

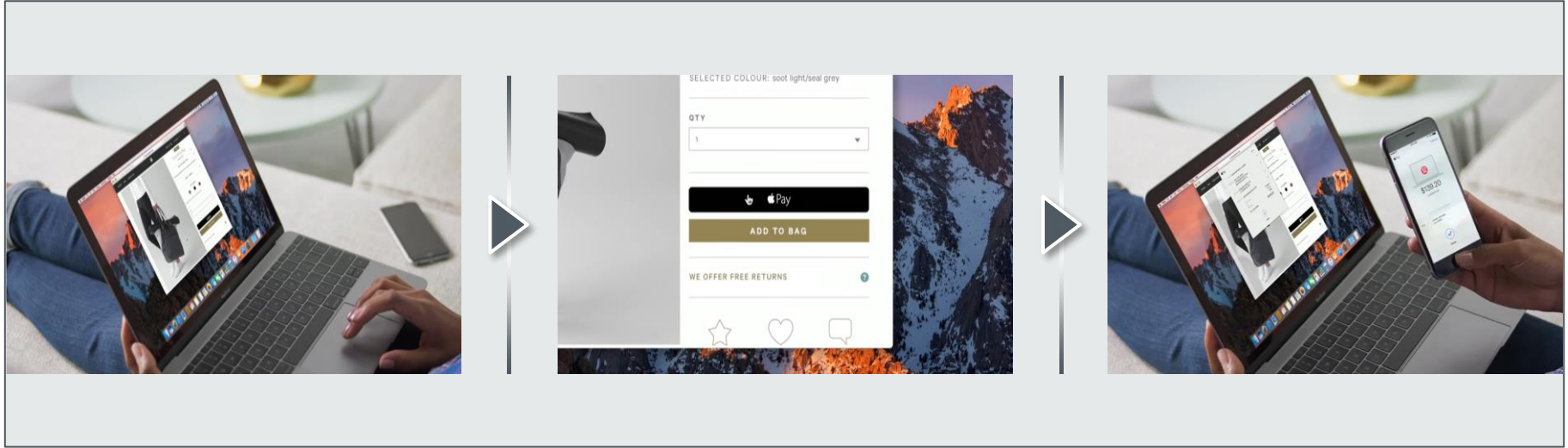
“The cards will be reshuffled”

A Vision for Request to Pay

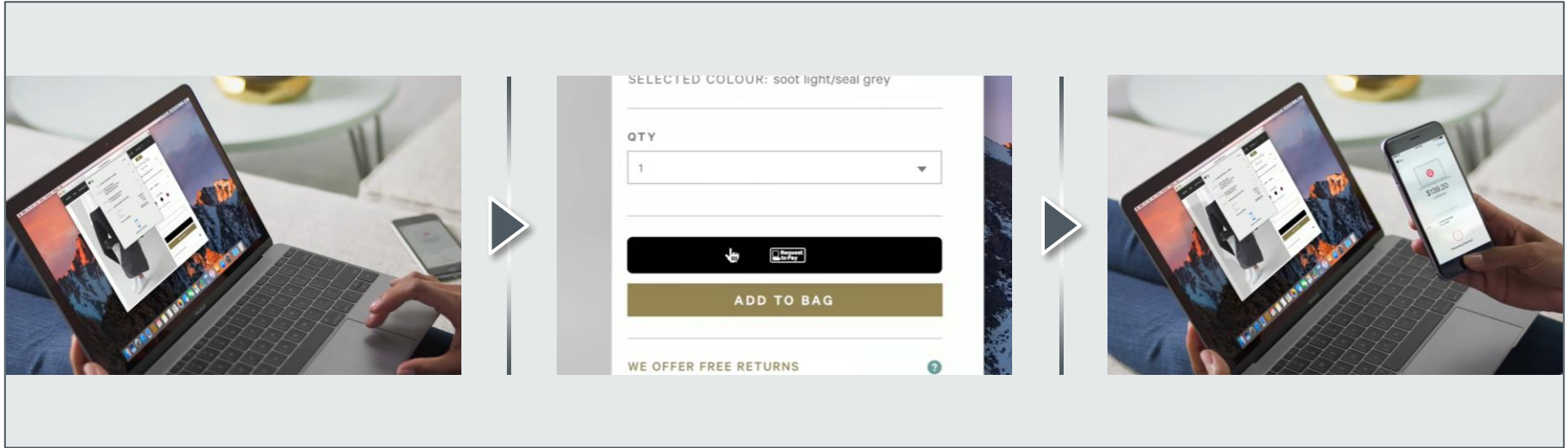
Swiss Banking Service Forum 2022

Zurich, September 7th , 2022

I E-commerce Apple Pay Transaction



I E-commerce Request to Pay transaction



Everything changes in payments nowadays, but is it?

E-commerce Apple Pay Transaction



Can you see
the eye-
catching
difference?

E-commerce Request to Pay transaction



“The cards will be reshuffled”

A Vision for Request to Pay

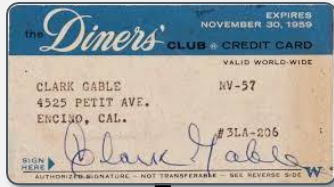
Swiss Banking Service Forum 2022

Zurich, September 7th , 2022

I

The 4-party model has established itself as the “gold-standard” for payments since the foundation of the Diners club card in 1950

Diners Club



1950

Credit Card



1958

Debit Card



1968

Fast forward



today

The principle and the backend process of the transaction of credit/debit cards **has not changed in years.**

Source: COREinstitute | 1: Or any other applicable & accepted pairing mechanism

CORE SE | A vision for Request for Pay | Zurich, September 7th, 2022

Customer
(Payment
instrument)



Merchant



Issuer



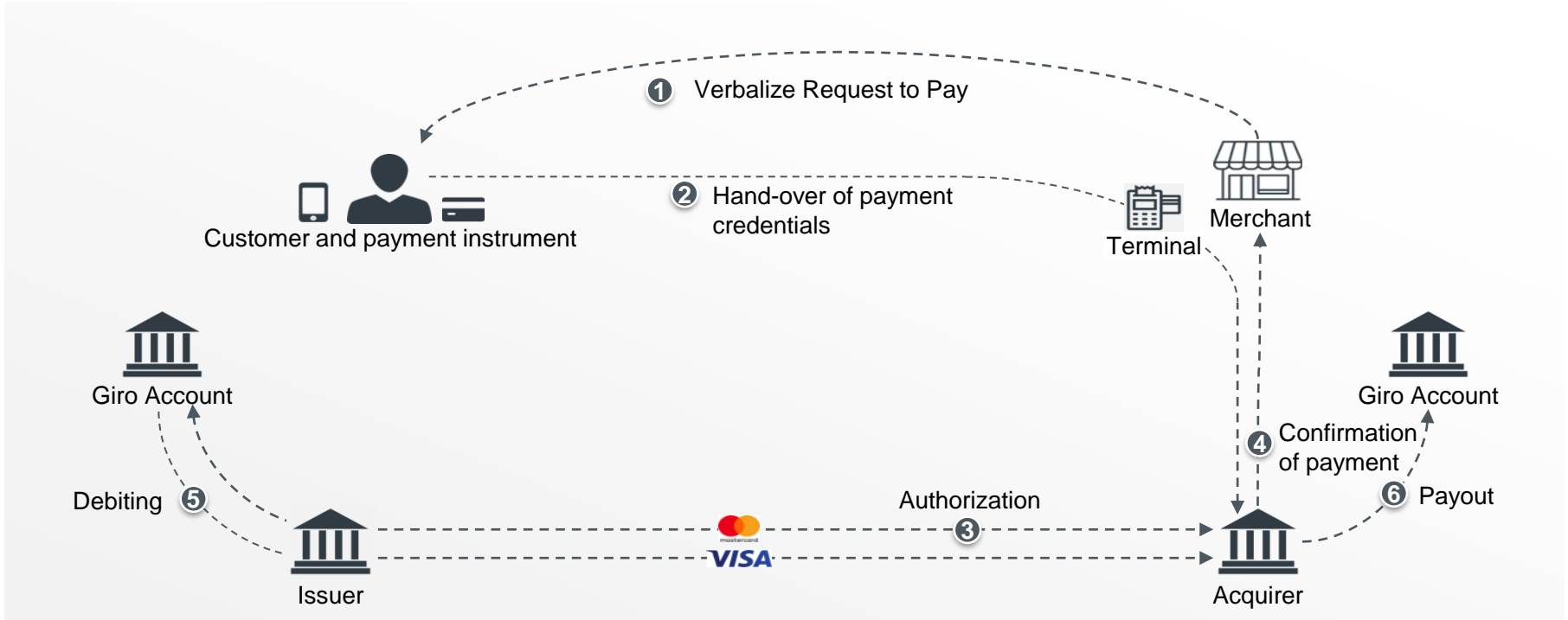
Acquirer



I The 4-party model has established itself as the “gold-standard” for payments since the foundation of the Diners club card in 1950

