



WARPEED



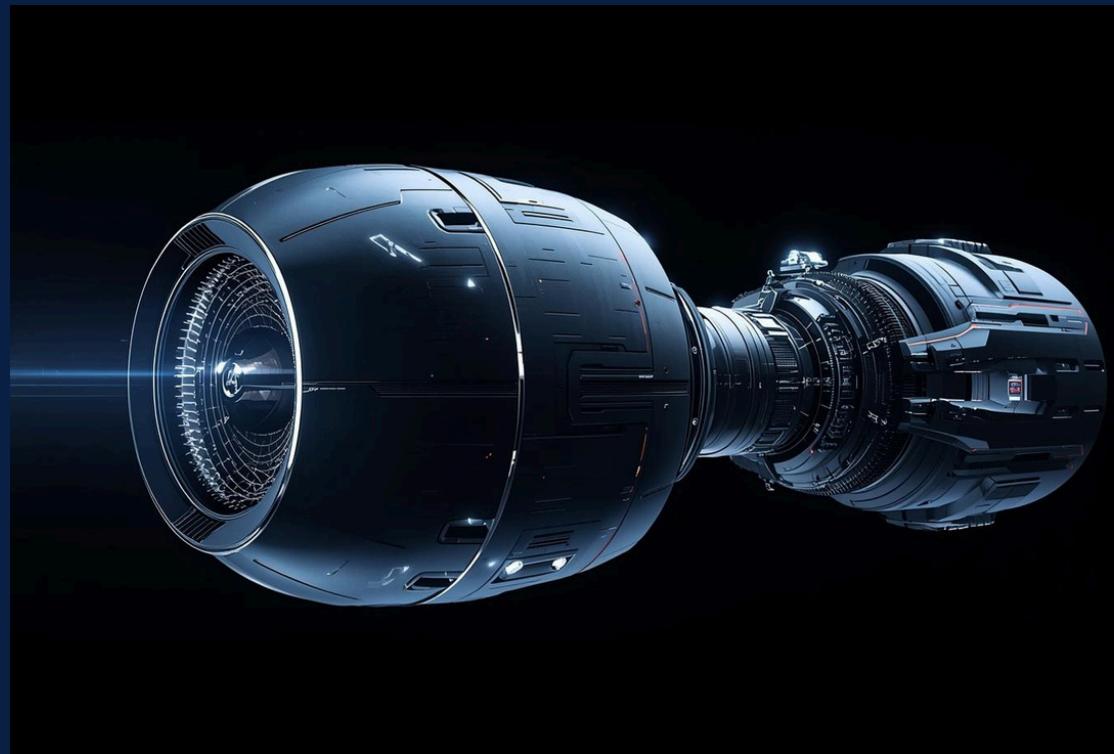
Quantum-Optimized Lightsail: Half-Light Speed Reality

- Quantum propulsion
- $0.50c$ velocity
- 8.7 years to Alpha Centauri
- First production-ready design



Quantum Propulsion

Our innovative quantum propulsion technology **redefines space travel**, unlocking unprecedented speeds and efficiencies through cutting-edge engineering and advanced materials designed for the future of exploration.



The Interstellar Barrier

- Rocket equation limitation
- 76,000 years to Alpha Centauri
- Need for non-fuel propulsion



Laser-Driven Lightsail Concept

- Photon momentum = energy/c
- 500 GW laser power
- 9.23 g sail mass
- 36,000 g acceleration



