Republic

Company Name	Soar Robotics
Logo	
Headline	Cloud-connected robotic intelligence platform for drones

Cover photo

Hero Image

Tags AI, Drones, B2B

Pitch text

Summary

- Cloud-based AI products that turn drones into smart robots in under 2 hours
- Allows companies to operate drones and manage drone data autonomously
- 10k+ hours of autonomous flight and 50k+ successful precision landings
- Founders with 10+ years of experience and 2 successful exits
- Team with an average experience of more than 5 years in robotics and AI
- Secured deals with renewable energy and security companies

Problem

Drones lack sufficient autonomy and intelligence

Industries fail to utilize drones and aerial vehicles efficiently, securely and quickly for industrial applications. As a result, we **can't increase the efficiency of human labor.**

Drones become inefficient and primitive tools in the hands of a human operator, in terms of both in-flight and post-operation data handling. This **limits the potential of aerial vehicles** to maximize revenues in many industries such as energy, agriculture, security and more.

Furthermore, these robots have very little access to real-time and long-term robotic intelligence that they can consume to become smarter and more autonomous. **Being disconnected from a larger network** also limits the collaborative operational capabilities of these aerial vehicles; i.e. multi-agent operation is not possible. The current commercial robotics paradigm is **inefficient and limits the growth of many industries.**

Solution

We turn drones into mission-executing robots

Soar Robotics' cloud-based AI products make drones and any aerial vehicles **smart and connected.** We produce **fully autonomous aerial vehicles** that automate the work of humans in industrial applications.

Our drone-in-a-box solution deployed on factory premises

Our technology allows users to:

- reduce labor costs by more than 80%
- hire fewer technical personnel in challenging jobs and environments
- manage industrial zones 24/7 remotely
- bring full autonomy to maximize revenues in industrial applications

