FILO.SYSTEMS
Empowering Space Missions with Intelligent Data Compression

Earth Observation, Satellite Telecommunications, Geolocation & Navigation, Deep Space Missions, AI-Driven Edge Processing

Etamar LARON, Co-Founder and CEO of Filo Systems
Dr. Ofer MARKMAN, Co-Founder and CEO of Filo Coimbra
INVESTORS DECK

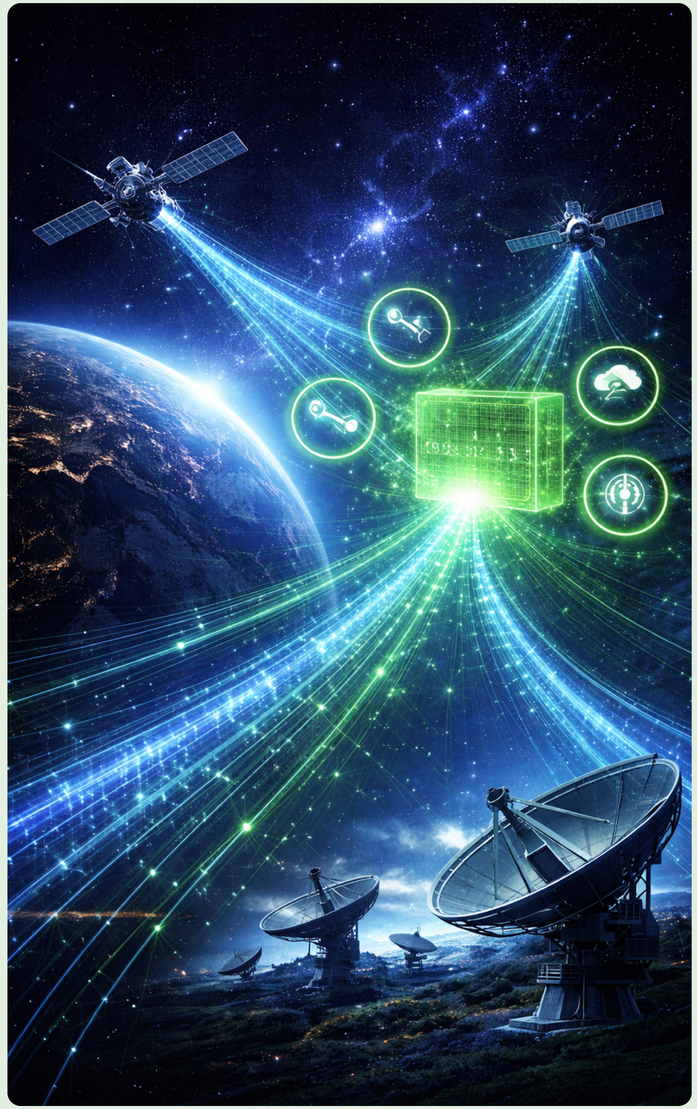
Q.1 SPACE MARKET RELEVANCE

The solution appears more relevant to terrestrial applications, with limited demonstrated demand or focus on the space sector.

FILO is designed to address fundamental challenges inherent to space missions, including limited bandwidth, constrained power budgets, and rapidly growing volumes of onboard-generated data.

The platform optimizes the storage and transmission of space-originated data such as Earth Observation imagery, radar, LiDAR, telemetry, and sensor streams.

By applying lossless compression prior to downlink or long-term storage, FILO enables missions to significantly increase usable data throughput within existing space and ground infrastructure constraints, directly enhancing mission efficiency and scientific output.



