Euro Retail Payments Board (ERPB)

Report of the Next Phase of the ERPB Working Group on a Single Euro Payments Area (SEPA) Application Programming Interface (API) Access Scheme

ERPB Meeting 28 June 2021

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Executive summary

In January 2019 the ERPB established the ERPB Working Group on a Single Euro Payments Area (SEPA) Application Programming Interface (API) Access Scheme ("Working Group") tasked with defining the key elements of a potential SEPA API Access Scheme ("Scheme"). The report was submitted as input to the ERPB meeting of 13 June 2019. The ERPB took note of the report and welcomed the analysis conducted by the Working Group and agreed to consider possibly resuming this work after the implementation of the revised Payment Services Directive (PSD2).

At its 6 July 2020 meeting the ERPB invited the impacted stakeholders to start an informal exploratory workstream addressing inter alia the commercial baseline, for allowing the reactivation of the Working Group in November 2020. The stakeholders met on several occasions and agreed that all relevant conditions to resume the activities of the Working Group had been met. The ERPB at its 26 November 2020 meeting welcomed the consensus reached and approved the mandate for the next phase of the Working Group. The Working Group was asked to take the report presented to the ERPB for its June 2019 meeting, as well as the outcome of the informal exploratory workstream addressing the conditions to re-start the Working Group, as a starting point.

The Working Group defined further key elements of a Scheme, with the legal and regulatory requirements of PSD2 constituting the 'baseline', which has now been set, but also going beyond such baseline to encompass value-added ('premium') services that may be provided in the context of 'open banking' as a natural evolution of PSD2, within the contractual framework of a Scheme. These key elements are recommended as a foundation of (a) future rulebook and future implementation guidelines of (a) Scheme(s).

As part of its vision statement the Working Group acknowledges that the EU shall be leading the way in the transition to a digital economy. The SEPA API Access Scheme will help by facilitating the disruption of digitised analogue value chains and the creation of completely new fully digital value chains through an API economy that leverages the benefits of a Scheme-based approach (a visualisation of the vision is included in the report). This will help unlock value which may then be fairly distributed amongst the participants facilitated by the Scheme framework and arrangements. Starting from payments, the aim is to move to finance beyond payments and eventually to move beyond finance.

The report details a non-exhaustive list of prioritised (illustrative) customer journeys from which a number of business requirements were derived, predominantly in the context of a Scheme related to payment accounts, covering the different stages of a payment including initiation, authorisation, confirmation and execution. Most of the requirements, already identified in the 2019 report, were validated by the Working Group and additional requirements such as the provision of a list of account-servicing payment service providers (ASPSPs) for customer selection, instant payment release notification and confirmation as well as pre-authorisation mechanisms were added. For each illustrative customer journey, it has been indicated

whether they can be applied in the domain of customer-to-business (C2B), business-to-business (B2B) and person-to-person (P2P) payments and what the main differences are. In addition, dedicated customer journeys were developed for the different methods of strong customer authentication (SCA).

The Scheme participants that take up the role of asset holder are expected to implement the business requirements in support of the customer journeys that are applicable to them as described in the Scheme i.e. asset holders only need to support customer journeys insofar they support the underlying service / payment instrument (except in relation to SCA, in the way it is further described in the business requirements section). The business requirements listed in the report are however to be considered as a starting point. Moreover, it is expected that the business requirements will evolve over time to better adapt to the market needs. The Scheme manager in accordance with its governance will ensure that this happens in the most efficient manner. Scheme participants that only take up the role of asset broker do not need to support all business requirements (only the ones related to their business domain).

Any service and functionality offered by ASPSPs that goes beyond their legal obligations can be considered as a value-added service in the context of a Scheme and is subject to a competitive, sustainable and fair distribution of value and risk between the actors.

The Working Group has mainly focused on payment related services to be put under the Scheme governance, in line with its mandate and core expertise, whilst at the same time also looking at other asset classes (e.g. loans, personal finance management) that could potentially leverage payments and lead to further efficiencies and innovations. Moreover, the recommendation is for the Scheme to be designed in such a way that it does not hinder expansion into other asset classes (beyond payments, beyond banking and beyond finance). To this end, a layered and modular approach is envisaged whereby different Schemes would address specific requirements of different asset classes and an 'overarching governance entity'[1] would ensure interoperability and minimum standards to be applied by each of the Schemes. As a first step, the recommendation is hence to start with the development of a Scheme in relation to payments accounts. Following a detailed assessment based on desk research and covering requirements related for example to governance (pan-European reach), competence and structure, the Working Group considers the European Payments Council (EPC) to be best placed to take up the role of Scheme manager in relation to payment accounts, subject to accepting the requirements as outlined in the corresponding section of this report.

The report details a number of general Scheme requirements which cover inter alia eligibility criteria, rights and obligations of Scheme participants and business conditions. Both regulated and non-regulated entities should in principle be able to join the Scheme. Regulated services will however only be available to

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[1] See section 2.1 for further clarification.

regulated entities but if the Scheme caters also for unregulated services, then these will be available to non-regulated entities as well. Moreover, Scheme participants will be free to commit to participate in the Scheme in the role of asset holder, or in the role of asset broker or in both roles, if and when the legal context permits.

Scheme participants will have to comply with a number of broad guiding principles that generally govern the existing SEPA schemes for credit transfers and direct debits (e.g. all Scheme participants need to comply with the rules of the Scheme on the same basis as all other participants). The Working Group however recommends that the exact rights and obligations shall depend on the services to be covered by the Scheme and on the eligibility criteria applicable for each specific asset class.

The Working Group confirmed its 2019 conclusions in relation to the fact that there are basically two elements that could be eligible for remuneration in the context of a Scheme i.e. the assets exposed through the API service by the asset holder and the API service itself, as provided by the asset holder. The monetisation of APIs is an individual business decision of the market participant offering data or transaction assets through the API. In this context it is necessary to understand the cost elements to be considered by the Scheme and what should be object of remuneration (and hence of the business conditions) to ensure a fair and sustainable distribution of value and risk for all parties. To this end, the Working Group assessed several options whereby the business conditions are addressed either within or outside the Scheme. It was concluded that the Scheme laying out business conditions could constitute a way to overcome the potential need for millions of bilateral agreements, ultimately helping to reduce the risk of market fragmentation and foster the take-up of the Scheme. This would moreover increase the attractiveness of the Scheme towards potential Scheme participants and ultimately benefit end users, as certainty and transparency on fair remuneration of services (going forward named Default Asset (DA) Remuneration fees) would be ensured. Accordingly, this will result in higher chances to lower entry barriers and foster competition in the market and increased benefits for participants and consumers, ultimately benefiting a competitive and innovative internal market for (initially) payment services.

Following a detailed assessment of possible "Inside the Scheme Models", the Working Group recommends the Scheme to implement a so-called Default Asset Remuneration model which encompasses a fallback DA fee for the API service, different sub-DA fees for different assets – which could vary per Scheme and service - paid by the asset broker to the asset holder based on cost recovery and a reasonable margin. Next to the DA fee there will be Scheme participation fees (covering the cost of operating the Scheme) and commercial fees (the latter are outside the Scheme and based on a commercial agreement between the Scheme participants and their clients). The ultimate objective of this model is to facilitate the exchange of services beyond PSD2, aiming at creating benefits for all involved parties.

However, to correctly address business conditions inside the Scheme the Working Group recommends i) a solid preliminary competition assessment, including a thorough evaluation of the potential effects on both competition in the market and consumers and ii) a sound calculation methodology for the chosen remuneration model. As a preliminary step, the Working Group has already reached out to the relevant services within the European Commission to get some first feedback. The outcome was perceived as positive by the Working Group's co-chairs and based on the information provided no initial 'red flags' were identified.

The responsibilities of the future Scheme manager in relation to the business conditions are also covered in the report. Moreover, the decision to address the business conditions in the Scheme takes into account the nature and governance of the Scheme manager and to this end the Working Group recommends to opt for a 'not-for-profit' Scheme manager mainly in view of the fact that there will be less risk of having a conflict of interest.

The report also includes recommendations on infrastructure related requirements to be covered by the Scheme, including basic requirements for API interfaces, minimal system infrastructure requirements in the security area and functional requirements related to a particular service (i.e. range of data necessary to execute a particular service). The (non-functional) requirements are generic and apply to the different asset classes.

The future Scheme manager(s) shall ensure that the API implementations are meeting a certain level of quality and that the overall Scheme set-up is efficient, and no obstacles are created. The actual implementation can hence be assessed and certified against the implementation guidelines containing the Scheme's functional and non-functional requirements combined with the specifications provided by the respective standardisation initiative(s). To this end, the future Scheme manager(s) shall cooperate with the major European standardisation initiatives in the field of PSD2 API's and possibly contract a homologation body.

The Working Group also performed a cross-check with other ongoing work streams (including for example the eIDAS Regulation, the SEPA Request-to-Pay Scheme and The Berlin Group Open Finance API Framework) that could potentially impact the development of the Scheme related to payments accounts. The Working Group agreed on a number of recommendations to be taken up by the future Scheme manager in order to foster possible synergies with the identified standardisation initiatives. In addition, it is to be noted that the legal context of the services covered under the Scheme includes the General Data Protection Regulation (GDPR), EU competition law and consumer protection rules. Moreover, specific sectoral legislation might apply to the specific Schemes. It was impossible, however, for the Working Group to assess the potential impact of ongoing regulatory initiatives of the EU Commission e.g. in the field of data governance.

The report also describes a suggested extension in a next stage to other financial as well as non-financial services with the aim of generating additional value and to foster further innovation. For this purpose, a standardised template was developed which lists the information that could potentially be exchanged via an API and which also indicates the possible dependencies and 'interplay' that exist between the different assets.

As a way forward, the Working Group recommends the ERPB to invite the EPC to take up the role of Scheme manager in relation to payment accounts in line with the requirements defined in the report, and to ask the EPC inter alia to ensure adequate stakeholder involvement and alignment with relevant actors (e.g. standardisation initiatives, directory service providers) and regulatory bodies in the ecosystem and to promote the Scheme's adoption. In addition, the Working Group recommends to explore the implementation for financial asset classes beyond payments via the identification of an appropriate host for such a multi-stakeholder project and to frame the ecosystem for asset classes beyond finance in order to be able to move towards an open data economy in Europe.

Glossary

Term or acronym	Description
AES	Advanced Electronic Signature.
AIS	Account information services as defined by PSD2.
AML	Anti-Money Laundering.
AMLD	Anti-Money Laundering Directive (Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing and amending Directives 2009/138/EC and 2013/36/EU).
API	Application Programming Interface.
API client	The "client" of an API is a program, not a person, which uses the service as offered by the API exposing party. In the context of this report, the API client function belongs to the asset broker.
API exposing party	The asset holder offers ("exposes") a service via an API to an asset broker.
ASPSP	Account-Servicing Payment Service Provider.
Asset	Any form of value (e.g. bank owned data, customer owned data, transaction data, or the ability to execute transactions, payment related and beyond) that is held by an asset holder. In the context of PSD2, payment account balance and transactions would be an information asset owned by the customer and held by the ASPSP and a payment initiation would be a transaction asset involving an ASPSP and payer with the involvement of a TPP.
Asset broker	The entity that uses assets (e.g. data) from the asset holder, with permission of the asset owner, to deliver value to the end users. Value is being driven by either consumer or corporate demand. In the context of PSD2, a TPP would be an asset broker. The asset broker in the context of GDPR will be considered a data controller or a data processor depending on the degree of control it exercises over the processing of the personal data which form part of the assets.
Asset holder	The entity that holds the assets. An asset holder is not necessarily the same entity as the data owner. In the context of PSD2 an asset holder would be an ASPSP. The data holder in the context of GDPR is considered the data controller.
Asset owner	Owner of the asset (e.g. a legal entity or a consumer, in which case it would also be a data subject).
Asset user	The client of the asset broker that 'uses' the asset. The asset user can be a consumer or a legal entity.
ATM	Automated Teller Machine.
B2B	Business to Business.
B2C/C2B	Business to Customer.
BCM	Business Continuity Management.

CRD IV	Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.
DA fee	Default Asset Remuneration fee.
Data vs Information	Data is raw, unorganised facts that need to be processed. Data can be something simple and seemingly random and useless until it is organised. When data is processed, organised, structured or presented in a given context so as to make it useful, it is called information. (source: https://www.diffen.com/difference/Data_vs_Information)
Decoupled SCA	SCA takes place via a dedicated device and/or independently activated app.
EACB	European Association of Co-operative Banks.
EBA	European Banking Authority.
EBF	European Banking Federation.
EC	European Commission.
ECB	European Central Bank.
eIDAS	Regulation (EU) N°910/2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation).
EMA	Electronic Money Association.
EMPSA	European Mobile Payment Systems Association.
EPC	European Payments Council.
EPIF	European Payment Institutions Federation.
ERPB	Euro Retail Payments Board.
ERPF	European Retail Payments Framework.
ESBG	European Savings Banks Group.
ETPPA	European Third Party Providers Association.
EU	European Union.
FeRD	Forum for Electronic Invoicing Germany.
GDPR	Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).
IBAN	International Bank Account Number.
IP	Intellectual Property.

IT	Information Technology.
KYC	Know Your Customer (e.g. including the verification of the customer ID details).
Marketplace	Online marketplace (or online e-commerce marketplace) is a type of e-commerce website where product or service information is provided by multiple third parties (source: Wikipedia). Also known as a product aggregation website.
MiFiD II	Markets in Financial Instruments (MiFID II) - Directive 2014/65/EU.
MiFiR	Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 Text with EEA relevance.
MSG MCT	EPC Multi-Stakeholder Group for Mobile Initiated SEPA (Instant) Credit Transfers.
NFC	Near Field Communication.
NIS	Directive on Security of Network and Information System (NIS Directive (EU) 2016/1148).
OBE	Open Banking Europe.
OBIE	Open Banking Implementation Entity.
OBUK	Open Banking UK.
OIDF	OpenID Foundation.
OTP	One-time Password.
P2P	Peer-to-Peer / Person-to-Person.
Payment execution guarantee	A 'payment execution guarantee' service is offered to merchants by asset brokers or asset holders to cover the non-payment of debts arising under a transaction.
PFM	Personal Finance Management.
PIN	Personal Identification Number.
PIS	Payment Initiation Services.
PISA	Eurosystem's oversight framework for electronic payment instruments, schemes and arrangements.
POI	Point of Interaction.
POS	Point of Sale.
PSD2	Revised Payment Services Directive (EU) 2015/2366.
PSU	Payment Service User. In the context of GDPR this will be a data subject (if an identified or identifiable natural person).
QR code	Quick response code (two-dimensional barcode).

REST	Representational state transfer (REST) is a software architectural style which uses a subset of Hypertext Transfer Protocol (HTTP).
RTS	Commission Delegated Regulation (EU) 2018/389 with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication.
SCA	Strong Customer Authentication.
Scheme (SEPA API Access Scheme)	A set of rules, practices and standards providing the organisational, legal and governance framework necessary for the functioning of certain API access services.
SCT (Inst)	SEPA (Instant) Credit Transfer.
SDD	SEPA Direct Debit.
SEPA	Single Euro Payments Area: The list of countries and territories which are part of the jurisdictional scope of the SEPA payment schemes can be found here: https://www.europeanpaymentscouncil.eu/document-library/other/epc-list-sepa-scheme-countries
SPL	SEPA Proxy Lookup (Scheme).
SRTP	SEPA Request-to-Pay (Scheme).
Standardisation initiative	In the context of this report, entities such as The Berlin Group, Open Banking UK, Polish API and Stet.
TAN	Transaction Authentication Number.
TPP	Third Party Provider as defined in the context of PSD2. In the context of this report a TPP is called an asset broker due to the potential scope going beyond payments. This is a role that can be taken up by different actors (e.g. banks, fintech's, retailers, telecommunication service providers).
UX	User experience.
W3C	The World Wide Web Consortium.

0. Introduction

In January 2019 the ERPB established the ERPB Working Group on a Single Euro Payments Area (SEPA) Application Programming Interface (API) Access Scheme ("Working Group") tasked with defining the key elements of a potential SEPA API Access Scheme ("Scheme"). The report was submitted as input to the ERPB meeting of 13 June 2019 and included a dissenting position on the way forward. The ERPB took note of the report and welcomed the analysis conducted by the Working Group and agreed to consider possibly resuming this work after the implementation of revised Payment Services Directive (PSD2).

At its 6 July 2020 meeting the ERPB invited the impacted stakeholders to start an informal exploratory workstream addressing inter alia the commercial baseline, for allowing the reactivation of the Working Group in November 2020.

The Electronic Money Association (EMA), the European Payment Institutions Federation (EPIF), EuroCommerce, the European Association of Co-operative Banks (EACB), the European Banking Federation (EBF), the European Savings Banks Group (ESBG), and the European Third Party Providers Association (ETPPA) met several times in September and October 2020 and agreed that all relevant conditions to resume the activities of the Working Group had been met and that the work could re-start based on the following three principles:

- The legal and regulatory requirements of PSD2 constitute the baseline.
- The commercial baseline is agreed i.e. any service and functionality offered by account-servicing payment service providers (ASPSPs) that goes beyond their legal obligations can be considered as a value-added service in the context of a Scheme and is subject to a competitive, sustainable and fair distribution of value and risk between the actors.
- The starting point is the 2019 report of the Working Group[2].

To this end, the aforementioned stakeholders submitted a "Joint understanding of the conditions to re-start the ERPB Working Group on a SEPA API access scheme and proposal for workstream deliverables" to the November 2020 meeting of the ERPB (see Annex 3).

The ERPB at its 26 November 2020 meeting welcomed the consensus reached and approved the mandate (see Annex 1) for the next phase of the Working Group (see Annex 2). The Working Group takes the report presented to the ERPB for its June 2019 meeting, as well as the outcome of the informal exploratory workstream addressing the conditions to re-start the Working Group, as a starting point.

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[2] https://www.ecb.europa.eu/paym/groups/erpb/shared/pdf/11th-ERPB-meeting/Report_from_the_ERPB_WG_on_a_SEPA_API_Access_Scheme.pdf?18ac5087de44551bb766b9fae7ca11f0

In line with its mandate, the Working Group defined further key elements of a Scheme, with the legal and regulatory requirements of PSD2 constituting the 'baseline', which has now been set, but also going beyond such baseline to encompass value-added ('premium') services that may be provided in the context of 'open banking' as a natural evolution of PSD2, within the contractual framework of a Scheme. These key elements are recommended as a foundation of (a) future rulebook(s) and future implementation guidelines of (a) Scheme(s).

It is acknowledged that all relevant regulations (see also section 3.1) apply equally to all stakeholders.

Any service and functionality offered by ASPSPs that goes beyond their legal obligations can be considered as a value-added service in the context of a Scheme and is subject to a competitive, sustainable and fair distribution of value and risk between the actors.

The Working Group has focused mainly on payment related services to be put under the Scheme governance, in line with is core expertise whilst at the same time also looking at other asset classes that could potentially leverage payments and lead to further efficiencies and innovations. Moreover, the recommendation is for the Scheme related to payment accounts to be designed in such a way that it does not hinder expansion into other asset classes (beyond payments and beyond finance).

The present report is organised as follows to cover the deliverables stipulated in the mandate of the Working Group:

- Chapter 1 covers the list of prioritised and non-prioritised (illustrative) customer journeys and related key business requirements for customer-to-business (C2B), business-to-business (B2B) and person-to-person (P2P) payments.

- Chapter 2 provides a high-level description of the envisaged Scheme governance, including Scheme requirements between asset holders and asset brokers for certain issues based on working assumptions related to inter alia eligibility criteria, business conditions, rights and obligations of participants, security, liability and compliance. In addition, this section describes the assessment of the landscape of existing and new governance entities which resulted in the recommendation of a Scheme manager in relation to payment accounts.

- Chapter 3 provides background information on the stock-take exercise that was undertaken with the aim of identifying initiatives that may impact the development of the potential payment related part of the Scheme. This section also provides an overview of the applicable regulatory context.

- Chapter 4 gives an insight into the suggested extension in a next stage to other financial as well as non-financial services with the aim of generating additional value and to foster further innovation. It moreover highlights the possible dependencies and 'interplay' between the different assets.

- Chapter 5 presents the Working Group's recommendations on a way forward.

The mission and vision statement of the SEPA API Access Scheme is described as follows:

Mission: *To reap the full benefits of PSD2 and beyond through a Scheme-based approach, by defining the key elements of such a Scheme, including business requirements, governance arrangements and a standardised API interface, whilst taking into account that PSD2 constitutes the baseline, that 'premium' services are encompassed and that a fair distribution of value and risk is ensured.*

Vision: *The EU shall be leading the way in the transition to a digital economy. The SEPA API Access Scheme will help by facilitating the disruption of digitised analogue value chains and the creation of completely new fully digital value chains through an API economy that leverages the benefits of a Scheme-based approach. This will help unlock value which may then be fairly distributed amongst the participants* facilitated by the Scheme framework and arrangements. *Starting from payments, the aim is to move to finance beyond payments and eventually to move beyond finance.*

The below diagram provides a visualisation of the vision statement:

Figure 1: Visualisation of the vision

The starting point is an '100% analogue' process (e.g. the client goes to an ASPSP branch) which then progresses from a partially digitised process (i.e. same steps as in the analogue process but for some steps the internet is used) to a fully digital process whereby new value chains and digital services can be created. The above generic visualisation of the vison statement has been applied to a concrete use case in section 4.1 of the report.

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1. Business requirements for a SEPA API Access Scheme

The Working Group prioritised a number of customer journeys from which updated business requirements were derived in the context of a Scheme. As part of this exercise, the business requirements identified in the 2019 report of the Working Group were re-assessed and validated.

The Scheme participants that take up the role of asset holder are expected to implement the business requirements in support of the customer journeys that are applicable to them as described in the Scheme i.e. asset holders only need to support customer journeys insofar they support the underlying service / payment instrument.

The business requirements listed below are to be considered as a starting point. Moreover, it is expected that business requirements will evolve over time to better adapt to the market needs. The future Scheme manager in accordance with its governance will ensure that this happens in the most efficient manner.

Scheme participants that only take up the role of asset broker do not need to support all business requirements (only the ones related to their business domain). Scheme participants are free to take up the role of asset holder or asset broker or they can opt for combining both roles (see eligibility criteria in section 2.2.1).

1.1. Prioritised illustrative customer journeys

In addition to validating the illustrative customer journeys included in the 2019 report, the Working Group prioritised the following additional customer journeys which are listed in alphabetical order (the detailed flows can be found in Annex 5):

- **Future dated payments:**

    - Future dated payments are subject to an initial agreement between the payer and payee.

    - A distinction can be made between:

        - Pay later (defined execution date): it allows the payment initiating parties to initiate payments at a given date in the future.

        - Deferred payment (event dependent execution date): it allows the payment initiating parties to initiate payments at an undefined date in the future, linked to a specific event / trigger (e.g. order is sent/received).

- **International Bank Account Number (IBAN) validation:**

- Online authorised scenario: A public or private entity requires the confirmation of an IBAN or of a combination of for example IBAN with a Tax ID or Name (Payment Service User (PSU)).

- Pre-authorised scenario: A public or private entity requires the confirmation of an IBAN or of a combination of for example IBAN with a Tax ID or Name (PSU) at a counter or in a store.

- **Mobile Personal Finance Management (PFM) automated transfers:**

  - Users can define and create automatic credit transfers with their mobile PFM app, for example to transfer any month-end surplus from their payment to their savings account, or to top-up their payment account before it reaches a negative balance.

- **Pay-by-Link (initial & subsequent payment(s)):**

  - The payee initiates a payment request and redirects the payer to the payment authentication context using a link sent by an asset broker, by any available channel (Quick Response (QR) Code, Near Field Communication (NFC), messaging, redirect…).

- **Payments to multiple counterparties:**

  - Single payment to multiple counterparties ('chained' payments): after completing the checkout in a marketplace (i.e. product aggregation website) scenario, a user will validate one strong customer authentication (SCA) linked to a single transaction. The payment is later divided and transferred to each individual seller by the marketplace, who acts as the collecting agent.

  - Single transaction / several payments to multiple counterparties (parallel payments): after completing the checkout in a marketplace, the user will validate one SCA linked to several payments which are sent directly to multiple receivers.

- **Payment with unknown final amount:**

  - Use case A: a user orders online fresh food. To ensure completeness of the order it can happen that 'over-weighted' food products may get delivered at the user's home. The user gets charged for the final total amount as effectively delivered.

  - Use case B: a customer downloads an app, onboards and rents goods for a defined period. The reservation is later updated as in the end the rent period surpassed the initial one.

  - Use case C: a user books a flight online and combines it with other services offered by the airline company. The crucial aspect of this transaction is that the user can confirm everything by one click to ensure a seamless approach.

- Use case D: a user fills up the petrol tank of their car and pays the final amount seamlessly at an unattended petrol station with a payment service for which the user is already enrolled.

- **Personal loan application:**

  - A customer applies for a personal loan from an ASPSP or a financial institution.

- **Recurring payments:**

  - With same amount: a customer subscribes for a service or good which will be paid on a regular basis (e.g. streaming platform, magazine subscription).

  - With variable amount: deferred recurrent payments with flexible execution time and amount. A shopper buys and consequently receives goods or services with a commitment to begin making payments at a future date.

- **Refunds:**

  - Capacity to process a total or partial refund requested by the customer or merchant.

The different forms of SCA (delegated; embedded; decoupled; redirection) can apply to each customer journey (identified above) and as a result the decision was made to depict the SCA processes themselves as dedicated customer journeys (see Annex 5):

- **Delegated SCA:** after completing the checkout in an e-&m-commerce or in-store scenario, shoppers can perform SCA with one touch and without switching app or device.

- **Embedded**: after completing the checkout in an e-&m-commerce scenario, shoppers can perform SCA by entering their bank Personal Identification Number (PIN) and then receiving and entering a One-time Password (OTP) / Transaction Authentication Number (TAN).

- **Embedded with signed payment request:** after completing the checkout in an e-&m-commerce scenario, shoppers can perform SCA with one touch using their authentication app triggered by the asset broker.

- **Decoupled (app2app):** after completing the checkout in an m-commerce scenario, shoppers can perform SCA with one touch using their authentication app triggered over-the-air by their bank.

- **Decoupled (web2app):** after completing the checkout in an e-commerce scenario, shoppers can perform SCA with one touch using their authentication app triggered by themselves.