Standardized 4 party model transaction process

■ Conventional card-base procedures



Source: COREInstitute | 1: Or any other applicable & accepted pairing mechanism

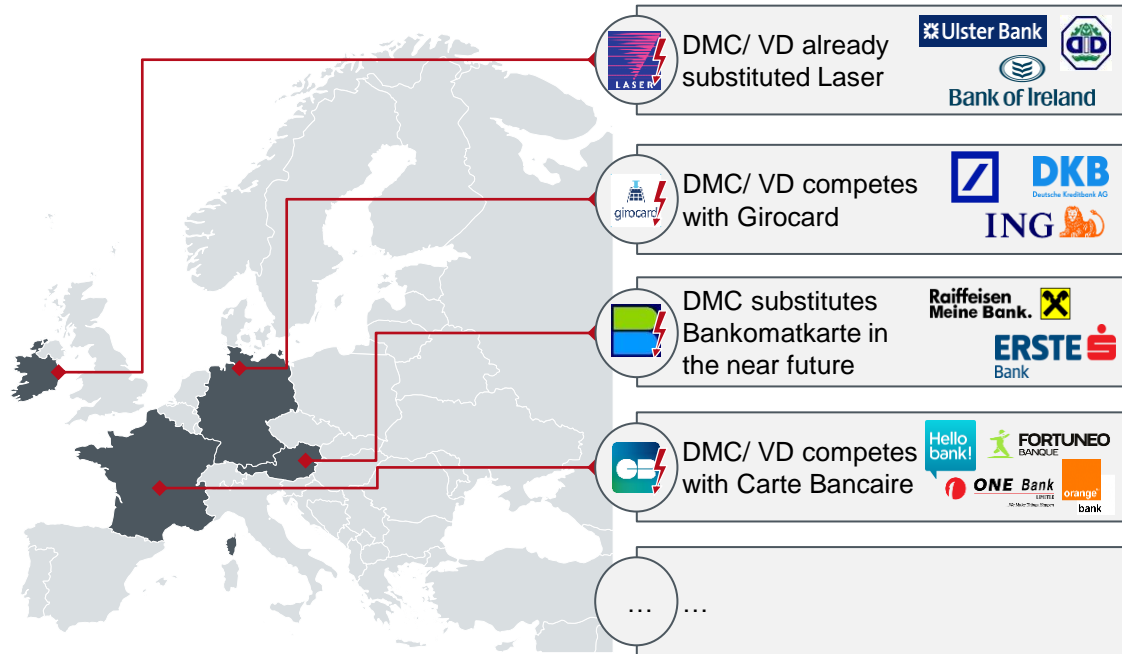
Over the last 5 years, international card schemes enabled technical interoperability of debit & credit, displacing National Schemes in Europe

Strategic approach of internat. card schemes

- International card schemes acknowledged that a majority of cardholders prefer a direct charging of their account for most transactions
- The next generation of debit cards (Debit Mastercard / Visa debit) are technically based on credit cards
- The most important change is that 16-digit PANs start fully supporting e-com. and tokenization
- Merchant acceptance retains the same global reach, and could be even larger than for credit card acceptance
- Functional benefits enable tactical displacement of existing national payment schemes, with a simultaneous approximation of scheme fees

Both Maestro and V-Pay have announced their decommissioning for the next years

Observable market development (selection)



I Also, for Issuers these next generation debit cards appear promising – but impact on positioning against credit cards to be considered

Issuer perspective on next generation debit cards



Cardholders expect transactions to be **visible on the current account and “real-time”** – which also implies **more visibility and interaction points for the account holding banks**



Full **eCom- and Wallet-readiness** as crucial benefit as **large amount of purchase volumes** shifts to **digital channels**



Debit cards are **scaling even better**, as they can more easily be issued for **low-scored or underaged customers**



Further trends

CDCVM

Consumer
Device
Cardholder
Verification Method

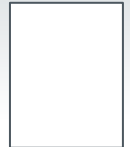


SoftPOS

mPOS and
SoftPOS
methods



**Redesign of
Checkout
process**



I Another recent development is Invisible Payments, where the „active“ Payment process for the user is abolished

”

Invisible Payments describes Payment transactions that are **not actively triggered by the customer** and are processed entirely in the background



teo amazon go



Uber
FREENOW

Switch as of
8. March 2021*



SmilePay

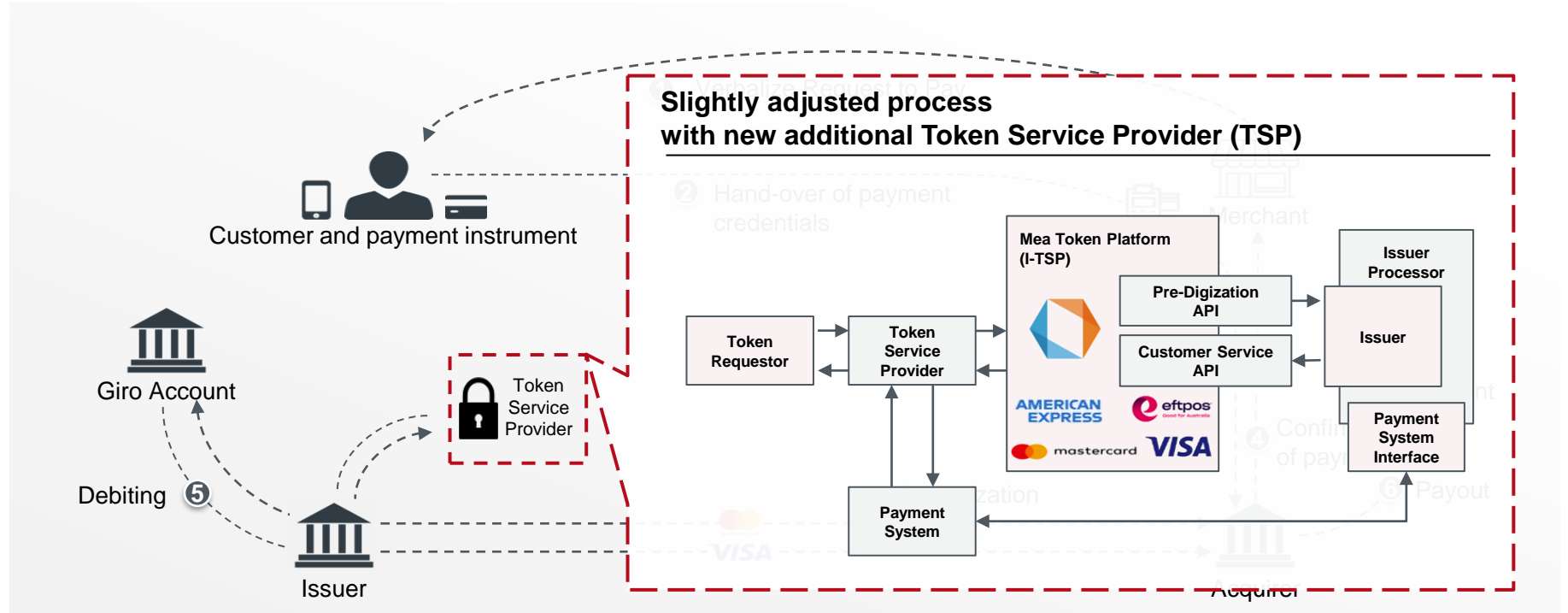


Burger King Beijing
facial recognition payment

*Introduction of "QuickPay" at FEE NOW from 8.3.21. The payment process will then be initiated automatically at the end of the journey, possibly driven by PSD2 to comply with the corresponding SCA exception.
Sources: AFP; <https://www.bloomberg.com/news/articles/2019-12-19/germany-bans-uber-services-citing-anti-competitive-practices>; <https://kinzig.news/8574/tegut-zum-selbstkassieren-digitaler-store-auch-im-mkk-denkbar.html>; <https://freenow.de>