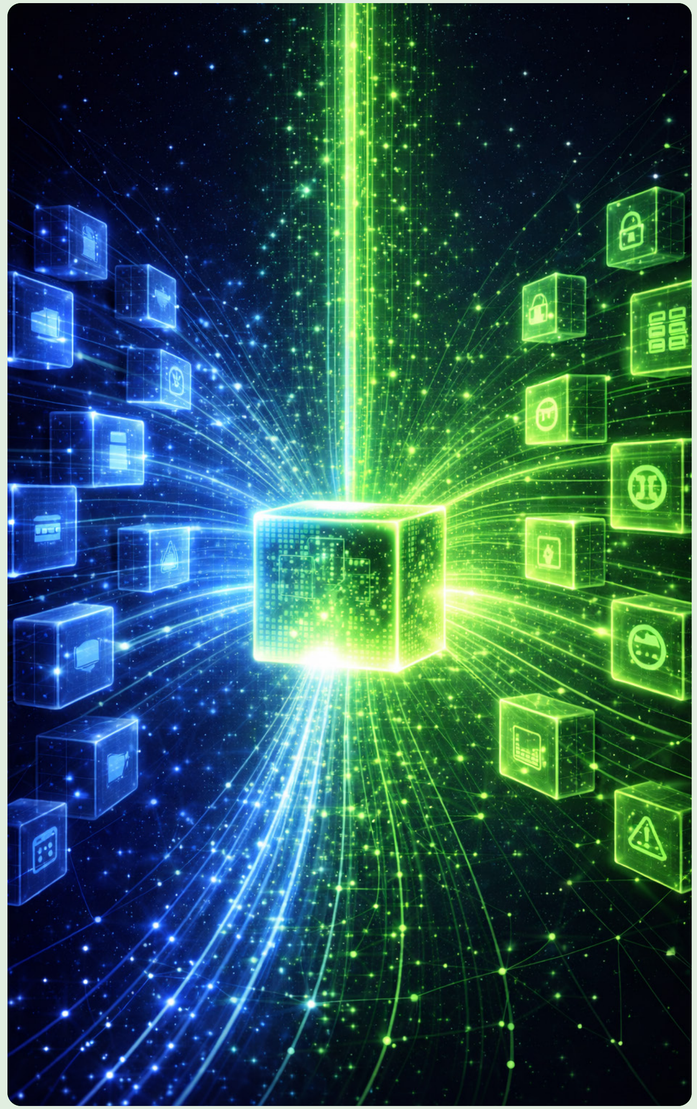
Q2. COMPETITIVE LANDSCAPE

The sector is crowded with major incumbents, making it difficult to define a unique position.

FILO differentiates itself through AI-driven, adaptive, lossless data compression operating at the file system and object storage layers.

Unlike traditional analytics, security, or data management vendors, FILO does not focus on extracting insights or selectively processing data, but on reducing raw data volume while preserving complete data fidelity.

The separation between FILO SPACES (deep compression for data at rest) and FILO GREENBOX (near real-time compression for data in motion) allows FILO to address mission-critical environments and workflows that are not optimally served by existing incumbent solutions.



Q3. HARDWARE COMPATIBILITY AND BACKWARD COMPATIBILITY

It remains unclear whether the solution is backward compatible with satellites already in orbit.

FILO is implemented as a software-only solution, designed to integrate transparently without requiring changes to applications, data formats, or payload architectures.

The platform operates on existing computing environments, enabling integration without hardware redesign, firmware modification, or satellite payload changes.

This approach supports compatibility with both existing satellites and future missions, minimizing integration risk and deployment complexity.

Q4. TECHNICAL SPECIFICS – LOSSLESS COMPRESSION

The pitch does not explicitly clarify whether the data compression is lossless, which is critical for space data.

FILO provides fully lossless data compression as a core architectural principle.

All scientific and operational data is preserved with complete fidelity, ensuring accuracy, reproducibility, and compliance with mission and research requirements.

Compression efficiency is achieved without any degradation or alteration of the original data.