- **SCA – Redirection (app2app)**: after completing the checkout in an <u>m-commerce</u> scenario, shoppers can perform SCA with one touch using their <u>authentication app triggered by the merchant / asset broker app.</u>

- **Redirection (web2web)**: after completing the checkout in an <u>e-commerce</u> scenario, shoppers can perform SCA with legacy web redirection <u>triggered by the merchant / asset broker web page.</u>

SCA is an important topic that needs to be assessed by the future Scheme manager who shall aim for the best possible customer experience without limiting adoption of the Scheme.

For each of the prioritised illustrative customer journeys it was assessed whether they would apply in the B2C, B2B and P2P domain. The result of this assessment has been indicated in the detailed customer journeys included in Annex 5 as well as in an overview matrix (Annex 12). The main differences are summarised below:

- **B2C vs B2B**: Rights, rules or mechanisms must be defined and included for:

    - The account information requests.

    - The authorisation process. The maximum amount that can be paid according to employees' profiles, which may be different from the mandate of the account holder.

    - The bank account list selection according to the entitlements of the employees.

- **B2C vs P2P:** Only the functional scopes need to be adapted.

It should be underlined that the customer journeys are without prejudice to the applicable regulations (e.g. PSD2, the General Data Protection Regulation (GDPR), Anti-Money Laundering Directive (AMLD)).

1.2. Non-prioritised user stories

The Working Group identified the following non-exhaustive and non-prioritised list of user stories - some of these user stories might already be addressed in the market today:

- **Enrolment:** enrolment to a service if needed (such as a payment service) e.g. Know Your Customer (KYC) on the merchant side and/or defaulting a payment instrument / ASPSP on the customer side for using the service.

- **E-invoice presentment, payment triggered by accepting such request / invoice (e- invoicing with integrated payments) - immediate payment:** payee initiates a request with payer data and a link to an e-invoice. Payer accesses invoice details via the link and approves request in any online app. Payer

receives an invoice, sees all the details and approves the invoice / request and payment is triggered immediately.

- **E-invoice presentment, payment triggered by accepting such request / invoice (e- invoicing with integrated payments) - later on payment (deferred payment):** payee initiates a request with payer data and a link to an e-invoice. Payer accesses invoice details via the link and approves request in any online app. Payer receives an invoice, sees all the details and approves the invoice / request and payment is triggered later at the due date.

- **Bulk payments in the B2B context:** a bulk is a group of payments (e.g. in a file) to be paid to multiple creditor accounts from the same debtor account, on the same date, with the same currency and through the same payment scheme.

- **Batch payments:** a batch is a group of payments (e.g. in a file) to be paid to multiple creditor accounts from multiple debtor accounts. These may involve different payment execution dates, currencies and payment schemes.

- **Recurrent instant collection where a mandate is in place (instant direct debit)[3]:** payment service based on a recurring instant direct debit. The SEPA Direct Debit (SDD) mandate has already been signed and provided by the customer to the creditor.

- **Recurrent instant collection where a mandate is not in place (instant direct debit)[3]:** payment service based on a recurring instant direct debit. The SDD mandate has to be signed and provided by the customer to the creditor.

- **Recurrent instant collection where a mandate is embedded (instant direct debit)[3]:** payment service based on a recurring instant direct debit. The SDD mandate is signed and provided by the customer to the creditor during the collection process.

- **Payer defined instalment amount:** in case a payer cannot pay all its bills in full at the due date. Provided the option is offered by the creditor, the payer will partially pay its bills and announce the next payment date for the remaining amount.

- **Multi-authorisation:** payments which require multiple authorisation on the payer's side based on different rights levels.

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[3] Instant direct debit is not available at the time of writing this report.

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- **International non-SEPA payments (one leg out):** in case the payer's ASPSP / bank account is located outside the SEPA zone.

- **Partial payment executed from available balance:** partial approval by the payee of the payment amount, based on the available funds, through an account information request or ASPSP partial authorisation.

1.3. Identified business requirements

This section covers the business requirements derived from the prioritised customer journeys described in section 1.1 as well as the validated business requirements from the 2019 report of the Working Group.

A distinction is made between specific business requirements for payment initiation, authorisation, confirmation and execution.

1.3.1. Payment initiation

- **Enrolment**

Enrolment of a shopper is optional, but when desired includes identity validation, management of shopper (download and activation of an app, enrolment, de-enrolment and changes of payment service or app) as well as the recording of their payment data and delivery address in the payment service onboarding.

- **E-Identity provider (eIDAS)**

Bank app / card as trusted source of client contact, address and other details, authorisation to share data and payment in one step.

- **Standardisation of QR / barcodes**

The Working Group has identified a need for a pan-European QR standard readable by all apps and mobile devices in Europe (to address the current fragmentation in the market).

- **Proxies at a European level for bank identifiers**

The Working Group has identified a need for a European level mechanism for conversion of proxies for a bank identifier (i.e. IBAN) in a way that would allow the best customer experience. Reference can be made in this context to the SEPA Proxy Lookup (SPL) Scheme.

- **Request to Pay**

Set of rules and technical elements (including messages such as acceptance confirmation) that allow a payee (or creditor) to claim an amount of money from a payer (debtor) for a specific transaction through a trusted network (e.g. SEPA Request-to-Pay (SRTP) Scheme)

- **List of ASPSPs for consumer selection**

A list of ASPSPs is to be presented to allow a consumer to select its preferred ASPSP and related IBAN.

1.3.2. Payment authorisation

- **SCA mechanism(s)**

To ensure high adoption and a good customer experience, any SCA-obliged party shall apply the best practice of the implemented SCA mechanism(s), including SCA exemptions, both from a usability and security perspective**.** Secure storage of the identity and the authorisation / authentication credentials of the customer shall not be compromised.

Delegated SCA enables asset brokers to provide a 'lowest friction' mechanism for user authentication processes. This mechanism is therefore strongly encouraged but it shall however not be mandated given the legal and contractual obligations (e.g. liability shift) related to the outsourcing of this functionality.

- **SCA exemptions**

The Working Group recommends to the future Scheme Manager to strive for a maximum use of the SCA exemptions foreseen in the law in as much as this may constitute a material competitive advantage of Scheme-based solutions offered by asset brokers.

SCA-obliged parties, e.g. asset holders not using SCA delegation, that participate in the Scheme have to consistently implement a predictability mechanism for all SCA exemptions foreseen by the law, subject to a positive risk analysis and without prejudice to the Regulatory Technical Standards on SCA and secure communication under PSD2 (RTS).

- **Potential for asset brokers to ask for an exceptional application of SCA.**

Optional feature which enables asset brokers to request the asset holder not to apply an SCA exemption, e.g. where the asset broker is aware of a risk, which the asset holder may not realise.

- **Identification shopper**

Shopper onboarding requires the truthfulness and accuracy of their identity. This helps preventing fraud and money-laundering, while giving the opportunity to assess their credit risk accurately.

- **Authorisation rights and mechanisms (e.g. for employees)**

The account information requests, authorisation / authentication rules and bank account list selection may differ according to the applicable domain (C2B vs B2B vs P2P).

1.3.3. Payment confirmation

- **Real-time 'payment execution guarantee'**

Asset holders must provide a 'payment execution guarantee' service for any payment type, not being confirmed instantly, to cover the non-payment of debts arising under a transaction.

- **Instant payment release notification and confirmation (full amount, instalment, multiple amounts…)**

A real-time notification service to merchants concerning the release of the payment for settlement / execution.

1.3.4. Payment execution

- **Pre-authorisation mechanisms (including payment guarantee)**

The pre-authorisation feature enables merchants to implement all use-cases by reserving an amount in order to secure sufficient funds to complete a subsequent payment. The shopper is only paying for the exact 'consumption' or upon delivery of goods and services.

- **Delays, and liability shift rules**

These rules shall be defined and implemented by the future Scheme manager.

2. Scheme governance

2.1. Scheme structure

The Working Group has focused mainly on payment related services to be put under the Scheme governance, in line with is core expertise whilst at the same time also looking at other asset classes that could potentially leverage payments and lead to further efficiencies and innovations. Moreover, the recommendation is for the Scheme to be designed in such a way that it does not hinder expansion into other asset classes (beyond payments, beyond banking and beyond finance).

To this end, a layered and modular approach is envisaged whereby different Schemes would address specific requirements of different asset classes and an 'overarching governance entity' would ensure interoperability and minimum standards to be applied by each of the Schemes. In this respect it is to be noted that the Working Group concluded that there would be no need for a so-called "umbrella" Scheme (manager) as referred to in the 2019 report. Different options to assure interoperability had been identified, but in the absence of clarity on particular requirements for other asset classes, were not developed further. This would need to be further studied and clarified when other asset classes are 'onboarded'.

As a first step, the recommendation is to start with the development of a Scheme in relation to payment accounts (see Annex 11). It is envisaged that shortly after, work could start on a Scheme related to savings accounts (yellow) and in a next phase a Scheme related to securities accounts (orange) could be foreseen. Each Scheme is envisaged to contain a section on generic requirements (which could be re-used for other asset classes) and an asset specific section (e.g. PSD2 'premium' APIs for the Scheme related to payment accounts). The below diagram gives an overview of the envisaged modular Scheme structure:
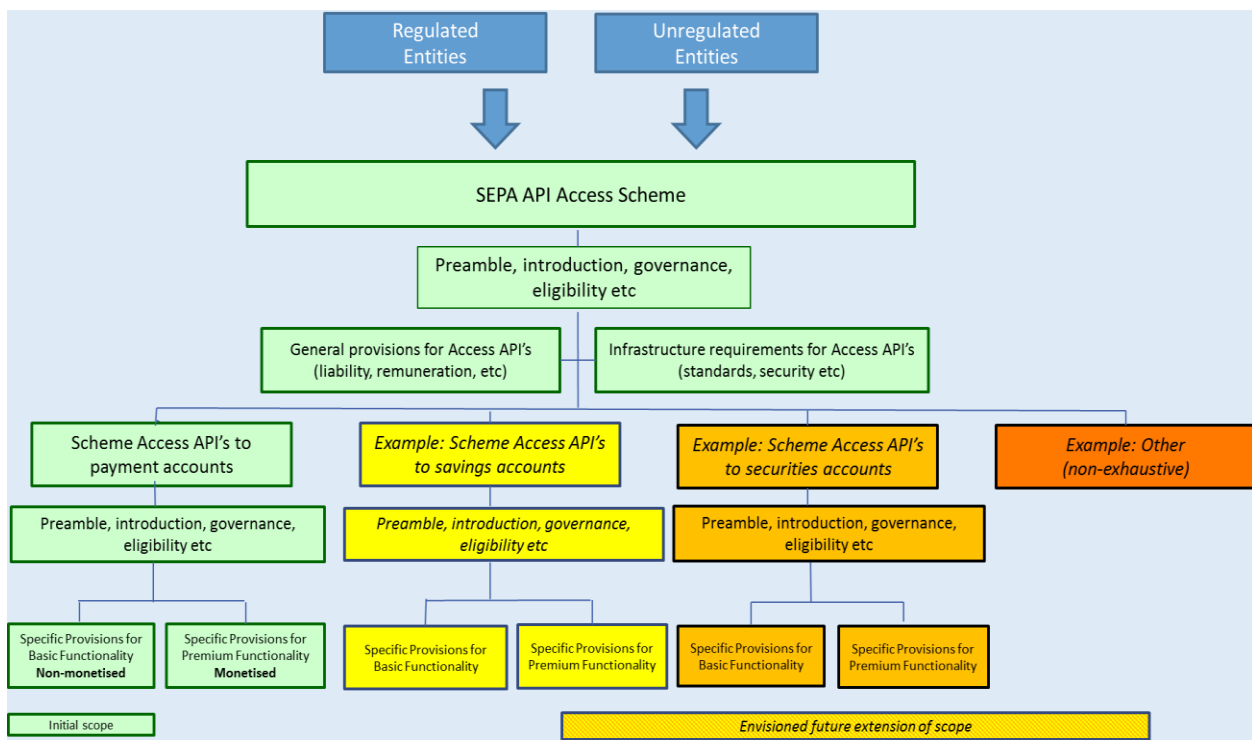

Figure 2: Envisaged structure of the SEPA API Access Scheme

For the Scheme related to payment accounts, it is to be noted that only the 'premium' functionalities can be monetised (see section 2.2.3).

2.2.   Scheme related requirements

2.2.1. Eligibility criteria

As a general principle, Scheme participation should be open to:

- **Regulated entities**: The activities of these entities are regulated and supervised by a competent authority. Examples include the license to act as a credit institution (CRD IV), the license to act as a payment institution (PSD2) or to certify customer identities (eIDAS Regulation).

- **Non-regulated entities**: The activities of such entities do not require by law to be regulated and supervised by a competent authority. Non-supervised entities could, for example, be merchants, technical facilitators, etc.

It should however be noted that in principle regulated services are only available to regulated entities. If the Scheme caters also for unregulated services, then these may be available to non-regulated entities as well.

Scheme participants will be free to commit to participate in the Scheme in the role of asset holder, or in the role of asset broker or in both roles, if and when the legal context permits.

2.2.2. Rights & obligations of Scheme participants

Scheme participants will have to comply with the following broad guiding principles that generally govern the existing SEPA schemes for credit transfers and direct debits:

- All Scheme adhering participants would have to comply with the rules of the Scheme on the same basis as all other participants.

- Participants would participate on the basis that the regulatory level playing field principle is respected.

- Participants adhere to the rulebook, implementation guidelines, Scheme management internal rules and any other relevant document, as amended in accordance with the Scheme change management process.

In addition, the Working Group recommends that the rights and obligations:

- Shall be specific to each considered asset class.

- Shall be structured depending on the eligibility criteria applicable for each specific asset class, also considering whether non-regulated entities would be eligible to participate.

- Should not constitute at any time a barrier for non-regulated entities, where applicable.

2.2.3. Business conditions

The Working Group confirmed its 2019 conclusions in relation to the fact that there are basically two elements that could be eligible for remuneration in the context of the Scheme i.e. the assets exposed through the API service by the asset holder and the API service itself, as provided by the asset holder. It may however depend on the concrete asset if the asset holder is entitled to monetise the asset, since it may belong to a customer of the asset holder (e.g. this may be the case for certain customer data under GDPR). The API service itself is always eligible for remuneration and rules for the settlement of amounts could also be part of the Scheme.

The monetisation of APIs is an individual business decision of the market participant offering data or transaction assets through the API. However, the ecosystem consists of a two-sided market whereby the asset broker wants to offer a service to its customers but needs data or functionality from the asset holder through the SEPA Access API.

In this context it is necessary to understand the cost elements to be considered by the Scheme and what should be object of remuneration (and hence of the business conditions) to ensure a fair and sustainable distribution of value and risk for all parties. On this premise, the Working Group explored and further expanded on the possible options identified in the 2019 report. To proceed with a thorough evaluation of the options, the possible business conditions were divided in:

- **"Outside the Scheme Models"** - notably models that i) leave it up to individual Scheme participants to either set their prices unilaterally and make them discoverable by other Scheme participants through an API call, or ii) to determine their remuneration entirely through bilateral agreements, to be concluded outside the scheme. This might however require (N x (N-1))/2 (i.e. millions) bilateral agreements to be signed, which is quite inefficient and would not create the network effects and reach required for pan-European solutions.
- **"Inside the Scheme Models"** - notably models that address the remuneration structure inside the Scheme, e.g. by providing a methodology for the determination of a fallback fee, leaving the possibility to Scheme participants to agree bilaterally on a different (lower) amount.

The following 'guiding principles' were taken into account for the assessment of whether the business conditions should be included in or left outside the scope of the Scheme:

- The solution must be compliant with EU competition law.

- The solution should enable the business conditions / remuneration models to be justifiable and transparent to Scheme participants and end users of the Scheme. This is relevant also for competition law purposes.

- The solution should ensure that the Scheme is attractive for Scheme participants to join; ensure certainty on the level / calculation methodology of fees applied prior to joining the Scheme; minimise, to the extent possible, the need for arrangements outside the scheme.

Having analysed in detail the pros and cons of each option (see Annex 9), the Working Group concluded that addressing business conditions inside the Scheme would ultimately help to reduce the risk of market fragmentation and foster the take-up of the Scheme[4]. This would moreover increase the attractiveness of the Scheme towards potential Scheme participants and ultimately benefit end users, as certainty and transparency on fair remuneration of services (later referred to as Default Asset (DA) Remuneration fees) would be ensured. Accordingly, this will result in higher chances to lower entry barriers and foster competition in the market and increased benefits for participants and consumers, ultimately benefiting a competitive and innovative internal market for (initially) payment services.

However, to correctly address business conditions inside the Scheme the Working Group recommends i) a solid preliminary competition assessment, including a thorough evaluation of the potential effects on both, competition in the market and consumers and ii) a solid calculation methodology for the chosen remuneration model. As a preliminary step, the Working Group has already reached out to the relevant services within the European Commission to get some first feedback. The outcome was perceived as positive by the Working Group's co-chairs and based on the information provided no initial 'red flags' were identified.

Moreover, the decision to address the business conditions in the Scheme also takes into account the nature and governance of the Scheme Manager. For this a comparison was made between 'for profit' and 'not-for-profit' Scheme managers. The Working Group recommends to opt for a 'not-for-profit' Scheme manager, mainly in view of the fact that there will be less risk of having a conflict of interest (see also section 2.3).

Following a detailed assessment of possible "Inside the Scheme Models"[5], the Working Group recommends the Scheme to consider a so-called Default Asset Remuneration[6] model as depicted below:

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[4] Even though it was preliminarily observed that from a Scheme's perspective the "Outside the Scheme Models" would be less challenging in terms of competition law compliance.

[5] In this context the experience of the Interchange Fees in four-party card schemes was also considered.

[6] The Default Asset Remuneration Model is inspired by the experience of an existing model, the so-called "IBAN Validation" model, which was acknowledged by the Italian Competition Authority (AGCM), following the request for an opinion from the Ministry of Economy and Finance: see opinion nr AS1677 issued by the AGCM in the exercise of its advocacy power under article 22 of Competition Act No 287/90.

Figure 3: Default Asset Remuneration Model

The following fee types can be distinguished in the above figure:

- **A Default Asset Remuneration fee (DA fee)** is the fee paid by the asset broker to the asset holder, and is based on cost recovery (estimated investments based on an amortisation duration, direct costs (technical, operational, etc.), indirect costs (HR, invoicing, etc.), risk related costs, estimation of number of calls per year, etc.) plus a reasonable margin.

  The calculation methodology for the reasonable margin could be based on a "cost to income" ratio that can be found in the "consolidated financial statements" of companies as applicable to different asset classes, so it can be unequivocally defined as an average of its value for a significant sample of possible Scheme participants. The reasonable margin takes the value created into consideration and makes it attractive for actors of all sizes to join the Scheme.

  Moreover, as both the service and the assets are identified as possible object of remuneration, the Scheme could envisage i) a fallback DA fee for the API service and ii) different sub-DA fees for different assets, which could vary in function of the cost and the risk inherent to the respective service.

  This fee can be reduced on a bilateral agreement basis, among Scheme participants.

- **Scheme fees** (inside the Scheme):

- Fee A: Scheme participation fee based on cost recovery and fair share value paid by the asset broker to the Scheme.
- Fee B: Scheme participation fee based on cost recovery and fair share value paid by the asset holder to the Scheme.

- **Commercial fees** (outside the Scheme):

  - Fee 1: Market-driven remuneration paid by the asset user to the asset broker for the service.
  - Fee 2: Reward to the asset owner for contributing to the Scheme and sharing its data. Can take different forms (i.e. monetary, benefits, 'premium' services).

The Working Group foresees that in the majority of cases, the asset owner and asset user would be the same individual or be mandated by the same legal entity.

In the case that the asset owner and asset user are not the same individual / company (e.g. ATM location data), there is no need for the asset broker to maintain a commercial relationship with the asset owner, nor for the asset holder to maintain a commercial relationship with the asset user.

In addition, the asset holder and asset broker could also be the same entity.

The recommended remuneration model has as ultimate objective to facilitate the exchange of PSD2 related 'premium' services, aiming at creating benefits for all involved parties. The responsibility of the Scheme manager in relation to the business conditions is described in section 2.3.2.

2.2.4. Security

For the Scheme related to payments accounts, the following regulations are to be considered from a security point of view:

- PSD2 (Directive (EU) 2015/2366).
- Directive on Security of Network and Information System (NIS Directive (EU) 2016/1148).
- European Banking Authority (EBA) Guidelines on ICT and Security Management.
- Possibly: EC Proposal for a Regulation on digital operational resilience for the financial sector (COM/2020/595).

For other asset classes, sectoral specific regulation (depending on the asset class) will have to be considered, and/or ad hoc security provisions that will have to be developed within the Scheme (e.g. under the risk management profile) in a neutral and transparent manner.

2.2.5. Compliance & liability

The Scheme should have in place a proper dispute handling and resolution process, including a dedicated dispute resolution body, and appropriate procedures to deal with i) disputes between Scheme participants and/or ii) Scheme Participants' liability for breaches of the Scheme's rules.

As already stipulated in the 2019 report, the dispute resolution mechanism should consist of different levels such as conciliation and arbitration. It should also describe the conditions to be fulfilled in order to submit a complaint to the Scheme manager and in which cases such complaints could be rejected by the Scheme manager. Moreover, the Scheme should describe the process and timelines for filing, handling, investigating a dispute or a rules compliance case and should describe the sanctions available to the Scheme manager.

In addition, the Scheme should duly address all possible Scheme Participants' liability profiles related to Scheme's compliance. Such "liability section" should cover i) the liability shift mechanism, ii) Scheme participants' liability for breaches of the Scheme's rules and ii) the regulatory requirements (if any) applicable to participants' liability for the Scheme-related activities.

2.2.6. Infrastructure requirements

The Working Group recommends that the future Scheme manager(s) define(s) the infrastructure requirements for Scheme Participants as per the following scope (see detailed diagram in Annex 10):

- Minimal organisational and procedural requirements related to the general Information Technology (IT) governance (e.g. policies, Business Continuity Management (BCM), risk management, etc.).

- Minimal requirements in the prevention of abuse and attacks area.

- Basic requirements for the IT infrastructure (e.g. protocols, communication standards).

- Minimal system infrastructure requirements in the security area (e.g. network configuration, access control, high availability systems, etc.).

- Basic requirements for API interface (architectural style, e.g. Representational state transfer (REST)).

- Minimal security and integrity requirements on a data level (e.g. authentication and authorisation of end-users, data validation, accountability of events, etc.).

- Functional requirements related to a particular service:

  - customer journeys as defined in section 1.1.

  - range of data necessary to execute a particular service (i.e. list of mandatory fields).

  - possible other specific requirements for the service.

- Minimal security requirements on the Scheme participant level (e.g. identification of API clients i.e. who can 'use' the API).

- Requirements for technical integration with the adopted billing system, based on agreed business model.

Moreover, the Working Group recommends that the future Scheme Manager(s) cooperate(s) with the major European standardisation initiatives in different asset classes (starting from the payments area) to ensure that the Scheme's implementation guidelines will be created in line with the Scheme's functional requirements (see section 1.3) and the respective API specifications.

The future Scheme manager(s) shall ensure that the API implementations are meeting a certain level of quality and that the overall Scheme set-up is efficient, and no obstacles are created. The actual implementation can hence be assessed and certified against the implementation guidelines containing the Scheme's functional and non-functional requirements, combined with the specifications provided by the respective standardisation initiative(s). To this end, the future Scheme manager(s) shall cooperate with the major European standardisation initiatives and posssibly contract a homologation body.

The above requirements apply to all Scheme participants (e.g. asset holders and asset brokers in line with their role as API exposing party or API client and for services related to different asset classes (i.e. payments, beyond payments, beyond finance, etc.).

2.3. Scheme manager

The Working Group assessed the landscape of existing governance entities with the aim of identifying (a) potential Scheme manager(s) or recommending the creation of a new Scheme manager.

2.3.1. Mission

The aim is to reap the benefits of PSD2 and beyond through a Scheme-based approach. To this end, the Scheme manager(s) should lead the Scheme in a manner that is agile, and which ensures that the objectives of the Scheme are met whilst taking into account that PSD2 constitutes the baseline and that the Scheme encompasses 'premium' services and guarantees a fair distribution of value and risk.

The Working Group concluded that a Scheme manager is expected to:

- Act in the best interest of the Scheme, including where appropriate independent from or in balance with other schemes, initiatives or undertakings managed by the Scheme manager, and is adaptable to accommodate future mandates.

- Engage in creating a favourable environment for the development of API standards and services.

- Respect the governance model envisaged by the Working Group including where appropriate setting up and/or implementing the relevant governance model internally independent from or in balance with other models existing in the Scheme manager's organisation on an ongoing basis.

- Develop and implement in a reasonable timeframe detailed rules, regulations and procedures of the Scheme and launch in a reasonable timeframe the basic operations of Scheme management, including participants management.

- Secure and maintain the required competence and resources (staff, office facilities, knowledge) to effectively manage the Scheme, including specific competence (if any) needed to manage interoperable digital - only services provided in a Scheme.

2.3.2. Requirements

The requirements applicable to the future Scheme manager can be categorised as follows:

a. Governance: The Scheme manager will be a membership organisation with pan-European reach which:

  - implements governance or adjusts existing governance so that the governance and management of a Scheme is independent from other schemes and initiatives of the manager on an ongoing basis.
  - ensures fair, balanced and transparent governance and decision-making, equal / proportionate representation of all stakeholders (asset holders and asset brokers) as well as geographical diversity and balance within a pan-European governance.
  - Is flexible and adaptable to accommodate innovation and needs of Scheme participants.
  - supports different membership models and/or participant structures if necessary (with adequately diversified fee structure).
  - manages conflicts of interest, including between Scheme management and manager's commercial activities.
  - implements or adjusts existing decision-making to ensure that in the decision making related to the Scheme, the views of the different Scheme stakeholders are adequately respected on an ongoing basis.

b. Flexible structure:

  - adjusts its existing operational structure to accommodate Scheme requirements as defined in this report.
  - manages the Scheme separately from any other business activity, including at least cost accounting.

c. Competence in:

- launch, development and management of a scheme: Scheme manager has experience in launching, developing and managing a scheme or is able to demonstrate a clear track record in relation to securing such competence.

- modern retail payments: has experience in managing interoperable digital-only services provided in a scheme or is able to demonstrate a clear track record in relation to securing such competence.

