

# Digital Identity Wallet: An Enabler to Inclusive Digital Citizenship

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## Abstract

The European Digital Identity Wallet is reshaping the concept of Digital Identity against a backdrop of increased digitalization of public services. However, expanding its scope in terms of use cases and investing in privacy and security at the technological and architectural levels alone will not guarantee the initiative's success. The true adoption of the service will depend on its ability to abide by the principles of equity, sustainability, and inclusion, following a Human-Centered design approach that factors in users' needs and diversity.

## Keywords

digital identity wallet, digital citizenship, human-centered design, inclusive design, accessibility, usability

## 1. The evolution of digitalization in public services

The new paradigm of the Digital Identity Wallet is defined by Regulation (EU) 2024/1183 [1] (hereafter Regulation eIDAS 2.0), published in the Official Journal on April 30, 2024, as an amendment to Regulation (EU) No 910/2014 [2], and is introduced in a context of robust technological progress and digital innovation.

Indeed, over the past decade there have been radical changes to the way public entities deliver their services and how citizens and businesses access them. Accelerated technological and digital developments, together with the need to meet new user demands and habits, have driven significant investments in the digitalization of public services across Europe.

In this context, the need to pursue common goals and outline a shared path led the European Commission to propose, in 2021, the so-called Digital Compass 2030 [3] and the Digital Decade Policy Programme 2030 [4], in March and September, respectively. Indeed, the Digital Decade Policy Programme 2030 introduced/marked the beginning of a real process of cooperation between the Commission and Member States with the aim of defining concrete actions, an implementation framework and monitoring tools for targets, such as the annual eGovernment Benchmark Report [5] and the Digital Economy and Society Index (DESI) [6].

## 2. Striking a balance between innovation and people

A critical commitment to planning, organizational drive and economic resources – such as the funds allocated in 2021 by the Recovery and Resilience Facility (RRF) [7], the financial instrument of NextGenerationEU [8] for digital transition – has been made. It is essential, however, not to lose sight of the **key element that should guide this inevitable and unstoppable process of public service digitalization: people.**

People represent all individuals who, as citizens or residents, live in and contribute to the social fabric of a territory. They are the users and final beneficiaries of public services and, therefore, the main factor in determining the value and purpose of a given service.

When it comes to services in the digital era, it is worth emphasizing that there should be no distinction between a public service and a digital public service. Regardless of the mode of delivery, a public service should be designed to meet the needs of all the users it is intended for. In summary, designing

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public services requires a great sense of responsibility and the implementation of specific rules and principles. Through our actions and design choices, we can shape how people access a service, define its characteristics and thus have a significant impact on people's lives and on how they exercise their rights in relation to digital contexts and/or tools. In this regard, the Organization for Economic Co-operation and Development (OECD) [9] states that *"the digital environment offers tremendous opportunities to enhance people's ability to exercise their human rights, but it can also create new and exacerbated risks, as well as new links and tensions between rights. For example, efforts to safeguard rights associated with online safety by removing harmful content online like hate speech may be seen as interfering with others' freedom of expression"*.

It is evident that the concepts of rights and digital services end up converging, making the latter a tool to enhance the former. Digital transformation in the public sector therefore embodies the values of freedom, equality, justice, citizenship and all other rights contained in the Charter of Fundamental Rights of the European Union (2009) [10].

### 3. The Digital Identity Wallet as an enabler of digital citizenship

The importance of regulating the protection of human rights in relation to the digital dimension, from the rise of the first e-Government services between the 1990s and 2000s to the present day, has been demonstrated by the enactment of numerous regulatory acts, both at the European and national level. Regulations and standards on privacy, accessibility, inclusion, and cybersecurity have provided the foundation for the widespread adoption of many services that today *"help citizens and businesses access public administration services"* [11]. Examples include certified email, digital addresses, electronic signatures, online payments and, most importantly, Digital Identity, an essential tool for accessing online public services.

Given the strategic importance that Digital Identity already holds today, it is necessary to focus on its evolution towards the European Digital Identity Wallet (EUDIW) which, as defined by the new Regulation eIDAS 2.0, aims to achieve the ambitious goal of significantly expanding the value proposition and scope of the traditional concept of Digital Identity. The European Digital Identity Wallet indeed presents itself as the tool that will ensure a unique, secure, and interoperable Digital Identity ecosystem across Europe. It will promote the protection of data according to the principle of Self-Sovereign Identity (SSI), enable access to both private and public services, not only in remote contexts (e.g., accessing an online service through authentication) but also in proximity scenarios (e.g., accessing a physical location by demonstrating a particular attribute) exponentially increasing the number of use cases.

### 4. The Importance of Inclusive Design for the Digital Identity Wallet

**Defining such a complex and articulated service framework requires the adoption of a design approach that is as inclusive as possible.** Indeed, while several articles in Regulation eIDAS 2.0 outline the main aspects for the protection of people's rights, such as accessibility (Art. 15), usability, privacy, and transparency (Art. 5a), achieving the desired quality is neither self-evident nor guaranteed.

