European Payments Council

ECSG
european cards stakeholders group

Business requirements

Consumer selection of preferred payment instrument

MSCT MSG 045-21 / 2021 Version 1.1 / Date issued: 19 November 2021

Public

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1   Executive summary

In its meeting of November 2020, the ECB's Euro Retail Payments Board (ERPB) took note of the report of the ERPB working group on instant payments at the POI (ERPB WG on IP at POI) and endorsed the suggested recommendations. Along with the main report, the ERPB WG on IP at POI delivered the report of the Joint Task Force (JTF) set-up with the European Cards Stakeholder Group (ECSG) that made a first analysis of the aspects related to the selection of payment solutions by the consumers at the POI. It resulted an additional specific recommendation, also endorsed by the ERPB (Recommendation B in the November 2020 ERPB Statement).

The EPC took over the follow-up work on the basis of that recommendation through its Multi-stakeholder Group on Mobile Initiated SCT/SCT Inst (MSCT MSG) who subsequently set-up a new JTF with the ECSG in March 2021.

This document is the deliverable of that JTF in response to the above-mentioned Recommendation B of the ERPB.

While developing the requested requirements, the JTF came to the conclusion that at this stage of maturity of specifications for the POI domain of SCT Inst based solutions, it is only possible to identify a limited number of *business requirements*. However, additional proposals were made jn the form of *guidelines*. First a number of *general requirements* were provided, essentially confirming the principles that were identified in the report delivered in November 2020.

Taking into account the specificities of physical and virtual environments, the scope was then divided into items applicable respectively to physical POIs and to virtual POIs. For each of these categories, *requirements* and *guidelines* were identified covering the following functional aspects:

-    Configurations of the payment solutions at the POI: payment instruments (card-based and SCT Inst), payments brands, and technical interfaces (chip with contact, NFC, QR-codes, etc.)
-    Defining merchant (POI) and consumer (consumer device) preferences
-    Overriding the merchant preferences by the consumer

In addition, some specific requirements or guidelines applicable to physical POIs are also provided: consumer-merchant dialogs and requirements for unattended POIs.

The resulting conclusion is that the proposed *business requirements* should be fulfilled by the specifications and standards on the POI domain for SCT Inst, which are under development or will be developed in the market or in the context of industry cooperation. In addition, the proposed *guidelines* may help the specifications providers to further address specific needs.

2   Document Information

2.1   Structure

This document is organised as follows:

The "Background" section ([3]) reminds of the demand from the ERPB that was the basis for the elaboration of this document, the way in which the EPC has organised the related work, and the approach that the Joint Task Force has taken.

The section "Scope and principles for elaborating the requirements" ([4]) includes the functional break-down of the payment selection scope, and explains the distinction that has been made between *requirements* and *guidelines* throughout the document. This distinction is reflected in the numbered items included in the text in a way that allows the two categories to be interlaced.

The section "General requirements"([5]) includes mainly a part of the deliverable from the 2020 Joint Task Force between the ERPB WG on Instant Payment at POI and ECSG, which is incorporated as a set of general requirements in this document.

The sections [6] and [7], "Requirements for physical POI" and "Requirements for virtual POI" covers the requirements and guidelines related to the scope divided from the perspective of the type of POI: physical (in-store, physical commerce) and virtual (remote, e- and m-commerce). All items from these sections are summarised in a table (**Table 3**) in section [8] ("Summary of requirements and guidelines") and a conclusion and recommendation (section [0]) is the final part of the document body. The list of organisations represented in the Joint Task Force is provided in the Annex ([10]).

