

Euro Retail Payments Board (ERP)

Final report of the ERP Working Group on Instant Payments at POI

ERP Meeting 25 November 2019

Contents

Executive summary.....	3
Glossary.....	8
References.....	12
1. Background.....	14
2. Introduction.....	14
3. Overview of the barriers.....	16
4. Description of the barriers.....	18
4.1. Lack of interconnectivity between IP at POI solutions - Business perspective.....	18
4.1.1. Lack of interoperability rules and appropriate governance between IP at POI solutions.....	18
4.1.2. Lack of a common pan-European label for IP at POI.....	19
4.2. Lack of interconnectivity between existing IP at POI solutions - Technical perspective.....	19
4.2.1. Lack of technical interconnectivity between IP service providers.....	19
4.2.2. Usage of different technologies for payment initiation.....	20
4.2.3. Proximity technology conflicts at the POI.....	20
4.3. Instant Payment (IP) related issues.....	21
4.3.1. Adoption, availability and reachability of IPs.....	21
4.3.2. Need for additional SCT Inst services.....	21
4.3.3. Merchant integration.....	21
4.3.4. Recognition of beneficiary (brand/trade) name.....	22
4.3.5. Notification of payment execution via the IP at POI service provider to the merchant.....	22
4.4. Lack of standardisation for Request-to-Pay functionality.....	22
4.5. Additional business issues.....	23
4.5.1. Viable business model and case while co-existing with other payment solutions.....	23
4.5.2. Awareness and communication to PSUs.....	23
4.5.3. Open access to all mobile device features.....	24
4.6. Security & privacy issues.....	24
4.6.1. Trust in PSU on-boarding.....	24
4.6.2. Implementation issues concerning European rules and regulations.....	25
4.6.3. Confirmation of correspondence between merchant IBAN and name.....	25
5. Recommendations.....	27
Annex 1: List of ERP Working Group participants.....	32
Annex 2: Mandate ERP Working Group Instant payments at POI.....	34

Executive summary

Following the ERP decision taken in November 2018, the ERP Working Group on Instant Payments at the Point of Interaction (IPs at POI) was established in February 2019. In the context of this document an IP at POI is an instant payment transaction based on a SEPA Instant Credit Transfer (SCT Inst), by a consumer to a merchant at the POI which may be for example a Point-of-Sale (POS) in a store or a payment page on an e-or m-commerce website.

The aim of the working group set up with the participation of relevant stakeholders (see Annex II), is to analyse the requirements for the pan-European reach and usability of solutions for IPs at the POI, to help foster the broader setting up of an integrated pan-European IP landscape.

As stated in its mandate ERP/2018/020 (see Annex I), the working group was expected to take a two-step approach: (i) conduct a stocktaking of existing and planned end-user solutions for SCT Instant based POI payments and (ii) on the basis of the stock-taking outcome and of the consultative report of the European Payments Council (EPC)'s multi-stakeholder group on mobile initiated SEPA Credit Transfers (MSG MSCT), analyse in detail the barriers to pan-European reach and usability, and determine what would be required to overcome such barriers to enable pan-European SCT Instant based POI payments, focusing in particular on requirements for harmonisation / standardisation / interoperability.

The results of the stocktake have been included in an interim report produced by the working group which was submitted to the meeting of the ERP in June 2019 (see ERP/2019/004). The present document is the final report which analyses the barriers to pan-European reach and usability of IPs at the POI and also defines a number of recommendations to address these barriers.

The following sources for the identification of these barriers have been used:

- The 2019 stocktake conducted by the working group in Q2 2019;
- The challenges identified by the ad-hoc multi-stakeholder group on Mobile initiated SEPA credit transfers (SCTs), including SCT Instant (MSG MSCT);
- Inputs derived from the report produced by the ERP working group (WG) on an SEPA API Access Scheme;

- Inputs provided by the ad-hoc multi-stakeholder group “Request-to-Pay” (RTP MSG);
- The barriers identified by the Digital Payments Task Force (DPTF) of the European Cards Stakeholders Group (ECSG);

and

- some additional, mostly business related barriers detected by the working group itself.

Next to a short description of each barrier including key observations, the document aims to identify the relevant body(ies) that are already developing or could potentially specify solutions to overcome each barrier. This enabled the working group to prepare a number of recommendations on how to address the “open” barriers as a conclusion to this report.

Those recommendations read as follows:

#	Addressee(s)	Rationale	Recommendations	Deadline
A	Group with multi-stakeholder participation (e.g., the MSG MSCT ¹)	A dedicated framework is needed to manage the interoperability rules and appropriate governance for IP at POI solutions. Also a “recognition of availability label” of an IP at POI solution for payment both on the consumer and merchant side should be developed.	<ul style="list-style-type: none"> • Develop a dedicated interoperability framework with common rules and procedures • Develop a pan-European label and its usage for IP at POI payment solutions <p>These developments should take into account the work executed under Recommendations B, C and D.</p>	November 2020 November 2020
B	Group with multi-stakeholder participation	Diverse levels of security are currently used for customer on-boarding, more in particular related to mobile payments across SEPA. A harmonisation on	Develop security requirements for PSU on-boarding processes by IP service providers and merchants to be adopted under a to be developed framework (see Recommendation A).	November 2020

¹ Subject to the mandate extension of the MSG MSCT by the EPC.

