

Payments as an (invisible) element of digital ecosystems

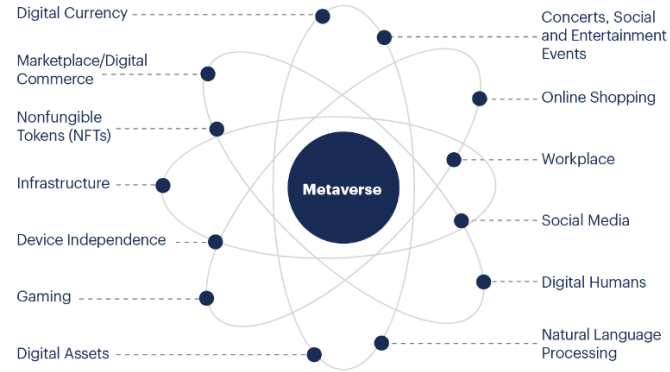
Dr. Julian Reischle, Deutsche Bundesbank

R+V Re conference, 1 September 2022

Introduction

- **Virtual reality based ecosystems (Metaverses) as next generation of Internet**
- **Car manufacturers building ecosystems, connecting customers to digital services and content, automated payments included**

Elements of a Metaverse

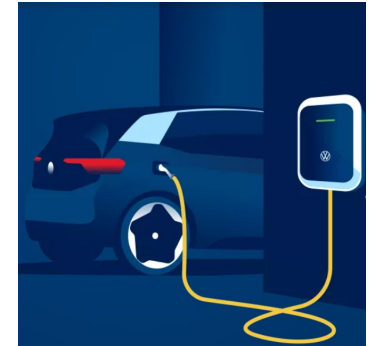


Source: www.Gartner.com

47%

are willing to switch brands to get new/innovative connected car features and services

NTT Data (2020): Connected Car Study.
[Connected Car Expectations, Opportunities and Challenges \(nttdata.com\)](https://www.nttdata.com)



Source: www.volkswagen.de

Introduction

- **Pay-per-use models** in ecosystems
- In industry 4.0 environments manufacturers provide e.g. machines as a service for a fee
- Ideally with financial services included (e.g. **pay-as-you-use insurances**)
- **IOT** (Internet of Things) provides usage related data in real time, opening up new possibilities for automated settlement

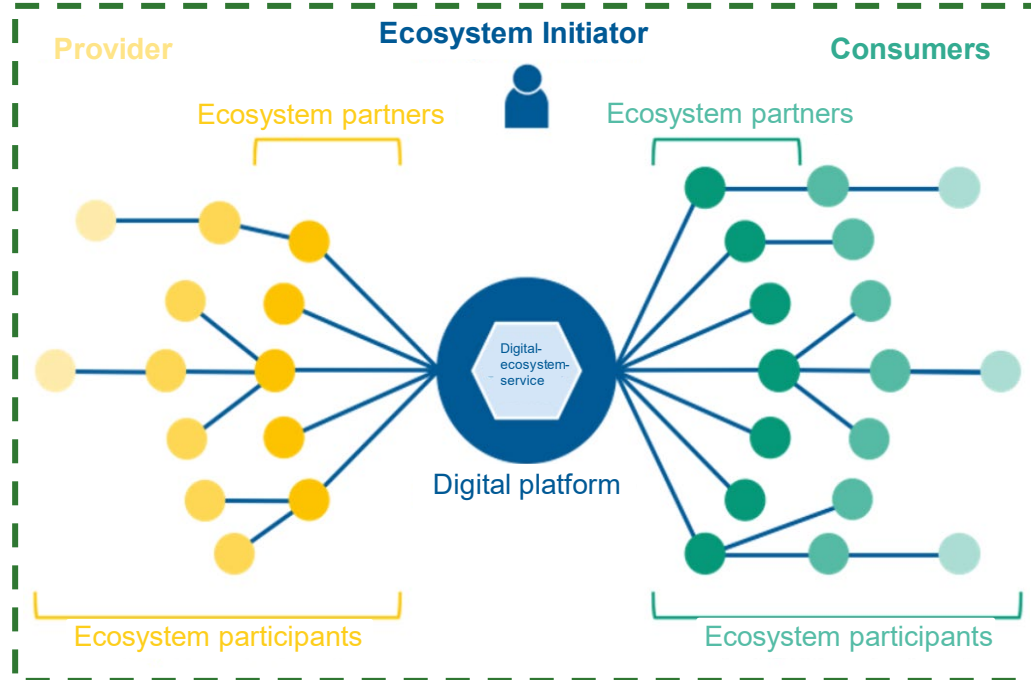


Source: <https://www.it-daily.net/it-management/erp-sap/prozessoptimierung-im-anlagen-und-maschinenbau-dank-industrie-4-0>