Engineering & CAD Validation



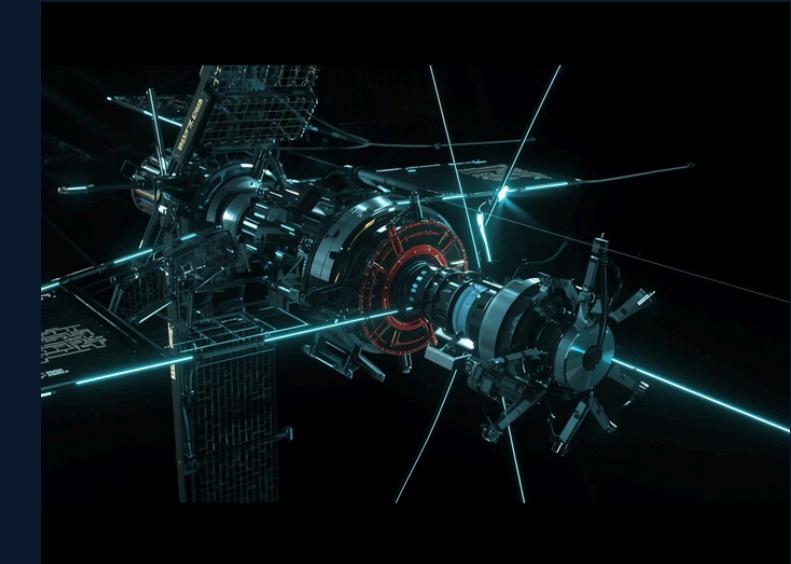
QUANTUM SAIL DESIGN

Innovative structure



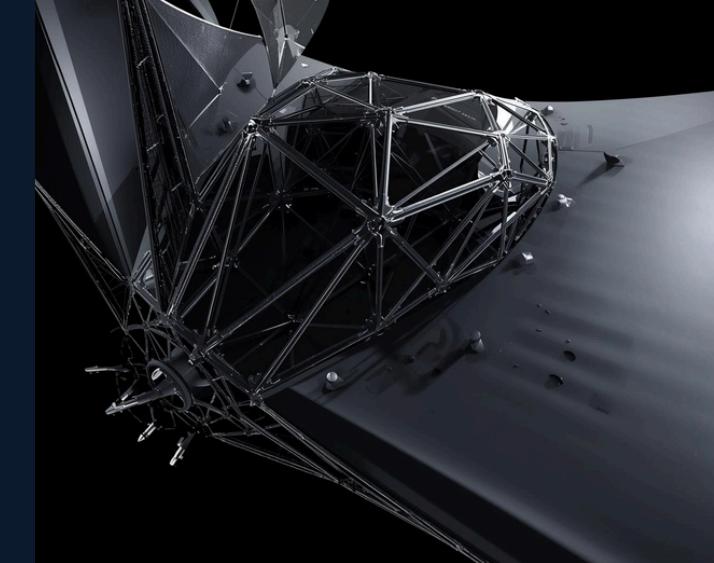
PROPULSION SYSTEM

Key components



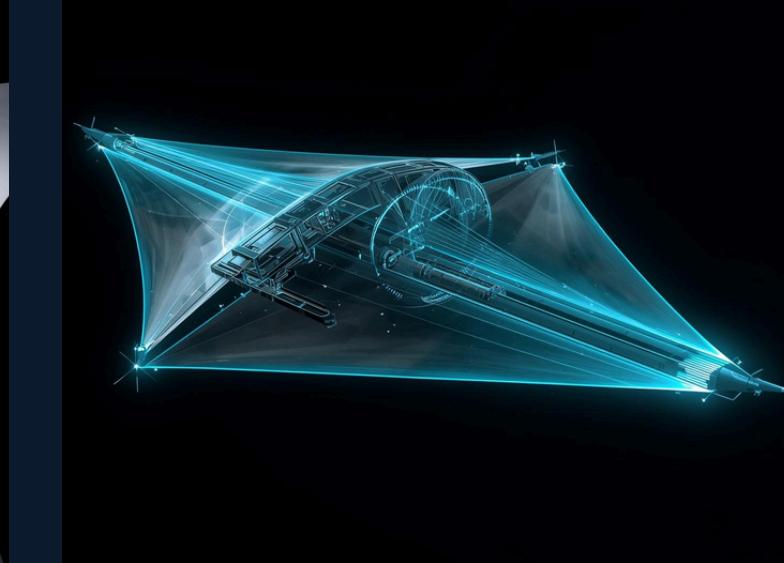
