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EWC D2.6



End user pilots (1,2 and 3) and citizen research results

WP2

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Revisions

| Version | Date | Author | Changes |
|---------|-------|-----------------------|---|
| v1.0 | 12/06 | Gen (Avast s.r.o.) | Version send to Management Board for review |
| v1.0 | 26/06 | Gen (Avast s.r.o) | Management board approved version, including updates based on feedback. |
| | | | |

01 Executive Summary

Introduction: Navigating the complex (digital) landscape of the European Union

Launching a digital wallet in Europe is complex due to significant differences in citizen attitudes, levels of digital maturity, and openness to EU-led initiatives across member states. While the EU promotes the wallet to reduce fragmentation and deliver collective benefits—such as greater convenience, security, and interoperability—this vision isn't uniformly embraced by the public. Many citizens remain sceptical, with varying degrees of trust in digital tools, differing levels of digital literacy but also a primary focus on what will directly benefit them. With some populations embracing integration and others viewing it with caution, it will be difficult to craft a one-size-fits-all approach across the EU. As one citizen stated, *"In reality, there will still be a lot of work to be done... not everyone is equally digital"*.

Currently only 29% of EU citizens would adopt the EDIW. The EU needs to convince over half of its citizens to adopt the wallet if it is going to achieve the ambition of reaching 80% of citizens by 2030. Bigger markets such as Germany and France are currently particularly difficult regions where the approach to driving adoption will have to be meticulously thought through and executed.

Three critical barriers were identified that are holding back the wallet's performance and adoption.

UX / UI

At a base level, citizens expect the EDIW to match up to alternatives such as Google and Apple. As one citizen stated *"It has to be simple and easy to use... Apple Wallet I double click on my phone... It can't be complex and hard to use."* However, given the greater stakes – all digital identity eggs in one basket – there is also a desire for the wallet to go further to demonstrate how it is protecting citizens through the UX and UI. This represents an opportunity to build on existing UX / UI expectations whilst also designing in EDIW-specific features. One citizen confirmed this saying that, *"If there are other alternatives, I will certainly assess those against the option/experience of using the EDIW. I think it will be all about the implementation and its user experience (both convenience and security/trust)."*

Security and Privacy

Citizens' views on the security of the wallet are mixed, with the current articulation of the wallet's security features not being understood by citizens. Amongst users of the wallet, there's a desire to see the security and privacy benefits more readily visible in the user experience. One citizen stated *"My data should be my data. As an individual, I would like to have full control of it and with whom I share it."* Together, this points to a need to recognise: 1 - the wallet's security is not currently seen by citizens as a USP 2 - further work is needed to understand how you can effectively engage citizens about security across their EDIW journey from awareness through to adoption.

Trust

Citizens are sceptical about the EU's intentions for the wallet, with judgements often clouded by wider insecurities about data, technology and the role of Big Tech. There's recognition that existing mechanics such as QR codes are becoming outdated but also acknowledgement that some form of certification or validation is necessary – *“without a trusted 'seal' on the wallet, it is not really feasible to completely trust the wallet.”* This represents an opportunity for the EU to build in this additional layer of trust into the wallet experience to provide value and differentiation versus other alternatives.

Identifying the Opportunities

Five opportunities stood out that will help overcome the barriers and drive adoption.

1. Verifying your identity – and those of other people and businesses

The digital wallet provides an additional layer of validation (counter-party verification), helping citizens to determine who to trust online and offering protection against scams, addressing a growing concern about fraud and improving overall digital safety. One citizen confirmed this saying *“It seems to me that abroad it will be more useful in terms of cross-checking/verifying the identity of different companies”*. There's significant untapped potential in highlighting this benefit. It will help differentiate the wallet versus incumbent wallets and draw the wallet's security features to the forefront of the user experience. Furthermore, it will open up enhanced business opportunities through the greater level of trust between citizens and businesses across the EU. In short, there is an opportunity for the EUDI wallet EUDI wallet to verify the genuine-ness of other people in addition to that of organisations (the latter of which should be provided by existing relying party registration). Therefore, the gap to fill is person to person verification.

2. Differentiating use cases

Citizens clearly recognise the value of seamless travel and easy access to healthcare records across borders - just as they would expect in their home country. As a result, use cases such as ePrescriptions and digital passports emerged as the most compelling. As one citizen stated *“If possible, lean into the healthcare-point since that is something that's always scared the bejeezus out of me, like what would happen if I need to go to the hospital abroad? It would be comforting to know that everything can be easily shared.”* These features address unmet needs that existing solutions like Apple and Google wallets do not currently fulfil within the EU. Their practical relevance and broader impact make them more likely to drive adoption.

3. Setting new UX/UI benchmarks

Citizens who tested the wallets consistently noted shortcomings in the UX and UI. To meet user expectations, the wallet must match the high standards set by existing providers such as Apple and Google, while also being accessible to those with lower levels of digital literacy. *“There is room for improvement in the user experience to make it smooth for those who are not as digitally savvy.”* Consistency in design across different providers is also essential to avoid confusion and ensure a seamless experience. By integrating visible features that reinforce security—such as data transparency, selective disclosure, and an EU-specific form

of identity validation—the design can actively build user trust and differentiate the experience versus incumbents. In this way, UX and UI are not just design considerations but foundational tools for establishing credibility.

4. Articulating security

A central challenge remains: effectively communicating the wallet's security and privacy advantages in a way that resonates with citizens. Unlike commercial alternatives such as Apple and Google, the EDIW is built on a foundation of privacy and public trust, but this distinction is not yet clearly understood. As one citizen said, *"I think it is important to really make the user feel like they are the one in control of their data."* Unlocking the ability to articulate these benefits convincingly is crucial to realising one of the core principles on which the wallet was conceived and the underlying technology was designed.

5. Tailoring the rollout

Rollout strategies must be adapted to individual country profiles taking into account varying levels of digital maturity, openness to technology, and attitudes toward the EU. For example, one citizen said, *"I'd rather not go digital, as I'm happy with the way things are now."* therefore, a one-size-fits-all approach will not succeed in such a complex and varied landscape.

In summary, there is clear enthusiasm for the EDIW and positive recognition amongst citizens of the EU's future-focused approach. By tackling the key barriers identified and capitalising on the opportunities, the EWC can accelerate progress toward the ambitious goal of 80% adoption by 2030.



D2.6 End user pilots & citizen survey results

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The research journey

The EU objectives for EDIW



- **Universal Access to Digital Identity:** By 2030, the EU aims to ensure that all citizens have access to a digital identity, aligning with the Digital Decade Policy Programme.
- **Cross-Border Interoperability:** The EDIW is designed to function seamlessly across all EU member states, allowing citizens to use their digital identity for various services, regardless of national boundaries.
- **Enhanced Security and Privacy:** The wallet emphasizes user control over personal data, ensuring that individuals can share only necessary information, thereby reducing the risk of profiling and unauthorized tracking.
- **Facilitation of Digital Services:** By providing a secure means of identification, the EDIW supports the uptake of digital public services and enables more efficient interactions between citizens, businesses, and public authorities.
- **Support for the Digital Single Market:** The initiative contributes to the broader goal of a cohesive Digital Single Market by standardizing digital identification methods, thus fostering economic growth and innovation.

Why represent the voice of the citizen?



1. EDIW needs a clear benefit for citizens, otherwise citizens may be slow to, or not adopt
2. Pre-empting and mitigating for concerns gives EDIW the best chance of success
3. Ensuring a large citizen install base for EDIW is important to encourage business participation
4. There's a need to shape the experience from the customer perspective to know what will drive adoption and usage

More than 11,000 EU citizens were engaged from across 18 different member states

Exploring the Concept

The initial goal was to explore citizen perceptions of the idea of an EDIW through qualitative and quantitative research. This evolved into a video survey to broaden reach and add depth and confidence to the early insights.

Qualitative interviews: In-depth conversations with 60 citizens about EDIW.

Quantitative survey: 2,030 citizens to support in validating the early learnings from the Qual (across 6 EU member states)

Video survey: 9,107 citizens watched a video representation of the EU digital wallet and were assessed through a survey on their perception of its value and utility (across 18 EU member states)

Representation from across: Germany, France, Italy, Spain, Poland, Romania, Netherlands, Belgium, Czechia, Greece, Sweden, Hungary, Austria, Denmark, Finland, Ireland, Slovenia and Estonia

Definition of sources.

P1 Quantitative Survey with 2,000 EU citizens

Video survey with 9,000 EU citizens

All quotes derived from exploring the concept qualitative and quantitative research *in this colour*

All quotes derived from the Testing the Functionality pilots *in this colour*

Testing the functionality

The 3 Pilots helped determine whether the EU digital wallet technology works as intended in a real-world environment. By testing use cases, we have been able to build a more holistic view of usability, usefulness and pain points.