2.2   References

N°	Title	Issued by
[1]	ERPB/2020/027 (ERPB Inst@POI 45-20v1.1): Specifications to enable consumer selection of preferred payment instrument	ERPB
[2]	EPC269-19v1.14: Mobile Initiated SEPA (Instant) Credit Transfer Interoperability Guidance	EPC
[3]	PSD2: Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market	EC
[4]	IFR: Regulation (EU) 2015/751 of the European Parliament and of the Council of 29 April 2015 on interchange fees for card-based payment transactions	EC
[5]	ECSG001-18v9.0: ECSG Volume: Book 6 - Implementation Guidelines	ECSG
[6]	ECSG001-18v9.0: ECSG Volume: Book 1 - General	ECSG

[7]	ERPB/2020/035: Statement following the fourteenth meeting of the Euro Retail Payments Board held on 26 November 2020	ERPB
[8]	ERPB/2021/012: Statement following the fifteenth meeting of the Euro Retail Payments Board held on 28 June 2021	ERPB
[9]	ERPB/2020/034: Requirements for the development of dedicated specifications	

Table 1: References

2.3   Abreviations

Abbreviation	Term
BLE	Bluetooth Low Energy
ECB	European Central Bank
ECSG	European Cards Stakeholders Group
EMV	EMV® Integrated Circuit Card Specifications for Payment Systems
EPC	European Payments Council
ERPB	Euro Retail Payments Board
IFR	Interchange Fee Regulation
JTF	Joint Task Force
MSCT	Mobile Initiated (Instant) SCT
MSG MSCT	Multi-Stakeholder Group for Mobile Initiated (Instant) SCT
NFC	Near-Field Communication
PAN	Primary Account Number (card number)
PCI SSC	Payment Card Industry Security Standards Council
POI	Point Of Interaction
PSD2	2nd Payment Services Directive
QR-code	Quick Response-code

SCA	Strong Customer Authentication
SCT	SEPA Credit Transfer
SCT Inst	SEPA Instant Credit Transfer
SDD	SEPA Direct Debit
SEPA	Single Euro Payments Area
WG	Working Group

Table 2: Abbreviations

3   Background

In the statement released after the meeting of 26 November 2020 ([7]), it is stated that the ERPB took note of the report of the ERPB working group on instant payments at the POI (ERPB WG on IP at POI), welcomed the analysis conducted and endorsed the suggested recommendations for follow-up work ([7]). Among these recommendations, the ERPB WG on IP at POI included the concluding recommendation from the deliverable of the Joint Task Force (JTF) set-up between the ERPB WG on IP at POI and the ECSG, also released in November 2020 along with the report from the ERPB WG on IP at POI. That deliverable ([1]) contained a first analysis of the scope covering the selection of the payment solutions by the consumers at the POI, considering a number of common use-cases and providing a baseline for identifying requirements that further developments should fulfil. It concluded with the following recommendation for a way forward, endorsed by the ERPB (labelled as *Recommendation B* in the November 2020 ERPB Statement):

Addressee	Rationale	Recommendation	Deadline
Group with multi-stakeholder participation consisting of market participants in card and SCT Inst payments	*Need to ensure that the consumer's choice of a given payment instrument to conduct a payment transaction at the POI is respected*	*Develop standards, business and technical requirements as appropriate, leading to interoperable specifications that ensure consumer selection of preferred payment instrument (card payment or SCT Inst) to conduct a payment transaction at the POI (physical or virtual POI) based on the deliverable ERPB Inst@POI 45-20v1.1*	*November 2021*

After the ERPB meeting of November 2020, the ERPB invited the EPC to take over the follow-up work based on ERPB recommendations linked to the ERPB WG on IP at POI and requiring-stakeholder participation. Therefore, the EPC Multi-stakeholder Group on Mobile SCT and SCT Inst (MSCT MSG) was tasked with organising the related activities. To respond to the recommendation regarding the selection of the payment solutions by the consumers at the POI, the MSCT MSG decided to set-up a new Joint Task Force with the ECSG which started its work in March 2021 and elaborated this document.

It must be noted that at this stage of maturity of specifications for the POI domain of SCT Inst based solutions, it is not possible to identify *technical* requirements leading to interoperability, and therefore this document includes *business* requirements only. Furthermore, some standardisation initiatives in the POI domain, such as a SEPA-wide standard for SCT Inst enabled QR-code are being finalised (expected in November 2021 – see [8]), and others are at an earlier stage, so that the opportunity for requirements related to *standards* in the strict scope of payment instrument selection can be assessed only after POI standardisation in general is available and substantially adopted.

However, some proposals can be made as *guidelines* and the next section explains the rationale leading to this approach.