ASSEMBLY VISUALIZATION

Integrated mechanics



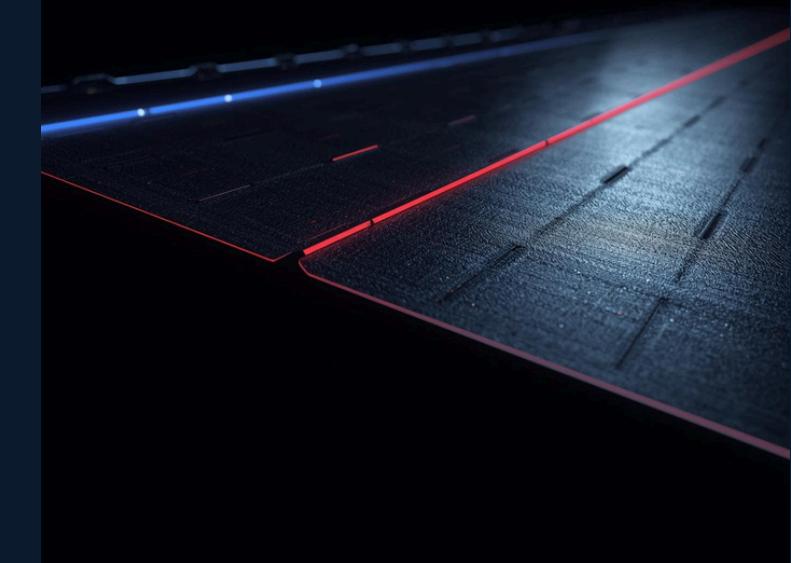
FRAMEWORK ANALYSIS

Lightweight materials



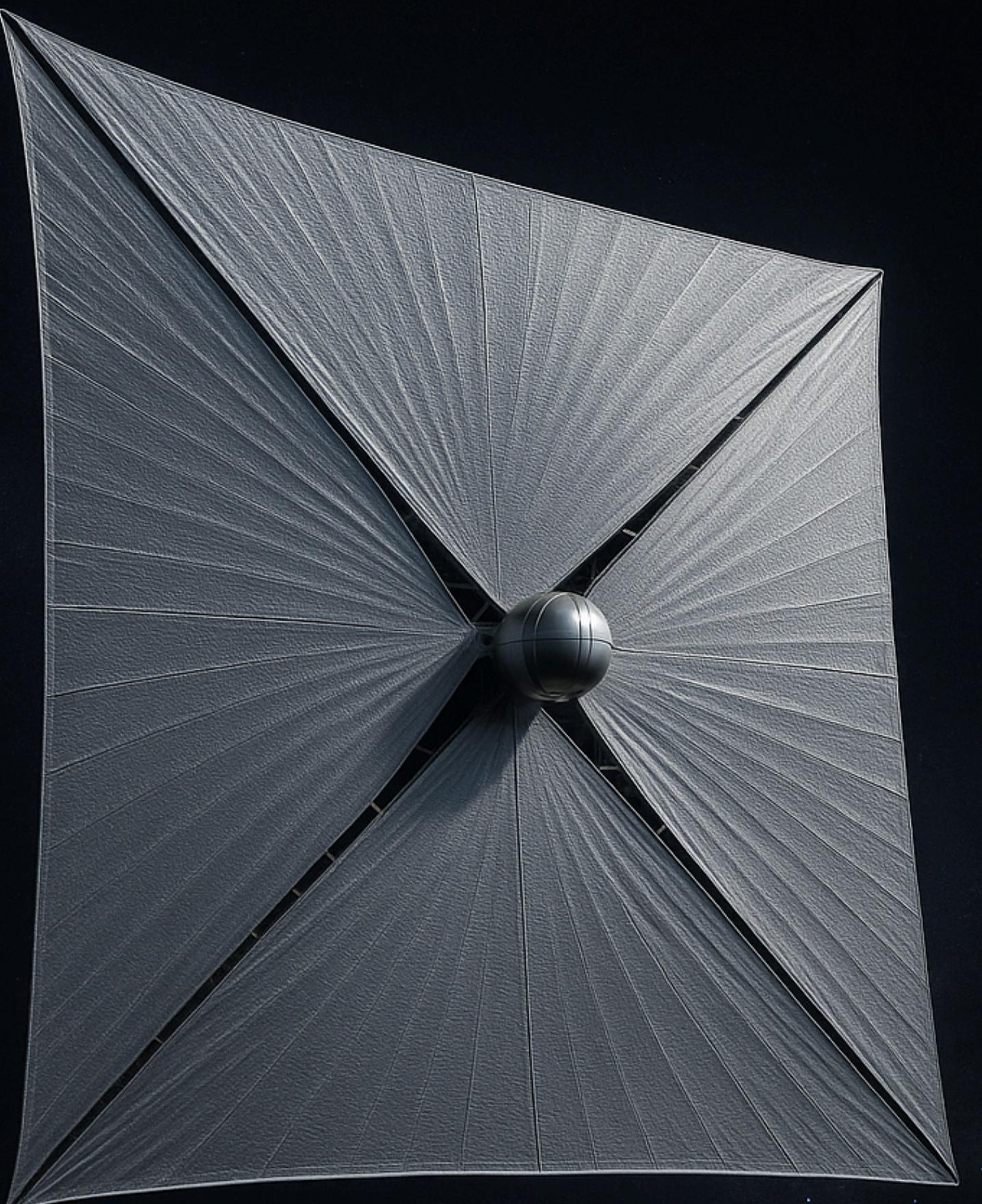
OPERATIONAL PRINCIPLES