- compliance: has experience in scheme compliance with EU competition law or is able to demonstrate a clear track record in relation to securing such competence.

d. Sufficient resources:

- has human, material and intellectual resources to launch, develop and manage the Scheme.

- covers at least development and maintenance of Scheme rules, management of adherence process, general management, strategy management, intellectual property (IP), disputes and compliance, basic operations (directory).

e. Consistent budget policy:

- implements a funding model as recommended in section 2.2.3.

f. Time to market:

- predictable launch: able to develop and launch the Scheme and put in place the required governance structure in a reasonable timeframe.

In addition, a Scheme manager related to payment accounts is expected to:

- ensure that the benefits of a Scheme-based approach are applied to make 'premium' services beyond PSD2 work more efficiently.
- facilitate the extension of Scheme benefits to non-statutory payment functionality through the SEPA API.
- contribute towards facilitating the extension of Scheme benefits to classes of financial assets also beyond payments and potentially beyond finance.
- ensure the reachability and the interoperability of the participants under the Scheme rules.
- define the DA Remuneration fee(s) application and calculation model and amount(s) (see section 2.2.3).

- define a dispute resolution process also for the default asset remuneration between the Scheme participants (i.e. asset brokers and asset holders).
- support (directly or as an outsourced function) Scheme participants with remuneration management on both a net and gross basis.

2.3.3. Scheme manager recommendations

The Working Group assessed the landscape of existing governance entities with the aim of identifying (a) potential Scheme manager(s) or recommending the creation of a new Scheme manager.

A total of fourteen entities were assessed - based on desk research - against the requirements defined in section 2.3.2 and in accordance with the following two-tiered approach:

- **Level 1: "must have" criteria** covering pan-European reach and adequate governance, including multi-stakeholder ownership and representation as well as governance representativeness and governance functions. Only entities that fulfil the level 1 criteria were considered for assessment against level 2 criteria.
- **Level 2: supplementary criteria,** mainly related to requirements such as competence, resources, budget and time to market.

All criteria were assessed via a weighted scoring as depicted below in Figure 4:

requirement	weight	EPC		Entity 2		Entity 3	
Governance	50%	3		2		1	
			1.5		1.0		0.5
Structure	20%	3		2		1	
			0.6		0.4		0.2
Competence	20%	3		1		2	
			0.6		0.2		0.4
Resources	10%	2		1		3	
			0.2		0.1		0.3
	ranking	2.9 [1st]		1.7 [2nd]		1.4 [3rd]	

Figure 4: Outcome assessment recommended Scheme manager in relation to payment accounts

The score aggregates the relative position of each candidate vis-à-vis other contenders where each contender within each category ranks as either first (score 3), or second (score 2) or third (score 1) (see red font). These scores are then weighted, which results in a given score (see purple font) per category. The addition of the weighted scores results in the total score for each candidate.

Based on the outcome of this assessment, which also took into account the aforementioned Scheme manager requirements, the Working Group considers the European Payments Council (EPC) to be best placed to take up the role of Scheme manager in relation to payment accounts, subject to accepting the requirements as outlined in the corresponding section of this report.

It is to be noted that taking into account the aforementioned assessment outcome it was decided to opt for an existing entity also in order to ensure a timely start-up.

3. Stock take of initiatives

The Working Group performed a cross-check with other ongoing work streams that could impact the development of the potential payment related part of the Scheme. (Note: the Working Group's mandate limits this stock take to the payment related part of the Scheme).

3.1. Scope and methodology

The initiatives that were assessed as part of the stock take exercise are listed below:

1.	SEPA Proxy Lookup (SPL) Scheme
2.	SEPA Request-to-Pay (SRTP) Scheme
3.	Mobile Initiated SEPA (Instant) Credit Transfer Interoperability Guidance
4.	ERPB Working Group on Instant Payments at POI
5.	e-IDAS Regulation
6.	e-identity initiatives (local)
7.	W3C Decentralized identifiers (DIDs)
8.	The Berlin Group openFinance API Framework
9.	European Payments Initiative (EPI)
10.	European Mobile Payment Systems Association framework (EMPSA)
11.	Local Gateway PSD2 Initiatives*
12.	Local PSD2 standardisation initiatives (PL, FR, SK)
13.	Payments API standards alliance (SWIFT)
14.	Open Banking Europe (OBE)
15.	OpenID Foundation (OIDF)
16.	e-Invoice specifications (e.g. Forum for Electronic Invoicing Germany (FeRD) Initiative)
17.	European Strategy for Data
18.	European Retail Payments Framework (ERPF)
19.	Eurosystem's oversight framework for electronic payment instruments, schemes and arrangements (PISA)

20.	Global Open Finance Technical Standards Working Group
21.	Open Banking Implementation Entity (UK)
22.	ERPB WG on transparency for retail payments end-users

Figure 5: List of initiatives affecting the Scheme in relation to payment accounts

Each initiative was assessed according to the following criteria:

- Positive impact on the Scheme (e.g. potential synergies, interactions, mutual benefits).
- Negative impact on the Scheme (e.g. potential conflicts, potential need to change).
- Type of impact (legal baseline / market layer / scheme layer / specification layer / standardisation layer) (see Annex 6).
- Geographical scope (Domestic / EU / SEPA / Global).
- Range of products included (Single product / PSD2 product / Payment or non-payment products beyond PSD2 / Other).

A detailed overview table of the outcome of the assessment can be found in Annex 7.

In addition, it is to be noted that the legal context of the services covered under the Scheme includes GDPR, EU competition law and consumer protection rules. Moreover, specific sectoral legislation will apply to the specific Schemes. It was impossible, however, for the Working Group to assess the potential impact of ongoing regulatory initiatives of the EU Commission e.g. in the field of data governance.

3.2. Follow-up recommendations

The Working Group agreed on a number of recommendations to be taken up by the recommended Scheme manager in relation to payment accounts in order to foster possible synergies with the identified initiatives in section 3.1 (see Annex 8).

In addition, developments in the domain of Central Bank Digital Currencies and quantum computing could also have an impact on the Scheme (e.g. quantum computing could have a potential impact on the security aspect of the Scheme). These initiatives were however not assessed in detail by the Working Group as deemed not yet mature enough.

4. Potential extension beyond payments (in a next stage)

The Working Group was mandated to assess with relevant subject matter experts the potential extension in a next stage to other financial services (e.g. lending, stock classes) as well as to non-financial services as required.

4.1. 'Beyond payment' asset classes

Given the limited time and resources and the high-level expertise of the Working Group with regard to asset classes beyond payments, the assets that were preliminary explored were limited to the ones mentioned below. Consequently, the below list of assets 'beyond payments' for which an API would be useful is to be seen as non-exhaustive:

Asset class	Assets
Banking	• mortgage • loans • securities • bank owned data/process • …
Other finance	• insurance • private pensions • data handling • ID services and tax • …
Beyond finance (non-finance)	• utility services (telco, energy) • public transport • …

Figure 6: Beyond payment asset class examples

For each of the different asset categories, several assets have been studied for which a standardised template[7] was developed, containing relevant information that could potentially be exchanged via an API (see Annex 4). The template contains the following main information categories:

Information category	Description
Pre-sale information	General information related to the respective asset
Contract preparation	Customer preparation: information collecting (personal information, collateral…) Provider preparation: credit checks, KYC, interest of the consumer /education/ information
Contract	Signing, content, cancellation (cool off).

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[7] The template has been customised only for the bank owned data asset.

During lifetime	Transaction; information, changes, extension, cancellation.
Closure	Normal end of contract
Administration process	Back-end related process

Figure 7: Asset template: information categories

In addition, the Working Group identified the following interdependencies between the assets included in Figure 6:

Asset classes...	...needed for	Banking				Other Finance			Beyond Finance	
		Securities	Loans	Mortgage	Bank Owned Data	Pensions	Insurance	ID-services	Telco	Public Transport...
Securities		■								
Loans			■							
Mortgage	Object details		■	■			■			
Bank Owned Data	General Information	■	■	■	■	■				
	Product Information	■	■	■	■	■	■			
Pensions						■				
Insurance	e.g. Death Insurance		■	■			■			
ID-Services	Customer Details	■				■	■	■	■	■
	KYC e.g. AML	■	■	■			■	■	■	■
	Signing QES	■	■	■			■	■		■
	Customer Creditability	■	■	■				■	■	
Telco									■	
Public Transport...										■
Payments (existing)	Pay-out / Payments		■	■						

Figure 8: Asset class interdependencies

The green colour in the above figure underlines the existence of interdependencies between the different assets. The consequence would be that an API created for one asset could also be useful for other assets. For example, an API that provides KYC / AML information would be useful for the following assets: securities, loans, mortgage, insurance, telco and public transport.

A number of relevant examples are listed below:

- The assets 'loans', 'mortgage', 'securities', 'insurance', 'private pensions' 'public transport' and 'telco' all require the successful completion of an adequate KYC procedure.
- The assets 'loans', 'insurance', 'securities' could use an API for eIDAS signature.

- The assets 'loans' and 'mortgage' could benefit from having an API to access the related death risk insurance.
- The asset 'securities', 'loans', 'mortgage', and 'pensions' could take advantage of an API with financial customer information.
- An API with real estate details would be useful for the assets 'mortgage' and 'insurance'.
- The assets 'mortgage', 'loans' and 'telco' could be impacted by an API with customer creditworthiness information.

Taking into account the above, the Working Group concluded that, for some assets, an API could be useful to have access to:

- KYC checks:
  - Standard KYC: this includes the verification of the customer ID details (age, name, marital status, children, address…).
  - Category checks: professional clients, retail clients, eligible counterparties, clients that can be treated as professionals at their own request.
- Electronic signatures.
- Policy schedule (death risk insurance…).
- Customer financial information (income, assets, liabilities).
- Customer creditworthiness (financial track record, references, asset certifications…).
- Bank products information.
- Bank appointments.

Moreover, the Working Group established that 'horizontal functions' exist i.e.one 'dedicated' API could contain information that is useful for different assets (beyond payments):

API	**API**	**API**	**API**	**API**	**API**	**API**
Customer ID details	KYC	Electronic signature	Policy schedule	Customer financial information	Customer credibility	Bank products information
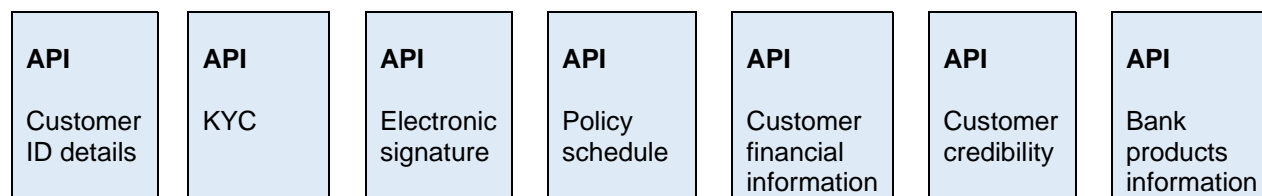
Figure 9: Horizontal functions

The below diagram translates the general SEPA API Access Scheme vision (see chapter 0.) to a concrete credit application process (P1, P2, etc.) example and also illustrates the possible 'interplay' between different assets:
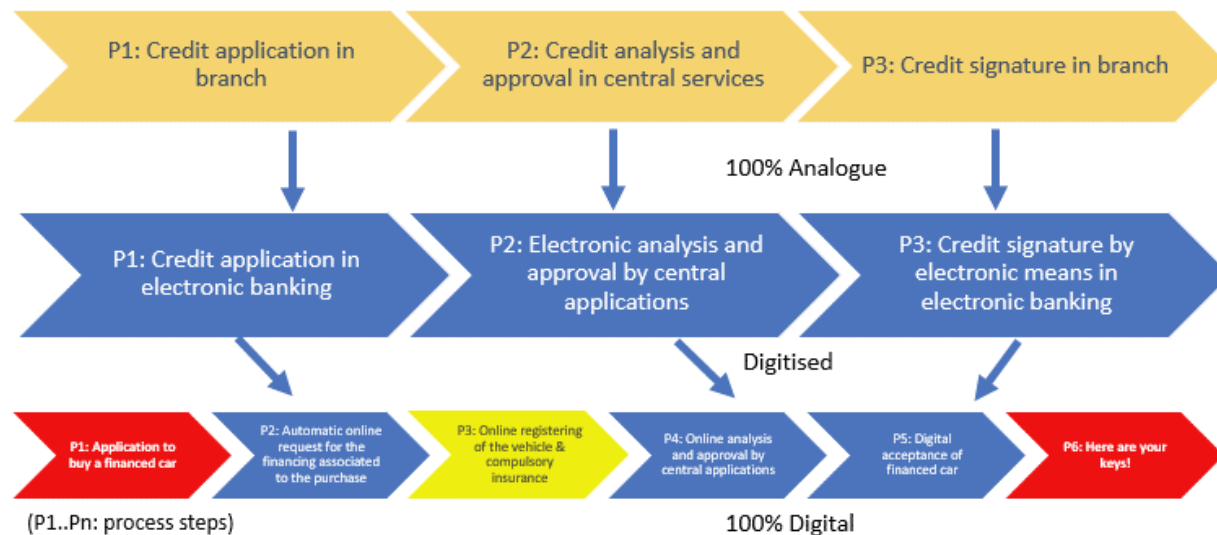
Figure 10: Interplay between assets

The starting point in the above figure is an '100% analogue' process (e.g. the client goes to an ASPSP branch to apply for a credit, the analysis in performed by the ASPSP and finally the client signs the credit application in the ASPSP branch) which then progresses from a partially digitised process (i.e. same steps as in the analogue process but for some steps the internet is used e.g. credit application via electronic banking) to a fully digital process whereby new value chains and digital services can be created. For example, a tablet could be used in a car dealership to buy a financed car vs buying a car and buying the financing as a separate process. Several related services could be digitally triggered including the online credit application, online purchase of required insurances, online analysis and approval of credit, even up to the registration of the car. Once successfully completed, the client would be given the keys of the new car on the spot.

4.2.   Recommendations for the next phase

The API that will be created for payment assets can have an impact on non-payment assets. The recommendation is that the future Scheme manager for payment assets keeps in mind the impact of the API created for payment assets on non-payment assets.

At this stage, the Working Group has noticed a strong market interest for an API for loans, ID services and bank owned data.

5. Conclusions and recommendations (way forward)

The Working Group recommends to the ERPB the following way forward:

a. Implement a Scheme for the payment asset class, i.e. move the payment asset class from discussion into a delivery phase.

Invite the EPC to take up the role of Scheme manager related to payment accounts as defined above and if the invitation is accepted, ask the EPC to:

- Create a stakeholder group to collaborate with the recommended Scheme manager.
- Write the Scheme rules, requirements and clarify related business conditions with the proper involvement of the stakeholders.
- Create the Scheme including inter alia the prioritisation of business requirements, the definition of related datasets, rights and obligations of the Scheme participants and the description of the change management process.
- Implement the requirements as laid out in the report.
- Align with relevant actors in the ecosystem (e.g. standardisation initiatives, directory service providers) and progress in relation to the recommendations made in chapter 3.
- Align with regulatory bodies (e.g. the EC Directorate-General for Competition (DG COMP) on business conditions).
- Promote its adoption.

b. Explore the implementation for financial asset classes beyond payments and frame the ecosystem for asset classes beyond finance

Identify a host for a multi-stakeholder project for financial asset classes beyond payments and create a multi-stakeholder project to:

- Further identify, describe, and prioritise business requirements per asset class.
- Assess the landscape of existing governance entities (including the Scheme manager defined under a) in order to identify a potential Scheme manager per asset class or recommend the creation of a new Scheme manager.
- Validate, amend and/or extend Scheme requirements defined for the payments asset class to address the needs of other asset classes.
- Propose a roadmap for implementation.

Identify a host for a cross industry working group to frame the wider ecosystem and draft an approach for an open data economy in Europe.

The ERPB is invited to:

1. Consider the report of the Working Group.

2. Endorse the recommendations on the way forward.

3. Invite the EPC to take up the role of the Scheme manager in relation to payment accounts

Annex 1: List of ERPB Working Group participants

Category	Stakeholder organisation	Representative
Co-Chairs	ECSAs (EACB, EBF and ESBG)	Christian Schäfer – Deutsche Bank
	ETPPA	Arturo González Mac Dowell - Eurobits
ERPB Stakeholders	BEUC	Jean Allix - BEUC Alternate: Deborah Faure
	EACB	Jens Holeczek - BVR Alternate: Agnieszka Janczuk - EACB
	EBF	Gijs Boudewijn – Dutch Payments Association Alternate: Anni Mykkänen - EBF
	EMA	Thaer Sabri - EMA Alternate: Jack Wilson - TrueLayer
	EPC	Maciej Kostro – ING Netherlands Alternate: Andrea Cogerino - Intesa Sanpaolo
	EPIF	Krzysztof Korus - DLK Legal
	ESBG	Robert Renskers - De Volksbank Alternate: Klára Bulířová – Erste Group
	EuroCommerce	Alexandre Leclerc - Carrefour Alternate: Pascal Spittler - Ikea
ETPPA	Bankin'	Fanny Rodriguez Alternate: Joan Burkovic
	Plaid / Sofort & Klarna	D. Morgan - Plaid Alternate: Aoife Houlihan – Sofort & Klarna
	Tink & PPRO	Ralf Ohlhausen
	Trustly	Jörn-Jakob Röber / Jens Olsson Alternate : Oscar Berglund
Central Banks	DE	Lukas Korella – Bundesbank Alternate: David Ballaschk
	ECB	Iddo de Jong Alternate: Kerstin Junius
	EE	Helena Kokk - Eesti Pank
	FR	Guillaume Bruneau – Banque de France
	NL	Wouter Vinken – De Nederlandsche Bank
	PT	Tiago Cordeiro - Banco de Portugal Alternate : Tatiana Lourenço - Banco de Portugal
Observers	European Commission	Eric Ducoulombier Juergen Rieg
Secretariat	EPC	Etienne Goosse
		Christophe Godefroi

Annex 2: Mandate ERPB Working Group on a SEPA API Access Scheme

EUROPEAN CENTRAL BANK
EUROSYSTEM

ERPB Secretariat

16 November 2020
ERPB/2020/032

MANDATE OF THE WORKING GROUP
ON A SEPA API ACCESS SCHEME
(NOVEMBER 2020 – JUNE 2021)

Based on Article 8 of the mandate of the Euro Retail Payments Board (ERPB) a working group is set up with the participation of relevant stakeholders to further define key elements of a potential SEPA API access Scheme ("Scheme"). The working group takes as starting point the report presented to the ERPB for its June 2019 meeting[1], as well as the outcome of the informal exploratory workstream addressing the conditions to re-start the ERPB Working Group on a SEPA API access scheme[2].

1. Scope

The revised Payment Services Directive (PSD2) introduced Payment Initiation Services (PIS), Account Information Services (AIS) and the confirmation on the availability of funds to boost innovation and competition in payment services. The related Regulatory Technical Standards on Strong Customer Authentication and Common and Secure Communication (RTS) require Account Servicing Payment Service Providers (ASPSPs) to offer an interface. To meet this particular legal requirement, a large majority of ASPSPs has chosen to implement an Application Programming Interface (API).

In order to reap the full benefits of PSD2 for the provision of innovative and competitive PIS and AIS services in an integrated European market, the ERPB agreed that the working group should define the key elements of a Scheme. These key elements shall be developed with the legal and regulatory requirements of PSD2 constituting the "baseline", which has now been set, but also going beyond such baseline to encompass value-added ('premium') services that may be provided in context of 'open banking' as a natural evolution of PSD2 within the contractual framework of the Scheme. These key elements could establish the foundation of a possible future rulebook and of possible future implementation guidelines of the Scheme.

In this regard, the legal and regulatory requirements represent the indispensable basis upon which to establish a Scheme in the sense of (i) business requirements, (ii) governance arrangements, as well as (iii) a standardised API interface.

The working group will focus its discussions and its report on functions and services on top of the PSD2 baseline. It is agreed that any service and functionality offered by ASPSPs that goes beyond their legal obligations can be considered as a value-added service in the context of a SEPA API access Scheme and is subject to a competitive, sustainable and fair distribution of value and risk between the actors.

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[1] See: https://www.ecb.europa.eu/paym/groups/erpb/shared/pdf/11th-ERPB-meeting/
Report_from_the_ERPB_WG_on_a_SEPA_API_Access_Scheme.pdf.

[2] See: https://www.ecb.europa.eu/paym/groups/erpb/shared/pdf/14th-ERPB-
meeting/Reporting_by_the_informal_workstream_on_a_SEPA_API_access_scheme.pdf

Page **1** of **2**

2. Deliverables

The ERPB working group is expected to prepare a report with the following deliverables:

1. Conduct a cross-check with other on-going workstreams (covering e.g. e-identity, Request-to-Pay, instant payments at the point-of-interaction, mobile initiated SEPA Credit Transfers) that may impact the development of the potential payment related part of the Scheme.
2. Validate, update, and prioritise business requirements from the previous report.
3. In addition to consumer-to-business customer journeys, draft customer journeys and derive business requirements for P2P payments, business-to business payments and other payments.
4. Assess the landscape of existing governance entities in order to identify a potential Scheme manager(s) or recommend the creation of a new scheme manager.
5. Assess with relevant subject matter experts the potential extension in a next stage to other financial as well as non-financial services as may be required.
6. Start drafting scheme requirements between asset holders and asset brokers for certain issues based on the above working assumptions related to inter alia eligibility criteria, business conditions, rights and obligation of participants, security, liability, and compliance.

The working group may consider providing additional key elements that may be needed to enhance the efficiency and/or safety of a Scheme.

3. Time horizon

The working group will be established shortly after the November 2020 ERPB meeting and shall deliver its report by June 2021.

4. Participants and chairmanship

The working group shall include representatives of banks and PIS/AIS providers with a broad experience and a good understanding of the key business, operational and technical requirements as well as the legal and governance elements that are needed for a Scheme. Knowledge and expertise in 'open banking' services based on API technology would be an asset. While representation of the ERPB supply side shall remain lean, it shall equally represent the different business models of both ASPSPs and TPPs. It is equally important to have representatives of ERPB demand side stakeholder groups actively participating in the WG. One representative of the ECB and a limited number of representatives of euro area NCBs are invited to join the working group as active participants. Furthermore, a representative of the European Commission will be invited as observer. The working group will be co-chaired by a representative of the European Third Party Providers Association and a representative of the banking sector. The secretariat will be provided by the European Payments Council.

Members and the co-chairs will be appointed by the ERPB Chair based on suggestions from their respective associations.

5. Rules of procedure

The mandate of the ERPB defines a broad set of rules for the procedures of its working groups: the working group takes positions on a ¾ majority basis; dissenting opinions are mentioned in any relevant documents prepared by the working group. The members of the group decide on how to organise secretarial support, timing and rules of meetings and communication via written procedure, as well as on the need and format of any interim working documentation produced. Costs related to the operation, meetings, chairmanship and secretariat are carried by the members of the group themselves. Members of the working group may interact with representatives of European standardisation initiatives for specific topics, where relevant.

Annex 3: Joint understanding

ERPB/2020/029

13 October 2020

Joint understanding of the conditions to re-start the ERPB Working Group on a SEPA API access scheme and proposal for workstream deliverables

In its meeting of 6 July 2020, the ERPB requested regarding the SEPA API access scheme work that the affected stakeholders start an informal exploratory workstream, addressing inter alia the commercial baseline, for allowing the reactivation of the working group in November 2020. Based on the outcome of this work, the ERPB Secretariat would prepare a proposal on resuming this working group to be discussed at the ERPB's November meeting.

With this document, the affected stakeholders, EMA, EPIF, EuroCommerce, EACB, EBF, ESBG, and ETPPA ("the Parties") agree on a clear basis for the Working Group ahead of the next ERPB meeting in November.

The Parties hereby understand that the concerns as expressed by some of the working group members in their respective letters to the ERPB from June 2019 have either been removed or are out of scope and that all stakeholders are now open to resume work on the SEPA API Access Scheme. Additionally, the Parties are in agreement with the following three principles on which the resuming of the SEPA API access scheme work would be based:

- **PSD2 is the Baseline**: The implementation deadline of the Regulatory Technical Standards on Strong Customer Authentication and Common and Secure Communication of September 2019 has passed and the baseline is now set. The Parties agree that they will within their ERPB work fully accept and appreciate the regulatory framework. The working group will focus its discussions and report on functions and services on top of the PSD2 baseline. The PSD2 baseline includes but is not limited to the latest EBA clarifications as well as the forthcoming final EDPB Guidelines on the interplay of PSD2 and GDPR.
  Matters of legal correctness of PSD2 implementation are out of scope of the SEPA API Access scheme work – as these are to be dealt with by NCAs and PSPs – and the Parties agree that there is sufficient clarity about PSD2 implementation to continue the work of the WG.

- **The commercial baseline is agreed:** It is agreed that any service and functionality offered by banks that goes beyond their legal obligations can be considered as a value-added service in the context of a SEPA API access scheme and is subject to a competitive and sustainable fair distribution of value and risk between the actors. The Parties are now open to determine the commercial principles for these value-added services.

- **Starting point is the 2019 report, which is fully endorsed by all signing parties**: The future work of the SEPA API access scheme is to be based on the report issued by the WG on 31 May 2019. The Parties agree that the WG should take the business requirements and customer journeys mentioned in the report as a starting point, validate whether they are still relevant and if so evolve them considering that the basic principles, such as fair distribution of value, should remain intact.

ERPB/2020/029

The Parties herewith confirm the three points mentioned above. They confirm further that all relevant conditions to resume the work of the SEPA API access scheme have been met and that the ERPB is recommended to approve resuming the work.

Annexed to this joint understanding the Parties propose a high-level timetable with deliverables, goals and milestones for the WG.

ERPB/2020/029

Annex - Proposed high-level timetable / planning with deliverables, goals and milestones

To note: The below plan builds on the "*next steps*" section as laid out in Chapter 6 of last year's report,[1] with some changes. Out of scope for this phase is the delivery of a written and consulted scheme rule books.