4   Scope and principles for elaborating the requirements and guidelines

To implement complete and easily applicable mechanisms enabling the consumer selection of the payment solution at the POI, all components of the solution should be analysed, and related requirements should be provided. As stated in the specifications released by the ERPB Working Group on IP at the POI in November 2020 (see [1]), a payment solution can be defined as a combination of a payment instrument (card-based or SCT Inst in the context of these requirements), a payment brand and a technical interface. Therefore, the configuration of these components should fulfil a set of requirements or at least follow a set of relevant guidelines specific to the selection of the payment solution.

Furthermore, the definition of the merchant preferred payment instrument and brand at POI, as well as consumer preferences whenever this is possible, and how these preferences could be combined in a final and valid payment solution should also be covered. As from technical setup and user experience points of view the transactions at physical POIs and those at virtual POIs are different, it is appropriate to provide specific principles for these two environments. The next sections provide requirements and guidelines, separately for physical and virtual POIs, covering the following:

- Configurations of the payment instruments at the POI
- Configurations of the payment brands at the POI
- Configurations of the technical interfaces at the POI
- Defining merchant (POI) and consumer (consumer device) preferences
- Overriding the merchant preferences by the consumer

In addition, some specific requirements or guidelines applicable to physical POIs are also provided: consumer-merchant dialogs and requirements for unattended POIs.

The payment instruments covered by this document are card-based and SCT Inst. However, the cards area is more mature - with detailed common POI requirements developed by multiple organisations (EMVCo, PCI SSC, Card Schemes, etc.) - than SCT Inst. In the SCT Inst area there do exist detailed technical specifications for solutions in some national markets, but not for pan-European solutions that would be needed to be compared with cards in the selection process at POI.

Therefore, while developing the proposals in this document, a distinction was made between two types of items where payment instruments based on SCT Inst and cards coexist:

- *Requirements*; they *shall* be respected by the implementations of payment solutions at POIs. An item is considered a requirement when underlying technical layers of a solution are mature enough for both cards and SCT Inst based payment instruments, making possible an implementation without unknown dependencies.

- *Guidelines*; they *should* be respected by the implementations of payment solutions at POIs. An item is considered a guideline when underlying technical layers of a solution are not mature enough for both payment instruments. The proposed guidelines should be duly considered when implementing a solution.

5   General requirements

As mentioned in section [3] this document is based on a first analysis of the aspects related to the selection of the payment instrument by the consumer, delivered in November 2020 by the JTF between the ERPB WG on IP at POI and the ECSG ([1]). This analysis which started from a number of *principles* formed the basis for the development of the general requirements hereunder (**GR1** to **GR5**), along with the more specific requirements and guidelines developed further.

> **GR1** The merchant shall display the range of available payment solutions (SCT Inst and card-based payment instruments, payment brands, and technical interfaces) they accept.
>
> **GR2** If the merchant does not define a preferred payment solution, all payment solutions shall be presented in a clear and non-discriminatory manner. Before the initiation of the payment at the POI, the consumer may then either:
> - Use the default payment solution they have previously set;
> - Change their default payment solution to another payment instrument, payment brand and/or technical interface. The consumer shall not be prevented from changing their default payment solution at any time;
> - Select a payment solution from the merchant's list of available payment solutions if a default payment solution is not defined in the consumer device.
>
> **GR3** The merchant can define (a) preferred payment solution(s) in priority order to the consumer possibly together with the consumer benefits, without preventing the consumer from overriding the priority selection mechanism in a convenient manner. Before the initiation of the payment at the POI, the consumer may then either:
> - Agree / select the merchant's preferred payment solution;
> - Override the merchant's preferred payment solution by selecting another payment instrument (SCT Inst, Card, etc.), brand and/or technical interface offered by the merchant.
>
> **GR4** The consumer will be in full control of the payment solution at all times, where technically feasible. The technical feasibility should only be related to the technical limitations of the consumer device, the POI or the communication technology between the consumer device and the POI.
>
> **GR5** The consumer's selected payment solution at the POI should not be overruled by any other parties involved in the technical service, clearing and settlement payment chain.

