REWIRE

REWiring the ComposItional Security VeRification and AssurancE of Systems of Systems

Newsletter Issue 11 | July 2025

Welcome to the 11th REWIRE Newsletter!

REWIRE is a 3-year Research and Innovation Action, started during October 2022, and funded under Horizon Europe.

REWIRE envisions a **holistic framework for continuous security assessment** and management of open-source and open-specification hardware and software for IoT devices, throughout their **entire lifecycle**, under the **zero-trust** concept, adhering to the **security-by-design** principle and providing **cybersecurity certification**.

In this issue

Our newsletter is published periodically offering updates on project achievements and results.
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REWIRE Plenary meeting

RERWIRE 5th Plenary Meeting

Date: 24-26 June 2025
Location: Thessaloniki
Host: KENOTOM

The REWIRE consortium successfully convened for its 5th Plenary Meeting on June 25th and 26th, 2025, hosted at the KENOTOM Headquarters. This pivotal two-day gathering brought together project partners to review significant progress, address integration challenges, and strategically plan for the final phase of the project, culminating in its ultimate demonstrations and review.

The first day commenced with a warm welcome and a comprehensive overview of the project's overall status by the coordinator, UBITECH. The agenda quickly delved into technical depth with sessions dedicated to progress updates on the integrated REWIRE framework and its experimentation within the project's use cases. Partners including UBITECH, BOCHUM, NEC, and SECURA led detailed discussions on key implementation results. These included the status of the Configuration Integrity Verification (CIV), software update processes, and the SW/FW Vulnerability Analysis tool, all critical for the upcoming Deliverables urther technical sessions saw contributions from S5, TUD/UBI, and COLLINS, focusing on the AI-based Misbehavior Detection system, the REWIRE Blockchain architecture, and the Formal Verification toolchain. The afternoon was dedicated to use-case-specific updates from KENOTOM, ODINS, and LSF, highlighting the practical application of REWIRE technologies in adaptive in-vehicle systems, smart cities, and satellite security. The day concluded with vital planning for the framework's final release and discussions on dissemination, exploitation, and project management led by 8BELLS, NEC, and UBITECH.

Day two shifted focus to future-oriented planning and convergence. Partners engaged in detailed discussions to define specific numerical Key Performance Indicators (KPIs) for the project's functional and security requirements. Deep-dive sessions covered policy management templates, upcoming activities for Deliverables and critical technical aspects like cryptographic functionalities, monitoring hooks, and attestation extensions.

The meeting culminated in parallel technical break-out sessions, allowing experts to collaborate intensively on integrating monitoring hooks, formal modelling, and finalizing use-case integration for experimentation. The productive sessions in Thessaloniki have firmly aligned the consortium on the path toward the successful final implementation and demonstration of the REWIRE framework, reinforcing its commitment to enhancing cybersecurity for embedded systems across critical industries.

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REWIRE Blogs & Demos

#REWIRE Blog

We present below the blog articles which were published on the REWIRE website and social media during the past few months. For the complete list of blog articles, please visit https://www.rewire-he.eu/blog/.

- **Configuration Integrity Verification**
  How do you ensure a complex cybersecurity system is built on a foundation of trust from the very beginning? Our latest blog post breaks down the REWIRE project's meticulous approach to Configuration Integrity Verification, detailing the processes that guarantee every component is securely configured and compliant from the outset. Read the full blog post here: https://www.rewire-he.eu/configuration-integrity-verification-for-rewire-project/

- **Aligning with EU Legal Frameworks**
  How do you build trust in next-generation technologies while ensuring compliance with EU regulations? Our latest blog post dives into how the REWIRE project aligns its work with core EU legal frameworks, including GDPR, the Data Act, and the EU AI Act, ensuring security and ethical data use across its entire lifecycle. Read more: https://www.rewire-he.eu/rewire-legal-aspects-a-brief-overview/

- **Integrating Operational Assurance**
  How can we ensure complex systems remain secure and trustworthy throughout their lifecycle? Explore our latest blog post by Unisystems on how the REWIRE project integrates Operational Assurance as a key enabler of secure and consistent system development. Read more: https://www.rewire-he.eu/rewire-on-operational-assurance/

- **A Vision for Trustworthy AI**
  How can AI-enabled systems remain secure and reliable across the Compute Continuum? Our latest blog post explores how the REWIRE project incorporates AI-driven trust mechanisms as part of its broader vision for Trustworthy AI and Operational Assurance. Read more: https://www.rewire-he.eu/trustworthy-ai-within-the-rewire-context/

- **AI Misbehaviour Detection**
  How do you build trust in AI-driven security systems? By ensuring they can police themselves. Our latest blog explores AI Misbehaviour Detection within the REWIRE project, creating mechanisms to identify and mitigate when AI components deviate from their intended purpose. Read more: https://www.rewire-he.eu/ai-misbehaviour-detection-within-rewire-context/