Digital ecosystems: a classification

- Digital ecosystem are **socio-technical systems**, in which businesses and people cooperate (Fraunhofer, 2021)
- a **digital platform** supports collaboration through ecosystem services
- **Mutual benefits** are created
- ecosystem participants **create network effects** through their interaction via the platform

Actors of a digital ecosystem and the digital platform



Source: Own reproduction according to Fraunhofer Institut, IESE (2021). Digitale Ökosysteme und Plattformökonomie: Was ist das und was sind die Chancen? (<https://www.informatik-aktuell.de/management-und-recht/digitalisierung/digitale-oekosysteme-und-plattformoekonomie.html>)

Global platforms with own ecosystems

Bigtech ecosystems in payments

- Globally operating companies with their own standards and rules
- Data-driven business models
- Innovative customer experience
- millions / billions of users

BigTechs tend to form closed ecosystems / platforms

Payment services included



Lack of third party access rights...

- May lead to fragmentation of market
 - Higher costs and inefficiencies for users
 - Providers benefit from user data
- Digital Markets Act of the EU Commission is intended to address parts of these issues

Payments in ecosystems

BigTechs integrate payment solutions for retail customers in their ecosystems



Source: www.about.facebook.com

Financial and industrial sector
cooperation in digital ecosystems
(e.g. Siemens / Volkswagen and JP Morgan)



Open API Standards / Schemes for open ecosystems



Source: European Payment Council

Instant Payments as „new normal“?

→ Instant Payments = real-time settlement of transactions 24/7/365
→ **Instant and final settlement** as benefit also for insurance business

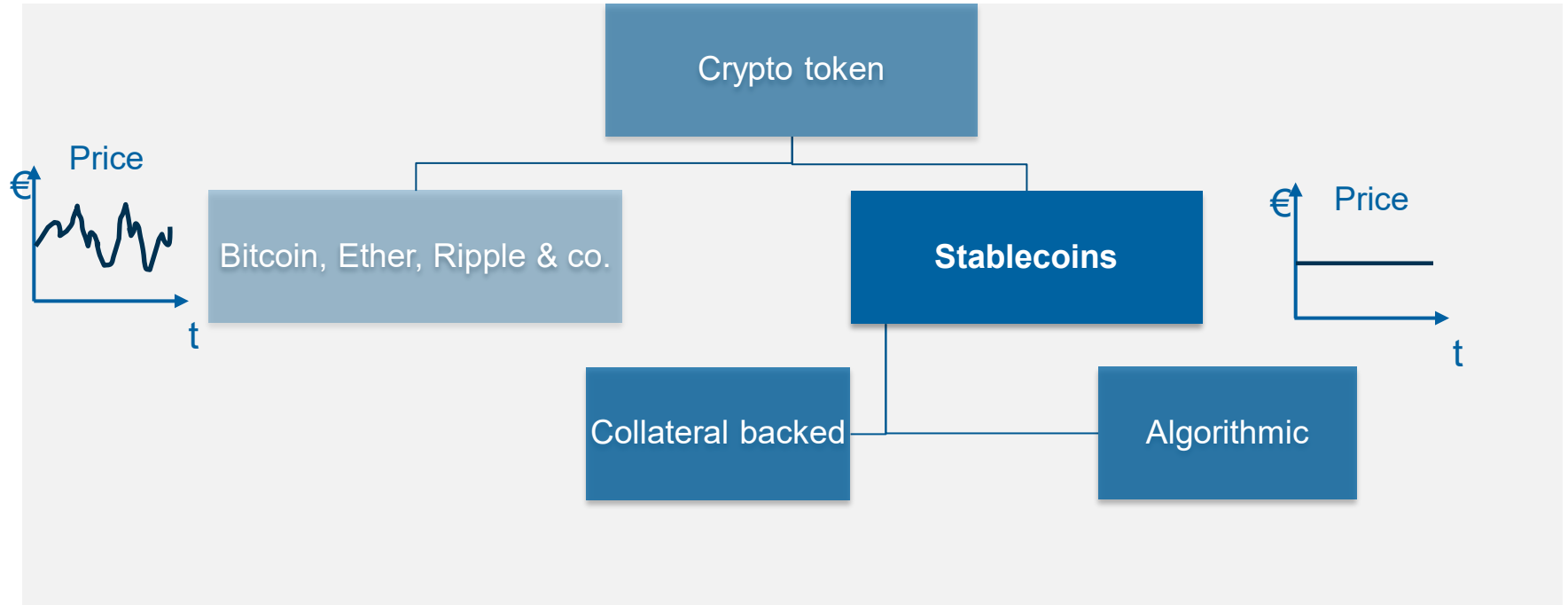
Current status in euro area:

→ 71% of payment service providers joined **SEPA Instant Credit Transfer (SCT Inst)** scheme
→ Up to 13% share of SCT inst volumes on total SEPA credit transfer volumes






- At least 1 SCT Inst participant and a majority of payment accounts in the country
- At least 1 SCT Inst participant but no majority of payment accounts in the country
- No SCT Inst scheme participants in the country

Crypto token and stablecoins



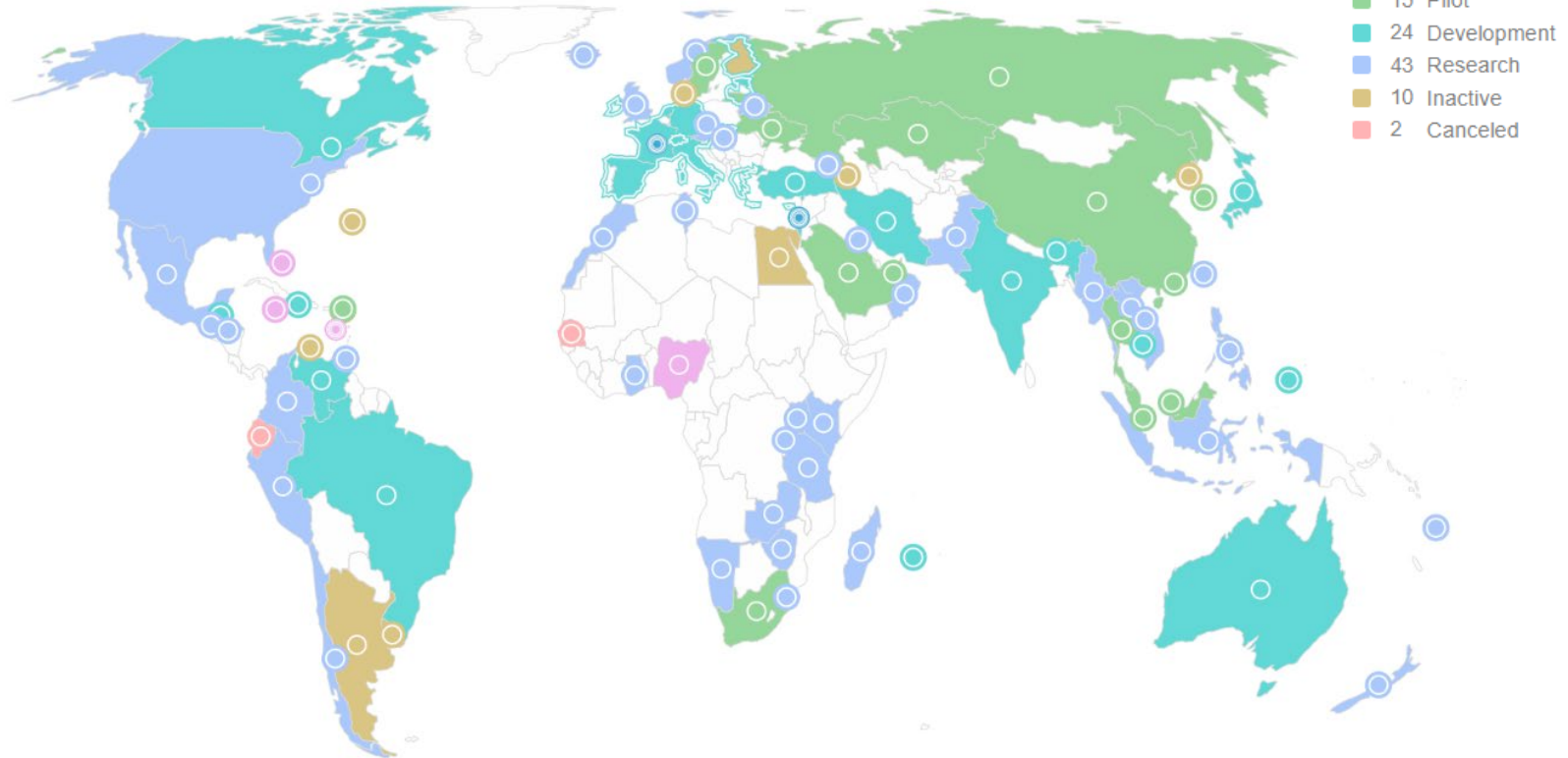
Source: Deutsche Bundesbank

Central bank digital currency (CBDC)

 Liability of central bank	 Liability of private company	 No liability
