AVAWATZ

Transforming Robots into Cooperative Teams with AI

avawatz.com   Dallas TX   🐦 in f ⓘ

Highlights

① Collaborative Robotic market predicted to reach almost $2T by 2030 with a CAGR of 12.3% from 2021-30

② Demand for robotic labor grew 22% in 2022

③ Previously crowdfunded over $1.1M

④ Working prototypes used by the US Air Force and Army

⑤ Use cases include tracking dangerous debris on airfields and accelerating manufacturing output

Our Team

Rajini Anachi   Founder, CEO

2x founder, previously founded CyGlass, which was acquired by Nominet in 2020. Listening to customers about their problem areas.

Bala Jana Co-Founder, Vice President, Treasurer, and Secretary

15+ years of experience in Oracle database design, development and administration, 6+ years managed team of database administrators and developers, off shore and on site.

J.R. May Director of Business Development & Sales

25+ years of experience in DoD and commercial sales. Coordinates partnerships for R&D, Autonomy Squad, and Surveillance and led business development and sales at mZeal/Cyglass (acquired by Nominet in 2020).

Pitch

We Make Robots Work as a Team

'Talent wins games. But teamwork wins championships.' - Michael Jordan

Here's Why

We have all grown up in the company of robots, in books and movies and on the Internet, and those fictional robots have created a popular understanding of what robots can do that doesn't always match reality. Real robots tend to be highly specialized to perform one task very well, whether it is cleaning floors, collecting items from a warehouse, or tightening the bolts on a wheel. Specialist robots can be arranged into structured teams to do complex tasks, as on an assembly line, but they do not have the ability to make their own group decisions about how to solve a problem.

That's fine for a task like assembling an automobile, but it means that today's robots are not good at tasks that involve on-the-spot decision-making, like deciding whether to send a drone or a ground robot to inspect an unknown object. AvaWatz is changing that.

THE PROBLEM

Despite all our human ingenuity, there are still tasks that stubbornly resist all our attempts to automate them. Why is it that we can largely automate the process of building cars, but not the process of building houses? Of course, there are lots of differences, but one of the biggest is predictability. Cars can be built in factories

differences, but one of the biggest is predictability. Cars can be built in factories where every step of the process is rigidly controlled. Every house is built in a different location, on different soil, under different weather conditions, with different materials and design specifications. Today's robots can certainly learn the tool-handling skills needed to build a house, but if they are to become proficient at building houses, they must also be able to use those skills in a variety of different settings.

Humans Are Still Performing Far Too Many Tedious, High-risk Tasks

Many of today's industries continue to delegate tedious, time-sensitive, and high-stress responsibilities to humans. Yet in these error-prone environments, mistakes carry significant safety and financial implications.

A prime example is the work of airport and airfield regulators, who must physically inspect runways multiple times each day to identify and remove hazards or debris. These tire fragments, metal shards, and other __foreign objects could result in a catastrophic accident if missed__.

Cost of Damage Caused by Foreign Object Debris (FOD)
$4 BILLION ANNUALLY
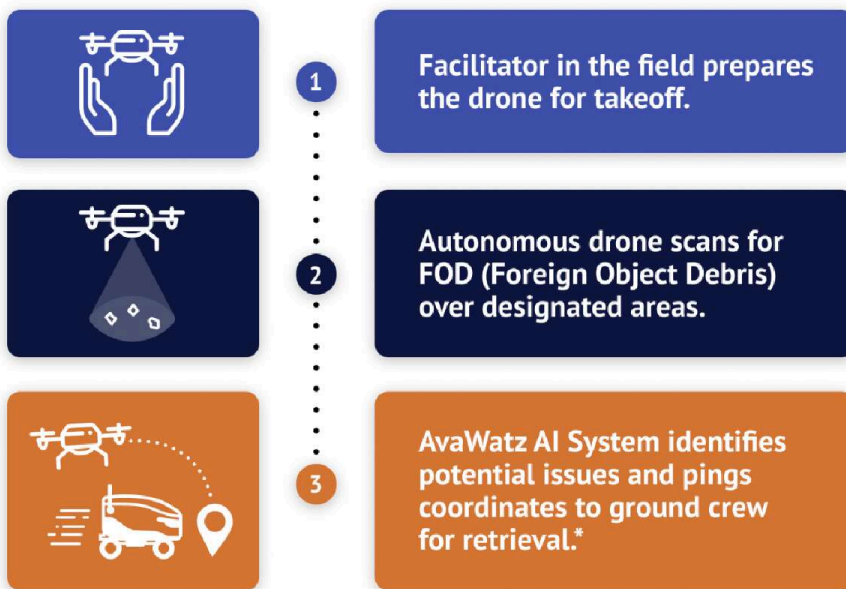
FOD 98.58%

