



# **CREDENTIAL**

## **Secure Cloud Identity Wallet** **You are what you keep!**

### **Deliverable D7.1** **PUBLIC PROJECT WEB PRESENCE**

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### Project Information

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<b>Requested EU Contribution</b>	5.978.082,50 €
<b>Start Date</b>	01.10.2015
<b>Duration</b>	36 months

### Web Presence

CREDENTIAL Website	<a href="https://credential.eu">https://credential.eu</a>
CREDENTIAL Twitter	@CredentialH2020
CREDENTIAL LinkedIn	<a href="https://www.linkedin.com/in/credential">https://www.linkedin.com/in/credential</a>

*This document is issued within the CREDENTIAL project. This project has received funding from the European Union's Horizon 2020 Programme under grant agreement no. 653454.*

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### Document Information

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0.1	27.11.2015	First draft version	Agi Karyda
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1.0	22.12.2015	Incorporated reviews by SIC, KAU, GUF	Agi Karyda, Stephan Krenn

## Project Description

With increasing mobility and Internet usage, the demand for digital services increases and has reached critical and high assurance domains like e-Government, e-Health and e-Business. Those domains have high security and privacy requirements and hence will be harnessed with various novel mechanisms for secure access. Approaches for handling the resulting variety of authentication and authorisation mechanisms include the use of digital identity and access management systems (IAM). Like other technologies IAMs follow the trend of using cloud services. This allows abstracting over used resources and enables ubiquitous access to identity data which is stored and processed in the cloud, but also results in an additional degree of complexity for securely operating IAMs. The goal of CREDENTIAL is to develop, test, and showcase innovative cloud based services for storing, managing, and sharing digital identity information and other critical personal data. The security of these services relies on the combination of strong hardware-based multi-factor authentication with end-to-end encryption representing a significant advantage over current password-based authentication schemes. The use of sophisticated proxy cryptography schemes will enable a secure and privacy preserving information sharing network for cloud-based identity information in which even the identity provider cannot access the data in plain-text and hence protect access to identity data. CREDENTIAL does not focus on evaluating and applying novel crypto-approaches for IAMs only but also on implementing them in an easy-to-use way to motivate secure handling of identity data, even in other areas than the cloud. To empirically evaluate CREDENTIAL's work and to produce outputs of a high technical readiness CREDENTIAL considers the demonstration of its project results in different use cases within the domains e-Government, e-Health and e-Business.

## List of Contents

1	Executive Summary .....	6
2	Visual Identity.....	7
2.1	CREDENTIAL Logo .....	7
2.2	Web Domain .....	7
3	CREDENTIAL Homepage .....	8
3.1	Website Structure.....	9
3.1.1	Home.....	9
3.1.2	Overview .....	9
3.1.3	Newsroom.....	10
3.1.4	The Team .....	10
3.1.5	Publications.....	11
3.1.6	Liaisons.....	12
3.2	Technical Implementation .....	13
4	CREDENTIAL in Social Media .....	14
4.1	Twitter Profile.....	14
4.2	LinkedIn Profile .....	14
	Appendix I .....	16
5	Bibliography.....	18

## List of Figures

Figure 1: CREDENTIAL logo.....	7
Figure 2: CREDENTIAL color palette .....	7
Figure 3: CREDENTIAL Home page .....	8
Figure 4: CREDENTIAL Overview page.....	9
Figure 5: CREDENTIAL Newsroom page .....	10
Figure 6: CREDENTIAL The Team page .....	11
Figure 7: CREDENTIAL Publications page .....	12
Figure 8: CREDENTIAL Liaisons page .....	13
Figure 9: CREDENTIAL Twitter profile .....	14
Figure 10: CREDENTIAL LinkedIn profile .....	15
Figure 11: CREDENTIAL Folder cover .....	16
Figure 12: CREDENTIAL Folder internal.....	16
Figure 13: CREDENTIAL Poster .....	17

## 1 Executive Summary

This document presents and describes the means through which the CREDENTIAL project is presented on the web in order to maximize the visibility of the project within the research community but also to the wider public.

For the promotion of CREDENTIAL, a public website has been set up under <https://credential.eu>. It is online since November 2015, and will be updated on the regular basis during the project's life time, in order to represent new developments and events. Additionally, to broaden visibility in professional groups and the general public, a Twitter and a LinkedIn accounts have been set up and are online since October 2015.