<ul style="list-style-type: none">i. Cash: physical form, <i>for general public</i>ii. Central bank deposits: <i>electronic form, limited access</i>	<ul style="list-style-type: none">i. Commercial bank moneyii. E-moneyiii. Some Stablecoins with a claim against an identifiable legal entity	<ul style="list-style-type: none">i. Other crypto token

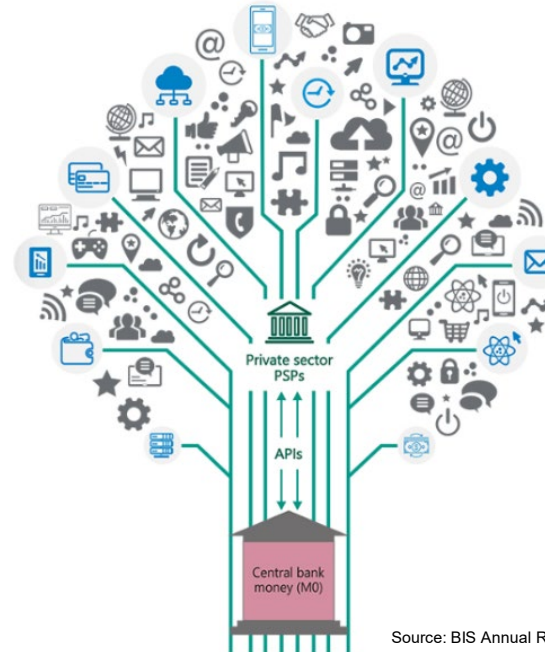
Central bank digital currency, e.g. digital euro: complement to cash

CBDC – initiatives worldwide



Motivation for a digital euro

- Ensuring **strategic sovereignty** of European payments
- **Fostering innovation** as digitalisation is calling for more innovative and automatised processes