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- **Demo Setup on RISC-V Platform**
  How do you translate cutting-edge cybersecurity research into tangible reality? Our latest post details the successful demo setup on the StarFive VisionFive 2 board, a crucial step in validating our hardware-based security innovations on a RISC-V platform. Read more: https://www.rewire-he.eu/rewire-demo-setup-on-starfive-visionfive-2/

- **Core Trust Concepts**
  What does "trust" truly mean in a next-generation cybersecurity infrastructure? The REWIRE project is defining it. Our latest article breaks down our core trust concepts, explaining how we build verifiable security and resilience into every layer of the system. Read more: https://www.rewire-he.eu/trust-concepts-in-rewire-entrust/

- Dy**namic Trust Assessment Framework**
  How do you build a cybersecurity system that can dynamically adapt its level of trust in real-time? Dive into our article on REWIRE's Dynamic Trust Assessment Framework, which enables continuous, context-aware evaluation for intelligent, responsive risk management. Read more: https://www.rewire-he.eu/rewires-dynamic-trust-assessment-framework/

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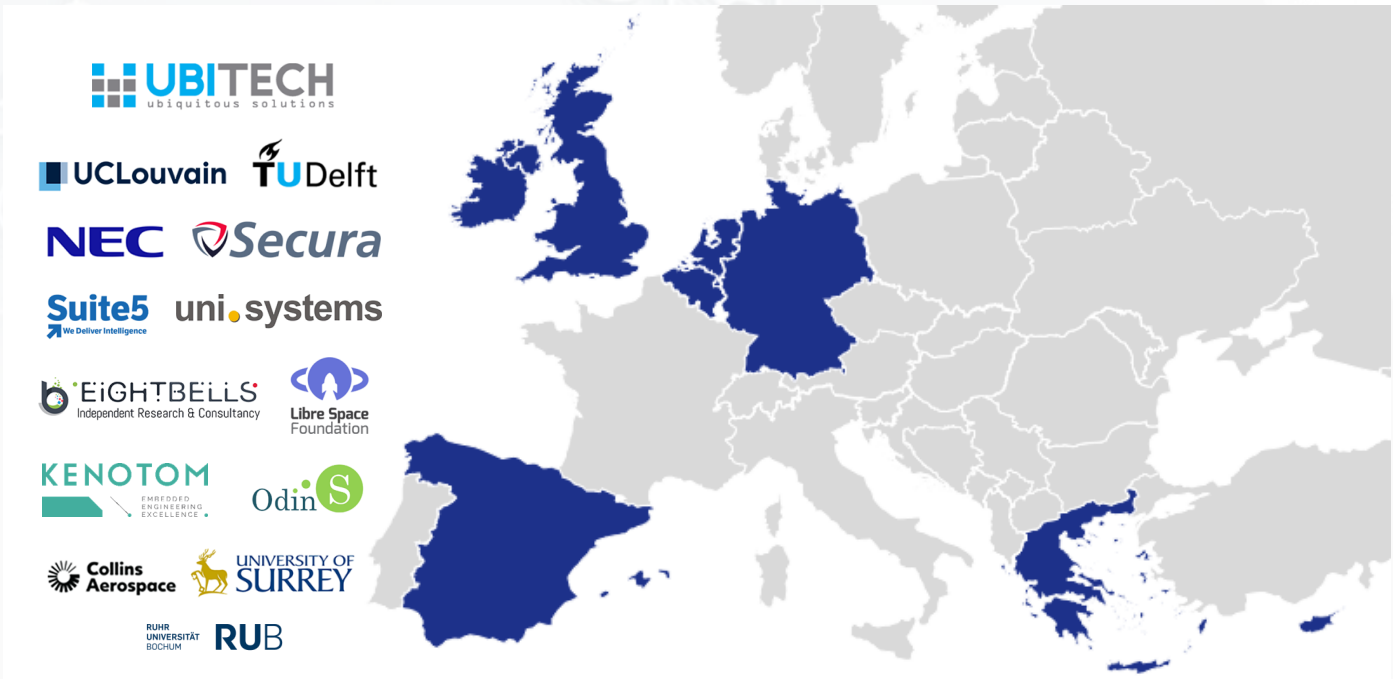
At a glance

Rewire consortium

REWIRE brings together 14 partners form 8 European countries, providing all the required expertise for achieving the project's ambitious objectives.



Fact Sheet

Title	Rewiring the Compositional Security Verification and Assurance of Systems of Systems Lifecycle
Acronym	REWIRE
GA No	101070627
Start	01 October 2022
End	30 September 2025
Budget	4.158.961 €
EU Fund	4.158.961 €
Topic	HORIZON-CL3-2021-CS-01-02
Scheme	RIA - Research and Innovation action

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