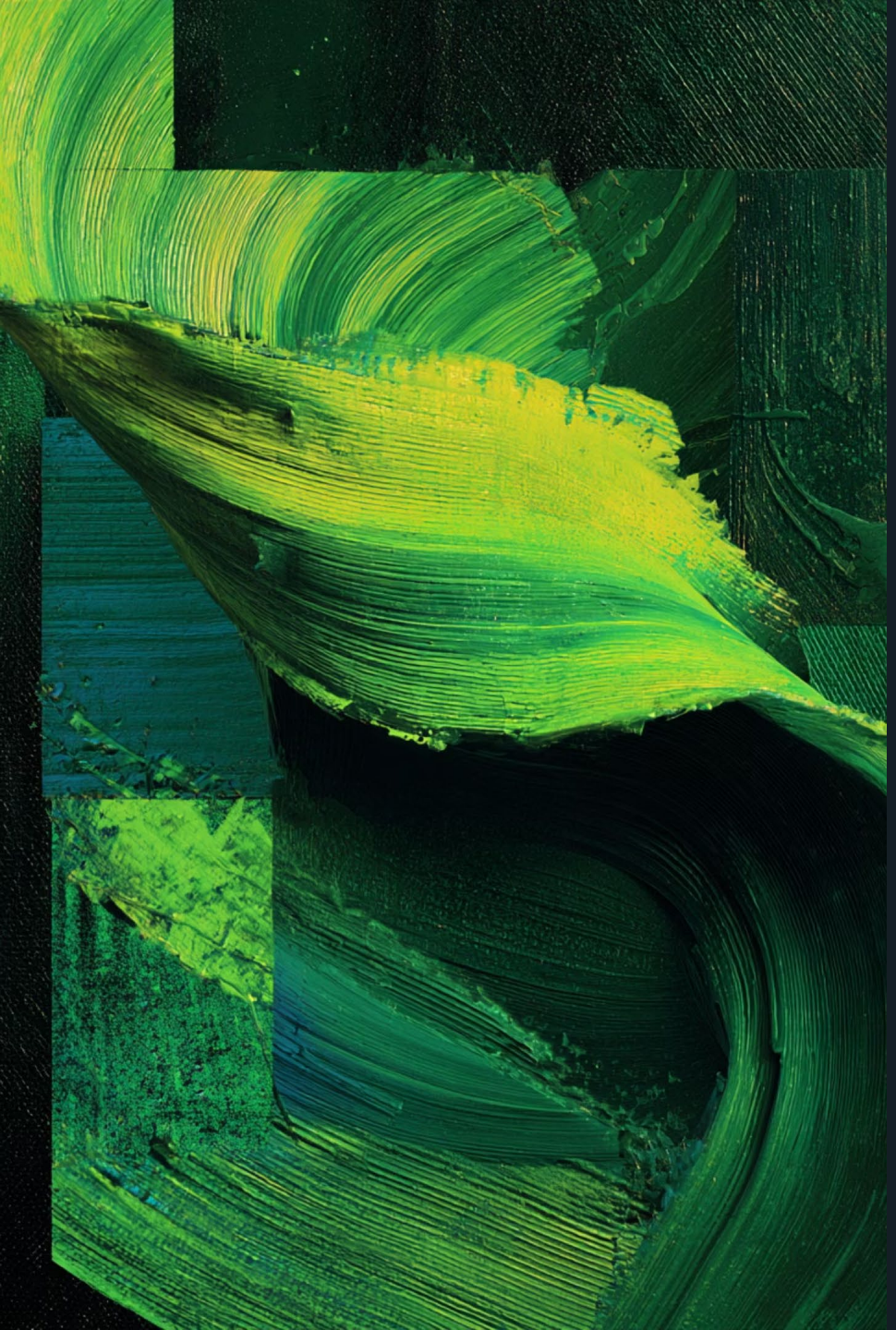


AGROS. DESIGN AND DEEP TECH

We don't build dashboards.

We build the tools that keep your operations running.

THE PROBLEM

The Dashboard Era Is Over

Most agtech tools treat farmers like analysts — giving them yet another dashboard and expecting them to connect the dots across maps, soil readings, and flight logs. That just doesn't work.

Scattered Information

Satellite images, soil sensors, drone data, and pest alerts all live in different places, with no single view to bring them together.

People Become the Bottleneck

Asking agronomists to sort through all this data by hand in real time is not a real workflow —it slows everything down.

No Built -In Action

Dashboards show information, but they don't do anything. That delay between seeing a problem and acting on it can cost time, money, and yield.

⚠ **The shift required:** The system needs to see, decide, and act on its own—without relying on dashboards.

MARKET CONTEXT

Why Brazil. Why Now.

Brazil is more than a huge farming country—it is one of the most complex places to run agriculture. The numbers show why this matters now.

$164B

Agri Exports (2024)

Brazil's farm exports reached $164.4B in 2024—nearly 49% of the country's total exports and the second-highest level on record.

