PRIVIDEMA

Privacy preserving identity management

for digital wallet and secure data sharing and processing for cyber threat intelligence data

Co-funded by the European Union

ECCC

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PRIVIDEMA

About

The Horizon Europe project PRIVIDEMA aims to advance privacy-preserving technologies in cyber threat intelligence, data protection, and identity management. It focuses on developing scalable, user-friendly solutions for the European ecosystem. Key project components include:

1. 1. Development of open-source tools, hosting networking events, and initiation of capacity-building efforts to democratize technology access and empower cybersecurity professionals.
2. 2. Advancement of homomorphic encryption capabilities, implementation of hardware acceleration methods, and improvement of Fully Homomorphic Encryption (FHE) usability.
3. 3. Creation and demonstration of a prototype European identity wallet featuring issuer and relaying party functionalities.
4. 4. Development and demonstration of a prototype European privacy-preserving cyber threat data processing system, with real-world testing and validation of innovative technologies.

Aligned with Horizon Europe's objectives, PRIVIDEMA enhances cybersecurity, data protection, and digital infrastructures. The project supports SMEs, promotes open-source development, and emphasizes privacy-by-design, aiming to drive cyber-resilient digitalization and innovation in Europe.

Vision

The PRIVIDEMA project envisions a future of robust, privacy-preserving technologies to enhance cybersecurity and protect personal data across Europe. With increasing cyber threats and vulnerabilities, especially targeting small businesses and individuals, PRIVIDEMA aims to tackle critical challenges in identity management and cyber threat intelligence. By developing secure, user-friendly solutions for biometric-based authentication and privacy-preserving cyber threat data sharing, the project addresses the EU's cybersecurity goals, including the Cyber Resilience Act and NIS2 Directive. Through advanced technologies like homomorphic encryption, federated learning, and differential privacy, PRIVIDEMA strengthens digital infrastructure, supports European digital sovereignty, and enhances resilience against cyberattacks, ensuring a secure digital future for European citizens and organizations.

Motivation

Cybercrime has significant economic and social impacts, especially on small and medium-sized enterprises (SMEs), which face substantial financial losses and often bankruptcy after attacks. With the increasing digital transformation, cybercriminals exploit vulnerabilities in software, networks, and infrastructures, targeting sensitive data like personal and health information. Recent breaches have highlighted critical security gaps and the need for stronger defenses. The PRIVIDEMA project aims to address these challenges by developing privacy-preserving, user-friendly solutions for secure identity management and cyber threat intelligence. By leveraging advanced technologies like homomorphic encryption, federated learning, and biometric authentication, PRIVIDEMA strengthens European cybersecurity resilience. The project supports the EU's digital sovereignty goals, enhances privacy compliance, and enables SMEs to adopt cutting-edge technologies, ensuring safer digital environments for businesses and citizens alike.

Mission & Objectives

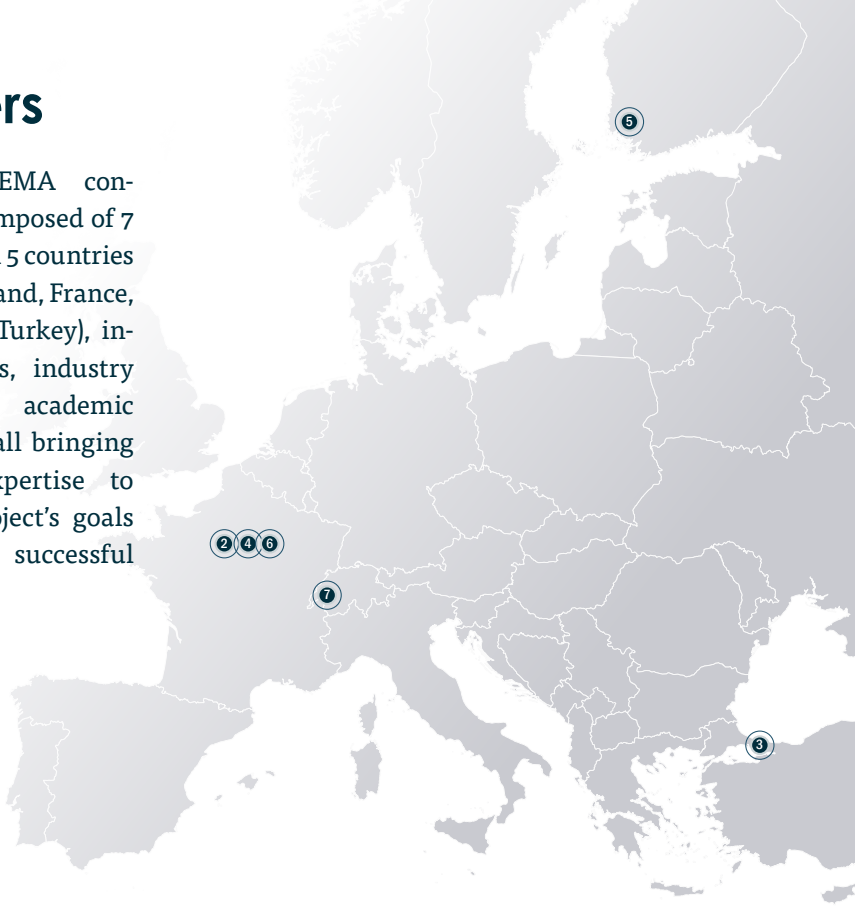
The PRIVIDEMA project aims to enhance cybersecurity across Europe by addressing key vulnerabilities and promoting the adoption of privacy-preserving technologies. Its mission is to develop scalable, privacy-by-design solutions for identity management and cyber threat intelligence (CTI) that protect individuals, businesses, and institutions from emerging cyber threats. The project focuses on two main areas: improving biometric-based authentication for digital identities while ensuring privacy compliance, and enabling secure sharing of CTI through privacy-preserving protocols.

The key objectives of PRIVIDEMA are:

- **Objective 1:** Foster a community of European cybersecurity professionals by providing open-source tools, networking events, and capacity building.
- **Objective 2:** Develop new methods for software and hardware acceleration to improve the usability and scalability of current technologies for homomorphic encryption.
- **Objective 3:** Strengthen the sovereignty and privacy compliance of current solutions for ID management with biometric authentication using homomorphic encryption.
- **Objective 4:** Improve cyber threat intelligence (CTI) by allowing multiple stakeholders to collaborate using privacy-preserving data sharing protocols.
- **Objective 5:** Support SMEs in the adoption of state-of-the-art privacy-preserving and identity management technologies.

Partners

The PRIVIDEMA consortium is composed of 7 partners from 5 countries (Austria, Finland, France, Switzerland, Turkey), including SMEs, industry leaders, and academic institutions, all bringing extensive expertise to drive the project's goals and ensure successful outcomes.



1 TECHNIKON

Technikon Forschungs- und Planungsgesellschaft mbH
AUSTRIA [Villach]

2 cea

COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
FRANCE [Paris]

3 Sabancı Üniversitesi

SABANCI UNIVERSITESI
Türkiye [Istanbul]

4 THALES

THALES DIS FRANCE SAS
FRANCE [Meudon]

5 UNIVERSITY OF TURKU

TURUN YLIOPISTO
FINLAND [Turku]

6 iDAKTO

iDAKTO SAS
FRANCE [Guyancourt]

7 TUNE INSIGHT

Tune Insight SA
SWITZERLAND [Lausanne]

Facts

Budget

€ 5.3 Million
€ 3.1 EU-funded

Consortium

7 Partners
5 countries

Duration

36 Months
11/2024 - 10/2027

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Find out more about this Project:
https://ptividema.eu/

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