



EUROPEAN CENTRAL BANK

EUROSYSTEM

# Digital euro – use case analysis

---

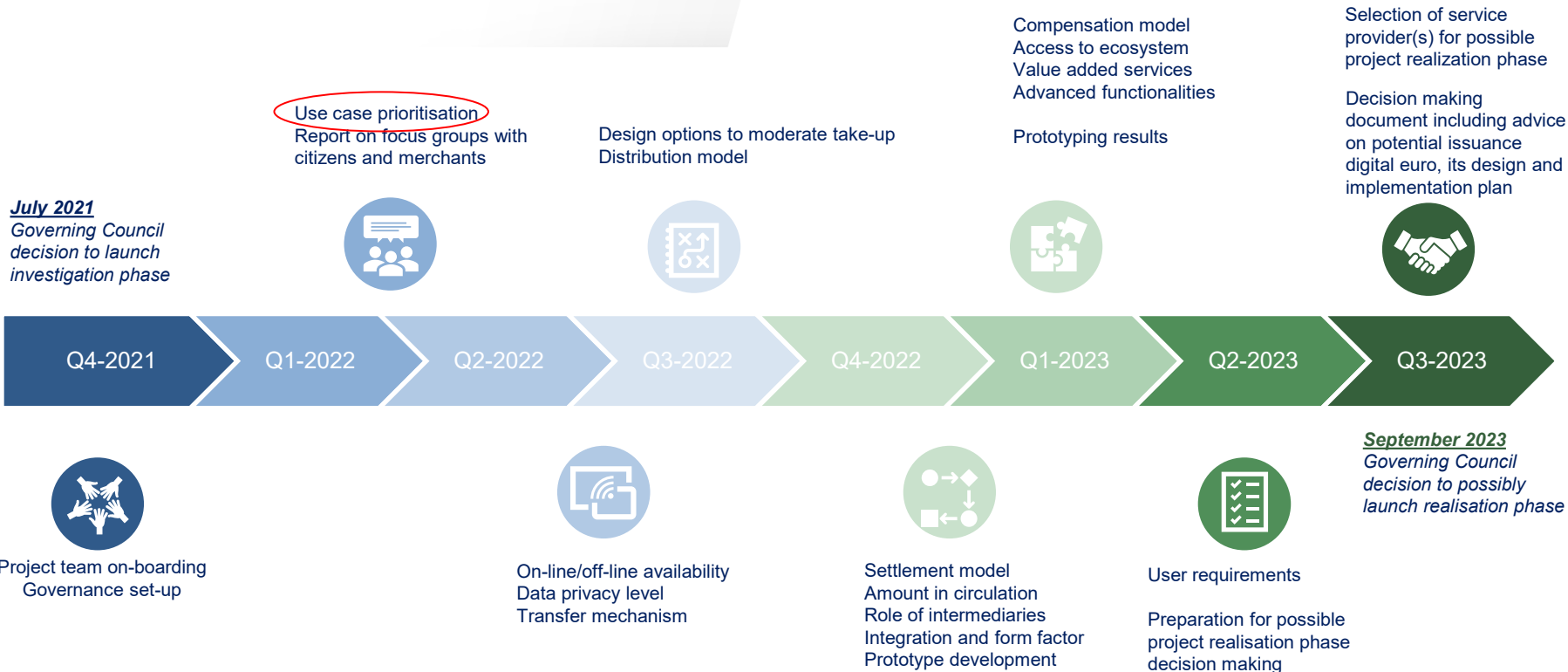
Euro Retail Payments Board  
technical session on digital  
euro

4 May 2022

Digital euro project team



# Digital euro project timeline



Tentative - timing subject to change

# Use cases for a digital euro

A **digital euro use case** describes a payment scenario, covering transacting parties (i.e. persons, businesses, government agencies and machines) as well as the environment (i.e. physical or virtual environment) in which it takes place.