The 4-party model is used, only partly complemented by a TSP

■ Conventional card-base procedures



CORE SE | A vision for Request for Pay | Zurich, September 7th, 2022

I

To put it into a nutshell, by 2022 the client dimension of payments has seen tremendous innovations, whereas the “backend-side” remains more or less unchanged

Content already imparted



Impact on Client Dimension

- Complete **overhaul of the frontend**
- **Embedded** and **easier** execution of transactions
- Usage of mobile and **new biometrics** authentication

Backend effects

- Except for Token Service Provider there are **no real variations in payment processing**
- Slight changes in procedural structure
- Structures rather **electrified than overhauled**

Chapter II

The potential of standards

II





Technological standards have and may further increased the standardization of elements of the payment value chain

Technology Standard

Short description

Recent developments

Current observations

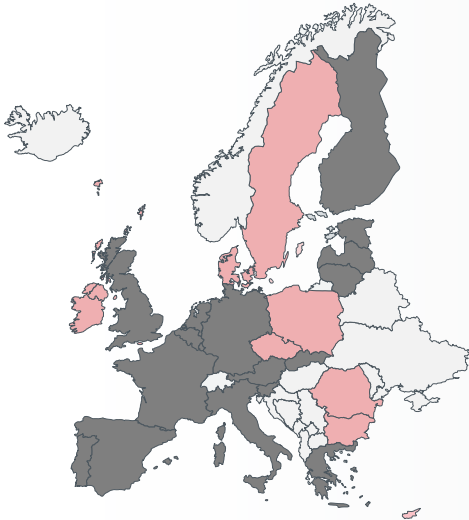
 Instant payments	<ul style="list-style-type: none"> ▪ Instant settlement of account-to-account payments within a specified targeted maximum execution time (10 sec. for SCT Inst and SIC-IP Service) ▪ Originator bank receives a notification that the funds are made available for the beneficiary 	<ul style="list-style-type: none"> ▪ Go live of the SIC IP Service in Nov 2023 with a market launch in Q4 2024; mandatory for the top 50 banks in Switzerland ▪ Version 1.2 of the SCT Inst rulebook issued on 25th May 2022. Effective date will be on 25th April 2023 	<ul style="list-style-type: none"> ▪ Regulatory forced market standards are product elements to build payment networks upon. ▪ However, even though they do have a high degree of standardization within their category they currently still need to gain significant market reach and they usually do not cover the complete value chain required for a payment scheme <div data-bbox="1506 764 1864 993"> <p><i>Once those standards will have significant market penetration, they will also enforce the competitive pressure for the cards industry.</i></p>  </div>
 RTP	<ul style="list-style-type: none"> ▪ The RTP scheme offers the possibility for a payee to request funds from a payer. ▪ With V2.0 of the rulebook the payee can request a payment guarantee that the payer can optionally respond to prior to actual settlement 	<ul style="list-style-type: none"> ▪ The effective date of the first release was set to 15 June 2021. ▪ The second version of the RTP rulebook was published on Nov. 30th, 2021 	
 Standardization of QR-codes & MSCTs, as well as SEPA Payment Account Access (SPAA) Scheme	<ul style="list-style-type: none"> ▪ Standardization of QR-codes for Mobile ▪ Initiated SEPA (Instant) Credit Transfers 	<ul style="list-style-type: none"> ▪ The European Payments Council (EPC) published version 2.0 of the Proxy Lookup (SPL) scheme rulebook currently on hold ▪ Last timing for release was cancelled (should have been between 1st Feb until 30th April 2021) 	



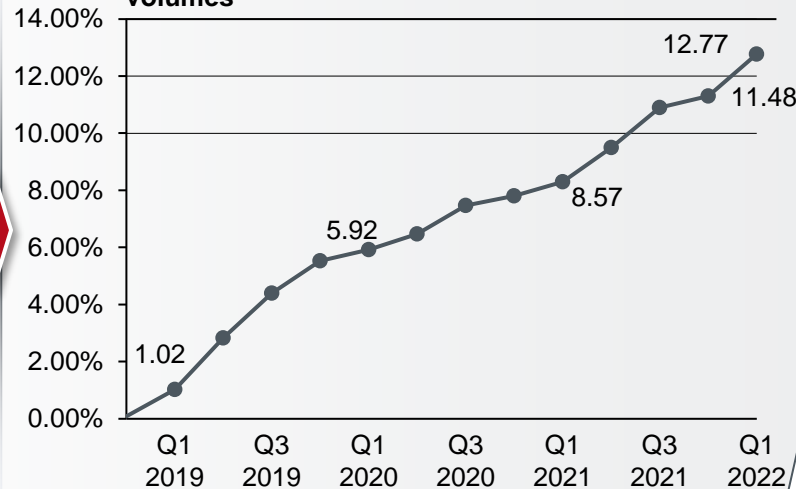
One example is Instant Payment, where 22 European countries have adopted SCT Inst since 2017