In addition, a general requirement is identified in relation with preserving the consumer control of the payment solution in POI environments where payee-initiated solutions are available:

GR6 If payment solutions based on payee-initiated transactions are proposed by the merchants, the consumer shall be well informed about the related rights and conditions. Information about alternative payment solutions and changing of payment instrument or brands shall also be available.

6   Requirements for physical POI

As explained in section [4], the configuration of the POI aiming at enabling all available payment solutions for consumer selection is an essential part of the mechanisms that a merchant should support for a free and non-discriminatory choice of the payment solution by the consumer. The document from the ERPB Working Group on IP at the POI (see [1]) explains that three main criteria should be considered when analysing how the principles for consumer selection should apply. These criteria - the payment instrument (Card or SCT Inst), the payment brand, and the device and interface – also are the components of what the report defined as a "payment solution". The requirements and guidelines for the configuration of the POI should reflect the same criteria.

6.1   Configuration of payment instruments

This set of requirements covers the configuration of payment instruments (card, SCT Inst) that a merchant should support on their attended POIs. Depending on the merchant's infrastructure technical setup, the operations concerned can be done either on a common platform to which all POIs are connected or on each individual POI. The identified requirements are prerequisites for any operational launch of acceptance and therefore are "one-off" operations, or part of them can be done when updates of POIs are required.

R1 For the acceptance of card-based payment instruments that are proposed for selection to consumers, the merchant shall configure all required technical parameters according to the information received from the acquiring entity providing the card scheme requirements

R2 For the acceptance of SCT Inst-based payment instrument that is proposed for selection to consumers, the merchant shall configure all required technical parameters according to the information received from their MSCT provider according to the relevant scheme requirements

R3 To allow a transparent and free choice of payment instrument by the consumer, the merchant shall propose in a non-discriminatory manner all SCT Inst and card-based payment instruments that are properly configured on the POIs according to the merchant's agreements with its acquirers and technical service providers.

6.2   Configuration of technical interfaces

This set of requirements covers the configuration of the technical interfaces for communication between the POI and cards or consumer devices: chip with contact, NFC, QR-codes, BLE, etc.

R4 The technical interfaces shall be configured in a way that they do not discriminate against any payment instrument contracted for by the merchant.

R5 A particular technical interface shall not hinder the deployment of a payment solution via another interface.

6.3   Configuration of payment brands

The requirements below relate to the next stage of generic configurations on the merchant side, after the payment instruments and interfaces: payment brands. The payment brand is a component of a payment solution, along with the device/interface and payment instrument. Therefore, the configuration of available brands accepted at the POI completes the actions that a payee should undertake to offer a consumer a full set of payment solutions.

R6 If a merchant makes use of loyalty programmes which are linked to the payment instrument (e.g. card PAN is used to identify the consumer and its loyalty account), the configuration of the acceptance of such programmes shall not impact the availability of the payment instruments to the consumers.

R7 Some payment solutions may propose delivery of e-receipts instead of paper payment receipts or other dematerialised, anonymous receipts. This feature shall be used upon consumer consent and should not result in a limitation of the choice of the payment instrument.

R8 Co-badging. The configuration of the POI shall include configuration of which applications of the same payment brand or which payment brands are accepted. As defined in the 2020 specifications document ([1]) it is also assumed in the context of this document that payment brand can refer to an SCT Inst based brand or a card-based payment brand. If at least one co-badging configuration has been made on the POI, the POI shall be enabled for the consumer selection. In the next section an additional requirement indicates how the payee can configure the priority between brands or applications in case of co-badging.

6.4   Configuration of merchant preferred solutions

This section covers the guidelines for defining the preferences (or priorities) of the merchant with regard to the payment solutions. Details are given for each interface (chip with contact, NFC, QR-codes, others) and cover aspects related to the priorities between payment instruments and between brands or applications of the same payment instrument (co-badging).

The Book 6 of ECSG Volume (see [5] - section 2.2.1 "Implementation guidance on Priority Selection and Choice of Application" and 2.2.2 "Local Transactions - Physical POI") provides guidelines supported by examples of priority selection of card-based payment instruments. This document does not re-include these guidelines, but they may be extended to cover the co-existence of SCT Inst and card-based payment instruments, once specifications for the POI domain of SCT Inst based solutions will be available.