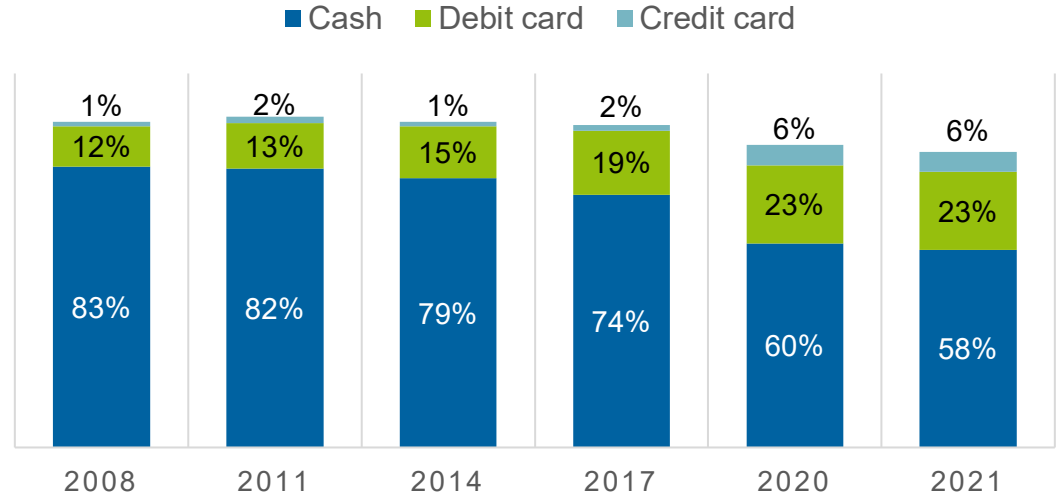


Motivation for a digital euro

- Ensuring **access to central bank money** for citizens also in the digital age

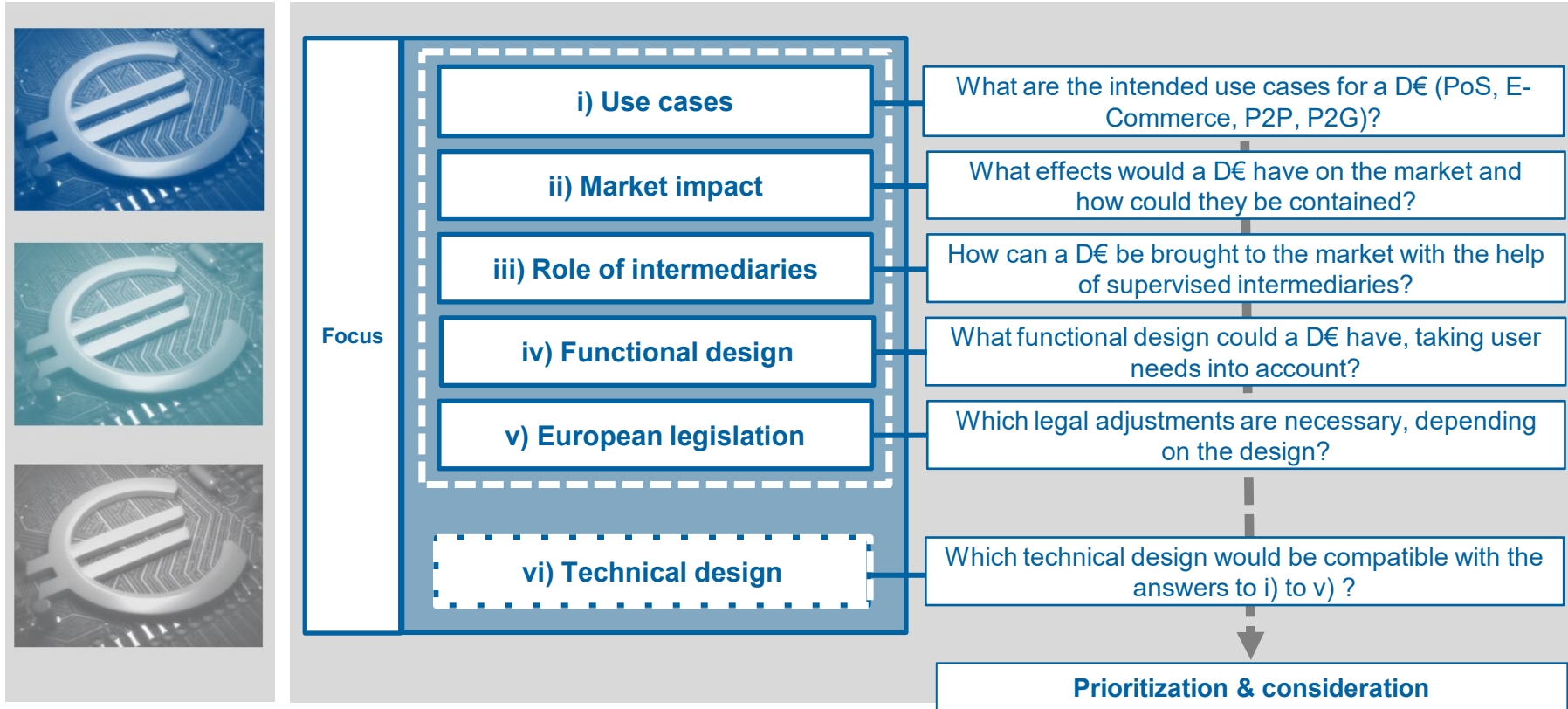
Cash payment share in Germany

According to payment diary among consumers. Missing to 100%: other payment methods.

