EUROPEAN CENTRAL BANK

EUROSYSTEM

ERPB engagement on digital euro fit in the payment ecosystem

Concluding workshop

19-20 May 2025

Digital euro project

Agenda – Day 1 - Concluding workshop

	Introductory remarks by the Chair	**11:00 - 11:10**
1	**Competition**	**11:10 – 12:30**
1.1	*Benefitting from digital euro without diminishing (domestic) European schemes*	
1.2	*Enhancing competition vs. global digital wallets and X-Pays*	
	Lunch Break	**12:30 – 13:30**
2	**Synergies – Part 1**	**13:30 – 15:30**
2.1	*Staggered roll-out approach with objective of achieving quick wins first*	
2.2	*How and where to join forces to establish a European acceptance network and to reuse existing standards, implementations and processes*	
	Coffee break	**15:30 – 15:45**
2	**Synergies – Part 2**	**15:45 – 17:15**
2.3	*Integrating the digital euro in European payment solution with a digital euro app as necessary fall-back*	
2.4	*Assessing co-badging to be ready if and when needed*	
	Conclusion of the Competition and Synergies theme	**17:15 – 17:30**

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1 Competition

Presenter: Maximilian Germann (ECB)

Recap competition outcome session: Key topics with widespread agreement (mainly PSP view)

	Topics	Follow-up
1	**Payment standardization at the POI** would allow cross-border banks, merchants and regional schemes to more **easily compete at an EU level**	*No dedicated discussion in today's workshop*
2	**Guaranteeing a digital euro payment channel** at the front-end of **eCom websites** would ensure **fair competition vs predominant players**	
3	**Guaranteeing an attractive pricing** would push merchants to **prioritize DEUR payments** over other payment **methods at the POS** and ensure **PSPs can retain the volumes**	

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Recap competition outcome session: Different views reported, proposal to engage further on some specific topics

	Topics	Follow-up
1	How could a digital euro **support domestic and regional schemes?**	*Discussed in today's workshop*
2	How could a digital euro enhance **bargaining power and reducing scheme and processing fees through competitive positioning?**	
3	How could an **offline digital euro bring value to merchants and PSPs (through e.g., resiliency)?**	
4	How could a digital euro **enhance competition vs. digital wallets and X-Pays on the distributing side?**	
5	How could the **digital euro allow distributing PSPs to compete more at an EU-level?**	

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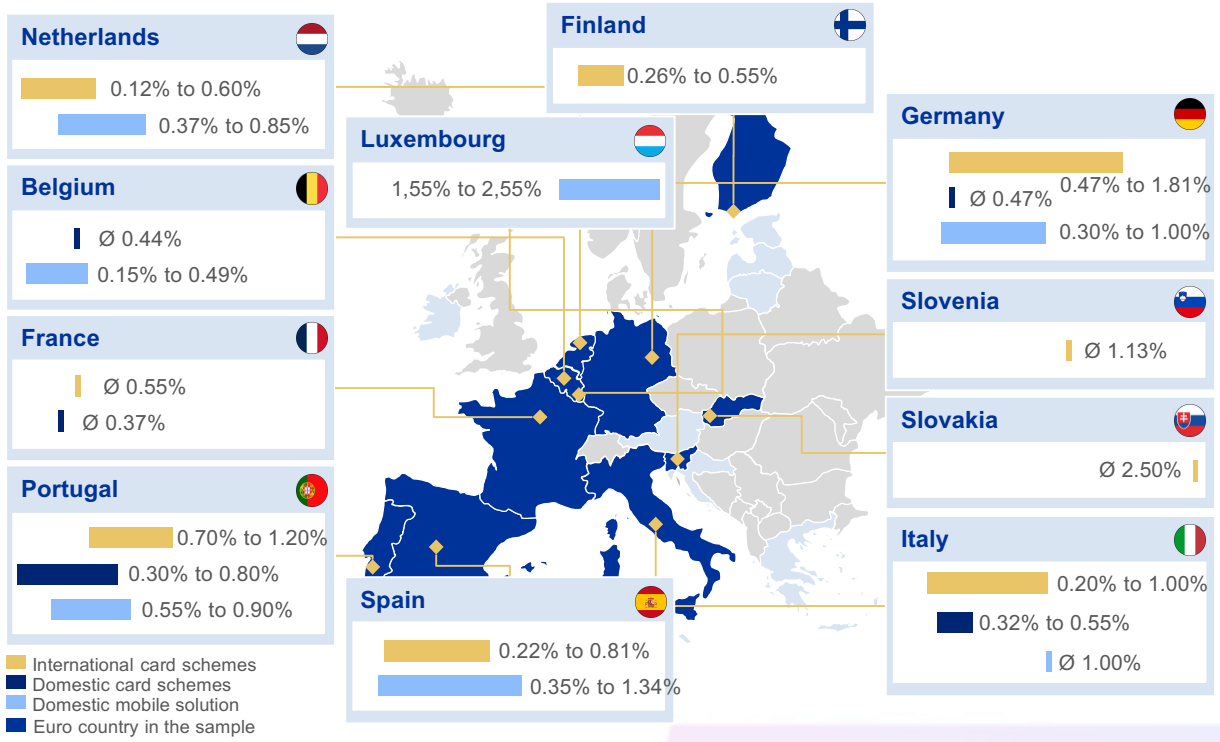
The cost advantage of domestic card scheme and mobile solutions is reflected in lower merchant fees

Overview on Merchant Service Charge [% on debit cards transaction value]



- **DCS and mobile solutions are usually cheaper** for merchants than ICS, particularly when PSPs that use scheme are also its shareholders (i.e., FR, IT, PT and DE)
- Especially in the online channel, **A2A solutions** represent an **alternative to** international **X-pays and digital wallets**[1)], lowering the MSC
- While DCS are based on transaction fees, **A2A solutions** compensation may include a **subscription-based model**
- For ICS payments **transaction fees usually lower at POS** compared to online because local banks acting as acquiring PSPs strive to offer competitive rates to attract merchants
- In less concentrated markets, such as France and Spain, **PSPs competition is higher** leading to **lower average fees**

1) Incl. Apple Pay, Amazon Pay, Google Wallet, PayPal
Source: Roland Berger analysis

1.1

Benefitting from digital euro without diminishing (domestic) European schemes

Proposed topic(s)

- How could a digital euro **support domestic and regional schemes**? How could it enhance **bargaining power through reducing scheme fees**?
- How could the digital euro allow distributing PSPs to **compete more at an EU-level**?

Scenario

- Maintaining **simultaneous investments in both domestic and regional burdensome**
- Domestic schemes **with strong footprint, but downward trajectory**
- **Domestic/regional schemes and A2A solutions low-cost** for merchants

Kickstarting the discussion

- Under what **conditions could digital euro allow domestic/regional schemes to scale?**
- What are **alleged reasons that prevent EU players** from turning away from ICS or using ICS solutions as **"premium-only" product**?

