Reusable Orbital Systems

Graviron Aerospace

Pitch Deck

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The Problem

Earth’s orbit is becoming increasingly congested, with a growing number of satellites and debris objects.

Current space systems are largely single-use and lack the ability to safely interact with, manage, or return from orbit.

This creates long-term operational risk and limits sustainable use of orbital space.

What's Broken in Earth Orbit

01.

Unmanaged Orbital Growth

The rapid increase in satellites has outpaced the ability to manage, coordinate, and sustain safe orbital operations.

02.

Single-Use Space Systems

Most orbital vehicles are designed for one-time missions, with no capability for reuse, interaction, or recovery.

03.

Limited Orbital Control

Current systems lack controlled maneuvering and interaction, increasing long-term operational risk in orbit.

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Current systems lack controlled maneuvering and interaction, increasing long-term operational risk in orbit.

Our Approach

Autonomous Orbital Navigation

Onboard autonomy designed to enable precise maneuvering and decision-making in orbital environments.

Controlled Orbital Interaction

Systems designed to enable controlled interaction with objects in orbit through incremental validation.

Reusable Atmospheric Return

Glide-based return concepts focused on safe recovery and reusability after orbital operations.

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Core Capabilities

Graviron is focused on building core technical capabilities required for safe, reusable, and controlled orbital operations.

Autonomous Guidance & Control

Onboard guidance and control systems designed for autonomous decision-making in orbital conditions.

Orbital Navigation Systems

Navigation architectures focused on precise maneuvering and situational awareness in orbit.

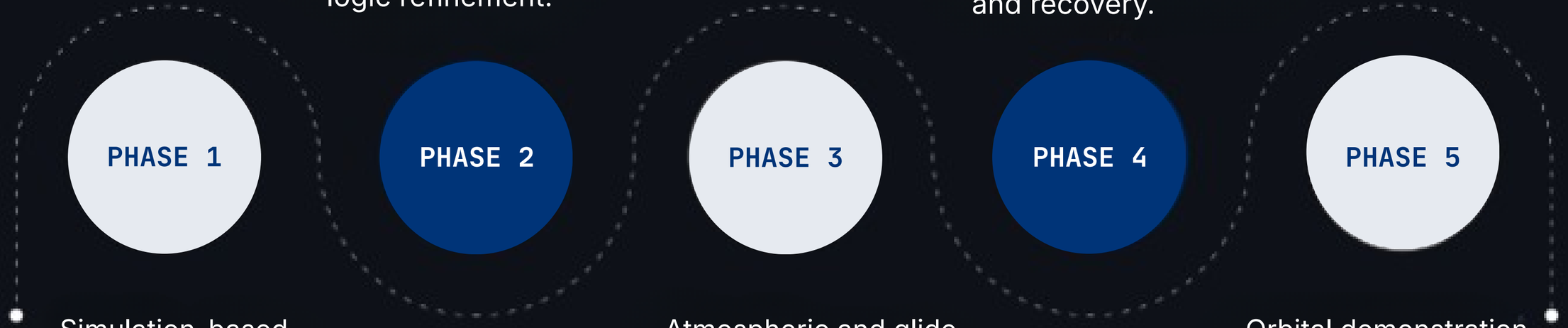
Incremental Validation Framework

Progressive testing across simulation, atmospheric, and sub-orbital environments.

Reusable System Design

Design principles focused on recovery, reusability, and long-term orbital sustainability.

Technical Validation Roadmap



Why This Matters

Orbital Sustainability

Long-term use of Earth orbit requires systems designed for reuse, control, and responsibility.

Lack of Reusable Infrastructure

Most existing systems are single-use and not designed for long-term orbital operations.

Growing Orbital Congestion

An increasing number of satellites and objects are creating coordination and safety challenges in orbit.

Future Orbital Operations

Future space activity will depend on controlled interaction, recovery, and sustainable orbital systems.

Long-Term Vision

Graviron is focused on building foundational orbital capabilities first, with long-term value created through reusable and responsible space systems.

Capability Development First

Early efforts are centered on technical validation and system capability development.

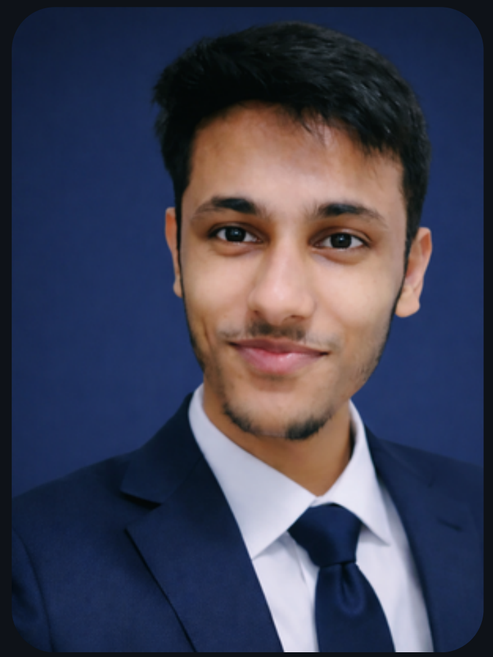
Future Service Enablement

Long-term value may be created through orbital services enabled by reusable systems.

Scalable Orbital Infrastructure

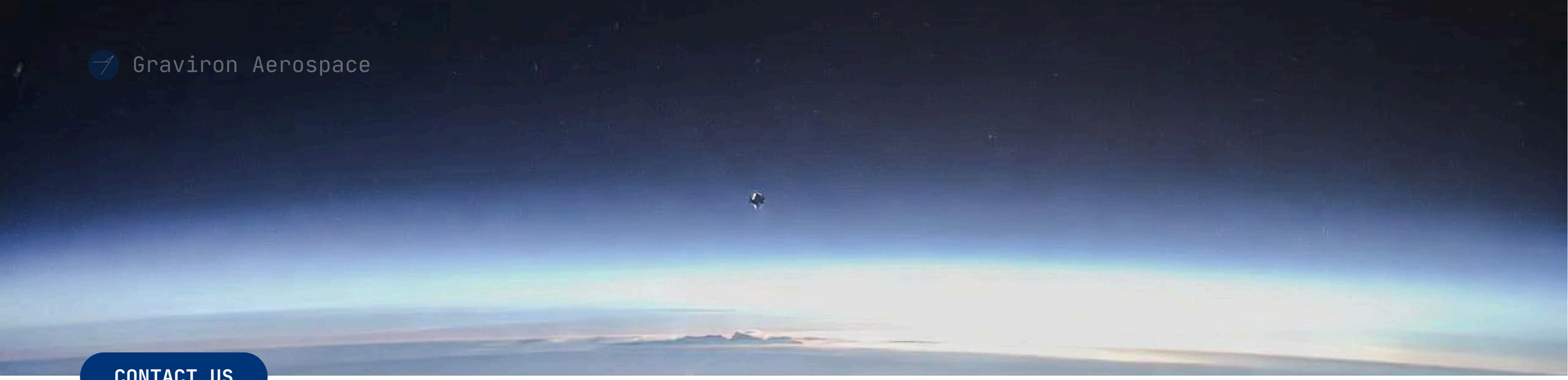
Reusable orbital platforms designed to support future space operations at scale.

Meet the Founder



Atul Raj

Founder & C.E.O



CONTACT US

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