



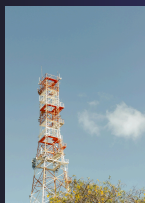
CLEPSYDRA

NEWSLETTER

NOVEMBER

TIME AS A CRITICAL INFRASTRUCTURE FOR SMART CITIES

In November, CLEPSYDRA further consolidated its position within the European space-innovation ecosystem, moving from groundwork to progress.



SHAPING THE PLATFORM: USER NEEDS & CLEPSYDRA SETUP

In November, for CLEPSYDRA, the activity of collecting and formalizing requirements was carried out, both on the user side and on the platform side, with the related delivery documentation produced. Specifically, user and solution requirements were defined through the drafting of the **User Requirements Document (URD)** and, in parallel, platform requirements were structured in the **Platform Requirements Document (PRD)**, outlining the expected functionalities, constraints, and operational specifications needed for implementation.



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CLEPSYDRA: TRUSTED AND RESILIENT TIMING AGAINST GNSS JAMMING AND SPOOFING

CLEPSYDRA delivers trusted, resilient timing, so infrastructure can stay synchronized even in the toughest GNSS conditions.

It is designed to keep **“the right time”**, even when satellite signals are disturbed or attacked.

Many critical services, like mobile networks, power grids, finance, and transport, use GNSS satellites (such as Galileo) not only for positioning, but also as a precise clock.

The problem is that GNSS signals can be **jammed** (blocked by interference) or **spoofed** (faked to trick receivers into reading the wrong time). If that happens, systems can lose synchronization, causing outages, errors, or unsafe situations.

CLEPSYDRA tackles this head-on: it includes anti-jamming features that detect and reduce interference so the receiver can keep working, and anti-spoofing protections that recognize suspicious or manipulated signals and reject them before they can corrupt the timing.

And if the satellite signal becomes unusable, CLEPSYDRA automatically switches to a high-quality internal clock to preserve accurate time until signals are safe again.



info@clepsydra-eu.com



www.clepsydra-eu.com

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CLEPSYDRA AT THE **NEW SPACE ECONOMY**, ROME



Following CLEPSYDRA's participation at the Smart City Expo World Congress in Barcelona (4–6 November 2025), the project is now heading to the New Space Economy European ExpoForum in Rome (10–12 December 2025).

There, the consortium will showcase the project's progress and engage with European institutions, industry leaders, and innovators across the space value chain, strengthening visibility and opening new opportunities for collaboration.

INTRODUCING THE CONSORTIUM PARTNERS



Thales Alenia Space Italia is coordinating the CLEPSYDRA Consortium, bringing together a team of experts and companies with proven experience and strong capabilities in timing applications.

It has a consolidated know how and background in GNSS Receiver design as well as in all supporting tools, techniques and algorithms gained in several projects relevant to navigation systems.



info@clepsydra-eu.com



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NEXT STEPS

In the coming months, the project will focus on:

- ▶ **SRR Project Review scheduled** for 18 December: The session will provide an update on overall project progress and key results achieved so far.
- ▶ Preparation of the next public event to showcase the project's results and future directions.



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info@clepsydra-eu.com



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