SCT Inst implementation in Europe

- 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



Estimated share of SCT Inst volumes in total CT¹ volumes



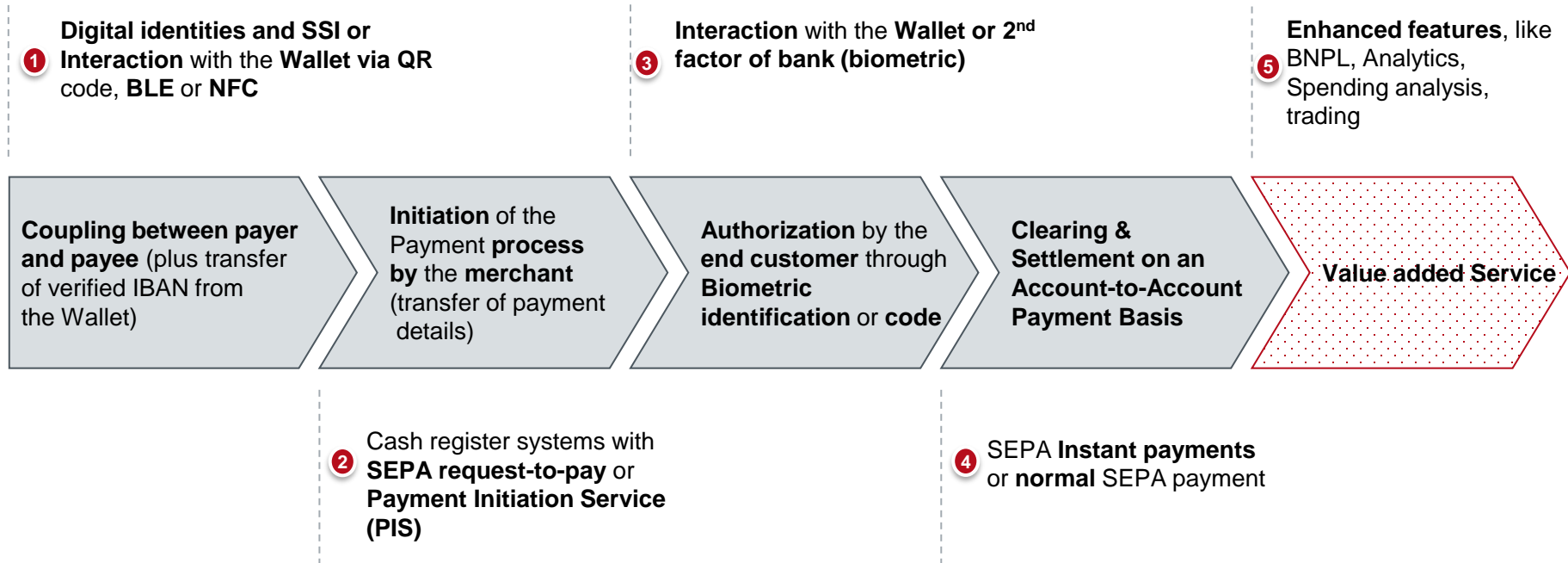
Results since launch in Nov. 2017

- **2.360 PSPs have joined the scheme**, meaning **61% of European PSPs³**
- **42 CSM organizations³ announced compliance** with the SCT Inst scheme
- **In Q2 2022, around 12,8% of all SEPA Credit Transfers were processed instantly** - over 99% of transactions were completed in less than five seconds

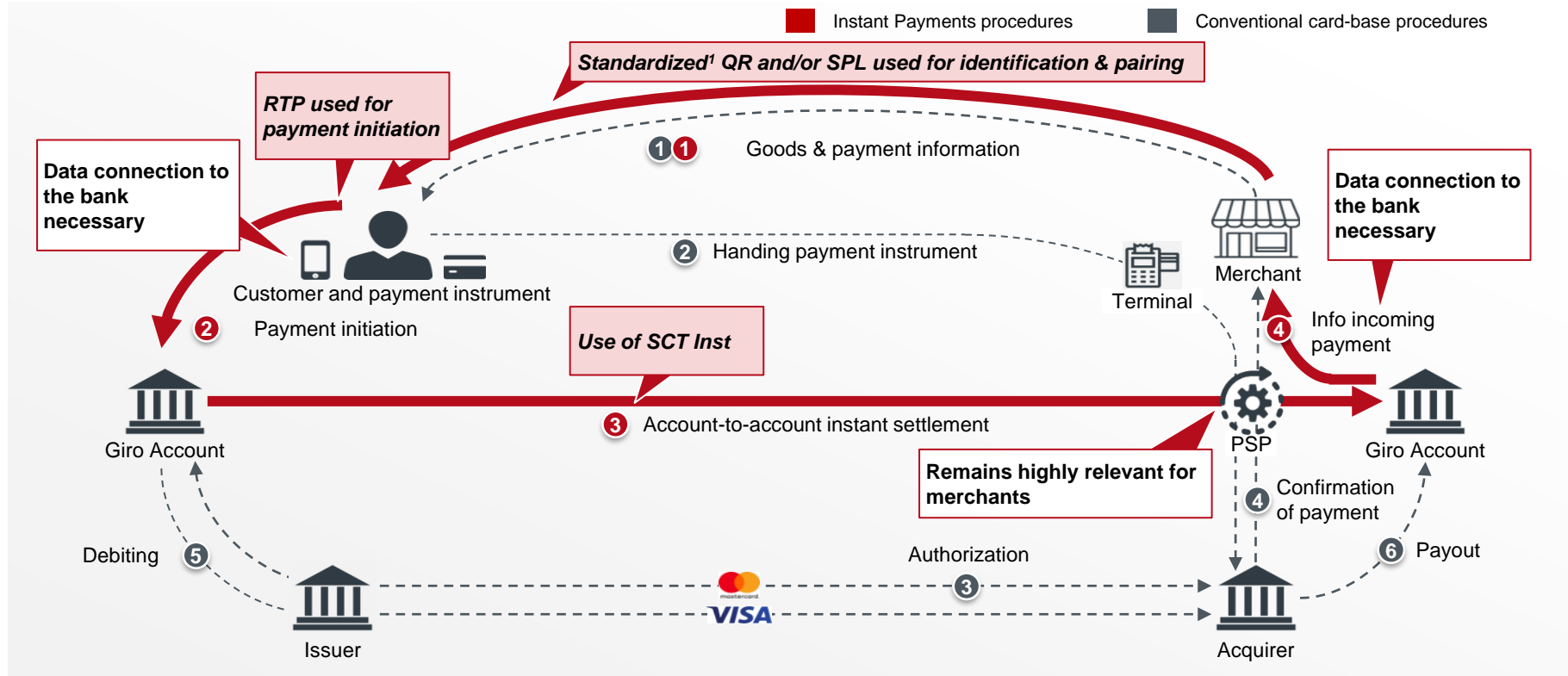
II

These standards can be the puzzle pieces to build a modular a payment system is, which is highly fitted to specific use cases

Every Payment Process has 4+1 elements:



Utopia: the joint-effects of introducing instant payments and other solutions with the potential to alter the power structure in the payment ecosystem



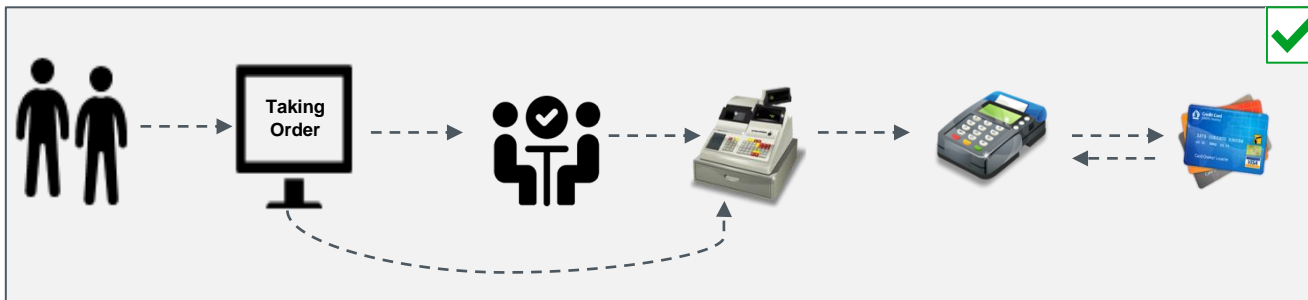
Source: COREInstitute | 1: Or any other applicable & accepted pairing mechanism



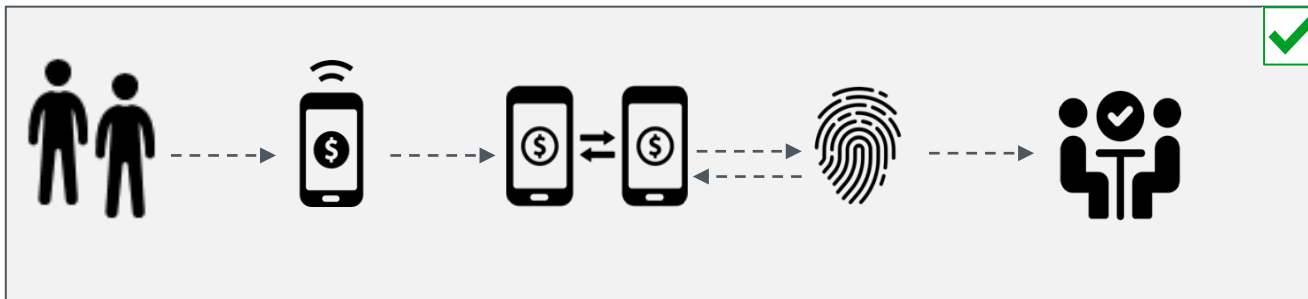
Who benefits from these new payment methods? There are plenty of use cases where this procedure can be adapted 1/2

Use case 1: Paying in restaurants, gastronomical industry

Transactions with classic 4 party model:



Transactions with Request to Pay:



What is going to change?