Initial Microsite Pilot: Testing wallet functionality with 108 Consortium Members across 4 use cases (Airline check-in, Buda Castle tickets, ferry tickets, payments video)

Evolved Microsite Pilot: More advanced wallet functionality testing with 310 participants, 96 general public respondents primarily focused on Benidorm hotel check-in use case (3 optional further use cases)

Transaction Pilot: Completing live transactions using the digital wallet with 25 Romanian citizens for a charity donation

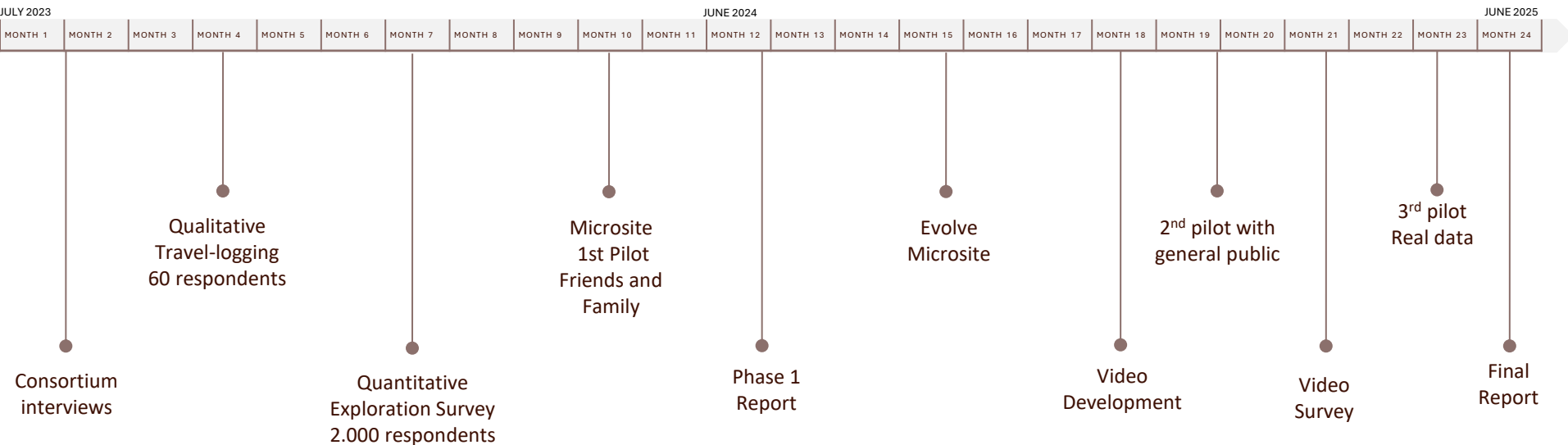
Representation from across: Netherlands, Spain, Sweden, Germany, Finland, Belgium, Italy, France, Czechia, Greece, Estonia, Latvia, Cyprus, Portugal, Lithuania, Ireland, Slovakia, Austria, Romania, Poland, Denmark, Luxembourg (Switzerland, UK, Norway, Albania, Montenegro, North Macedonia)

Definition of terminology.

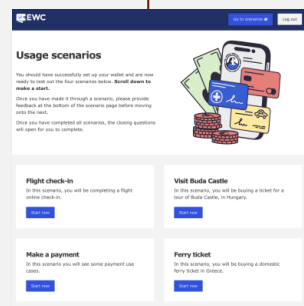
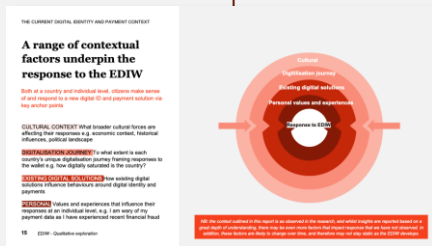
Open citizens – likely to adopt

Closed citizens – unlikely to adopt

The 2 Year Programme: in full



The 2 Year Programme: a snapshot



Life-logging

The first research phase was the travel-logging qualitative interviews. This method provided rich, contextual data on travel behaviours, across European citizens. It also enabled us to establish our base understanding of citizens' beliefs about EDIW informing the ongoing research programme.

Microsite Pilot

Participants were onboarded to the initial Pilot via a custom-built microsite, designed to guide them through the experience and collect feedback seamlessly. The site was user-friendly, aligned with EWC branding, and helped ensure a consistent, engaging journey.

The microsite proved highly effective and was enhanced for use in subsequent Pilots during Phase 2. We've also extended access to consortium partners, enabling its reuse and adaptation for future pilots.

General Assembly Presentation

The culmination of the first phase saw Yonder present the findings from the P1 report at the General Assembly in Amsterdam. This was the first citizen testing conducted and shared across the consortium and was a strong endorsement of the work being conducted by the WP2.

Video Development

Phases 2 and 3 of testing had to be adapted due to delays in the development of wallet technology. We pivoted to creating a compelling, high-quality video flythrough that showcased the wallet's features and benefits. This enabled us to engage over 9,000 citizens, effectively gauging public sentiment despite the technical setbacks. We were able to shape the approach to ensure we were building on the learnings from Phase 1.

Microsite in detail

Purpose

The Microsite served as the central platform for Pilot participation, providing end-to-end guidance across all stages of the experience.

Application

Participants were supported through wallet and credential setup, completion of use case scenarios, and submission of survey feedback.

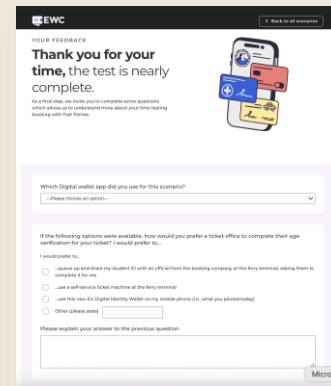
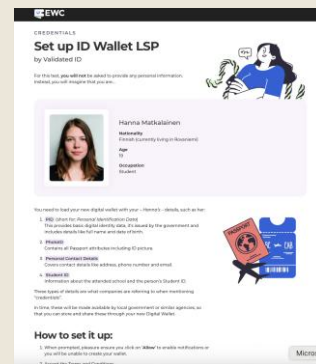
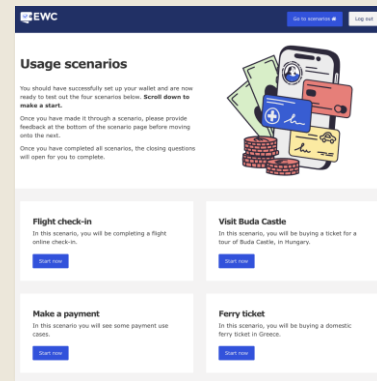
Use case and results

In **Pilot 1**, access was limited to consortium members as wallets were still in Beta phase, which limited overall reach. However, we were still able to test the wallet experience with 108 participants from within the consortium.

For **Pilot 2**, the option to participate was open to the public. Interested users could access via LinkedIn. Of the 310 participants, 96 were members of the general public.

The Microsite proved highly effective for onboarding and hand-holding participants through a complex setup process, and is now continuing to be used by other consortium members for further piloting.

However, it's also important to note that this specific support structure will not exist when the wallets are publicly launched. As such, onboarding is likely to become a significant user experience challenge and should be a key area of focus moving forward.



Video in detail

Purpose

A short, easy-to-understand 2-minute video was created by Yonder and Gen to help survey participants grasp how the new European Digital Identity Wallet (EUDI Wallet) will work. The video shows the journey to arriving at digital identity today, and highlights the benefits and use cases of the EU digital wallet. The video was designed to be distinctive and appealing for citizens, with the style specifically chosen to not appear overly corporate.

The video was a comprehensive edit encompassing all stage of the production process - from concept development and scriptwriting to storyboarding, filming, editing, and subtitling - tailored for 18 different EU markets.

Use

The final video was embedded in a survey distributed across these 18 countries to assess public sentiment towards the EUDI Wallet. The results serve as a key input into this report.

As with the Microsite, it's important to note that the video provided a guided and simplified view of the user experience. In reality, onboarding is likely to pose a significant usability challenge, and this may mean that survey-based adoption interest is somewhat overstated.

The video has subsequently been used as an asset used to showcase the value of the wallet across the consortium.



Market Dynamics

Market Dynamics, in summary

Digital and eID readiness

There are member states with advanced digital infrastructure, and citizen participation. E.g., 99% and 86% of Swedish and Dutch citizens use BankID and DigiD respectively*, or in Finland – home to Nokia – there too is high digital participation. However, this is not universal with other member states at varying levels of digital maturity. Whilst some countries are progressing well, others still face challenges in delivering widespread digital infrastructure.

EU “political unity”

The enthusiasm for EU-backed initiatives amongst citizens varies, with concern focused on three areas:

- A general scepticism of the EU’s ability to successfully deliver such a widespread programme
- A belief that the EU should not be getting involved and that digital ID is the responsibility of individual countries
- A view that certain countries are disproportionately funding the development of others

Demographic and attitudinal divides

There are demographic factors – primarily age – as well as attitudinal factors around citizens’ trust in technology that will influence adoption of the digital wallet. Without resolution, these factors will inevitably slow adoption or cause it to be uneven.

*<https://www.bankid.com/en/om-oss/statistic>

*<https://www.nldigitalgovernment.nl/wp-content/uploads/sites/11/2021/02/Accessible-understandable-and-intended-for-everyone.pdf>

EU Markets vary in both digital and digital wallet maturity. This will impact their likelihood to adopt new EU-driven solutions

Digital and eID Readiness



Sweden

"I expect that there will be an expansion of what already exists in Sweden so I don't have any big expectations for that."



Netherlands

"In reality, there will still be a lot of work to be done... not everyone is equally digital".



Greece

"This makes me a modern EU citizen."



Finland

“How is this more convenient than suomi.fi?”