ERP Working Group Instant Payments at POI

		minimum security requirements for on-boarding processes is needed to create trust in PSU on-boarding across the payment ecosystem		
C	MSG MSCT ²	Lack of technical interconnectivity between IP at POI solutions	<p>Develop functional and security specifications for interconnectivity of IP at POI solutions including the specification of the minimal data set to be exchanged between consumer and merchant while covering different proximity technologies.</p> <ul style="list-style-type: none"> • based on QR-codes • based on NFC / BLE <p>This work should serve as input to the work under Recommendation A.</p>	<p>June 2020</p> <p>November 2020</p>
D	Group with multi-stakeholder participation	Need to ensure that the consumer's choice of a given payment instrument to conduct a payment transaction at the POI is respected	<ul style="list-style-type: none"> • Conduct a technical and security analysis on possible proximity conflicts at the POI addressing multiple payment instruments (card payment, instant credit transfers, etc.) • Develop appropriate specifications to enable consumer selection of preferred payment instrument to conduct a transaction at the POI 	November 2020

² Subject to the mandate extension of the MSG MSCT by the EPC.

ERP Working Group Instant Payments at POI

			This work should serve as input to the work under Recommendation A	
E	EPC	Merchants identified a need for a common set of additional SCT Inst services	<ul style="list-style-type: none"> Analyse the appropriateness of defining new services for SCT Inst, including pre-authorisation, recurring payments, refund, etc. Update the SCT Inst rulebook [7] to cover for these services as needed 	November 2020
F	EPC	Need to ensure that the IBAN of the merchant is correctly corresponding to the merchant name	Analyse the possibility to introduce a “Confirmation of Payee” service in the context of the SEPA credit transfer schemes.	November 2020
G	EuroCommerce	Merchants require a payment acceptance environment with full integration of all payment functionalities	Identify the requirements for the development of dedicated specifications to cover the integration and maintenance of multiple payment solutions in the merchant environment.	June 2020
H	Group with multi-stakeholder participation ³	The lack of support of certain SCA authentication models involving a PISP at physical POIs and the related consumer experience	Investigate the authentication models for SCA at physical POIs supported by the consumer’s ASPSP when a PISP is involved and the related impact on the consumer’s experience.	November 2020
I	Competition authorities, mobile device manufacturers, mobile OS developers and GSMA / MNOs	Need for consumer independence on mobile device for the freedom of choice on mobile contactless payment services	Investigate the provisioning of access to all mobile device features (e.g., the contactless interface) in order to ensure that the consumer can have a choice amongst payment applications from different mobile payment providers, independently of the	Mid 2020

³This could possibly be addressed by the ERPB WG SEPA API Access Scheme, subject to revival of the group.

ERP Working Group Instant Payments at POI

			mobile device and the operating system used.	
J	EPC, consumer and retailers associations, public sector	Need to enhance society awareness of IP at POI	<p>Coordinate in co-operation with the IP at POI service providers an institutional communication campaign of the ERPB members to increase the familiarity with IP at POI solutions (in-store and e- and m-commerce).</p> <p>The communication campaign should result in the creation and distribution of informative material on IP at POI payment solutions and their usage to all the ERPB members and affiliates. Moreover ERPB members and the ECB are requested to make the informative material produced available on their websites.</p>	Mid 2021

Glossary

Term or Acronym	Description
Account Servicing Payment Service Provider (ASPSP)	A PSP providing and maintaining a payment account for a payer (see [1]).
API	Application Programming Interface
Bluetooth Low Energy (BLE)	A wireless personal area network technology designed and marketed by the Bluetooth Special Interest Group aimed at novel applications including beacons. Compared to classic Bluetooth, BLE is intended to provide considerably reduced power consumption and cost while maintaining a similar communication range.
Consumer	A payer that is a natural person who, in payment service contracts covered by the PSD2, is acting for purposes other than his or her trade, business or profession (see [1]).
2D barcode	A two-dimensional barcode is a machine-readable optical label that contains digital information. They are also referred to as matrix barcodes. Examples include QR-codes and tag barcodes.
DPTF	Digital Payments Task Force
EC	European Commission
ECR	Electronic Cash Register
ECSG	European Cards Stakeholders Group
EMVCo	An LLC formed in 1999 by Europay International, MasterCard International and Visa International to enhance the EMV Integrated Circuit Card Specifications for Payments Systems. It manages, maintains, and enhances the EMV specifications jointly owned by the payment systems. It currently consists of American Express, Discover, JCB, MasterCard, Union Pay and VISA.
EPC	European Payments Council
ERP	Enterprise Resource Planning
ERP/	Euro Retail Payments Board
Instant Payment (IP)	Electronic retail payment solution available 24/7/365 and resulting in the immediate or close-to-immediate interbank clearing of the

ERP Working Group Instant Payments at POI

	transaction and crediting of the payee's account with confirmation to the payer (within seconds of payment initiation).
IP(s) at POI	Instant Payment(s) at the POI
IP Service Provider	A service provider that offers an instant payment service to a consumer and/or merchant based on a SCT Instant transaction. This may involve the provision of a dedicated application for download on the consumer's device or the provision of dedicated software for the merchant POI. As an example, an IP service provider could be an ASPSP, an MSCT service provider, or any party acting as a PISP.
Merchant	A payee within a payment scheme for payment of the goods or services purchased by the consumer. In the context of this document this includes retailers (including digital goods) and other businesses in the services sector (e.g., accommodation, restaurants, entertainment, recreation, professional (including hairdressers, plumbers, electricians, builders, car repairs), and many more).
MSCT	Mobile Initiated SCT (Instant)
MSCT IG	Mobile Initiated SEPA (Instant) Credit Transfer Interoperability Guidance
MSCT Service Provider	A service provider that offers an MSCT service to a payer and/or beneficiary based on a SCT Instant or SCT payment transaction. This may involve the provision of an MSCT application for download on the customer's mobile device or the provision of dedicated software for the merchant POI. As an example, an MSCT service provider could be an ASPSP, a mobile P2P payment service provider or any party acting as a PISP.
Near Field Communication (NFC)	A contactless protocol for mobile devices specified by the NFC Forum for multi-market usage. NFC Forum specifications are based on ISO/IEC 18092 but have been extended for harmonisation with EMVCo and interoperability with ISO/IEC 14443.
Payee	A natural or legal person who is the intended recipient of funds which have been the subject of a payment transaction (see [1]) (examples include merchant, business).
Payer	A natural or legal person who holds a payment account and allows a payment order from that payment account, or, where there is no payment account, a natural or legal person who gives a payment order (see [1]).