- Today's gastronomical institutions provide **two types of management systems**.
 - One system for their business administration (orders, logistics..)
 - One system for payments
- In RtP each order can be already **placed in app** and can be **paid in app**.
- Here-by the **provider** of the **restaurant software gains the fee** which was before taken by VISA/Mastercard for their card terminals.

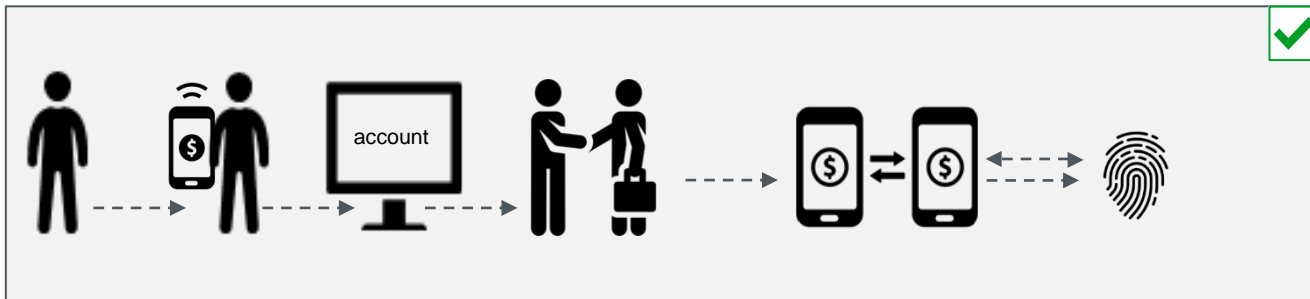
Who benefits from these new payment methods? There are plenty of use cases where this procedure can be adapted 2/2

Use case 2: Paying in retail trade

Transactions with classic 4 party model:



Transactions with Request to Pay:








What is going to change?

- In today's process of buying clothes, usually in store you get **professional advice** on fashion
- The **customer journey of tomorrow** can be changed to:
 - Arrive at store
 - Scan QR code at entrance
 - Get advises already on past buying history
 - Style advisors already know your size and can provide examples what could fit to your style
 - Direct in App payment through Account-to-Account



Utopia or Dystopia?

Decide for yourself ...

Scheme	Merchant	Issuing Bank	Acquirer	Client
				
<ul style="list-style-type: none"> There is no need for classical scheme Therefore no scheme fees 	<ul style="list-style-type: none"> New role, with either deeper value chain or new partners Better financial conditions 	<ul style="list-style-type: none"> No interchange anymore Needs to restructure their current business model and refocus 	<ul style="list-style-type: none"> Change of roles, but terminal provider, but technical partner No reconciliation, but other services required 	<ul style="list-style-type: none"> Simplified transaction and value add Cheaper (?) payment products
Classical scheme not required anymore	Reduced fees and fitted process	Requires new structuring, looses Interchange	Industry and technical user journey experts required	UX is key

Chapter III

Reality check



This is not necessarily just an utopia, but already in development or live!

Point of Sale based

January 26, 2022

Pavel Sokolovas • 2
Founder & COO at Kevin, The Future of Payments
1 Tag • Bearbeitet • 1

The Future of Payments is NOW
Please meet the first live A2A payment on a POS payment terminal!
No Card Scheme involved!

Customers will have the same NFC payment experience as they would with Apple Pay or Google Pay. And there will be no need to inform the cashier that you will be paying with A2A or [kevin](#).

[kevin](#), together with [Worldline](#), has developed the first kernel for POS payment terminals that take A2A payments.

eCom based

Emirates Pay in UK and Germany live since May 2021!

Current payment methods hinder sector profitability

- Airline industry pays US ~\$8 bn./year in card transaction fees alone

IATA Pay leverages Open Banking/Request-to-Pay schemes

- Customer just approves the charge via online or mobile banking app
- Payments settled in 24h with minimum fee, enhancing airline liquidity
- Developed in collaboration with Deutsche Bank

Trustly provides payments for Ikea since Nov. 2021!

Trustly and IKEA create a better global payment experience together

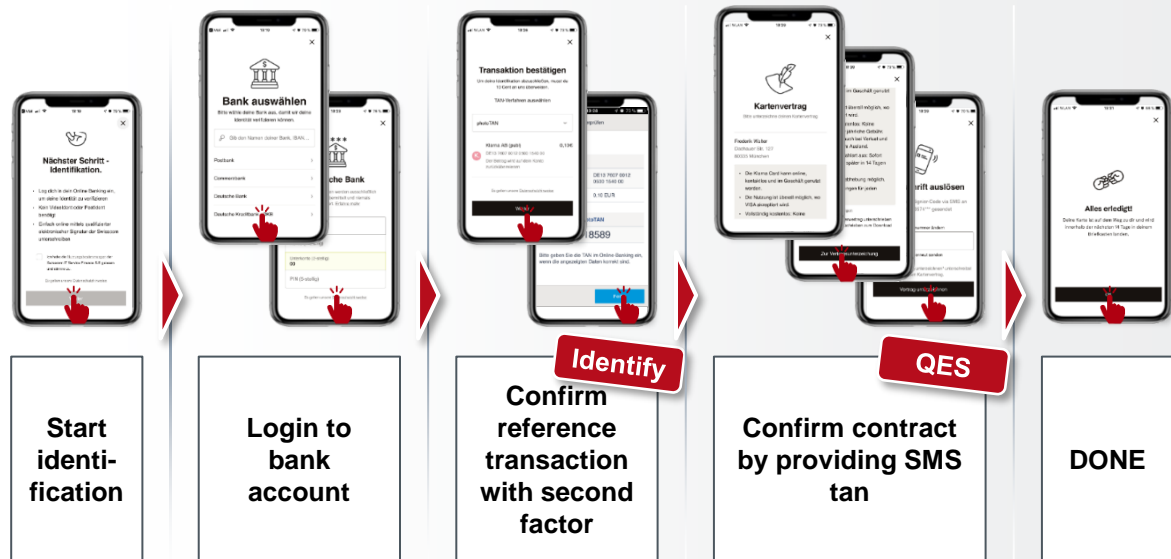
- Offering direct account-to-account solution through one API-integration
- High average transaction volume
- Less administrative effort for Ikea

Trustly provides a low cost approach, simple and secure way for costumers to pay

- Fast settlement
- Reduced fraud
- Instant refunds for buyers

Lean identification process by leveraging existing bank account in combination with a Qualified Electronic Signature (QES) e.g. opens doors

Exemplary identification with QES at Klarna



The onboarding process is easy for users to go through, scalable and there is no human interaction necessary