~25%

of Brazil's GDP

Farming and agribusiness make up about one quarter of Brazil's economy and support more than 18M jobs.

2,100%

Drone Fleet Growth

Brazil's fleet of farm drones grew by more than 2,100% between 2021 and 2024.

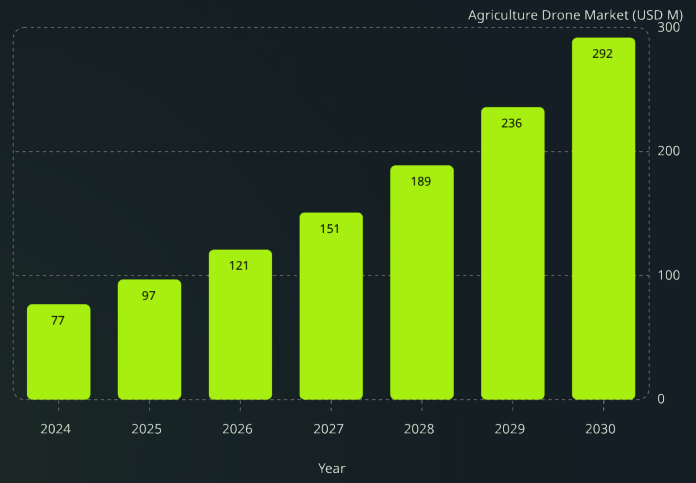
(Sindag data).

$292M

Drone Market by 2030

Brazil's farm drone market is expected to reach $291.9M by 2030.

That is a 25.1% CAGR from 2025.

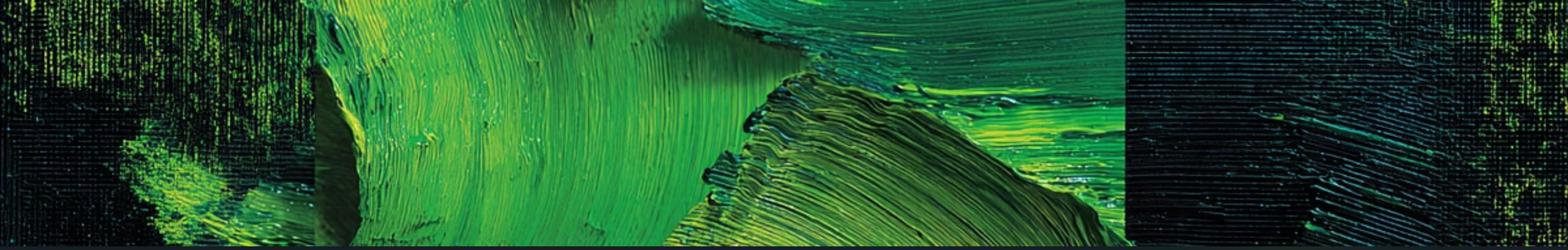


Brazil's farm drone market is growing quickly, at a 25.1% CAGR. Source: Grand View Research, 2025.

The Structural Opportunity

Brazil is the world's top exporter of soybeans, coffee, beef, sugar, and orange juice. The scale is massive, but the way farms are run is still behind the curve. With drone fleets growing 2,100%, the need is clear:

DJI (Agrishow 2025) Coffee growers using drone-applied inputs cut operating costs by **70%** compared with manual spraying in Brazil.



LAYER 1

The Geodatabase Engine

Everything runs on **PostgreSQL + PostGIS**—the data foundation that makes it possible to ask complex location-based questions at production scale using our standard GeoJSON plot data.

Built-in location checks

Questions like what's inside, what overlaps, and what connects run directly on field shapes—no extra steps, no slowdowns.