In the following we provide an impression of the project's identity and the structure of the webpage.

## 2 Visual Identity

Visual identity plays a significant role to the visibility and recognisability of CREDENTIAL project. For this reason the project website is designed in a way to reflect as much as possible the visual identity of the project which is constructed around the project's logo.

### 2.1 CREDENTIAL Logo

The color scheme used within credential was carefully chosen based on the project's logo.



Figure 1: CREDENTIAL logo






	RGB: 103, 152, 188 CMYK: 63, 30, 15, 2
	RGB: 31, 113, 184 CMYK: 85, 50, 0, 0
	RGB: 57, 168, 224 CMYK: 70, 16, 0, 0
	RGB: 123, 124, 124 CMYK: 51, 39, 40, 22
	RGB: 52, 54, 53 CMYK: 70, 58, 56, 64

Figure 2: CREDENTIAL color palette

### 2.2 Web Domain

An easy to remember web domain linking to the project's acronym and using the ".eu" extension to give a strong emphasis on the project's european identity was selected: <https://credential.eu/>

### 3 CREDENTIAL Homepage

The CREDENTIAL homepage is the project's main communication tool and it is designed in a user friendly and clean way in order to trigger high popularity.

The purpose of the homepage is to facilitate dissemination outside the consortium, highlight project objectives, progress and achievements through public documents and announcements. A structure with gradually increasing scientific detail will be followed to allow dissemination to audiences with varying background knowledge. The official CREDENTIAL homepage can be found under <http://credential.eu/> and it was published in November 2015.

Figure 3 shows a screenshot of the main page of the project.



Figure 3: CREDENTIAL Home page



In the following, a detailed preview of the current state of the CREDENTIAL homepage will be given. Note that due to the nature of a webpage the precise presentation and the details will change over the project's life time in order to maximize its impact.

### 3.1 Website Structure

The website is divided into the six parts: Home, Overview, Newsroom, Publications, The Team, and Liaisons, which allows visitors to efficiently find the information they are looking for.

In the following we will give a brief description of each of the single parts.

#### 3.1.1 Home

The Home page is visually attractive and contains general information about the project such as the vision of the project and a project's summary. An screenshot is given in Figure 3: CREDENTIAL Home page.

#### 3.1.2 Overview

This section gives an overview of the project's work plan containing the following three childpages:

- **Objectives – Results:** This page contains a description of the project's goals and visions.
- **Scientific Methodology:** This page contains descriptions of the project's internal structure, the workpackages within the project, and the that will be addressed by those.
- **Use Cases:** Once they are fully specified, this page will contain detailed descriptions of the use cases from the different domains addressed within CREDENTIAL.