Solaris Bank and Samsung Pay followed a similar path



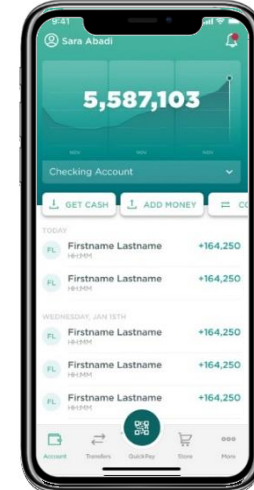
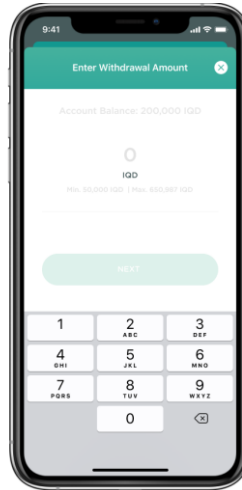
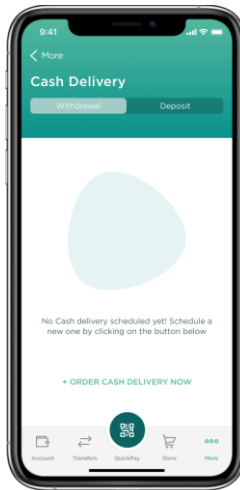
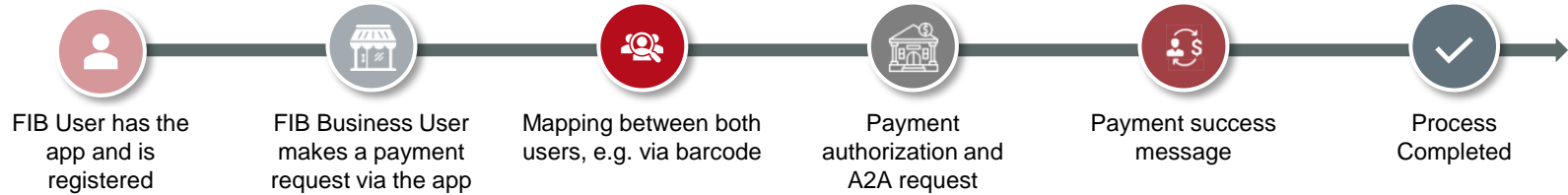
- **Samsung and Solaris Bank entered a partnership to introduce Samsung Pay in Germany**
- **They bypassed established banks by engaging with Visa:**
 - **Customers receive a virtual Visa debit card** which is issued after **lean KYC process** making use of the QES (See left)
 - **Purchases** from Samsung Pay customers are then **collected via direct debit from existing current account** of the customer and credited to Solaris Bank card account
 - **Interchange fees** will be **credited to Solaris Bank** (And potentially Samsung Pay)

A QES shall have the equivalent legal effect of a handwritten signature



Case Study: In a market setting with immature infrastructure, institutions need to be creative in order to deliver services, i.e., payments or cash without ATMs

Payment flow overview – FIB



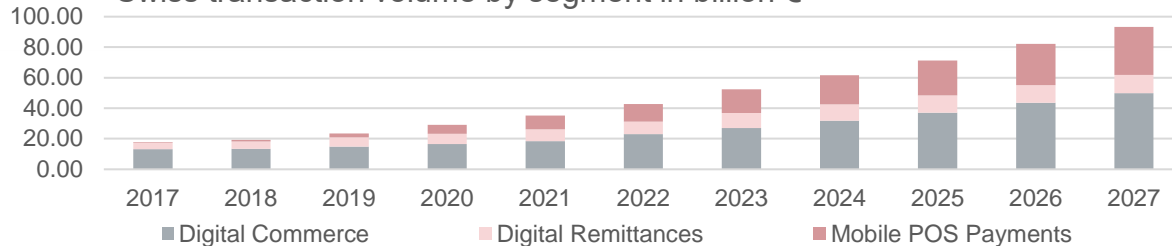
Chapter IV

Outlook & Trends

IV

Covid-19 crisis as accelerator for rising transaction volume as well as penetration rate of mobile ...

Swiss transaction volume by segment in billion € ¹



Research and Markets reported in their **Global Embedded Payments Market Report 2022** that the embedded payments industry alone is expected to **grow by over 40%** globally and is to reach **\$124 billion value in 2022**, and **\$380 billion by 2029**.

Key findings:

- There will be a significant **rise** in digital payment means
- **Average penetration** of Switzerland is in comparison to all countries listed up in the statistics in **top ten ranking of rates**
- Forecast on **Penetration rate** greater than **>22% by 2027**

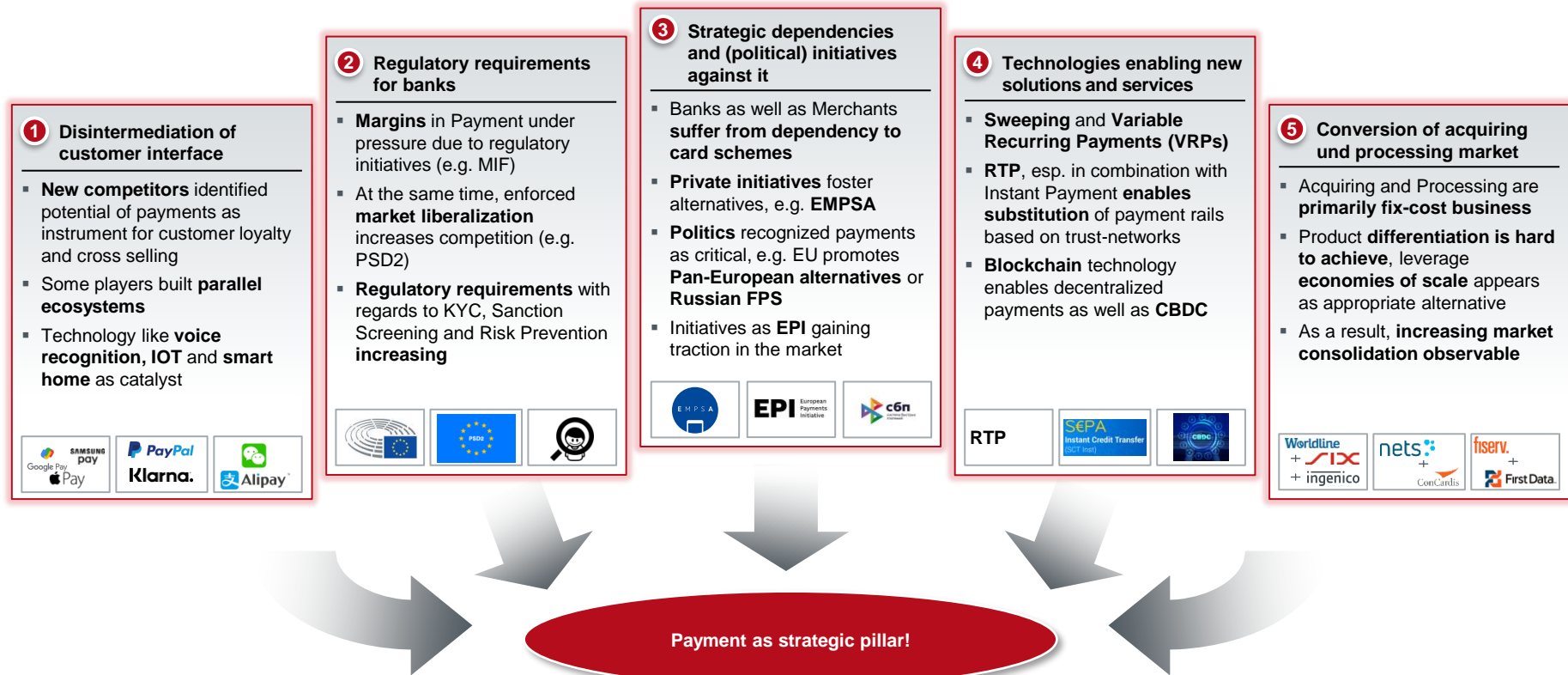
Key learnings:

- Change in Switzerland is **accelerating** in the next years
- **There will be more** and **rising payment possibilities** for digital suppliers
- **Positioning** must happen **now** to **participate** in market growth

¹ <https://de.statista.com/outlook/dmo/fintech/digital-payments/swiss#anlagevolumen> ² <https://de.statista.com/outlook/dmo/fintech/neobanking/weltweit?currency=EUR>

IV

... and the conjunction of development has the potential to change the whole payment value chain fundamentally in the next years



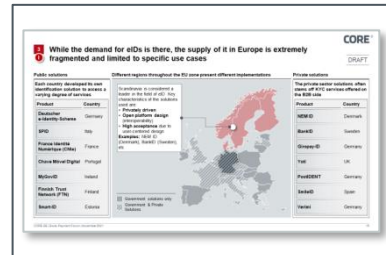
IV

eID solutions will play an integral role, even if neither a specific technology, nor a vendor is dominantly established yet

I

Options in the European market

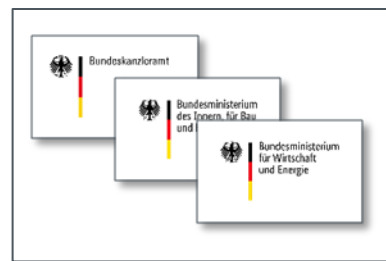
- Large number of public, private and public + private initiatives around Europe, but each with a limited scope of application
- The limited interoperability of the available options and the limited convenience of the interoperable ones, creates an extremely fragmented market with no clear leading solution