## ***Use cases have features, like***

- Privacy
- Offline
- Programmability
- Cross-border

Multiple use cases could have common features

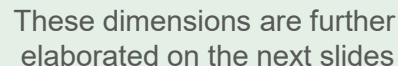
# Use cases for a digital euro

- **Person-to-person**: a payment between two individuals
- **Consumer-to-business**: a payment for goods or services purchased in a **physical store** or online via **e-commerce**
- **Business-initiated**: a payment between two businesses or from a business to an individual (e.g. wages)
- **Payments to the government** (e.g. taxes) and **by the government** (e.g. allowances and subsidies)
- **Machine-initiated**: a fully automated payment initiated by a device and/or software based on predefined conditions

# Strategic importance of use cases

Two **key prioritisation criteria**:

1. Does the use case support the **policy objective of a digital euro**?
2. Does the use case target an **relevant market segment** that can support network effects?



These dimensions are further elaborated on the next slides

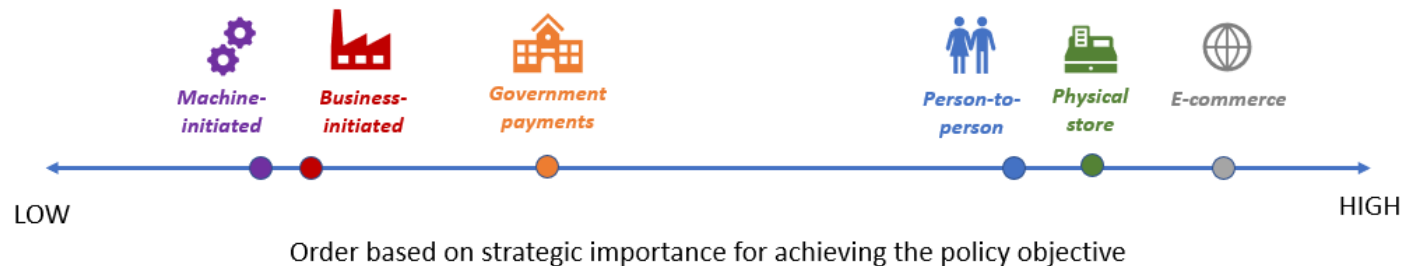
## Importance for the policy objective (criterion 1)



Maintain *public access to and full usability of central bank money* in a world in which consumers and firms are turning to electronic payments

- Supporting **digitalisation** of the European economy
- Responding to a **decline in the use of cash** as a means of payment
- Tackling **sovereignty concerns** relating to foreign CBDC or private digital means of payment in the euro area

# Importance for the policy objective (criterion 1)



- Non-European solutions dominate digital payments in **e-commerce** and **physical stores**
- Cash dominant for **person-to-person payments**, but **segment open to disruption** and strategically important to drive adoption and foster network effects
- European solutions available for **business-initiated payments**
- **Machine-initiated payments** could support innovation, but private sector also likely to develop solutions

## Importance of the market segment (criterion 2)



Order based on annual number of transactions conducted using a digital means of payment

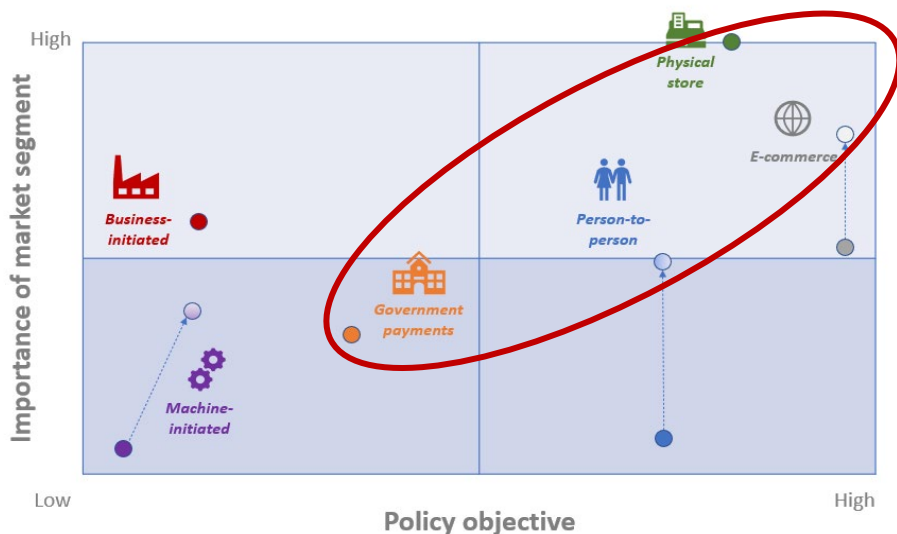
Some important developments to consider:

- Strong **growth of e-commerce** as a percentage of total retail sales
- Digital payments between individuals (**person-to-person**) still limited, but preferences could change as more digital solutions become available

**Sources for data on transactions:** BCG (2021), BigCommerce (2021), De Nederlandsche Bank (2020), ECB (2020), eMarketer (2021), Eurostat (2022), McKinsey (2021), Oliver Wyman (2021), Sveriges Riksbank (2020), SWIFT (2018) and ECB staff calculations.