Ireland

"I'm a bit sceptical of the need for it as my digital wallets already do the job"



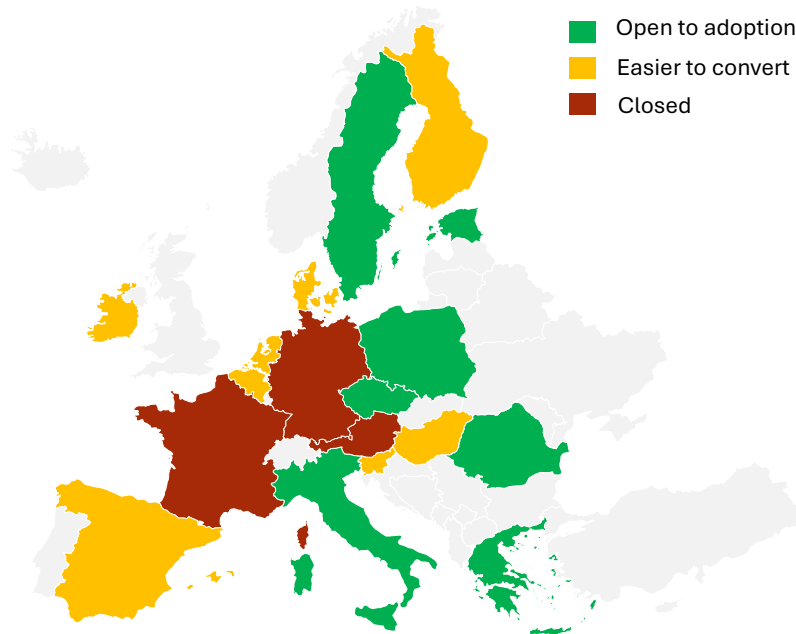
Denmark

"This will make the digital journey more equal between EU countries"



Romania

"It should be implemented as soon as possible in my country, it is much more efficient, it saves you a lot of worries."



60% and above likely adoption = green
Less than 60% adopt but more than 75% adopt or undecided = yellow
Less than 50% adopt and more than 15% highly unlikely = red

Gen .YONDER

Public enthusiasm for government and EU-backed initiatives varies across member states

EU “political unity”

There is concern about the EU’s ability to implement the digital wallets

“The idea is certainly good, but the implementation will probably be completely tragic, as is the custom with most EU IT initiatives... So I don't expect anything functional, it's a waste of money and it will be cancelled again in a few years.”

Some feel the EU should not get involved and that it is the responsibility of individual EU states

“This it is not something that the EU should get involved in. It is only a national matter within the individual EU member states”

51%

Over half **do not agree** that...

‘This will bring EU member states closer together, which is a good thing’¹

Some citizens feel their countries are disproportionately funding the development of others

37%

believe that...

‘This feels like a waste of public money, or that could be better spent elsewhere’¹

“another EU invention that will absorb more resources than it is worth and replace good national solutions without compensation for the time spent”

More generally, citizens demonstrate views that indicate adoption is likely to be uneven

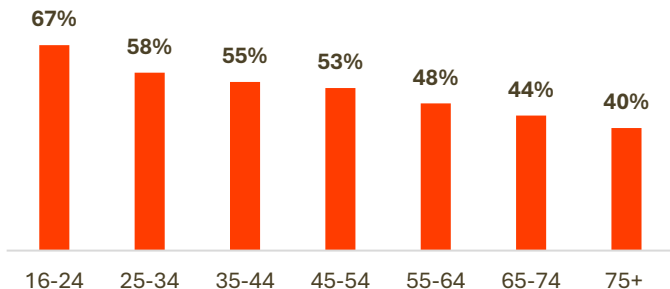
Demographic and attitudinal divides

Expected adoption follows a clear slope with older citizens less inclined to adopt

“I’m 67 years old and I’m not entirely sure about all of this, and it’s too difficult at my age to deal with all the changes.”

“At this stage in my life, I would have not interest in this type of thing and am quite happy to use cash and sometimes a debit card.”

AGE | LIKELY TO ADOPT (%)¹



While some citizens are just wary of technology, irrespective of age

“I’m still wary of digital technology and I’m not yet ready to rely on it completely for all my needs”

“I’d rather not go digital, as I’m happy with the way things are now.”

64%

of **closed** citizens agree with the statement that...

‘there’s already enough tech in the world without this being introduced’²

15 1. Video survey with 9,000 EU citizens

2. P1 Quantitative Survey with 2,000 EU citizens (closed 822)

INSIGHT:

The EU thinks big picture -
citizens think ‘what’s in it for
me?’



RECOMMENDATION:

The EDIW is entering a multifaceted environment shaped by the complexity of citizen attitudes. While the EU aims to establish a unified digital standard, enhance security, and foster cross-border integration, these ambitions can clash with public sentiment. The EU’s ambitions – to bring the EU up to a common digital standard, to improve digital security and increase cross-border integration – are at odds with citizen attitudes. Many citizens resist EU-driven initiatives, are hesitant to support broader societal ambitions, and will be led by what is easiest for them, not society writ large. EDIW must ‘think global, act local’ to navigate Europe’s diverse digital landscapes, tech readiness, and general trust in the EU.

- Tailor comms and rollout strategies by country profile – one-size-fits-all won’t work
- Focus messaging on local control, benefit and safety

Citizen enthusiasm

Citizen enthusiasm, in summary

Civic advantages

EU countries are at different levels of digital maturity and have different systems currently in place. Citizens acknowledge the wider system benefits of having a uniform approach to ID though often this is expressed through the citizen benefit such as seamless travel experiences. However, within this there are anticipated business benefits too – a shared digital framework will build trust across countries and enable better integration of business services across borders.

Utility focused adoption

The current wallet experiences tested as part of the Pilots offers limited value across existing use cases, providing modest benefits in terms of speed, accuracy, and efficiency. While these advantages are not insignificant, they fall short of delivering compelling utility for widespread adoption. Insights from video survey testing indicate that use cases such as ePrescriptions and eSignatures hold greater appeal for citizens and may serve as key drivers of broader adoption and engagement.

Security empowerment

Security empowerment is a key, yet currently underemphasized, benefit of the digital wallet. It enables citizens to better understand whom to trust and when, by providing an additional layer of verification for websites they visit or transact with online. While much of the focus has been on use cases where citizens are actively using the digital wallet, this comparatively passive functionality still has a compelling role to play for citizens.

At a conceptual level, citizens see universal acceptance and cross-border harmony as the critical benefits

Civic advantages

EDIW solves for an “unevenness” in digital infrastructure throughout the EU...

“... if every where would accept this in Europe it would make things like night outs, going to the bank and border checkpoints easier.”

“I am interested, because it can be useful outside of Hungary.”

“It will make travelling through the EU much easier.”

84%

of open citizens agree that they would be more confident that they were ‘Fit for travel’ with the EDIW¹

... and similarly, EDIW solves for when some forms of identity are accepted domestically, but not across the EU.

“A German official wanted to create problems because I was travelling with my [Greek] identity card, which didn’t have Latin letters. He told me that my identity was not valid. A sweat broke out, I froze. I told him that I had travelled with this identity card. I was trembling.”

Through creating a common digital framework, the associated security and efficiency benefits will unlock business growth too:

“It’s making it easier and more secure to do business in the EU”

“It makes it easier for EU citizens to do business in the EU region, when everything they need is under one application”

“It will be easy to handle administrative procedures and official business, as well as having various payment options and registering somewhere quickly and securely.”

Currently tested use cases deliver on accuracy and efficiency, but to drive widespread adoption will require greater utility

The tested use cases do not clearly showcase the identified benefits – cross-border harmony and universal acceptance – thereby limiting their overall utility

Utility focused adoption



Having tested the EU digital wallets on use cases that span ticket purchases and check in experiences, current user feedback indicates there are clear accuracy and efficiency benefits to be had:

“It is not only easier and quicker but ruling out any typo issues that can result from manual entry, and that can lead to pesky delays.”

“The payment feels secure and the whole idea of having my ID and my card saved in a digital wallet is very convenient.”

“I would no longer have to remember static passwords for approving online payments.”

“I’m sure that I paid the correct price for my profile”



However, these benefits won’t necessarily drive widespread adoption on their own, with Pilot respondents recognising that the existing approach is often easier so the introduction of the wallet is unlikely to shift initial adoption inertia:

“Autofill in browser is faster and more convenient.”

“The wallet is not faster, I have to select what data to share. Most of travel companies and hotels have a loyalty app with all my data. The use of a wallet does not bring much value.”

“I’m using BTPay for all my banking needs, so it would be difficult to switch to another app just for the online payments authorization.”

7 in 10 users said that the wallet was “significantly better” in comparison to the incumbent experience for the Benidorm use case. But that implies 30% still need some degree of convincing. Additionally, this is amongst the receptive Pilot audience – over two thirds of this group have direct links to the consortium – so are likely to overstate the benefits.

There is a more significant value gap between the current experience and the transformative potential offered by EDIW in other use cases

Utility focused adoption

Through further research, when exploring the concept of the wallet's usage, there is potentially more utility in other use cases where there is a greater value gap between the existing approach and the value that will be provided through the European digital wallet.

- Though a less frequent experience, a highly painful if encountered one is trying to access, link to, or prove your medical history, insurance or prescription abroad. **EU citizens see great value in being able to access their healthcare records abroad**, as they would do in their home country.
- E-signatures unlock clear business value through fast, secure cross-border authentication. They simplify contracts, streamline public services, and stand out as **one of the most tangible ways citizens and businesses can experience the benefits** of a unified digital identity framework.
- The use case for digital passports is broader as it covers travel and identity. However, the value of this use case points to a desire at a fundamental level to be able to **prove your identity digitally- an area that is not optimised for today**.