II

Regulatory approaches at the German and European federal level

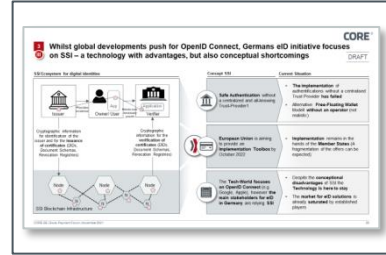
- European amendment to eIDAS regulation, planning on a European Digital Identity Wallet
- In Germany, several projects are being pursued in parallel (e.g. Bundeskanzleramt, BMWi, BMI)



III

SSI Solution

- All the different SSI implementations so far share the same technical design flaws (endpoint compatibility issues, privacy concerns with DLT, central authentication server...)
- Delays in the implementation of a Europe-wide tool box drive nationalism and patchwork; any changes at the base technical architecture counteract the initial decentralized approach





One the one hand side, Apple rolled out its own solution in the US, enabling citizens in 8 states to travel with their digitized driving licenses and ID cards

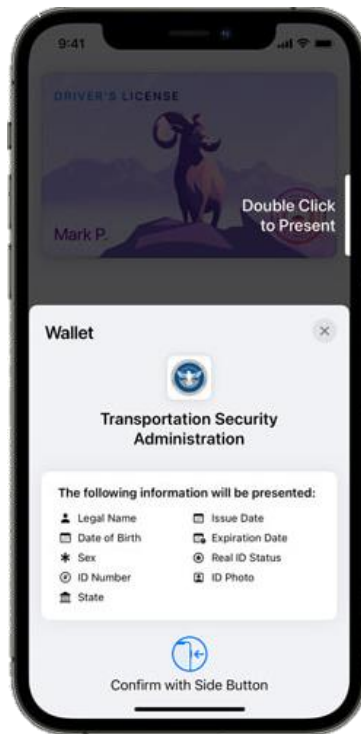
Apple defined own identification standards and is a first mover in the US market

Easy verification process:

- A picture of the ID
- Face ID confirmation
- A final verification by the state

Robust privacy measures:

- Neither Apple nor the state know when or where the user is presenting his/ her ID or driving license
- No-touch encrypted transmission of data to the identity reader
- Guidelines ISO 18103-5 mDL for personal identification



Bottom Line

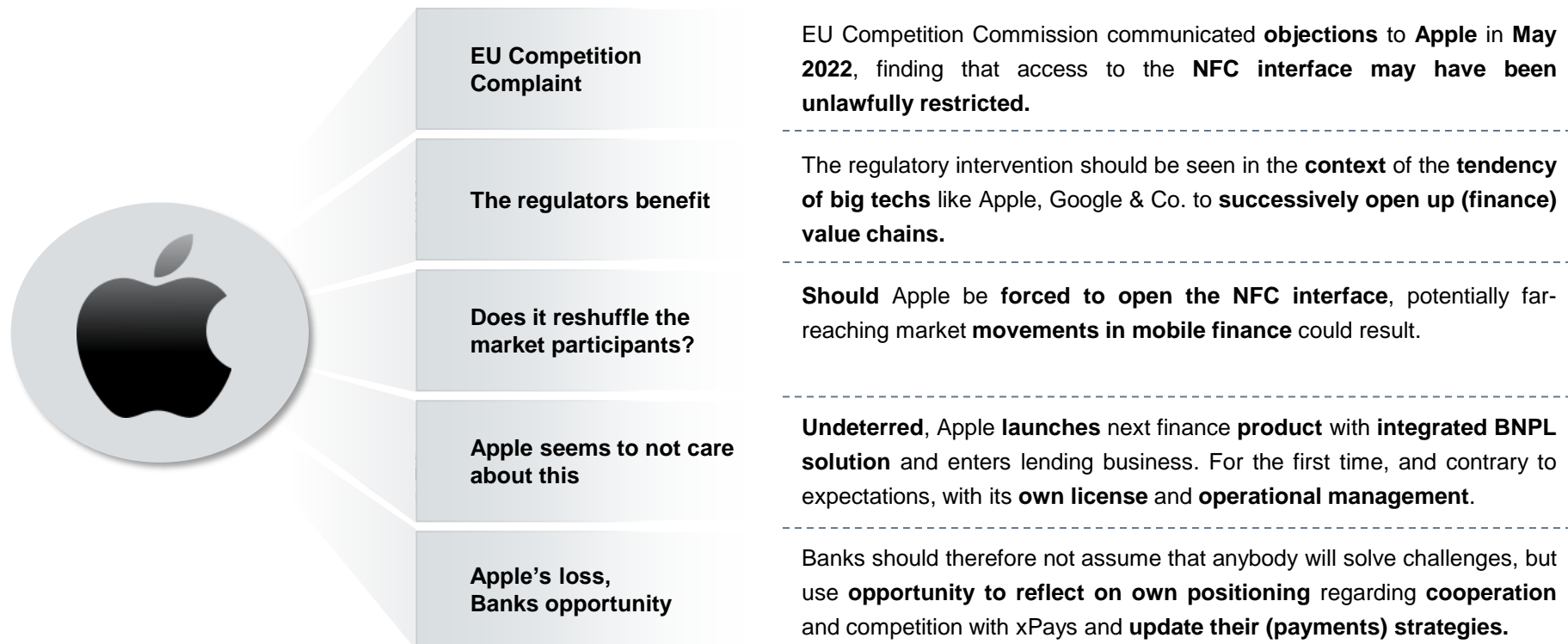
- In **Europe**, the regulation-first **approach** with **implementation burden** on the states **reached questionable results**
- In the United States, Apple is establishing a **highly certified and safe eID** system that defines its **own standards**