# Prioritisation of use cases



Bringing the two criteria together, payments in e-commerce and physical stores together with person-to-person payments seem natural candidates for the first releases of a digital euro: they rank high on both dimensions, especially if we take expected developments into account [see upper right quadrant]. Making the digital euro available for physical store and e-commerce would also allow it to be used for government payments.

Focusing on these payment segments first does not mean we close the door to new trends and emerging needs. With this prioritization exercise, we set ourselves the objective to cover the priority use cases within the first releases of a digital euro. We will assess the actual feasibility of doing so and define a more precise release planning later on, as our investigation progresses.

# Questions (I)

1. What are the markets' expectations regarding the future evolution of the different use cases (in terms of growing transaction volume and value)? and specifically:
  - What are the markets' views regarding:
    - *The substitution of cash by digital payments in the physical environment (both POS and P2P)?*
    - *What private sector initiatives are currently taking regarding (i) programmable; (ii) machine-triggered; (iii) IoT related; (iv) micro- payments? What are the impediments (legal, technical, lack of demand, etc.) and how do you see these use cases evolving? What could be the arguments to have the digital euro playing a pioneering role (if any) in these? Please distinguish (i)-(iv) as relevant.*
    - *The future evolution of business-to-business and business-to-consumer transactions (in terms of growing transaction volume and value)?*
  - What differences in rate of adoption of digital payments – over all use cases – are being observed across the different countries in the euro area?

## Questions (II)

2. Considering the Eurosystem's preference to distribute a digital euro via supervised intermediaries, what are the market's views on how addressing the prioritised use cases will influence the strategic autonomy (i.e. tackling sovereignty challenges)?
3. Do market participants identify other emerging market segments or use cases not covered currently in the strategic prioritisation matrix?
4. Do market participants members wish to share other comments and/or insights related to the presented analysis?

Thank you for your  
attention

# References

- BCG (2021), *Global Payments 2021: All in for Growth*. <https://www.bcg.com/publications/2021/global-payments-industry-is-all-in-for-growth>
- BigCommerce (2021), *7 B2B Ecommerce Trends You Need to Follow for 2022 and Beyond*. <https://www.bigcommerce.com/articles/b2b-ecommerce/b2b-ecommerce-trends/#:~:text=In%202020%2C%20the%20global%20B2B,18.7%25%20from%202021%20to%202028>
- De Nederlandsche Bank (2020), *Shift of cash to debit card continues*. <https://www.dnb.nl/en/actueel/dnb/dnbulletin-2020/shift-of-cash-to-debit-card-continues/>
- ECB (2020), *Study on the payment attitudes of consumers in the euro area (SPACE)*. <https://www.ecb.europa.eu/pub/pdf/other/ecb.spacereport202012~bb2038bbb6.en.pdf>
- eMarketer (2021), *Ecommerce sales in Western Europe beat expectations*. <https://www.emarketer.com/content/ecommerce-western-europe-continues-beat-previous-expectations>
- Eurostat (2022), *E-commerce statistics for individuals*. [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=E-commerce\\_statistics\\_for\\_individuals](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=E-commerce_statistics_for_individuals)
- McKinsey (2021), *How e-commerce share of retail soared across the globe: A look at eight countries*. <https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/how-e-commerce-share-of-retail-soared-across-the-globe-a-look-at-eight-countries>
- Oliver Wyman (2021), *Is e-commerce good for Europe?* <https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2021/apr/is-ecommerce-good-for-europe.pdf>
- Sveriges Riksbank (2020), *Cash is losing ground*. <https://www.riksbank.se/en-gb/payments--cash/payments-in-sweden/payments-in-sweden-2020/1.-the-payment-market-is-being-digitalised/cash-is-losing-ground/>
- SWIFT (2018), *The transformation of the European payments landscape*. <https://www.swift.com/news-events/news/transformation-european-payments-landscape>