ERP Working Group Instant Payments at POI

Payment Initiation Service Provider (PISP)	A payment service provider pursuing business activities as referred to in Annex I of [1].
Payment Service Provider (PSP)	An entity referred to in Article 1(1) of [1] or a natural or legal person benefiting from an exemption pursuant to Article 32 or 33 of [1].
Payment Service User (PSU)	A natural or legal person making use of a payment service in the capacity of payer, payee, or both (see [1]).
Point of Interaction (POI)	The initial point in the merchant's environment (e.g. POS, vending machine, payment page on merchant website, QR-code on a poster, etc.) where data is exchanged with a consumer device (e.g., mobile phone, wearable, etc.) or where consumer data is entered to initiate an instant credit transfer.
Proximity payment	A payment where the consumer and the merchant (and/or their equipment) are in the same location and where the communication between the consumer's device and the POI takes place through a proximity technology (e.g., NFC, 2D barcodes, BLE, ultrasonic, etc.).
PSD2	Revised Payment Services Directive (EU) 2015/2366.
QR-code	Quick Response code, see also 2D barcode
Request-to-Pay	Set of rules and technical elements (including messages) that allow a beneficiary to claim an amount of money from a payer for a specific transaction (see [5] and [6]).
Strong Customer Authentication (SCA)	An authentication based on the use of two or more elements categorised as knowledge (something only the user knows), possession (something only the user possesses) and inherence (something the user is) that are independent, in that the breach of one does not compromise the reliability of the others, and is designed in such a way as to protect the confidentiality of the authentication data (see Article 4 in [1]).
SCT	SEPA Credit Transfer
SCT Inst	SEPA Instant Credit Transfer (see [6])
Secure Element (SE)	A tamper-resistant platform (typically a one chip secure microcontroller) capable of securely hosting applications and their confidential and cryptographic data (e.g., key management) in accordance with the rules and security requirements set forth by a set of well-identified trusted authorities.

ERP Working Group Instant Payments at POI

	There are different form factors of SE including Universal Integrated Circuit Card (UICC), embedded SE (including eUICC and iSE) and microSD. Both the UICC and microSD are removable.
Single Euro Payments Area (SEPA)	The countries and territories which are part of the jurisdictional scope of the SEPA payment schemes (see https://www.europeanpaymentscouncil.eu/document-library/other/epc-list-sepa-scheme-countries).

Table 1: Terminology and abbreviations

References

Ref. nr	Title	Issued by
1.	PSD2: Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC	EC
2.	Commission Delegated Regulation (EU) 2018/389 of 27 November 2017 supplementing Directive (EU) 2015/2366 with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication (also referred to as "RTS")	EC
3.	General Data Protection Regulation (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	EC
4.	ECSG061-19v1.0: DPTF – Analysis on the coexistence of card and non-card payments at POI and potential volume impact	ECSG
5.	EPC 251-18: Terms of Reference – Request-to-Pay Multi-Stakeholder Group (RTP MSG)	EPC
6.	RTP MSG 005-19: Request-to-Pay – Specifications for a standardisation framework	EPC
7.	EPC004-16: SEPA Instant Credit Transfer Scheme Rulebook	EPC
8.	EPC269-19: Mobile Initiated SEPA (Instant) Credit Transfer Interoperability Guidance (MSCT IG)	EPC
9.	ERP Final report on Mobile and card-based contactless proximity payments https://www.ecb.europa.eu/paym/groups/erp/shared/pdf/4th-ERP-meeting/2015-11-26_4th-ERP_item_6_ERP_CTLP_working_group_final_report.pdf?726f67769d37722de341702fe5f2387a	ERP
10.	ERP Report of the ERP Working Group on a Single Euro Payments Area (SEPA) Application Programming Interface (API) Access Scheme https://www.ecb.europa.eu/paym/groups/erp/shared/pdf/11th-ERP-	ERP

ERP Working Group Instant Payments at POI

	meeting/Report from the ERPB WG on a SEPA API Access Scheme.pdf?18ac5087de44551bb766b9fae7ca11f0	
11.	ERP Interim report of the ERP Working Group on Instant Payments at POI https://www.ecb.europa.eu/paym/groups/erpb/shared/pdf/11th-ERP-meeting/Interim Report from the ERPB WG on %20Instant at POI.pdf?18ac5087de44551bb766b9fae7ca11f0	ERP

Table 2: References

1. Background

In February 2019, the ERPB established the ERPB Working Group on Instant Payments at the Point of Interaction (IPs at POI). In the context of this document an IP at POI is an instant payment transaction based on a SEPA Instant Credit Transfer (SCT Inst), by a consumer to a merchant at the POI which may be for example a point-of-sale (POS) in a store or a payment page on an e-commerce website.

The aim of the working group, set up with the participation of relevant stakeholders (see Annex II), is to analyse the requirements for the pan-European reach and usability of solutions for IPs at the POI, to help foster the broader setting up of an integrated pan-European IPs landscape.

