



Using SSI for wallet based administrative services.

How Gradiant created wallet based identity management solutions for the public sector using Self-Sovereign-Identity.

About Gradiant

Gradiant incorporates their vision and knowledge of telecommunications and technologies into the processes and products that companies develop. They bring their expertise from the point of view of connectivity, intelligence and security to work hand in hand with the industry from their surroundings. Gradiant's mission can be summed up as "contributing to the innovative dynamism, growth and competitive improvement of the business ecosystem through technology development and innovation in the use of ICT".

The Challenge

[IMPULSE](#) is a EU-funded consortium that focuses on building a decentralized Self-Sovereign Identity (SSI) model by combining artificial intelligence and blockchain networks. A vast majority of public administration services are based on centralized solutions, so evaluating and building on decentralized solutions was a breakthrough.

The challenge was to build a secure digital identity management solution and test Self-Sovereign-Identity for multiple public administrations solutions. The current solution is not efficient because it requires long administrative processes where many documents and information have to be given out. In addition to making those identity management solutions easy to use for citizens, they also needed to be secure and respect data privacy which is why SSI appeared as the best technology.

The Solution

Considering the complexity of Self-Sovereign Identity (SSI) Gradiant looked for existing solutions that would fulfill a number of criteria:

- Open source solution
- EBSI and ESSIF compliant
- Written in Kotlin
- Wallet compatibility

Moreover, Gradiant heard about walt.id during a meeting with the EBSI people from the Early Adopters Programme and got in touch with walt.id's team right after. Gradiant, through Xavier Martinez also became a contributor to walt.id's open source libraries of

the [SSI Kit](#). The main contributions to the main repository were the implementation of the EBSI DID method versions 1 & 2, fixing some errors registering the DID, and other minor improvements. It is also worth noting the creation of the [Android version](#) of the whole [SSI Kit](#) stack, that continues to be updated every few months based on the main branches.

The Results

The end results of this collaboration is 6 use cases that are connected to the SSI model (identity management mode). Each one of them has a unique activity :

- [Aarhus, Denmark] - Objects and personal documents stored in public lockers: This use case is related to physical cabinets that can unlock personal drawers using IMPULSE technology. The primary target group is the vulnerable citizens, and the goal is to support them in their lives in a digital world by giving them a safe place to store their key cards and ensure that they have access to digital services and digital documents.
- [Ertzaintza, Spain] - Issuing complaints entirely online: The use case will enable secure and trustworthy eID so the complaint process can be entirely completed online using IMPULSE technologies once the citizen fills in the form on the ERTZ web page, and just before the information is submitted to the Police Management Service.
- [Gijón, Spain] - Citizen Card for accessing city public services: The Citizen Card (CC), which is the main tool used by citizens in Gijón to access municipal services, has weaknesses (blurred images, deteriorated texts, complicated codes to memorize, etc.) that limit its use. The aim of the pilot is to explore how the IMPULSE technologies can bridge those gaps, as some of the services must rely on sufficient security measures to guarantee a proper functioning.
- [Peshtera, Bulgaria] - Civil registration & certification, and secure management of privacy rights: The service selected for IMPULSE to operate in the use case is the change of address of the citizens, due to its close relation to identity management.
- [Reykjavík, Iceland] - Participatory democracy platform: The use case will take advantage of the experimental space Electronic Reykjavik to deploy and evaluate IMPULSE as an advanced solution in e-governance and e-government, assess the

vulnerability of public services, and quantify the value of disruptive technologies that offer interesting options to conventional methods.

- [Unioncamere & InfoCamere, Italy] - Person of business – legal identities: Business registers are economic registers and instruments of legal disclosure of all businesses, where business representative persons (“Person of business”) need to be identified to access information and store certified data about the legal relationship with their own enterprises. The use case will address the case where persons of business can access public/private services online and provide proof that specific business requirements are met.

"The SSI Kit is very versatile because it can be easily deployed and integrated, and its design allows it to be adapted to a large number of different solutions.

The walt.id team has always been very collaborative, and has shown a great knowledge about the European EBSI/ESSIF ecosystem."

Xavier Martínez Luaña

Research Engineer

Gradient

Ready to get started?

[Contact us](#) or simply [book a meeting](#).

We are happy to help.

... or [get in touch](#) with *Gradiant* experts to know more about SSI eID systems for public administrations.



[walt.id](https://www.walt.id) develops Self-Sovereign Identity (SSI) solutions for businesses and governments across industries.

Developers and organisations rely on our open source products as an easy and fast way to use Self-Sovereign Identity - including Europe's new digital identity ecosystem based on the EU Blockchain and the EU SSI Framework (ESSIF).

To ensure client's success, our industry-leading experts provide holistic services including from conception over the implementation of pilots and production system to enterprise support and managed cloud services.

For more information visit www.walt.id or get in touch via [mail](mailto:info@walt.id).



Gradiant, ICT technology center, aims to improve the competitiveness of companies through the transfer of knowledge and technology in the fields of connectivity, intelligence and security. With more than 140 professionals and 14 patents applied for, Gradiant has developed more than 300 different R&D projects, becoming one of the main drivers of innovation in Galicia.

After more than 12 years of activity, Gradiant is positioned as a technological partner of the industry focused on its needs in the field of ICT, contributing its national and international experience in technologies for security and privacy; multimedia signal processing; internet of things; biometrics and data analytics and advanced communications systems.

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