CREDENTIAL

Secure Cloud Identity Wallet

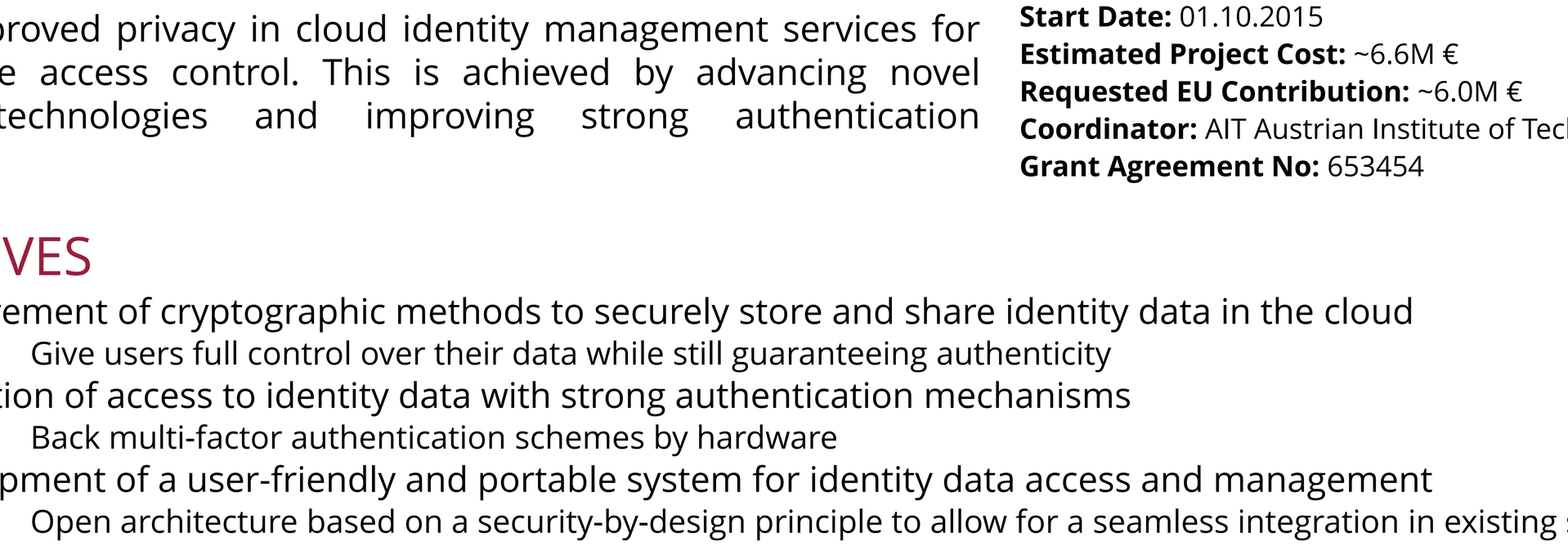
CREDENTIAL is an H2020 funded research project developing, testing, and showcasing innovative cloud-based services for storing, managing, and sharing digital identity information and other highly critical personal data with a demonstrably higher level of security than other current solutions.
The main idea and ambition of CREDENTIAL is to enable end-to-end security and improved privacy in cloud identity management services for managing secure access control. This is achieved by advancing novel cryptographic technologies and improving strong authentication mechanisms.

METADATA

Call: Digital Security: Cybersecurity, Privacy and Trust
Topic: DS-02-2014 Access Control
Type of Action: Innovation Action
Duration: 36 months
Start Date: 01.10.2015
Estimated Project Cost: ~6.6M €
Requested EU Contribution: ~6.0M €
Coordinator: AIT Austrian Institute of Technology GmbH
Grant Agreement No: 653454

OBJECTIVES

- Improvement of cryptographic methods to securely store and share identity data in the cloud
  - Give users full control over their data while still guaranteeing authenticity
- Protection of access to identity data with strong authentication mechanisms
  - Back multi-factor authentication schemes by hardware
- Development of a user-friendly and portable system for identity data access and management
  - Open architecture based on a security-by-design principle to allow for a seamless integration in existing solutions
- Creation of enabling technologies for cloud service providers and identity data consumers
  - Implementation of a secure, efficient, and high-quality software suite
- Transfer of project results into market-ready identity management technologies and standards
  - Demonstration and development of standards and guidelines



Workflow of a privacy preserving identity and access management protocol realized in CREDENTIAL

EXPECTED RESULTS

- Novel efficient cryptography to enable advanced trust models in the cloud
  - Allow cloud providers to process personal data without accessing it using proxy cryptography
- Methods for strong authentication to the cloud
  - Boost use of stronger authentication mechanisms through efficient and user-friendly protocols
- Holistic privacy models for user protection and secure data sharing
  - Integrate privacy features into eID solutions to allow for minimum attribute disclosure
- Dedicated usability and HCI models for wide user adoption and maximum impact
  - Improve usability of strong authentication mechanisms by novel HCI guidelines and design patterns
- Secure, efficient, and portable implementations of components and protocols
  - Improvement of existing standards in the field of identification and authentication protocols
- Piloting on a European scale
  - Three real-world pilots from different domains (eHealth, eBusiness, and eGovernment)

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