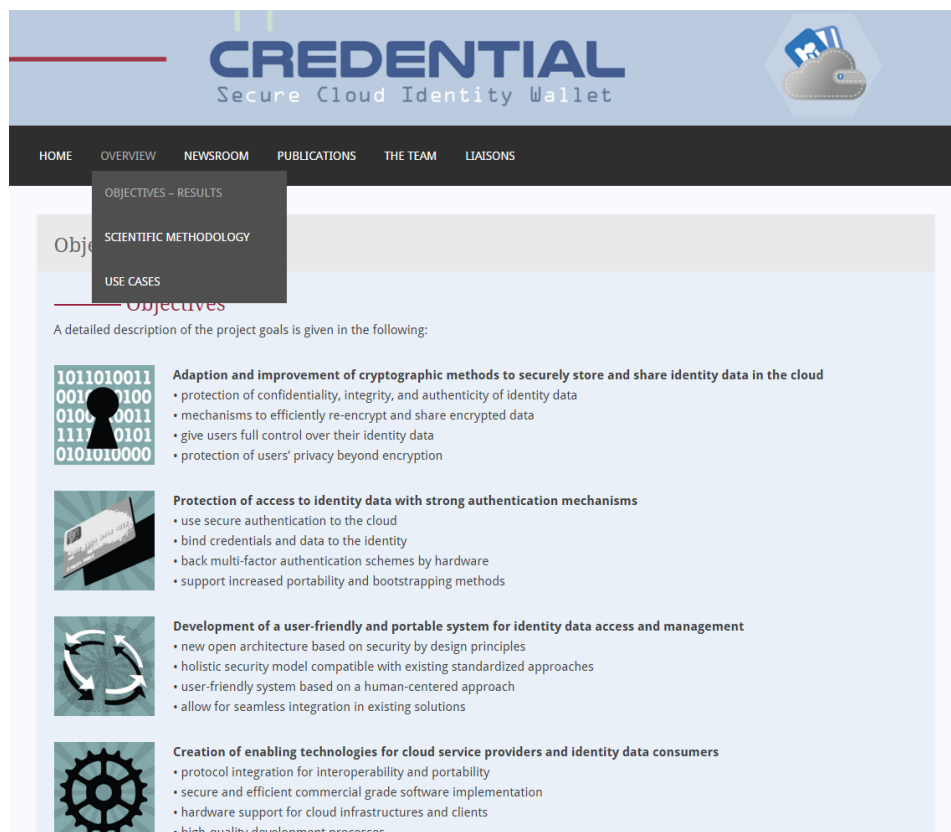


Figure 4: CREDENTIAL Overview page

### 3.1.3 Newsroom

In the newsroom the projects news and future events related to the project's topic will be posted.