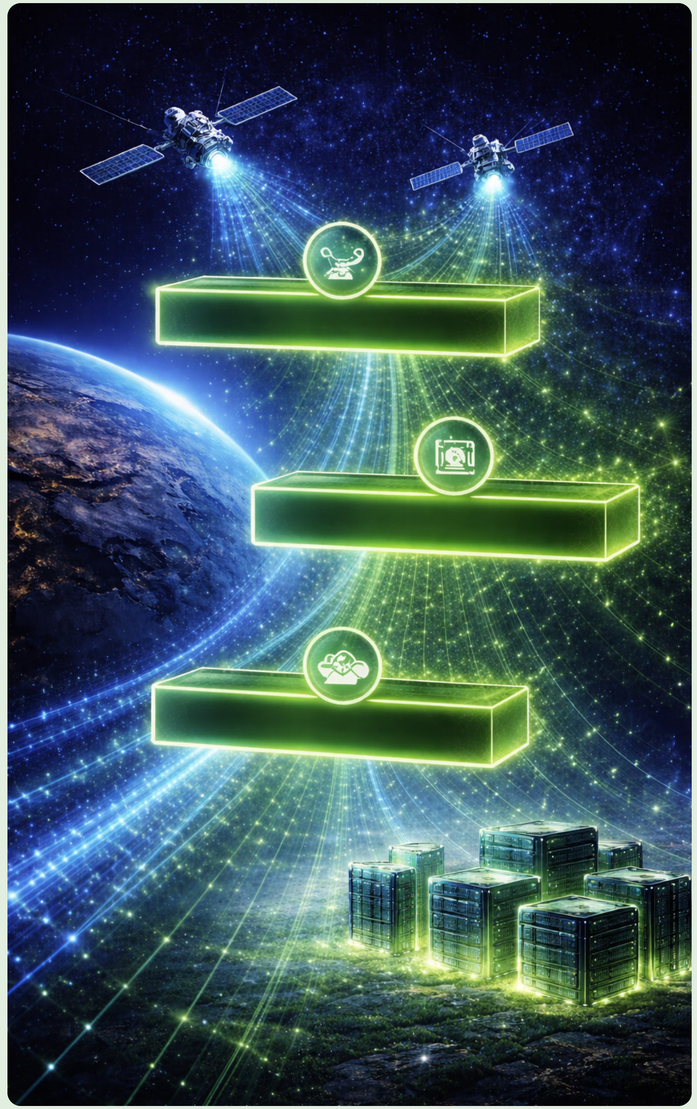
Q5. PRODUCT DEFINITION AND TARGET MARKET

As an early-stage venture, the definition of the specific product and target market needs to be sharper.

FILO’s initial space-focused product targets satellite operators, mission operators, and payload owners who face growing storage and downlink limitations.

The offering centers on high-efficiency, lossless compression of space-generated data, supporting both long-term data storage optimization (FILO SPACES) and near real-time mission data handling (FILO GREENBOX).

This phased approach allows deployment aligned with mission architectures and operational requirements while providing a clear entry point into the space market.



PITCH DECK AGENDA

THE TEAM

Etamar LARON
Co-Founder, CEO

Dr. Ofer MARKMAN
Co-Founder, CEO FILO Coimbra

Prof. Tomi KLEIN
Chief Scientist

Maya Kertzman
Marketing Director

HFN Israel + Morais Leitão Lisbon
Attorneys

PwC
Accountant

Engineers Team (7+)
Software, Algorithm, Data Scientists

BIOS

Etamar LARON
Co-Founder, CEO

Since 1991 Etamar founded and managed Filo (2022), Asparna (2010), and CogniTest (1990s), CEO at Scanmarker (01’-05’) and Founding member at MindCite (2000) and Hermelin college (1997).

Led 10 products from idea (TRL 1) to market (TRL 9) with 1 exit and 5 companies ongoing. 7 patents in data-related CS fields.

MBA in Leadership & Entrepreneurship, University of Liverpool, UK.

Dr. Ofer MARKMAN
Co-Founder, CEO FILO Coimbra

Since 1992 Ofer co-founder ProCognia, NutriCognia bringing them to an exit and M&A, and later managed GMCE Innovation Hub.