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Digital wallets and X-pays set to double their market share in Europe over the 2023 – 2027 period at the POS

Payment landscape evolution in Europe[1] [% on consumer payments transaction value]

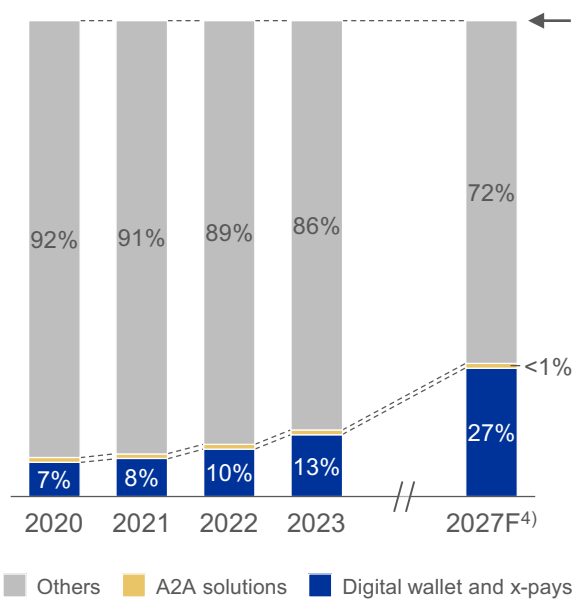
Digital wallets and X-pays[2]

Pay, amazon pay, Google Wallet, PayPal

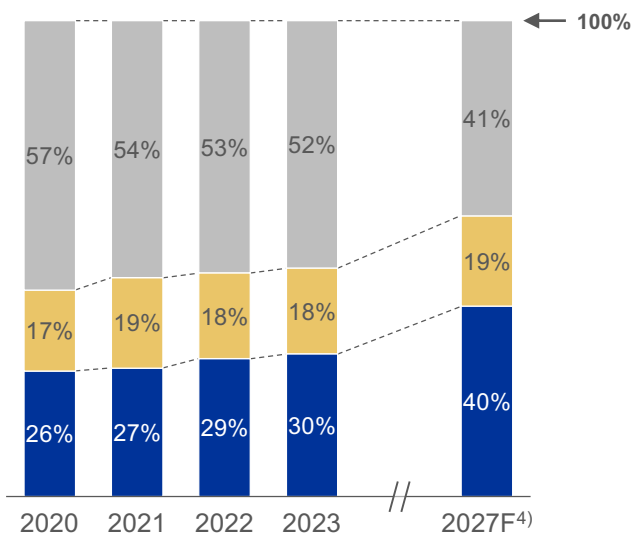
A2A solutions[3]

blik, TIKKIE, payconiq, iDEAL, satispay, bizum, PAY, Yippay, MyBank, SOFORT

Market share in POS



Market share in E-commerce[5] Indicative

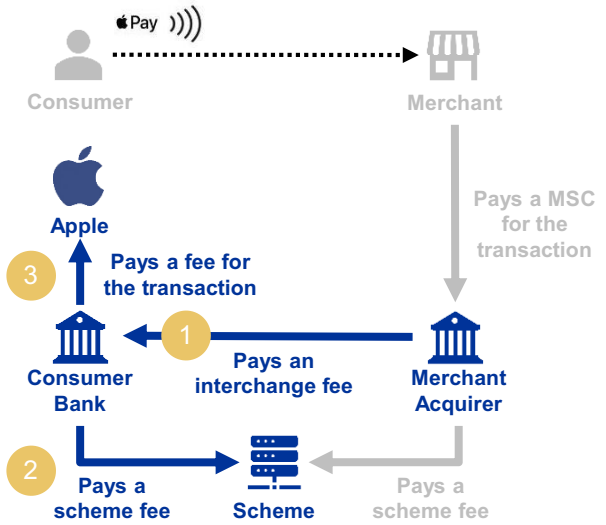


1) Considering Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Poland, Spain, Sweden, Turkey, UK; 2) Also incl. local digital wallets; 3) Also incl. SCT and SDD payments; 4) 2023-27 projections based on consumer surveys, B2B surveys and desk research available macroeconomic projections at the time of writing (2024); 5) e-commerce market size estimates include retail, food and drink, travel, gaming, gambling, and digital content streaming

Consumer banks are ready to distribute demanded pass-through wallets at the expense of revenue

Example: Apple Pay

Fee model overview



There are not additional fees on users or merchants[1)]

Fees structure example – Apple Pay vs. digital euro

Indicative

		Pay PoS	Pay E-Com	*Digital euro* All consumer banks
1	Interchange fee	+ 0.20%		variable or fixed fee
2	Scheme fee	- 0.11%[2)]		-
3	Apple Pay fee	- 0.08%[3)]	- 0.12%[3)] *(-0.02% to -0.03% for 3DS)*[3)]	-
	Profit	**0.01%**	**- 0.03%** *(-0.05% to -0.06% incl. 3DS)*	**variable or fixed fee**

1) Possible impact on merchants in case their contract with the acquirer includes different aquiring fees for card present or card not present transactions; 2) Roland Berger analysis; 3) ECB assumptions.

1.2

Enhancing competition vs. global digital wallets and X-Pays

Proposed topic(s)

- How could a digital euro enhance **competition vs. digital wallets and X-Pays on the distributing side**?

Scenario

- **X-Pays grow further** due to inherent ecosystem benefits
- **Despite** recent initiatives based on **Digital Markets Act** the **X-Pays have headstart** as customers stick with habits

Kickstarting the discussion

- How can digital euro design (and regulation) be **leveraged to offer on-par UX with X-Pays**?
- How can **no scheme and no wallet fees for digital euro translate to better bargaining with X-Pays**?
- How to ensure **EU players are first point of contact** for digital euro?

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Lunch break

2 Synergies

Presenters: Maximilian Germann (ECB) and Marcus Härtel (ECB)

Recap synergies outcome session: Key topics with widespread agreement *(mainly PSP view)*

	Topics	Follow-up
1	By integrating the digital euro into existing PSPs' solutions, **established customer** trust and **familiarity can be leveraged**, potentially **speeding up adoption**	*No dedicated discussion in today's workshop*
2	Supporting **reuse of well-established** and **widely adopted standards and processes**	
3	**Technical Service Providers play a relevant role** in delivering **operational digital euro services** and **reducing duplication of efforts,** especially for small PSPs	
4	Relying on **existing certification entities** and **capabilities** would be **beneficial for PSPs**	

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Recap synergies outcome session: Proposal to engage further on specific topics

	Topics	Follow-up
1	How **could the integration of the digital euro app** be designed to **extract maximum benefits**?	*Discussed in today's workshop* *+ "How could a staggered introduction in line with the legislative proposal look like? Which features could be prioritized?"* *+ "Why are there diverging views on reusability of existing processes (e.g., fraud management)?"*
2	How could **co-badging features be leveraged while legislation is still pending?**	
3	What opportunities could **be leveraged from technical service providers?**	

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6th ERPB technical session from early 2023: Staggered rollout with clear prioritization

How the digital euro could be successfully introduced into the market?

indicative

- Sequence and combination of use cases[1]

- Maximising the balance between…

Market relevance	Eurosystem's policy considerations	Technical and implementation aspects