Deliverables

1. Conduct a cross check with other ongoing work streams (covering e.g. e-identity, Request-To-Pay, instant payments at the POI, mobile initiated SCT) that may impact the development of the potential payment related part of the Scheme.
2. Validate, update, and prioritise business requirements from previous report.
3. In addition to customer-to-business customer journeys, draft customer journeys and derive business requirements for P2P payments, business-to business payments and other payments.
4. Assess the landscape of existing governance entities in order to identify a potential Scheme manager(s) or recommend the creation of a new scheme manager.
5. Assess with relevant subject matter experts the potential extension in a next stage to other financial services as well as to non-financial services as may be required.
6. Start drafting scheme requirements between asset holders and asset brokers for certain issues based on the above working assumptions related to inter alia such as: a. Eligibility criteria, b. Business conditions, c. Rights and obligation of participants, d. Security, e. Liability, f. Compliance

Timetable/Milestones

In terms of milestones we suggest that the working group has monthly meetings at the end of which it should have accomplished for each of the above deliverables the following:

1st meeting – 2nd week of December: Agreed work packages and owner per deliverables.
2nd meeting – 3rd week of January: Validate draft milestone planning, team composition, resource demand, and deliverables per workstream as suggested by the work stream leads.
3rd meeting – mid February: 1st draft of the deliverable in PowerPoint / bullet list format; agreement on content scope and further topics to be addressed.
4th meeting – mid March: Mid-term progress review.
5th meeting – mid April (provided editorial support is available): Final draft of the deliverable in PowerPoint / bullet list format, agreement on content and remaining issues to be closed.
6th meeting – end of April: Initial draft report, agreement on content and agreement on proceeding with remaining open issues.
7th meeting – end of May: Final report endorsed for submission to June 2021 ERPB meeting.

Between the meetings we suggest weekly working group meetings per working package to be organised and manage per delivery owner. Further to which weekly update calls with the deliverables owners and co-chairs.

Composition

In order to resume the work with immediate impact we suggest to retain the composition from the previous working group. Further members as agreed by the ERPB are welcome.

Annex 4: Asset templates (non-exhaustive & preliminary)

Banking	Mortgage

Pre-sale (general information)	• Proposed mortgage conditions
	  o credit amount
	  o interest rate (fixed, variable) & effective rate
	  o duration, annuities, penalties, pay-out timing, etc.
	• Product & Portfolio information
	• Detailed terms & conditions
	• Mortgage calculator

Contract preparation	
- Contract: information collecting (personal information…)	• Customer ID details (name, address, etc.) • Customer financial information (income, assets, liabilities) • Object/real estate details • Customer credibility (financial track record, references, asset certifications, etc.) • Assessment and valuation of the object/real estate • Negotiation tools
Contract	
- Signing (KYC…)	• KYC check • Open account(s)

- Content	• Agreed mortgage conditions
	  o credit amount
	  o interest rate (fixed, variable) & effective rate
	  o duration, annuities, penalties, pay-out timing, etc.
	• Detailed terms & conditions

- Cancellation (cool off)	• Duration
During lifetime	
- Transaction	• Pay-outs • Interest, payback, penalties, fees, etc.
- Information	• Promotions, mortgage improvements, etc.
- Changes	• Change of terms & conditions • Change of mortgage conditions • Change of customer details
- Extension (prolongation)	• Prolongation • Payback holidays
- Cancellation	• Contract termination • No agreement about change of terms & conditions • Switching service
Closure (normal end of contract)	• Giving notice or end of term • Clearing balance
Administration processes / back end	• Late payments, bankruptcy • Change of interest rates, fees, duration, etc. • Change or loss of collateral • Version of terms & conditions • Foreclosures

Banking	Consumer (Personal) Loans
Pre-sale (non-personal) general information)	Terms & conditions Product information (credit on payment account, **Personal loan based on annuities**, revolving credit) Pricing (nominal & effective interest rate) Object (**for personal loan**/ revolving credit) In some cases death risk insurance (**Personal loan** / revolving credit)
Contract preparation (Personal information)	
- Contract: personal information collecting	Name address Credit bureau (other loans etc.) and financial check (salary) Duration Check regarding laws around loans (over crediting, interest rates)
Contract	
- Signing (KYC…)	KYC check, **Electronic Signature allowed in different ways per country** (based on Advanced Electronic Signature (AES), eIDAS, SMS & PIN code, electronic signature (without additional demands))
- Content	Appendix terms & conditions (Personal) Pricing (interest, annuities, insurance fees) Duration Notice period Policy schedule (n case death risk insurance) Beneficiary in case of passing away (finance company)
- Cancellation (cool off)	14 days (**for Europe this applies for all countries**)
During lifetime	
- Transaction	At the start pay-out of the amount Collecting annuities /fees insurance
- Information	Change of terms & conditions / changes in law (not interest rate because mostly fixed in personal loans) API access for (renewed) AIS due to changes

- Changes	Sale object/ passing away/payment arrears
- Extension (prolongation)	n/a in personal loans end date already in the contract
- Cancellation	Sale object/ passing away/payment arrears
Closure (normal end of contract)	debt repaid, stopping death risk insurance
Administration processes / back end	Administer Policy schedule Version of terms & conditions Collecting annuities and (insurance) fees In some cases Customer Due Diligence after certain period of time Payment arrears treatment

Banking	**Securities**
Pre-sale (general information)	Regulation 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments (MiFIR) establishes the principle of pre- and post-trade transparency. The related obligations apply, with some variations, to equities and equivalent instruments ("equity instruments") and to non-equity financial instruments, including bonds and derivatives ("other instruments"). **More generally a Key Information Document (KID) for Packaged Retail & Insurance-based Investment Products (PRIIP) must be made available :** The KID documents will provide you with key information on the investment product you may be interested in. It is not a Marketing material. This document will help you to better understand the nature, risks, costs and potential gains and losses of your chosen investment product. Under the regulation, manufacturers/issuers are obliged to produce a Key Information Document (KID) for each product in scope. The KID is a 3-page document which must be provided in the local language of the investor and be published on the company website prior to product being offered to retail investors. Any distributor or financial intermediary, who sells or provides advice

		about PRIIPs to a retail investor or receives a buy order on a PRIIP from a retail investor, must provide the investor with a KID.
Contract preparation		
-	Contract: information collecting (personal information…)	The implementation of suitability and appropriateness within MiFID II requires clear understanding of the client's profile, which is based on relevant information (such as knowledge and experience in the investment field, financial situation, investment objectives, according to the type of service provided), collected by the investment firm, before providing the investment services, through a questionnaire. Furthermore the scope of investments services covers, where applicable, advised services such as investment advice and portfolio management or non-advised services (execution only) such as order execution or the primary market placement of financial instruments.

Table 1. Requirements for assessing suitability

Information to be obtained when assessing suitability	Requirements
Client's knowledge and experience[5]	• the types of service, transaction and the regulated investments with which the client is familiar; • the nature, volume, frequency of the client's transactions with regulated investments; and • the level of education, profession or (if relevant) former profession of the client.
Client's financial situation*[6]	• the source and extent of the client's regular income; • the client's assets, including liquid assets, investments and real property; • the client's regular financial commitments; • the ability to bear losses.
Client's investment objectives	• the client's investment horizon; • the client's risk preferences, risk profile and risk tolerance; and • the purposes of the investment.

Table 2. Requirements for assessing appropriateness

Information to be obtained for purposes of assessing appropriateness[7]	Requirements
Client's knowledge and experience in order to enable the firm to determine whether the financial instruments and services envisaged are appropriate.	• the types of financial service, transaction and regulated financial instruments the client is familiar with;
	• the nature, volume and frequency of the client's transactions in regulated financial instruments; and
	• the client's level of education and profession (or former profession).

Information permitting to analyse or confirm the suitability and appropriateness of the potential investment shall be obtained through the API as Information regarding active or past investments.

Meaning that API access to information regarding securities could be retrieved from another provider.

Contract	
- Signing (KYC…)	Standard KYC + Category of Client as - Professional client - Retail Clients - Eligible counterparties - Clients that can be treated as professional at their own request Category must be notified to client
- Content	- a description of the nature and extent of any investment advice to be provided; - where portfolio management is provided, a statement of the types of financial investments that may be purchased/sold and the types of transactions that may be undertaken and any investments/transactions which are prohibited; and - a description of the main features of any custody services to be provided, including the role of the firm in relation to corporate actions and the terms on which securities financing transactions will generate a return for the client. ESMA has stated that these requirements will be minimum harmonisation rules meaning that member states may impose additional requirements on firms in relation to advice and suitability if they so choose.
- Cancellation (cool off)	- Information on cancellation option - Cancellation request (both sides) - Confirmation of definitive subscription
During lifetime	
- Transaction	- Trading Order - Investment/deposit - Withdraw - Arbitration
- Information	**Information that shall be pushed (API call-back)** |	**Equity instruments**	**Non equity instruments**
---	---	---
Post trade transparency	Yes immediatly unless in case of deferral for: - Large in scale and trading on own account by one of the counterparty	YES, within 15 minutes unless in case of deferral for: - Large in scale - SSTI for voice trading systems and RFQ and trading on own account by one of the counterparty - Illiquid instruments - Package transactions (including Exchange for Physical)	 **Information that should be made available** - Securities List (shares, obligations, funds, unit-linked contracts, liquidities, etc) - information on fees and costs - information on commissions - status of an order - Securities History (ended contracts) - Balances - Balance History - Trading order status - Trading orders list

		- pockets - pockets withdrawal conditions - withdraws status - investment status - withdraws/investments list - interests list - dividend list	
- Changes		- Change of Category Notification - Contract change - Managed arbitration	
- Extension (prolongation)		- Extension request - Extension acceptation - Auto-extension information	
- Cancellation		- Cancelation notice - Cancelation acknowledgement - Cancelation information requests (for final transfers ?)	
Closure (normal end of contract)		Closure notice Closure acknowledgement Closure information requests (for final transfers ?)	
Administration processes / back end		./.	

Banking	Bank owned data
Public information	**General data** General data APIs would provide access to the bank's (data asset holder's) general information, such as contact information or a list of ATMs and branches, including geolocations, services offered, and opening hours. • Contact information (phone number, email address, Skype or other) • ATM locations • ATM services (e.g. withdrawals, deposits) • Branch locations • Branch opening hours • Branch services **Product data** Product data APIs would provide access to the bank's information about its products, such as fees, interest rates, product features, and other terms and conditions. • Fees/charges • Interest • Features • Terms and conditions General and product data APIs could be used to present specific bank information on the asset broker's website or application, as well as to aggregate information from different banks for comparison. The added value of such APIs lies in facilitating access to such public bank data.

Private information	**Aggregated customer data** Aggregated customer data APIs would provide impersonal statistical information about the bank's customer base, including cross-sectional and time series data. • Customer demographics • Behavioural metrics • Trends (time series) Such data could be useful for asset brokers in making product, pricing and marketing strategy decisions when tapping into bank's customer base. Here, the unlocked value lies in providing access to such private, bank owned data.
Consultation	**Consultation scheduling** Consultation scheduling APIs would allow to self-book a consultation or any other appointment in the bank on the asset broker's website or application, as well as to change or cancel the appointment. • Book a consultation time • Change the consultation time • Cancel the consultation time

General remarks

The list of possible APIs and data provided is not exhaustive (just a few examples are given here).

All of these APIs can be monetised by banks to generate revenue through data sharing. However, the market demand and business case for such APIs has yet to be confirmed.

All of the above APIs could be used by both regulated and unregulated entities (asset brokers).

The use of these APIs does not require customer consent as no personal data is shared.

CUSTOMER JOURNEY
Example

The customer wants to take a mortgage loan and compare information on mortgage loan products of different banks (maximum amount, period, fees, interest rates, etc.)	The customer visits the asset broker's website, which conveniently brings together (aggregates) information on mortgage loan products of different banks	The customer compares product information from different banks	The customer selects the bank with the most favourable conditions and books a consultation time with the bank to further discuss the contracting process at the nearest branch
	↑ Product data APIs	↑ Product data APIs	↑ Consultation scheduling APIs General data APIs

Note: This customer journey is based solely on bank owned data APIs, in which case no personal data is shared. More advanced cases involving the sharing of personal data could also include a personal loan offer and the conclusion of a loan agreement on the asset broker's website.

Other Finance	Insurance
Pre-sale (general information)	Terms & conditions Product information Pricing Object Household effects Residential building (rent or ownership))
Contract preparation	
- Contract: information collecting (personal information…)	Name address Credit bureau or financial check Duration Check object or building
Contract	
- Signing (KYC…)	KYC check, **Electronic Signature allowed in different ways per country** (based on Advanced Electronic Signature (AES), e-IDAS, SMS & PIN code, electronic signature (without additional demands))
- Content	Appendix terms & conditions Pricing Duration Notice period Policy schedule
- Cancellation (cool off)	In NL 14 days
During lifetime	
- Transaction	Collecting fees
- Information	Change of terms & conditions / alert in case of under insured
- Changes	Additional household purchased / home improvement when owner
- Extension (prolongation)	No notice, extension 1 year, although conform Dutch law you can end the subscription at any time

- Cancellation	Stop renting or selling home No agreement about change of terms & conditions Switching service
Closure (normal end of contract)	Giving notice or end of term At that point not insured
Administration processes / back end	Administer Policy schedule Version of terms & conditions Collecting fees In some cases CDD after certain period of time Damage treatment

- Depends on the insurance (household effects, residential building , life insurances will need for example a healthy statement from doctor etc.

Other finance	**Private Pensions** **(Note: only regarding second pillar (work related) pensions, since third pillar pensions are private life insurances and part of "*Other finance: Insurance*")**
Pre-sale (general information)	Terms and conditions of the pension scheme offered by an employer *Relevant for persons applying for a job: once hired by an employer participation in the pension scheme is obligatory in the Netherlands.*
Contract preparation	
- Contract: information collecting (personal information…)	• Age • Married/official registered as partnered • Children • Capital possibly to transfer from a pension scheme from a former employer
Contract	
- Signing (KYC…)	Not relevant
- Content	Choices of the participant when entering the scheme • Transfer of capital from former pension scheme
- Cancellation (cool off)	• Choice to leave capital at the pension fund when leaving the employer or transfer the capital to a new scheme of a new employer.
During lifetime	

- Transaction	Choices of the participant of the scheme during participation • In case of a *Defined Contribution* pension scheme: choice of level of risk of the investments.
- Information	• Information about accrued pension rights • Information about expected pension right under the assumption of staying with the employer till date of retirement
- Changes	• Divorcing • Dying and leaving a widow • Getting children
- Extension (prolongation)	Not relevant
- Cancellation	Not relevant (not possible when engaged in a job)
Closure (normal end of contract)	Choices of the participant of the scheme at moment of retiring • Choice of bringing commencement date forward (with a lower pension) or of postponing the date (with a higher pension) • Choice between a flat rate pension or a pension that is higher the first period and lower the latter period (high-low construction) • Choice to swap capital of the survivors pension for a higher old age pension. • Choice to get paid a lump sum of max 10% of the capital at start retirement
Administration processes / back end	?

Example 1 Customer Journey

Customer wants advice of a third party about changing the level of investment risk in a defined contribution pension scheme (for instance : the fund offers 5 levels of risk to choose of) during lifetime + the customer wants the third party to actually change the level investment risk

A participant of a pension scheme (customer) wants to ask a third party for advice about the choices he has regarding investment risk in his pension scheme	The customer visits the asset broker website, which provides a consultation service and retrieves information from the website of the pension fund	The asset broker asks the customer for its wishes and possibilities regarding risks in old age income.	The customer authorises the asset broker to retrieve personal pension data from his pension fund	The asset broker retrieves the personal data from the pension fund	The asset broker gives advice	The customer makes a choice and asks the asset broker to change on his behalf the level of investment risk.	The customer authorises the asset broker	The asset broker changes the level of investment risk of the customer
	Product data APIs.		SCA	Personal data APIs.			SCA	Transactional API to adapt / change the contract

Other finance	ID-Services
Pre-sale (general information)	ID-Services in this Context means much more than only the confirmation of a Name or an address. Parts of ID are attributes of a person or a company (further named ID-Subject) it has for lifetime and attributes gotten over time or for a special duration. For example, Certificate of School or university, information about paid taxes and much more. ID-Services should be integrated with the philosophy of data minimisation and with the permission of the user. Means the customer always should know what's happening with the parts of its ID
Contract preparation	
- Contract: information collecting (personal information…)	All relevant contracts are only legal nature, **done outside the API**: First: Contract between Scheme participants with the general rules between ID-Provider (e.g. banks) and the relying parties need ID-Services. Second: If a relying party wants an ID-Delivery for a customer, during the process there will be done a contract between the ID-Subject and

	the ID-Provider to deliver the ID to the asset broker, called relying party in ID-Schemes.
Contract	
- Signing (KYC…)	No need, not distribution bank contracts
- Content	No need, not distribution bank contracts
- Cancellation (cool off)	No need, not distribution bank contracts
During lifetime	
- Transaction	**General user story based on API**:

General user story based on API:

If the customer needs a verified confirmation for ID-Attributes, the third party is asking the Scheme via API for an ID-delivery. The ID-Subject is redirected to the right ID-Provider (e.g. his Bank). After log-in, the customer gets shown all data the Third party asked for and to whom this data will be send. After instructing his bank to deliver the attributes (maybe with an additional SCA) the data will be sent directly from the ID-Provider to the Relying Party (Third Party) asked for. So the Scheme never got in contact with the personal data, only match the ID-Provider for this Customer for the needed information with the Relying Party needs verified attributes. Because banks have a lot of verified information because of legal oversight, a lot of services could be done by banks, but ID-Providing must not be limited to banks.

Some of the ID-Services are done before or within a payment.

Examples for ID-Services:

Confirmation of personal Data: In this use-case the relying party needs some personal information, like verified Name and Birth for its own Business with the ID-Subject.

Another example is the full digital check-in in hotels and the "key" for the room could be directly delivered to the smartphone of the user.

Confirmation of address for e.g. delivery of high value goods

Conformation of age for buying special goods or got discount if a special age reached.

Creation of a qualified electronic signature could be done with the data set of personal data, passport data (in banks because of AML regulation) could enable the Third Party to enable fully digital contracts between the customer and another company.

Confirmation of Creditworthiness for example to rent a flat or house, got a loan from a new bank.

Confirmation of paid taxes or paid interest for tax consultant, tax-consulting-Apps or the tax offices, etc.

Confirmation of Accounts: To prevent fraud the bank could confirm the existence and access to an account for a customer.

Confirmation of Balance for authority applications confirmations of account balances needed.

		Confirmation of mortgage during the progress of buying a house or to give a confirmation about the financial solution. (This could only be a first overview)
	- Information	
	- Changes	Only needed if ID-Services offered as a permanently service. This should not be done, because with the philosophy of transparency for the customer always should know what is happening with his data.
	- Extension (prolongation)	
	- Cancellation	If always done in the progress and no unlimited service offered, there is no need for a cancellation.
Closure (normal end of contract)		./.
Administration processes / back end		./.

Example for a user Story: Hotel Check-In

Welcome in „Hotel-App"
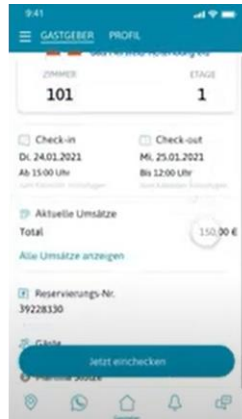
See Booking and Check-in
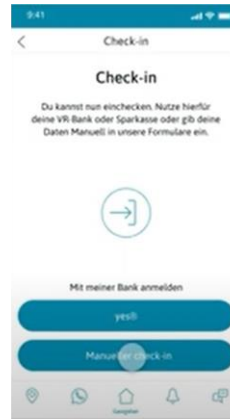
yes - check-in with Bank
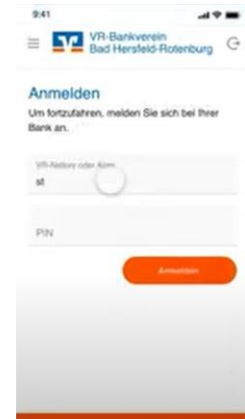
Login to your online-banking
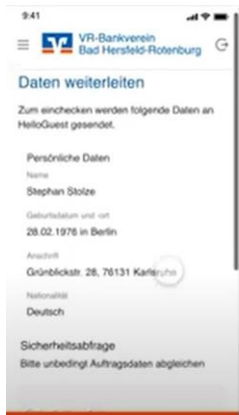
PSU Confirmation for transmitting ID

Check-in confirmed by „Hotel-App"

Your Smartphone is the key for your room

Beyond Finance	Public Transport
Pre-sale (general information)	Terms & conditions Product information for subscriptions Pricing Type of subscription (train, bus, combined)
Contract preparation	
- Contract: information collecting (personal information…)	Name address Appendix Terms & Conditions regarding chosen subscription

	Duration
	Way of paying for subscription (monthly, quarterly, yearly (always upfront)
Contract	
- Signing (KYC…)	KYC check,
	Electronic Signature allowed in different ways per country (based on Advanced Electronic Signature (AES), eIDAS, SMS & PIN code, electronic signature (without additional demands))
- Content	Subscription
	Appendix terms & conditions
	Pricing
	Duration
	Notice period
- Cancellation (cool off)	In NL 14 days
During lifetime	
- Transaction	Collecting fees
- Information	Change of terms & conditions / additional services
- Changes	Change of subscription / change of pricing
- Extension (prolongation)	Alert x month before subscription is ending
- Cancellation	End of term, non-payment, not agreeing change of terms & conditions
Closure (normal end of contract)	Giving notice or end of term
Administration processes / back end	Administer Subscription
	Version of terms & conditions
	Collecting fees
	Additional value-added services public transport (GPS function etc.)

Beyond Finance	Telco
Pre-sale (general information)	Terms & conditions
	Product information (Sim only, including phone)
	Pricing
	Type of subscription (xxMB or xx GB)

		Additional insurance
Contract preparation		
	- Contract: information collecting (personal information…)	Name address Credit bureau check Duration
Contract		
	- Signing (KYC…)	KYC check, **Electronic Signature allowed in different ways per country** (based on Advanced Electronic Signature (AES), eIDAS, SMS & PIN code, electronic signature (without additional demands))
	- Content	Subscription Appendix terms & conditions Pricing Duration Notice period (Policy schedule if chosen with insurance)
	- Cancellation (cool off)	In NL 14 days
During lifetime		
	- Transaction	Collecting fees
	- Information	Change of terms & conditions / additional services
	- Changes	Change of subscription / change of phone / (New policy schedule)
	- Extension (prolongation)	No notice, extension 1 year, although conform Dutch law you can end the subscription at any time
	- Cancellation	Moving to other provider / switching service
Closure (normal end of contract)		Giving notice or end of term, finish payback for phone
Administration processes / back end		Administer Subscription Version of terms & conditions (insurance (maybe by third party) Collecting fees

Annex 5: Illustrative customer journeys

(Note: Customer journeys #1a until #6 were already included in the 2019 report. Prioritised customer journeys start as from #7a)

Illustrative Customer journey #1a — B2C / B2B

eCommerce payment: First payment based on a bank account with & w/o payment guarantee

Use case: after completing the checkout in an eCommerce scenario, a user pays from his bank account for the first time in a Payment service that requires onboarding.
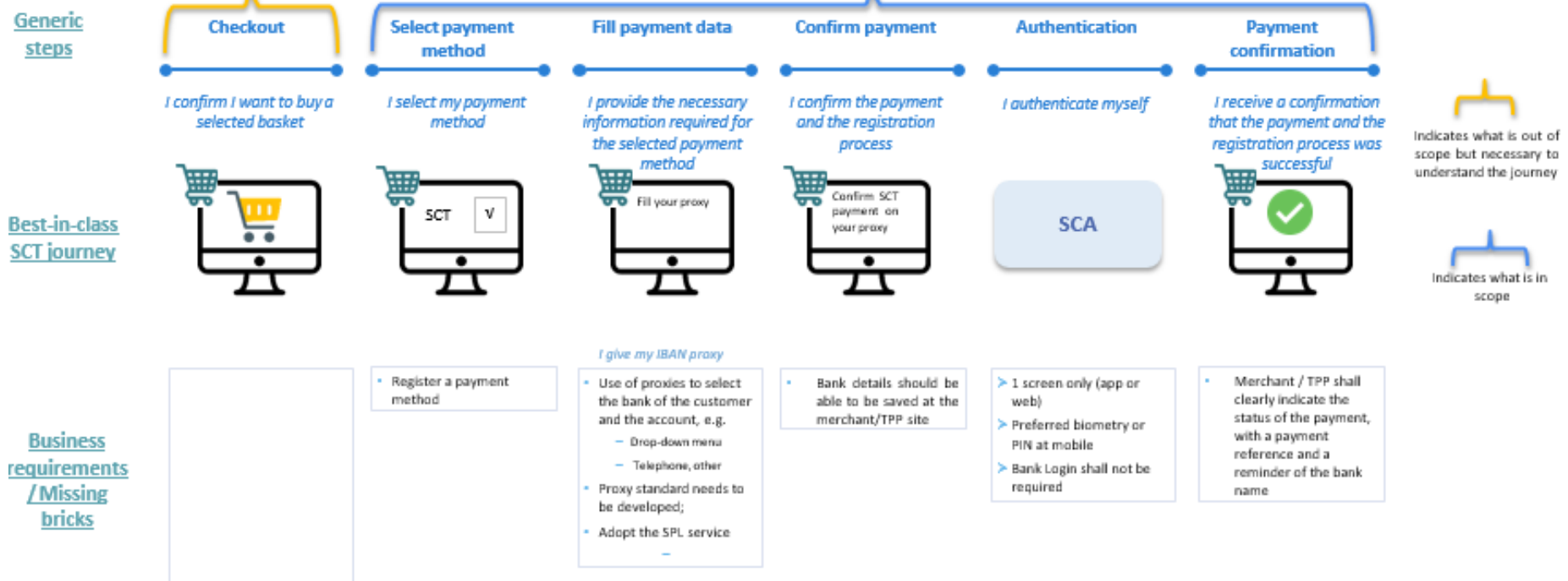
Illustrative Customer journey #1b

B2C / B2B

eCommerce payment: Consecutive payments with & w/o payment guarantee

Use case: after completing the checkout in an eCommerce scenario, a user that has already onboarded on a Payment service that requires so, performs a subsequent payment.