Launched 7 ventures and secured x2 successful exits in data related companies as M&A & IPO.

Dr. Markman is CEO of Filo Coimbra. Holds 14 patents. PhD Boston College, USA.

Prof. Tomi KLEIN
Chief Scientist

Prof. Klein was Bar Ilan University's Computer Science Department chair. His research focuses on various aspects of algorithmics predominantly Data Compression.

He is the author of two books, more than 150 publications in refereed journals and conferences, and holds 29 patents.

Frequently judges international CS competitions and academic boards and has numerous contributions in informatics and linguistics.

HISTORY

Filo was initiated, grown, and developed through the pre-seed stage to TRL 5 at Asparna, funded by the founder’s investment as a long-term, high-risk project aimed at solving a complex problem.

The company has since evolved through numerous partnerships and secured $5.2 million in funding to date, with a $1 million SAFE round currently underway.

OUR VISION

Short-Term: Become the go-to compression layer for satellite missions across Earth observation, telecom, and research.

Mid-Term: Power autonomous data handling for deep space probes, lunar bases, and interplanetary missions.

Long-Term: Build the backbone for intelligent data routing in space – enabling real-time planetary exploration and interstellar communication.

THE PROBLEM:
Data Bottlenecks in Space Missions

Space missions generate far more data than current downlink bandwidth can handle, creating critical bottlenecks.

CHALLENGES

1. **Explosive Data Growth**
   Satellite sensor and missions produce ultra-high-resolution imagery and telemetry at massive scale.
2. **Limited Downlink Bandwidth**
   Power, antenna size, and crowded frequency bands restrict transmission capacity.
3. **Hardware Constraints**
   Spacecraft have strict limits on mass, power, and processing.
4. **Scientific Integrity**
   Compression must preserve data accuracy and fidelity.

FILO VALUE PROPOSITION FOR SPACE

1. **Bandwidth amplification**
2. **Preservation of scientific integrity**
3. **AI-enhanced compression**
4. **Efficient onboard processing**
5. **Scalable across mission types**

THE SOLUTION:

Intelligent Data Compression for Space Missions

Our space-optimized compression maximizes throughput and minimizes bandwidth use.

Multiply and reuse existing Storage
X2 > X20 times

Reduce Bandwidth
X3 > X1000s times

World’s **densest** data-compressed
Object Store and Distributed **File System**

FILO ADVANTAGES FOR SPACE

1. **Efficient Use of Bandwidth**
2. **Reduced Onboard Storage Needs**
3. **Lower Power Consumption**
4. **Improved Data Throughput**
5. **Preservation of Scientific Integrity**
6. **Enhanced Mission Flexibility**

Market Size, Opportunity, Competitive Advantages

The space data compression market is accelerating, expected to reach ~$3B by 2033.

SPACE MARKET OPPORTUNITY

1. **Market size**
   $1.52B (2024) > $2.94B (2033).
2. **Drivers**
   More satellites, real-time data needs, higher-resolution instruments.
3. **Trends**
   On-orbit AI compression, cloud-based ground stations, flexible mission architectures.
4. **Key users**
   Government, satellite operators, research institutions.