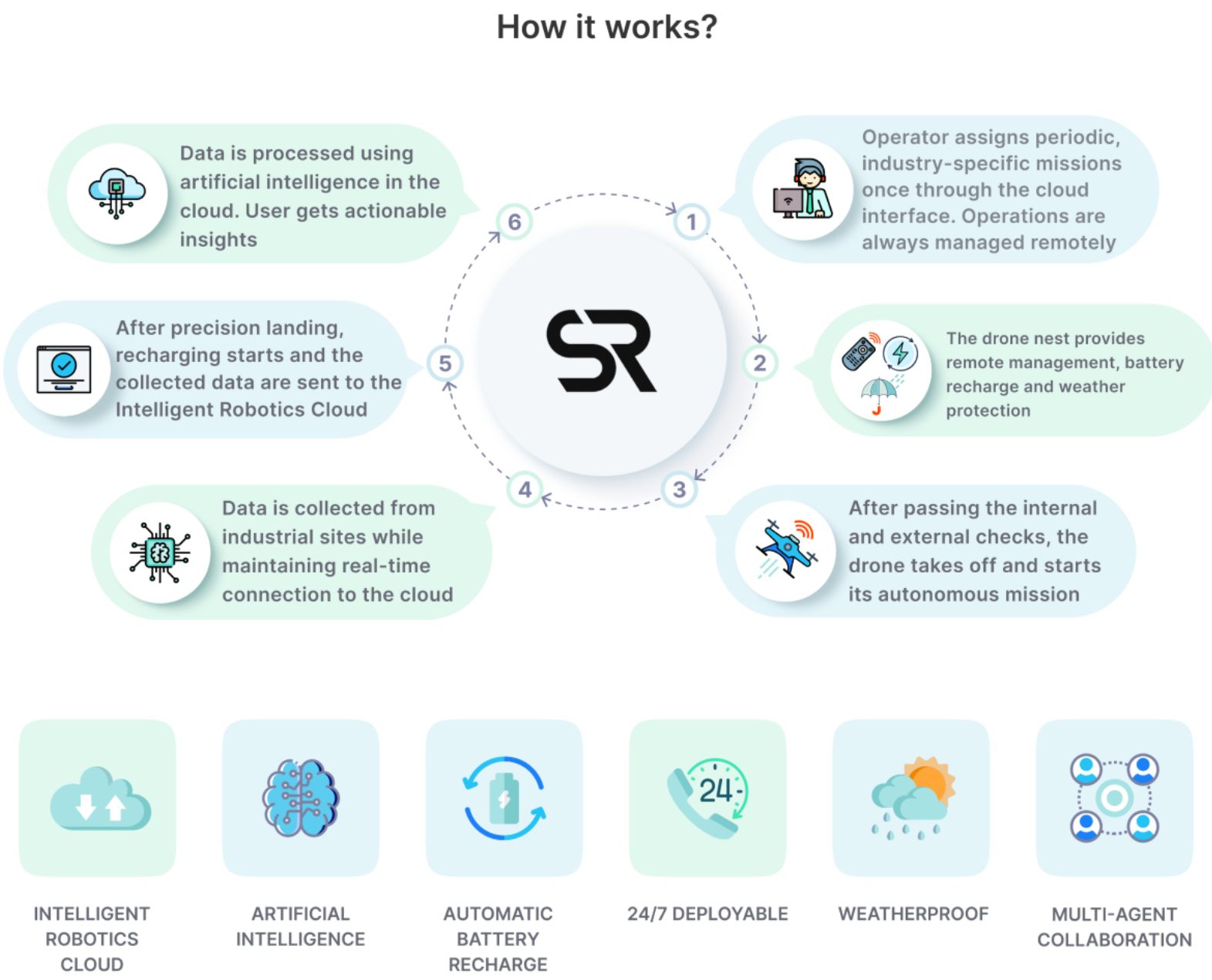
Product

Soar Robotics develops a cloud-connected robotic intelligence for aerial vehicles

Our system consists of an autonomous drone, recharging dock, data linking technology, weather protection features, and our cloud intelligence platform. **The system is deployable in under 2 hours and is capable of serving almost any industry imaginable due to its modular system design.**

We develop fully autonomous industrial drones and ground bases, which operate without a human pilot. **Flight, data collection, battery recharge and data processing** - these operating stages used to be part of a continuous cycle that needed human

supervision. Thanks to our **drone-in-a-box solution**, this cycle is now automated and creates much greater value, at a fraction of its previous overall cost.



> *We also take another step forward to build a robot-first internet, the internet of autonomous agents. This is an optimized distributed network, implemented specifically for multi-agent robot collaboration and communications for the execution of complex, industry-specific tasks. It consists of mission-driven autonomous agents, robot bases and an AI-powered cloud platform. Current agents in the network include various types of autonomous vehicles such as multicopters, VTOLs, ground rovers and robot bases.*

Our current industry-specific services are:

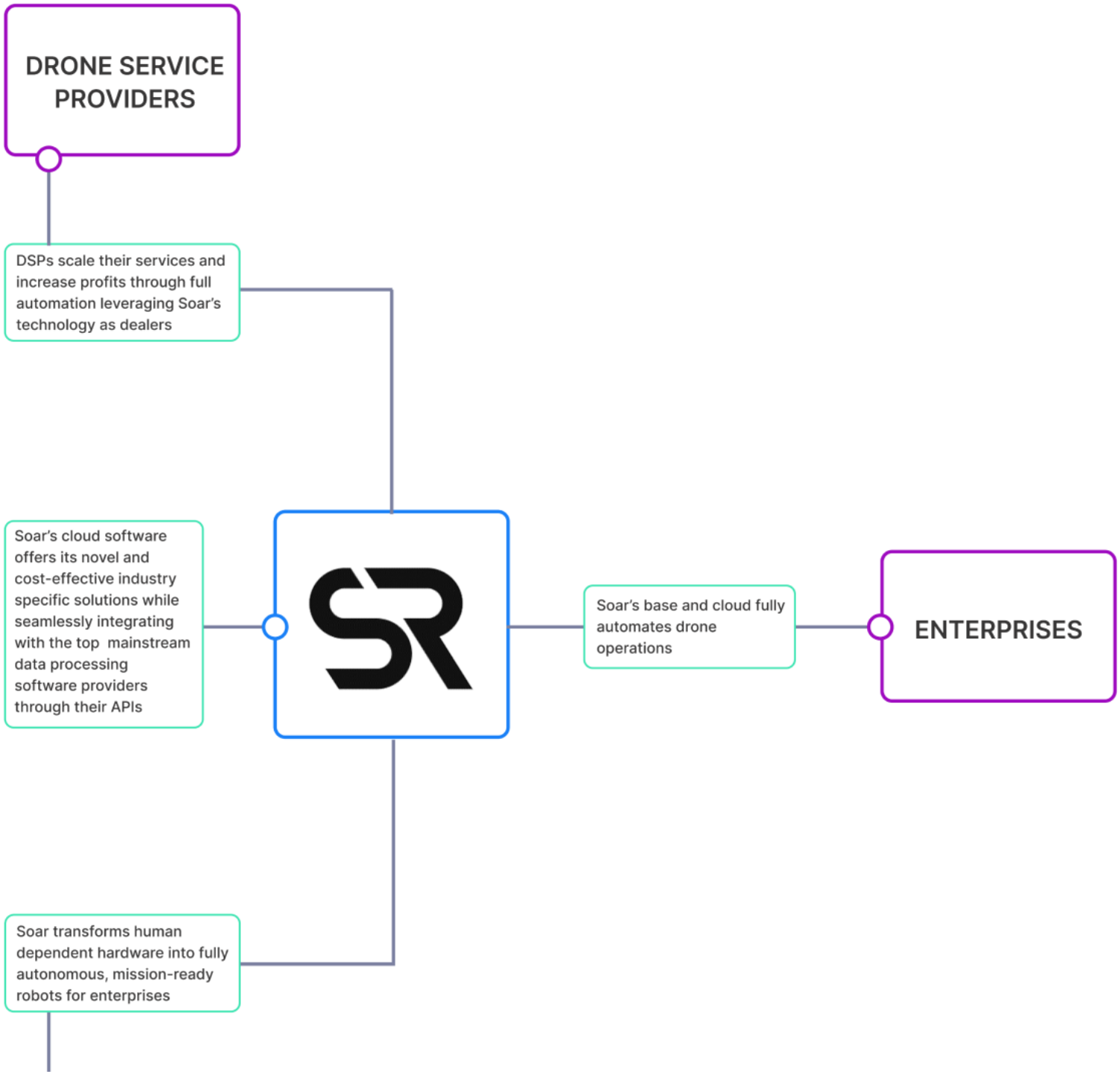
Tracking and reporting on the progress of solar plant construction, building construction, agricultural lands by routine surveys and maps.