Generic steps	Checkout	Select payment method	Fill payment data	Confirm payment	Authentication	Payment confirmation	
	I confirm I want to buy a selected basket			I confirm I want to pay my selected basket using my usual payment data		I receive a confirmation that the payment was successfull	Indicates what is out of scope but necessary to understand the journey
Best-in-class SCT journey	Chekout / Checkout	NA	NA	Confirm SCT payment on your proxy	No SCA N.A (except tv ayhigh risk transaction)		Indicates what is in scope
Business requirements / Missing bricks				• TPP/merchant shall provide a payment summary that shall be validated by the customer • Bank details should be selected by default	➢ **No SCA in most cases** ➢ SCA exemptions as indicated in the PSD2 but mandatory for banks to implement all options ➢ Potential for TPP to ask for an exemption of SCA ➢ **Delegation of authentication to TPP with liability shift mechanism**	• Merchant / TPP to indicate the status of the payment, with a payment reference and a reminder of the bank name; Real time • Payment guarantee	

Illustrative Customer journey #1c   *B2C / B2B*

Mobile app payment: Consecutive payments with & w/o payment guarantee

Use case: after completing the checkout in an e-&m-Commerce scenario, a user that has already onboarded on a Payment service, proceed with one click consent and authentication on their mobile device

Pre-requisite : the shopper mobile payment apps has been previously activated

Generic steps	Checkout	~~Select payment method~~	~~Fill payment data~~	Confirm payment/ Authentication	Authentication	Payment confirmation
	I want to pay my selected basket			*I confirm I want to pay my selected basket using my usual payment data*		*I receive a confirmation that the payment was successfull*

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

Best-in-class SCT journey		*NA*	*NA*	Mobile payment	*NA* Performed in Previous step	Mobile payment

Business requirements / Missing bricks	• Acceptance API			› Consent and SCA in one click › Delegation of authentication to TPP with liability shift mechanism		• Merchant / TPP to indicate the status of the payment, with a payment reference and a reminder of the bank name; Real time • Payment guarantee

Illustrative Customer journey #2a

Mobile payment at POS : Enrolment

B2C / B2B

Use case: a user contracts a Mobile payment service and enrols a bank and its accounts for the first time to the service;
This enrolment shall be linked to e-commerce enrolment for each merchant (If a customer has been enrolled in either channel, he is automatically enrolled in the rest of the digital channels)

	Basic enrollment	Select Bank	Identify User / login bank app	Select Accounts	Authentication	Enrolment confirmation	
Generic steps	I accept the service terms and conditions of the mobile payment service (Merchant/TPP)	I select the bank of the account I want to enrol in the service	I identify myself on my bank app	I select the accounts I want to enrol to the service	I authenticate myself	I receive a confirmation that the enrolment was successful (account data retrieved)	Indicates what is out of scope but necessary to understand the journey
Best-in-class SCT journey	Mobile payment / Service T&C Lorem Ipsum	Mobile payment / Bank A	Bank A / Login	Bank A / Account 1 Account 2 Account 3	SCA	Mobile payment / ✓	Indicates what is in scope
Business requirements / Missing bricks		• The user has a list of all the banks available to the service. • No need for this step if the customer is already enrolled through ecommerce	• The user should be able to identify itself with a best in class UX • No need for this step if the customer is already enrolled through ecommerce	• The UX should be best in class • The user should be able to select all the payment accounts • No need for this step if the customer is already enroled through ecommerce	➢ 1 screen only ➢ Preferred biometry or PIN at mobile ➢ Bank Login shall not be required again	• The TPP shall clearly indicate the status of the enrolment process	

Illustrative Customer journey #2b   *B2C / B2B*

Mobile payment at POS: Consecutive payments with & w/o payment guarantee

Use case: a user wants to pay in a physical store with a Payment service where the user is already registered
Pre-requisite : *the shopper mobile payment apps has been previously downloaded and user is enrolled*
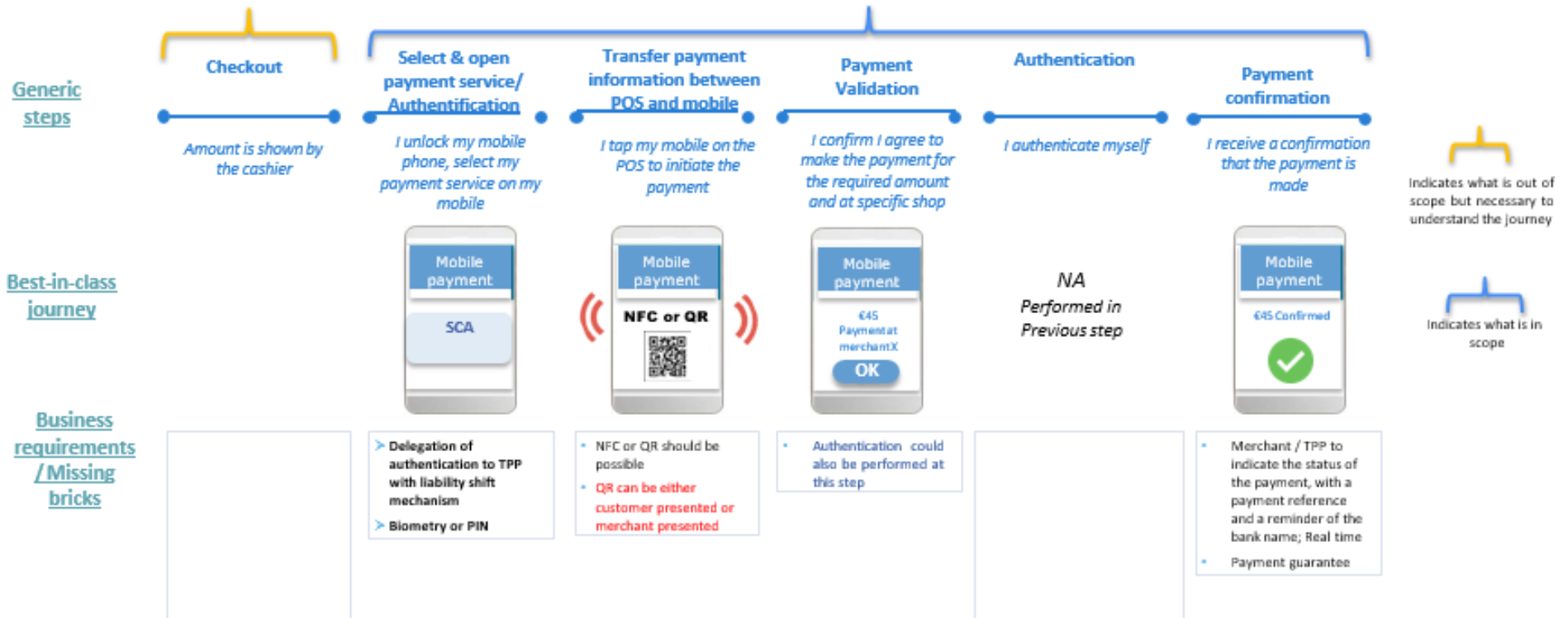
Illustrative Customer journey #3

E-Identity for KYC purposes

B2C / B2B

Use case: a user is willing to buy a product or service online that requires that he is properly identified. It could be for AML purposes, mitigation of risk, or other reasons.

Generic steps

Checkout / Product Selection	Select Bank & Identify User	Select Information and approve	Authentication	Enrolment confirmation
I accept the service terms and conditions of the product or service	*I select the bank I want to identify against and provide the credentials to identify myself*	*I select and accept the transfer of my identification data to merchant*	*I authenticate myself*	*I receive a confirmation that the identification was successful and my ID transferred to the merchant*

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

Best-in-class SCT journey

| Service T&C Lorem Ipsum | Bank A ∨ User ID Password | Identification data selection ∨ | SCA | ✓ |

Business requirements / Missing bricks

| | • The user has a list of all the banks available to the identification service. • The user should be able to identify itself with a user experience controlled by the TPP offering the service | • The UX should be best in class • User should be able to verify and select the identification data he is willing to transmit to the merchant | ➢ 1 screen only ➢ Preferred biometry or PIN at mobile ➢ Bank Login shall not be required again ➢ Best in class UX | • The TPP shall clearly indicate the status of the identification process • The TPP should confirm the data transmitted to the merchant. |

Illustrative Customer journey #4

Mobile payment at unattended petrol station (POS)

B2C / B2B

Use case: a user wants to fill his deposit and pay for it at an unattended petrol station with a Payment service that already has the user registered

Pre-requisite : *the shopper mobile payment apps has been previously activated*

Generic steps	Scan QR code to select the pump	Select the product type with amount for authorisation	Authentication and authorisation	Payment confirmation	Fill up petrol	Repayment	
Best-in-class journey	I Scan the QR code of the pump	I select the product And select 50€ amount to pay among the options menu	I authorise the payment of € 50	I receive a confirmation that the payment was successful	I fill up to € 45, return the nozzle to the pump and leave petrol station	I get repayment € 5, electronic ticket and collect reward	Indicates what is out of scope but necessary to understand the journey
		Mobile payment . Petrol .Diesel €10 €20€30 €40 €50€60	Mobile payment Please authenticate	Mobile payment ✅		Mobile payment €5 repayment ✅	Indicates what is in scope

Business requirements:						
Sub journey 1 Missing bricks	• Acceptance API		• Payment guarantee			• Refund
Sub journey 2 Missing bricks PREFERRED	• Acceptance API		• Pre Authorisation		• Update pre-authorisation (nullify) • Payment Completion	

Illustrative Customer journey #5

Mobile app payment: one click pay later

Use case: Shopper delays payment to after their goods have been shipped on agreed payment term(s)

Generic steps

Checkout | Select payment method | Identification & Quotation search | Choose from terms credit proposed | Order and credit confirmation | Instalment payments

I want to pay my selected basket

I confirm I want to pay my selected basket using three monthly installments

I pay my three instalment at due term upon receiving Request to Pay

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

Best-in-class SCT journey

Checkout

Mobile payment — **Pay later**

Mobile credit — Identification on either at ASPSP, TPPs or retailers

Mobile credit — Terms credit . 30 Days inv. . 3 Installment . 6 installment

Mobile payment — Order OK 3 monthly payments

Mobile credit — Payment first Installment € 65.00 To: TPP or ASPSP Ref: ABC123

Business requirements / Missing bricks

	Select payment method	Identification & Quotation search	Choose from terms credit proposed	Order and credit confirmation	Instalment payments
	• Pay later service	• Identification shopper (KYC) – Only the first time	• Instalment • Deferred payment	• SCA only in the first payment (enrolment) • Potential to use exemptions from SCA • Notification credit term	• Request to Pay (RTP)

Illustrative Customer journey #6

PFM / Money Management : Bank Enrolment

B2C / B2B

Use case: a user contracts a Personal Financial Management (PFM) or Money Management and enrols a bank and its accounts for the first time to the service.

	Basic enrolment	Select Bank & Identify User	Select Accounts	Authentication	Enrolment confirmation	
Generic steps	I accept the service terms and conditions of the PFM service	I select the bank I want to enrol in the PFM service and provide the credentials required to identify myself	I select the products and accounts I want to enrol to the PFM service	I authenticate myself	I receive a confirmation that the enrolment was successful and the account data is retrieved	Indicates what is out of scope but necessary to understand the journey
Best-in-class SCT journey	Service T&C Lorem Ipsum	Bank A User ID Password ✓	Account 1 Account 2 Account 3	**SCA (90 days)**	✓	Indicates what is in scope
Business requirements / Missing bricks		• The user has a list of all the banks available to the service. • The user should be able to identify itself with a best in class UX	• The UX should be best in class • The user should be able to select all the products he has contracted at the bank • The user should be able to select all the available accounts for each product	➢ SCA exemptions as indicated in the PSD2 but mandatory for banks to implement all options ➢ Potential for TPP to ask for an exemption of SCA	• The TPP acting as a PFM shall clearly indicate the status of the enrolment process • Typically the PFM will show the PSU the retrieved transactions and data and prompt him with relevant alerts	

Illustrative customer journey#7a

Pay-by-link: initial payment   B2C / B2B / P2P

Use case: payee initiates a payment request and redirects the payer to the payment authentication context using a link transmitted by any available channel (QR Code, NFC, messaging, redirect...).

Generic steps	Ask for a payment offer	Execute link	Select bank	Confirm SCT payment	Authenticate	Payment confirmation
	I ask for a commercial offer that I will receive electronically with a link I can use to pay	I execute link received by messaging system, using a button, a hyperlink, a QR Code...	I select my bank	I confirm the payment request and the optional registration process	I optionally select the account and authenticate myself from my bank	I receive a confirmation that the payment and the optional registration process was successful

Indicates what is out of scope but necessary to understand the journey

Best-in-class SCT journey

http://...

Pay-by-link
Bank1
Bank2
Bank3

Pay-by-link
Bank2
10€
Confirm

SCA

Pay-by-link ✓

Indicates what is in scope

| **Business requirements / Missing bricks** | • Payer needs to be identified for offline remote payments
• Voluntary enrolment
• Remote and proximity payments
• Payee presented transaction
• An intermediary agent may forward the link to the asset broker | • Any technical communication flow can be used to transmit the link
• The link does not contain any sensitive data | Consolidate bank selection and account | • Payer is asked to accept provider terms and conditions
• Option to add the merchant to the trusted beneficiary exemption list => SCA is required | • SCA TBD | • Instant Payment confirmation to payer |

Illustrative customer journey#7b

Pay-by-link: subsequent payments   B2C / B2B / P2P

Use case: payee initiates a payment request and redirects the Payer to the payment authentication context using a link transmitted by any available channel (QR Code, NFC, messaging, redirect…).

Generic steps	Ask for a payment offer	Execute link	~~Select bank~~	Confirm SCT payment	Authenticate	Payment confirmation
	I ask for a commercial offer that I will receive electronically with a link I can use to pay	I execute link received by messaging system, using a QR Code….	Account was previously stored using journey#7a	I confirm the payment request	Authentication	I receive a confirmation that the payment was successful

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

Best-in-class SCT journey

Business requirements / Missing bricks

• Payer needs to be identified in order to transmit him the payment offer	• Any technical communication flow can be used to transmit the link • The link doesn't contain any personal data

• Payer is asked to accept provider terms and conditions	• Trusted beneficiary exemption or • SCA

• Instant payment confirmation to payer

Illustrative customer journey#8a

Unknown final Amount - Food experience e & m-Commerce   B2C / B2B

Use case: a user orders online fresh food. To ensure completeness of the order, over-weighted food products may get delivered at user's home, pre-authorisation of higher amount. The user get charged for the total amount as effectively delivered – variance up to **15%** in value.
Pre-requisite : the shopper mobile payment apps has been previously activated

	Ordering	Estimated Amount	Authorisation funds reservation	Home delivery	Payment confirmation
Generic steps	I order fresh food for estimated €65.45	I authorise the estimated amount +15% to be guaranteed .	Authentication of the funds reservation	I get delivered at home for total amount of € 69.38 (+6%)	I receive a confirmation that the final payment €69,38 was successful

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

Business requirements: Sub journey Missing bricks		• Pre-Authorisation • Payment Guarantee	• SCA		• Release reservation of funds (nullify) • SCT Inst payment for the final amount • Instant Payment confirmation to payer

Illustrative customer journey#8b

Unknown final Amount – Rental   *B2C / B2B*

Use case: a customer downloads an app, onboards and rents two cycles for a two hours journey

Generic steps	I book my rental	Estimated Amount	Select account	Authorisation reservation by one click	Update Reservation	Payment confirmation
	I rent two cycles for two hours ride	I confirm the reservation of cycles	I select the payment account to be debited from the list of accounts & balances	Authentication & reservation on IBAN Y	I confirm giving back the cycles 4 hours later.	I receive a confirmation of the final payment debited on IBAN Y

Indicates what is out of scope but necessary to undersand the journey

Indicates what is in scope

Best-in-class journey

| Just Ride pricing | Mobile app / Reservation detail / €10 | Mobile app / Select bank and bank account | SCA | Mobile app / 3Hours 52mn | Mobile app / Payment confirmation IBAN Y / €15 |

Business requirements:

Sub journey
Missing bricks

| | Deposit amount for guarantee | • Bank list and account list (AIS) • Pre-Authorisation • Payment Guarantee | • SCA | • Update reservation of funds • Void Reservation of fund if no delivery of service (customer changes his mind) | • Release reservation of funds (nullify) • SCT inst payment for the final amount • Instant Payment confirmation to payer |

Illustrative customer journey#8c

Unknown final Amount – Travel   B2C / B2B

Use case: a user orders online a flight ticket and he wants to use an opportunity to combine it with other services offered by the airlines company. The crucial aspect of this transaction is that he confirms everything by one click and the following transaction happen seamlessly.
Pre-requisite : a customer has already enrolled in either mobile wallet or dedicated airlines app.

	Plan My Trip	Amount	Select account	Authorisation by one click	Payment confirmation	Payment confirmation (initial pre-authorisation)
Generic steps	I order a flight ticket and book a hotel room.	I see the amount to be authorized split in the final amount and pre-authorized	I See the list of accounts and balances. I select the bank and account to pay	Authentication of the funds reservation of hotel and final payment of air line ticket	I receive a confirmation · Flight payment completed · Hotel reservation	I receive a confirmation that the final payment completed
Best-in-class journey		Mobile app Flight: €1000 Hotel: €545 Total €1545	Mobile app Bank1 Acc #1 €2'341.05 Bank2 Acc #1 €599	SCA	Mobile app ✓	Mobile app ✓
Business requirements: Sub journey Missing bricks		· Pre-Authorisation · Payment Guarantee For the hotel reservation	· Balance information (AIS) · My accounts list (AIS)	· One SCA for two payment services	· SCT Inst payment for the final amount · Instant Payment confirmation to payer · Instant confirmation of reservation	· Release reservation of funds (nullify) · The final payment for other services completed · Refund by flight cancellation

Indicates what is out of scope but necessary to undersand the journey

Indicates what is in scope

Illustrative customer journey#8d
Mobile payment at unattended petrol station using proximity technologies   B2C / B2B

Use case: a user wants to fuel his car and pay seamlessly the final amount at an unattended petrol station with a Payment service that already has the user registered (enrolment done).

Prerequisite : the shopper mobile app has been previously activated and supports fund reservation service.

	Mobile app activated	Select the product type and amount	Authorisation funds reservation	Fill up the car fuel tank	Payment confirmation	
Generic steps	My preferred proximity technology is activated I stop in front of pump3, my app is recognised	The car plate /or location of mobile is recognised, I confirmed the pump, preserved the	I authorise fund reservation of € 60	I fill up to € 55,63 return the nozzle to the pump and leave the petrol station	I receive a confirmation that the payment € 55,63 was successful	Indicates what is out of scope but necessary to understand the journey
Best-in-class journey		Mobile app Bank1 Acc@1 Bank2 Acc#2 Pump 3 .Diesel €60	SCA		Mobile app ✓ 10	Indicates what is in scope
Business requirements: Sub journey Missing bricks	• Open access to proximity technologies (geolocation and/or CCTV/push message)	• Balance information (AIS) • My accounts list (AIS) • Partial approval	• Reservation of fund • Push reservation service message to the app • SCA	• Void Reservation of fund if no delivery	• Release reservation of funds (nullify) • SCT inst payment for the final amount • Instant confirmation of the payment final amount • Bank statement with final amount	

Illustrative customer journey#9a

Single payment to multiple merchants (chained payments):   B2C/B2B/P2P

Use case: after completing the checkout in a marketplace scenario, a user issues a single transaction, which is later divided and transferred to each individual seller. The marketplace acts as the collecting agent.

Note : some sellers might not be eligible to single checkout journey

Generic steps	Checkout	Select payment method	Fill payment data	Confirm payment	Authentication	Payment execution & confirmation	Marketplace transfer
	I confirm I want to buy a basket composed of goods from several sellers via a marketplace	I select my payment method	I provide the necessary information required for the selected payment method	I confirm the payment and the registration process (single confirmation for the whole basket)	Single Authentication for the whole basket	I receive a confirmation that the payment and the registration process was successful for the whole basket	User not informed. Marketplace transfers amount to each merchant minus a fee
Best-in-class SCT journey		SCT √	Fill your proxy	Confirm SCT payment on your proxy	SCA	✓	
			I give my IBAN proxy				

Business requirements / Missing bricks		• Register a payment method *May not be required if consumer already onboarded*	• Use of proxies to select the bank of the customer and the account, e.g.
			  — Drop-down menu
			  — Telephone, other
			 • Proxy standard needs to be developed;
			 • Adopt the SPL service
			  —
				• Bank details should be able to be saved by the marketplace / PSP site		• Marketplace / PSP shall clearly indicate the status of the payment, with a payment reference and a reminder of the bank name
						 • The user is debited of the full amount via a single SCT
							Financing of sellers based on individual fee, iban, transaction amount needs to be passed on from the checkout to the financing step, by the collecting agent (AML requirement ?)

Illustrative customer journey#9b

Single transaction / several payments to multiple merchants / counterparties (parallel payments):   *B2C/B2B*

Use case: after completing the checkout on a marketplace (product aggregation website), the user authorises a single **bulk** transaction composed of several payments which are sent directly to multiple receivers.

	Checkout	Select payment method	Fill payment data	Confirm payment	Authentication	Order confirmation	Payment execution
Generic steps							
	I confirm I want to buy a basket composed of goods from several sellers via a marketplace	*I select my payment method*	*I provide the necessary information required for the selected payment method*	*I confirm the payment and the registration process (single confirmation for the whole basket)*	*Single Authentication for the whole basket*	*I receive a confirmation that the payment and the registration process was successful for the whole basket*	*User not informed. The transaction is broken down into several payments which are sent to multiple sellers*
Best-in-class SCT journey		SCT ✓	Fill your proxy	Confirm SCT payment on your proxy	SCA	✓	
			I give my IBAN proxy				

Business requirements / Missing bricks		- Register a payment method
		
		May not be required if consumer is already onboarded
			- Use of proxies to select the bank of the customer and the account, e.g.
			  — Drop-down menu
			  — Telephone, other
			- Proxy standard needs to be developed;
			- Adopt the SPL service
			  —
				- Bank details should be able to be saved at the marketplace site		- Marketplace / PSP shall clearly indicate the status of the payment, with a payment reference and a reminder of the bank name	- Marketplace fee, IBAN, transaction amount needs to be passed on from the checkout
							- The user is debited of the global amount via several SCTs
							- Total amount should be equal to the total amount validated

Illustrative customer journey#10a

Recurring payments – same amount   B2C / B2B / P2P

Use case: a customer subscribes for a service/good (such as streaming platform or a magazine subscription).

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

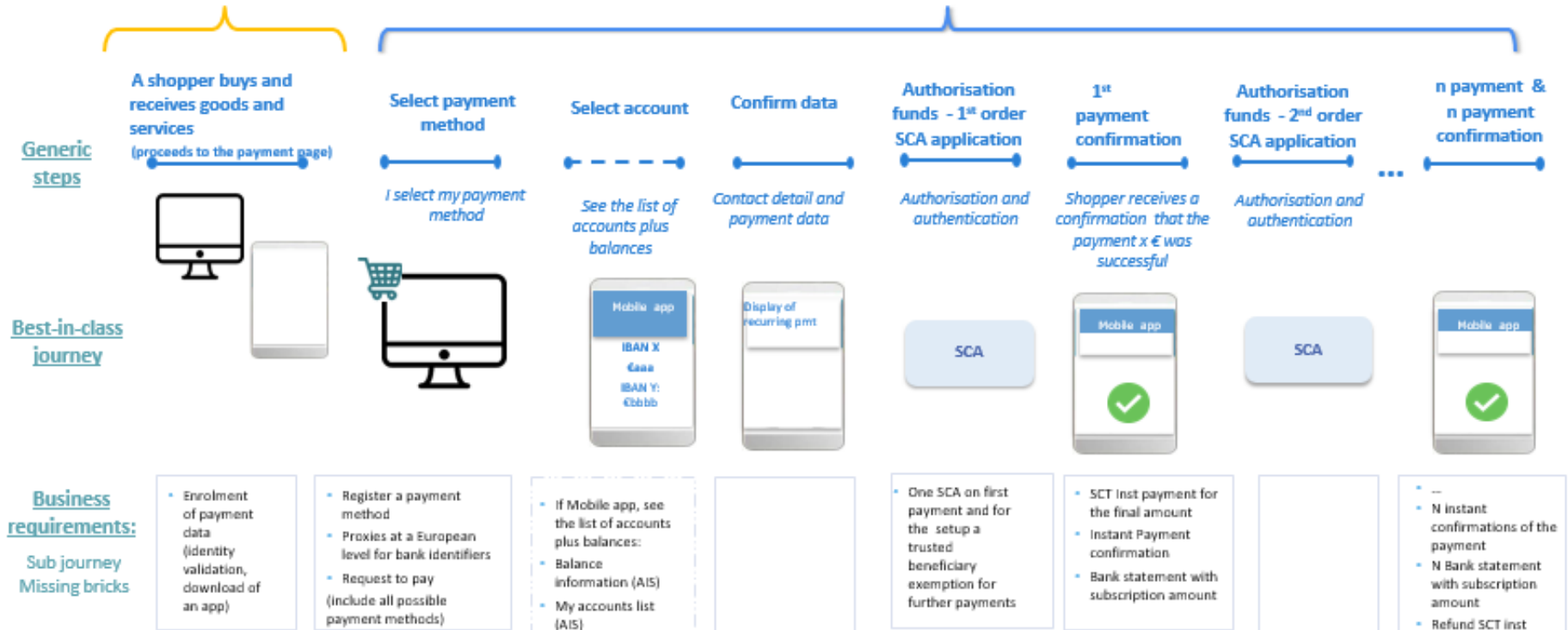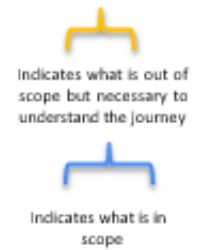|	Subscription of a product and insertion of the contact details in the platform (proceeds to the payment page)	Select payment method	Select account	Confirm data	Authorisation funds – SCA application –	First payment confirmation	n payment & n payment confirmation
Generic steps		I select my payment method	See the list of accounts plus balances	Contact detail and payment data	Authorization and authentication	Client receives a confirmation that the payment x € was successful	...
Best-in-class journey			Mobile app / IBAN X €aaa / IBAN Y: €bbbb	Mobile app / Display the payment amounts and dates	SCA	Mobile app ✅	Mobile app ✅
Business requirements: Sub journey Missing bricks	• Enrolment of payment data (identity validation, download of an app)	• Register a payment method • Proxies at a European level for bank identifiers • Request to pay (include all possible payment methods)	• If Mobile app, see the list of accounts plus balances: • Balance information (AIS) • My accounts list (AIS)		• SCA	• SCT Inst payment for the final amount • Instant Payment confirmation • Bank statement with subscription amount	• ... • N Instant confirmations of the payment • N Bank statement with subscription amount • Refund SCT inst