FILO COMPETITIVE ADVANTAGES

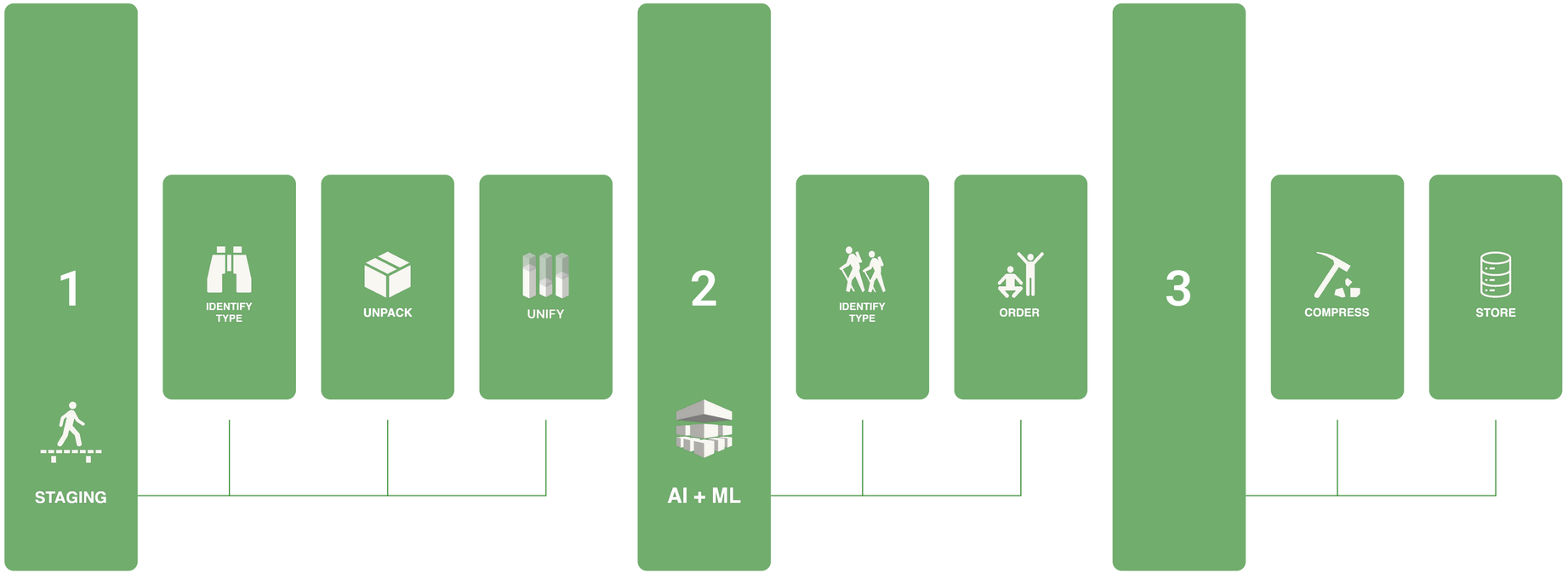
1. **Tailored for space constraints**
2. **AI-adaptive compression**
3. **Lossless scientific fidelity**
4. **Scalable from small sats to large constellations**
5. **Seamless integration with existing workflows**

MARKET SCALE IMPACT

FILO-compressed storage can 3× market size within 5 years.

1. **TAM 2025:**
   $100B–$160B > 2030: $140B–$220B
2. **SAM:**
   $27B–$44B > $38B–$59B
3. **SOM:**
   $27B–$44B > $38B–$59B

INVENTING AND LEADING THE TRANSITION TO INFORMATION-COMPRESSION



תעודת פטנט
CERTIFICATE OF PATENT

רשות הפטנטים

Patent No	**284315**	**מספר פטנט**
Title of invention		**שם אמצאה**
SYSTEMS AND METHODS FOR GENERATING AND APPLYING A PATCH PACKAGE		מערכות ושיטות להפקה ויישום של חבילות עדכון
Filing Date	22/06/2021	**תאריך הבקשה**
Patentees		**בעלי הפטנט**
FILO SYSTEMS LTD. , Israel		פילו מערכות בע"מ , ישראל
Inventors		**ממציאים**
Etamar H. Laron		
Michael J. May		
Date of Publication	01/06/2022	**תאריך פרסום קיבול הבקשה**
Date of Grant	02/09/2022	**תאריך מתן פטנט**

This certificate certifies that the grant of the patent is recorded in the Register of Patents

תעודה זו היא אישור כי דבר מתן הפטנט נרשם בפנקס הפטנטים

Jacqueline Bracha
Deputy Commissioner of Patents

ז'קלין ברכה
סגנית רשם הפטנטים

FILO SPACE
Object Storage & File System (Software-Only)