TOP 3 USE CASES (OUT OF 20) – CITIZENS OPEN TO ADOPTION¹



“If possible, lean into the healthcare-point since that is something that's always scared the bejeezus out of me, like what would happen if I need to go to the hospital abroad? It would be comforting to know that everything can be easily shared.”

In identity, there is a greater unmet need versus existing providers of digital wallets

Utility focused adoption

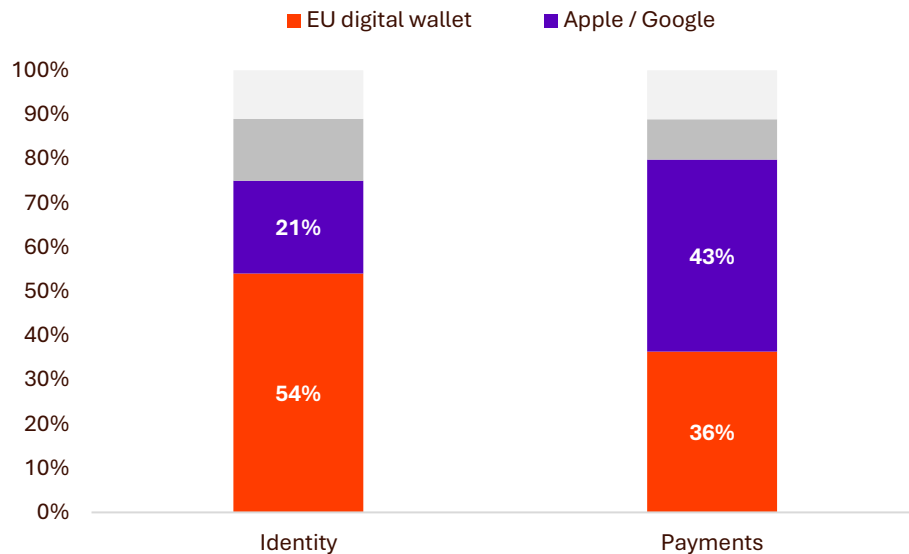
It's also valuable to consider the role of incumbent players here. For instance, Apple and Google already occupy the payments space having built up the ecosystem. It will be consequently difficult to disrupt the hold they have. By contrast, in Europe, identity is not a 'solved for' element within Apple and Google wallets.*

Consequently, use cases associated with identity are more likely to deliver the additional utility that will drive adoption because it fulfils a need unserved by these existing providers.

“Nobody wants to install a new app for a functionality that already exists”

**Whilst there are, in more digitally mature countries, existing digital ID infrastructures in place this access is not universal. By contrast, the EU digital wallet should open up access to all and be a valid digital wallet alternative to Google and Apple.*

I WOULD STORE MY IDENTITY DOCUMENTATION IN / MAKE PAYMENTS WITH...
(% AGREE - FILTERED TO APPLE/GOOGLE WALLET USERS ONLY) ¹



The ability to verify the legitimacy of any business, organisation or person, is an additional clearly unmet need that is a unique selling point for the wallet and should be emphasised

Security Empowerment

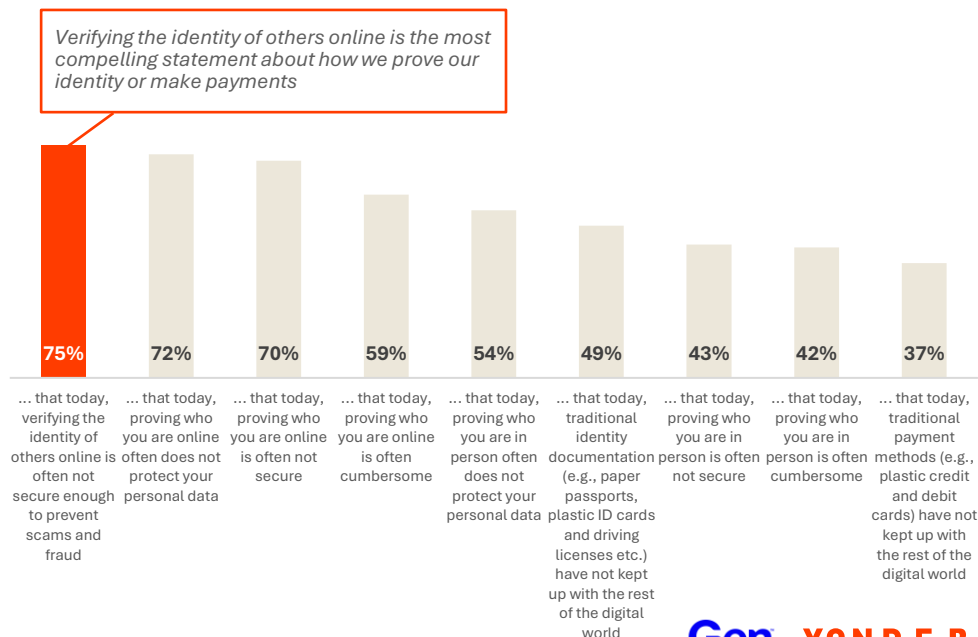
Knowing whether a business can be trusted is a clear pain point with growing concerns about scams and fraud. The EDIW can offer citizens:

- **Reassurance** that who they are booking with and paying is **trusted**
- **Confidence** that the organisation or person that you are interacting with is who they say they are and will provide the relevant service e.g., travel bookings
- **Protection** from scams, especially for more vulnerable people

"It seems to me that abroad it will be more useful in terms of cross-checking/verifying the identity of different companies."

"I think that the EDIW would have the highest levels of online security, and would effectively guarantee user's online safety."

HERE ARE SOME STATEMENTS THAT OTHERS HAVE MADE ABOUT HOW WE PROVE OUR IDENTITY OR MAKE PAYMENTS. TO WHAT EXTENT DO YOU AGREE OR DISAGREE...? (%)¹



INSIGHT:

The most effective path to adoption is by focussing on where existing solutions fall short.



RECOMMENDATION:

The opportunity to drive adoption most effectively is in meeting pain points where existing options (paper ID / digital wallets) don't wholly solve for. EDIW should focus on:

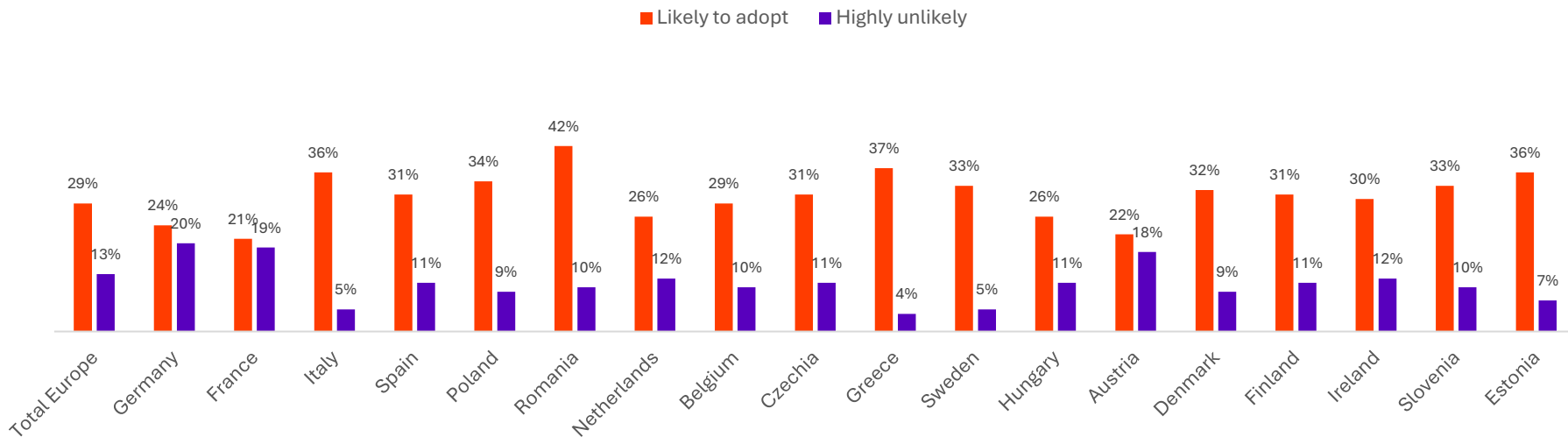
- Standout use cases e.g. cross-border **e-prescriptions**, **e-signatures** for legal documents or contracts and **counter-party verification** for transactions
- Anchor messaging and adoption strategy in these **breakthrough use cases**, not just convenience

Expected adoption

80% adoption is the target for EDIW by 2030

However, only 29% across the EU are likely to adopt

HOW LIKELY WOULD YOU BE TO USE THE DIGITAL WALLET? (%)¹





What are the barriers to adoption that, if overcome,
will help to unlock the next 50%?

Gen .YONDER

Barriers to Adoption

01 **UX/UI**

02 Security and Privacy

03 Trust

UX/UI barriers, in summary

Digital exclusion

Some citizens, especially older individuals or those less confident with technology, may struggle to engage with a digital wallet. Gaps in digital literacy, like unfamiliarity with QR codes, suggest the design must be simple, inclusive, and supported by clear guidance.

Real-world reliability concerns

Users are unsure how the digital wallet would function in high-stakes or emergency scenarios, e.g. if your phone runs out of battery at border control or is stolen while travelling. Building trust will require robust fail-safes and clear guidance.