Illustrative customer journey#10b

Recurring payments – different amount

B2C / B2B / P2P

Use case: Deferred recurrent payments with flexible execution time and amount (below authorised amount). A shopper buys and receives goods and services with a commitment to begin making payments at a future date

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

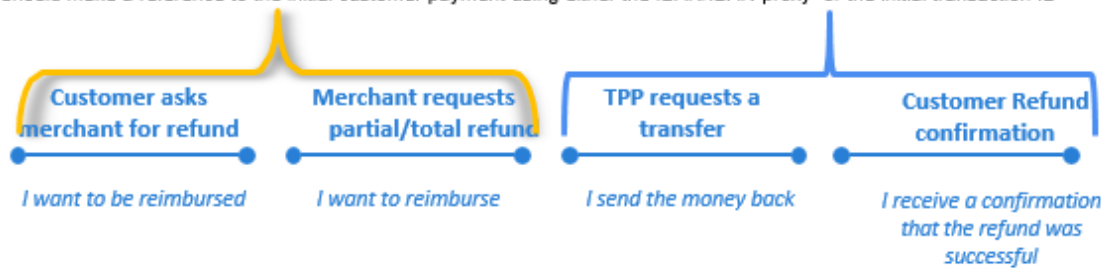|	A shopper buys and receives goods and services (proceeds to the payment page)	Select payment method	Select account	Confirm data	Authorisation funds - 1st order SCA application	1st payment confirmation	Authorisation funds - 2nd order SCA application	n payment & n payment confirmation
Generic steps		I select my payment method	See the list of accounts plus balances	Contact detail and payment data	Authorisation and authentication	Shopper receives a confirmation that the payment x € was successful	Authorisation and authentication	
Best-in-class journey			Mobile app IBAN X €aaa IBAN Y: €bbbb	Display of recurring pmt	SCA	Mobile app ✓	SCA	Mobile app ✓
Business requirements: Sub journey Missing bricks	• Enrolment of payment data (identity validation, download of an app)	• Register a payment method • Proxies at a European level for bank identifiers • Request to pay (include all possible payment methods)	• If Mobile app, see the list of accounts plus balances: • Balance information (AIS) • My accounts list (AIS)		• One SCA on first payment and for the setup a trusted beneficiary exemption for further payments	• SCT Inst payment for the final amount • Instant Payment confirmation • Bank statement with subscription amount		• ... • N instant confirmations of the payment • N Bank statement with subscription amount • Refund SCT inst

Illustrative customer journey#11

Refund (user not present): total or partial refund
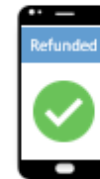
B2C / B2B

- **Use case:** customer/merchant request a partial/ total refund

- Refund made without the IBAN known by the merchant or their collecting party/PSP
- Trigger event for the refund is an agreement between the consumer and the merchant outside of the scheme
- The refund should make a reference to the initial customer payment using either the IBAN/IBAN-proxy or the initial transaction ID

Generic steps				
Customer asks merchant for refund	**Merchant requests partial/total refund**	**TPP requests a transfer**	**Customer Refund confirmation**	
I want to be reimbursed	*I want to reimburse*	*I send the money back*	*I receive a confirmation that the refund was successful*	

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

Best-in-class SCT journey

Refunded ✓

Business requirements / Missing bricks

- Partial or total amount

- Asset broker may need to obtain the customer IBAN from the asset holder through the scheme to initiate a refund
- Asset broker may request the payment initiation based on the link to initial customer payment transaction Id ref. (harmonised STET and BG)
- SCA required, except if an exemption applies (e.g. exemption art 17)
- support batch refund payment with only one SCA
- Support Instant refund to the customer

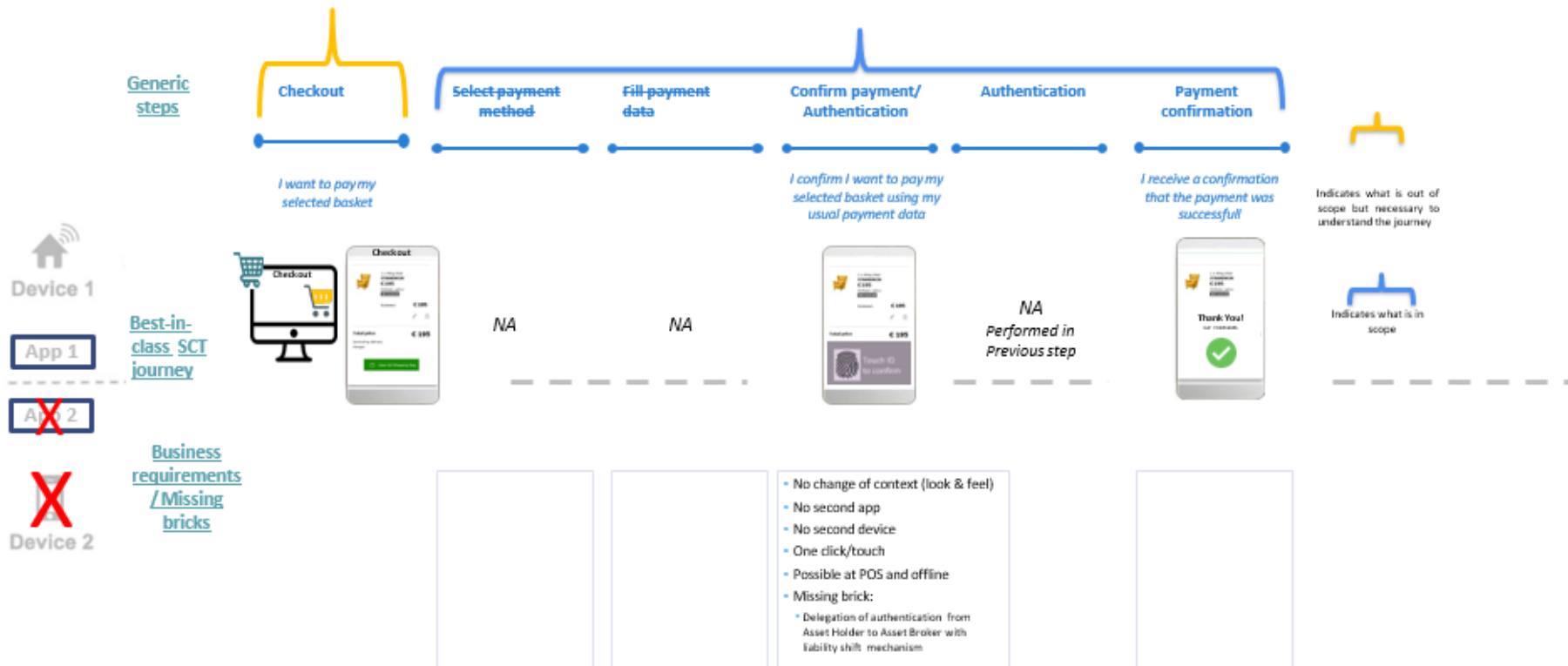Customer receives the confirmation (instant).

Illustrative customer journey#12a

SCA - Delegated

B2C / B2B / P2P

Use case: after completing the checkout in an e-&m-Commerce scenario, shoppers can SCA with one touch and without switching app or device
Pre-requisite : the shopper and mobile device must be Asset Broker-onboarded

Generic steps	Checkout	Select payment method	Fill payment data	Confirm payment/ Authentication	Authentication	Payment confirmation
	I want to pay my selected basket			I confirm I want to pay my selected basket using my usual payment data		I receive a confirmation that the payment was successfull

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

Device 1

| Best-in-class SCT journey | | NA | NA | | NA Performed in Previous step | |

App 1

App 2

Device 2

Business requirements /Missing bricks

- No change of context (look & feel)
- No second app
- No second device
- One click/touch
- Possible at POS and offline
- Missing brick:
  - Delegation of authentication from Asset Holder to Asset Broker with liability shift mechanism

Illustrative customer journey#12b-1

SCA - Embedded

B2C / B2B / P2P

Use case: after completing the checkout in an e-&m-Commerce scenario, shoppers can SCA by entering their Bank PIN and then receiving and entering an OTP/ TAN

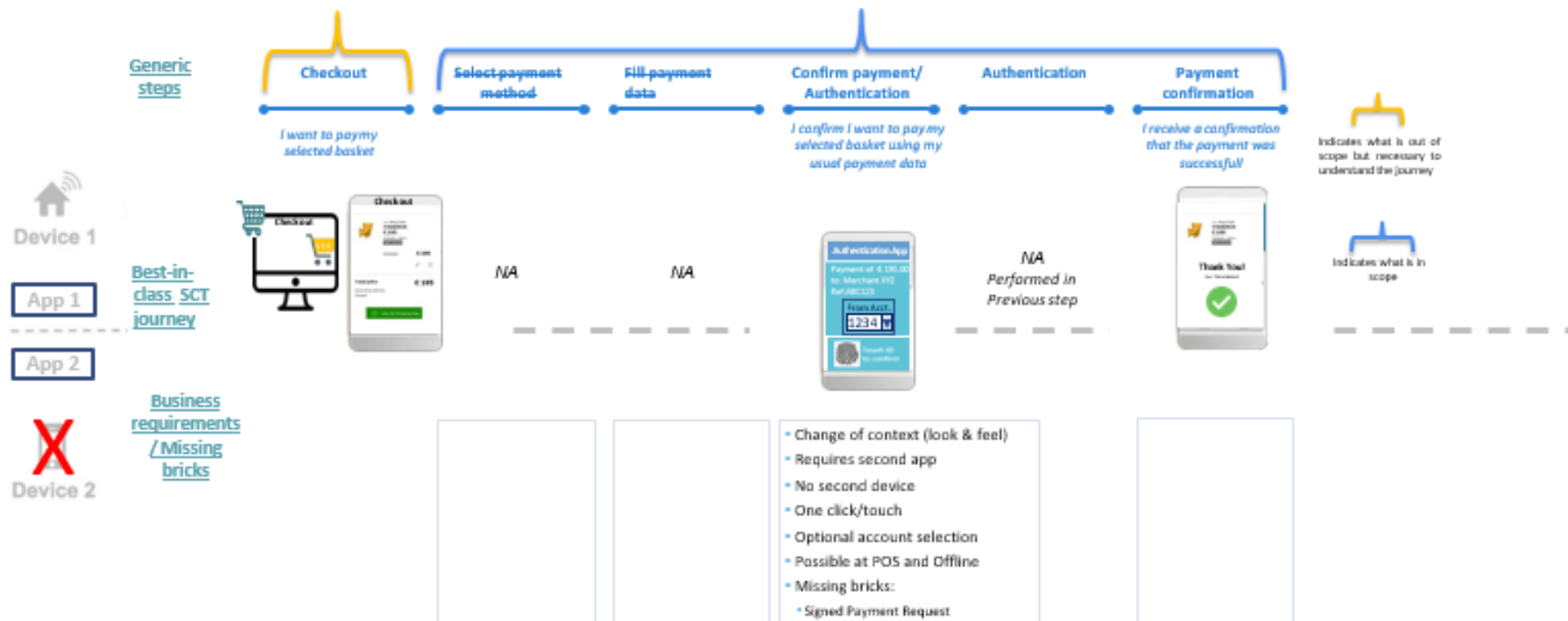**Pre-requisite :** the shopper must be Merchant-onboarded
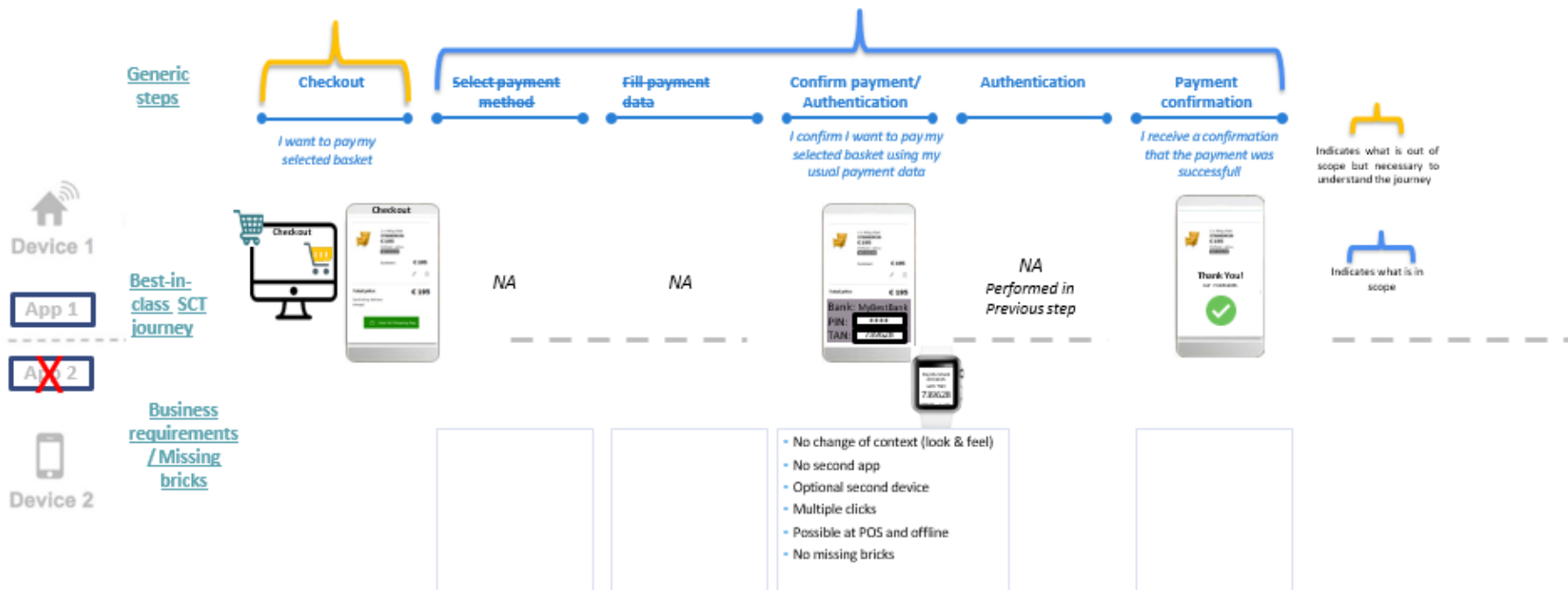
Illustrative customer journey#12b-2

B2C / B2B / P2P

SCA - Embedded with Signed Payment Request

Use case: after completing the checkout in an e-&m-Commerce scenario, shoppers can SCA with one touch using their <u>Authentication App triggered by the Asset Broker</u>

Pre-requisite : Authentication app supporting singed payment request

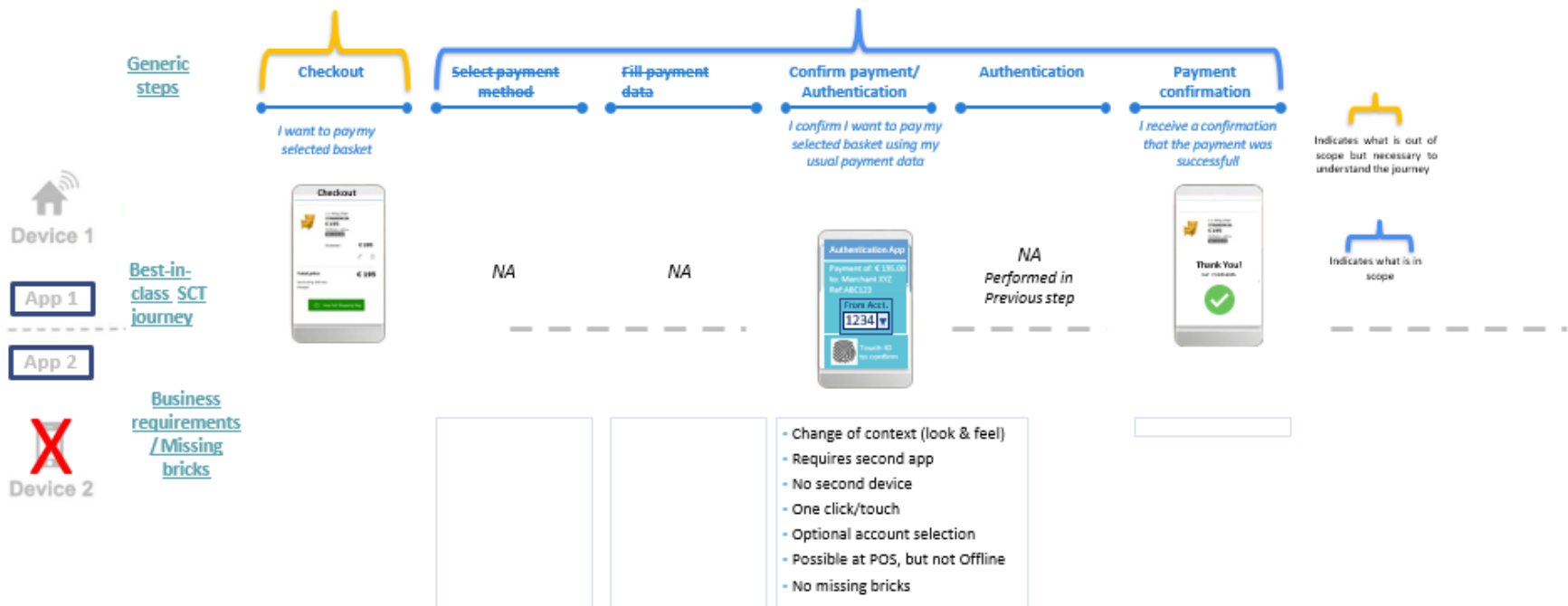|	Checkout	Select payment method	Fill payment data	Confirm payment/ Authentication	Authentication	Payment confirmation	
Generic steps	*I want to pay my selected basket*			*I confirm I want to pay my selected basket using my usual payment data*		*I receive a confirmation that the payment was successfull*	Indicates what is out of scope but necessary to understand the journey
Device 1							Indicates what is in scope
App 1 **Best-in-class SCT journey**		*NA*	*NA*		*NA Performed in Previous step*		
App 2							
✗ Device 2 **Business requirements / Missing bricks**				• Change of context (look & feel) • Requires second app • No second device • One click/touch • Optional account selection • Possible at POS and Offline • Missing bricks: • Signed Payment Request			

Illustrative customer journey #12c-1

B2C / B2B / P2P

SCA – Decoupled (app2app)

Use case: after completing the checkout in an m-Commerce scenario, shoppers can SCA with one touch using their Authentication App triggered over-the-air by their Bank

Pre-requisite : none

Generic steps	Checkout	Select payment method	Fill payment data	Confirm payment/ Authentication	Authentication	Payment confirmation	
	I want to pay my selected basket			*I confirm I want to pay my selected basket using my usual payment data*		*I receive a confirmation that the payment was successful*	Indicates what is out of scope but necessary to understand the journey
Best-in-class SCT journey (Device 1, App 1)	Checkout	NA	NA	Authentication App	NA Performed in Previous step	Thank You!	Indicates what is in scope

Business requirements / Missing bricks (Device 2)

- Change of context (look & feel)
- Requires second app
- No second device
- One click/touch
- Optional account selection
- Possible at POS, but not Offline
- No missing bricks

Illustrative customer journey #12c-2

B2C / B2B / P2P

SCA – Decoupled (web2app)

Use case: after completing the checkout in an e-Commerce scenario, shoppers can SCA with one touch using their Authentication App triggered by themselves
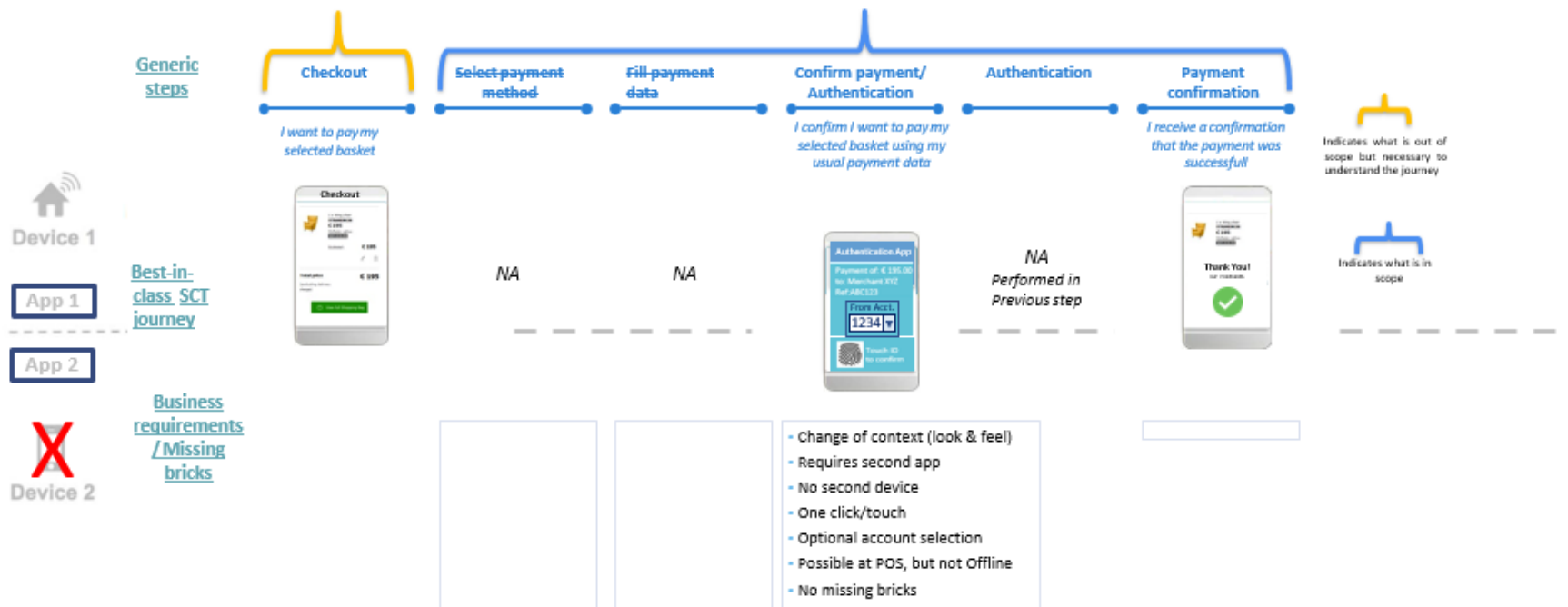**Pre-requisite :** none, however if user gets merchant-onboarded Step 2 & 3 can be avoided
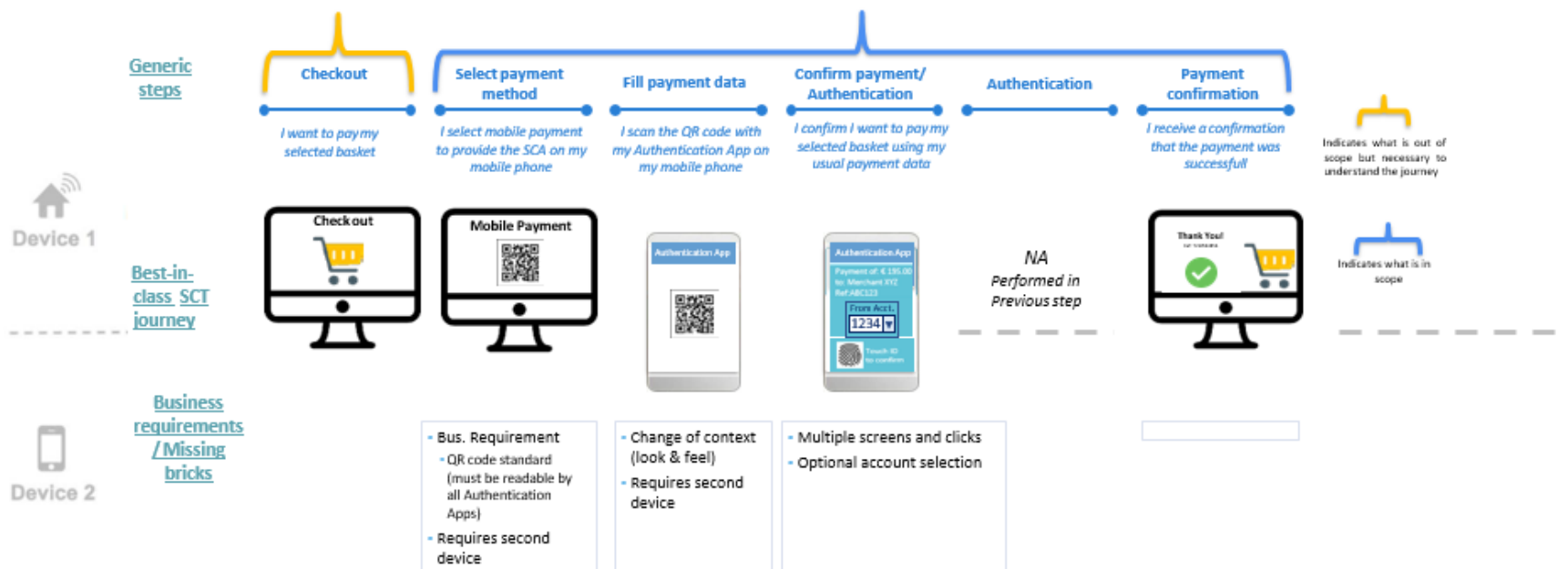
Illustrative customer journey#12d-1

B2C / B2B / P2P

SCA – Redirection (app2app)

Use case: after completing the checkout in an m-Commerce scenario, shoppers can SCA with one touch using their Authentication App triggered by the Merchant/Asset Broker App

Pre-requisite : none

	Checkout	Select payment method	Fill payment data	Confirm payment/ Authentication	Authentication	Payment confirmation	
Generic steps	*I want to pay my selected basket*			*I confirm I want to pay my selected basket using my usual payment data*		*I receive a confirmation that the payment was successful*	Indicates what is out of scope but necessary to understand the journey
Best-in-class SCT journey		NA	NA		NA Performed in Previous step		Indicates what is in scope
Business requirements / Missing bricks				- Change of context (look & feel) - Requires second app - No second device - One click/touch - Optional account selection - Possible at POS, but not Offline - No missing bricks			