1) P2P and POS include both online and offline functionalities

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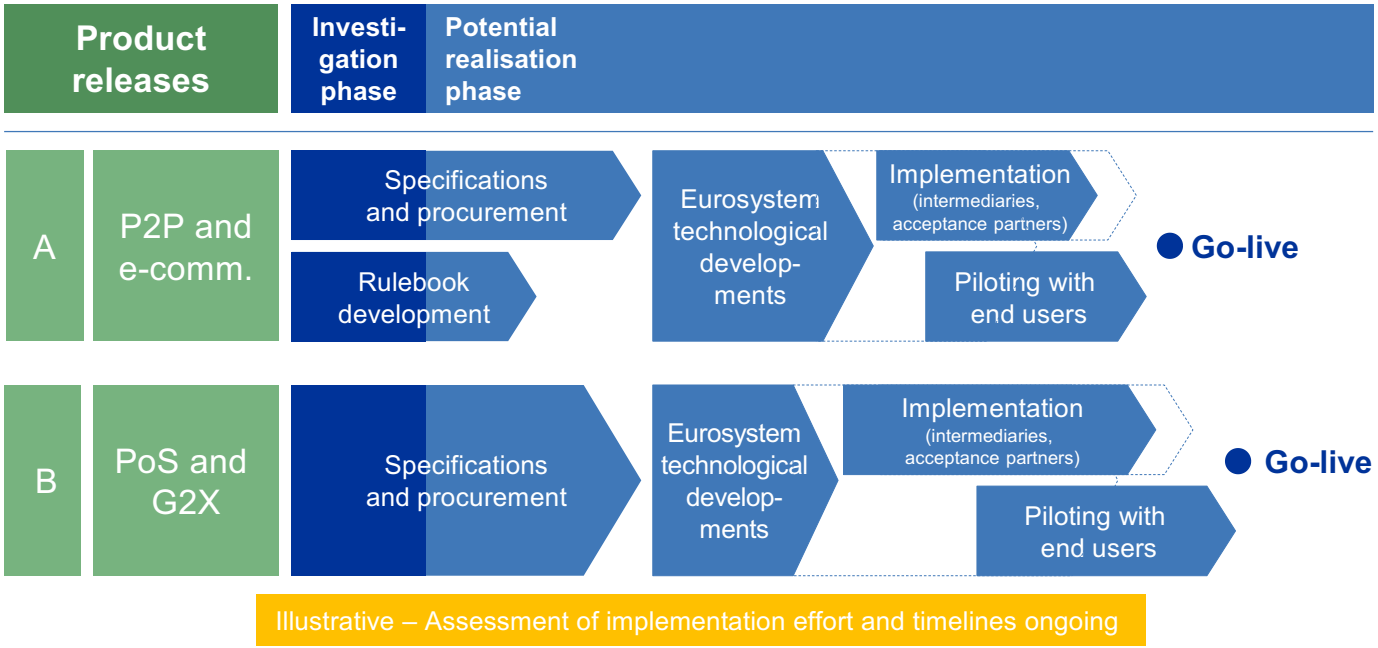
6th ERPB technical session: Overall structure of rollout plan from early 2023 is base case for current thinking



indicative

- Each product release to be preceded by a **piloting exercise** to prove design decisions
- **Parallel work** to optimise the release path

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2.1

Staggered roll-out approach with objective of achieving quick wins first

Proposed topic(s)

- How could a **staggered introduction in line with the legislative proposal** look like? Which **features could be prioritized**?

Scenario

- **Spread out** (and generally minimise) **investment cost** for both distributing and acceptance side
- Regulation likely sets **launch requirements that must be fulfilled**; Eurosystem has leeway within

Kickstarting the discussion

- Which feature could bring **most immediate positive impact**?
- Which **exact rollout sequence would maximize** the (investment) **cost-benefit ratio**?
- What **reasonable transitory measures** (if any) could support a digital euro rollout?

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Four standard setting bodies and their standards along the digital euro payment chain in focus

- **Standards** pursued or established by digital euro would be **open for private sector** to build on
- **Clarity** to the market **at the earliest**, anticipated for (still) 2025

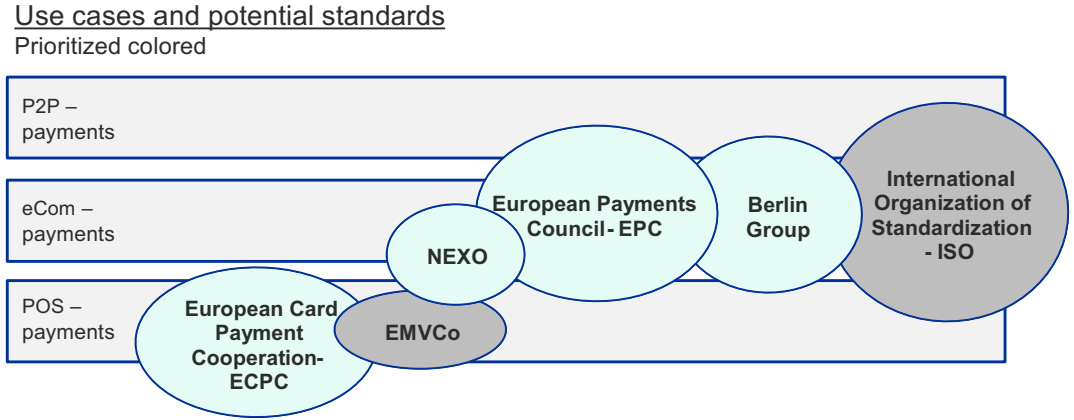
European Payments Council

nexo STANDARDS

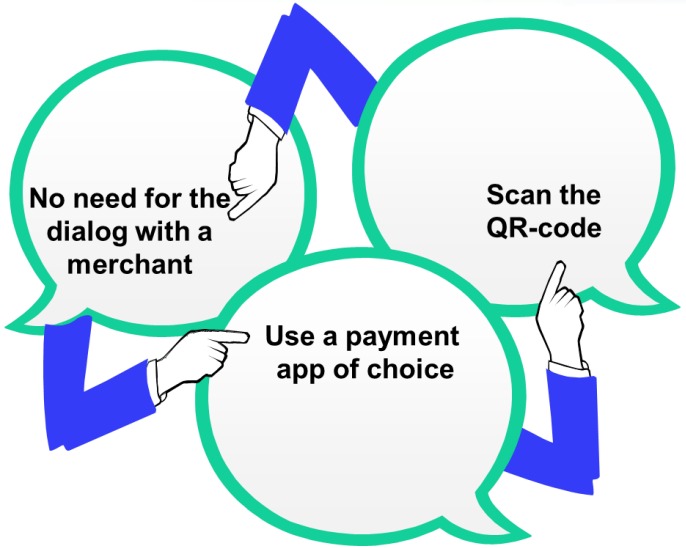
ECPC

THE Berlin GROUP

Prioritised standards based on governance and technical assessment covering most of the front-end payment chain



Example: Seamless and standardised payer experience with the QR-code



The establishment of a **QR-code supporting different** QR-code **schemes** and addressing their needs **backed by a European standard** could provide convenient user experience.

Digital euro project already initiated change requests towards EPC QR-code to achieve the goal. Currently alignment process with other QR-code based schemes.