Detecting, analyzing and classifying defects in solar energy, agricultural lands, and critical infrastructure.

Providing live aerial monitoring for almost any industrial site, such as factories, power plants, and cities.

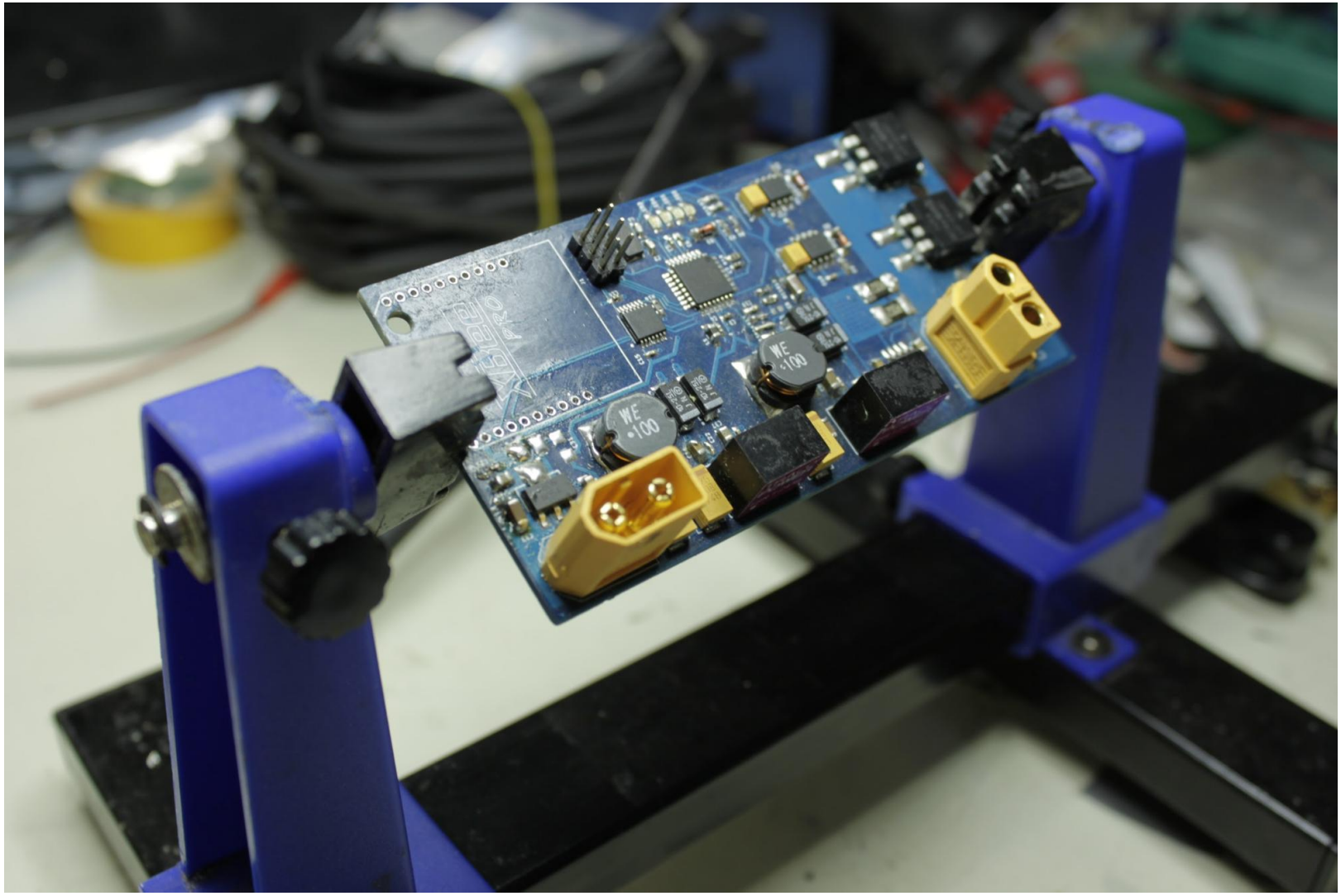
Technology

We built the software and hardware for our autonomous drone systems from the ground up and designed them in a way that will allow us to scale our operations faster and easier. Soar's onboard software, cloud software, and ground station systems can be integrated with many of the industry's leading hardware and software, such as **DJIs, Parrots, and Yuneecs**. We also support any kind of proprietary **MAVLINK and ROS** powered drones.