(source)

THE SOLUTION

# Robots Solve Complex Problems Through Teamwork

The task of finding and removing Foreign Object Debris from airfield surfaces before it causes a catastrophic accident is a good example of the kind of open-ended, unpredictable challenge to robot capabilities that AvaWatz intends to solve. A small camera-carrying drone can detect a debris fragment and report its location, and a ground-based robot can go to that location and remove the

fragment, and it seems like it would be fairly simple to implement that as an application. But a much more efficient and flexible solution is to use multiple drones to inspect the runway, saving time and eliminating the need to recharge or swap batteries, and to station multiple ground robots along the runway and send the closest robot to remove the debris, again saving time, especially if more than one fragment is found. This kind of teamwork calls for complex reasoning and group decision-making about the best way to accomplish the task, and it is this kind of group decision-making that the AvaWatz platform enables.

Foreign Object Debris removal is actually a fairly simple example of the kind of problem AvaWatz intends to solve. We envision use cases for the platform that call for air and ground (and potentially marine, submarine, and even space) robots, each with different kinds of sensors, actuators, and propulsion, working together on tasks like recovery after a hurricane or wildfire management. To support this broad range of applications, AvaWatz is devoting significant Research and Development effort to developing software methods for sensing and operating in adverse conditions, including night, bad weather, smoke, and GPS-degraded and GPS-denied conditions

	1	**Facilitator in the field prepares the drone for takeoff.**
	2	**Autonomous drone scans for FOD (Foreign Object Debris) over designated areas.**
	3	**AvaWatz AI System identifies potential issues and pings coordinates to ground crew for retrieval.***

Later iterations of our service packages will include autonomous retrieval via ground-level robots.
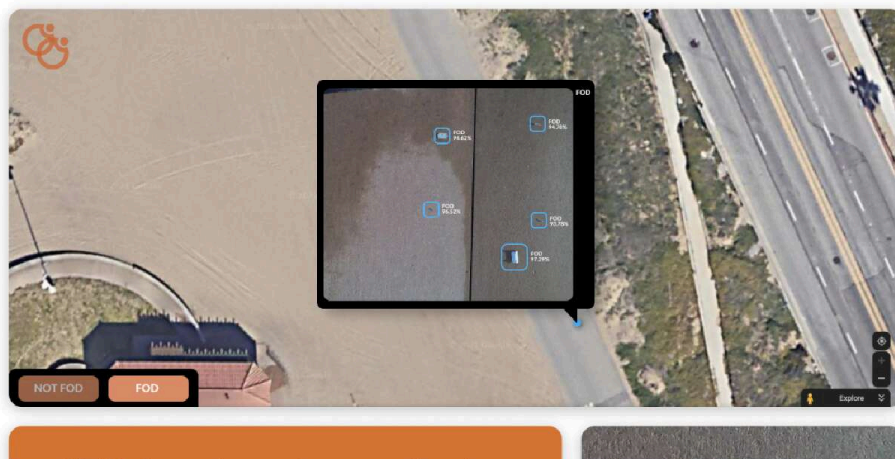
Utilizing air and ground cobot teams to detect and retrieve hazardous debris

FOD
97.29%

In summary, the AvaWatz decision intelligence platform helps air and ground robots work together. Our platform creates "cobot" teams who can execute complex tasks, in challenging environments, through real-time collaboration. Working together, collaborating robots shoulder the burden of tedious, repetitive, and unsafe tasks. Our software implements a Detect-Decide-Act cycle to resolve challenges accurately. We do this by integrating team navigation, computer vision, information sharing, and group decision-making.