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2.2 How and where to join forces to establish a European acceptance network and to reuse existing standards, implementations and processes

Proposed topic(s)

- How can digital euro **standards best be leveraged** by the private sector?
- Why are there **diverging views on reusability** of **existing processes** (e.g., fraud management)?

Scenario

- **Establishing joint** (public+private) **acceptance standards** would **maximize benefits for the distributing** and **minimize efforts** for the **acceptance side**
- **Speed of progress, timing, and governance** demands of standard bodies/private sector may not align
- Even with interoperability of private solutions, **fragmented standards landscape could remain**

Kickstarting the discussion

- How could **speed and adoption** of a **joint public-private acceptance network** be **maximised**?
- Which **standards are most urgent or essential** and should be prioritized first?

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Coffee break

A digital euro integrated into European payment solutions for mutual benefits

The digital euro can be easily integrated with existing European payment solutions.

Existing European payment solutions will be able to cover uses cases not yet served and achieve pan-European reach without relying on international card schemes

Illustration of integration within existing European payment solutions:

Mandatory support of the digital euro app by PSPs is necessary to enable payment innovations

The digital euro app will constitute a gateway provided by the Eurosystem that connects end users with PSPs

✓ **Ensure a resilient level playing field for all PSPs at launch**

- ✓ **Guaranteed access** to basic (online and offline) digital euro services for end users via all PSPs
- ✓ **Support resilience** of digital euro front-end services by enabling easy emergency switching between PSPs in the same user interface
- ✓ **Help smaller PSPs**, who may not have experience in point-of-sale payment apps, to considerably reduce their own development costs
- ✓ **Emphasise PSP relationship** by clearly displaying the brand of PSP in the digital euro app[1]

✓ **Allow PSPs to develop their innovative front-end solutions with time**

- ✓ **Minimum** UX requirements, but no WCAG AAA[2] level requirements
- ✓ **Allow staggered market launch** of digital euro services in proprietary solutions
- ✓ **Building upon existing APIs** to reduce implementation costs for PSPs

1) See RDG WS A3 brand rules
2) Web Content Accessibility Guidelines

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2.3

Integrating the digital euro in European payment solution with a digital euro app as necessary fall-back

Proposed topic(s)

- How can **European payment solutions remain the primary entry point** also for digital euro?
- How could the **integration of the digital euro app be designed** to extract **maximum benefits**?

Scenario

- **Mandatory support of the Eurosystem app** to **help smaller PSPs** and allow for consumer choice
- **Market solutions will likely integrate digital euro services incrementally**, not in full at start
- Digital euro **sits in wallet of domestic/regional scheme as alternative** to mobile banking app

Kickstarting the discussion

- How are **benefits of integration seen and could the full suite of digital euro services be supported**?
- Why is the Euroystem app perceived costly when **API/SDK support will be provided**?
- How could **adequate PSP branding in Eurosystem** app look like?

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Working out details of co-badging for “physical” integration if and when necessary remains on the table

Always emphasized: Digital euro to coexist with and complement private solutions

- **Possibility to integrate** encouraged and foreseen **in legislative proposal**
- Subject to e.g., UX requirements from the rulebook; never as pure funding source only

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Physical

Digital

Co-badging on physical card

- Domestic **card schemes** could **benefit from pan-euro area** acceptance network; in turn digital euro leverages on trusted brands
- **An issuer choice to assess:** is co-badging itself valuable enough to pursue? What if merchants prefer D€ card payments over domestic, even if consumer choice to alter? Does co-badging with digital euro improve position vis-à-vis ICS?

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2.4

Assessing co-badging to be ready if and when needed

Proposed topic(s)

- How could **co-badging features be leveraged** while **legislation** is still **pending**?

Scenario

- **Regulation obliges digital euro card issuance**
- **ICS push further** for **mono cards**

Kickstarting the discussion

- Would you **reassess co- and tri-badging**?
- What would **be feasible branding/UX requirements**?
- Would **merchant pre-selection** and **consumer "override" be seen problematic** for domestic card scheme?

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Agenda – Day 2 - Concluding workshop – Morning session

	Introductory remarks by the Chair	**9:30 - 9:45**
3	**Business Model – Part 1**	**9:45 - 11:15**
3.1	*Calibrating a compensation model that compensates effort and liability*	
3.2	*Practical solutions to avoid unintentional consequences of open funding*	
	Coffee Break	**11:15 - 11:30**
3	**Business Model – Part 2**	**11:30-12:30**
3.3	*What is needed to facilitate "Digital euro as a service" – enabling a "make-or-buy" decision*	
	Conclusion of the Business model theme	**12:30 - 12:45**
	Lunch break	**12:45 - 13:45**

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Agenda – Day 2 - Concluding workshop – Afternoon session

4	**Merchants**	**13:45 - 14:45**
4.1	*Enhancing competition and merchants' bargaining power*	
4.2	*Existing standards and scheme solutions – minimizing implementation efforts on the acceptance side*	
4.3	*Ensuring the resilience of the payment system*	
4.4	*Fees reporting – reducing complexity*	
	Conclusion of the Merchants theme	
	Coffee break	**14:45 - 15:00**
5	**Consumers**	**15:00 - 16:00**
5.1	*Digital financial inclusion*	
5.2	*Privacy, fraud prevention and resilience*	
5.3	*Competition*	
	Conclusion of the Consumers theme	**16:00-16:15**

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3 Business Model

Presenters: Meri Sintonen (ECB), EDPIA's expert and Maximilian Germann (ECB)

Recap business model outcome session: Key topics with widespread agreement *(mainly PSP view)*

	Topics	Follow-up
1	**No strong requirements** on **ATMs**	*No dedicated discussion in today's workshop*
2	**Staggered approach** for **digital euro rollout**, subject to legislative requirements	
3	**Open funding** as in draft legislation, while stimulating wide adoption and innovation, **may hamper strengthening European strategic autonomy**	
4	Establishing **merchant acceptance usable** by **private solutions**	

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Recap business model outcome session: Different views reported, proposal to engage further on some specific topics

	Topics	Follow-up
1	How could a **staggered introduction in line with the legislative proposal look like**? Which features could be prioritized?	*Discussed in today's workshop*
2	**Within the framework** of the legislative proposal, how could the **compensation model be calibrated** to compensate **effort** and **liability**?	
3	**Why** are there **diverging views** on **reusability** of **existing processes** (e.g., fraud management)? Where and why would **not decoupling settlement** verification and recording pose difficulties?	
4	What is the **view on "Digital euro as a service"** and are there **any roadblocks** to make a **build-or-buy decision**?	