As stated in its mandate ERP/2018/020 (see Annex I), the working group was expected to take a two-step approach: (i) conduct a stocktaking of existing and planned end-user solutions for SCT Instant based POI payments and (ii) on the basis of the stock-taking outcome and of the consultative report of the European Payments Council (EPC)'s multi-stakeholder group on mobile initiated SEPA Credit Transfers (MSG MSCT), analyse in detail the barriers to pan-European reach and usability, and determine what would be required to overcome such barriers to enable pan-European SCT Instant based POI payments, focusing in particular on requirements for harmonisation / standardisation / interoperability. This second step would take into account and complement where necessary the interoperability implementation guidelines that are expected to be delivered by the MSG MSCT first as a draft early Q2 2019 and in their final version thereafter.

The results of the stocktake have been included in an interim report produced by the working group which was submitted to the Board meeting of the ERPB in June 2019 (see ERP/2019/004). The present document is the final report which analyses the barriers to pan-European reach and usability of IPs at the POI and also defines a number of recommendations to address these barriers.

2. Introduction

This document aims to provide an overview of the identified barriers to pan-European SCT Inst based POI payments, focusing in particular on requirements for harmonisation / standardisation

/ interoperability. Hereby the following sources for the identification of these barriers have been used:

- The 2019 stocktake conducted by the working group in Q2 2019 (see [10]);
- The challenges identified by the ad-hoc multi-stakeholder group on Mobile initiated SEPA credit transfers (SCTs), including SCT Instant (MSG MSCT) in their Mobile SCT Interoperability Guidance (MSCT IGs – see chapters 17 and 18 in EPC 269-19), currently under finalisation for publication, following the public consultation on the final draft document (see [8]);
- Inputs derived from the report produced by the ERPB working group (WG) on a SEPA API Access Scheme (see [9]);
- Inputs provided by the ad-hoc multi-stakeholder group “Request-to-Pay” (see [5],[6]);
- The barriers identified by the Digital Payments Task Force (DPTF) of the ECSG (see [4]);

and

- some additional, mostly business related barriers detected by the working group.

Next to a short description of each barrier including key observations, the document aims to identify the relevant body(ies) that are already developing or could potentially specify solutions to overcome each barrier. This enabled the working group to prepare a number of recommendations on how to address the “open” barriers as a conclusion to this report.

In view of the mandate of the working group, note that the document focuses on barriers for interoperability of IPs at the POI which are based on SCT Inst transactions as specified in the rulebook (see [6]). Additional barriers may arise with respect to interoperability with instant account-based transactions which are not based on SCT Inst. However these are not addressed in this document.

3. Overview of the barriers

The table below provides an overview of the barriers that will be analysed in this document.

#	Barrier
1	Lack of interconnection between IP at POI service providers – Business perspective
B1.1	Lack of interoperability rules and appropriate governance between IP at POI solutions
B1.2	Lack of a common pan-European label for IP at POI transactions
2	Lack of interconnection between IP at POI service providers – Technical perspective
B2.1	Lack of technical interconnectivity between IP at POI service provider
B2.2	Usage of different proximity technologies for payment initiation
B2.3	Proximity technology conflicts at the POI
3	Instant Payment (IP) related issues
B3.1	Take-up, availability and reachability of IPs
B3.2	Need for additional SCT Inst services
B3.3	Merchant integration
B3.4	Recognition of beneficiary (brand/trade) name
B3.5	Notification of payment execution to merchant
4	Request-to-Pay
B4.1	Lack of standardisation for Request-to-Pay functionality
5	Additional business issues
B5.1	Viable business model and case for all stakeholders while co-existing with other payment solutions
B5.2	Awareness and communication to PSUs
B5.3	Open access to all mobile device features

6	Security & Privacy
B6.1	Trust in PSU on-boarding
B6.2	Implementation issues concerning European rules and regulations
B6.3	Confirmation of correspondence between merchant IBAN and name

Table 3: Overview of barriers

4. Description of the barriers

This section provides a short description of the various barriers identified as well as a high level analysis of potential means to address these barriers.

To enable a SEPA wide usage of IPs at the POI, and in view of “time to market”, an interconnection between the different “IP at POI solutions” that exist in the market today or are planned for the near future could be realised. At a later stage, it could be evaluated if the specification of a new IP at POI solution (encompassing both the consumer device and the merchant POI infrastructure) would be appropriate, to offer an “off-the-shelf” framework for those that have not yet started any such implementation.

Since this interconnectivity should be handled from both a business and technical perspective, some more insights are provided below in sections 4.1 and 4.2.

4.1. Lack of interconnectivity between IP at POI solutions - Business perspective

4.1.1. Lack of interoperability rules and appropriate governance between IP at POI solutions

Issue description

There is a lack of common rules and procedures for interoperability between the different IP at POI solutions and the respective service providers that address legal, business, functional and security aspects such as liabilities, disputes, etc.

Key observations

There is not only a need to develop these common rules and procedures but also an accompanying governance model to manage compliance to these common interoperability rules and procedures between IP service providers.

This could be managed by the development of a dedicated framework.

Potential (non-exhaustive) topics identified are:

- Business, technical and operational rules, including minimum PSU on-boarding requirements;
- Eligibility criteria and registration of participants in the framework;
- Rights and obligations of participants to the framework;
- Risk & security management;
- Liabilities and consent management;
- Governance, dispute handling and appeal process;
- Fraud and sanction monitoring;
- Change management processes.

4.1.2. Lack of a common pan-European label for IP at POI

Issue description

The stocktake conducted in Q2 2019 has shown that every IP at POI solution has their own label/mark, displayed by the merchant POI and in consumer applications. In order for the PSU to recognise the possibility to pay with an IP at POI under the interoperable framework mentioned in 4.1.1., there is a need for a dedicated mark or label in SEPA.

Key observations

It is to be noted that currently the EPC is already evaluating the possible development of a dedicated recognition mark for SCT Inst.

