilities and investors.
Key Things to Watch in This Space	As current industries scale and Uptime gathers more intelligence on components, data can be applied to new markets.
Why Uptime Analytics Made the List	AI and SaaS tools are used to improve various industries. If implemented widely, it can have large market potential with predictive maintenance tools iterating and developing with scale.

> **"AI has the potential to transform the future of industry by turning operational and energy data into actionable insights. However, we must recognize that AI is only an enabler—true transformation comes from people and culture. In fact, 60% of failures in these projects are cultural and only 40% are technical. Success requires a multidisciplinary approach that brings together technology, leadership, and change management."**
>
> **– Oscar Hoyos, CEO & Co-Founder**

The LATAM Cleantech 25

04 Watch List

Congratulations!

To all of the **25 innovators** who made the list.

Agriculture & Food

10 Companies ↑ 3 Countries —

Company	Name & Description	Sector	Country	Year Founded
AgriBest	AgriBest Biotechnology products including satellite soil diagnostics, biostimulants, and bio-nutritional solutions designed to make agricultural production more sustainable and efficient.	Crop Science	Mexico	2013
BioHeuris	BioHeuris Bio-based herbicides using synthetic biology techniques and gene editing.	Crop Science	Argentina	2016
BeCaps	BeCaps Microencapsulation platform to naturally deliver microorganisms in soil.	Crop Science	Argentina	2024
calice	Calice AI-powered computational modeling platform that optimizes crop field trials, thereby reducing R&D costs.	Crop Science	Argentina	2022
CALIGENIA	Caligenia Biochar and microbial technology, named BACTERCHAR, from organic waste streams to restore degraded soils, while permanently storing carbon.	Biochar	Argentina	2023
cellva ingredients	Cellva Ingredients Cell-cultured proteins, starting with cultivated pork fat.	Alternative Proteins	Brazil	2022

GÊNICA	Genica Bioinoculants, biostimulants, and biopesticides for soybean, corn, and sugarcane crops.	Crop Science	Brazil	2015
Loopfarms	Loopfarms High-value products from microalgae raw materials from food waste as low-cost nutrients.	Clean Chemicals	Argentina	2021
M4Life	M4Life Microbiological products applied as seed treatment for soil regeneration with 28% yield increase with customers.	Crop Science	Argentina	2023
TIERRA DE MONTE VIDA QUE GENERA VIDA	Tierra de Monte Organic fertilizers and plant protection products intended to replace toxic chemicals for soil regeneration.	Crop Science	Mexico	2015

Energy & Power

4 Companies ↑ 2 Countries —

Company	Name & Description	Sector	Country	Year Founded
Ab Astra	Ab Astra High-precision imaging of underground structures through muography to reduce drilling for industries like oil & gas, mining, nuclear energy, precision agriculture, aquifers, infrastructure, and underground CO_2 storage.	Subsurface Monitoring	Argentina	2024
SENTRISENSE	Sentrisense Early fault detection, quick incident detection, and dynamic line rating technology for the grid.	Grid Resilience	Argentina	2020

	Unblock Computing Recaptures wasted energy to power computing applications.	Energy-Efficient Computing	Argentina	2021
	Uptime Analytics AI-based sofware that captures, processes, models, simulates and predicts operational behavior and energy consumption for machines.	Industrial Optimization	Colombia	2019

Materials & Chemicals

4 Companies ↓ 3 Countries ↓

Company	Name & Description	Sector	Country	Year Founded
	Allie Factory analytics and monitoring solutions for food, beverage, building materials, personal care, and automotive.	Process Technology	Mexico	2021
	BioFase Bio-resins made from avocado pit agrowaste for use in bioplastic products.	Bioplastics	Mexico	2011
	Kran Nanobubble Nanobubble solution for water management and efficiency, with agriculture, aquaculture, and industrial applications.	Water Management	Chile	2017

TECNORED DESENVOLVIMENTO TECNOLÓGICO S.A.	Tecnored Industrial pig iron production using cold-briquetted iron ore and low carbon reductants.	Ironmaking	Brazil	2008

Resources & Environmental Management

4 Companies — 4 Countries —

Company	Name & Description	Sector	Country	Year Founded
InPlanet	InPlanet Enhanced rock weathering for use in soil regeneration and verified carbon credits.	Carbon Removal	Brazil	2022
Raincoat	Raincoat Parametric climate insurance solutions that enable resilience by instantly processing/paying claims.	Climate Adaptation	Puerto Rico	2019
SATELLITES ON FIRE	Satellites on Fire Fire detection platform that detects, alerts, and monitors fires early by combining satellites, cameras, and AI technology.	Climate Adaptation	Argentina	2020
WaterMind	WaterMind Platform that leverages satellite technology to monitor water bodies for harmful algae and create forecasts for crop protection	Water Management	Chile	2023

Transportation & Logistics

2 Companies ↑ 2 Countries ↑

Company	Name & Description	Sector	Country	Year Founded
MegaFlux	Megaflux Electrification solutions for heavy-duty fleets including electric powertrains, battery systems, charging services, and analytics and retrofit services.	Electric Mobility	Mexico	2022
Runni	Runni Electric cargo bike platform and battery swapping.	Electric Mobility	Colombia	2024

Waste & Recycling

1 Company ↓ 1 Country ↓

Company	Name & Description	Sector	Country	Year Founded
NIU NIU	NIU NIU Technology that recycles e-waste into key materials required for EV production and energy transformation.	Battery Recycling	Mexico	2022

The LATAM Cleantech 25

05 About Cleantech Group

Cleantech Group is the human intelligence authority on global cleantech innovation. Since 2002, we've helped decision-makers across industry, finance, and policy navigate the rapid shifts transforming the global economy.