Today in Section 2

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Calibrating a compensation model that compensates effort and liability

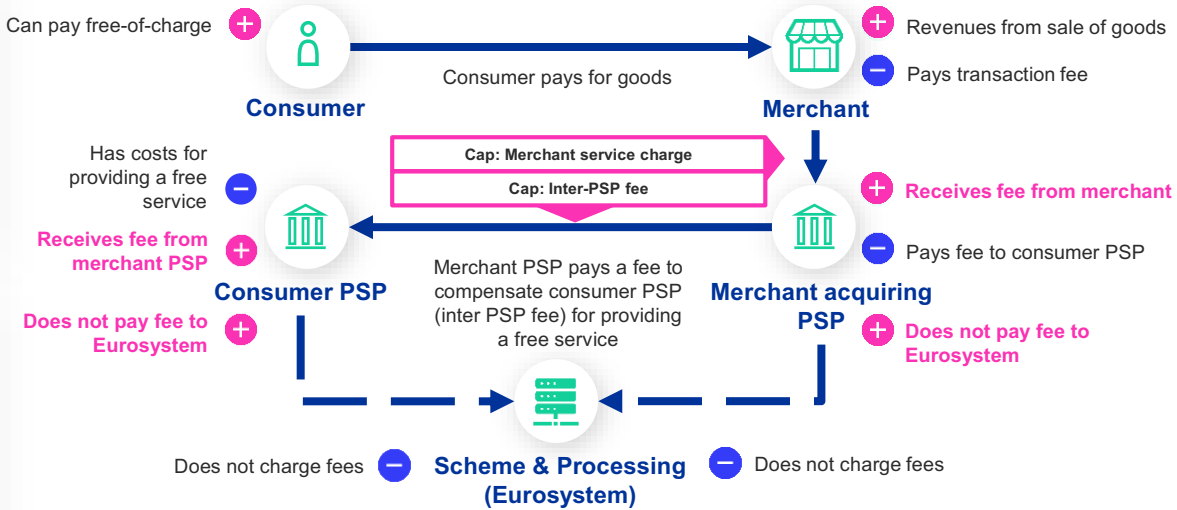
ECB only provides solicited technical advice to support the legislative process

Core principals of the compensation model for the digital euro

- Wide **usability** across the euro area
- **Free** for basic use by individuals
- Eurosystem bears its **own costs**
- **Safeguards for merchants**

Adequate compensation for PSPs linked to actual cost or comparable fees

- **Reported cost** for digital euro provision
  +
- Reasonable **profit margin**
  or if lower
- Fees for **comparable means of payment**



3.1

Calibrating a compensation model that compensates effort and liability

Proposed topic(s)

- Within the **framework of the legislative proposal**, how could the **compensation model** be **calibrated to compensate effort** and **liability**?

Scenario

- **"Four-party" model** remains as **basis**
- **Mandatory acceptance remains** and **entails capped MSC fees**

Kickstarting the discussion

- How do **PSPs ensure no scheme fee benefits** extend to **merchants** and **consumers**?
- Which **uniform compensation model** could account for **heterogeneous European payments landscape**?
- If a **transition regime was introduced**, how could it look like?

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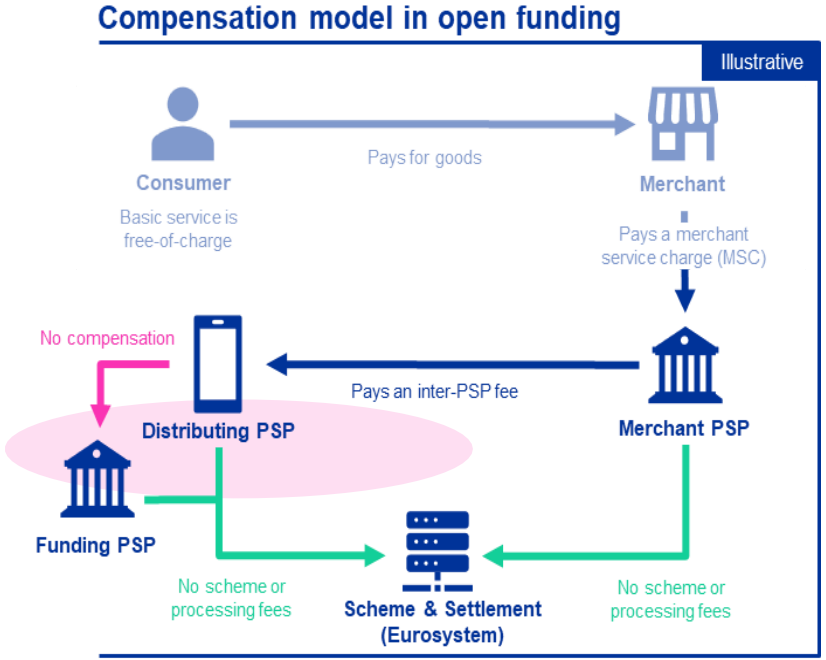
Practical solutions to avoid unintentional consequences of open funding

Legislative proposal: PSPs required to support reverse waterfall open funding for free as a basic service

- The **draft regulation** mandates PSPs to allow end-users to link a non-digital euro account with a digital euro account to **use reverse waterfall**, **whether held with the same or another PSP for free**.
- The **distributing PSP is remunerated** as it provides digital euro payment services to the end-user, which also require the PSP to perform e.g., KYC, fraud prevention checks, transaction processing, dispute management. **The (open) funding PSP is not remunerated** for providing (de)funding services**.**



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3.2

Practical solutions to avoid unintentional consequences of open funding

Proposed topic(s)

- Within the **framework** of the legislative proposal, how could the **compensation model** be calibrated to compensate effort and liability, **specifically to avoid unintended consequences of "open funding"**?

Scenario

- **"Four-party"** model remains as **basis**
- Regulation needs to **balance innovation potential** and **openness new market entrants** with potential **downsides of open funding**

Kickstarting the discussion

- Is **(reverse waterfall) open funding considered a real issue** or rather a corner-case?
- What are **precise practical solutions to open funding**?

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Coffee break

Outsourcing service providers could provide and bundle efforts for individual PSPs, making for more efficient digital euro implementation

Our basis for discussion: Realization of savings through **bundling of services** via outsourcing service providers a **choice for the market**

- Anyways current market practice in payments
- Could relate both to operational and to set-up efforts

Responsibility: Scheme **participant** always **responsible** towards the Eurosystem scheme

- Limits to de-facto outsourcing through future applicable regulation and guidelines, specifically DORA
- Specifics determined in rulebook

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Current rulebook drafting reflects the principles for outsourcing service providers

Section 2, scheme scope and interplay:
“Note: **Intermediaries may engage third party entities** […] **while remaining fully liable […]**. Such third party entities would not be participants in the digital euro payment scheme.”

Section 6.4, operational risk and third-party-risk:
“**Third-party risk** is **defined** as the **ICT third-party risk in DORA**, meaning an ICT risk (see 6.4.2) that may arise for a participants PSP in relation to its use of ICT services […].”
“**Participating PSPs** […] **shall, at all times, remain fully responsible for compliance with**, and the **discharge of**, all **requirements under the Rulebook**”

Definition, “Outsourcing service provider”:
A service provider that is not a scheme participant or does not act in the capacity as scheme participant, but which provides services—such as, but not necessarily only, communication or interaction with the Digital Euro Service Platform (DESP)—to a scheme participant under a formal outsourcing arrangement. **The scheme participant remains fully responsible** for ensuring that the outsourcing service provider complies with all applicable scheme requirements

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3.3

What is needed to facilitate “Digital euro as a service” – enabling a “make-or-buy” decision

Proposed topic(s)

- What is the view on **“Digital euro as a service”** and are there **any roadblocks to make a build-or-buy decision**?