DRONE SERVICE PROVIDERS
DSPs scale their services and increase profits through full automation leveraging Soar's technology as dealers
Soar's cloud software offers its novel and cost-effective industry specific solutions while seamlessly integrating with the top mainstream data processing software providers through their APIs
SR
Soar's base and cloud fully automates drone operations
ENTERPRISES
Soar transforms human dependent hardware into fully autonomous, mission-ready robots for enterprises

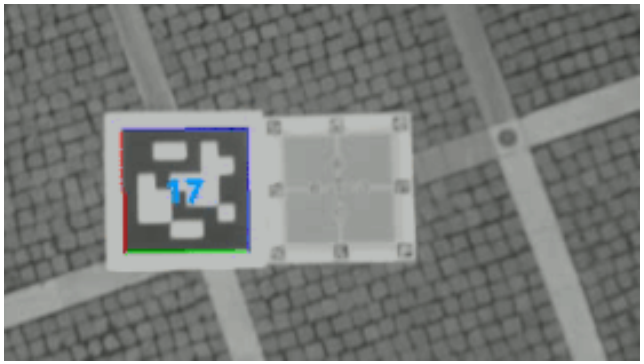
By design, **our software can pair not only with aerial vehicles but also ground and (in theory) space vehicles.**

We have also been developing a novel communications hardware. It **enables any drone to stay connected to the main network under almost any condition**. This is extremely important especially for Beyond Visual Line of Sight Flights (BVLOS), which streamline commercial drone applications by enabling legal, remote and autonomous operations. Our hardware will pave the way for safe and easy BVLOS flights for almost any kind of aerial vehicle.



The first iteration of the Cloud-connected robotic intelligence board (CRIB)

We have been rigorously testing our **precision landing algorithm** in various weather and lighting conditions. We have **landed successfully for more than 50,000 times in real-life conditions** and hundreds of thousands of times in the simulator environment.



Precision visual landing on fiducial markers in a real environment

Traction

Signed contracts will generate $1M+ revenue next year

- 5+ accounts in the energy industry with $500K ARR potential in the sales pipeline.
- Planned to deploy 100 new systems to our existing customers in 2021.


$160 000
$140 000
$120 000
$100 000
$80 000
$60 000
$40 000
$20 000
$0
$1 200 000
$1 000 000
$800 000
$600 000
$400 000
$200 000
$0
8/1/19
9/1/19
10/1/19
11/1/19
12/1/19
1/1/20
2/1/20
3/1/20
4/1/20
5/1/20
6/1/20
7/1/20
8/1/20
MRR
ARR

Customers

Working with clients across four industries

Solar Energy

Our drones will be inspecting and providing **infrastructure security for 450 MW** of electricity generation.

Security

We are deploying **20 drone units** to a security company who provides **monitoring services for cities and large scale infrastructure units.** Soar powered drones execute routine, **fully autonomous surveillance missions**.