Rivalling existing solutions

To succeed, the wallet must deliver a seamless and valuable user experience that meets or exceeds the standard set by existing alternatives like Apple and Google Wallet. However, parity on UX/UI is table stakes and unlikely to drive adoption. But focusing on specific use cases such as higher stakes scenarios could open up an opportunity for meaningful UX/UI differentiation.

The UX and UI must not hinder adoption amongst less digitally savvy users

Digital exclusion

A lack of familiarity with basic digital tools highlights the need for more intuitive, accessible design to overcome the inertia. The below quotes reflect what users expected from the wallet experience:

“... a good idea, but extensive for many elderly and IT weak, but that is the future.”

“It sounds interesting and useful, but it is possible that people who are less savvy with smart devices may cause problems or others may exploit the system against them.”

“I am 83 years of age and I find all this new technology confusing.”

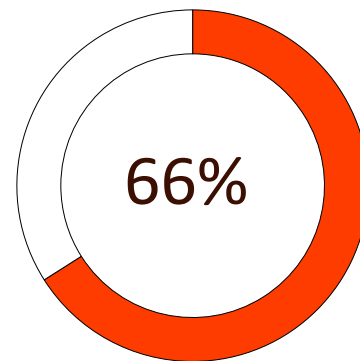
“Many older people do not have computers or smartphones.”

There’s a real concern that non-digital natives, particularly older citizens, could be left behind. In the pilot, the experience aligned with expectations, as users voiced the same concerns:

“Also, for some people using QR codes and OTPs might not be very straightforward.”

“There is room for improvement in the user experience to make it smooth for those who are not as digitally savvy.”

“I WORRY ABOUT THE ACCESSIBILITY ISSUES FOR THOSE WHO MAY NOT HAVE SMARTPHONES OR EXCLUDES CERTAIN DEMOGRAPHICS (E.G., THE ELDERLY)” (% AGREE) ¹



■ Agree

Digital wallets are seen as riskier than paper alternatives, with concerns around phone loss, battery failure, or lack of signal.

Real-world reliability concerns

The most prevalent anxiety in testing was around disconnection, i.e., “what if I run out of battery?” and “will EDIW be made available offline?” ...

“What if I lose my phone, how do I access my data again or would I need my paper proof?”

“There should also be a backup digital, paper or plastic ‘trail’.”

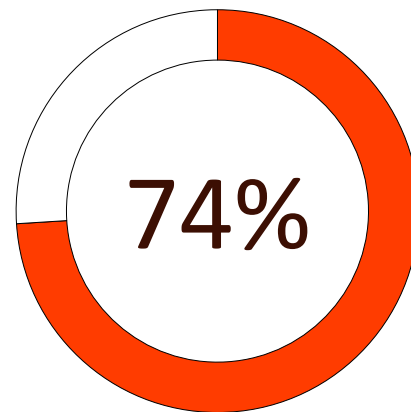
“Nothing is as secure as having your passport physically stowed away in a safe location.”

... and by extension, questions around “what happens when you lose, change device, or worst – your device is stolen?” Users assumed that their credentials would be retrievable from “the Cloud” in any retrieval flow.

“I would want to know if I can retrieve my information through a cloud like if I lose my phone, but all my apps and photos are on iCloud”

“A fragile device, sometimes lost, stolen, dropped in water.”

“I WOULD BE ANXIOUS IF MY PHONE RUNS OUT OF BATTERY AND/OR I COULD NOT CONNECT TO THE INTERNET IN SITUATIONS WHEN I NEEDED TO USE THE EDIW” (% AGREE) ¹



■ Agree

At a minimum, the wallet must offer a user experience and user interface that matches or exceeds alternatives

Rivalling existing solutions

Users expect the wallet to meet current UX/UI standards and align with established phone interactions like quick access, biometric authentication, and double click to pay.

“It has to be simple and easy to use... Apple Wallet I double click on my phone... It can't be complex and hard to use.”

62%

Agree that...I would expect the app, and the user experience to be **as-good-as, if not better than those from Apple and Google.**¹

However, competing for adoption on existing use cases such as payments will be hard - you have to be as good as and/or better than incumbents such as Apple and Google or bank providers, but citizens suggest it will still be hard to encourage usage here:

“I pay through Apple pay and I find it efficient and convenient”

“I'm using BTPay for all my banking needs, so it would be difficult to switch to another app just for the online payments authorization”

“It sounds fine, but can it beat private companies is a good question.”

However, there is a potential opportunity to differentiate the UX / UI experience when considering less established use cases

Rivalling existing solutions

Citizens recognise that it will be hard to displace existing alternatives when considering the occasions where digital wallets are used today.

“I'm not sure how I'd use it for the first time, there are so many alternatives which are doing the same thing”

“If there are other alternatives, I will certainly assess those against the option/experience of using the EDIW. I think it will be all about the implementation and its user experience (both convenience and security/trust).”

More complex use cases may offer opportunities for UX/UI differentiation. In scenarios such as ePrescriptions and eSignatures, trust and security must be clearly conveyed and consistently reinforced. Friction here can actually be perceived as a benefit if it supports security and transparency - speed isn't always the priority.

“Once you use it and gain experience and your experience is good, the trust...will increase, and if the experience is bad - game over.”

“It should still be with some type of confirmation tool, so everything goes fast but not too fast.”

INSIGHT:

It's not enough for the wallet to simply meet incumbent benchmarks, it needs to redefine what a digital wallet experience is



RECOMMENDATION:

If people are expected to use local EUDI wallet providers, their apps must meet consistently high standards. Two critical factors will help ensure UX/UI does not remain a barrier:

1. **Meeting current expectations** - Putting strong UX/UI guidance and governance in place, setting clear design principles, enforcing them across providers, and benchmarking the experience against industry leaders like Apple Wallet.
2. **Redefining what a digital wallet can achieve** - Through new use cases (ePrescriptions and eSignatures) and through solving common retrieval issues, such as losing a phone, theft, or dead batteries. Some of this technology already exists (near field communications - NFCs) but without widespread marketing to inform citizens, they will remain misinformed and the opportunity to unlock new wallet utility/value will be lost.

Barriers to Adoption

01 UX/UI

02 Security and Privacy

03 Trust

Security and privacy barriers, in summary

All eggs in one basket concern

Users are wary of storing everything in a single wallet, fearing misuse, loss, or lack of control. This includes concerns that third parties might gain access to personal data and use it against them. As a result, many will diversify their digital identity across multiple wallets to reduce perceived risk. This behaviour fragments the value proposition and may prevent people from fully experiencing the convenience and utility of an integrated wallet.

Misunderstanding of tech capability

There is a lack of public understanding around the underlying technology, such as decentralised data and selective attribution which creates mistrust and hesitation. Bridging this knowledge gap is critical for driving adoption and building user confidence in the system.

Security in action

Security and data ownership remain key concerns. Users want greater transparency about how their data moves through the system, who has access, and what safeguards are in place. While EDIW has the potential to enhance privacy, clearer communication and user empowerment are needed to overcome scepticism.

Some citizens see EDIW as a security risk: it's "All Eggs in One Basket"

When citizens spoke about expectations of the wallet, this was expressed as i. an "all eggs in one basket risk", ii. open to misuse

"... security is claimed, but hackers, i.e., cybercriminals, can get in everywhere, and it is not smart to have everything in one place."

"Everything is in one place, but this is where the catch begins. What if someone steals my mobile phone?"

"I'm a little concerned about having all your eggs in the one basket, if you lose your wallet you've lost everything?"

Similarly, this aligned with how people felt in their experience when using the wallet:

"Access to id and payment in one app could be a target for fraud/scammers/ theft"

"This feels like everything a scammer would want in one place."

Ultimately, some citizens already choose to have multiple wallets to de-risk having everything in one place (i.e., avoid all eggs in one basket).

"I use more than one digital wallet as I think it is more secure."

"I don't use them actively, I just downloaded them to my phone. I might use them later. It is worth doing more if there is something wrong with one of them."

71%

Agree that... having my identity and payment cards in one place **makes them much more of a target for hackers.**"¹

All eggs in one basket concern

Most citizens do not understand decentralised data, and the selective disclosure of attributes

Misunderstanding of tech capability

The EU positions the wallet as a privacy-first solution but this doesn't resonate with citizens because they don't understand this as a benefit. The wallet is designed around decentralised data and selective disclosure, with the intention of offering users more control and privacy. However, for most citizens, these concepts are abstract and unfamiliar. Without a clear mental model, people fall back on what they already know, assuming their data is stored centrally and vulnerable to misuse or breaches.

"... my initial reaction is complete horror. I would not be comfortable with this. I have no faith whatsoever in having either any privacy or control of my data."

Even with deeper explanation, concerns remained. In follow-up experiences where we explored decentralised data and selective disclosure in more detail, many participants still struggled to grasp the concepts, and concerns about data security persisted.

"I still feel that I do not own my data (even though this is the goal)"

"I think it is important to really make the user feel like they are the one in control of their data."

Despite varied approaches, no messaging has yet clearly demonstrated the security and privacy benefits to citizens

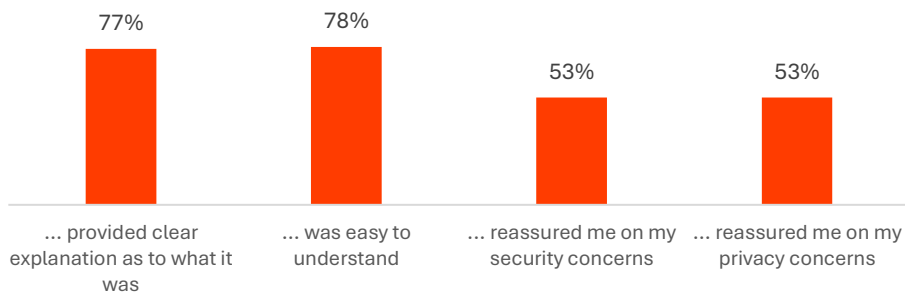
We tested different ways of communicating the wallet's security benefits in the video. While the messaging emphasised protection under EU regulation and restrictions on profiling, it didn't lead to greater understanding amongst citizens.

