The Domino-E Webinar Series: Unlocking the Future of Earth Observation

Webinar Session 2: Developing Within Domino Examples from Domino-E

25.03.2025, 10:30 - 12:00 CET

DOMINO

www.domino-e.eu

Co-funded by the European Union

What is a Domino?

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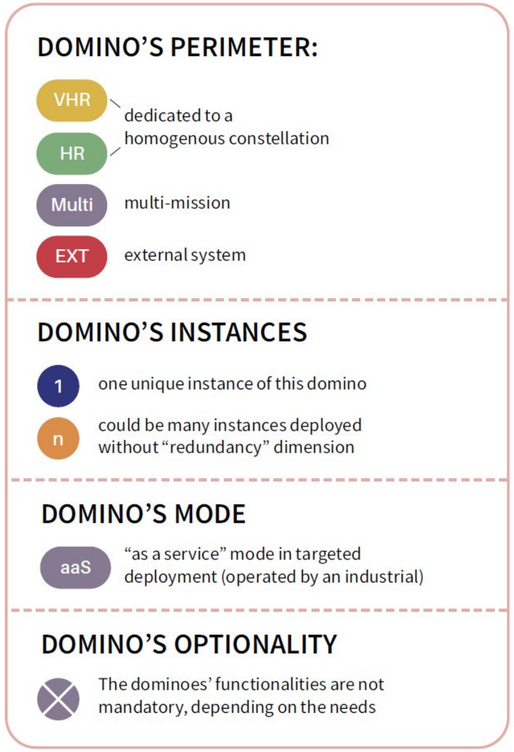
The Domino Architecture

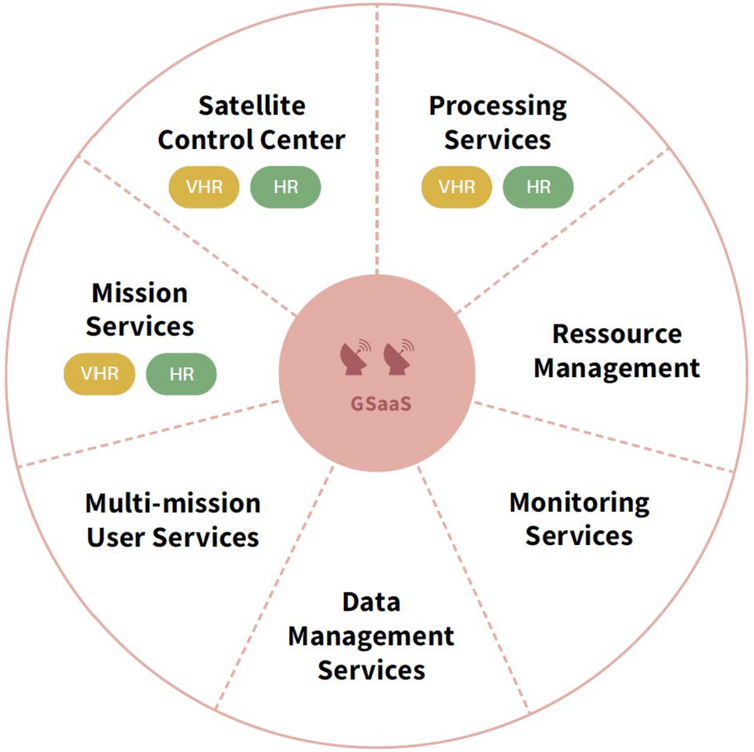
Recap

- The Domino architecture is built on a **Flexible Ground System framework** composed of modular **Dominoes** that can be customized for specific tasks.

- **Core GS Operations:** Certain Dominoes focus on optimizing **core Ground System operations**, ensuring efficient data processing and communication.

- **Constellation Management:** Other Dominoes specialize in **managing diverse satellite constellations**, enabling seamless coordination and resource allocation.





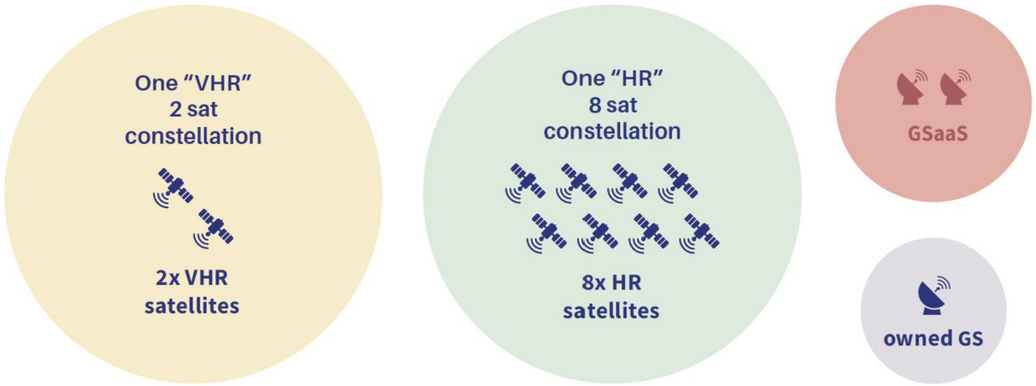
The Domino Architecture

Recap

- **Current Focus:** The Domino framework currently supports **optical imagery**, including **High Resolution (HR)** and **Very High Resolution (VHR)** satellite constellations.