Currently it takes a ground crew up to two hours, on average, to detect and remove airfield debris. We are continuously working on reducing the total time to clear a runway to 15-20 minutes with cobot teams - allowing airfields to schedule more landings resulting in increased profits.


Drones shown in video are pre-market prototypes and not currently available on the market.

Airfields are one of many opportunities across industrial sectors. Our next steps involve integration and adoptions in the ground transit and surveillance markets.

While our pilot prototype detects and retrieves hazardous debris from airport runways and taxiways, our AI platform can be applied to an expansive spectrum of tasks across various industries.

──────── Future Usage Applications May Include ────────
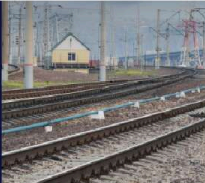
Large-Scale
Railroad Inspection

Infrastructure Repair Surveying

Endangered Species Monitoring

AvaWatz's business model is simple. We use a recurring revenue subscription model. Our offer is structured for one- to three-year contracts. Contracts include levels of tiered support so customers can find the right fit for their need accelerating adoption. To ensure ease of onboarding we've included operator training, support, and system updates for all our services.

Collaboration is our core product and core company value. Investing in our community is key for AvaWatz. That's why a portion of our revenue shall be donated to support efforts for endangered species monitoring and debris pick-up along our coastlines.

THE MARKET

We Plan To Help Companies Meet The $634 Billion Demand For Solutions Coming By 2026

AvaWatz is an early adopter to this need positioning them in the rapidly growing Collaborative Robotics market, that is predicted to reach almost $2 trillion by 2030* with a CAGR of 12.3% from 2021-2030 (source). Early market demand for smart airports, ground transit assets, and surveillance total $634 Billion by 2026 (source, source).

The growing spend for robotic teams shows a demand for autonomous mobile robots, artificial intelligence, and cloud computing. This growth in demand is our opportunity as adoption and application was accelerated by the pandemic (source).

$74.1B
Global Robotics Market by 2026

$634B
Global Ground Transit Market by 2025

$1990.2B
Collaborative Robotic Market by 2030

(<u>source</u> / <u>source</u> / <u>source</u>)

AvaWatz has a unique advantage for early market adoption that traditional competitors don't. Our advantage? We make hardware developers' robots better. We make robots into cooperative teams through software, something hardware suppliers don't do. Our platform will make traditional competition into raving advocates. The reason why?

AvaWatz's platform allows robotics producers to provide more value to their customers without increasing production costs. Our focus on driving collaboration between multiple robots. We add value to companies producing robots by increasing customer retention, satisfaction, and in-industry referrals. This applies to all robotic manufacturers from drones, autonomous vehicles, assembly line solutions, and more.

OUR TRACTION

We Are Market Ready | Prototyped & Commercial Application Approved

The AvaWatz platform is fully prototyped and pilot-tested for operational environments. IE-we are ready for launch. There were three phases of prototypes released to the U.S. Air Force over the last two and half years. These prototypes include surveillance versions which were also contracted out to the Department of Homeland Security (DHS). In 2022 we began to work on the early versions for the combined air and ground robotic vehicles. These prototypes were released to the US Army.

Fully prototyped and pilot-tested

Released three phases of prototypes to the U.S. Air Force over the last two and half years

Released protytpes for the combined air and ground robotic vehicles to the U.S. Army in 2022