Core Features

1. **Transparent to users and systems**
2. **Auto caching + hot/warm tiering**
3. **Replication & erasure coding on fully compressed data**
4. **Scales from a single device to multi–data centers**
5. **Competitive performance**

Single Server

- File-system mounts
- Multi-user concurrent access
- FUSE / SMB / NFS interfaces
- S3 object server & S3/HDFS/CIFS interfaces

Multi Server

- High availability
- Replication 0–999
- Erasure-code shards
- Exabyte-level scalability
- Hot/warm tiering
- Cloud offloading + DC <> DC replication

TRACTION

Fundraising, Sales, Key Partnerships (Short Summary)

01 Fundraising

1. Raised to date: **$680k (founders), $500k (pre-seed), $4M (VC, 2023)**
2. Current SAFE round: **up to $1M** (~$600k already raised)
   - Investors from the U.S., Germany, Singapore + a Hong Kong bank
3. Upcoming **€5M** investment expected Q4-2025 / Q1-2026

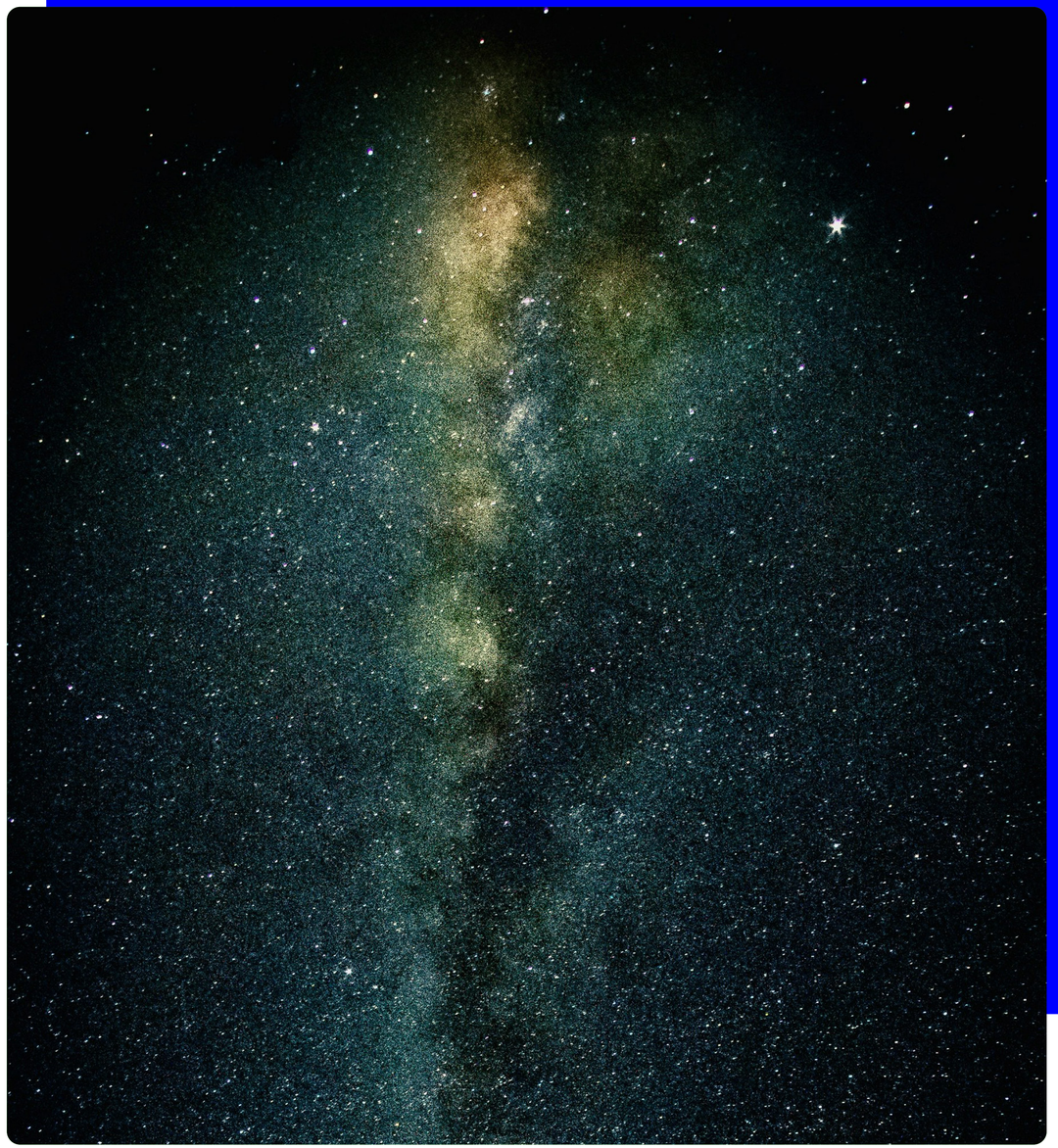
02 Sales

1. Sales launched Sept 2025; paid pilots with **Intel, NetApp,** a government agency, and the air-force (~$70k initial sales)
2. Annual recurring revenue outlook:
   - **2025 Q3–2026 Q3:** ~$750k (reseller commitments)
   - **Following year: >$2M**

03 Key Partnerships

1. IPN / ESA-BIC
(European Space Agency)
2. Israel Space Agency & Creation-Space Accelerator
3. Intel Ignite -
Program #9
4. NetApp Excellerator
Cohort #14
5. MedOne – Data Center Innovation Program
6. Israeli Airforce – tender win for non-military infrastructure