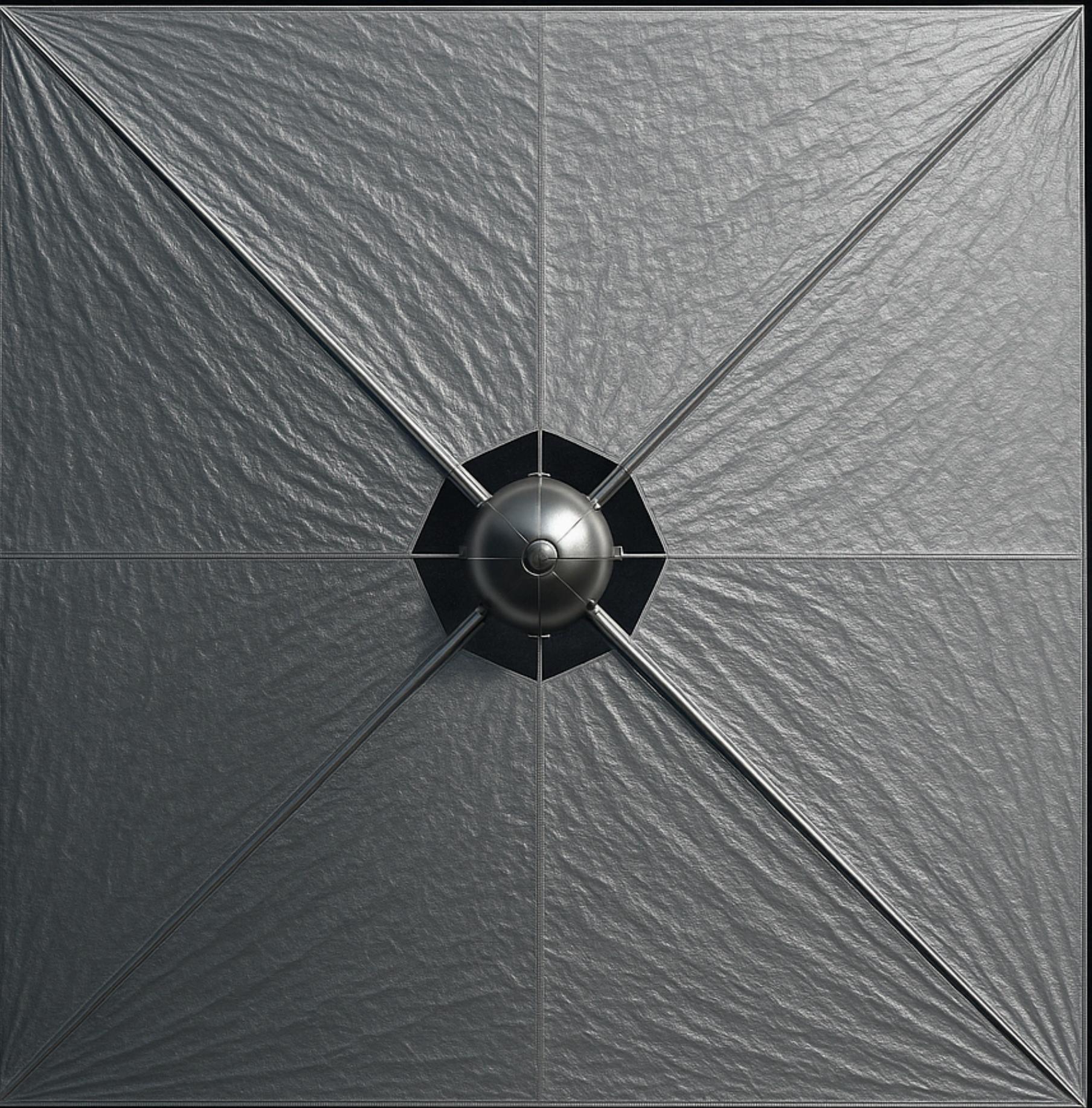
Energy flow



MATERIAL PROPERTIES

Advanced composites





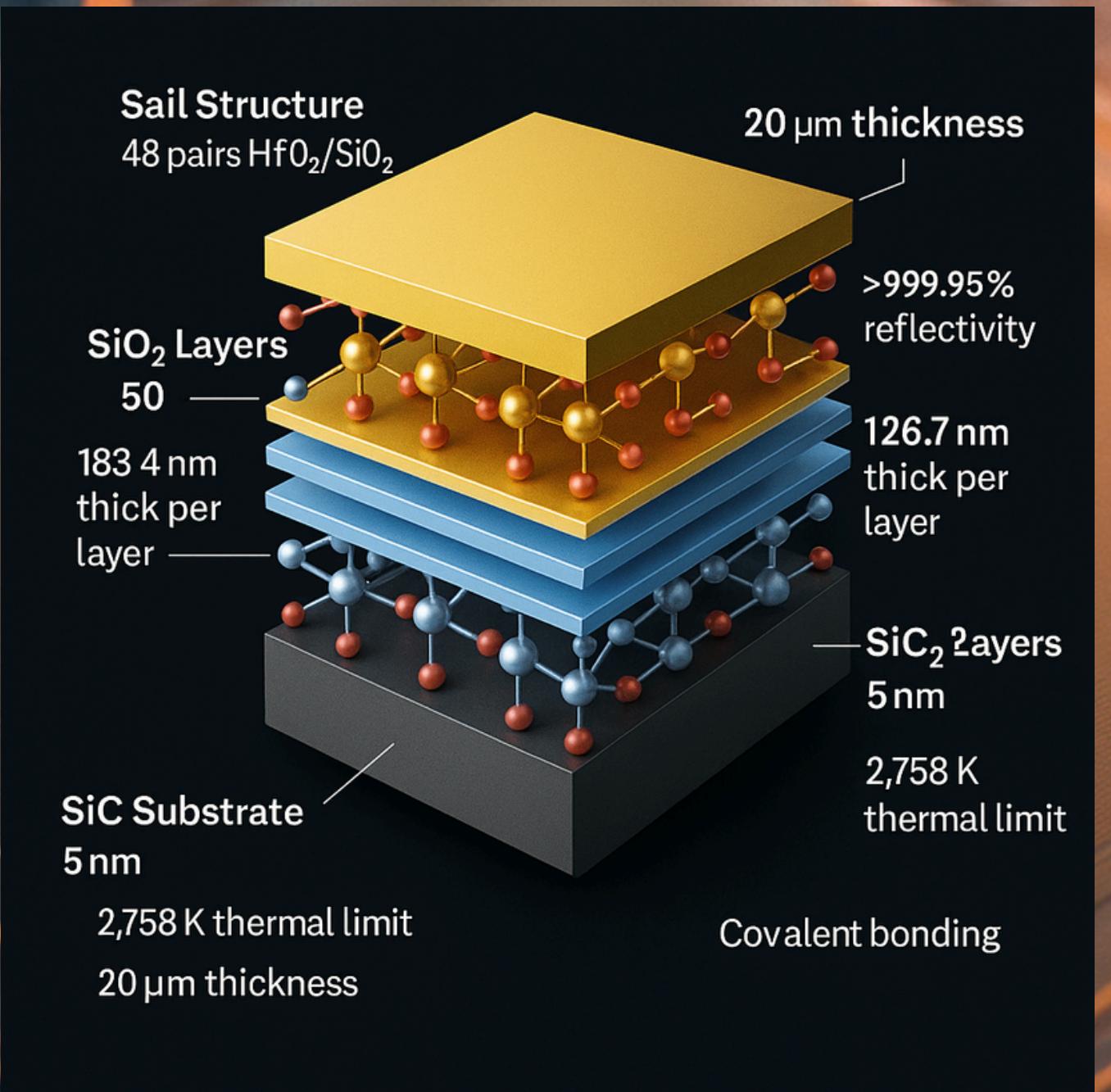
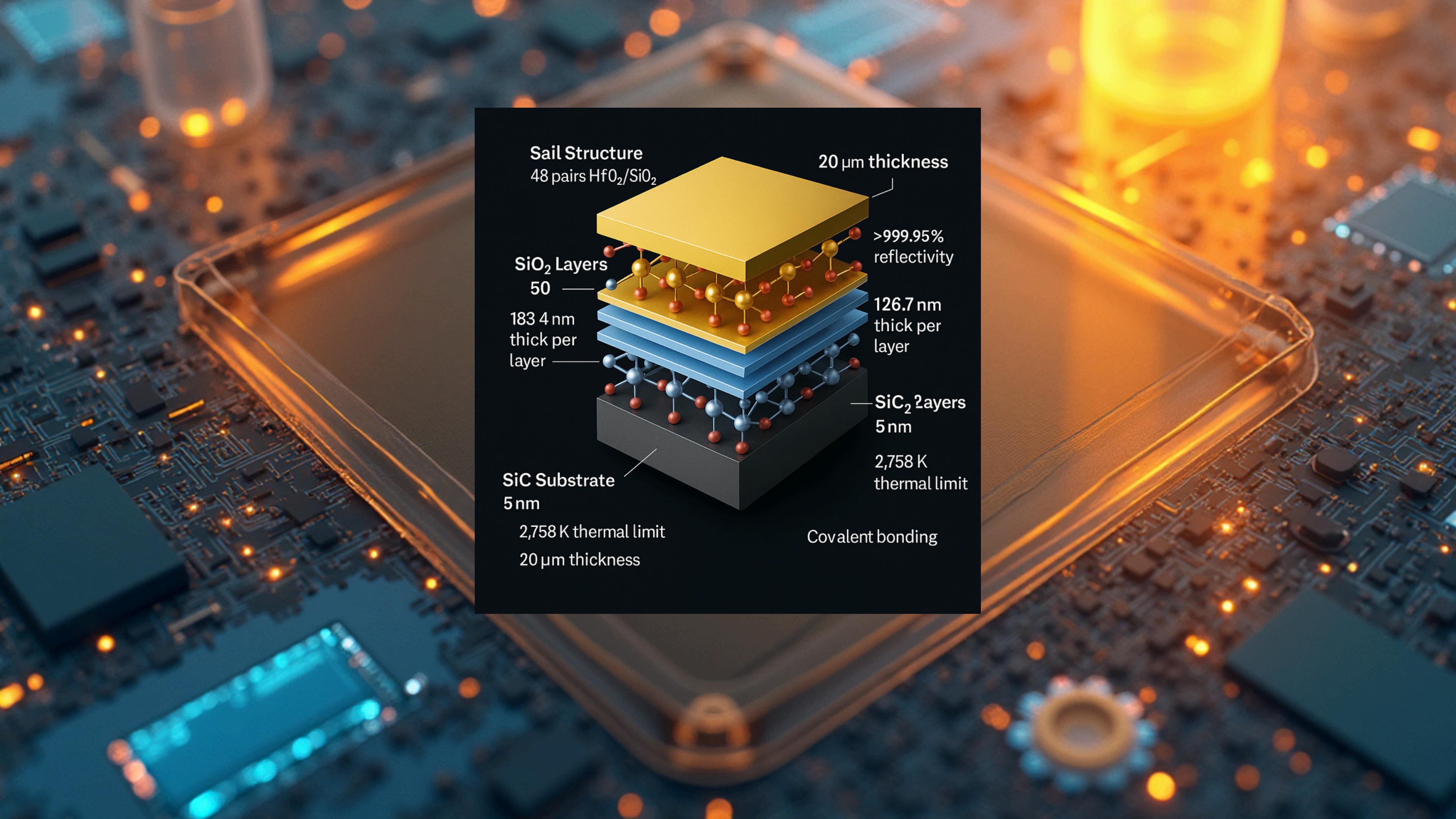
Quantum Computing Breakthrough