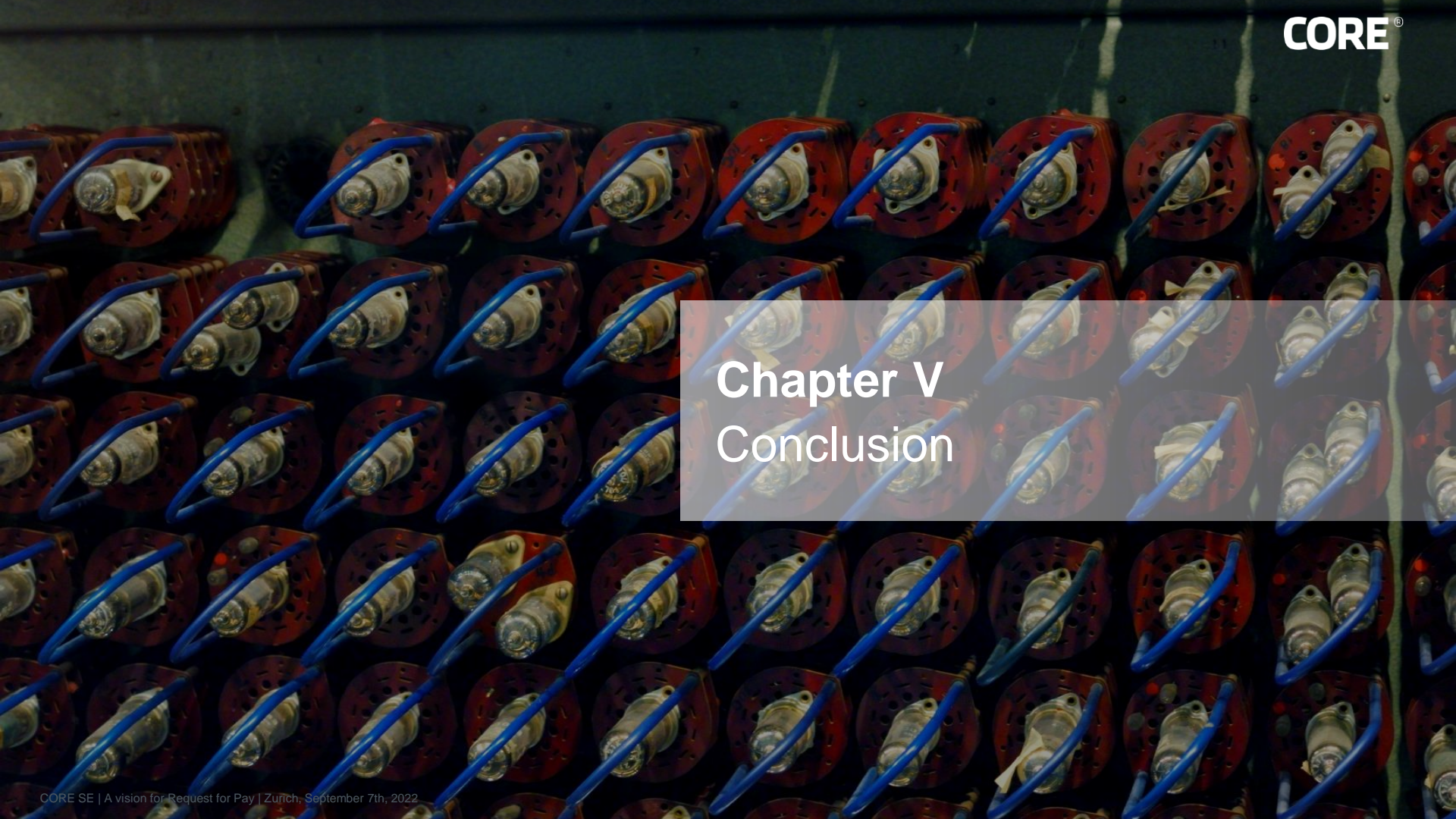
Key Take-Aways

1. Market forces are often **more efficient** than **regulatory** stimulus
2. If we don't **define our own standards now**, we will have to **adapt** on the **currently** establishing **industry standards**

On the other hand side: Will the regulator stop Apple's predominance?

Apple under pressure due to illegal NFC interface





Chapter V Conclusion

Short- and long-term measures are required, in order to defend & strengthen individual market position

Solution dimensions

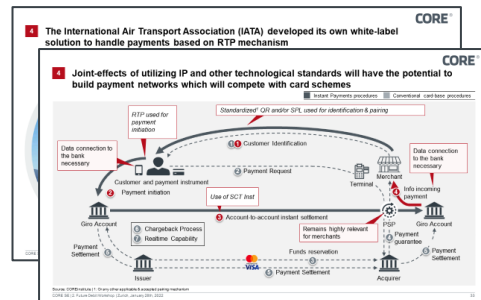
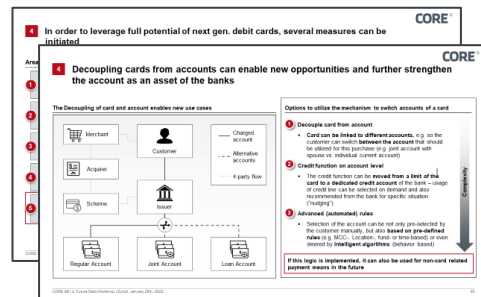
Short-term: Improvements and optimizations of card portfolio, by...

- ...enable market differentiation by new features and VAS
- ...enable new card related revenue streams
- ...increasing efficiency

Long-term: Build strategic solutions, by...

- ...leveraging new technological standards (e.g., Instant Payments, SEPA RTP & SEPA Proxy Lookup)
 - ...mobilizing strategic partnerships
- and don't think payments only!***

Deep dives in backup



THANK YOU FOR YOUR ATTENTION

Web: core.se

Blog: core.se/techmonitor




linkedin.com/company/core.se


facebook.com/CORE.social

twitter.com/CORE_SE_

Fabian Meyer

Managing Director

 +49 172 6396 468

 fabian.meyer@core.se



CORE SE
Am Sandwerder 21-23
14109 Berlin
Germany

COREtransform Ltd.
Canary Wharf, One Canada Square
London E14 5DY
Great Britain

COREtransform GmbH
Limmatquai 1
8001 Zürich
Helvetia

COREtransform Consulting MEA LLC
DIFC-105 Currency House, Tower 1
P.O. Box 506656 Dubai
United Arab Emirates

CORE – International technology think tank & trusted partner of IT-driven institutions

CORE is the trusted partner for international business-critical technology transformations



With offices in Europe...



• Project locations

... and in the Gulf region

Key facts

2010

Year of foundation

~135

Experts

**Berlin, Frankfurt,
London and Zurich**
Headquarter

CORE is an independently managed consultancy as subsidiary company of EPAM Systems.

CORE – Experts in automotive, IT-research, IT-strategy development, IT-solution design and IT-implementation management

Tech Think Tank

Consulting boutique for applied strategy consulting and technology-driven business models.

Transformation Engineers

Specify. Design. Implement. Test. Repeat. - We turn ideas into technologies and products for our customers.

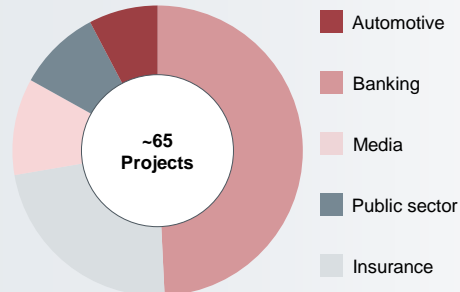
Venture Builder

Building Ventures – Translate ideas into successful businesses with the right partners.

Generalists and specialists working with the methods of strategy consultants and the tools of software engineers, compiling focused IT strategies and developing software for industries where IT is critical to business success.

CORE[®]
competence leads

With a total of 65 projects in 2021, CORE covers five industries and sectors, acting as a trusted tech think tank



CORE is a trusted partner for clients and institutions

- Membership of DIN reg. industry standards and ISO 27001 certified
- Membership of Bitkom e.V.
- Membership of Bundesverband Mergers & Acquisitions
- Regular exchange with German ministries and European authorities



Disclaimer

Diese Unterlagen wurden von SIX Group AG, ihren Tochter-, Schwestergesellschaften und/oder ihren Niederlassungen (zusammen «SIX») für den ausschliesslichen Gebrauch durch diejenigen Personen, welchen SIX sie zustellt, ausgearbeitet. Diese Unterlagen und ihr Inhalt stellen keine verbindliche Vereinbarung, Empfehlung, Anlageempfehlung, Angebot, Einladung oder Offerte zum Kauf oder Verkauf von Finanzinformationen, Produkten, Solutions oder Dienstleistungen dar. Sie dienen einzig Informationszwecken und können ohne Ankündigung jederzeit geändert werden. SIX hat keine Verpflichtung, diese Unterlagen zu aktualisieren, abzuändern oder den Inhalt auf dem aktuellsten Stand zu halten. SIX gibt keine Erklärungen, Gewährleistungen, Garantien oder Zusicherungen – weder ausdrücklich noch implizit – in Bezug auf die Richtigkeit, Vollständigkeit, Angemessenheit, Eignung oder Verlässlichkeit des Inhalts dieser Unterlagen ab und wird auch keine solchen abgeben. SIX und ihre Verwaltungsräte, Führungskräfte, Mitarbeiter, Vertreter und Beauftragte schliessen jegliche Haftung für Verluste, Schaden oder Beeinträchtigungen, welche aus oder im Zusammenhang mit diesen Unterlagen entstehen, aus. Diese Unterlagen sind Eigentum von SIX und dürfen ohne die vorgängige, ausdrückliche sowie schriftliche Zustimmung von SIX in keiner Weise gedruckt, kopiert, reproduziert, veröffentlicht, weitergegeben, offengelegt oder verbreitet werden.

© 2022 SIX Group AG. Alle Rechte vorbehalten.