Guidelines for the configuration of merchant preferred solutions at the POI:

G1 A merchant may choose not to configure a preferred payment instrument or a preferred brand. In this case the payee should equally present at the POI all supported payment

instruments (SCT Inst and cards) and brands to enable the consumer choice. The consumer can choose their preferred payment instrument or brand through various types of interfaces (graphical, text based, physical buttons, touch screen, separate components of the POI) or via a dialog with the salesperson. The final selection of the payment solution will also depend on the configuration of the consumer device and the consumer selection on their consumer device.

G2 For chip with contact interface used for transactions making use of the physical card, the merchant should be able to configure the POI priority on the basis of the following options:
   a. Card-based payment instrument without a preferred brand.
   b. Card-based payment instrument with a preferred brand.
   c. SCT Inst without a preferred brand
   d. SCT Inst with a preferred brand
   e. Brand without a preferred payment instrument (card-based or SCT Inst)

These options should be implemented at the POI in two modes: before the physical card is inserted ("upfront") or after the physical card is inserted in the payment terminal. The section Book 2 of the ECSG Volume ([5]) – section 2.2.2 provides examples in card environments, as guidelines for implementing the related requirements of the IFR (see [4]). Regardless of the priority modes and options adopted by the payee, the consumer should be allowed to override the payee preference, either before the physical card is inserted or after the card is inserted. The requirements covering the options for overriding are detailed in section **6.6**.

G3 For the NFC contactless interface, the same priority options as for chip with contact interface (see G2) should be possible to be configured at the POI. Also, the merchant may configure the priority mode: before or after the consumer device or the physical card interacts with the NFC reader of the terminal. It must be noted that if the consumer does not use a physical card but a mobile device the final choice of a payment solution also depends on the configuration of the consumer device (see section [6.7).

G4 For the QR-code interface, merchant-presented, the POI may be configured in one of the following modes, that is activated after the interface "merchant-presented QR-code" is selected:
   a. Merchant presented QR-code for card-based payment instruments. In addition, optionally one preferred card brand can be defined. If no preferred brand is defined, the final choice depends only on the configuration of the consumer device (or consumer interaction with their device for the selection of the brand).
   b. Merchant presented QR-code for SCT Inst. In addition, optionally one SCT Inst preferred brand can be defined. If no brand is defined, the final choice depends only on the configuration of the consumer device (predefined brand or consumer interaction with the consumer device for the selection of the brand).

Regardless the type of QR-code defined in the POI, the consumer shall always be able to request the change of this type by either direct interaction with the POI or dialog with the salesperson, provided that the POI supports the alternative QR-code type selected by the consumer.

Other types of QR-codes may be developed in the future, so these modes are not exhaustive and are given only as examples. For example, if in the future QR-code standards common to card and SCT Inst payment instruments becomes available, this guideline needs to be reviewed accordingly.

G5 If for merchant-presented QR-codes, no QR-code type (SCT Inst, card, or common if it becomes available) priority mode is defined on the POI and the POI supports multiple types, the selection of the QR-code should be made by the consumer by: direct interaction with the POI or dialog with the salesperson who will make the choice on behalf of the consumer and activate one of the QR-code types to be displayed. If no priority brand is configured for selected type of QR-code, the final selection of the brand should be made on the consumer device.

G6 For consumer-presented QR-codes, depending on the mobile application generating the QR-code on the consumer device, several cases may occur:
   a. The consumer uses an application configured with a preference for SCT Inst so that an SCT Inst QR-code is displayed. If several brands are available a preferred SCT Inst brand may be also configured.
   b. The consumer uses an application configured with a preference for card-based payment instruments so that a QR-code in a format for cards is displayed, in which one brand can be defined as consumer preference.

If the consumer has not made the selection of payment instrument (SCT Inst or card) and brand on its mobile device, the selection should be subsequently made on the POI

If in the future QR-code standards common to card and SCT Inst payment instruments becomes available, this guideline needs to be reviewed accordingly.

G7 For contactless interfaces based on technologies other than NFC (e.g. BLE, WiFi), a guideline similar with G3 should be applicable. However, it should be adapted to technical restrictions or specificities of these interfaces.