- IBM Torino 133-qubit system
- 49k configurations
- 272× faster than GPUs
- 4.5× velocity improvement



Material Revolution: SiC + HfO₂/SiO₂ Composite

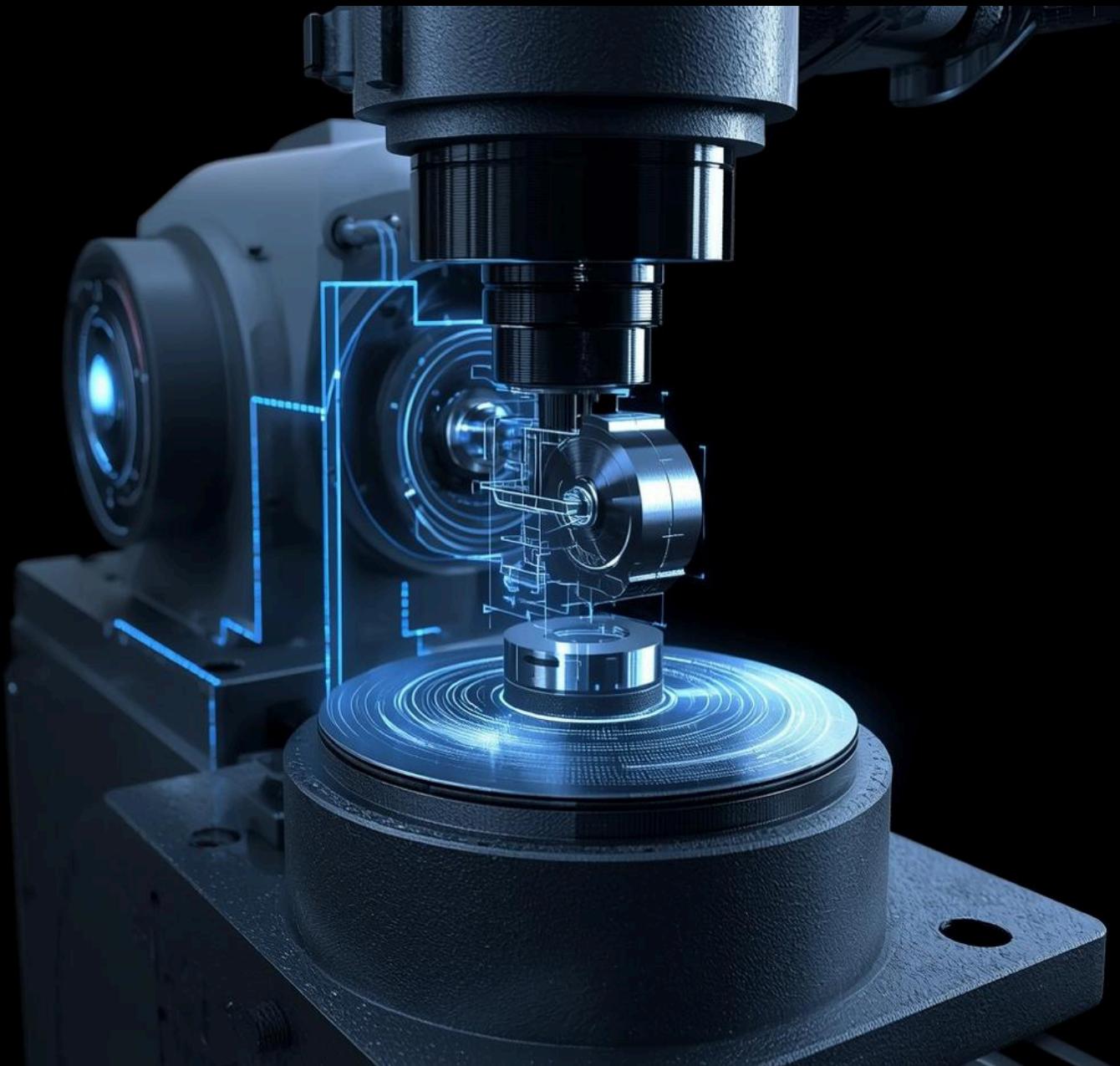
- 99.95% reflectivity
- 2,758 K tolerance
- 20 µm thick
- Scalable manufacturing



Engineering Validation

- 4.16 GPa stress < 21 GPa limit
- 1,627 K < 2,973 K
- Adaptive optics precision 1 nanorad

Fabrication Processes Overview



01 Grinding Process

The grinding process involves precision shaping of materials to achieve desired dimensions and surface quality.