- **Future Expansion:** The architecture is designed to be **scalable**, with plans to include **additional imaging modalities** such as **radar** in the future.

- **Multi-Mission Capability:** Domino enables **cross-communication with external missions**, moving beyond single-mission constraints to promote a **multi-mission approach** that enhances **resource utilization** and **operational efficiency**.



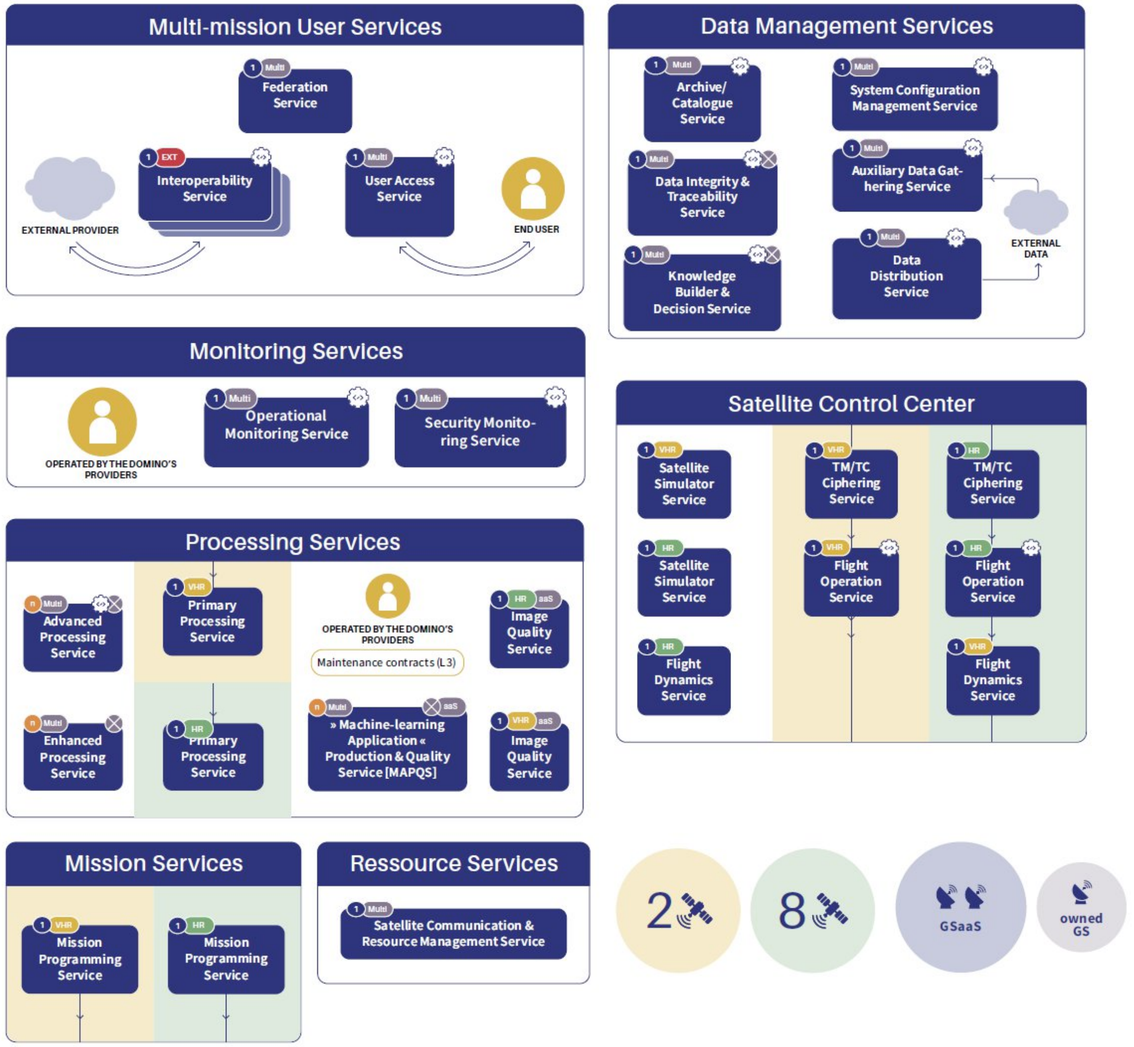
What is a Domino?

Key characteristics

- **Modular and Adaptable:** Dominoes serve as **modular building blocks** within EO ground systems, offering **tailored functionalities** that support **multi-mission operations** (or specific **dedicated tasks**).

- **Customizable and Scalable:** Each Domino can be configured with **mandatory and optional functionalities**, delivered **on-demand** as a service or integrated as a **standalone product**

- Cloud-based: Dominoes can be deployed **on-premises** or in the **cloud**, ensuring **scalability** to meet diverse performance needs.



HR & VHR dedicated to an homogenous constellation

Multi multi-mission

EXT external system

1 one unique instance of this domino

n could be many instances deployed Without "redundancy" dimension

aaS "as a service" mode in targeted deployment (operated by an industrial)

The dominoes' functionalities are not mandatory, depending on the needs

DOMINO

Looking at Three Dominoes developed in Domino-E

Satellite Communication and Ressource Management, Coverage Service, Virtual Assistant