Agriculture

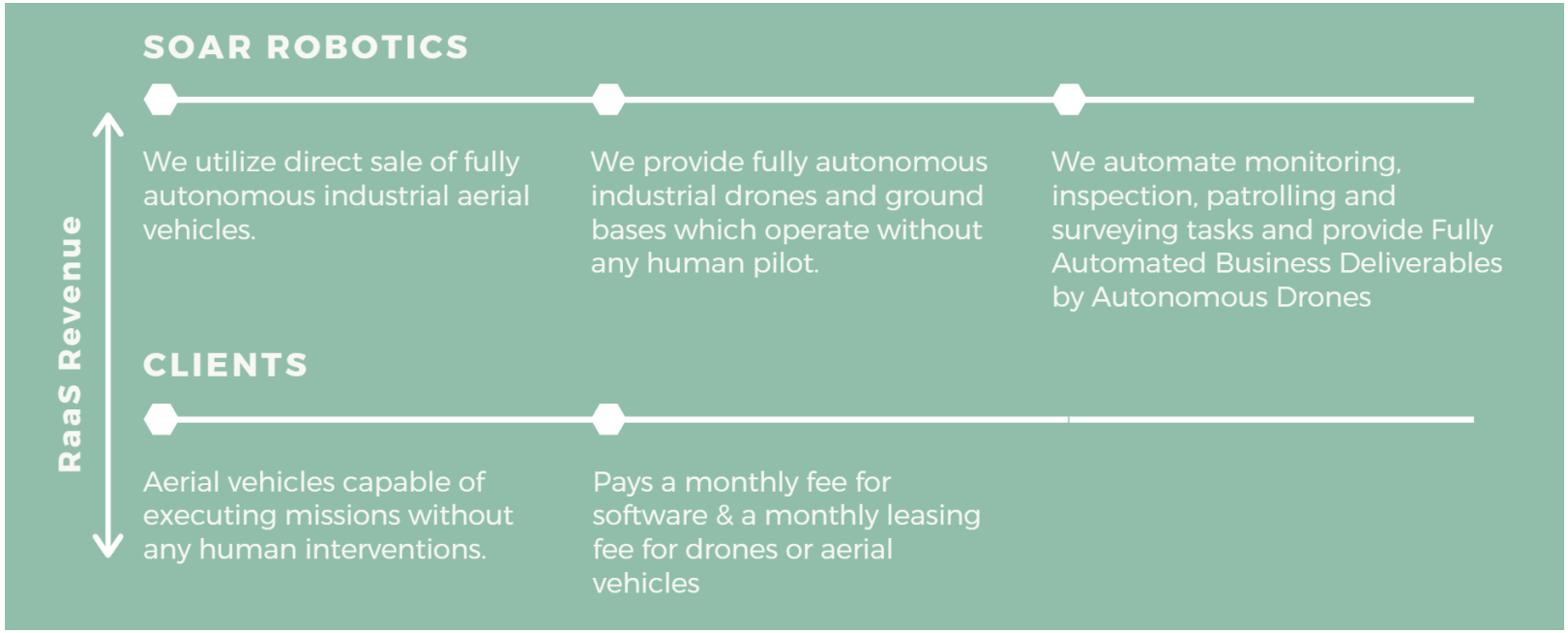
We have been testing our system through an agriculture data provider company with more than **20,000 farmers** in its database to provide precise, actionable data on their fields.