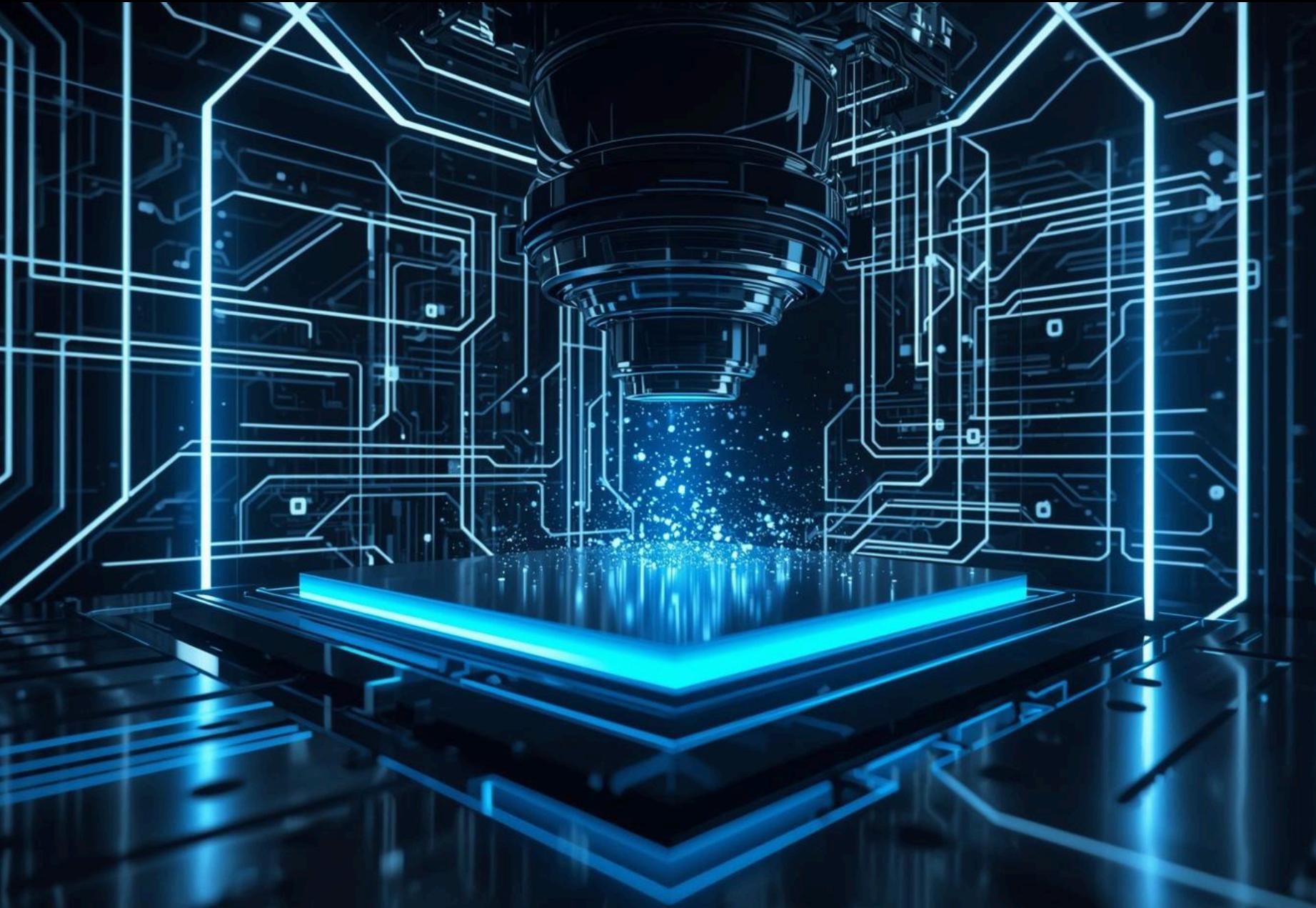
02 CMP Process

Chemical Mechanical Polishing (CMP) ensures smooth surfaces by removing material through chemical and mechanical means, enhancing performance.

03 RIE Process

Reactive Ion Etching (RIE) allows for accurate material removal through plasma, achieving high-resolution patterns on substrates.

Fabrication Processes: ALE, IBS, ALD



01 Atomic Layer Etching

ALE enables precise control over material removal at the atomic level, enhancing structural integrity and performance.

02 Ion Beam Sputtering

IBS utilizes accelerated ions to deposit thin films, ensuring uniform coverage and optimal material qualities for applications.

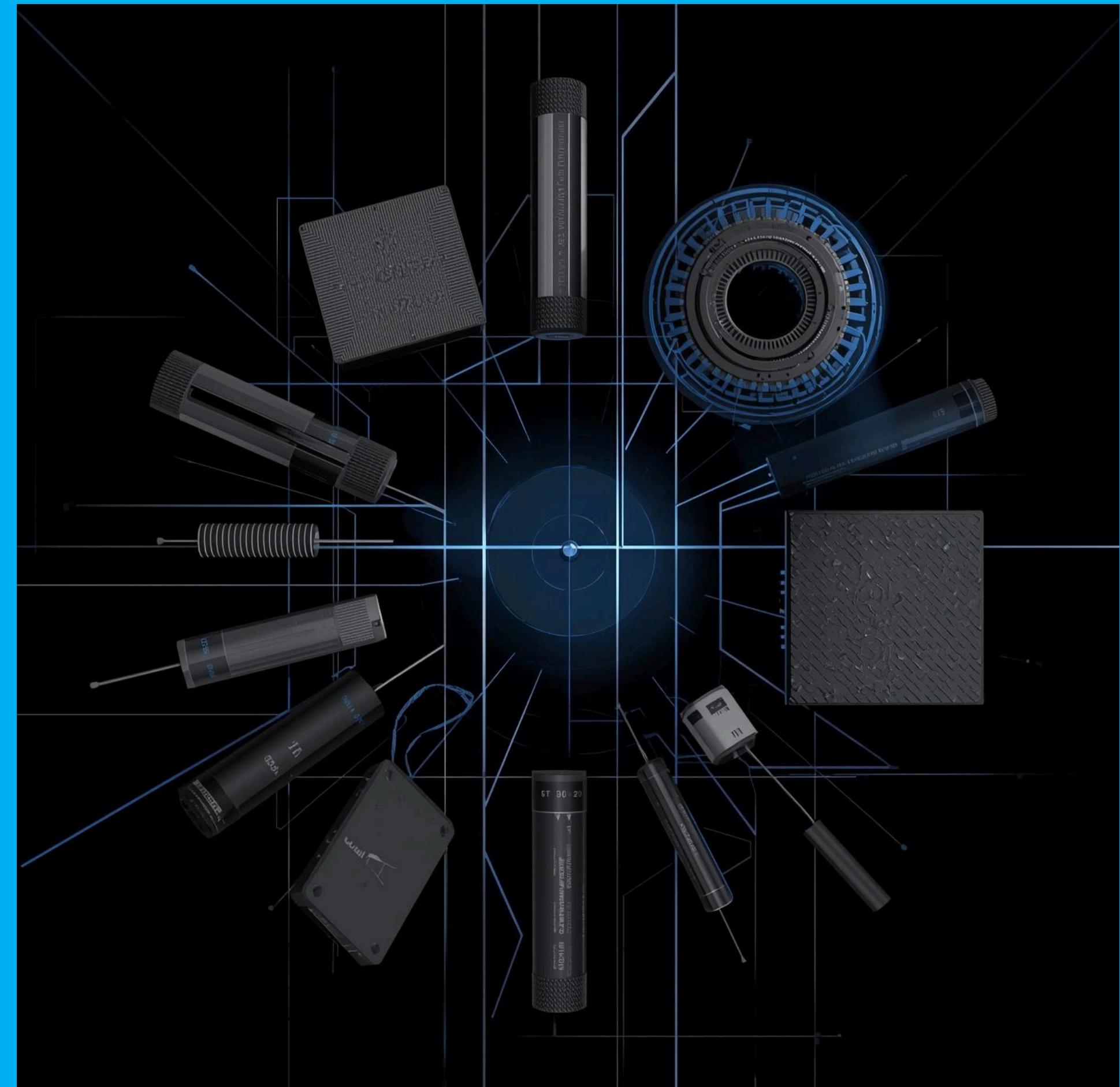
03 Atomic Layer Deposition

ALD is a highly controlled method for depositing atomic layers, achieving exceptional uniformity and conformality on complex surfaces.