- Partners: German reseller, Singapore reseller, Portugal subsidiary



TRACTION (2/2) – PILOTS:
Performances and Savings

intel	Internal R&D data center
Current compression factor	x3
Improvement with Filo	**x3**
New compression factor	**x9**
Current data center size	50 Petabytes
Potential data center size	**6** Petabytes
Potential savings per year	**$4.5M**

automation AUTHORITY	Security cameras & drones data center
Current compression factor	x2
Improvement with Filo	**x11**
New compression factor	**x22**
Current data center size	100 Petabytes
Potential data center size	**5** Petabytes
Potential savings per year	**$9.8M**

Deloitte.	Google Play Store app updates
Current compression factor	x1
Improvement with Filo	**x3**
New compression factor	**x3**
Potential savings per year	**$6.4B**

GREENBOX

Near-RT Data Compression Solution

GREENBOX is designed for data in motion.
It enables efficient, continuous transmission of large data volumes with no long-term storage requirement.

KEY CHARACTERISTICS

1. Optimized for Near Real-Time (NRT) environments
2. Focused on transmission efficiency and responsiveness
3. Designed for operational and mission-critical systems

GREENBOX
Value Proposition

Value Axis 1 — Efficiency

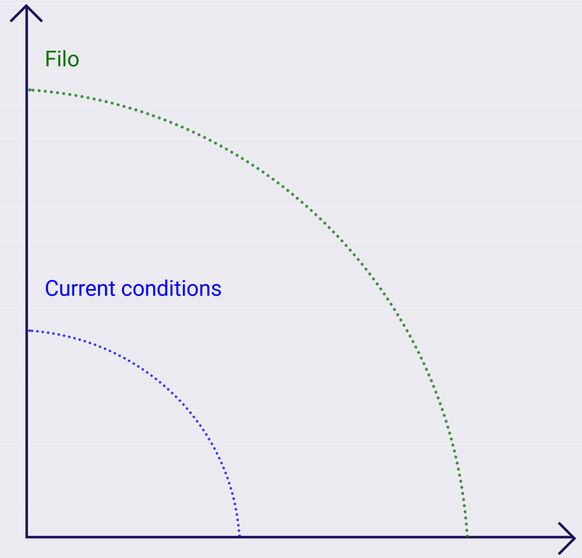
Infrastructure & energy optimization

- Reduced energy consumption
- Lower need for hardware upgrades
- Extended lifetime of existing equipment
- Reduced electronic and communication load