- **Project News**
- **Events**

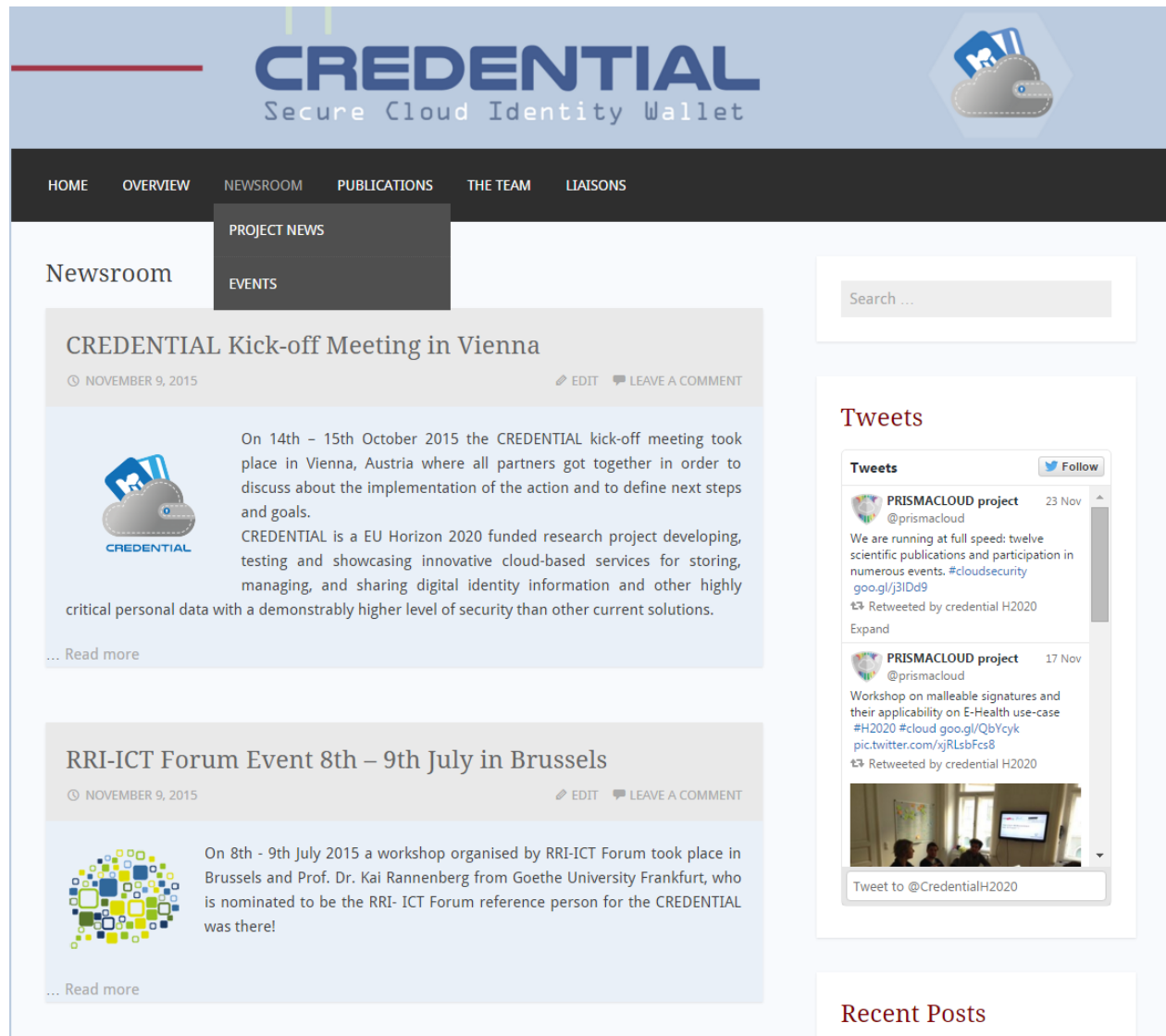


Figure 5: CREDENTIAL Newsroom page

### 3.1.4 The Team

This section gives an introduction about the consortium, a small description of all project partners and their role in the project, as well as links to their websites.

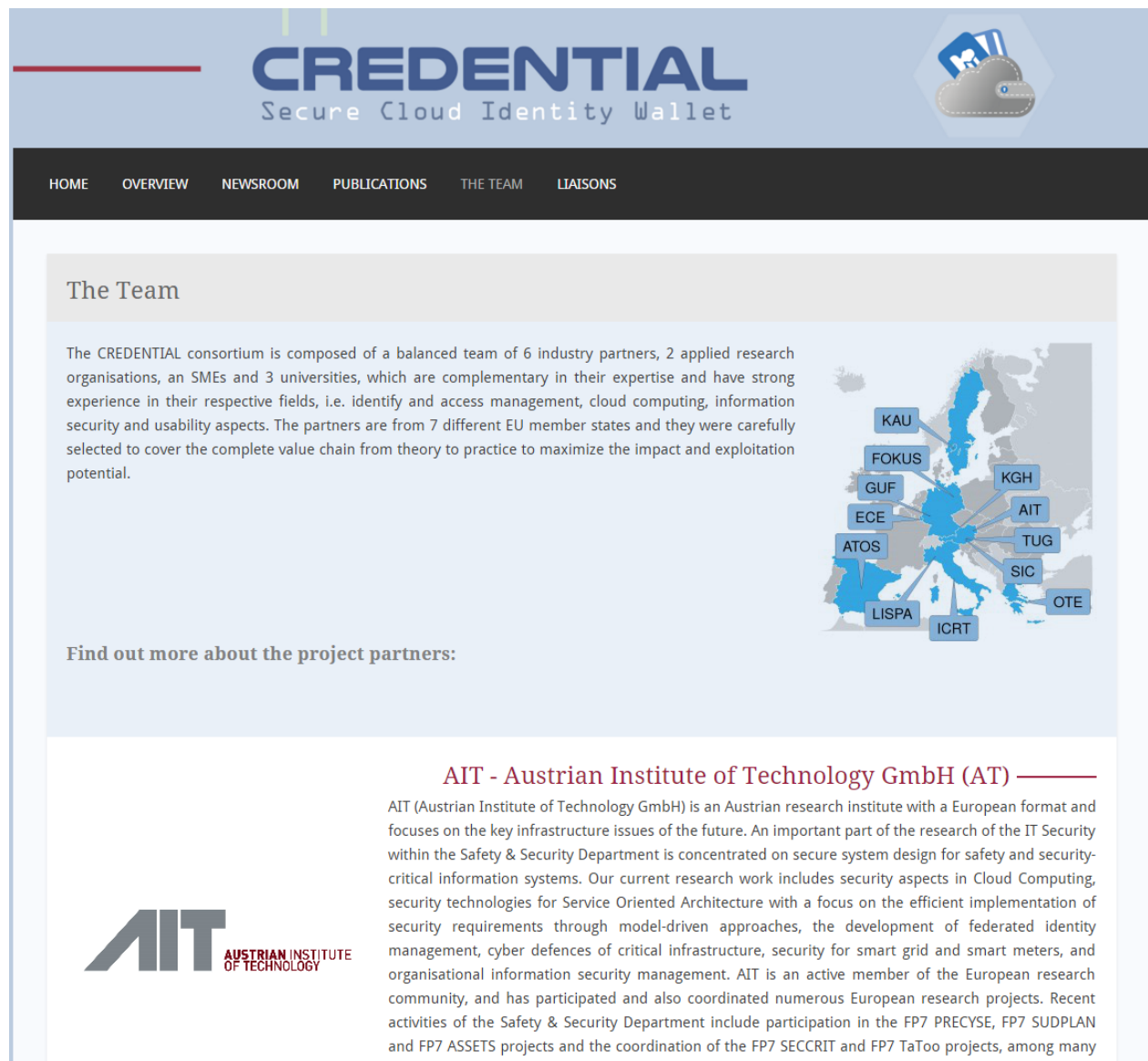


Figure 6: CREDENTIAL The Team page

### 3.1.5 Publications

This section provides a list of all the publications produced within the CREDENTIAL project and links to download the respective publication.

