



Project COCOON
Thessaloniki, 22/10/2025

Ensuring the Cybersecurity of the Future Power Grids

COoperative Cyber prOtectiON for modern power grids – COCOON

COCOON is an EU-funded research and innovation project developing cyber-physical solutions for the protection of modern energy systems.

Introduction of COCOON

The COCOON project aims to deliver cyber-physical protection for modern power grids and the substations of the future. Within the project, the academic partner's expertise is combined with the infrastructure and practical experience of the industrial partners to create a concrete solution, the COCOON Programmable Node (CPN), a cost-effective and high-speed tool that enhances the cybersecurity of critical systems vulnerable to potential cyberattacks. Four pilot sites will showcase COCOON's impact through real-world demonstrations: from an Energy Community and a Regional Community Center in Greece, to a new photovoltaic (PV) plant in Spain, and a digital substation in the Netherlands.

Beyond the energy sector, COCOON offers an adaptable solution applicable across diverse domains, from water utilities to the semiconductor industry, reinforcing the project's mission to secure the interconnected infrastructures of tomorrow.

Main achievements

During the last months, COCOON has successfully reached key milestones:

- The Greek DSO in synergy with Aristotle University of Thessaloniki, AUTH, implemented for the first Ancillary Services in real conditions in Greece, to the Energy Community of the project owned by I&K.
- The development of the power grid state estimation methodology for PV plants and Energy Communities has been finished and tested through benchmark setups meeting the project KPIs. This was the outcome of close collaboration between the University of Seville, USE, and Aristotle University of Thessaloniki, AUTH.



- The photovoltaic plant pilot has been operational since the end of 2024. The COCOON solution demonstration is currently being deployed.
- The configuration of the Digital Twin for Digital Substations has been successfully accomplished.
- The architecture of the COCOON Programmable Node (CPN) and the implementation of the COCOON Toolset Dashboard have been completed, marking a major milestone in the project's technical development.
- ENCS conducted an informative cyber range training session on its testbed for Enxsis employees, introducing them to simulated attack scenarios and defense strategies.

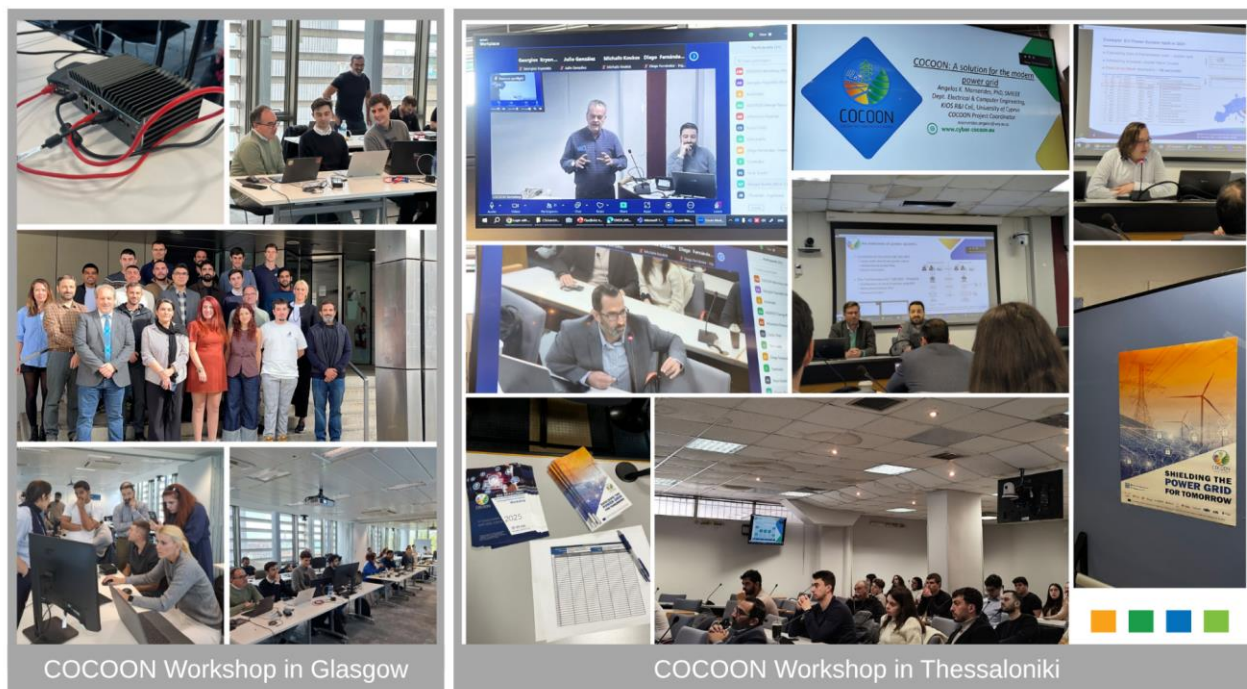
COCOON Workshops

After the end of the fourth consortium meeting, the Thessaloniki Workshop was organized and hosted by Aristotle University of Thessaloniki (AUTH). This event marked an important milestone for the COCOON project, bringing together more than 100 participants both online and in person. The audience included experts from the energy and cybersecurity domains, representatives from various related sectors, as well as university students. Two distinguished keynote speakers honored the event: **Mr. Michail Bletsas**, a high-profile figure and Governor of the National Cybersecurity Authority in Greece, who delivered an insightful presentation on current cybersecurity trends, and **Dr. Konstantinos Moulinos from ENISA**, who shared valuable insights into the new NIS2 Directive. The workshop was also an excellent opportunity for the partners of the project to present the overall scope of COCOON, highlight the achievements accomplished so far, and discuss the next steps in the project's development. The event concluded successfully, reflecting once again the strong collaboration and shared vision among the COCOON partners.

At the end of COCOON's second year, in mid-September, the project's second workshop was organized and hosted at the premises of the University of Glasgow (UGLA). The workshop lasted one and a half days and was an internal event among the project partners. The main objective was for UGLA to present the CPN, demonstrating how to install and integrate it into partners' systems. As the partner responsible for the CPN architecture—where the cybersecurity algorithms and the COCOON Dashboard Toolset will be implemented—UGLA guided primarily the industrial partners through the installation process and practical integration steps. The workshop was completed with great success, fostering collaboration and technical exchange among participants.

Below are some photos from the events, highlighting not only the productive discussions but also the strong team spirit within the COCOON consortium. On the left the workshop in Thessaloniki and on the right this in Glasgow.





Social Media Presence

COCOON remains highly active on social media. On Spotify, the new *Midterm Episode* revisits the project's key moments and major insights, featuring a discussion with the project coordinator, **Prof. Angelos Marnierides**. The episode reflects on the lessons learned so far and sets the stage for what lies ahead.

On LinkedIn, the first two demonstrations from the Greek pilots have been published, presenting the project's journey to date and offering an initial glimpse into the upcoming final demo at the end of the project. Additionally, COCOON has launched a new educational video series, aimed at raising awareness among our followers. As cyber risks continue to grow rapidly, understanding how to protect ourselves against potential threats is crucial. The first videos introduce the **MITRE ATT&CK framework** and explain one of the common cyberattacks, **DNS spoofing**.

For updates, visit: <https://www.cyber-cocoon.eu>

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