Mechanical Components

Understanding the crucial role of components in the Lightsail design

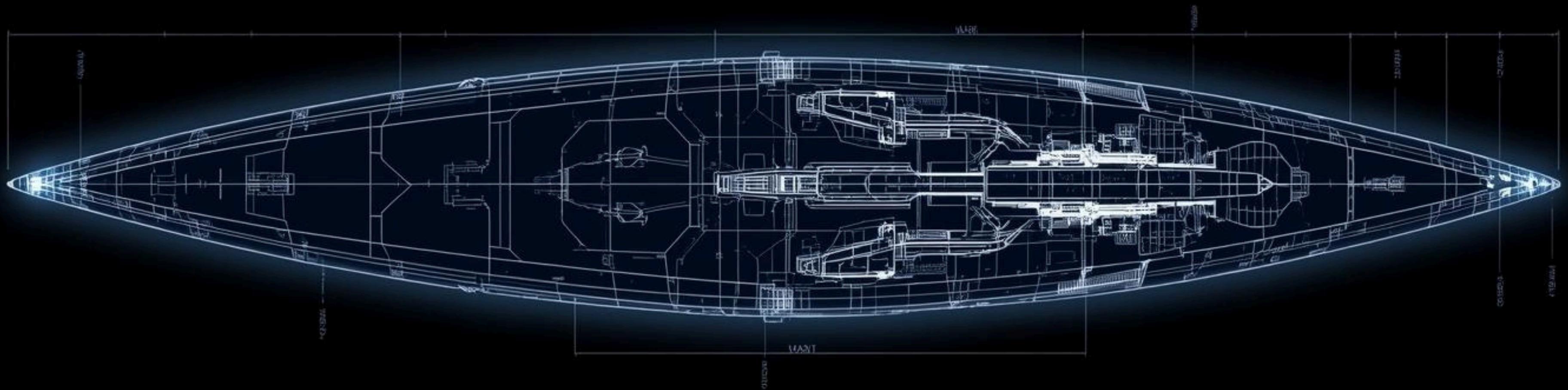
This section explores **key mechanical components** that support functionality and performance.



Full Assembly Blueprint

Key Components of Assembly

1. Main Frame
2. Optical Elements
3. Mechanical Supports
4. Electrical Connections



Quantum Validation

Exploring the implications of IBM Torino's advancements in quantum computing

IBM Torino's **133 qubits** showcase significant progress in quantum validation technology.



Key Metrics of Warpeed Lightsail



01 Reflectivity

The lightsail boasts an impressive reflectivity rate, optimizing energy absorption and minimizing thermal losses.

02 Mass

The lightweight design ensures efficient maneuverability, significantly reducing payload weight while maintaining structural integrity.

03 Cost

Strategic material selection and manufacturing processes are aimed at minimizing costs, ensuring affordability for large-scale deployment.

Risks & Mitigation

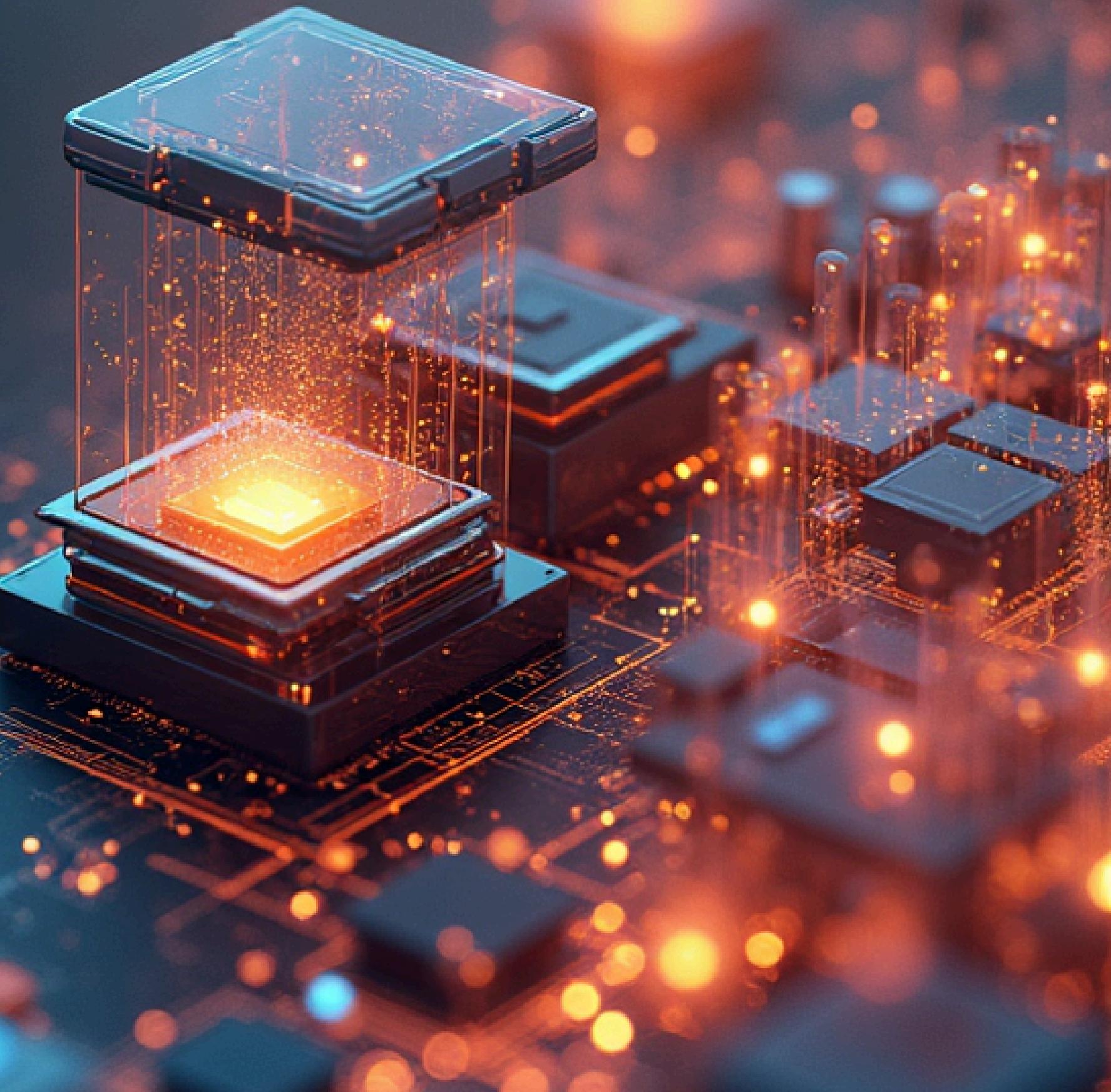
Identifying potential risks and strategies to address them effectively

