



MarVi: 3D Earth Observation and 4D Digital Twin Platform for Smart Cities



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<https://marble-visions.com/>

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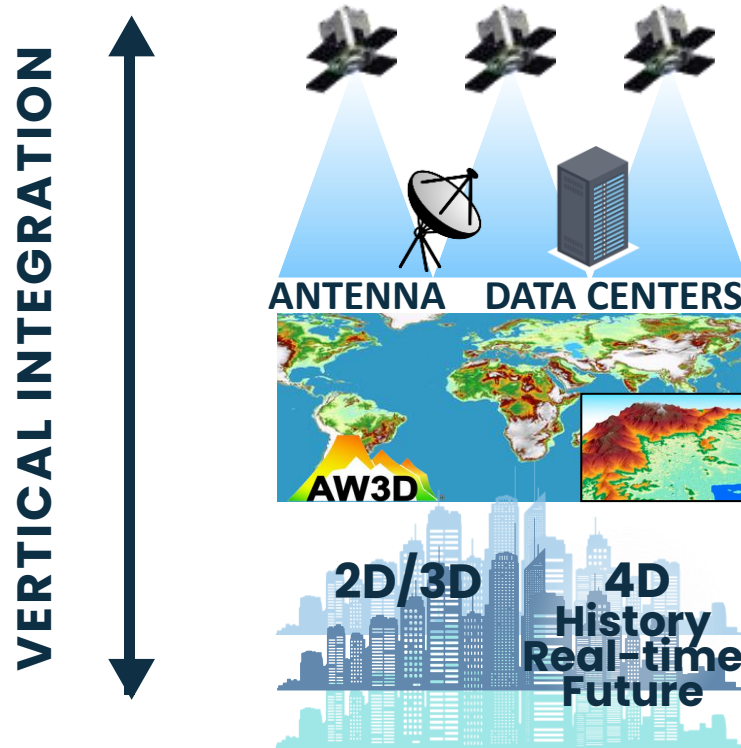
Japan and Europe – Working together to create new satellite-driven markets for smart cities



Integrated EO Services: Downstream to Upstream

Marble Visions was **founded in 2024** to integrate satellite data into **high-frequency 3D and 4D digital twins**, providing **end-to-end solutions from satellite development and ground systems to analytics and applications**.

OUR SERVICES



SATELLITE DEVELOPMENT

Design and development of satellites, utilizing advanced expertise and heritage technology.



GROUND SEGMENT & OPERATIONS

In-house System for Rapid, Flexible Satellite Management.



DATA ANALYTICS

Satellite Data Analytics, Driven by Accurate 3D Modeling.



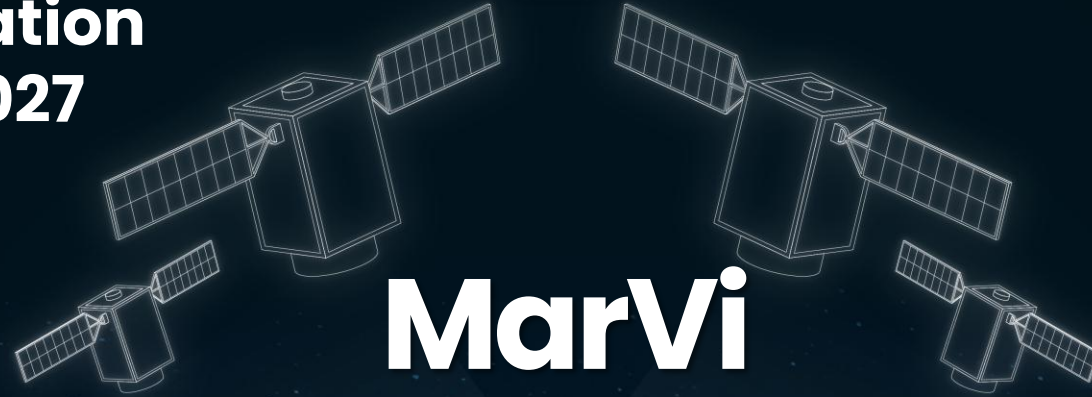
APPLICATIONS

AI-powered insights through simulations and change detection, enabling data-driven decisions to analyze the past, understand the present, and anticipate the future

SOCIAL IMPACTS



**8-satellite constellation
launching from 2027**



MarVi

Multi **A**ngle **R**emote **V**iew **I**maging

**High
Precision
×
High Frequency
Satellite
System**

Near
Real-time

**3D
Platform**

**Understand the World in 3D.
Predict the Future in 4D.**



MarVi : Transforming Earth Observation from 3D into 4D

MarVi is a **next-generation Earth observation mission** that captures our changing planet in **3D** and enables a **4D understanding of urban and environmental change** through **AI-powered analytics** and **Digital Twin technologies**.