As shown on the right-hand side chart, citizens clearly felt they understood the video and it was easy to understand but they did not feel reassured around their security and privacy concerns.

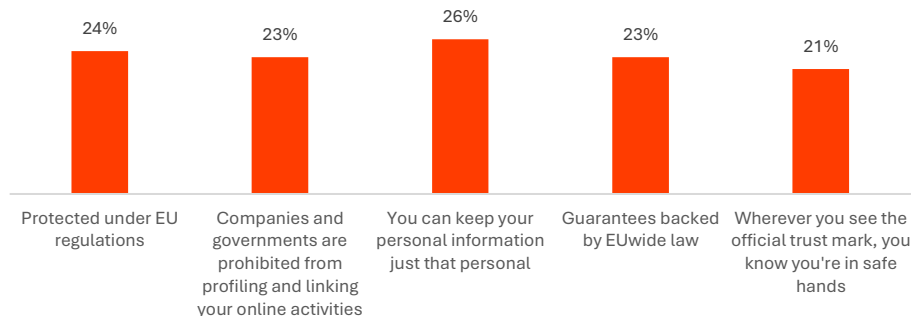
The second chart shows that none of the security and privacy messaging statements tested resonated particularly highly or resonated any more than another.

Misunderstanding of tech capability

THE VIDEO... | % AGREE¹



SECURITY STATEMENTS | % COMPLETELY REASSURING¹



Users want to see security in action by seeing the security benefits demonstrated in the wallet experience

Security in action

It's important to build security into the live 'UX' so that it re-enforces the security benefits while you are using the wallet. Users of the wallet identified two areas in particular where they would like the user experience to demonstrate security in action:

Users want transparency in data management

"Lack of clarity over how data was being procured/transferred"

"The question of trust is who is managing this wallet for me, how will I trust it only picks the data it has and that I want to share this time with this 3rd party? I can think only of a government application or my bank to deserve that trust."

"Considering that the app stores very sensitive personal data, I would like to know how its storage is handled and by which organisation specifically before I trust the wallet."

Users want control over the data they share, and desire for data minimisation

"Because I don't see the option to limit the data I'm sharing, why does a hotel need to know my gender?"

"I would like to be able to not send part of the data, meaning be able to deselect data I don't want to share."

"My data should be my data. As an individual, I would like to have full control of it and with whom I share it."

INSIGHT:

Security is at the heart of the wallet's technology, but **insecurity** is at the heart of citizens' concerns.



RECOMMENDATION:

Citizens will only adopt the wallet if they trust it, however they are innately distrusting towards data and technology. Clear, demonstrable security builds user confidence. It is therefore key to build a wallet that reassures at every step of the user journey.

- Position the wallet as secure and privacy-first from the start with clear communication and visible security features.
- Educate users on data protection and sharing, while highlighting the benefits of consolidating everything in one place.
- Design for flexibility to support gradual onboarding and users who prefer multiple wallets initially.
- For businesses, emphasise improved customer trust and reduced risk.

Barriers to Adoption

01 UX/UI

02 Security and Privacy

03 Trust

Trust barriers, in summary

Surveillance and government overreach

Many users fear that an EU-issued digital wallet could enable increased surveillance and loss of personal freedoms. Concerns around how data might be used, or misused, by government bodies are a serious barrier to adoption. Even with privacy protections in place, users need clear, proactive reassurance that the wallet is not a tool for monitoring, but one built on autonomy, control, and strict data minimisation.

Big tech and data distrust

There is increasing public awareness about how Big Tech handles personal data, with some concerned about their data being harvested, sold, or used to manipulate behaviour. This presents an opportunity for the EU to position the wallet as a radically different model, one that is privacy-by-design, never monetised, and independent from corporate interests.

Trust gap in digital tools

Previously trusted digital tools, like QR codes, have become associated with scams and fraud, creating friction in wallet adoption. For a system built on trust, visual and interactive safeguards are essential, e.g. verified trustmarks and two-way authentication. There's also an opportunity to lead the way with new, innovative security measures. By setting a higher standard, the wallet can become a benchmark for trust in digital identity.

Among some citizens, there is a belief that EU-issued tech could lead to surveillance and overreach

Surveillance and government overreach

Some people raised concerns about control and surveillance. They felt uneasy about the idea of a centrally managed digital wallet. For them, it raised worries about government overreach, loss of privacy, and too much EU involvement in their daily lives.

36%

Agree that...

“This is **“Big Brother” – EU overreach.**”¹

It is worth considering that 36% agreement is significantly lower versus other statements, highlighting that whilst it is a view held by some, it is not one that is universally endorsed. But it still speaks to the challenge that needs to be overcome.

“... a disgusting idea. The EU should not be given any more power, my country has suffered a lot from the EU and it's only getting worse. Here, [the EU] clearly want control, so that a certain person can be silenced if necessary.”

“... sounds like another bureaucratic intervention from Brussels, aimed at greater control of the individual citizen. It's Big Brother knocking once again; the totalitarian society is just around the corner.”

“I’m actually a bit frightened that all of EU would have access at their fingertips about me regardless how much info I want to give or not. It is not necessary to have them know by purchases and movements constantly.”

“... another part of European surveillance and the taking away of civil liberties.”

Big Tech is distrusted as a possible EU digital wallet provider; familiar institutions like banks hold more public trust.

Big tech and data distrust

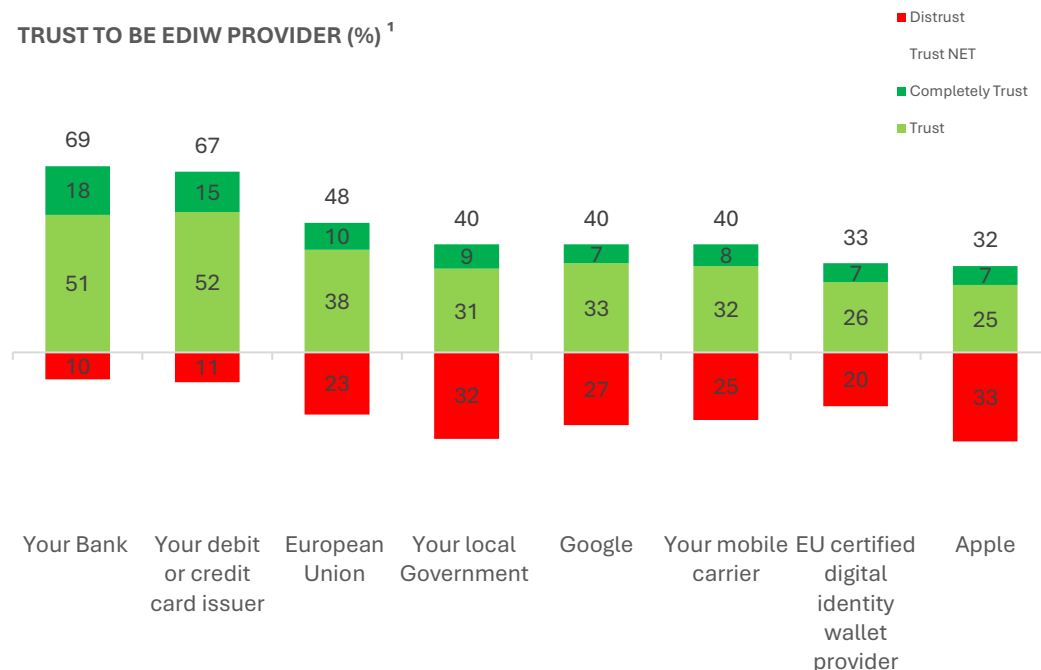
The EU has an opportunity to go further — setting new standards for digital trust. Citizens currently see banks as the most trusted institutions - because they already oversee payments and are strictly regulated. The EU is second most trusted but citizens currently question the legitimacy and safety of the current, lesser-known providers of the EU digital wallets.

"I don't trust Apple as a brand with my data"

"I like the idea of EU mandated services used to take control away from monopolistic businesses, and the advantage it gives to privacy."

"Lissi Wallet" does not seem as trustworthy as a name connected to a specific official entity."

TRUST TO BE EDIW PROVIDER (%) ¹



Data monetisation is the default expectation, the EU must prove it won't follow Big Tech's lead

There is an expectation for private companies to consult on and support the development of the wallet; appreciating that industry specialists will be required to provide their expertise in certain use cases and scenarios. There is still concern – by half of citizens - that private businesses will sell their data or use it for targeting advertisements. Overcoming this widely held expectation will help with demonstrating the genuine value of the wallet versus existing solutions.

50%

Agree that...

“I still expect my data to be sold, and me advertised to, whatever they promise about EDIW.”¹

Scepticism of Big Tech opens the door for trusted alternatives:

“I don't want Google and Apple to have even more data from me because it's being sold and abused. I hardly benefit from it because even tailored ads are usually not what I'm looking for and I don't want my personal data to fund a big corporation.”

