PRIVIDEMA

Privacy preserving identity management for digital wallet and secure data sharing and processing for cyber threat intelligence data

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Duration

36 Months

11/2024 - 10/2027

Consortium

7 Partners

5 countries

Budget

€ 5.3 Million

€ 3.1 EU-funded

Message from the Project Management Team:

prividema.eu

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As the PRIVIDEMA project approaches the end of its 8th month, it's time we shared a snapshot of the PRIVIDEMA progress with our external project partners, stakeholders and other interested parties. This newsletter gives an update of exciting news, deliverable and progress of the project so far. As always, for more detailed information about the project, feel free to visit ***our project website***, which is regularly updated with the latest project related news!

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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

Getting off to a great start!

The PRIVIDEMA project officially launched with a remote meeting in November, followed by an in-person meeting in Paris on January 21st and 22nd 2025, hosted by our partner iDAKTO. Over two dynamic days, project partners from across Europe gathered to discuss project details and establish a clear roadmap for PRIVIDEMA's success. The primary goal of the meeting was to define each partner's role, communicate work package (WP) activities, and establish a strong foundation for teamwork.

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.

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Communication activities

It is vital to share the exciting work being done in PRIVIDEMA and within Europe, so we have already created both an ***Objectives*** and an ***Explainer Video***, and interviews with our technical lead, ***Mariya Georgieva***, a Head of Cryptography at Tune Insight and ***Oana Stan***, a Cybersecurity Research Engineer at CEA.

Learn more about the PRIVIDEMA Objectives as well as the talented researchers driving the project forward!

Did You know?

A use-case in a research project is a real-life example of how the research can be used to solve a specific problem. It shows **how, where,** and **why** the research matters.

It's like a short story that explains:

- **Who** will use the research or tool
- **What** problem it will help to solve
- **How** it will be used in the real world
- **What** results the researchers hope to see

What is FHE?

Fully Homomorphic Encryption is a type of encryption that lets systems process data without ever seeing the data itself. FHE-based biometric authentication lets you prove who you are using your body—without ever revealing your body data to the system, even the system checking it. It's deemed safer, as theoretically your fingerprint, facial or other biometric data cannot then be recorded or stolen, if the system didn't read it in the first place.

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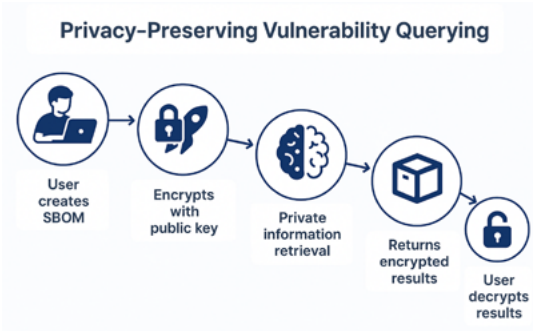
Mapping the project's progress

The first six months have gone very smoothly. We have made technical progress in all areas related to the PRIVIDEMA technical work packages. More specifically, the team have worked hard to map out the requirements for the 2 chosen use-cases.

The first use case is: **'Identity management for enhanced privacy preserving Digital Wallet'**. This explores how secure Multi-Factor Authentication (MFA) can be enhanced through the integration of FHE-based biometric authentication, providing robust identity verification while preserving user privacy, even during remote or untrusted computations.



The second use case is: **'Secure data sharing and analytics for Cyber Threat Intelligence'**. A key way to assess system security is using a Software Bill of Materials (SBOM). This SBOM assists in understanding what components are inside a software. The main role of such inventory is to help people in identifying all the possible vulnerabilities which could impact the said software. These vulnerabilities are generally tracked against public databases such as MITRE's Common Vulnerabilities and Exposures database (U.S.) or the European Union Vulnerability Database. Most tools that assess for vulnerabilities however, work offline and only help individual companies protect their own software. PRIVIDEMA enables secure, collaborative detection of software vulnerabilities in line with the EU Cyber Resilience Act and NIS2 Directive. Using privacy-preserving technologies like homomorphic encryption, federated learning, and differential privacy, it allows stakeholders to: (i) match Software Bills of Materials with vulnerability databases, and (ii) detect malicious providers via machine learning on confidential data — all without exposing sensitive information.

These two promising use cases provide a strong foundation for developing a safer digital Europe, while ensuring the protection of biometric identity privacy in full alignment with EU policy.

We look forward to sharing developments as the project goes into high gear in the coming months. Watch this space!

Submitted Deliverables:

D3.1: Requirements for Use Case 1: Identity management for enhanced privacy preserving Digital Wallet (M06)

D3.2: Requirements for Use Case 2: Secure data sharing and analytics for Cyber Threat Intelligence (M06)

D4.1: Specifications for the open-source software (M06)

D10.1: Plan for dissemination and exploitation incl. communication activities (M06)

D10.2: Data Management Plan (M06)

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Upcoming Events

All past and upcoming events can be found on the PRIVIDEMA official webpage:
https://prividema.eu/events/

Project Facts

Consortium: 7 partners (5 countries)
Project Coordinator: Martina Truskaller (Technikon)
Technical Leader: Mariya Georgieva (Tune Insight SA)
Project number: 101167964
Project website: https://prividema.eu/
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EC contribution: EUR 3 133 964,75

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