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**EU H2020
Electrical Power
System's Shield
against complex
incidents and
extensive cyber and
privacy attacks**



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PHOENIX Objectives

- **Strengthen EPES cybersecurity preparedness** by employing
 - a) “security by design” via novel protective concepts for resilience, self-healing, and accountability,
 - b) “security by innovation” via adapting, upgrading, integrating, and validating a number of TRL5 developments to TRL7-8.
- **Coordinate EPES cyber incident discovery, response and recovery**, contributing to the implementation of the NIS Directive by developing and validating at national and pan-European level, a novel fully decentralized near real-time synchronized information awareness exchange platform, among authorized utilities, CSIRTs, ISACs, CERTs, NRAs and the strategic NIS cooperation group.
- **Accelerate research and innovation in EPES cybersecurity** by a novel prevent, detect and mitigate DevSecOps mechanism, secure and privacy preserving federated Machine Learning (ML) algorithms and definition of certification methodologies and procedures.

PHOENIX Final Workshop „Privacy, Ethics and Cybersecurity aspects in Critical Infrastructures”

The PHOENIX aims to reconcile technology development activities with privacy, ethics, security and societal concerns, and to this end an ad hoc methodology has been developed and implemented: the **PRESS framework**.

In this context, **CyberEthics Lab**. (partner of the PHOENIX project) opened a public debate with the stakeholders on critical infrastructures (i.e. energy) and existing armours against cyber and privacy attacks.

Involving research projects from **the EPES cluster**, the pool of **experts**, operators and **policy makers** participated in the discussion during the **PHOENIX final workshop in Rome** on July 7th 2022. PHOENIX was able to show the addressed challenges and the proposed solutions with disruptive technologies (e.g. blockchain, internet of things, artificial intelligence).



Success Stories of PHOENIX

- **SYN has founded a spin-off company**, namely POWER OPERATIONS HELLAS. The spin-off company has begun an exploration related to the steps required to bring the **Configuration & Maintenance Service functionality** to a commercially exploitable level (TRL9). Leveraging PHOENIX results, the new company will integrate cybersecurity features, aiming to eliminate cyberattacks in its clients' products, services, and deployments.
- **Capgemini and Netcompany-Intrasoft** (in Feb 2020) have been granted a **new contract** under the call “Cybersecurity digital service infrastructure establishment of a core service platform cooperation mechanism for Information Sharing and Analysis Centres (**ISACs**) facilities manager” (SMART 2018/1022). This new business collaboration extends the development of the **I2SP component through the Information Sharing and Analysis Centers (ISAC)** project based on PHOENIX solution.
- To accelerate the testing and **certification of new EPES secure products** in the market. The PHOENIX has developed the **certification methodologies and procedures through a Netherlands-based Cybersecurity Certification Centre**. The PHOENIX cybersecurity procedures serve as a European-wide blueprint for cybersecurity, privacy and interoperability certification and provide organisation and process certification for product development, integration and manufacturing organisations.
- The lessons learned from the PHOENIX experience and the constantly changing EU regulatory framework convinced the PHOENIX team to provide documentation of the most relevant challenges and options to consider when developing **EPES technology against cyber threats**. The PHOENIX knowledge and its **policy brief** created by **CyberEthics Lab** represent another success story and it is suggested to be replicated in any other development for EPES **critical infrastructures**.

Repowering the European Energy Sector

Romanian Energy Day (RED), the flagship event of our partner **CRE**, representing Romanian and South-Eastern energy sectors in Brussels, has established a **forum for dialogue and cooperation on energy** benefiting from the participation of key **policy decision makers**. PHOENIX project was represented on 11th edition of RED 2022 by CRE Team as **Speakers in several sessions**.



PHOENIX at CIPRE 2022

PHOENIX project was presented at **CIPRE 2022** from 14 to 16 June 2022 in Bucharest, Romania. **Critical Infrastructure Protection & Resilience Europe (CIPRE)** allowed the industry to get back together to share experiences, as well as network and develop connections to collaborate on securing Europe.



PHOENIX results and platform capabilities were communicated to the event participants. Our consortia partner colleagues from **CRE** participated **there** as **Speakers** and talked about the PHOENIX project.