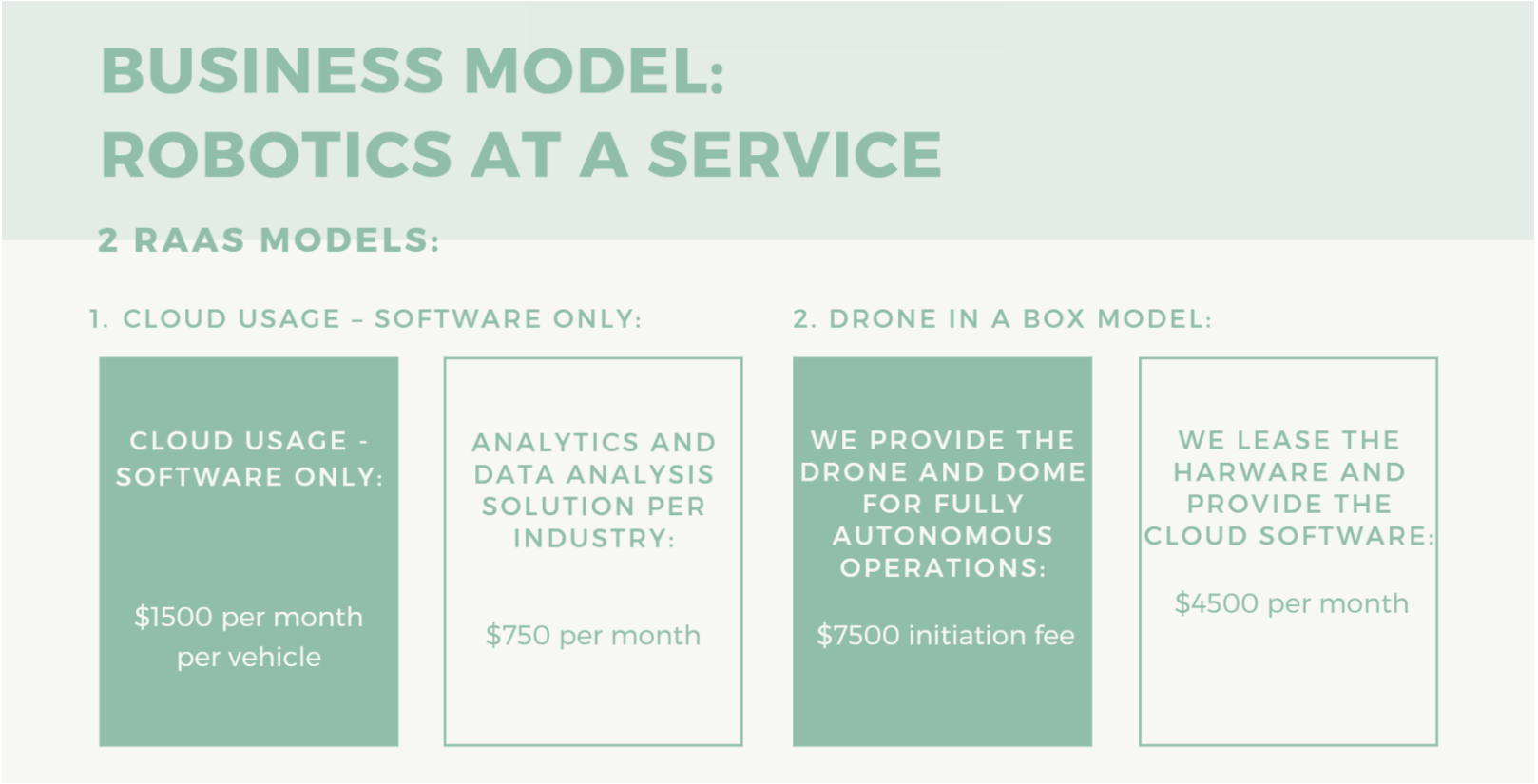
Construction

We have successfully tested our autonomous progress tracking service from the **pre-construction period until the end of a construction project**. We are working to integrate our fully autonomous and intelligent cloud solution with the already existing drone operations of a large construction company.

Business Model

Generating recurring revenue with Robotics-as-a-Service (RaaS) model


SOAR ROBOTICS
We utilize direct sale of fully autonomous industrial aerial vehicles.
We provide fully autonomous industrial drones and ground bases which operate without any human pilot.
We automate monitoring, inspection, patrolling and surveying tasks and provide Fully Automated Business Deliverables by Autonomous Drones
RaaS Revenue
CLIENTS
Aerial vehicles capable of executing missions without any human interventions.
Pays a monthly fee for software & a monthly leasing fee for drones or aerial vehicles

