



Funding Planetary Defense

Navigating Geopolitics
and Finance for
Asteroid Threats

● THE PROBLEM

We Can Stop an Asteroid. We Can't Fund the Defense.

- Mitigation technology exists: kinetic impactors, deflection systems
- No standing fund for rapid response
- No pre-approval for financial deployment
- Deflection missions need 3–10 years lead time

CASE STUDY

Asteroid 2024 YR4

January 2025: Discovered

Initial risk: 1-in-3,800 impact by 2032

April 2025: Risk removed by ESA/IAWN

Public response: Muted—no funding debate

Despite technical success, 2024 YR4 exposed systemic gaps in global preparedness—especially in finance.

● THE CAPABILITY

The Technology Pipeline Is Active

● CONFIRMED

DART Mission

First successful deflection

2022

● LAUNCHING

NEO Surveyor

Space-based detection

2028

● PROPOSED

ESA RAMSES

Apophis rendezvous mission

2028

● ACTIVE

IAWN / SMPAG

International coordination

2016+

DART altered Dimorphos's orbit by 33 minutes—25x the minimum for mission success.

Global Funding Comparison

WORLD BANK CAT BONDS

\$4.8B

17 transactions issued

- ✓ Earthquakes
- ✓ Hurricanes
- ✓ Tsunamis
- ✓ Pandemics

MECHANISM PROVEN

ASTEROID DEFENSE

\$0

Zero transactions. Ever.

- No standing fund
- No rapid-response treasury
- No pre-approved deployment
- No cost-sharing framework

INFRASTRUCTURE GAP

WHY THIS MATTERS: Deflection missions require **3–10 years** of lead time. Pre-positioned funding isn't a preference—it's physics.

April 13, 2029

Asteroid Apophis will pass closer to Earth than our communications satellites.

T-1,156

DAYS TO CLOSEST APPROACH

31,600 km

Closest approach

~2B

Potential viewers

2029

UN Year of Planetary Defense

For one moment, the entire world will think about planetary defense.

Will we have the financial architecture ready?

● THE SOLUTION

Building the Financial Architecture

Not inventing new mechanisms—extending proven ones.

01

DSR BANK

Multilateral institution for pooled planetary defense capital with GDP-weighted contributions.

Modeled on GEF, GFDRR

02

ASTEROID BONDS

Capital markets instruments for planetary risk transfer with resilience-linked yields.

Mechanism: World Bank Cat Bonds

03

GLOBAL GOVERNANCE

Transparent framework with scientific oversight and UN-OOSA interoperability.

Compatible with COPUOS norms

Every component has institutional precedent. We're adapting, not inventing.

- PROPOSAL

The DSR Bank

Defense, Security, and Resilience Bank—A Multilateral Institution

MISSION

Fund asteroid, debris, and solar weather mitigation

DESIGN

Pooled capital from nations, banks, and private sector

FUNCTION

Pre-fund infrastructure, rapid response, and R&D

MODEL COMPONENTS

- GDP + orbital asset exposure = contribution tiers
- Mission-based funding windows
- Technical certification for private partners
- Governance: sovereigns, agencies, vetted private actors

INSTITUTIONAL PRECEDENTS

GEF

> \$23B in grants since 1991

GFDRR

Sendai Framework implementation

Implementation Timeline



YEAR 1-2

- Launch international feasibility commission
- Secure G7/G20 declarations of support
- Draft Articles of Incorporation



YEAR 3-5

- Pilot Asteroid Bond issuance
- Begin fund capitalization via MDBs
- Certify mission vendors



BY YEAR 10

- Fully operational planetary defense finance ecosystem

Apophis flyby in 2029 provides natural deadline and global attention catalyst.

Proprietary Financial Architecture for Planetary Defense

Provisional Patent | Defensive Finance as Infrastructure

FILED PROVISIONAL PATENT

Resilience-linked financial instruments tied to planetary hazard events

Mission-triggered capital deployment frameworks

Hybrid public-private governance and certification mechanisms

Risk scoring methodologies incorporating orbital, scientific, and geopolitical data

SCOPE

Protects system-level design, not individual missions or hardware

PRIORITY

Establishes priority date for future filings, licensing, and spin-outs

This transforms planetary defense finance from an idea into defensible infrastructure.

Provisional Patent filed, U.S. Patent and Trademark Office, 2025.

From Legal Protection to Global Financial Platform

01

PATENT LAYER

Defines core mechanisms: trigger conditions, capital pooling logic, and deployment authorization. Creates a standardized, certifiable framework.

Legal foundation

02

INSTITUTIONAL LAYER

Enables adoption by multilateral development banks, sovereign contributors, and UN-aligned agencies. Aligns with World Bank Cat Bonds, Sendai Framework, COPUOS.

Policy alignment

03

MARKET LAYER

Allows Asteroid Bonds and derivatives, private capital participation, insurance and reinsurance integration. Opens secondary markets over time.

Capital markets

The provisional patent allows DSR to act as the architect and steward of the system, even as capital scales globally.

- CAPITALIZATION

Capitalization Strategy and Long-Term Sustainability

How the Organization Finances, Scales, and Sustains Itself

CAPITAL INFLOWS

- Sovereign and MDB capitalization (GDP and orbital exposure weighted)
- Pilot Asteroid Bond issuances
- Philanthropic and catalytic capital
- Strategic private-sector participation

ORGANIZATIONAL VALUE CAPTURE

- Licensing fees tied to patented architecture
- Certification and technical validation roles
- Advisory participation in bond issuances
- Potential future spin-outs or SPVs

WHY THIS WORKS

Public-good aligned, not profit-maximizing
Scales with risk, not hype
Creates incentives for early participation without distorting mission priorities

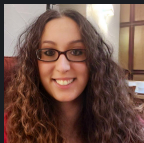
DSR is not monetizing fear. It is capitalizing preparedness.

Leadership Team



James Wolff

Founder & Executive Director



Inara Tabir

Director of Development



Chris Hearsey

Director of Policy



Sean Hollis

COO, Board



Chris Jeanette

CTO, Board



Ronaldo Symon

Policy & Governance



Marshall Eubanks

Chief Science Officer



Jean Luc Philistin

Software & Content Developer

● NEXT STEPS

For Policymakers and Partners



Advocate

For planetary defense inclusion in UN disaster frameworks



Commission

Feasibility analysis through World Bank or regional banks



Organize

A planetary defense finance summit under NSS or UNOOSA



Convene

Public-private partnerships to operationalize Asteroid Bonds

The next asteroid may never hit—but if it does, let our failure not be one of imagination or resolve.

- LEGAL DISCLAIMER

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Partnership inquiries | Technical collaboration