Scenario

- Digital euro **regulation “silent” on outsourcing**; rulebook not to cause **unintentional roadblocks**
- **“Make-or-buy” decision essential to minimize investments** across industry
- **Specialized players could innovate based on “D€aaS”**

Kickstarting the discussion

- Are there any **evident roadblocks to “D€aaS”**?
- How much will **digital euro development be bundled** in e.g., bank associations’ common IT providers?
- Are **third-party concentration risks** a **“binding” concern in payments today**?

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Lunch break

4

Merchants

Presenter: Axel Schaefer (ECB)

Outcome technical sessions for merchants with widespread agreement

	Topics	Follow-up
1	Enhancing competition and merchants' bargaining power	*Wrapping up in today's workshop*
2	Existing standards and scheme solutions will help minimize implementation efforts on the acceptance side	
3	Digital euro as a driver to ensuring the resilience of the payment system	
4	Informed decisions for merchants due to less complex reporting	

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Adapting the euro to the digital age

Digital payments: on the rise*

Day-to-day cash payments fell from 68% in 2019 to 40% in 2024*

International card schemes account for close to two-thirds (64%) of all electronically initiated transactions with cards issued in the euro area**

Online purchases rose from 18% in 2019 to 36% in 2024***

A digital euro: bridging the gap

ICSs benefit from trends observed

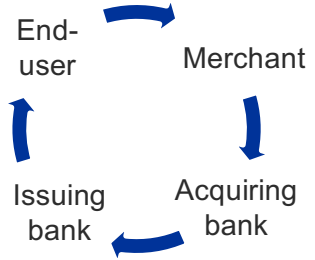
Growing market share to the detriment of domestic schemes

Smaller merchants pay 3 to 4 times higher MSC than larger merchants

*https://www.ecb.europa.eu/stats/ecb_surveys/space/html/ecb.space2024~19d46f0f17.en.html#toc5, ECB, December 2024.
** transactions acquired worldwide in the second half of 2023, based on data collected under Regulation (EU) No 1409/2013 of the European Central Bank on payments statistics (ECB/2013/43)
*** In terms of payment value

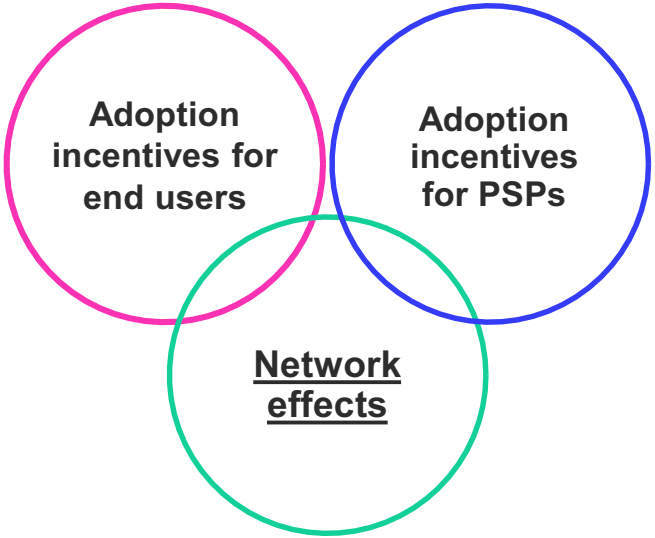
A fair and balanced compensation model* for digital euro

4-party model



Public good features

- Wide **usability** across the euro area
- **Free** for basic use by individuals
- Eurosystem bears its **own costs**
- **Safeguards for merchants**



* Subject to digital euro legislation.

4.1

Enhancing competition and merchants' bargaining power

Proposed topic(s)

- How can **negotiation position for merchants vis-à-vis incumbents (ICSs) be improved**?

Scenario

- Digital euro **infrastructure that is accessible** for **private and public payment propositions**
- **Common infrastructure** may allow merchants to enable **"Least-cost routing",** improving **merchants negotiation position**

Kickstarting the discussion

- Will **mandatory acceptance and distribution** create the **needed network effects**?
- Will such network effects help increase competition, thereby **re-balancing merchants' negotiation capabilities**?
- How can **the public infrastructure** be used to improve competition in favour of merchants?

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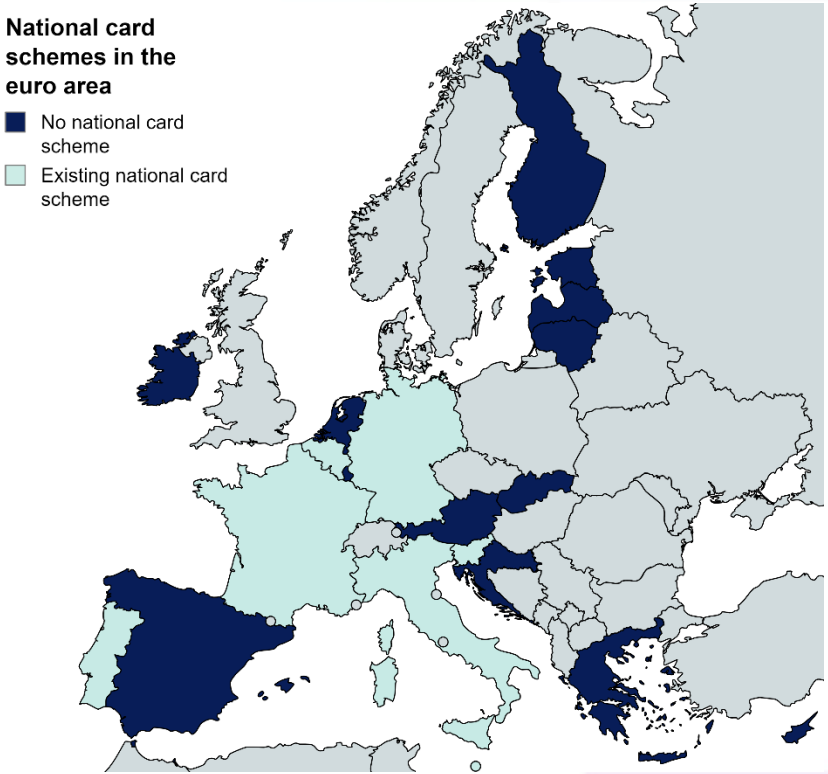
A “European by design” solution ready to serve merchants’ interests



Merchants operating across borders in Europe have to integrate and maintain solutions based on different standards

There is currently no European digital means of payment covering all euro area countries: 13 out of 20 euro area countries don’t have a national card scheme and instead rely on international schemes for digital payments, which account for close to two-thirds (64%) of all electronically initiated transactions with cards issued in the euro area

A digital euro would provide a pan-European platform that would standardise digital payments in the entire euro area

4.2

Existing standards and scheme solutions – minimizing implementation efforts on the acceptance side

Proposed topic(s)

- How can **standardisation help merchants to integrate digital euro**?

Scenario

- Digital euro **infrastructure should enable an open**, **standardised**, **easy to integrate**, **low-cost system**
- Creation of **common framework** not only with **standardisation bodies** but also with **private payment initiatives**

Kickstarting the discussion

- Will the **identified standards and interfaces** help **reduce efforts and limit costs** of integrating digital euro into **merchants' systems**?
- Will the identified standards help the digital euro to **integrate seamlessly into existing digital solutions** and allow domestic schemes to leverage on a pan-European acceptance network?