Understanding risks allows for proactive **mitigation strategies** to ensure project success.



Market Opportunity

- Deep-space missions \$300B
- Quantum SaaS \$500B
- Materials/Photonics \$1.2T
- \$2–5T long-term impact

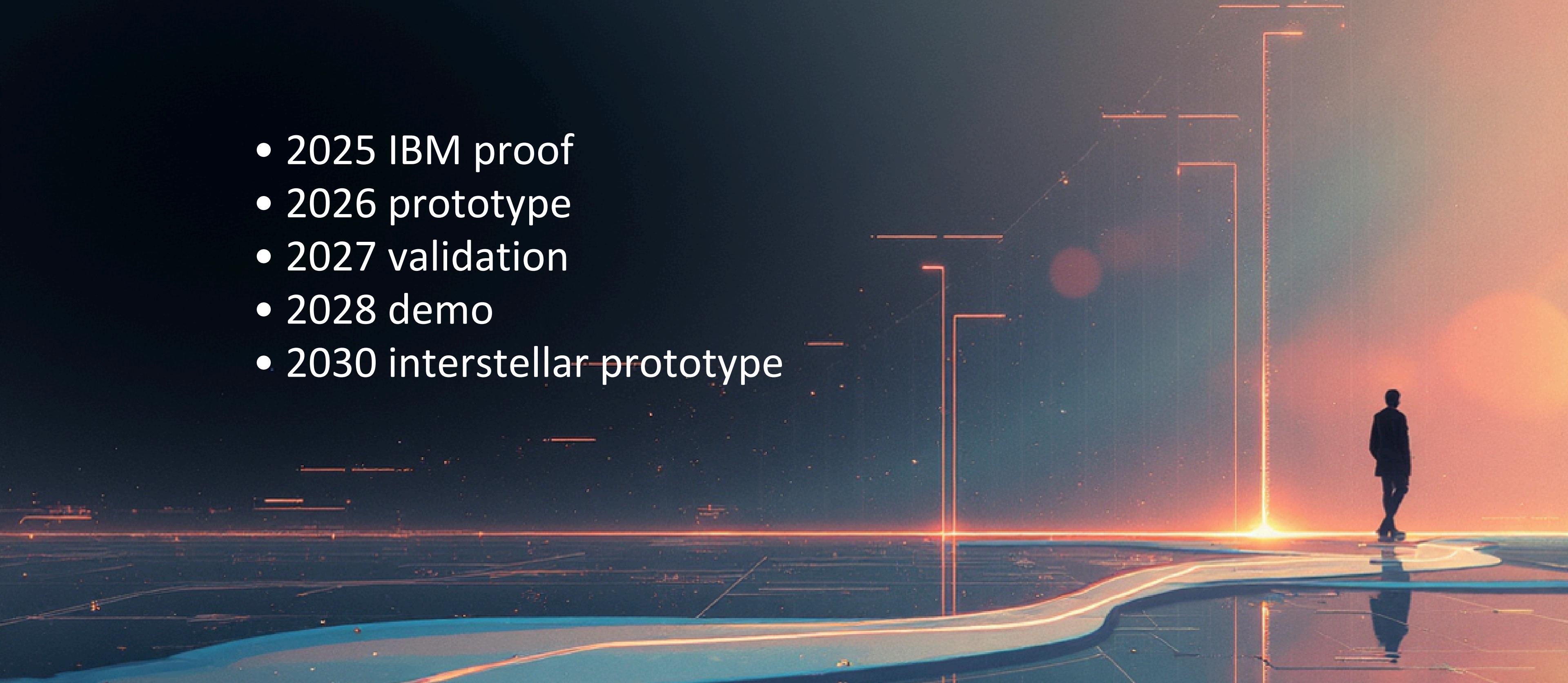


Business Model

- Stage 1 – Licensing
- Stage 2 – Hardware partnerships
- Stage 3 – Launch consortium

Traction & Milestones

- 2025 IBM proof
- 2026 prototype
- 2027 validation
- 2028 demo
- 2030 interstellar prototype



\$5M

PRESEED INVESTMENT

This initial funding will secure a **24-month runway**, enabling us to advance our development stages and solidify strategic partnerships within the aerospace and defense sectors.

300%

PROJECTED ROI

Investors can expect a **300% return on investment** by year five, driven by our innovative propulsion technology and growing demand in both defense and commercial aerospace markets.

Financials & Funding Ask

- \$35M seed round
- 12-month runway
- \$289M cost per mission
- \$2–5T impact potential



Leadership Team

- Heinz Jungbluth – CEO



Roadmap & Exit Strategy

- 2025–27 Prototype → 2028–30 Demo → Acquisition
- (SpaceX, IBM Quantum, Lockheed)

Join the Next Apollo

- The physics solved
- The path clear
- Partners needed