Illustrative customer journey#12d-2

SCA – Redirection (web2web)

B2C / B2B / P2P

Use case: after completing the checkout in an e-Commerce scenario, shoppers can SCA with legacy web redirection triggered by the Merchant/Asset Broker web page
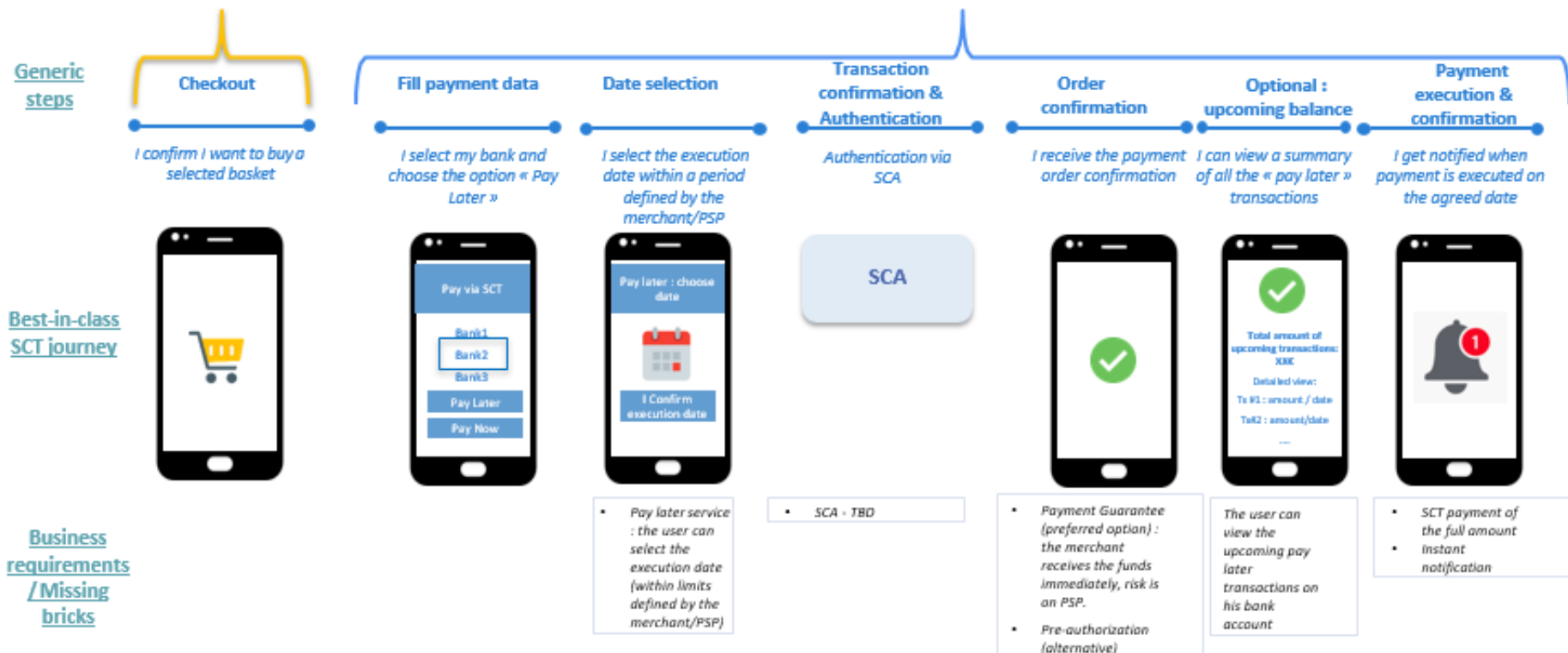
Pre-requisite : none
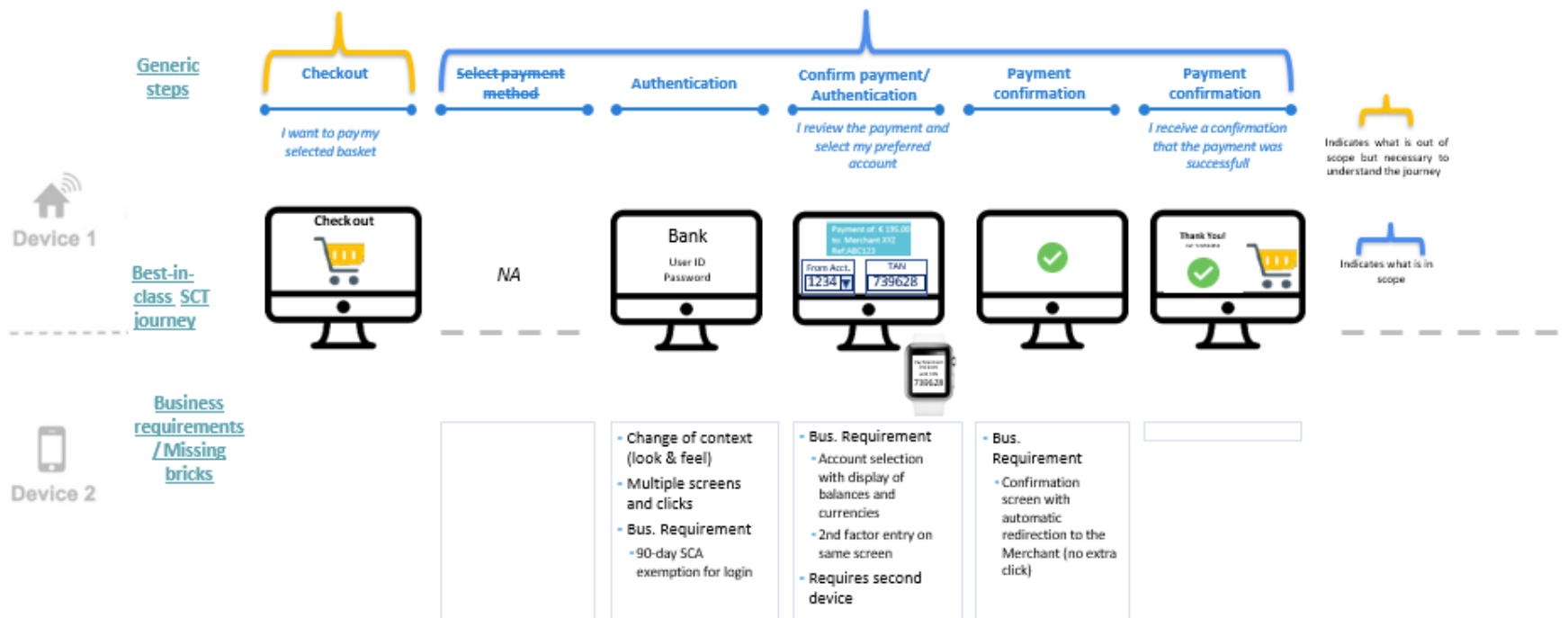
Illustrative customer journey#13a

Pay later (defined execution date)   B2C / B2B / P2P

Use case: It allows the Payment Initiating Parties to initiate payments to be executed by ASPSPs at a given date in the future. The actual execution date may differ from the one defined in the request, depending on rules for processing payments in weekends and banks holidays the ASPSP applies.
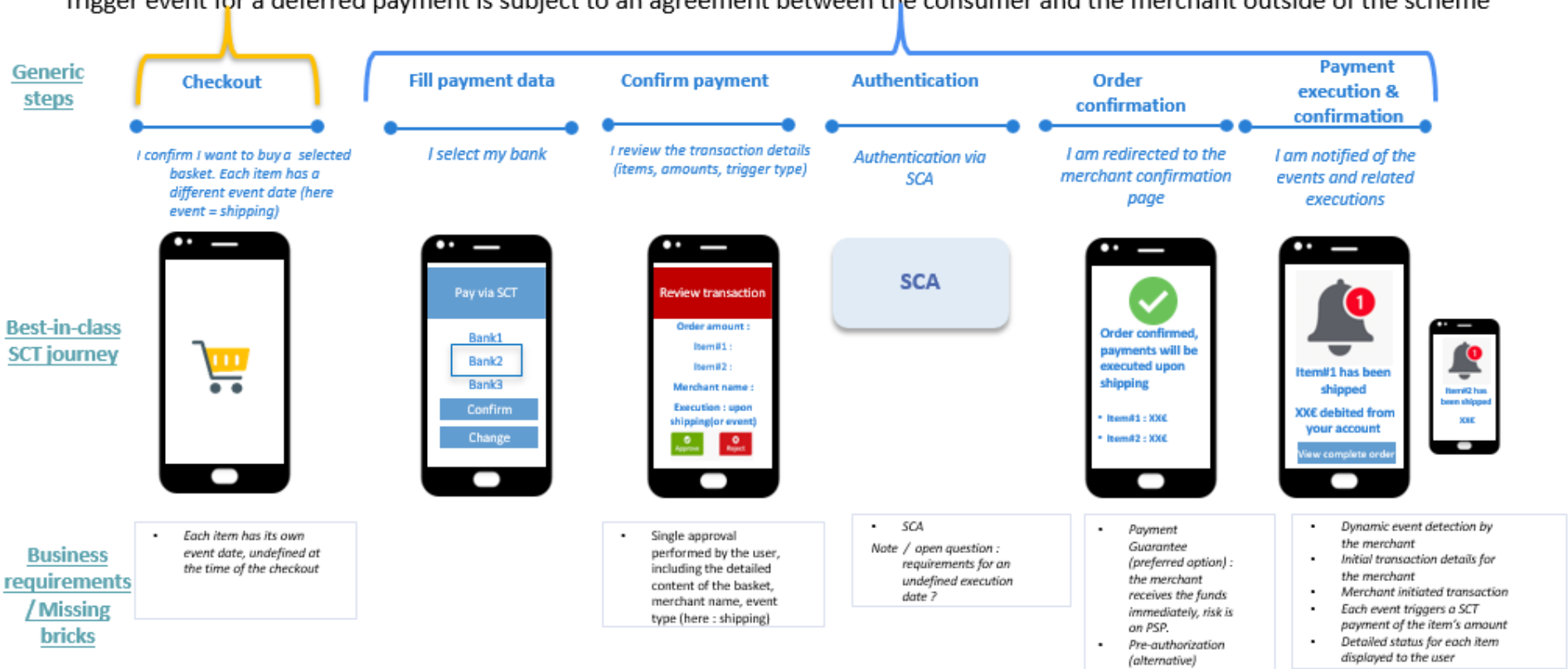

Generic steps

Checkout	Fill payment data	Date selection	Transaction confirmation & Authentication	Order confirmation	Optional : upcoming balance	Payment execution & confirmation
I confirm I want to buy a selected basket	I select my bank and choose the option « Pay Later »	I select the execution date within a period defined by the merchant/PSP	Authentication via SCA	I receive the payment order confirmation	I can view a summary of all the « pay later » transactions	I get notified when payment is executed on the agreed date

Best-in-class SCT journey

Business requirements / Missing bricks

- Pay later service : the user can select the execution date (within limits defined by the merchant/PSP)

- SCA - TBD

- Payment Guarantee (preferred option) : the merchant receives the funds immediately, risk is on PSP.
- Pre-authorization (alternative)

- The user can view the upcoming pay later transactions on his bank account

- SCT payment of the full amount
- Instant notification

Illustrative customer journey#13b

Deferred payments (event dependent execution date)   B2C / B2B / P2P

Use case: : It allows the Payment Initiating Parties to initiate payments to be executed by ASPSPs at an undefined date in the future, linked to a specific event/trigger (e.g., order is sent/received).
Trigger event for a deferred payment is subject to an agreement between the consumer and the merchant outside of the scheme
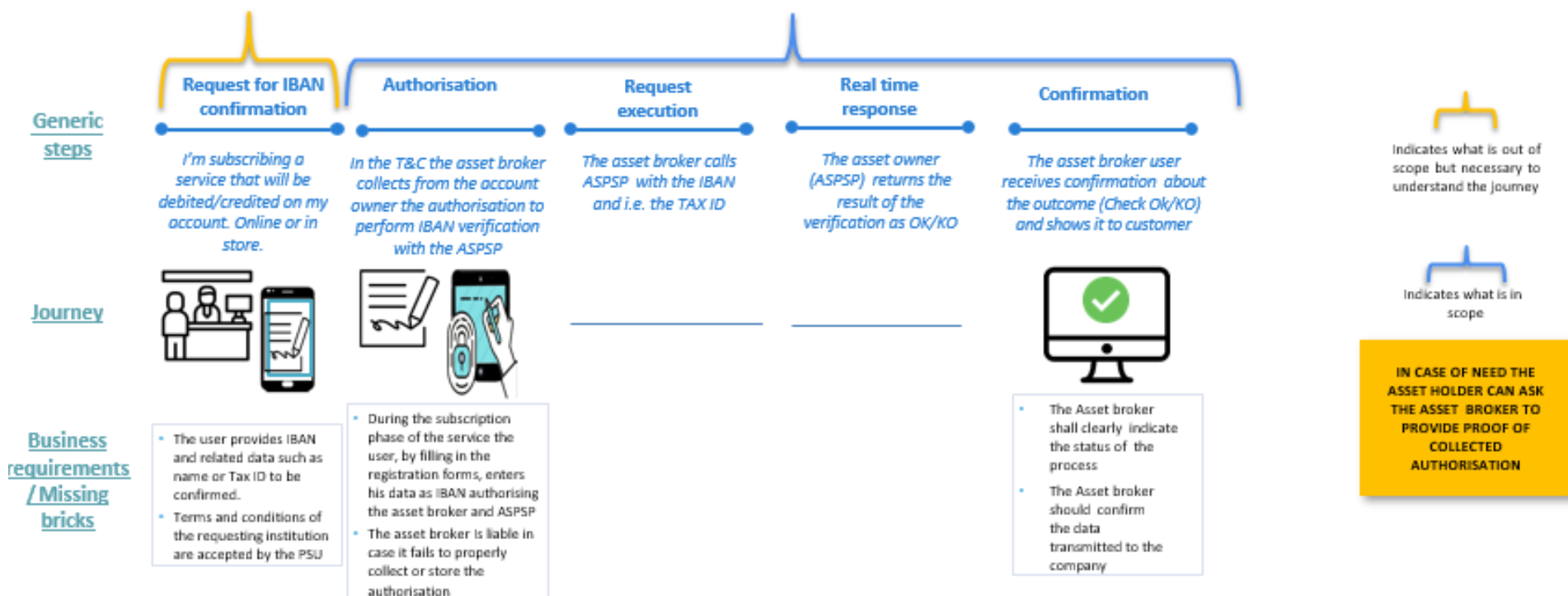
Generic steps	Checkout	Fill payment data	Confirm payment	Authentication	Order confirmation	Payment execution & confirmation
	I confirm I want to buy a selected basket. Each item has a different event date (here event = shipping)	I select my bank	I review the transaction details (items, amounts, trigger type)	Authentication via SCA	I am redirected to the merchant confirmation page	I am notified of the events and related executions

Best-in-class SCT journey

Business requirements / Missing bricks

- Checkout:
  - Each item has its own event date, undefined at the time of the checkout

- Confirm payment:
  - Single approval performed by the user, including the detailed content of the basket, merchant name, event type (here : shipping)

- Authentication:
  - SCA
  - Note / open question : requirements for an undefined execution date ?

- Order confirmation:
  - Payment Guarantee (preferred option) : the merchant receives the funds immediately, risk is an PSP.
  - Pre-authorization (alternative)

- Payment execution & confirmation:
  - Dynamic event detection by the merchant
  - Initial transaction details for the merchant
  - Merchant initiated transaction
  - Each event triggers a SCT payment of the item's amount
  - Detailed status for each item displayed to the user

Illustrative customer journey#14

IBAN Validation

B2C/B2B

Use case: An institution from the public or private sector seeks for confirmation of an IBAN or the combination of IBANxTAX ID, IBANxName etc. from the Payment Service User at counter or in store.

	Request for IBAN confirmation	Authorisation	Request execution	Real time response	Confirmation
Generic steps	I'm subscribing a service that will be debited/credited on my account. Online or in store.	In the T&C the asset broker collects from the account owner the authorisation to perform IBAN verification with the ASPSP	The asset broker calls ASPSP with the IBAN and i.e. the TAX ID	The asset owner (ASPSP) returns the result of the verification as OK/KO	The asset broker user receives confirmation about the outcome (Check Ok/KO) and shows it to customer

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

IN CASE OF NEED THE ASSET HOLDER CAN ASK THE ASSET BROKER TO PROVIDE PROOF OF COLLECTED AUTHORISATION

Business requirements / Missing bricks

- The user provides IBAN and related data such as name or Tax ID to be confirmed.
- Terms and conditions of the requesting institution are accepted by the PSU

- During the subscription phase of the service the user, by filling in the registration forms, enters his data as IBAN authorising the asset broker and ASPSP
- The asset broker is liable in case it fails to properly collect or store the authorisation

- The Asset broker shall clearly indicate the status of the process
- The Asset broker should confirm the data transmitted to the company

Illustrative customer journey#15

Mobile PFM Automated Transfers   B2C

Use case: users can define and create Automatic Credit Transfers with their Mobile Personal Finance Mgmt. app, for example to sweep any month-end surplus from their checking to their savings account, or to top-up their checking account before it reaches negative balance
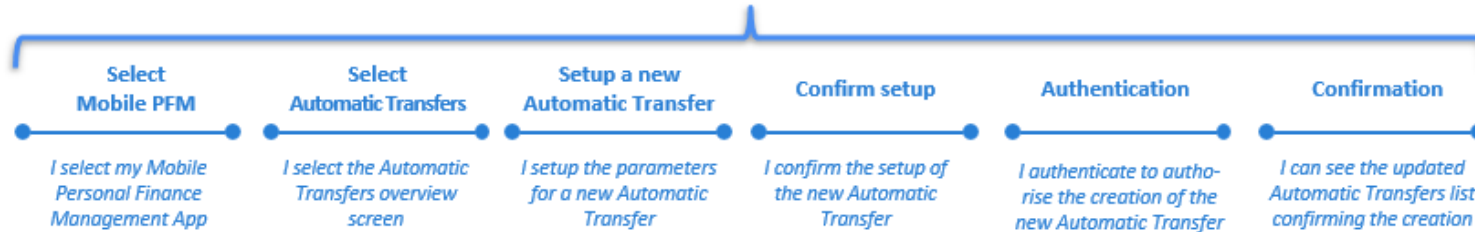
	Select Mobile PFM	Select Automatic Transfers	Setup a new Automatic Transfer	Confirm setup	Authentication	Confirmation	
Generic steps	I select my Mobile Personal Finance Management App	I select the Automatic Transfers overview screen	I setup the parameters for a new Automatic Transfer	I confirm the setup of the new Automatic Transfer	I authenticate to autho-rise the creation of the new Automatic Transfer	I can see the updated Automatic Transfers list confirming the creation	Indicates what is out of scope but necessary to understand the journey
Best-in-class SCT journey					SCA		Indicates what is in scope
Business requirements / Missing bricks	• The user has a Personal Finance Management App on their mobile • The PFM app supports automatic transfers	• The user can see, edit, delete and create automatic transfers	• The user can setup automatic transfers with the following parameters • Account to debit • Account to credit • Balance threshold of debit or credit account • Frequency of transfer • Amount to transfer	• The user can review all parameters before confirming the setup	• 1 screen only • Preferred biometry or PIN at mobile • Bank Login shall not be required again • Transfer of variable amount: What is the SCA impact if no exemption applies (Exemption article 15 if same bank, trusted beneficiaries)	• The PFM app shall clearly indicate the successful creation of the new automatic transfer	

Illustrative customer journey#16
Personal Loan application

Use case: A customer subscribes a personal loan from a ASPSP or a financial institution

B2C

Indicates what is out of scope but necessary to understand the journey

Indicates what is in scope

	Loan Request	Pre-sales Loan information	Contract Preparation	Final Loan Proposal & validation	Authorisation - SCA application -	Loan Confirmation	Loan lifetime
Generic steps	*I start a personal loan process*	*The asset broker sends loan general information*	*The asset broker requests for access to account*	*The asset broker sends loan contract*	*Authorisation and authentication*	*I receive a confirmation that the loan has been granted*	*I want to update my loan condition*
Best-in-class SCT journey	• ASPSP/ financial institution	• Result	• Request details • Result	• Result	SCA	✓	• ASPSP/ financial institution
Business requirements / Missing bricks		• Receiving and consulting pre-sales documents capability (product information, pricing, insurances, …)	• The user provides his IBAN and his consent to the asset broker to share personal information (Name, Credit bureau, salary, …) • KYC check process	• The user receives the contract and Terms & Conditions	• Preferably SCA would be applied to agree on the loan, however other requirements such as Electronic Signature mechanism (e.g. e-IDAS) may be needed	• Instant acceptation notification • Cancellation capability by the user during 14 days	• The user can pay, extend, change, cancel, close his loan through specific requests •Administration back-end processes

Annex 6: Scheme layers overview

SEPA API access scheme layers
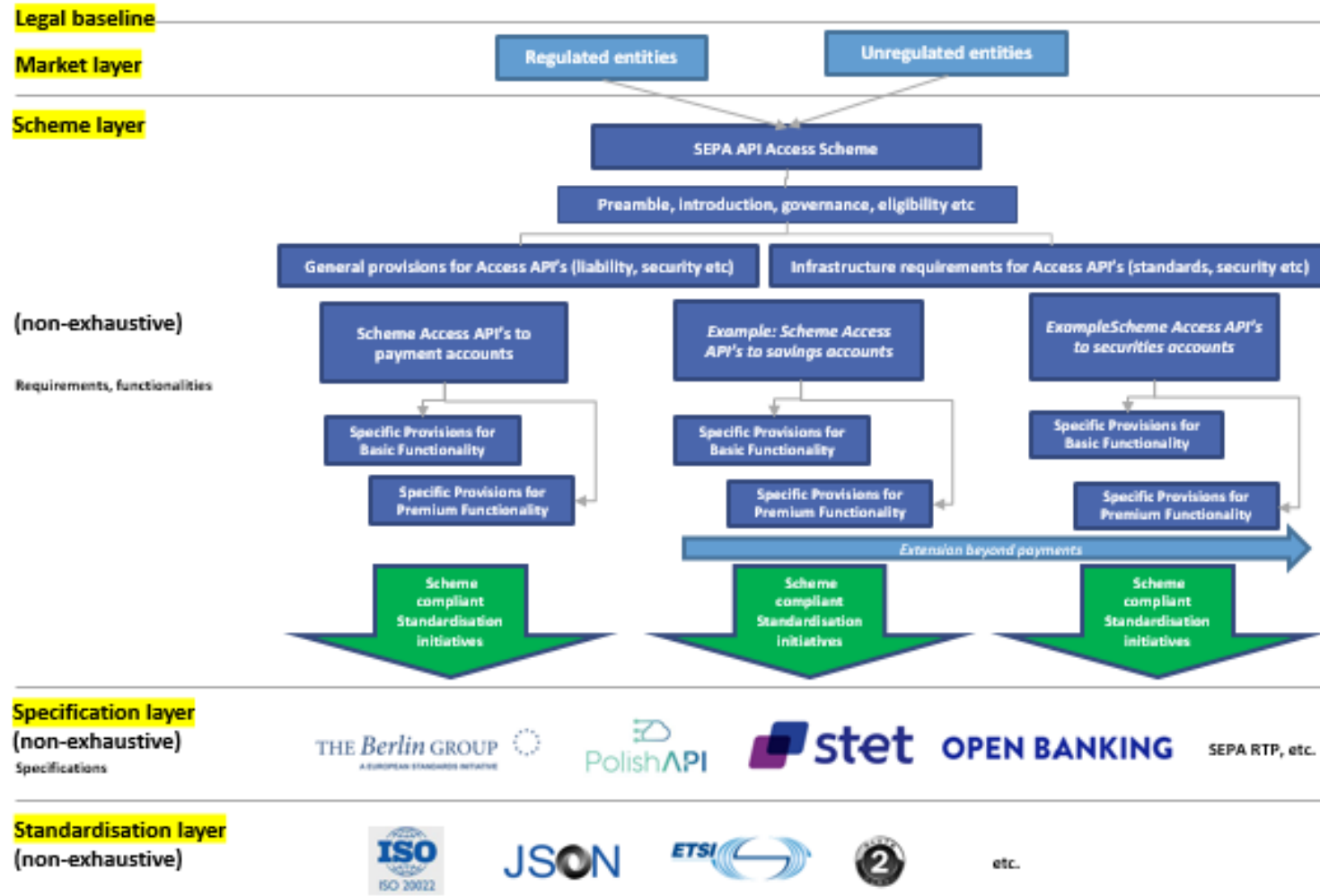
Annex 7: Overview assessment of initiatives

Id	Initiative	Code name	Geographical scope	Range	Positive impact	Negative impact	Layer	Underlying asset class
5	e-IDAS regulation	eIDAS	EU	Other	Significant	Low	Legal baseline	Identity
17	European Strategy for Data	ESD	EU	Beyond PSD2	Significant	Medium	Legal baseline	Data
19	Eurosystem's oversight framework for electronic payment instruments, schemes and arrangements (PISA)	PISA	EU	Other	Significant	Medium	Legal baseline	Payments
22	ERPB WG on transparency for retail payments end-users	TRPE	SEPA	Beyond PSD2	Medium	No impact	Legal baseline	Payments
9	European Payments Initiative	EPI	EU / global	Other	Significant	Low	Market	Payments
10	European Mobile Payment Systems Association framework	EMPSA	SEPA	Beyond PSD2	Significant	Low	Market	Payments
18	European Retail Payments Framework (ERPF)	ERPF	EU / global	Beyond PSD2	Significant	No impact	Market	Payments
11	Local Gateway PSD2 Initiatives (RedSys, LuxHub, CBI Globe, etc.)	locGat	Domestic	Beyond PSD2	Medium	Low	Scheme / Infrastructure req	Payments
14	Open Banking Europe	OBE	SEPA	Beyond PSD2	Significant	Low	Scheme / Infrastructure req	Data
4	ERPB Working Group on Instant Payments at POI	IP-POI	SEPA	Single product	Significant	Low	Scheme	Payments
1	SEPA Proxy Lookup (SPL) Scheme	SPL	SEPA	Single product	Medium	Low	Scheme / Specification	Payments
2	SEPA Request-to-Pay (SRTP) Scheme	SRTP	SEPA	Single product	Significant	Low	Scheme / Specification	Payments
3	Mobile Initiated SEPA (Instant) Credit Transfer Interoperability Guidance	MSCT	SEPA	Single product	Significant	No impact	Scheme / Specification	Payments
6	e-identity initiatives (local)	eID	Domestic	Other	Medium	Low	Scheme / Specification	Identity
8	The Berlin Group	BG	Global	Beyond PSD2	High	No impact	Specification	Payments & Beyond
12	Local PSD2 standardisation initiatives (PL, FR, CZ, SK)	locStand	Domestic	PSD2	Medium	Medium	Specification	Payments
13	Payments standards alliance (SWIFT)	PSA	Global	PSD2	Significant	Low	Specification	Payments
16	e-Invoice specifications (e.g. FeRD Initiative)	eINV	Domestic	Single product	Medium	No impact	Specification	Payments
21	Open Banking Implementation Entity (UK)	OBIE	Global	Beyond PSD2	Medium	Low	Specification	Payments
7	W3C Decentralized identifiers (DIDs)	DID	Global	Other	Medium	Medium	Standardisation	Identity
15	OpenID Foundation (OIDF)	OIDF	Global	Other	Medium	Low	Standardisation	Identity
20	Global Open Finance Technical Standards Working Group (GOFTSWG)	GOFTSWG	Global	Beyond PSD2	Significant	Low	Standardisation	Payments

