

ASSURE 

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FUTURE PROOFING OF ICT TRUST CHAINS

**SUSTAINABLE OPERATIONAL ASSURANCE
AND VERIFICATION REMOTE GUARDS FOR
SYSTEMS-OF-SYSTEMS SECURITY AND
PRIVACY.**

The vision of ASSURED is to design and implement a novel policy-driven, formally verified, runtime assurance framework in the complex domain of Cyber-Physical System (CPS).

VISION & OBJECTIVES

- Highly-usable, resilient cybersecurity, privacy and data protection management framework.
- Highly automated middleware for the secure configuration, management of edge devices, processes and safety-critical software components.
- Reactive, runtime risk assessment model.
- Safe implementation of mixed-criticality applications in CPSs.
- Secure, trusted and audible data sharing environment.
- Implementation & evaluation of the assured models and mechanisms in the four envisioned use cases.



ASSURED brings together renowned partners from industry and academia and gives us the possibility to shape the future development of secure and trustworthy CPSoS and services that can greatly benefit the lifecycle of various safety-critical application domains.

ATHANASIOS GIANNETSOS

ASSURED Technical Coordinator (Ubitech)

ASSURE 

USE
CASES



SMART MANUFACTURING

SAFE HUMAN-ROBOT COLLABORATION IN AUTOMATED ASSEMBLY LINES.

ASSURED Framework will be able to perform a quantitative and qualitative analysis of the CPS attacks as well as to provide the essential security mechanisms in order to provide enhanced data integrity and trustworthiness and recognize a manipulation of used CPS components which shall lead to appropriate mitigation steps through the combined use of RA, attestation and trust management.



SMART CITIES

SECURE, CROSS-VERTICAL COLLABORATION OF “PLATFORM- OF-PLATFORMS” FOR ENHANCED PUBLIC SAFETY.

ASSURED Framework will use all the runtime risk assessment and auditable security policy enforcement mechanisms (via the use of smart contracts) to allow fast prototyping and enable protection at a device level, and collaboratively prove its nominal functionality to the belonging network.



SMART AEROSPACE

AIRCRAFT DEVICE USE-CASE.

ASSURED platform will be used to perform runtime security attestation of (selected) aircraft embedded device (constituent or holistic firmware update, ultra-secure operation mode, new data exchange schemes, new key distribution).

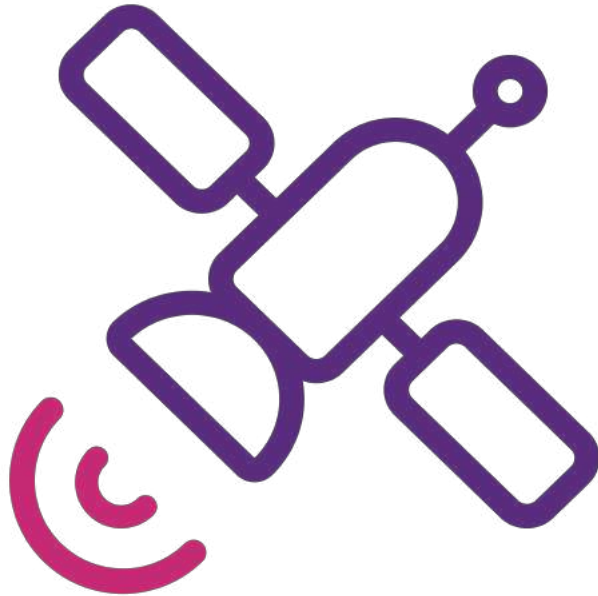


SMART SATELLITE COMMUNICATIONS

DIGITAL SECURITY OF SMART SATELLITE COMMUNICATIONS.

ASSURED will be used to perform runtime attestation of a key distribution application at the level of constellation.

Key distribution is highly crucial for several applications (e.g. surveillance, communication, etc.) utilize application-level and transport-level encryption techniques fortify the confidentiality, integrity and availability of the processed data.





THE CONSORTIUM

The ASSURED partners were carefully selected to provide complementary skills and competencies, which cover all project objectives and activities, starting from the generation of ideas, to analysis of requirements, to specification and design, low cost implementation, system integration, up to demonstration, validation and beyond.

THE CONSORTIUM





THANKS



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