The usage of a recognition label/mark by IP service providers (e.g., in their IP app) and merchants at the POI, should also be governed, possibly by the dedicated IP at POI framework as mentioned in section 4.1.1.

4.2. Lack of interconnectivity between existing IP at POI solutions - Technical perspective

4.2.1. Lack of technical interconnectivity between IP service providers

Issue description

To create pan-European interoperability amongst IP service providers, an interconnection would be needed between the different IP at POI solutions⁴. The challenge is how to interconnect the IP service provider's back-end systems so that when a consumer that is on-boarded with IP service provider "X" can make an SCT Inst to a merchant that is on-boarded with IP service provider "Y"?

Key observations

A high level analysis shows the following topics to be addressed with respect to the interconnectivity:

- The provisioning (exchange) of transaction data
 - In case of usage of proxies or tokens for merchants, the name and IBAN of the merchant should be mapped/derived from the proxy or token used and provided to the consumer and their IP service provider to initiate the IP, covering IPs based on merchant-presented data. This means that there is a need for technical / security requirements for the interconnection and the formats used (messages, proxies, tokens);
 - Request-to-Pay messages;

⁴ More information for mobile initiated IPs is to be found in chapter 17 in the MSCT IGs (see [8]) (<https://www.europeanpaymentscouncil.eu/document-library/implementation-guidelines/mobile-initiated-sepa-credit-transfer-interoperability>)

- Exchange of data as needed for IP at POI transactions based on consumer-presented data.
- The instant confirmation/notification messages to consumer and merchant (e.g., confirmation of receipt to the consumer from their IP service provider about the receipt of the SCT Instant instruction; notification of payment to the merchant; notification of payment to the consumer).

Note that for mobile initiated IPs, these issues are already being addressed by the MSG MSCT.

4.2.2. Usage of different technologies for payment initiation

Issue description

The current solutions in the market today use **different proximity** technologies such as Quick Response-codes (QR-codes), Near Field Communication (NFC), Bluetooth Low Energy (BLE), etc. for exchanging transaction data at the POI. In addition, through the stocktake, it was reported that even if the same proximity technology is used for IPs at the POI, the current solutions appear to use **proprietary formats** for exchanging transaction data between the consumer and the merchant.

Key observations

Most “IP at POI” solutions reported in the stocktake exercise make use of (proprietary) merchant-presented QR-codes today, although also consumer-presented QR-codes and both NFC- and BLE-based solutions are currently being introduced in to the market.

To avoid a further fragmentation, technologies should be standardised, ideally hereby considering the enablement of different IP payment contexts, next to payments at POI (e.g. invoices, P2P payments). In view of the current market situation, priority should be given to the standardisation of a “generic” QR-code, useable in different payment contexts.

However, there is also a lack of standardisation for the adoption of BLE technology for IPs at the POI (e.g., common specification for radio range on POI, transaction processing) and of harmonised PSU experience guidelines. Also the usage of NFC technology for IP at POI transactions need to be further analysed and standardised accordingly, including harmonised PSU experience guidelines. This means that the usage of those technologies for payments should also be analysed in the near future.

4.2.3. Proximity technology conflicts at the POI

Issue description

When the POI supports multiple proximity technologies (e.g., QR-codes, NFC, BLE, etc.), a conflict may arise with respect to the technology used to perform a payment transaction. As an example, the consumer’s mobile device may perform a transaction over an unintended interface (e.g., the NFC interface overtakes the reading of a QR-code). This obviously would have a negative impact on the consumer experience.

Key observations

There is a need to further analyse these issues from a technical perspective, taking into account that multiple payment instruments may be available on consumer devices and at the POI (SCT Inst, cards, etc.). The consumer needs to be able to conduct the transaction based on their selection of the payment instrument. In other words, the consumer's choice of a specific payment instrument, amongst those supported by the merchant, should be respected.

The Digital Payments Task Force (DPTF) of the ECSG, has carried out an analysis on the co-existence of card and non-card based payments at the POI and conclude with the same barriers in their report (see [4]).

4.3. Instant Payment (IP) related issues**4.3.1. Adoption, availability and reachability of IPs***Issue description*

The pan-European adoption of SCT Inst payments has been identified as a key factor for the success of these payments at the POI.

Key observations

Currently it is to be noted that the adoption is at different pace across European countries. The EPC and ERP/ECB are already monitoring the evolution of this today.

4.3.2. Need for additional SCT Inst services*Issue description*

Some stakeholders reported that the lack of existence of certain services for SCT Inst such as pre-authorisation, recurring payments, refund, etc. is a perceived barrier for the take-up of IPs at POI, all the more so since these services are available with other payment solutions.

Key observations

The ERP WG on SEPA API Access Scheme has also identified use cases which include some of these services (see [10]). These additional services need to be further analysed with respect to their appropriateness in the context of IPs in the SCT Inst scheme.

Also the MSG RTP has identified the need for some of these services (see [6]).

4.3.3. Merchant integration*Issue description*

The complexity of the integration and maintenance of multiple solutions in the merchant environment (POI, ECR, ERP) while covering all payment functionalities with appropriate reconciliation is a major challenge that next to the technical aspects also includes some business aspects.

Key observations

Technical solutions may be different depending on the implementation model for IPs at the POI. The instant notification to the merchant, as already mentioned in 4.2.1, needs to be integrated

in the POI infrastructure to enable a seamless PSU experience and reconciliation by the merchant.

Note that IP at POI solutions also impact the merchant capability for proposing enhanced user experience including value-added services.

4.3.4. Recognition of beneficiary (brand/trade) name

Issue description

It is important for trust and transparency that the commercial brand name (sometimes referred to as “trade name”) of the merchant is provided to the consumer’s IP service provider so that it can be properly used in any communication (SCT instant app on consumer device, bank account statements, etc.) towards the consumer. It might also facilitate every further communication between the consumer and the merchant.