6.5   Guidelines for merchant-consumer dialog scenarios

In retail commerce payments are often made as a result of a dialog between the salesperson and the consumer. This dialog can be about non-payment matters (e.g. related to products, to loyalty programmes, etc.) but can also end with a question of type "how do you want to pay?" Once it is clear that the consumer wants to pay by an electronic means of type "card" or "SCT Inst" (expressed in various way – e.g. "from my bank account", "by bank transfer", "using the app X", "by QR-code"), the salesperson performs some actions on their cash register and/or the payment terminal via their specific interfaces and steer the consumer to the selected option. For a complete payment experience, in full respect of consumer choice of payment instrument, this dialog could be translated into operating procedures in the merchant internal organisation. It is not the purpose of this document to provide requirements for such dialogs, but to outline guidelines for:

-    A dialog resulting in a choice of a payment instrument;

- A dialog resulting in a choice of an interface and presentment mode;
- A dialog resulting in a choice of a brand.

Guidelines for merchant-consumer dialogs

G8 If the first choice is made via a dialog, the consumer should be able to make the remaining choices on the POI. Example: a dialog may result in the choice of payment by merchant presented QR-code. The consumer should be then allowed to choose between a SCT-Inst or a card QR-code, or override a POI priority between these two types if this is configured.

G9 The dialogs may result in inviting consumers to other checkout lines if the electronic payment instruments are not available, but the merchant should not discriminate between available electronic payment instruments.

6.6 Override the merchant preferences by the consumer

As stated in the requirement [GR4], the consumer shall be able to override the priorities (payment instrument, brand, interface) defined by the merchant on the POI. This is possible if the consumer has defined other priorities in their consumer device (e.g. smartphone) than those of the POI, or if the consumer makes use of a POI interface or their own device to override the merchant preferences.

The guidelines proposed below indicate the functions that should be implemented by the POI to enable the overriding functions.

Guidelines for overriding the merchant preferences by the consumer

G10 For chip with contact interface the consumer may override the POI priorities with the following options (see also the guideline G2):
   a. If only the preferred payment instrument (card or SCT Inst) or preferred brand is configured in the POI, the consumer should be able to change the POI preference via an action on the POI interface or via a dialog with the salesperson. The remaining choice is further selected either implicitly (after the card is inserted and if it is defined on the card) or via a second action on the POI or a dialog.
   b. If both preferred payment instrument and brand are configured in the POI, it should be possible to override these preferences by:
      i. A complete set of actions on the POI interface or a dialog, resulting in a valid (complete) selection, or:
      ii. A partial action or dialog (e.g., choosing only the brand or payment instrument), and the final selection is made implicitly after the card is inserted. If a different preferred instrument and brand are defined in the card and these preferences are also supported by the POI the preferences of the card have higher priority; if they are not supported by the POI a second action on the POI interface or a new dialog should be performed for a valid selection.

G11 The NFC contactless interface can be used either with a physical card or a consumer device.

    a. If the consumer uses a physical card, the guideline G10 applies. However, the contactless nature of this interface and the need to avoid physical interactions should be considered.

    b. If the consumer uses a consumer device, an additional layer of choices is available. Several cases can be identified:

        - No preferences are defined in the POI, but a preferred payment instrument or brand, or both are defined in the consumer device and are accepted by the POI. These preferences are then used for the transaction.

        - A preferred payment instrument or brand, or both, are configured in the POI. If such preferences are also configured in the consumer device, and are accepted by the POI, the preferences of the consumer device should have higher priority. If no such preferences are configured in the consumer device, the POI preferences should be used for the transaction, after validation by the consumer on the consumer device.

G12 For "merchant presented" QR-code interface, as indicated in the requirement G4, the POI can be configured in card standard mode, SCT Inst standard mode, or in a mode corresponding to a standard common for card and SCT Inst (provided that such a standard becomes available), with or without preference for one of the two payment instruments. The following guidelines are provided as examples of how the consumer could make their selection.

    a. If the POI is configured in card standard mode or SCT Inst standard mode and the consumer uses their payment application on their device, the following options are available:

        - If no payment instrument preference (card or SCT Inst) is configured in the consumer device, but both are supported, the consumer should be able to confirm the payment instrument used and implicitly the QR-code standard that is being read.