- **Scientific Publications**
- **Press Releases**
- **White Papers**
- **Communication Material:** CREDENTIAL Poster and CREDENTIAL Folder can be found in Appendix I and II respectively.

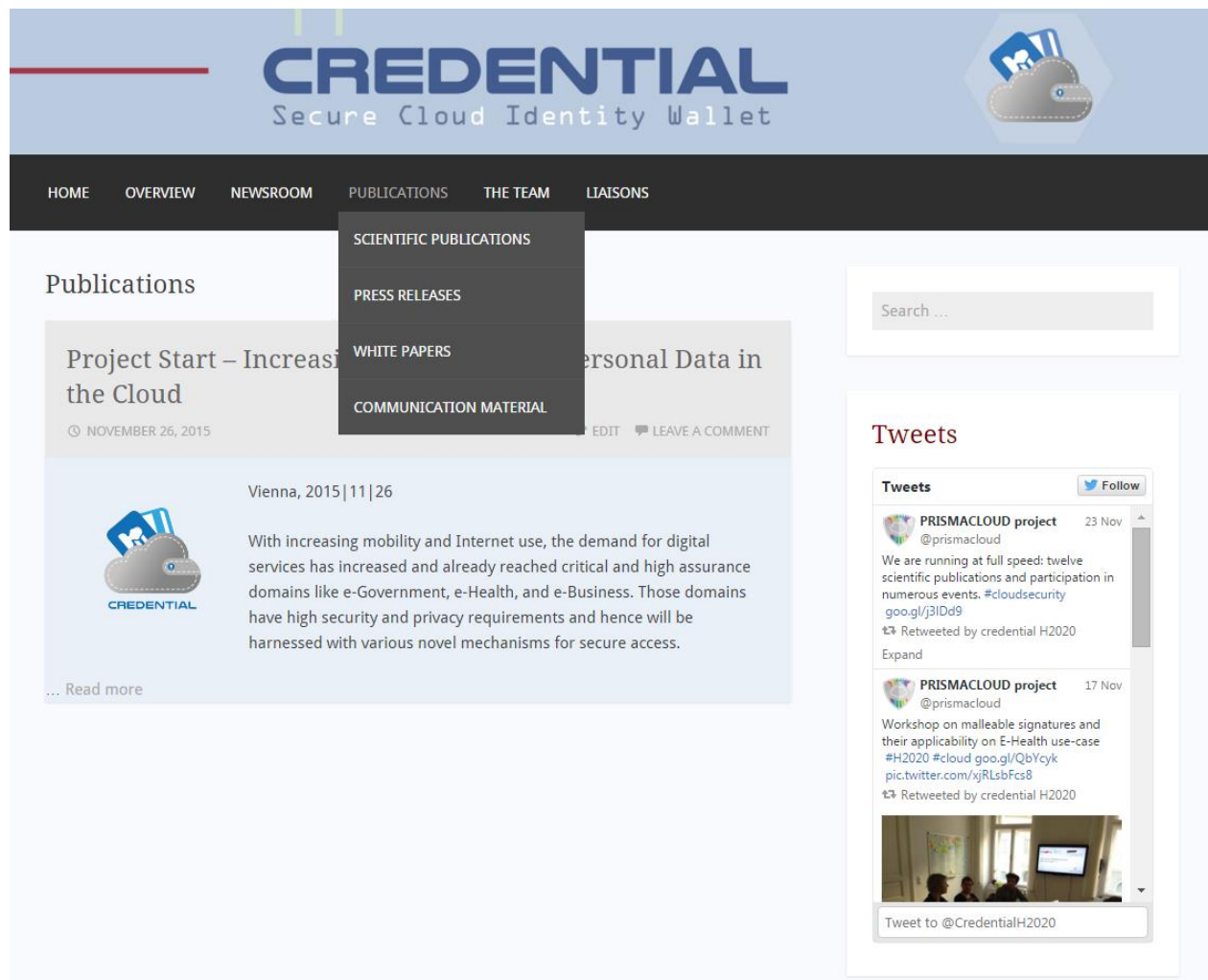


Figure 7: CREDENTIAL Publications page

### 3.1.6 Liaisons

This section includes reports on Collaborations (User Advisory Board presentation) or other Liaisons which are setup during the course of the project work.