Key observations

This issue appears to be of more general nature, going beyond IP at POI solutions. This topic is related to the one included in the existing ERPB work plan regarding “Transparency in payment transaction reporting”⁵

4.3.5. Notification of payment execution via the IP at POI service provider to the merchant

Issue description

The lack of a common standard for the instant notification via the IP service provider to the merchant of the execution of the IP, which would enable the immediate release of goods and services, is a major obstacle for merchant adoption of IPs at the POI.

Key observation

The specification of this notification is already addressed under barrier 4.2.1 and the adoption of such notification could be covered under the development of a dedicated IP at POI framework.

4.4. Lack of standardisation for Request-to-Pay functionality

Issue description

The stocktaking exercise has shown that several IP at POI solutions have adopted different proprietary implementations for a Request-to-Pay functionality. There seems to be a definite need for standardisation of “Request-to-Pay” which would enhance the convenience for consumers for POI payments.

Key observations

There is already a multi-stakeholder group, namely the RTP MSG RTP [5], working on this topic. While awaiting the outcome of this work, it is clear that not only the interbank level but also IP

⁵ see https://www.ecb.europa.eu/paym/retpaym/shared/pdf/10th-ERPMeeting/Update_of_the_ERPB_workplan.pdf?c6f1974812dd95cd6db6af85c4d80766

service provider level and solutions based on proximity technologies (e.g., QR-codes) should be addressed.

4.5. Additional business issues

4.5.1. Viable business model and case while co-existing with other payment solutions

Issue description

The development of a business model and case for all stakeholders involved in the IP at POI ecosystem, next to the existing other payment solutions at the POI, is perceived as a major challenge.

Key observations

The cost and creation of added value are important factors for the adoption of SCT Instant at the POI by both consumers and merchants. This could include aspects such as convenience, security, transparency, additional services.

Although this issue is in the competitive space there is a need for transparency on remunerations and services supported to enable a sustainable business model and case for all stakeholders involved and the appropriate technical infrastructure to support this.

4.5.2. Awareness and communication to PSUs

Issue description

A lack of familiarity makes it difficult for PSUs (both consumers and merchants) to employ IPs, more in particular at the POI.

Key observations

Trust and confidence in these payments should be built by the industry leveraging the advantages of these solutions. The multiple solutions that exist create some variations in the user experience. For example, different proximity technologies can be used to initiate an IP at the POI and POIs may have different set-ups. Moreover, multiple consumer verification methods are available (mobile code on mobile device, biometrics on mobile device or absence of any consumer verification methods, etc.). These variances contribute to the creation of a lack of clarity with regards to IPs and a lack of trust both from consumers and merchants. This may affect the take-up of IP at POI solutions. To overcome this perceived lack of knowledge and awareness by PSUs about SCT Inst payments, a coordinated communication effort by all stakeholders might effectively contribute to increasing the familiarity with IPs at the POI.

4.5.3. Open access to all mobile device features

Issue description

To support competitiveness, there is a strong demand for more openness of the (new) solutions which are entering or are available in the market today⁶. Examples include a secure and free access to the mobile device capabilities (including the NFC antenna or any other component, e.g. the secure element). This should contribute to the consumer and IP service provider independence on the mobile device for the freedom of choice for IPs at the POI.

Key observations

Currently it is unclear what will be the prevailing mobile proximity payment technology in the future, which results in difficult decisions with respect to investments to be made. It is precisely the competition between the different technologies that leads to a fragmented market.

However, there is a strong demand for more openness of the new solutions which are entering the market today to support competitiveness, including an open but secure and free access to the mobile device's capabilities.

With the objective of streamlining the consumer experience and facilitating payments, the industry supply side has introduced wallet services. These services represent a breakthrough in the payment market; consumers have the opportunity of aggregating the payment service interfaces via the wallet together with other information (e.g., loyalty reward scheme accounts, etc.).

It is to be noted that numerous mobile offerings are gaining consumer attention, interest and preference. Nevertheless, consumer adoption of mobile device usage for payment services initiation is at different pace across SEPA. The will from the payment supply side to conquer the consumer preference might lead to a movement towards the use of closed loop solutions, which could hinder widespread use of mobile proximity payments, potentially leading again to market fragmentation.

4.6. Security & privacy issues

4.6.1. Trust in PSU on-boarding

Issue description

Today, different on-boarding processes are adopted for IP solutions which may result in a lack of trust by stakeholders (e.g. consumers, merchants, PSPs), more in particular in a cross-border context.

⁶ Note that this barrier was already described in [8].

Key observations

There is a need for the development of minimal security requirements to be applied during the on-boarding process by IP service providers and, if applicable, also by merchants. The MSG IGs developed by the MSG MSCT include a dedicated section on security guidelines for customer on-boarding (see chapters 14 in [8]). It should be further investigated under a dedicated framework for IPs at the POI, how these guidelines could be adopted to enhance the overall security and trust in this type of payments, more in particular in a cross-border context.

4.6.2. Implementation issues concerning European rules and regulations

Issue description

There are still implementations issues stemming from the EU rules and regulations such as the PSD2 [1], the RTS [2] and the GDPR [3], also related to their interplay, that might have an impact on the take-up of SCT Inst at the POI, e.g. the implementation of SCA which is impacting the consumer experience.

Key observations

There still exist different views with respect to the implementation of strong customer authentication (SCA) with dynamic linking and the applicability of the exemptions, the involvement of a PISP and the supported functionality of the APIs, or the transfer and processing of sensitive payment data (e.g. related to risk-based authentication or sensitivity of the IBAN) (see for instance [8]).