GeoJSON from the start

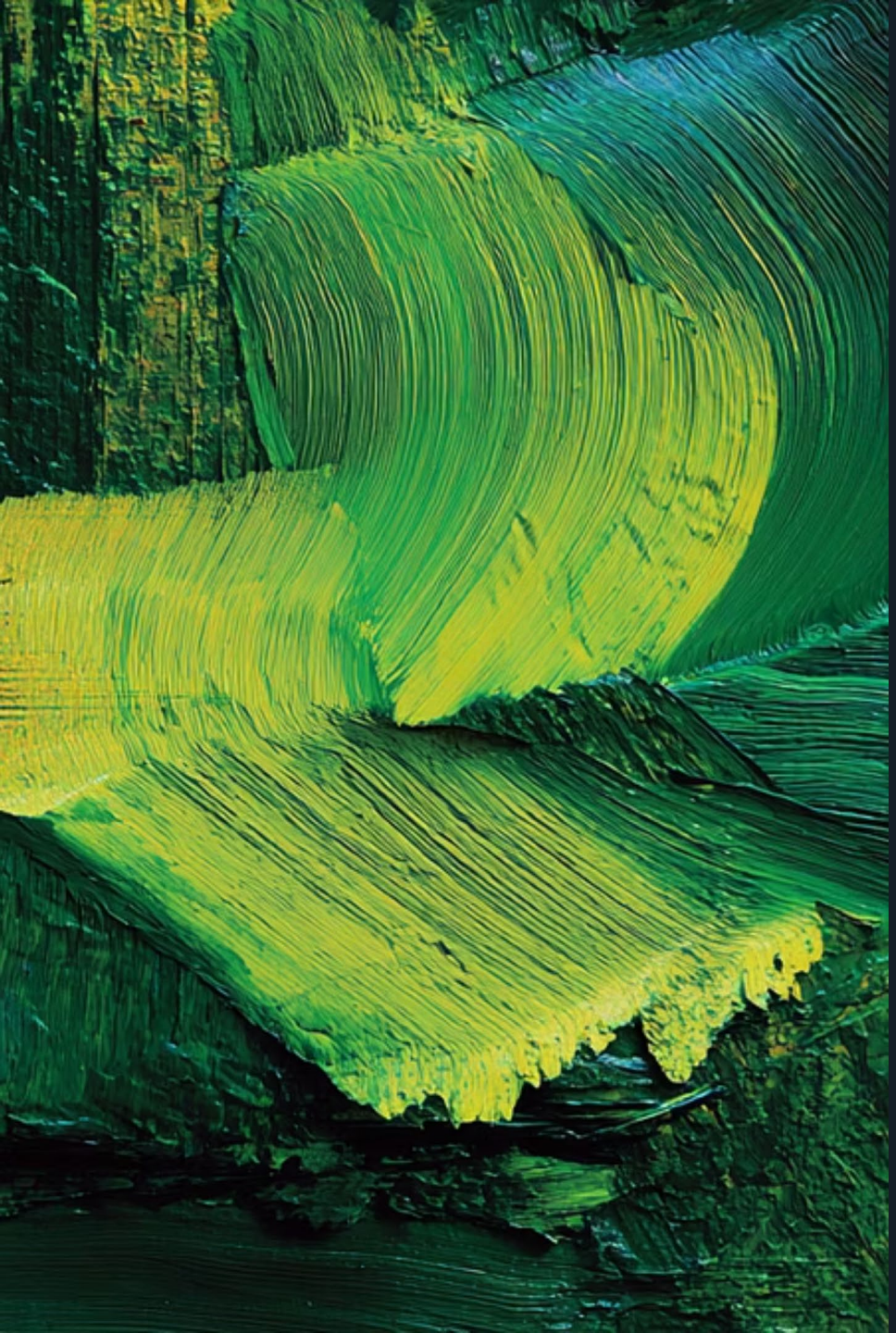
Field edges, crop zones, and flight paths are stored as real map data inside the database.

No slow middle layer

We skip the extra translation step that usually slows things down when image data gets bigger.

Reliable field updates

Changes stay in sync, so everyone sees the same field state even when multiple people are working at once.



LAYER 2

The Swarm Engine: Multi -Agent Debate

Instead of one big AI, we use a **modular system** where specialized digital agents review incoming orthomosaics together in real time —each one focused on a different job.

Solis

Looks at **Sentinel-2 and Landsat images** for sudden changes. It's the first check for anything unusual.

Aero

Watches live drone activity and helps guide flights while making sure they follow **airspace rules**.

Fauna

Compares weather data with pest life cycles —Ex. **sugarcane weevil** outbreaks —to spot risk early.

Ceres

Reviews approved field images to find **planting lines** and **gaps in planting**.

LAYER 3

The Edge Simulation Core

To handle live data from satellites and drone signals at the same time, we run custom simulation cores right at the edge —which keeps response time low and makes field setup simple.

Rust Core

Safe and fast handling for incoming drone data. Helps avoid slowdowns that could disrupt live tracking.

C++ Simulation Layer

Runs flight path and sensor checks with precise control. Built for strong performance on the edge device.

Why run it at the edge?

Sending data back and forth to the cloud takes too long for real-time field decisions. Running it on-site keeps reactions fast, even when internet access is weak in remote farm areas.

Design principle: Process the data where it's created—not far away on a server.

Geodatabase

Stores and organizes all geospatial data inputs.

Swarm Engine

Manages and coordinates distributed nodes and resources.

Edge Core

The central processing unit for edge computing tasks.

TECHNICAL TAKEAWAY

We’re not just analyzing fields. We’re running a smart farm network.

The combination of **cloud-based field images** and **teams of AI agents that compare ideas** creates something very different from the precision farming most people know.

Cloud-Based Field Images

We collect drone and satellite images, organize the data, and keep everything easy to search—so we always have a clear view of the field.

AI Teams Working Together

Different AI agents review the same field data, test ideas, and agree on the best next step.

Smarter Farming

The result is a system that can see what’s happening, decide what to do, and take action with less human back-and-forth.