However, currently it is a strongly held view that with the EU will also be looking to monetise the situation:

“Overall, I would be sceptical if there were companies in this whole procedure besides the EU and public organisations, some organisations whose goal would be profits and behind which there would exist hidden business interests.”

“The government could track my mayonnaise buying habits and my health insurance premiums could increase as a result”

Declining trust in current mechanisms, such as QR codes, highlights the need for a unique EU validation approach

Trust gap in digital tools

Mechanisms such as QR codes have become associated with fraud and ambiguity, eroding public confidence.

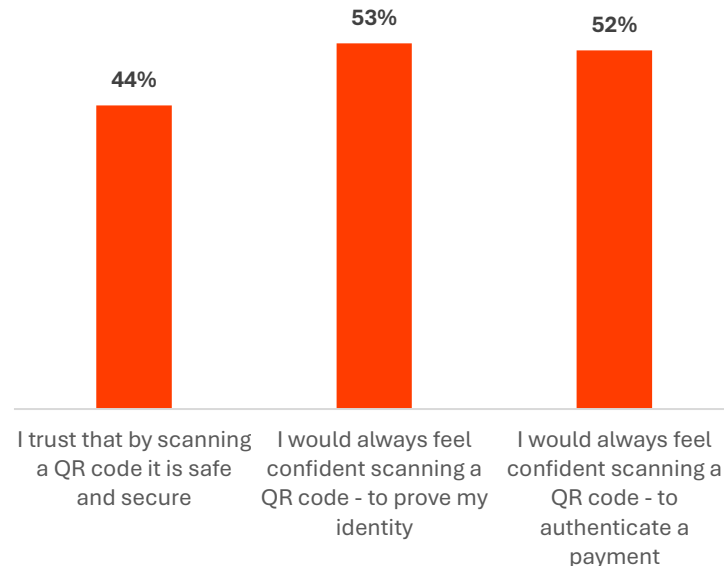
More than half of EU citizens would not be confident scanning a QR code to prove their identity.

This is reflected in citizens' expectations of the wallet and through the Pilot experience:

“There are already scammers using fake QR codes. Smartphones are prone to failure. Hackers and blackouts – what then?”

*“Given the known abuse of QR code-based flows, it was also *within the wallet* somewhat unclear who the data was being shared with”*

QR CODES | DO NOT AGREE %¹



Existing mechanisms, such as trustmarks, do provide reassurance but there's also an opportunity for the EU to take this further

Trust gap in digital tools

To instill trust, EDIW should build on familiar indicators like two-factor verification and security trustmarks, already valued in banking and payments.

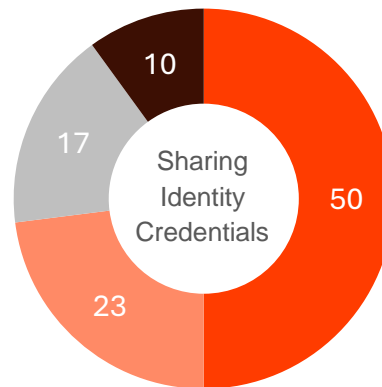
However, there is potentially a greater opportunity in establishing a unique EU digital validation that represents a higher standard of security and legitimacy and embedding this validation visibly and intuitively within the UX to reassure users throughout their journey.

"It must have two factor authentication"

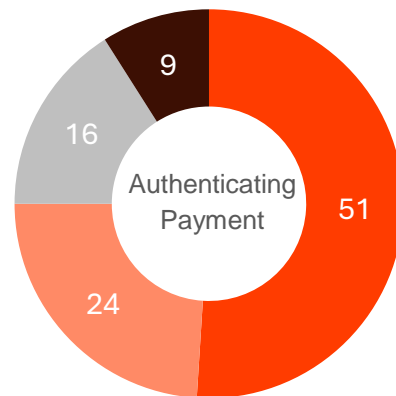
"A Trustmark is definitely necessary to know you aren't going to get scammed by a random shop"

"Without a trusted 'seal' on the wallet, it is not really feasible to completely trust the wallet."

IMPORTANCE OF TRUST MARKS (EURO AVERAGE, %) ¹



Very Important
Somewhat Important
Undecided
Somewhat/Not Important



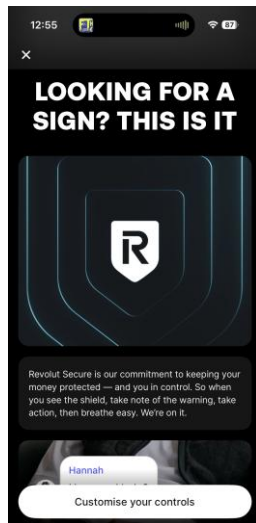
Case Study: Revolut

Building security directly into the user experience

Revolut recognized they had a security reputation challenge to overcome with customers after it was revealed last year that they are named in more fraud reports than any other UK bank.

Consequently, they have enhanced the user experience in the app to signal to customers the security features that are now in place as well as helping to educate users on how to avoid fraud.

This is an example of the type of digital wallet ecosystem that can be utilised to overcome the challenge of demonstrating complex technology security measures in ways that translate through to the customer.

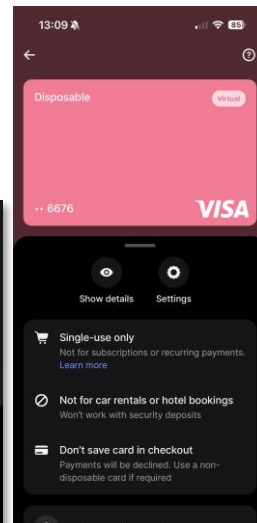
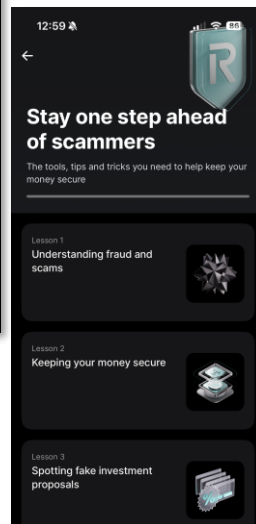


Eg 1: Security symbol

Revolut have implemented the Revolut shield as a symbol to instill trust in online transactions

Eg 2: Education

Revolut have introduced optional short lessons for wallet users to educate themselves on the risks and what to look out for from scammers

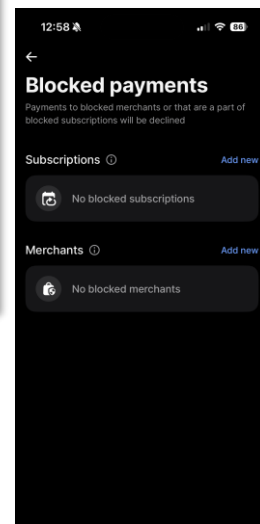


Eg 3: Single use cards

Revolut's single use cards are a direct response to online fraud. They are an easy way for users to understand security – your card can only be used once so scammers can't access it again even if the website you purchased from gets hacked

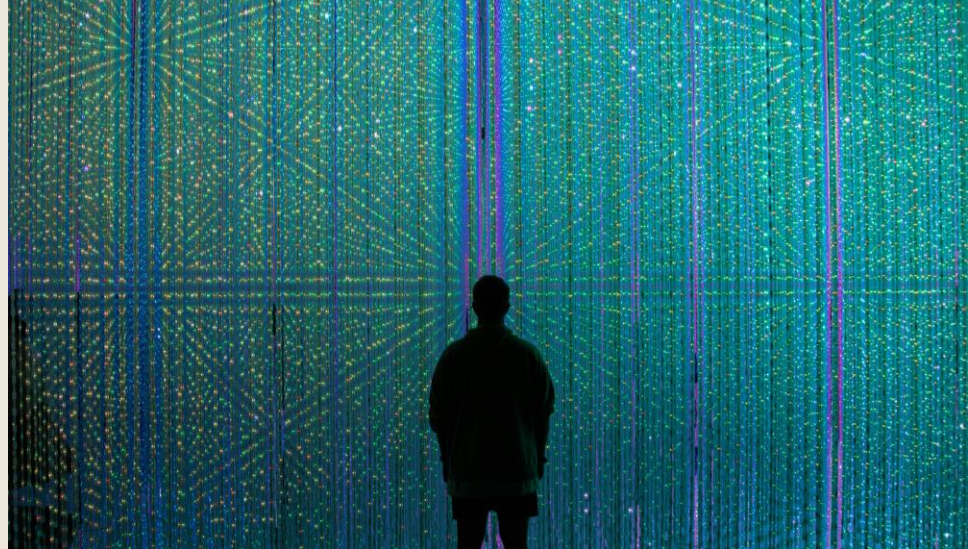
Eg 4: Filtering merchants

Revolut enables customers to set custom security levels for different merchants. Eg, payments to trusted, frequently used merchants can be processed automatically, while transactions with untrusted merchants can be restricted or blocked entirely.