Furthermore, it should be noted that the implementation of SCA influences the PSU experience in terms of ease of use, which in turn might impact the take-up of IPs at the POI⁷. More in particular, not all authentication models involving a PISP can be supported at physical POIs. This topic could for instance be addressed by the ERPB WG SEPA API Access Scheme subject to revival of the group.

4.6.3. Confirmation of correspondence between merchant IBAN and name

Issue description

It is important that there is a confirmation to the payer that the IBAN of the merchant they intend to use for an instant credit transfer is correct for a given merchant name. This is important to enhance the consumer trust in this type of payments and for fraud prevention reasons.

Key observations

Several methods may be employed to ensure that the link between the payee name and the corresponding IBAN_merchant is correct.

In a number of SEPA countries it has been implemented as an additional service referred to as “Confirmation of Payee” (e.g. in the Netherlands, UK, etc.), where before the initiation of the (instant) credit transfer the correctness of the link between payee’s name and IBAN_payee is checked.

⁷ Some guidance on SCA is provided in chapter 8 of the MSCT IG (see [8])

ERP Working Group Instant Payments at POI

Another means of securing this link is the addition of a digital signature/certificate on the payee name/IBAN_payee which may be added for example in a QR-code or in a “Request-to-Pay” message and checked by the payer’s ASPSP before the instant credit transfer is executed.

5. Recommendations

Based on the analysis of the barriers conducted in the previous section, the following recommendations have been specified. For each recommendation the intended addressee is listed, as well as a deadline and mapping on the identified barriers as described above. In addition, a high level estimation has been made of the impact of the implementation of the recommendation (High or Medium) on the identified barriers.

In the table below, a proposal for assignment to specific bodies for developing solutions to address those barriers which are not yet being taken care of by an organisation or industry body has been included, with dedicated reference(s) to the barriers as listed in Table 3. In addition, an attempt is made to provide an impact statement regarding each of the recommendations (H(igh) or M(edium)).

#	Addressee(s)	Rationale	Recommendations	Deadline	Barriers addressed	Impact
A	Group with multi-stakeholder participation (e.g., the MSG MSCT ⁸)	A dedicated framework is needed to manage the interoperability rules and appropriate governance for IP at POI solutions. Also a “recognition of availability label” of an IP at POI solution for payment both on the consumer and merchant side should be developed.	<ul style="list-style-type: none"> Develop a dedicated interoperability framework with common rules and procedures Develop a pan-European label and its usage for IP at POI payment solutions <p>These developments should take into account the work executed under Recommendations B, C and D.</p>	November 2020	B1.1	High
				November 2020	B3.5 B1.2	High
B	Group with multi-stakeholder participation	Diverse levels of security are currently used for customer on-boarding, more in particular related to mobile payments across SEPA. A harmonisation on minimum security requirements for on-boarding processes is	Develop security requirements for PSU on-boarding processes by IP service providers and merchants to be adopted under a “to be developed” framework (see Recommendation A).	November 2020	B6.1	High

⁸ Subject to the mandate extension of the MSG MSCT by the EPC.

		needed to create trust in PSU on-boarding across the payment ecosystem				
C	MSG MSCT ⁹	Lack of technical interconnectivity between IP at POI solutions	<p>Develop functional and security specifications for interconnectivity of IP at POI solutions including specification of the minimal data set to be exchanged between consumer and merchant while covering different proximity technologies.</p> <ul style="list-style-type: none"> • based on QR-codes • based on NFC / BLE <p>This work should serve as input to the work under Recommendation A.</p>	<p>June 2020</p> <p>November 2020</p>	<p>B2.1</p> <p>B2.2</p> <p>B3.5</p>	<p>High</p> <p>High</p>
D	Group with multi-stakeholder participation	Need to ensure that the consumer's choice of a given payment instrument to conduct a payment transaction at the POI is respected	<ul style="list-style-type: none"> • Conduct a technical and security analysis on possible proximity conflicts at the POI addressing multiple payment instruments (card payment, instant credit transfer, etc.) • Develop appropriate specifications to enable consumer selection of preferred payment instrument to conduct a transaction at the POI. 	November 2020	B2.3	Medium

⁹ Subject to the mandate extension of the MSG MSCT by the EPC.

			This work should serve as input to the work under Recommendation A.			
E	EPC	Merchants identified a need for a common set of additional SCT Inst payment services	<ul style="list-style-type: none"> Analyse the appropriateness of defining new services for SCT Inst, including pre-authorisation, recurring payments, refund, etc. Update the SCT Inst rulebook [7] to cover for these services as needed 	November 2020	B3.2	Medium
F	EPC	Need to ensure that the IBAN of the merchant is correctly corresponding to the merchant name	Analyse the possibility to introduce a “Confirmation of Payee” service in the context of the SEPA credit transfer schemes.	November 2020	B6.3	Medium
G	EuroCommerce	Merchants require a payment acceptance environment with full integration of all payment functionalities	Identify the requirements for the development of dedicated specifications to cover the integration and maintenance of multiple payment solutions in the merchant environment.	June 2020	B3.3	Medium
H	Group with multi-stakeholder participation ¹⁰	The lack of support of certain SCA authentication models involving a PISP at physical POIs and the	Investigate the authentication models for SCA at physical POIs supported by the consumer’s ASPSP when a PISP is involved and the related impact on the consumer’s experience.	November 2020	B6.2	Medium

¹⁰ This could possibly be addressed by the ERPB WG SEPA API Access Scheme, subject to revival of the group.