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Public ownership with strong focus on resilience

Our money in our hands

- A digital euro would strengthen Europe's resilience and reduce our dependency on private non-European providers – specifically in times of crises

No commercial interest in data

- As a public institution, the ECB has no commercial interest in collecting or exploiting end-user data.

Monetary and financial stability and no profit maximization

- The objective of the ECB is to ensure that financial stability is preserved and to maintain the crucial role of banks as providers of credit to businesses and the overall economy.

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4.3

Ensuring the resilience of the payment system

Proposed topic(s)

- Digital euro as a **driver to secure resilience** of the payment system

Scenario

- Eurosystem is mandated to **protect monetary** and **financial stability**
- Development of **offline digital euro** as **key functionality**

Kickstarting the discussion

- How can digital euro contribute to the resilience of the payment system **in a swift manner?**

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Complex reporting structures of incumbents disable merchants to make informed decisions

Regulated vs unregulated interchange fee

- Card type
- Region of issuance
- Three party schemes
- Merchant sector

Scheme fee complexity drivers

- Categories[1]
- Pass-through limitations[2]
- Different per scheme

Merchants' limited cost control capabilities

Tendering: Pricing structures and different approaches to rates make it complex for merchants to compare the quotes it receives from acquirers

Due diligence: Non-published scheme fees render it difficult for merchants to verify whether charged scheme fee correspond with service provided

Information asymmetry: Merchants depend on acquirers regarding changes to scheme fees, that are unilaterally defined by schemes

[1] depending on cardholder and merchant region, card scheme, authentication method, data capture and security, card type, sales channel, merchant sector
[2] fee components might be charged in different currency, based on transaction, value, volume or period

4.4

Fee reporting – reducing complexity

Proposed topic(s)

- Can **transparency in fee reporting** help merchants to **make more informed decision**?

Scenario

- **Digital euro rulebook** as foundation of **functioning of the scheme**
- **Market participants actively involved** in the creation of **rulebook**

Kickstarting the discussion

- **Absence of scheme fees** should **reduce significantly the complexity** of **transaction fee reporting**

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Coffee break

5

Consumers

Presenter: Pieter-Jan Terryn (ECB)

Outcome technical sessions for consumers with widespread agreement (1/2)

	Topics	Follow-up
1	**Available** to all, including the unbanked and those at risk from digital exclusion	*Wrapping up in today's workshop*
2	A service simple to understand and **easy to use**	
3	**Accessible** to everyone, including individuals with disabilities	
4	**High privacy standards**, protecting user data and rights in the digital age	
5	Robust **fraud** prevention and **protection**	

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Outcome technical sessions for consumers with widespread agreement (2/2)

	Topics	Follow-up
6	**Resilient** European payments	*Wrapping up in today's workshop*
7	Basic use is **free of charge** for consumers	
8	Accepted across **all euro area** countries, offering payment **flexibility**	
9	A platform for further **innovation** by the private sector	

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A digital euro available to everyone

A mandatory public approach is key in ensuring digital euro services are available to everyone and is necessary support to those **vulnerable to digital financial exclusion**

One public institution or PSP in each member state (e.g. post office) would provide

- **In-person** onboarding and support
- Defunding with **cash** ensured
- Issuance of **physical card**
- Services **free** of charge for vulnerable groups

5.1

Digital financial inclusion – Availability

Proposed topic(s)

Available to all, **including the unbanked** and those at **risk from digital exclusion**.

Scenario

The digital euro will be widely available to all citizens and will address the needs of vulnerable groups who are **underserved by PSPs** or at risk of **exclusion due to the digitalization** of financial services.

Kickstarting the discussion

Under the current legislative proposal, a **dedicated entity** in each member state will provide **basic digital euro services** to the unbanked as well as in-person face-to-face support to vulnerable groups.

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Usability of the digital euro

The digital euro should be as instantly **recognizable** to consumers as a banknote

The Eurosystem may provide a digital euro app, allowing consumers to easily access digital euro services via a single, easy-to-use interface.

Minimum UX requirements provide guidance for integrating the digital euro for all scheme participants.

Usability is a measure of how well a specific user in a specific context can use a product to achieve a defined goal effectively, efficiently and satisfactorily.

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5.1

Digital financial inclusion – Usability

Proposed topic(s)

A service **simple to understand and easy to use**

Scenario

The digital euro will be simple to understand and **easy to use**, whether it is employed to settle transactions through PSPs' interfaces or via the digital euro app.

Kickstarting the discussion

Consumers will have **the option to choose** either the front-end solution offered by their PSP or the one provided by the Eurosystem, depending on their usability preferences. Minimum **UX requirements** will balance the need for harmonisation with allowing flexibility for innovation.

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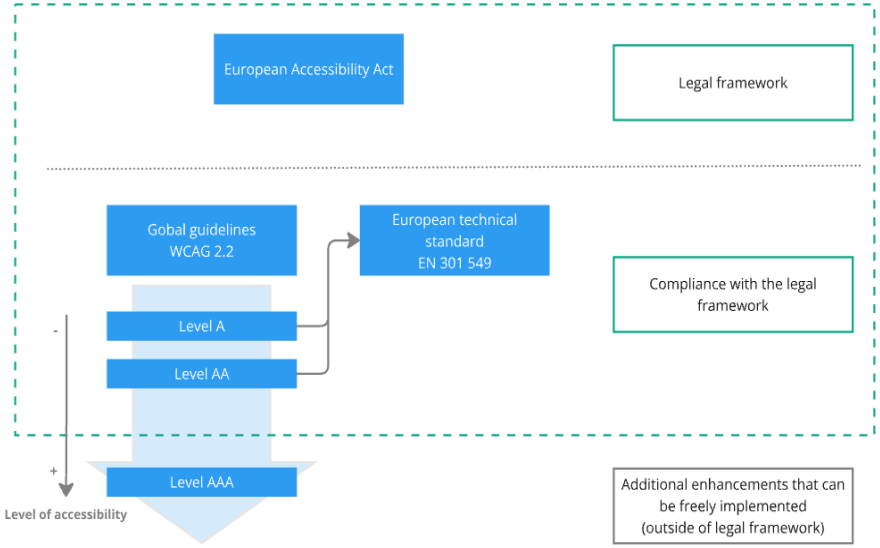
Accessibility of the digital euro app



The **digital euro app** will comply with the EAA

But it aims to be **more accessible** than required by the EAA

Leverage global guidelines (WCAG AAA) to design the most accessible front-end interface in the ecosystem.

Accessibility requirements aim to ensure that products and services are equally accessible to all, including persons with disabilities.

5.1

Digital financial inclusion – Accessibility

Proposed topic(s)

Accessible to **everyone, including individuals** with **disabilities**

Scenario

The digital euro, as central bank money, will be accessible to everyone, **including individuals with disabilities** whose needs are not systematically met by private payment solutions.

Kickstarting the discussion

The **digital euro app** provided by the Eurosystem aims to be fully accessible, surpassing the level of accessibility offered by PSPs. The Eurosystem is still evaluating how the digital euro app can **exceed EAA standards**.