An inclusive design process should be Life-Centered, meaning that the innovation and development process should assess aspects or implications for the entire planet (for example, wondering how the choice of a particular technology or architectural framework can affect energy consumption and resource usage) as well as being Human-Centered, meaning it should consider the needs, expectations, and diversity of the people it addresses.

While it is necessary to analyze and address all these different aspects, the last one is particularly worth focusing on the diversity and heterogeneity that characterize people as end users. In this respect, it can be assumed that while every digital public service constitutes a right, it is highly unlikely that it can be considered as a constraint or an obligation. This is because *"everyone should be able to effectively and freely choose which online services to use, based on objective, transparent, easily accessible and reliable information"* [12].

Accordingly, the same rationale will apply to the European Digital Identity Wallet as to any other digital public service. Although each Member State will be required to ensure at least one EUDIW solution by 2026, people will be able to choose whether to use it, guaranteeing the principle of freedom mentioned above. No matter how well-designed or user-friendly a service may be, we cannot assume that everyone will want or be able to use it. It is therefore essential that the design of an inclusive public service includes an equally effective alternative path and ensures that users are well informed about them.

The presence of alternatives or assisted and/or simplified processes does not change the fact that, regardless, **a digital public service must consider all people, leave no one behind, and contribute to a more equitable and inclusive society** for the “*elderly people, people living in rural areas, persons with disabilities, or marginalised, vulnerable or disenfranchised people and those who act on their behalf*” [12]. Without analyzing all the numbers and percentages that quantify all these different vulnerable categories, it is enough to consider that, according to the Digital Economy and Society Index (DESI), only 45.75% of the Italian population possesses at least basic digital skills (compared to the European average of 55.56%). The gap highlights how this single variable can impact the effectiveness of a digital public service. In summary, designing inclusively from a user’s perspective means evaluating the efficiency of the service from at least three different perspectives:

- **Economic sustainability**, meaning avoiding the imposition of direct or indirect costs on the User that could discourage or even prevent access to the service.
- **Accessibility**, meaning addressing the various conditions of disability, whether temporary or permanent, in accordance with current national and international regulations also considering a mandating mechanism if necessary.
- **Usability**, meaning providing simple and recognizable interaction patterns, clear and comprehensive information, as well as a good support system and self-care strategies such as FAQs.

## 5. Best practices and design tools

Despite the complexity and the numerous factors to be considered, there are several models and methodologies that can assist us. We can mention the Seven Principles of Universal Design [13] (Equity, Flexibility, Simplicity, Perceptibility, Tolerance for error, Effort reduction, Adequate size and space) or the collaborative and iterative approach supported by kits and practical tools promoted by Designers Italia [14], a project of the Italian Department for Digital Transformation aimed at the digitalization and harmonization of Italian Public Administration. However, we will soon realize that the starting point and the key element guiding every well-designed process is always the user.

Looking at the main phases of a systemic and iterative design process (Understanding, Design, Realization and Validation), here are a few practical examples related to the European Digital Identity Wallet.

- **Understanding the Users:** considering both the complexity within the same user category and the coexistence of multiple user types, each with different roles and responsibilities inside the same framework. For example, the European Digital Identity Wallet is characterized by multiple value propositions: G2C for citizens, G2G or G2B for Public Administration or private organizations and businesses. A successful service must start by understanding the needs and perspectives of all stakeholders, insights that can only be gathered through research and participatory activities such as surveys, questionnaires, and interviews.
- **Designing the Ecosystem:** devoting equal attention and care to all the elements that build a complex service model and putting them in relation to each other. In the case of the European Digital Identity Wallet, it is not just about a single Wallet app but a variety of different Wallet solutions and, additionally, interacting with several other new or pre-existing touchpoints. It is important to ensure that all these elements communicate within an interoperable framework, both technologically and systemically. This can only be achieved by defining convergent service flows based on a model that creates value for the environment, people, and businesses.

- **Providing the Service:** enabling everyone to join the ecosystem and to use its functionalities, in line with the principles of inclusive design previously outlined. Both the discovery and usage phases need to be carefully structured. The discovery phase requires communication campaigns with different content and channels depending on the target audience. The usage phase should include training initiatives and, if necessary, support services to facilitate adoption and usage. For instance, the European Digital Identity Wallet demands the right messaging to highlight the benefits of this new paradigm over traditional models, guiding all stakeholders, not only citizens, through the adoption and onboarding process.
- **Validating the Ongoing Outcomes:** continuing the design process beyond the start-up phase, with the aim of continuously improving and adapting the service through monitoring activities and evaluating its impact and perception. We should apply an iterative process, based on evidence collected in a constantly evolving context. For a complex project like the European Digital Identity Wallet, ongoing listening moments, such as feedback tools within the Wallet app or sentiment analysis across different media and channels, are recommended.

## 6. Conclusion

The European Digital Identity Wallet, as a public service that enables digital citizenship, represents an undeniable promise of value and innovation. However, this very awareness must drive us to carefully evaluate all design dimensions and variables, and ensure, for example, that technology and digital solutions do not become answers to questions we have yet to ask: **Who am I designing for? What need am I addressing? How will it impact people and the environment?** Only by dealing with these questions can we design a fair, equal and inclusive public digital service.

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