Annex 8: Follow-up recommendations per layer

Legal baseline

Id	Initiative	Code name	Geographical scope	Range	Positive impact	Negative impact	Layer	Underlying asset class
5	e-IDAS regulation	eIDAS	EU	Other	Significant	Low	Legal baseline	Identity
17	European Strategy for Data	ESD	EU	Beyond PSD2	Significant	Medium	Legal baseline	Data
19	Eurosystem's oversight framework for electronic payment instruments, schemes and arrangements (PISA)	PISA	EU	Other	Significant	Medium	Legal baseline	Payments
22	ERPB WG on transparency for retail payments end-users	TRPE	SEPA	Beyond PSD2	Medium	No impact	Legal baseline	Payments

Follow-up recommendations

Id	Initiative	Code name	Possible ways of connection/cooperation/interaction
5	e-IDAS regulation	eIDAS	The future Scheme manager could liaise with the EC to promote a better inclusion of private initiatives in the eIDAS framework, especially interoperability obligations. In addition, it is recommended for the EC to take into account of the requirements of financial entities in an e-identity perspective (data standards, AML-CFT, PSD2). **Note**: the EC is currently assessing the opportunity to review the regulation. The EC launched a public consultation from 24 July to 2 October 2020. The EC has not yet published the results of this consultation.
17	European Strategy for Data	ESD	Cooperation with the EC must be searched to create clear differentiation and demarcation lines between "data sharing" and "data re-use". The future Scheme manager must not confuse data re-use in Open Finance (as an extension of Open Payments/PSD2) with data sharing within a "Finance Data Space" (facilitating the sharing of finance data for industrial use or the public benefit).
19	Eurosystem's oversight framework for electronic payment instruments, schemes and arrangements (PISA)	PISA	Discussion with ECB at an early stage regarding oversight, and expectations of the Scheme governance and rules.

| 22 | ERPB WG on transparency for retail payments end-users | TRPE | SEPA API Access Scheme may include recommendations from the Transparency WG that are applicable to PISPs. |

Market layer

Id	Initiative	Code name	Geographical scope	Range	Positive impact	Negative impact	Layer	Underlying asset class
9	European Payments Initiative	EPI	EU / global	Other	Significant	Low	Market	Payments
10	European Mobile Payment Systems Association framework	EMPSA	SEPA	Beyond PSD2	Significant	Low	Market	Payments
18	European Retail Payments Framework (ERPF)	ERPF	EU / global	Beyond PSD2	Significant	No impact	Market	Payments

Follow-up recommendations

Id	Initiative	Code name	
9	European Payments Initiative	EPI	Suggested sync up between EPI and ERPB WG on SEPA API Access Scheme before the June 2021 ERPB Board meeting. Alternatively this action can be taken by the future Scheme manager.
10	European Mobile Payment Systems Association framework	EMPSA	An informational exchange should be suggested by the future Scheme manager to EMPSA with potential deep dive concerning selected topics.
18	European Retail Payments Framework (ERPF)	ERPF	The future Scheme manager shall highlight any potential conflicts or cross-fertilisation opportunities, in particular with regard to the alignment of standards, interoperability features and processes.

Scheme Layer (instrastructure requirements)

Id	Initiative	Code name	Geographical scope	Range	Positive impact	Negative impact	Layer	Underlying asset class
11	Local Gateway PSD2 Initiatives (RedSys, LuxHub, CBI Globe, etc.)	locGat	Domestic	Beyond PSD2	Medium	Low	Scheme / Infrastructure req	Payments
14	Open Banking Europe	OBE	SEPA	Beyond PSD2	Significant	Low	Scheme / Infrastructure req	Data

Follow-up recommendations

Id	Initiative	Code name	
11	Local Gateway PSD2 Initiatives (RedSys, LuxHub, CBI Globe, etc.)	locGat	The future Scheme manager should monitor the activities carried out by local gateway initiatives.
14	Open Banking Europe	OBE	The future Scheme manager should explore various potential areas for cooperation with OBE, which could play several roles around scheme management, e.g. OBE could either develop a Scheme itself. OBE may provide resource into a Scheme developer body or provide operational capability to support the Scheme.

Scheme / specification layer

Id	Initiative	Code name	Geographical scope	Range	Positive impact	Negative impact	Layer	Underlying asset class
4	ERPB Working Group on Instant Payments at POI	IP-POI	SEPA	Single product	Significant	Low	Scheme	Payments
1	SEPA Proxy Lookup Scheme	SPL	SEPA	Single product	Medium	Low	Scheme / Specification	Payments
2	SEPA Request-to-Pay (SRTP) Scheme	SRTP	SEPA	Single product	Significant	Low	Scheme / Specification	Payments
3	Mobile Initiated SEPA (Instant) Credit Transfer Interoperability Guidance	MSCT	SEPA	Single product	Significant	No impact	Scheme / Specification	Payments
6	e-identity initiatives (local)	eID	Domestic	Other	Medium	Low	Scheme / Specification	Identity

Follow-up recommendations

Id	Initiative	Code name	
4	ERPB Working Group on Instant Payments at POI	IP-POI	The reports of the ERPB Working Groups, i.e. ERPB WG on Instant Payments at the Point of interaction/Framework for interoperability could serve as a guidelines for some API functions e.g. minimum data sets have already been defined in the framework for interoperability of instant payments at POI. (Note: these ERPB WGs have been disbanded and work is continued in the MSG MSCT – see [MSCT])
1	SEPA Proxy Lookup Scheme	SPL	SEPA API Access scheme can potentially reuse or incorporate the functionalities covered by the SPL scheme. The SEPA Proxy Lookup scheme Rulebook can be used as a model for developing the Scheme requirements between asset holders and asset brokers concerning e.g. eligibility criteria, business conditions, rights and obligation of participants, security, liability, compliance.

2	SEPA Request-to-Pay (SRTP) Scheme	SRTP	The components of a SEPA API Access Scheme could leverage the SRTP scheme (together with additional services). On the other hand, the SRTP scheme could be used as 'inspiration' for the development of a SEPA API access Scheme. RTP related use case(s) to be included (developed by WS2&3).
3	Mobile Initiated SEPA (Instant) Credit Transfer Interoperability Guidance	MSCT	Set up coordination calls between co-chairs and secretariats of the ERPB WG API and MSG MSCT. Common members (of the two groups) to exchange relevant updates during meetings. (Note: the two groups are currently 'collaborating' following the MSG MSCT request to assess the possibility to add a new functionality under the SEPA API access scheme). The future cooperation should be also considered by the future Scheme manager.
6	e-identity initiatives (local)	eID	The SEPA API Access Scheme and eID initiatives could work together in two main areas. First, the SEPA API Access Scheme could offer a solution to eID initiatives to transfer data from a participant to the eID scheme to another. Second, a cooperation could be initiated with an eID initiative to offer identification solutions within the SEPA API Access Scheme to facilitate on-boarding of users of the scheme participants.

Specification layer

Id	Initiative	Code name	Geographical scope	Range	Positive impact	Negative impact	Layer	Underlying asset class
8	The Berlin Group	BG	Global	Beyond PSD2	**High**	No impact	Specification	Payments
12	Local PSD2 standardisation initiatives (PL, FR, CZ, SK)	locStand	Domestic	PSD2	Medium	Medium	Specification	Payments
13	Payments standards alliance (SWIFT)	PSA	Global	PSD2	Significant	Low	Specification	Payments
16	e-Invoice specifications (e.g. FeRD Initiative)	eINV	Domestic	Single product	Medium	No impact	Specification	Payments
21	Open Banking Implementation Entity (UK)	OBIE	Global	Beyond PSD2	Medium	Low	Specification	Payments

Follow-up recommendations

Id	Initiative	Code name	
8	The Berlin Group	BG	The cooperation should be focused on the re-use by the SEPA API Access Scheme of the API specifications, prepared by The Berlin Group. New use-cases, considered within the future Scheme, could also be prepared in close cooperation with The Berlin Group. It is recommended for the ERPB WG on SEPA API access scheme to start informal consultation with The Berlin Group to set the most effective way of preparing the technical requirements for future APIs.
12	Local PSD2 standardisation initiatives (PL, FR, CZ, SK)	locStand	The future Scheme manager should cross-check regarding API functionalities with potential API Scheme customer journeys.
13	Payments standards alliance (SWIFT)	PSA	The future Scheme manager should monitor the alliance activities.
16	e-Invoice specifications (e.g. FeRD Initiative)	eINV	The future Scheme manager should cross-check regarding API functionalities with potential API Scheme customer journeys.
21	Open Banking Implementation Entity (UK)	OBIE	The future scheme manager should establish a regular way of exchange information and plans. The cooperation should be focused on re-using the OBIE API specifications in some areas and learning how to handle disputes and complaints within the ecosystem. New use-cases considered within the future scheme could be discussed and consulted with the OBIE.

Standardisation layer

Id	Initiative	Code name	Geographical scope	Range	Positive impact	Negative impact	Layer	Underlying asset class
7	W3C Decentralized identifiers (DIDs)	DID	Global	Other	Medium	Medium	Standardisation	Identity
15	OpenID Foundation (OIDF)	OIDF	Global	Other	Medium	Low	Standardisation	Identity

20	Global Open Finance Technical Standards Working Group (GOFTSWG)	GOFTSWG	Global	Beyond PSD2	Significant	Low		Standardisation	Payments

Follow-up recommendations

Id	Initiative	Code name	
7	W3C Decentralized identifiers (DIDs)	DID	The EC is currently undertaking a review of eIDAS and contemplating the introduction of an EU-ID. Multiple approaches for this are considered, incl. FIDs and DIDs and the most prominent use case examples investigated are eKYC and SCA, which are both highly relevant for the Working Group. Therefore, it is recommended for the future Scheme manager to establish an ongoing link with the EC's eID activities to get early visibility of the direction these are going
15	OpenID Foundation (OIDF)	OIDF	If case of needed functions that are not realised as yet, the future Scheme manager could directly work within the working groups or just send change requests to one of their members.
20	Global Open Finance Technical Standards Working Group (GOFTSWG)	GOFTSWG	The future Scheme manager could participate in this Working Group through the relevant eligible organisations (e.g. The Berlin Group).

Annex 9: Pros/Cons of business condition models

Outside the Scheme Models

Model #1: Unilateral Offering Only

Pros:

- Relatively safe option for the Scheme, from competition law compliance perspective

Cons:

- No transparency on the level of fees to any party outside the bilateral agreement.
- Increases fragmentation and operational inefficiency.
- Decreases the attractiveness of the scheme by not providing certainty on fees and fee structure when a party joins the scheme and by forcing parties to check each offer upfront.
- Increases entry costs: the need to discover each unilateral fee.

Model #1: Bilateral Agreements Only

Pros:

- Relatively safe option for the Scheme, from competition law compliance perspective

Cons:

- No transparency on the level of fees to any party outside the bilateral agreement
- Increases fragmentation and operational inefficiency.
- Decreases the attractiveness of the scheme by not providing certainty on fees and fee structure when a party joins the scheme and by forcing parties to conclude agreements bilaterally and separately with all other scheme participants, which may not be feasible.
- Increases entry costs: the need to conclude bilateral contracts.

Inside the Scheme Models

Model #3: Multilateral Remuneration Model

<u>Pros</u>:

- Single fee that can be bilaterally reduced.
- Increased chances for the take-up of the Scheme.
- Decreased entry costs and barriers.
- Increase competition in the market vis-à-vis other existing solutions

<u>Cons</u>:

- The EC assessment and enforcement on single IFs is quite consolidated in scope.
- Might not suit the needs of a SEPA API AS, considered the different roles of the involved actors and the business needs of the Scheme.

Model #4: Default Remuneration Model

<u>Pros</u>:

- Facilitate market integration (being agreed by all sides of the market) and allow companies to market their goods and services across the whole SEPA, leading to increased consumer choice and decreasing prices.
- Reduced transaction costs for consumers in case PSD2-premium services are offered.
- Remuneration is based on transparent, justifiable criteria.
- Lower entry barriers, fosters competition on the merits.
- Ensure competition on the offer, as Asset Brokers and Asset Holders shall always have the possibility to amend (by lowering it) the fallback DA-Fee(s) bilaterally.

<u>Cons</u>:

- A proper analysis and thorough cost calculation and remuneration methodology would have to be produced by experts and discussed with the EC.
- Must balance out the necessity of such measure, the appreciable gains and competition loss.

Annex 10: Infrastructure requirement for Scheme participants
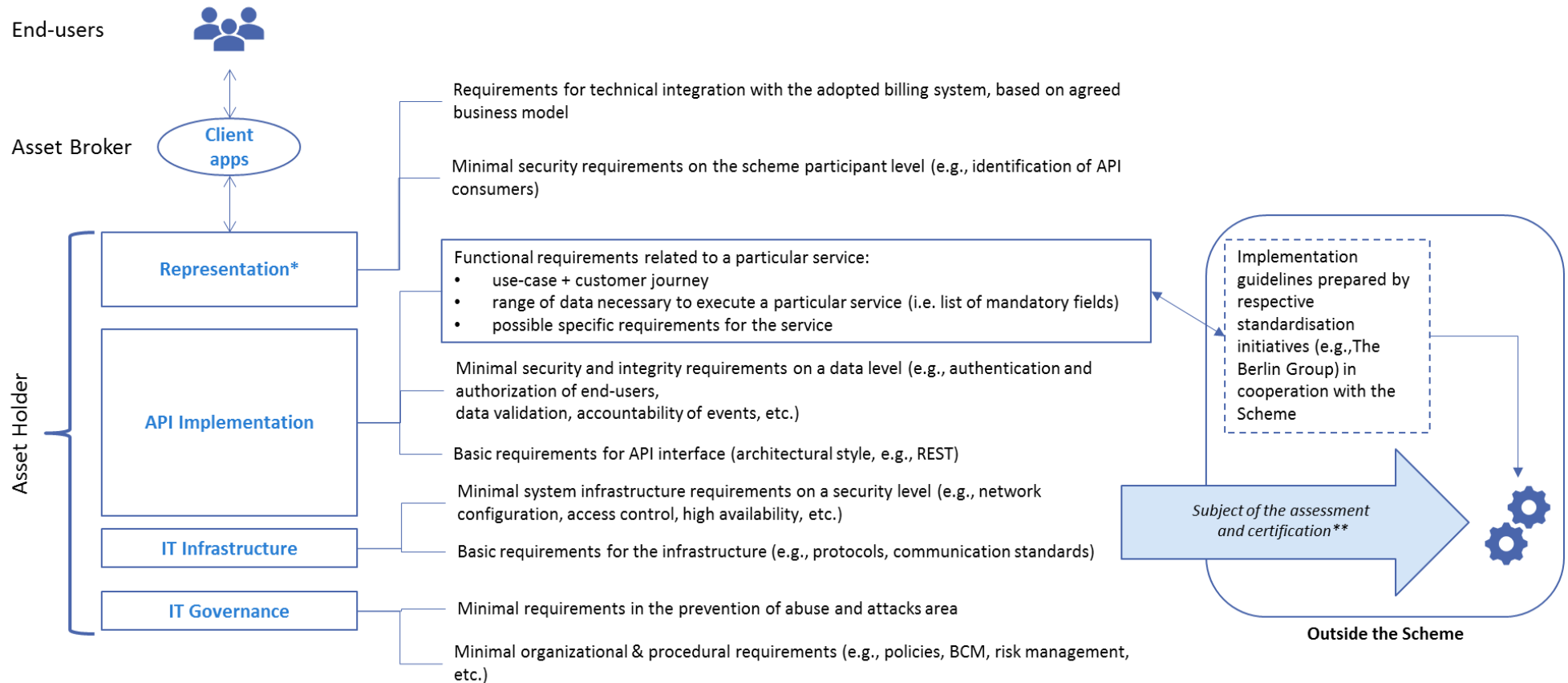
*how the API is exposed (API gateway, developer portal, etc.)

**The Scheme manager may contract a homologation body for this purpose

Annex 11: Scheme structure related to payment accounts
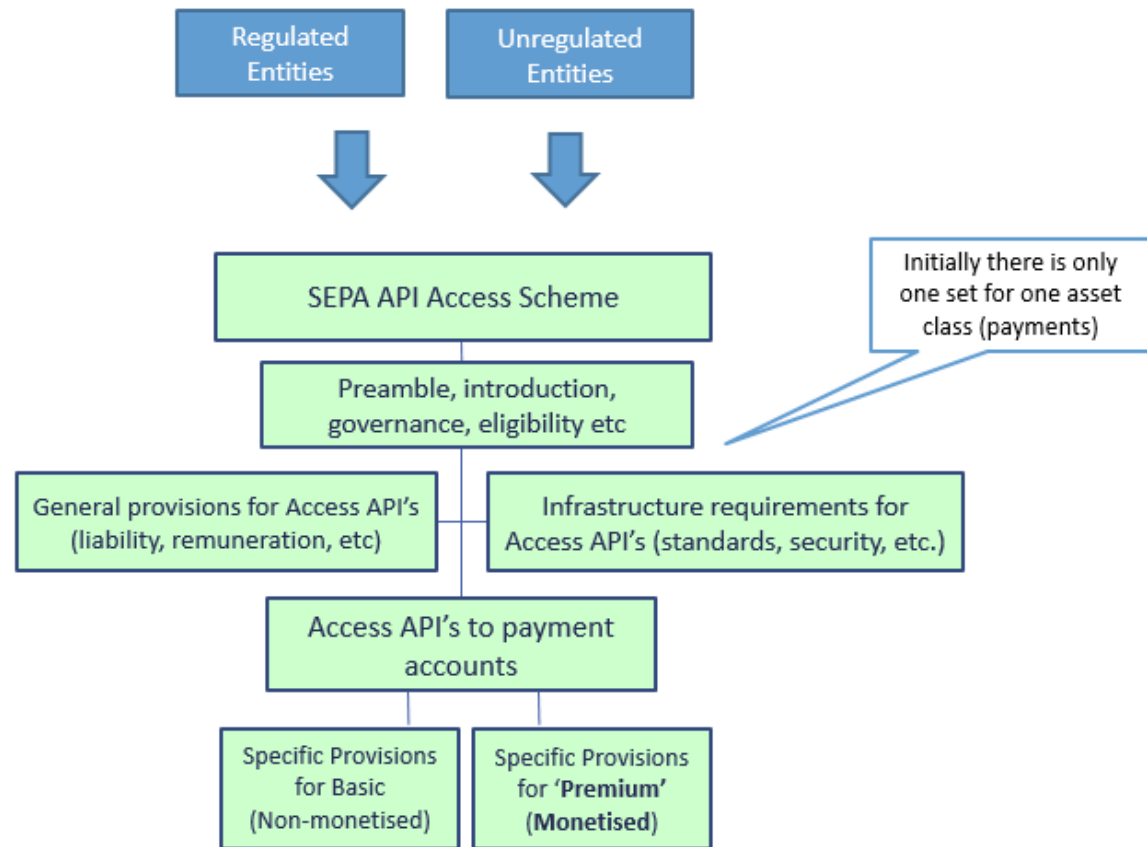
Annex 12: Overview customer journeys (including applicable domain(s))

(Note: Value "1" refers to the fact that the use case is applicable for the respective domain(s); value "NA" means "not applicable")

2019 Use cases	Journey number	Description	B2C	B2B	P2P
E-Commerce payment	Journeys #1	1a - After completing the checkout in an eCommerce scenario, a user pays from his bank account for the first time in a Payment service that requires onboarding 1b – After completing the checkout in an eCommerce scenario, a user that has already onboarded on a payment service that requires so, performs a subsequent payment 1c – After completing the checkout in an e-&m-Commerce scenario, a user that has already onboarded on a payment service, proceed with one click consent and authentication on their mobile device	1	1	NA
Mobile payment at POS	Journeys #2	2a –Enrolment: a user contracts a mobile payment service and enrols a bank and its accounts for the first time to the service; This enrolment shall be linked to e-commerce enrolment for each merchant (If a customer has been enrolled in either channel, he is automatically enrolled in the rest of the digital channels) 2b – Consecutive payments with & without payment guarantee: A user wants to pay in a physical store with a payment service where the user is already registered	1	1	NA
E-identity for KYC purposes	Journey #3	A user is willing to buy a product or service online that requires that he is properly identified. It could be for AML purposes, mitigation of risk, or other reasons.	1	1	NA
Mobile payment at unattended petrol station (POS)	Journey #4	A user wants to fill his deposit and pay for it at an unattended petrol station with a payment service that already has the user registered	1	1	NA
Mobile app payment: one click pay later	Journey #5	A shopper delays payment to after their goods have been shipped on agreed payment term(s	1	1	NA
PFM / Money Management : Bank Enrolment	Journey #6	A user contracts a Personal Financial Management (PFM) or Money Management and enrols a bank and its accounts for the first time to the service	1	1	NA

Prioritised Use cases	Journey number	Description	B2C	B2B	P2P
Pay by Link	**Journeys #7**	7a – Initial payment & 7b – Subsequent payments: A payee initiates a payment request and redirects the payer to the payment authentication context using a link transmitted by any available channel (QR Code, NFC, messaging, redirect…)	1	1	1
Payment with unknown amount - Food	**Journey #8a**	A user orders online fresh food. To ensure completeness of the order over-weighted food products may get delivered at user's home, pre-authorisation of higher amount. The user get charged for the total amount as effectively delivered – variance up to **15%** in value.	1	1	NA
Payment with unknown amount - Rental	**Journey #8b**	A customer downloads an app, onboards and rents two cycles for a two-hour journey	1	1	NA
Payment with unknown amount - Travel	**Journey #8c**	A user orders online a flight ticket and he wants to use an opportunity to combine it with other services offered by the airlines company. The crucial aspect of this transaction is that he confirms everything by one click and the following transaction happens seamlessly.	1	1	NA
Mobile payment with unknown amount - Petrol	**Journey #8d**	A user wants to fuel his car and pay seamlessly the final amount at an unattended petrol station with a payment service that already has the user registered (enrolment done).	1	1	NA
Payment to multiple merchants (Counterparties)	**Journey #9a**	Single payment to multiple merchants (chained payments) - After completing the checkout in a marketplace scenario, a user issues a single transaction, which is later divided and transferred to each individual seller. The marketplace acts as the collecting agent	1	1	1
Payment to multiple merchants (Counterparties)	**Journey #9b**	Single transaction / several payments to multiple merchants / counterparties (parallel payments) - After completing the checkout on a marketplace (product aggregation website), the user authorises a single bulk transaction composed of several payments which are sent directly to multiple receivers.	1	1	NA
Recurring payments	**Journeys #10**	10a - A customer subscribes for a service/good (such as a streaming platform or a magazine subscription). 10b- Deferred recurrent payments with flexible execution time and amount (below authorised amount). A shopper buys and receives goods and services with a commitment to begin making payments at a future date	1	1	1

Full / Partial Refund (Instant)	**Journey #11**	Customer/merchant requests a partial/ total refund	1	1	NA
SCA - Delegated	**Journey #12a**	After completing the checkout in an e-&m-Commerce scenario, shoppers can SCA with one touch and without switching app or device	1	1	1
SCA - Embedded	**Journeys #12b**	12b-1 - After completing the checkout in an e-&m-Commerce scenario, shoppers can SCA by entering their bank PIN and then receiving and entering an OTP/ TAN 12b-2 - After completing the checkout in an e-&m-Commerce scenario, shoppers can SCA with one touch using their authentication app triggered by the asset broker	1	1	1
SCA - Decoupled	**Journeys #12c**	12c-1 - After completing the checkout in an m-Commerce scenario, shoppers can SCA with one touch using their authentication app triggered over-the-air by their bank 12c-2 - After completing the checkout in an e-Commerce scenario, shoppers can SCA with one touch using their authentication app triggered by themselves	1	1	1
SCA - Redirection	**Journeys #12d**	12d-1 - After completing the checkout in an m-Commerce scenario, shoppers can SCA with one touch using their authentication app triggered by the merchant/asset broker app 12d-2 - After completing the checkout in an e-Commerce scenario, shoppers can SCA with legacy web redirection triggered by the merchant/asset broker web page	1	1	1
Future dated payments (Pay later)	**Journey #13a**	It allows the Payment Initiating Parties to initiate payments to be executed by ASPSPs at a given date in the future. The actual execution date may differ from the one defined in the request, depending on rules for processing payments in weekends and banks holidays the ASPSP applies.	1	1	1
Deferred payment	**Journey #13b**	It allows the Payment Initiating Parties to initiate payments to be executed by ASPSPs at an undefined date in the future, linked to a specific event/trigger (e.g. order is sent/received).	1	1	1
IBAN validation	**Journey #14**	An institution from the public or private sector seeks for confirmation of an IBAN or the combination of IBANxTAX ID, IBANxName etc. from the Payment Service User (PSU)	1	1	NA
Mobile Personal Finance Management Automated Transfers	**Journey #15**	Users can define and create Automatic Credit Transfers with their Mobile Personal Finance Management app, for example to sweep any month-end surplus from their checking to their savings account, or to top-up their checking account before it reaches negative balance	1	NA	NA
Personal Loan application	**Journey #16**	A customer subscribes a personal loan from a ASPSP or a financial institution	1	NA	NA