



The Golden Twins

InCubed



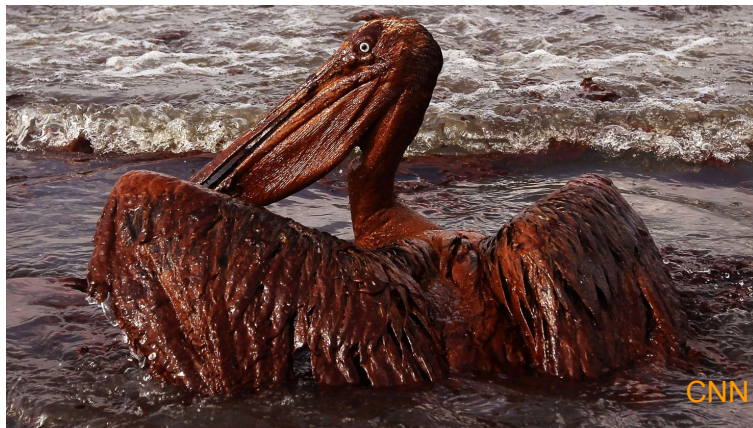
- Wildfires



- Extreme Weather Events



- Illegal Vessels and Oil Spills



Partnership



2 companies & 3 academic institutions

Prime Contractor



Subcontractors



ARISTOTLE
UNIVERSITY OF
THESSALONIKI



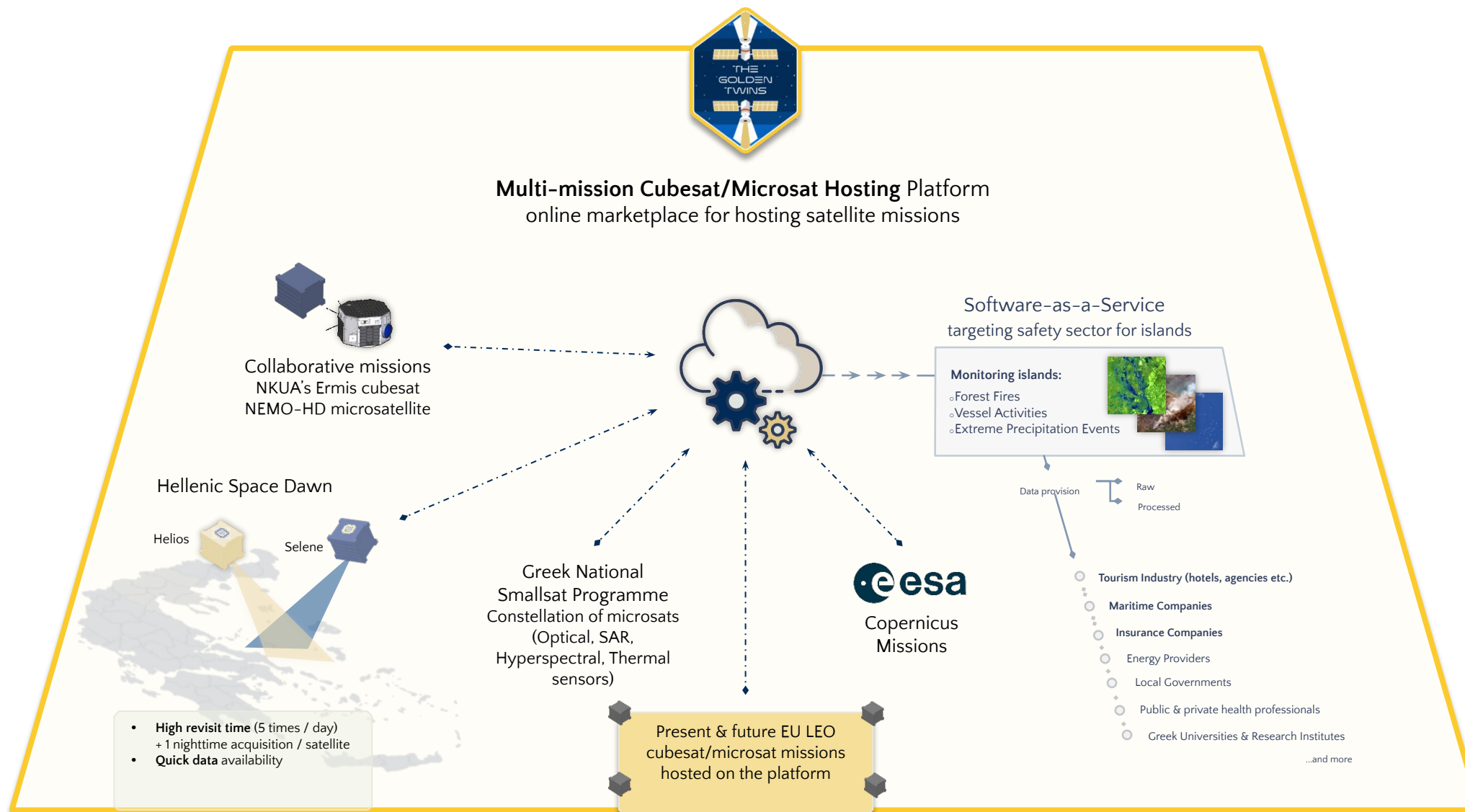
Laboratory of Photogrammetry

NTUA PHOTOG
GRAMMETRY
COMPUTER VISION
CADASTRE
LAND ADMINISTRATION



HELLENIC REPUBLIC
**National and Kapodistrian
University of Athens**
— EST. 1837 —

The Big Picture



3 Services : Development of specific SAAS web-based software for each application.

Description



Forest Fire Prevention,
Monitoring
& Post Fire Mapping

Detect fire outbreaks and
monitor their behavior,
assess fire risk, track fire
progression, map post-fire.



Extreme Precipitation
Events Monitoring

Coastal or inland floods,
Infrastructure damage
detection



Vessel
Monitoring

Detecting illegal vessel
activities and oil spills,
monitoring vessel incidents
and accidents, track and
analyze general ship tr

(+1) Satellite Tasking

Ability to task the HSD and the
collaborating
cubesats/microsatellites for
capturing on-demand imagery

Golden Twins Platform

Expertise and Proficiency

- Developed sophisticated platforms in EU R&D projects.
- Proficiency in creating advanced WebGIS applications, with enhanced usability and user-friendly UI.
- Implemented interoperability framework in Docker for efficient development.
- All-purpose utilization of NGINX and GeoServer containers.

Deployment & Expansion

- Focus on creating APIs and integrating all the monitoring services.
- Relevant (EO) processing services to be implemented in the Payload Data Ground Segment (PDGS) of the CubeSats future missions.