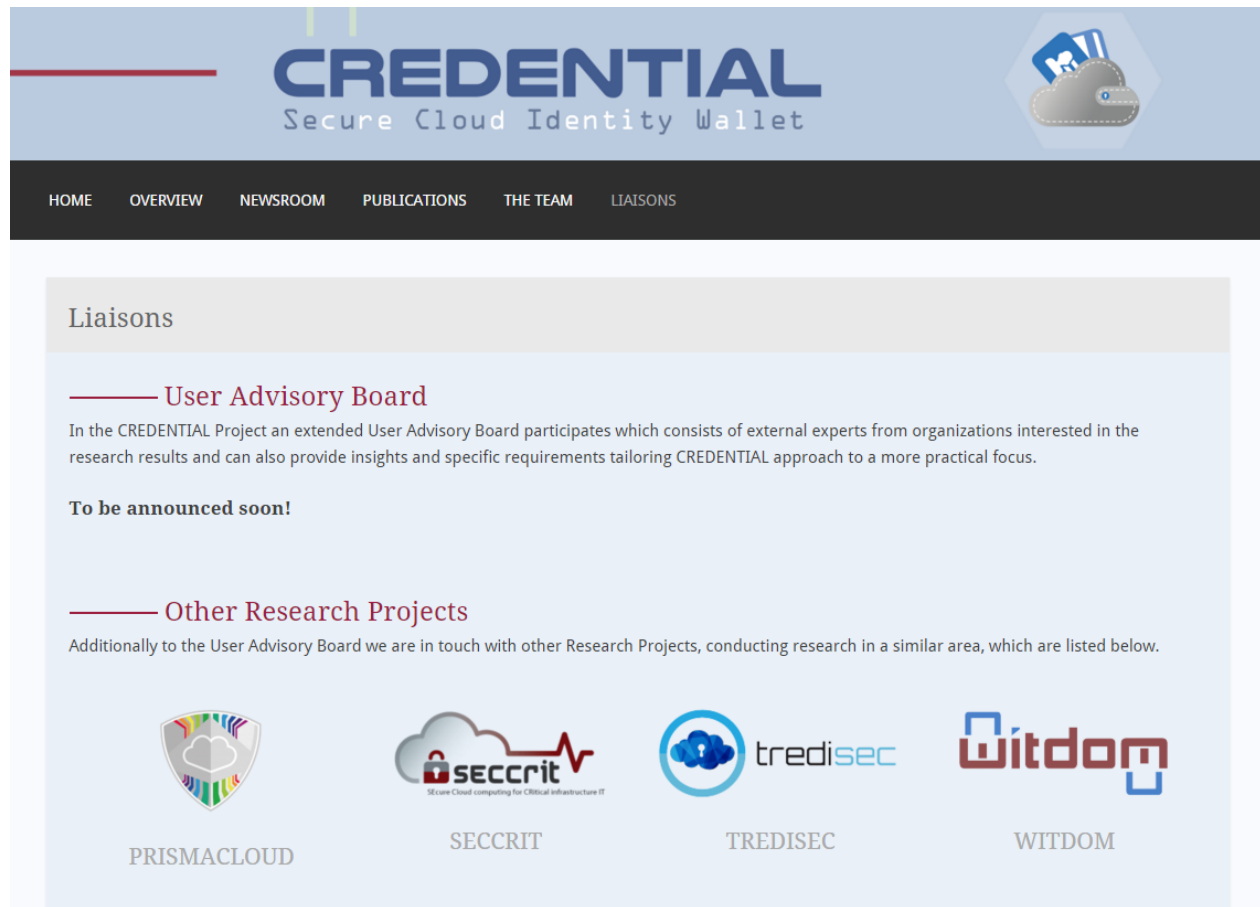


Figure 8: CREDENTIAL Liaisons page

### 3.2 Technical Implementation

The CREDENTIAL homepage has been developed with WordPress [1]. More information about the homepage technical implementation can be found in [2].