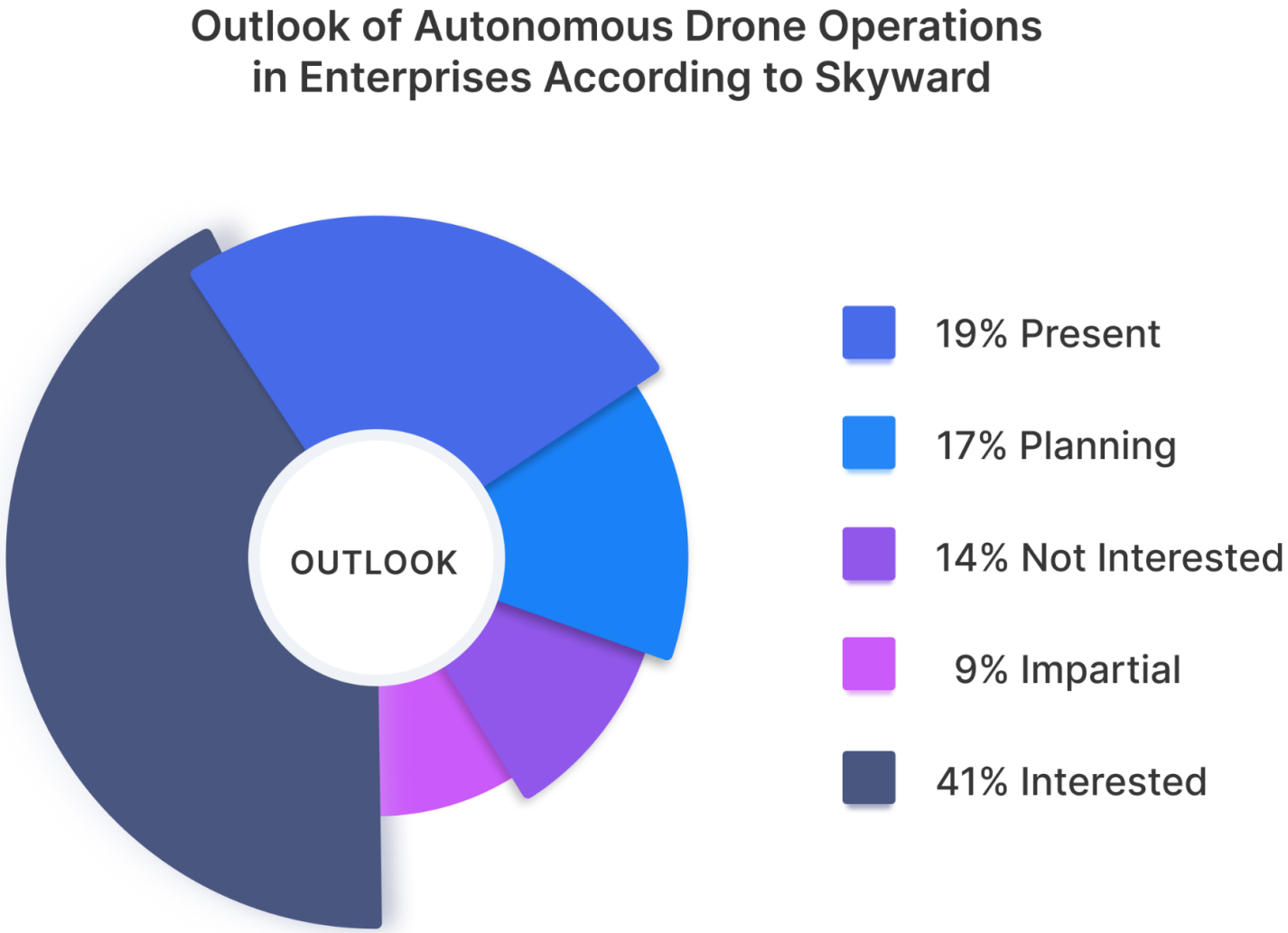


Market

$300 billion market opportunity

According to PWC's market predictions, the global market value for drone-enabled commercial solutions is estimated at $127B. With the widespread adoption of BVLOS flights and governments establishing regulatory frameworks around it, we expect that commercial **drones will take a step closer to their full potential and span a +$300B** addressable market until 2025.

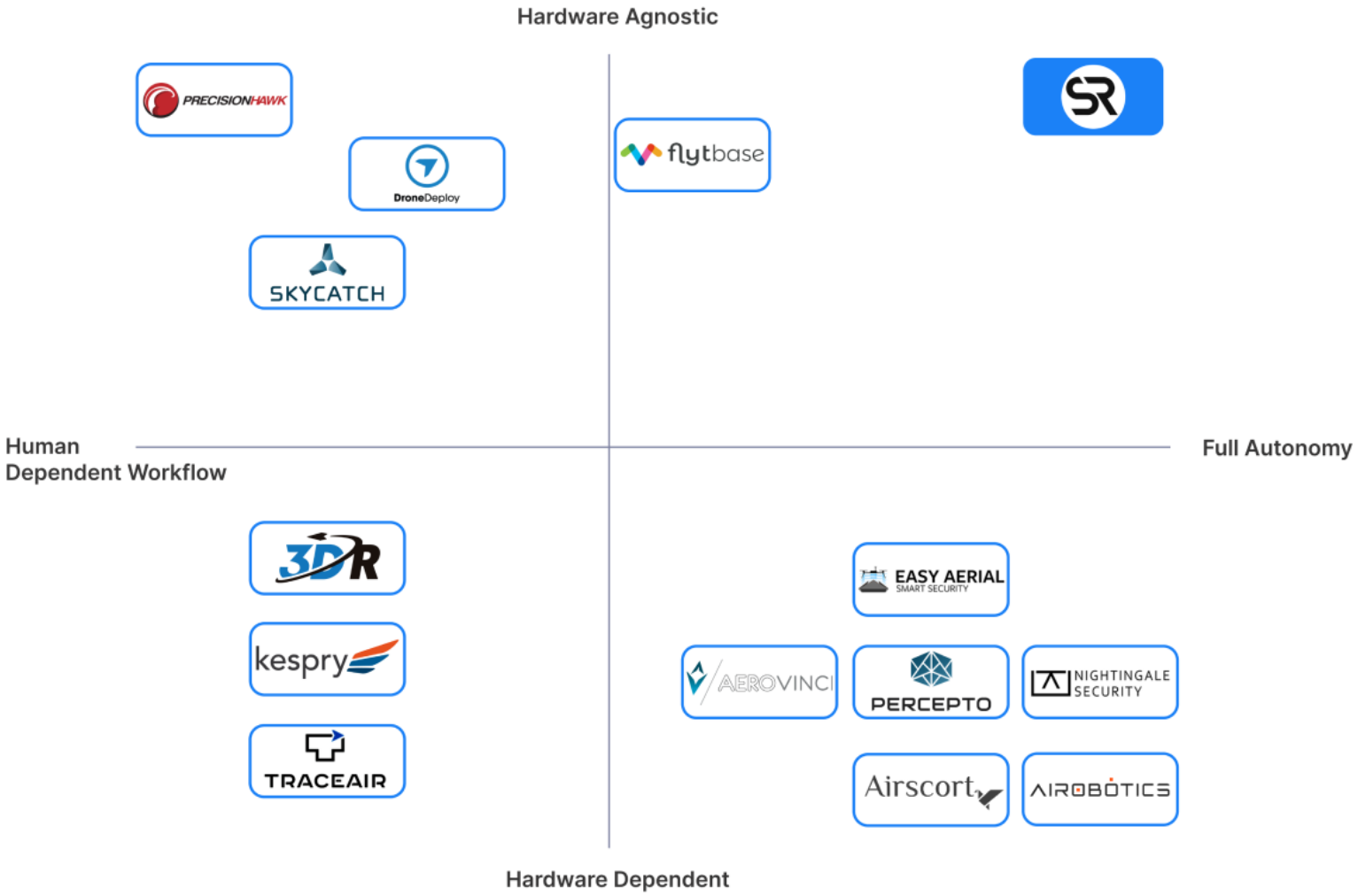
> *According to Skyward's "State of Drones in Big Business" report, these are the percentages of enterprises' anticipation of autonomous drones. Our target market not only spans all enterprises without a drone operation, but also 81% of the enterprises with drone operations who haven't implemented autonomous operation yet*



Competition

Soar Robotics' technology is hardware agnostic and fully autonomous

Human dependent workflows cause inefficiencies and thus losses in revenue. Full autonomy revolutionizes the way enterprises do business by **eliminating the risks and costs caused by human operators**. Hardware dependency means less flexibility and availability. **Hardware dependent systems are limited in applications** and thus scale much slower than hardware-agnostic systems. Our system implements the best of both worlds, **bringing flexibility and availability to scale industrial applications** and grow as every manufacturer in its network grows.