        - If either the card or the SCT Inst payment instrument is defined in the consumer device and the related QR-code standard matches the POI standard, the corresponding payment instrument should be automatically used for the transaction. If the related QR-code standard in the consumer device does not match the QR-code standard in the POI (either card or SCT Inst), and if the POI supports both standards, the consumer preferred standard should be used, after switching the payment instrument (and the displayed QR-code) in the POI upon request of the consumer. Alternatively, the device can notify the consumer that a QR-code in a standard different than their preferred one is displayed on the POI for the transaction. If the consumer device supports the POI standard, the consumer should be able to accept the POI standard for this individual transaction.

    b. If the POI is further configured with a preferred brand, that does not match with the preferred brand of the consumer device or no preferred brand is configured in the consumer device, the consumer should be able to accept the proposed brand on their

device. If this brand is not supported by the consumer device or not accepted by the consumer, the transaction will fail.

In any case if the preferences on the POI do not match with the preferences on the consumer device, the latter should have a higher priority.

If in the future, QR-code standards common to card and SCT Inst payment instruments becomes available, this guideline needs to be reviewed accordingly.

G13 For "consumer presented" QR-code interface, it is expected that the QR-code standard (card, SCT Inst, common if it becomes available) is already selected as of the consumer action to display the QR-code on their device. If a common standard is used, a preferred payment instrument (card, SCT Inst) may be configured in the consumer device.

It should be noted that SCT Inst payments could be done without any payment brand at all, but if any payment brand is involved, it may be selected at that moment, or the consumer might be asked to select a brand from those configured on their device, prior to displaying the QR-code.

    a. The payment instrument used in the transaction should be defined by the same combination of factors as set out in the guideline G12.

    b. If the consumer would like to use a specific brand, it might be selected at the moment of displaying the QR-code (i.e. predefined or the consumer is asked to select a brand from those configured on their device, prior to displaying the QR-code). If the preferred brand of the POI is different from the brand selected on the consumer device, the consumer device brand should be selected if supported by the POI. If it is not supported, another brand supported by the consumer device is selected. Alternatively, another payment instrument can be chosen after a dialog between the salesperson and consumer.

G14 For contactless interfaces based on technologies other than NFC (e.g. BLE, WiFi), the overriding of POI preferences by the consumer may follow principles similar with G11. However these should be adapted to technical restrictions or specificities of these technical interfaces, for example, whether these technologies support bi-directional POI-consumer device exchange of data.

G15 Fall-back scenario. For the purpose of this document a fall-back scenario with relevance for the choice of the payment instrument can be defined if an initiated transaction fails generating a result according to the rules of the payment scheme used. This result (e.g. transaction decline) does not depend on the choice of the payment instrument, interface or brand, which all are expected to be valid at the moment of the transaction initiation. In relation to the free choice by the consumer of the payment instrument and brand, a fall-back should be followed by:

    a. Relevant message to the consumer including the information about the fallback reason with clear indication that no financial transaction has taken place so no transfer or reservation of funds has been made.

    b. Invitation to initiate a new financial transaction for the same purchase, using a different payment solution (payment instrument, brand, or device). The consumer

should be advised about the possible consequences of an attempt using the same payment solution as in the first transaction (e.g. possible blocking of the payment instrument, etc.)

6.7 Configuration of the consumer device

The following set of requirements covers the configuration of the consumer devices that can be used for payments such as smartphones, smartwatches and other wearable objects. Physical cards are not included as their configuration ("personalisation") is done as of the subscription and delivery to the consumer, and no further action by the consumer (payer) is possible.

Some technical prerequisites are not covered in this document, such as: installation of the required operating system on the device, availability of hardware elements that make possible certain features (e.g. NFC antenna, camera for QR-code scanning, etc.), availability of mobile data connection. Also, requirements related to the capabilities of such devices for SCA are not relevant for the current purpose, even though in practice the available SCA methods can have impact on the preference of the consumer for one or another payment solution.