		related consumer experience				
I	Competition authorities, mobile device manufacturers, mobile OS developers and GSMA / MNOs	Need for consumer independence on mobile device for the freedom of choice on mobile contactless payment services	Investigate the provisioning of access to all mobile device features (e.g., the contactless interface) in order to ensure that the consumer can have a choice amongst payment applications from different mobile payment providers, independently of the mobile device and the operating system used.	Mid 2020	B5.3	Medium
J	EPC, consumer and retailers associations, public sector	Need to enhance society awareness of IPs at POI	<p>Coordinate in co-operation with the IP at POI service providers an institutional communication campaign of the ERPB members to increase the familiarity with IP at POI solutions (in-store and e- and m-commerce).</p> <p>The communication campaign should result in the creation and distribution of informative material on IP at POI payment solutions and their usage to all the ERPB members and affiliates. Moreover ERPB members and the ECB are requested to make the informative material produced available on their websites.</p>	Mid 2021	B5.2	High

Table 4: Recommendations for IPs at POI

Annex 1: List of ERPB Working Group participants

Name	Surname	Nominating Institution
Co-Chairs		
Dag-Inge	Flatraaker	EPC (DNB)
Michel	Van Mello	EuroCommerce (Colruyt)
ERP Stakeholders		
Jean	Allix	BEUC
Massimo	Battistella	EACT (Telecom Italia)
Gerhard	Huemer	SMEs United
Pascal <i>alternate:</i>	Spittler	EuroCommerce (Ikea)
Pierre	Lansade	EuroCommerce (Carrefour)
Michael <i>alternate:</i>	Knetsch	EPC (Deutsche Bank)
Harris	Monteiro da Silva	EPC (Crédit Agricole)
Rita <i>alternate:</i>	Camporeale	EBF (ABI)
Anni	Mykkänen	EBF
Didier <i>alternate:</i>	Darmouni	EACB (Natixis)
Pablo	Lahoz	EACB
Ignacio <i>alternate:</i>	Mascarell	ESBG (La Caixa)
Frederik	Schubert	ESBG (DSGV)
Ruth	Mitchell	EMA

ERP Working Group Instant Payments at POI

Regis	Massicard	EPIF (Ingenico)
PISPs		
Carlos <i>alternates:</i>	Blanco	Eurobits
Ralf	Ohlhausen	PPRO & Tink
Joan	Burkovic	Bankin
NCBs		
Hannes	Hermanky	Austria
Rauno	Veske	Estonia
David	Ballaschk	Germany
Deniss	Filipovs	Latvia
Rui <i>alternate:</i>	Pimentel	Portugal
Hugo	Mira	
ECB		
Mirjam	Plooij	ECB
Observer		
Roxane	Romme	European Commission
Secretariat		
Marijke	De Soete	EPC

Table 5: Participants ERPB WG IPs at POI

Annex 2: Mandate ERP Working Group Instant payments at POI



ERP Secretariat

23 January 2019
ERP/2018/020

MANDATE OF THE WORKING GROUP ON INSTANT PAYMENTS AT THE POINT OF INTERACTION

Based on Article 8 of the mandate of the Euro Retail Payments Board (ERP), a working group is set up with the participation of relevant stakeholders to analyse the requirements for the pan-European reach of solutions for instant payments at the point of interaction (POI)¹, to help foster the broader setting up of an integrated pan-European instant payment landscape.

Scope

The potential usage of the SEPA Instant Credit Transfer (SCT Inst) scheme and the benefits it could provide to end-users can be greatly increased if SCT Inst services are offered in combination with end-user solutions that are adapted to specific use cases. POI payments are an important use case for instant payments because of the high number of transactions involved.² The availability of safe, efficient and user-friendly POI solutions could therefore have significant impact on the uptake of instant payments and could bring benefits to merchants and consumers across Europe. The pan-European nature of the SCT Inst scheme offers an opportunity for POI solutions with pan-European reach. Existing initiatives, however, tend to be limited in their geographical scope both on the consumer and on the merchant side, and to use proprietary standards for e.g. messaging. There is therefore a need for standardisation to ensure that European payment service users' can pay EU-wide using interoperable solutions, while not stifling innovation.

Deliverables

The working group is expected to take a two-step approach: (i) conduct a stocktaking of existing and planned end-user solutions for SCT Inst based POI payments and (ii) on the basis of the stock-taking outcome and of the consultative report of the European Payments Council's multi-stakeholder group on mobile initiated SEPA Credit Transfers (MSG MSCT), analyse in detail the barriers to pan-European reach and usability, and determine what would be required to overcome such barriers to enable pan-European SCT Inst based POI payments, focusing in particular on requirements for harmonisation/standardisation/interoperability. This second step would take into account and complement where necessary the interoperability implementation guidelines that are expected to be delivered by the MSG MSCT first as a draft early Q2 2019 and in their final version thereafter.

¹ A point of interaction is the initial point in the merchant's environment where data is exchanged with the mobile device or where consumer data is entered (e.g. physical POI, QR-code on a poster).

² A 2017 ECB study showed that in 2016, households in the euro area made a total of 157 billion payments at the physical POI, using mainly cash and cards.

Time horizon

The working group will be established in January 2019 and shall deliver an interim report including the stocktaking by June 2019 and the full analysis by November 2019, including if relevant a proposal on the next steps.

Participants and chairmanship

The working group shall include relevant stakeholders, including representatives of i) ERPB member associations and ii) payment initiation service providers as a relevant third party. Other relevant stakeholders may also be invited to join as relevant third parties. 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. A representative of the EU Commission will be invited as observer. The working group will be co-chaired by EuroCommerce (demand side) and European Payments Council (supply side). The Secretariat will be provided by the European Payments Council.

Members representing their associations and the co-chairs will be appointed by the ERPB Chair based on suggestions from their respective associations. Other participants – after expressing interest to the ERPB secretariat – may be invited by the ERPB Chair to join the group based on consultation with the members of the ERPB.

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 $\frac{3}{4}$ 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.