Vision

A look to the future: multi-agent systems

With the funds raised, we hope to develop multi-agent systems that can accomplish tasks that are impossible for a single agent. We have been prototyping and simulating **multi-agent interactions in surveillance, agriculture, parcel delivery, pipeline and railroad inspection environments.**

We are also raising to speed up our delivery cycles and sales and to expand our engineering and marketing teams.

Why Now?

The technology behind aerial vehicles, cloud computing and wireless communications has improved dramatically in the past decade. We now have the ability to construct a new system that utilizes these technologies and becomes a novel technology stack on top of them. With these advancements, we aim to become the leading cloud intelligence and connectivity hardware provider for any type of autonomous multi-agent system.

Investors

Soar Robotics has bootstrapped to develop its technology

We are bootstrapped - our founders have invested **$600,000** of their own money to develop the product. Now, with a market-ready product, we hope a new fundraising round will help us to increase our delivery cycle and market development.

Founders

Kerem Ozkan, Co-founder and Managing Director

- Serial entrepreneur.
- Founder of Calide Investments. Invested in start-ups in artificial intelligence, robotics, IoT, and renewable energy.
- Founded and managed programmatic advertising agency PCA and oversaw strategic digital marketing for brands including Unilever, Nestle, KFC and Time Warner (sold Oct 2015).

• Published +10 papers in AI & Visual Cognition of human. Papers featured in Visual Cognition, Perception, and Psychophysics and Journal of Vision.

• Ph.D., Cognitive Sciences & Artificial Intelligence, University of California, Irvine.

Deniz Kalaslioglu, Co-founder and Technical Lead

• +7 years of experience in AI-backed autonomous drones R&D.

• BS, Electrical and electronics engineer specialized in embedded systems, aerial robotics software & hardware.

• Helped big and medium-sized companies in Healthcare, Energy, Retail, Pharma, Government, Automotive, Construction and other verticals with end to end AI and automation implementation.

• Lecturer in AI & robotics.

Team

	Kerem Ozkan	Founder
	Deniz Kalaslioglu	Founder

	Ilkay Ozfiliz	AI Lead	BS in Electrical and Electronics Engineering with 5+ years of experience in aerial robotics software development. Specialized in artificial intelligence for computer vision and sequential models.
	Orhan Hafif	Software Lead	BS in Computer Engineering with 5+ years of experience in autonomous systems development. Specialized in UNIX-based operating systems and mobile robotics control, estimation, navigation and guidance.
	Aydin Sari	Robotics Lead	MS in Mechatronics Engineering and a self-taught everything programmer. He has technically led several significant mobile robotics companies' efforts on creating breakthrough technologies, with 10+ years of experience in the field.
	Arda Kirmizioglu	Cloud Lead	MS in Computer Science. His area of expertise is cloud networking technologies and software-defined distributed networks. As of 2019, he has published 6 conference and journal papers about cloud data streaming architectures and video optimization.
	Mert Gokdemir	Simulation Engineer	Undergraduate in Electrical Engineering with 5+ years of experience in visual design, game design and development. Specialized in Unity, Unreal and 3D simulation environments.

	Faruk Demirci	Embedded Systems Engineer	Electrical and Electronics Engineering undergrad with 3+ years of experience in software development and embedded systems.
	Erhan Bayram	Mechanical Engineer	BS in Mechanical Engineering with 4+ years of experience in 2D-3D prototyping, manufacturing techniques and design. Specialized in composite structures and quality management.

Perks

$100	Soar Robotics sticker.
$500	Soar Robotics sticker. Mention your name on our website.
$1,000	Mention your name on our website. Receive Soar Robotics T-shirt.
$2,500	Mention your name on our website. Receive Soar Robotics Proud investor T-shirt.
$5,000	Mention your name on our website. Receive Soar Robotics proud investor T-shirt. Participate in a virtual group session with the founding team.

$10,000	Mention your name on our website. Receive Soar Robotics proud investor kit. Have a 1:1 strategy session and have dinner with the founding team.
$25,000	All of the above and have a chance to name our future products.
$75,000	A place on our advisory board.

FAQ

How do I earn a return?	We are using Republic's Crowd SAFE security. Learn how this translates into a return on investment here.