## 4 CREDENTIAL in Social Media

In order for the project to reach a broader audience who have less interest in conventional media channels, Twitter and LinkedIn accounts have been set up. Furthermore, these channels allow for a bi-directional communication, so that also the wider public to communicate can get in touch with the project and with people who share the same interests. [3]

### 4.1 Twitter Profile

Get in touch with CREDENTIAL H2020 on Twitter:

@CredentialH2020


<https://twitter.com/CredentialH2020>



Figure 9: CREDENTIAL Twitter profile

### 4.2 LinkedIn Profile

Connect with CREDENTIAL Project on LinkedIn: <https://www.linkedin.com/in/credential>



## CREDENTIAL Project

EU H2020 Project at AIT Austrian Institute of Technology GmbH

Wien, Wien, Austria | Research

Current AIT Austrian Institute of Technology GmbH

[Add Education ?](#)

[View profile as](#) ▼

**40**  
connections

<https://at.linkedin.com/in/credential>
[Contact Info](#)

Figure 10: CREDENTIAL LinkedIn profile



## Appendix I

In the following we briefly present further material that will be used for advertising the CREDENTIAL project.

Figure 11 and Figure 12 show a folder that can be used, e.g., as handouts in industry events to present the CREDENTIAL project. The folder contains detailed descriptions of the project's objectives, goals, and partners, and is visually aligned with the web page in order to achieve a unified project identity.




Figure 11: CREDENTIAL Folder cover



Figure 12: CREDENTIAL Folder internal


Similarly to the folder, a CREDENTIAL poster (shown in Figure 13) has been prepared. The poster will be used, e.g., in poster sessions or workshops.





# CREDENTIAL

Secure Cloud Identity Wallet



## You are what you keep!

### VISION






CREDENTIAL is an EU 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

**Adaption and improvement of cryptographic methods to securely store and share identity data in the cloud**

- protection of confidentiality, integrity, and authenticity of identity data
- mechanisms to efficiently re-encrypt and share encrypted data
- give users full control over their identity data
- protection of users' privacy beyond encryption

**Protection of access to identity data with strong authentication mechanisms**

- use secure authentication to the cloud
- bind credentials and data to the identity
- back multi-factor authentication schemes by hardware
- support increased portability and bootstrapping methods

**Development of a user-friendly and portable system for identity data access and management**

- new open architecture based on security by design principles
- holistic security model compatible with existing standardized approaches
- user-friendly system based on a human-centered approach
- allow for seamless integration in existing solutions







**Creation of enabling technologies for cloud service providers and identity data consumers**

- protocol integration for interoperability and portability
- secure and efficient commercial grade software implementation
- hardware support for cloud infrastructures and clients
- high-quality development processes

**Transfer of project results into market-ready identity management technologies and standards**

- business models and exploitation opportunities
- European scale pilot
- demonstrate methods' capabilities and tools developed
- development of standards and guidelines for secure IAM deployment in the cloud

### EXPECTED RESULTS

**Novel efficient cryptography to enable advanced trust models in the cloud**

- methods to treat identity data in the cloud in encrypted format only
- application of efficient proxy cryptography concepts for eID solutions
- enable cloud provider to process identity data without accessing it

**Methods for strong authentication to the cloud**

- protocols for a merged processes of authentication and decryption to one single process of equal strength
- a boost for the use of stronger authentication mechanisms

**Holistic privacy models for user protection and secure data sharing**

- integration of privacy features such as selective and minimal attribute disclosure into eID solutions
- application of new approach based on redactable and sanitizable signatures to realize data minimization concepts

**Dedicated usability and HCI models for wide user adoption and maximum impact**



- novel HCI guidelines including HCI design patterns
- improve the usability of strong authentication mechanisms.

**Secure, efficient, and portable implementations of components and protocols**















- improvement of existing standards in the field of identification and authentication protocols
- secure, efficient, and portable privacy-preserving identity management system

**Piloting and testing on a European scale**

- an open and flexible cloud identity wallet architecture to easily connect to other identity management systems
- application of the developed tools in a European scale pilot

@credentialH2020  <https://at.linkedin.com/in/credential> 

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 653454.

Figure 13: CREDENTIAL Poster

## 5 Bibliography

- [1] "WordPress," [Online]. Available: <https://wordpress.com/>. [Accessed 10 October 2015].
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