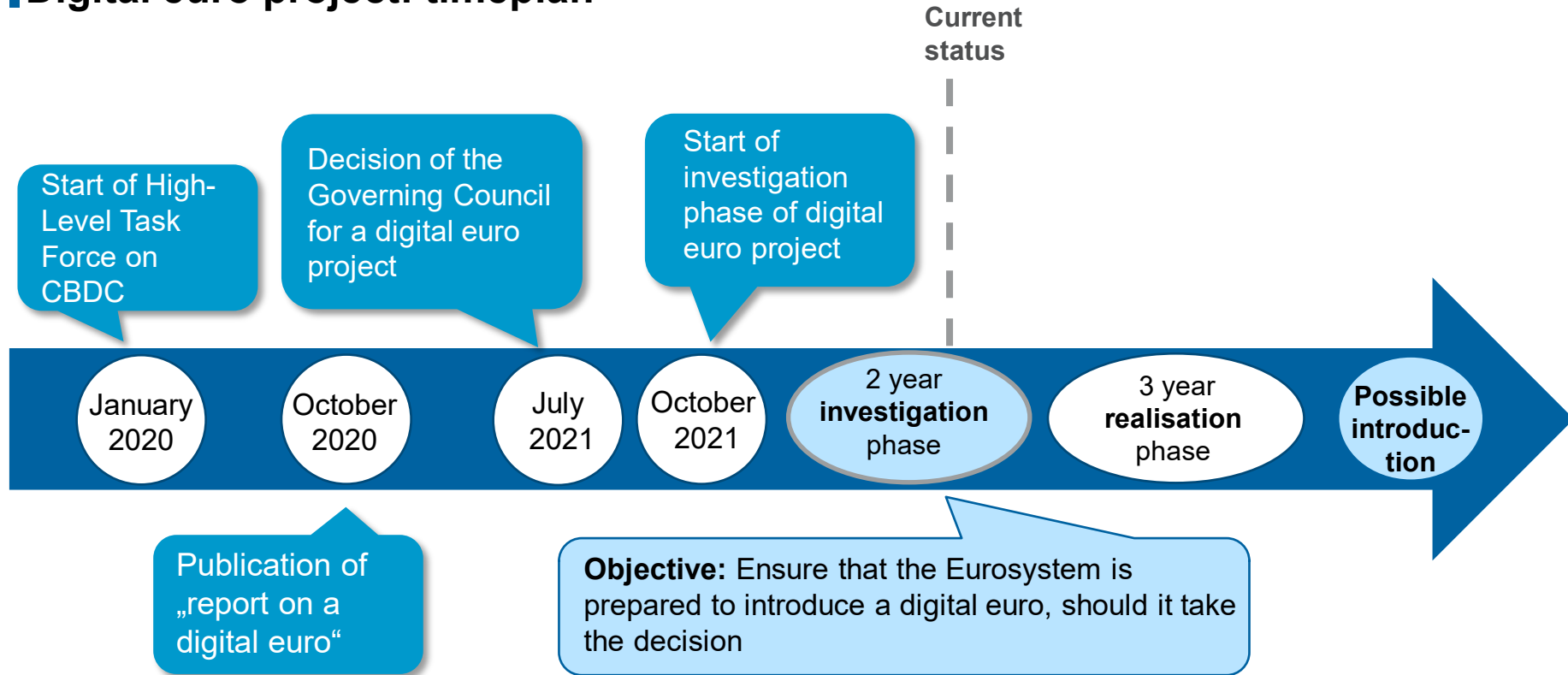


These and other results can be found at www.bundesbank.de/zahlungsverhalten
Source: Deutsche Bundesbank

Digital euro project: investigation phase



Digital euro project: timeplan



Thank you very much for your attention!