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Privacy by design and protection for the digital euro services platform

For the **online digital euro**, privacy would be ensured so that the Eurosystem, i.e. the issuer and payment infrastructure provider, would **not be able to directly link transactions to specific individuals**.

For the **offline digital euro**, payments would offer privacy levels similar to cash, as there would be **no third-party validations** of transactions.

Privacy preserving techniques

Pseudonymisation: Personal data would be transformed so individuals cannot be identified without additional information

Hashing and data encryption: Data remains secure and unreadable during transmission and storage

Data segregation: The data exchanged between PSPs and the Eurosystem would be segregated

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5.2

Privacy, fraud protection and resilience - Privacy by design

Proposed topic(s)

High **privacy standards, protecting user data** and **rights** in the digital age

Scenario

The Eurosystem is committed to maintaining **high privacy standards** for digital euro payments, safeguarding user data and rights in the digital age.

Kickstarting the discussion

In digital euro payments made with an online balance, privacy will be ensured by **preventing the Eurosystem from directly linking transactions to individuals**. Payments made with an offline balance will provide cash-like privacy **without third-party involvement in payment settlement**.

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Fraud prevention via the centralised RFM component

PSP

Individual fraud risk assessments, enhanced with insights into patterns and anomalies from a central infrastructure-level perspective.

- ✓ D€ risk score will improve PSP's ability to detect fraudulent transactions.

sends request to RFM component

Risk score with reason code

RFM component

Produces **real-time risk score** with reasoning for online D€ transactions

- ✓ All relevant fraud types
- ✓ All D€-payment use cases (POS payments are not on the critical path due to latency/ fraud risk trade off)

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5.2

Privacy, fraud protection and resilience - Fraud protection

Proposed topic(s)

Robust **fraud prevention and protection**

Scenario

Strong **fraud prevention** measures through smart design and **fraud protection** through effective dispute resolution mechanisms.

Kickstarting the discussion

The online digital euro will include a robust fraud prevention and detection mechanism through the **Risk and Fraud Management component**. Additionally, **effective dispute resolution mechanisms** will be in place to address instances of fraud that do occur, ensuring proper handling of consumer complaints.

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Resilience during internet outages

Offline digital euro payments would enable payments in physical shops and between individuals **without the need for an internet connection**.

5.2

Privacy, fraud protection and resilience – Resilience

Proposed topic(s)

Resilient European payments

Scenario

A digital euro would enhance the **resilience of the European payments** sector by relying on its own infrastructure.

Kickstarting the discussion

The offline digital euro will enhance payment system resilience by **enabling transactions without an internet connection**, ensuring digital payments can continue during internet outages, thus maintaining economic activities.

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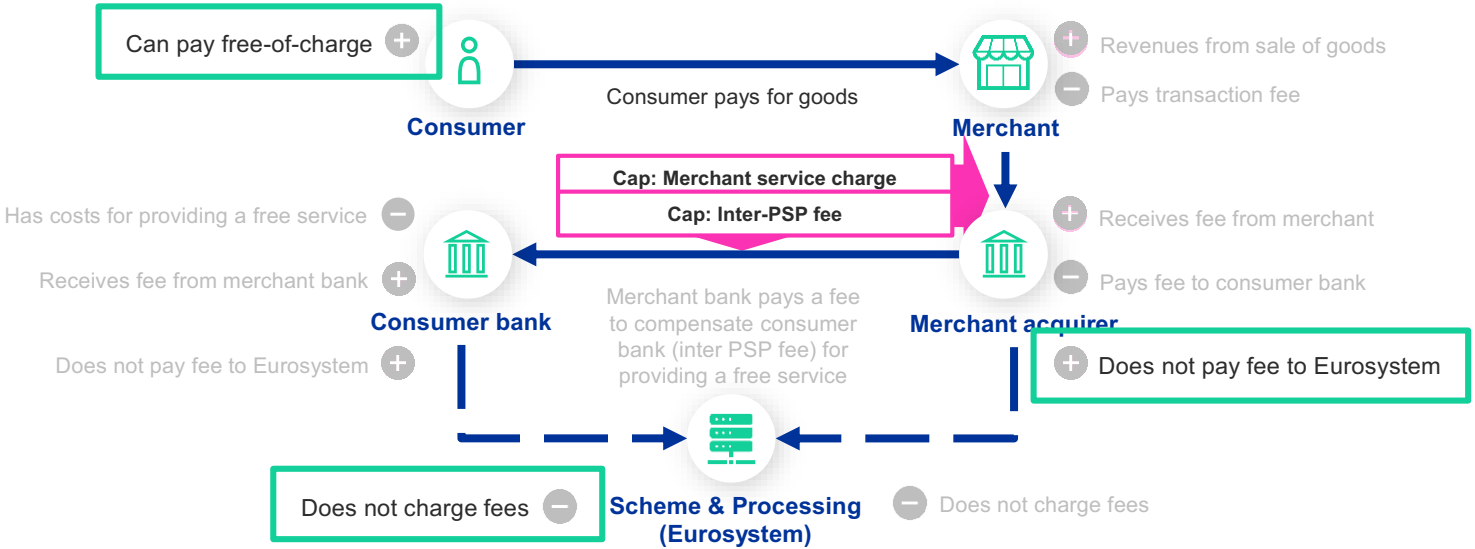
Free of charge with price benefits passed on to consumers



The **absence of scheme fees and settlement costs** for intermediaries will allow businesses to pass savings to consumers, aiding price stability. **Essential services** like account opening, transactions, and fund management will be free for consumers.

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5.3

Competition - Free of charge for consumers

Proposed topic(s)

Free of charge for consumers

Scenario

A digital euro will put **downward pressure on fees**, and these benefits can be passed on to consumers.

Kickstarting the discussion

With no scheme fees or processing fees charged by the Eurosystem, the resulting **savings can be passed on to consumers**. Additionally, the **basic use** of the digital euro, including opening an account, conducting transactions, and funding or defunding, will be **free of charge for consumers**.

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Universally accepted as legal tender and therefore available for any digital payments across all euro area countries

Point of Sale

NFC

Chip contact

QR

NFC offline

E-Commerce

App-to-app

DEAN/ Alias

QR

Pay-by-link

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5.3

Competition - Universally accepted

Proposed topic(s)

Basic use is **free of charge for consumers**

Scenario

The digital euro is proposed to have the status of **legal tender**, as outlined in the draft digital euro regulation.

Kickstarting the discussion

The digital euro, as legal tender, will be universally accepted for electronic payments in shops, online, or for person-to-person transactions **across all euro area countries**, much like cash today. It will offer **payment flexibility** for end-users through various acceptance methods.

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A platform for innovation and value-added services

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5.3

Competition - Platform for innovation

Proposed topic(s)

A **platform** for further **innovation by the private sector**

Scenario

The digital euro will offer a foundation **for further innovation by** private payment service providers.

Kickstarting the discussion

The digital euro infrastructure will serve as a platform for a range of **additional services** such as cashback, loyalty programs, personalised product recommendations, digital receipts, and embedded payments.

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Thank you for your attention

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