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Artificial Intelligence Threat Reporting & Incidence report system

A new EU project has come to protect ICT systems providing collaborative-first approach and state-of-the- art technology

IRIS EU project, which consists of 19 partners from 12 European countries, officially launched its activities with the organisation of the consortium kick-off meeting that was held virtually, in September 2021.

As existing and emerging smart cities continue to expand their IoT and AI-enabled platforms, novel and complex dimensions to the threat intelligence landscape are introduced. These are linked with identifying, responding, and sharing data related to attack vectors, based on emerging IoT and AI technologies, whose architecture and behaviour are not currently well understood by security practitioners, such as CERTs and CSIRTs. This lack of experience as well as of tools, for detecting and reporting IoT & AI attack vectors is further aggravated by potentially greater safety risks caused by such attacks.

The H2020 IRIS project aims to deliver a framework that will support European CERT and CSIRT networks detecting, sharing, responding, and recovering from cybersecurity threats and vulnerabilities of IoT and AI-driven ICT systems to minimize the impact of cybersecurity and privacy risks. The IRIS platform will be made available, free of charge, to the European CERT and CSIRTs, by the end of the project.

IRIS concept is proposed as a federated threat intelligence architecture that instates three core technological and human-centric components into the threat intelligence ecosystem:

- **The Collaborative Threat Intelligence** module: forms the nexus of the IRIS framework and core component of the architecture enhancing the capabilities of the existing MeliCERTes platform by introducing **Analytics Orchestration**, an **Open Threat Intelligence interface**, and an intuitive **Threat Intelligence Companion**. All these supported by a **Data Protection and Accountability** module.



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- **The Automated Threat Analytics** module: collects and supply key threat and vulnerability assessment telemetry and respond to received intelligence, initiating autonomous response and self-recovery procedures.
- **The Cloud-based Virtual Cyber Range:** delivers an immersive virtual environment for collaborative CERT/CSIRT training exercises based on real-world environment platforms (and Digital Twin Honeypots), providing representative adversarial IoT & AI threat intelligence scenarios and hands-on training.

The IRIS platform will be demonstrated and validated in three carefully selected pilots resembling real world environments with the engagement of three smart cities (Helsinki, Tallinn, and Barcelona) along with the involvement of national CERTs, CSIRTs and cybersecurity authorities.

“IRIS is uniquely positioned to provide a high impact solution to support the operations of European CERTs and CSIRTs for coordinated response to large-scale cross-border cybersecurity incidents and crises,” mentions Mr Nelson Escravana from INOV, the Project Coordination Team.

The IRIS consortium comprises of public organizations, SMEs with cutting-edge cyber technologies, large industries as service providers as well as research and academic partners with significant achievements to cybersecurity and privacy technologies.

At **Exalens**, we protect digital manufacturing against downtime and safety events through early warning of both system malfunctions and cyber security incidents. With our ground-breaking "cyber-physical" security analyst AI, manufacturers enhance their operational resilience with automated incident detection and response. For more information, please visit our website (www.exalens.com).

In IRIS, **Exalens** will contribute to the design of the IRIS Platform architecture as well as the specification of the technical requirements and the IRIS use cases. In addition, **Exalens** will be responsible for developing IRIS’s risk-based assessment mechanisms that intelligently model attack and threat input from multiple sources to initiate autonomous response and self-recovery procedures. **Exalens** will also assist Thales in developing the IRIS cyber range dashboard. Furthermore, **Exalens** will contribute to the integration and validation of the IRIS platform as well as the preparation of the IRIS Pilot Use Cases (PUCs). Finally, **Exalens** will lead the “Dissemination, Communication and Exploitation of Results” work package as well as the task on “Market Analysis and Business Modelling” and will assist the dissemination and communication activities of the project.

Contact Details



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Project at a Glance

Acronym	IRIS
Title	Artificial Intelligence threat Reporting and Incident response System
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Duration	36 months (September 2021 – August 2024)
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Consortium	<ul style="list-style-type: none">• INOV - Instituto de Engenharia de Sistemas e Computadores, Inovação, (INOV), Portugal• European Cyber Security Organisation (<u>ECSO</u>), Belgium• Central National De Raspuns La Incidente De Securitate Cibernetica, (CERT-RO), Romania• Intrasoft International SA (<u>INTRA</u>), Luxembourg• Thales Six Gts France SAS (<u>THALES</u>), France• Atos It Solutions and Services Iberia SL (<u>ATOS</u>), Spain• Cisco Systems Spain S.L (<u>CISCO SPAIN</u>), Spain• Exalens (<u>CLS</u>), Netherlands• Sidroco Holdings Limited (<u>SID</u>), Cyprus• Cyberethics Lab SRLS (<u>CEL</u>), Italy• Commissariat A L Energie Atomique Et Aux Energies Alternatives (<u>CEA</u>), France• Ethniko Kentro Erevnas Kai Technologikis Anaptyxis, (<u>CERTH</u>), Greece• Institute Of Communication and Computer Systems (<u>ICCS</u>), Greece• Technische Universiteit Delft (<u>TU Delft</u>), Netherlands• Tallinna Tehnikaülikool (<u>TalTech</u>), Estonia



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