INSIGHT:

Scepticism shadows the wallet's promise: to set a new standard for trust in the digital world



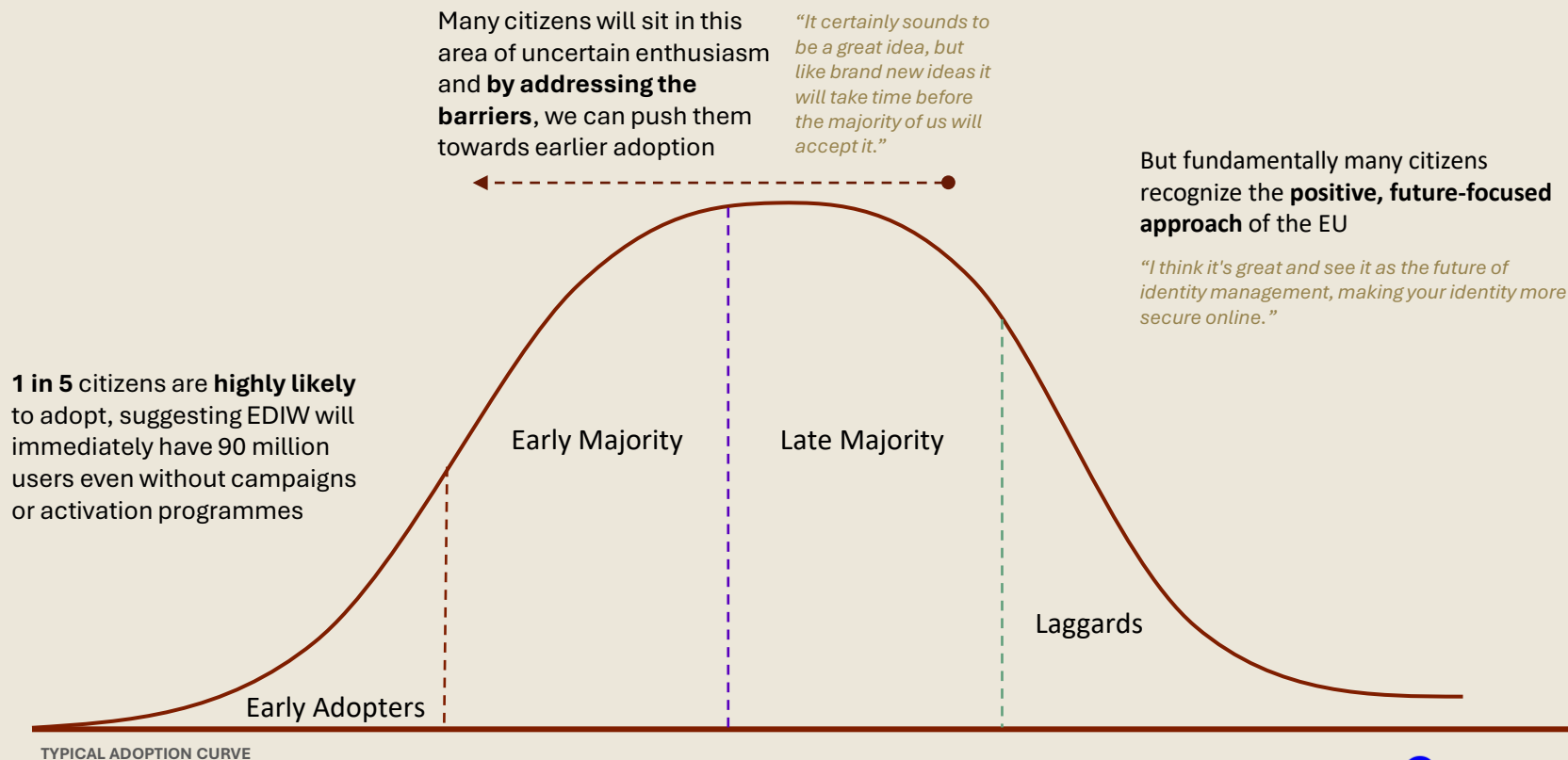
RECOMMENDATION:

Current trust in the wallet's potential is limited across the EU. This stems partly from a lack of understanding of the underlying technology ecosystem. Additionally, public mistrust shaped by concerns over how big tech monetises personal data contributes to hesitation. Several actions can help address these concerns:

- Position the EU Digital Identity Wallet as a privacy-first, non-commercial alternative to Big Tech, focusing on transparency, user control, and a strict no-data-monetisation promise.
- Consider verified trustmarks and two-way authentication, but additionally conduct further research to understand the UX mechanics that citizens will find most reassuring and trustworthy. As part of this, investigate a universal EU endorsement that validates wallet providers and extends trust across websites and platforms.
- Highlight the wallet's core values, digital autonomy over surveillance, to build a compelling narrative that drives user confidence and adoption.

Conclusions and recommendations

Despite the focus on barriers, there remains strong overall support for EDIW



Overarching positives: building trust and improving citizens' lives

- Citizens recognise the advantages of a uniform approach to identity, notably seamless travel experiences and access to healthcare records abroad as they would in their home country. These elements highlight the potential for improved personal convenience through a joined up cross-EU experience.
- The digital wallet provides an additional layer of verification, helping citizens to determine who to trust online and offering protection against scams, addressing a growing concern about fraud and improving overall digital safety. There's significant untapped potential in highlighting this benefit.
- E-prescriptions, e-signatures and digital passports stand out as appealing use cases, offering tangible improvements in efficiency and security. These use cases offer greater utility, as they satisfy unmet needs not currently addressed by Apple and Google wallets in the EU.
- A shared digital framework strengthens trust across nations and has the potential to enhance business interoperability and unlock business value. The EDIW helps to verify the legitimacy of organisations and individuals, offering confidence in interactions and bookings, and ensuring protection against scams.

Key Recommendations

Refining the experience

- Establish what visible features in the UX / UI will reinforce security benefits for citizens (for instance, data transparency, selective disclosure and EU-equivalent of validation / trustmark symbol)
- Focus on how the wallet can set new standards for data privacy and security in the EU. There's significant potential in counter-party verification, as it will unlock a benefit for the wallet that differentiates the experience versus incumbent wallets.
- Develop the wallet UX / UI ensuring that it is reaching the standards set by existing digital wallet providers (e.g. Apple /Google) and designed for the least digitally literate users
- Enforce the clear design across providers to avoid inconsistencies across multiple providers

Sharpening the adoption strategy

- Establish how to articulate security in a way that leads to citizen understanding of the security benefits of the EDIW and positions the EU Digital Identity Wallet as a privacy-first, non-commercial alternative to Big Tech
- Emphasize specific, high-impact use cases – universal acceptance of digital passports, cross-border e-prescriptions and e-signatures for contracts - anchor messaging and adoption strategy in these breakthrough use cases, not just focusing on convenience
- Tailor comms and rollout strategies by country profile (digital maturity, openness to technology, views towards EU) – one-size-fits-all won't work

Summary

Executive summary, 1/2

Market Dynamics

KEY INSIGHT:

The EU thinks big picture - citizens think ‘what’s in it for me?’

Launching a digital wallet in Europe is complex due to significant differences in citizen attitudes, levels of digital maturity, and openness to EU-led initiatives across member states. While the EU promotes the wallet to reduce fragmentation and deliver collective benefits—such as greater convenience, security, and interoperability—this vision isn’t uniformly embraced by the public. Many citizens remain sceptical, with varying degrees of trust in digital tools, differing levels of digital literacy but also a primary focus on what will directly benefit them. With some populations embracing integration and others viewing it with caution, it will be difficult to craft a one-size-fits-all approach across the EU.

Citizen Enthusiasm

KEY INSIGHT:

The most effective path to adoption is focussing on where existing solutions fall short

Many citizens are excited about the cross-border integration benefits whilst also recognising other valuable new use cases such as ePrescriptions and eSignatures. Beyond digital passports and travel, it is further identity-driven use cases where there is the biggest appeal. Validation, whether that is of your own personal identity or a website / supplier from which you might purchase, is a critical strength and one where existing solutions don’t provide a successful alternative. For instance, counter-party verification helps citizens to determine who to trust online and offers protection against scams, addressing a growing concern about fraud and improving overall digital safety. There’s significant untapped potential here for both citizens and businesses.

Expected Adoption

KEY INSIGHT:

Currently only 29% of EU citizens would adopt the EDIW

The EU needs to convince over half of its citizens to adopt the wallet if it is going to achieve the ambition of reaching 80% of citizens by 2030. Bigger markets such as Germany and France are currently particularly difficult regions where the approach to driving adoption will have to be meticulously thought through and executed.

Executive summary, 2/2

Barriers - UX / UI

KEY INSIGHT:

It's not enough for the wallet to simply meet incumbent benchmarks, it needs to redefine what a digital wallet experience is

At a base level, citizens expect the EDIW to match up to alternatives such as Google and Apple. However, given the greater stakes – all digital identity eggs in one basket – there is also a desire for the wallet to go further to demonstrate how it is protecting citizens through the UX and UI. This represents an opportunity to build on existing UX / UI expectations whilst also designing in EDIW-specific features.

Barriers – Security & Privacy

KEY INSIGHT:

Security is at the heart of the wallet's technology, but insecurity is at the heart of citizens' concerns.

Citizens' views on the security of the wallet are mixed, with the current articulation of the wallet's security features not being understood by citizens. Amongst users of the wallet, there's a desire to see the security and privacy benefits more readily visible in the user experience. Together, this points to a need to recognise: 1 - the wallet's security is not currently seen by citizens as a USP 2 - further work is needed to understand how you can effectively engage citizens about security across their EDIW journey from awareness through to adoption.

Barriers – Trust

KEY INSIGHT:

Scepticism shadows the wallet's promise: to set a new standard for trust in the digital world

Citizens are sceptical about the EU's intentions for the wallet, with judgements often clouded by wider insecurities about data, technology and the role of Big Tech. There's recognition that existing mechanics such as QR codes are becoming outdated but also acknowledgement that some form of certification or validation is necessary. This represents an opportunity for the EU to build in this additional layer of trust into the wallet experience to provide value and differentiation versus other alternatives.

Thank you

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