Value Axis 2 — Mission Capability

Operational advantage

- Increased mission capacity
- Multiple parallel data streams
- Improved system responsiveness
- Better utilization of communication channels



Value Axis 1 Efficiency | Value Axis 2 Mission Capability
* Assuming a 2× compression ratio

GREENBOX

Use Cases & Data Types

1. Space systems
2. Communication-heavy organizations
3. Defense and security
4. Transportation and mobility platforms

Typical NRT Data Types

- Numeric data
- IoT sensor streams
- Geospatial (GEO) data
- Camera feeds
- Radar / LiDAR data

Ideal for environments requiring:

- Efficiency + performance
- Cost control + mission scaling

SPACE USE CASES - Summary

Earth Observation

High-throughput compression of multispectral/hyperspectral imagery for faster analytics and efficient downlink.

Satellite Telecommunications

Bandwidth-efficient encoding for voice, video, and telemetry over constrained RF links.

Geolocation & Navigation

Low-latency compression of GNSS and sensor fusion data for autonomous and robotics platforms.

Deep Space & Planetary Missions

Lossless/near-lossless compression of scientific payload data under extreme bandwidth and power limits.

AI-Driven Edge Processing

Semantic-aware compression for onboard ML, anomaly detection, and prioritized transmission.

Potential Clients / Partners

- Institutional: NASA, ESA, European Space Agencies
- Technological: Space engineering firms, satellite launchers, constellation operators, Earth-space communications

BUSINESS MODEL

Filo

- **FILO SPACES™**

Object store distributed file-system

- **FILO CORE™**

Embeddable SDK for info-compression

Channel Partners

- **RESELLERS PARTNERS**
- **HYPER OEM’S**

Clients

CLIENTS

- Space Agencies
- Satellites Actors
- Software Vendors
- Government Agencies
- Regulated Industries
- Cloud Providers
- Technological Partners

PERSONAS

- CIO / IT Managers
- Cloud Architects
- Data Architects

GO-TO-MARKET STRATEGY

Phase 1

Strategic Partnerships

Collaborate with space agencies (e.g., ESA, NASA) and satellite manufacturers to integrate compression tech into upcoming missions (workshops and simulations)

Target flagship missions with high data throughput to showcase performance, e.g., NASA Artemis missions, Moon to Mars etc.

Integrate in Development of future tools (e.g. low energy storage in space (Intel/SK Hynix) for storage or communication.

Phase 2

Commercial Satellite Operators

Offer plug-and-play compression modules for Telecoms (80% of needs), Earth observation (15% of needs), and IoT constellations (e.g. Geolocation – 5% of needs).

Highlight cost savings and bandwidth efficiency as key ROI drivers.

Phase 3

Licensing & SaaS Model

Provide datacenter-based compression services for ground stations and mission control centers.

Enable flexible pricing tiers based on data volume and mission type.

Phase 4

Expansion to Adjacent Markets

Apply core technology to aerospace, defense, and autonomous systems where data bottlenecks are critical.

THE ASK

CURRENT ROUND (Q4-2025) >

SAFE Round $1M
$400k to be raised

Use of Funds:
Deploy proof-of-concept systems that validate our proprietary data compression technology for some Space use cases.

NEXT ROUND (Q1-2026) >

Round **$5M to be raised**

Use of Funds:
Accelerate product development and customer acquisition to reach $2M in Annual Recurring Revenue (ARR) in 2026
Establish U.S. operations to access strategic partnerships, talent, and government-backed space innovation programs (e.g. NASA Artemis).

SAFE:

Simple Agreement for Future Equity

LET’S CONNECT
we're fully at your disposal to explore the realm of possibilities together.

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