We go beyond market intelligence — offering insights, strategic guidance, and curated connections to help leaders stay ahead, identify opportunities, and act with confidence. Our insight is built on over 20 years of human intelligence, proprietary data, and direct relationships with the ecosystem leaders driving change.

Through our Membership, we help corporations, investors, financial and professional services, governments, non-profits, foundations, and start-ups track breakthrough technologies, make informed decisions, and connect with the right partners to accelerate their impact.

Industries everywhere are moving toward a cleaner, more resilient future. We're here to make sure you not only keep pace, but lead.

Global Presence, Local Insight

With experts across Europe, the Americas, and Asia-Pacific, we're on the ground where cleantech innovation is shaping the future, bringing local knowledge and global perspective to every connection and insight we deliver.

How we select the LATAM Cleantech 25

06 Methodology

The Question We Seek to Answer

According to the global cleantech community, which 25 private companies located in the LATAM region today are most likely to make significant market impact over the next five to ten years? We answer this question in three phases:

Phase 1: Nominations

Nominations come from five sources:

1. The expert panel of 14 investor and multinational corporation representatives.
2. Our Members Hub, which tracks the investment and partnership history of thousands of relevant companies.
3. Third-party awards where expert assessment has been applied.
4. Our analysts, who cover Agriculture & Food, Energy & Power, Materials & Chemicals, Resources & Environmental Management, Transportation & Logistics, and Waste & Recycling.
5. Public nominations from the global ecosystem, as well as additional data points from the Global Cleantech 100 nomination process.

Phase 2: Evaluation

Since our aim is to objectively synthesize and represent consensus, nominations are scored in a system rewarding companies that have multiple validations from our nomination sources. From this, a shortlist is created and sent to our panel of industry experts comprised of representatives from investors and multinational corporations. The panel votes positively or negatively based on their knowledge of the company's innovation, market, and ability to execute.

Phase 3: The Final 25

A combination of data from Phase 1 and Phase 2 are pooled and adjusted for geographic or other biases. Companies with the highest points overall make it to the final 25.

Exploring the Depth and Breadth of the Cleantech Community

To create the list, we put together a diverse panel of 14 early-stage innovation and investment experts. We asked them to nominate and review the companies that most impressed them and combined that information with our own nominations and research on early-stage awards.

This year, the number of nominations from the public, our expert panel, Members Hub, awards and Cleantech Group totaled 330 from over 17 countries. These companies were weighed and scored to create a short list of 78 companies that were reviewed by the 14 members of Cleantech Group's Expert Panel.

It's not just about ideas; it's about real-world solutions making a tangible difference.

07 Expert Panelists

14 leading specialists who focus on early-stage start-ups in Latin America provide their inputs into the process.

Felix Steinberg
LATAM Coordinator
The CATAL1.5°T Initiative, Mexico

Anthony DeOrsey
Research Manager
Cleantech Group, United States

Gideon Blaauw
Regional Lead
Cleantech HUB, Colombia

Florencia Mesa
Executive Director
Climatech Chile, Chile

Diego Serebrisky
Co-Founder & Managing Partner
Dalus Captial, Mexico

View Biographies →

Nathalie Prado
Managing Director, Investments
EcoEnterprises Fund, Costa Rica/Pan-LATAM

Rafael Carmona Davila
CTO & Co-Founder
Green Momentum, Mexico

Federico Restrepo Sierra
Co-Founder and Director
Impact Hub Medellín, Cali and Bogotá, Colombia

Adriana Suarez Pardo
Co-Founder & Managing Partner
MatterScale Ventures, Colombia

Lizi Peretti
Head of Sustainability & Latin America Regional Manager
Oxentia, Argentina

Lucia Montalvo
Partner
Salkantay Ventures, Peru

Kirk-Anthony Hamilton
Co-Founder and CEO
Tech Beach Resort, Jamaica

Bruno Arcadier
Head
Vale Ventures, Brazil

Federico Cristofani
VX Ventures Manager
Vista Ventures, Argentina

The expert panel is comprised of pioneers, leaders, veterans, and new entrants in cleantech and is broadly representative of the global cleantech community.

View Biographies →

Cleantech Group

The human intelligence authority on global cleantech innovation since 2002.

Our team is global

North America | Europe | Asia

Contact us

info@cleantech.com