- GSH will refine and expand the suite of applications offered by GoldenTwins, by drawing on its experience with free and open-source libraries/tools.



- **System and mission/sensor agnostic platform**
- **Near real-time monitoring** of wildfires, extreme precipitation events, and vessel activities
- **Damage assessment** on infrastructure
- **Hazard assessment and decision making support**, leveraging advanced Earth Observation (EO) technologies
- Tailored insights for **safety** and **evacuation planning**, utilizing high temporal and spatial resolution satellite data
- Support for maritime and **port operations** through actionable insights
- **Proactive measures** for public safety and environmental protection
- Safeguard of **isolated Greek islands**

Effective Decision-Making in the Public Sector

- Enhancing response to critical challenges such as wildfires, floods, and maritime risks by modernizing public services.
- Provides services for infrastructure monitoring, crisis management, and proactive surveillance.
- Offers timely alerts to support evacuation planning and disaster management decisions.
- Protects lives and property while promoting sustainable development through resource management and improved safety.
- Supports a wide range of public entities in crisis management and sustainable development.

Who Can Benefit?

- **Government Ministries:** Utilize GT for disaster prevention, policy planning, and maritime activity monitoring.
- **Local Authorities (Regions & Municipalities):** Leverage the platform to protect critical infrastructure, the environment, and respond to risks.
- **Civil Protection Agencies:** Use GT for accurate risk assessments, timely alerts, operational support, and resource management.



Thank you