Mission name	MarVi: Multi-Angle Remote View Imaging
Number of satellites	8
Launches	Starting in 2027
Orbit	Sun-Synchronous Orbit (SSO)
Altitude	350-450 km
Ground Sampling Distance (GSD)	40cm (at 400 km altitude)
Swath	8–9 km per satellite
Spectral Bands	4 (Blue, Green, Red, Near-Infrared)
3D observation	Stereo imaging by tandem observations and multi-view stereo observations

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Feature **1**

High Resolution

40cmGSD Capable of identifying **building outline, road marking, and the individual trees as well as vehicle types.**

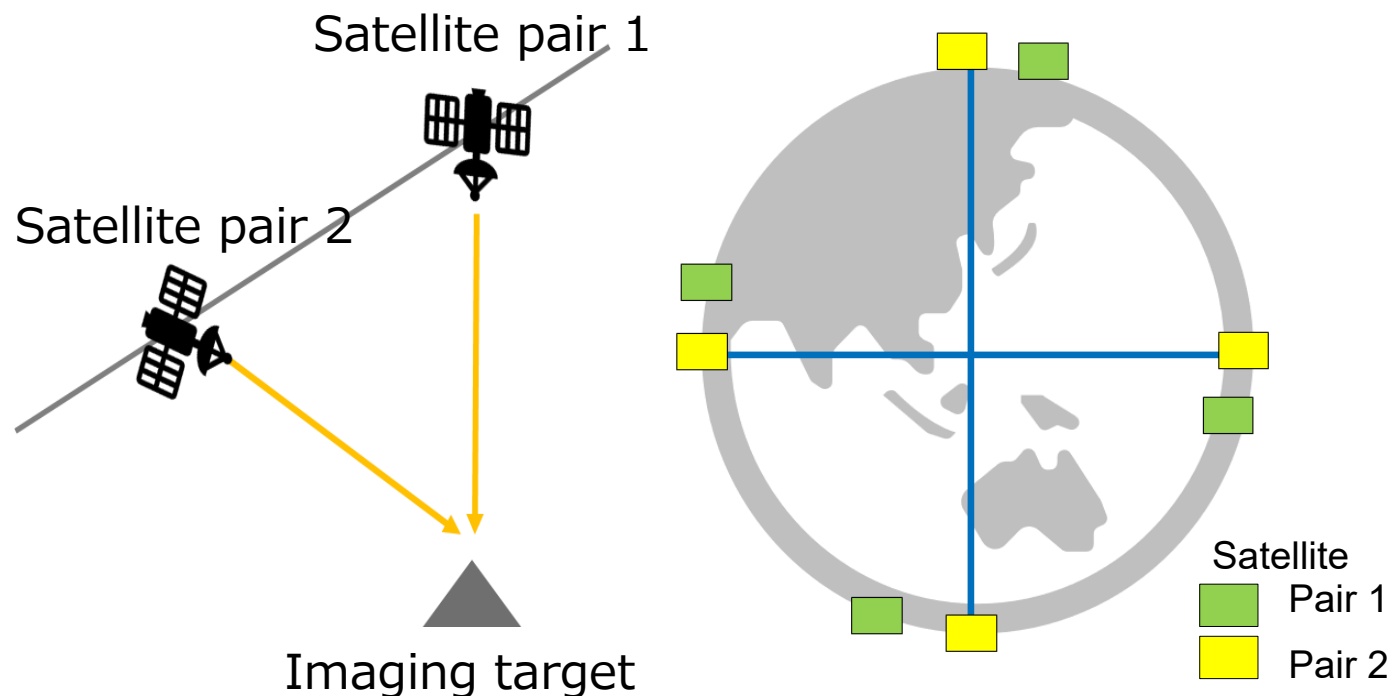


Simulated from aerial imagery

Feature **2**

High-revisit 3D imaging

An 8-satellite **LEO constellation, operating in coordinated pairs**, enables **high-revisit 3D imaging** through stereo and multi-view acquisition.



Feature 3

4D Geospatial Information

High-revisit 3D imaging monitors urban and vegetation changes.
4D AI-powered analytics enable smarter planning, simulation, and decision-making.

2024
12/12





Meet us at **Smart City Expo World Congress 2026 in Barcelona**
November 3–5, 2026
“MEXT–Space Transformation” Booth at the Japan Pavilion