Our ongoing product R&D with our U.S. Air Force, Army and DHS establishes our credibility for meeting our customers' needs. It also helps customers confidently and quickly adopt our platform. Our DoD contracts also prepared us to meet unique and challenging operational requirements companies need when using our solution.
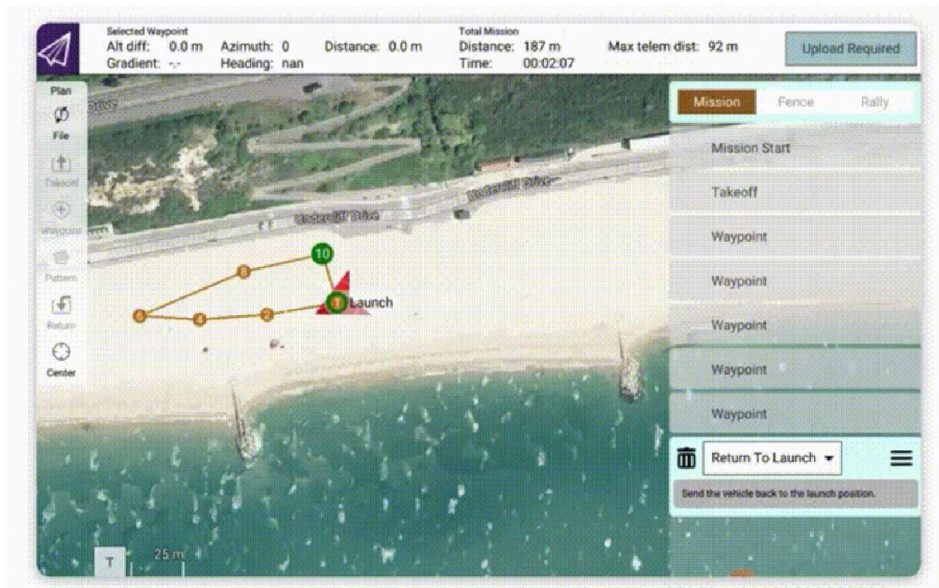
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Our next step? Onboarding customers in the Flightline Operations space into our sales pipeline. Starting 2023 we are implementing marketing campaigns for integrating and acquiring customers in this space. We're combining outreach, targeted placement, voice of customer research, and sales best practices to identify accelerated sales opportunities for quick market adoption.

WHY INVEST

Invest In The Future Of Robotics, Today

AvaWatz believes in a world where robots collaborate like humans to help companies increase productivity and profits while increasing on site safety. Our unique solution serves an unmet demand in the market, has solution validation with $13M in the sales pipeline, and DoD contracts. Our team is building the future of growth today. Join our team as we create connected 'Cobot' teams to meet the world's demand today, using the next era of robotics.
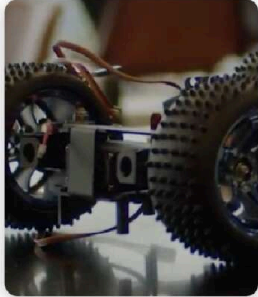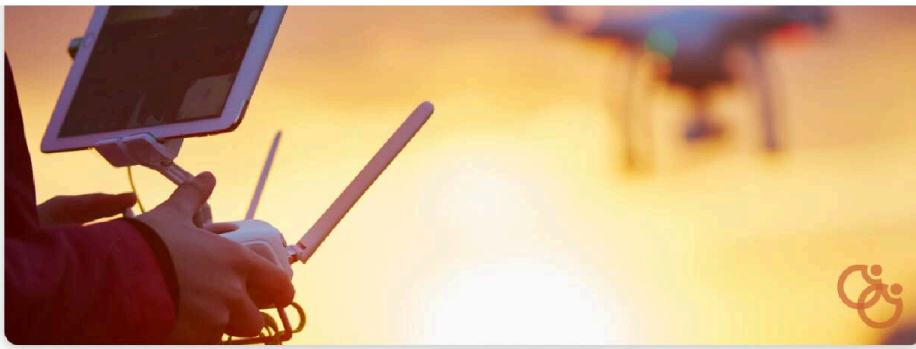
Help us advance the frontier of mobile robotics to open up a world of opportunities

AvaWatz uses decision intelligence to make robots collaborate. Our platform transforms robots into teams of 'cobots' that help companies get more done, faster, without compromising quality or safety. Our cobot solution helps companies track dangerous debris on airfields, accelerate manufacturing output, track land management in challenging terrain, support conservation tracking, and more. We currently serve target airfields, ground transit, and surveillance missions for private, government, and defense sectors with working prototypes used by the US Air Force and Army.