R9 Availability of mobile payment application. In order for the consumer to make use of a payment solution (payment instrument, brand and interface) proposed by their provider (issuing PSP, MSCT provider), the required mobile payment application shall be downloaded and installed, and if required by the provider, upgraded to the most recent version. The consumer shall be enrolled, the application shall be activated (e.g. login, configuration retrieved, etc.), and the payment instruments (card, SCT Inst) on boarded according to the requirements of the provider and in accordance with the payment scheme. If multiple brands of the same payment instrument (SCT Inst or card) are available, the application shall support the definition of a preferred brand. If only one SCT Inst brand and one card brand are available in the same application, the application shall support the definition of a preferred brand (SCT Inst or card). It is however likely that a mobile application is dedicated to only one payment instrument (either card-based or SCT Inst), so that the configuration of a preferred brand needs to be made on each application.

R10 If the consumer wishes to use the NFC contactless interface, if supported by the mobile payment application, this interface shall be activated on the mobile device and in the mobile application. If multiple payment applications are installed and activated on the mobile device, the operating system should support the definition of a preferred application for the NFC interface. The consumer shall be able at any moment to change the preferred mobile payment application or to not define any preferred mobile payment application. In this case the choice of a mobile payment application will be made in accordance with the priority configured in the POI. If no such priority is configured, the consumer shall be requested to select the application to be used for the transaction among those supported by both the POI and its device.

6.8 Specific configurations for unattended POI

The unattended POIs are defined in the Book 1 of ECSG Volume ([6]) as POIs where "*The Cardholder is present and conducts the transaction at the Physical POI, without the participation of an attendant representing the Acceptor or the Acquirer (e.g., kiosks, vending machines, petrol*

pumps (UPT), etc.).". With the emergence of account-based payment solution at physical POI it is expected that the unattended POIs also accept SCT Inst based payment instruments in the future.

The main difference compared with other physical POIs is that the dialog between the consumer and an attendant (e.g. salesperson) is not possible. However unattended POIs may implement other forms of interaction with the consumer that simulate a physical, voice-based, dialog. Examples: advanced touchscreens that could reproduce the questions in written form and collect answers via the touch screen, or even synthetised voice or pre-recorded messages along with voice recognition techniques.

It is too early and difficult to describe specific requirements for this type of interactions but nevertheless the general requirements specified in section 5 also apply to unattended POIs.

Specific unattended POIs can be pre-configured for a limited range of products or services (e.g. petrol pumps, POIs for mass transit in public transportation, parkings) or pre-configured with a fixed amount if supported by the payment instrument (e.g. pre-authorised amount). These features are not considered limitations of the choice of payment instrument by the consumer if clearly indicated at the POI before the transaction.

The specific requirements that cover the choice of the payment instrument by the consumer at unattended POIs are:

R11 If an unattended POI supports only one type of technical interface (e.g. NFC contactless, chip with contact, etc.), payment instrument or brand, this limitation shall be clearly indicated. Unattended POIs are often installed in premises where fast payment experience is needed so that any unexpected waiting time due to incomplete information about supported interfaces, payment instruments or brands shall be avoided.

R12 Configuration of POI user-interface. It is expected that the first payment related interaction of the consumer with the POI is for selecting a payment instrument and brand. Therefore, the POI interface shall be clear and complete, for equally presenting the consumer all related choices. This may include merchant preferred payment instrument and brand, and an override option.

R13 If multiple languages are used in the POI location or if an internationally used language (e.g. English) is proposed in addition to the local language, the switch between languages shall be easy and available at any step of the interaction and shall not hinder the choice of the payment solution. Principles related to design for consumers with disabilities shall be considered.

R14 Configuration of merchant preferred payment instrument and brands. If the payee defines preferences (e.g., payment instrument SCT Inst or card, or brand) in the POI, these preferences shall enable as much as possible a final selection for a given interface. Example: if an NFC logo is displayed on the POI and the NFC interface is active, a single tap with a card or consumer device shall allow the selection of a payment solution (SCT Inst/card and a brand). Or if a merchant presented QR-code is displayed, reading it with a consumer device shall allow the initiation of a transaction without other interactions between the consumer and the POI. If the consumer device does not accept the POI

preferences, further actions should be available on the POI (e.g. button for choosing another brand or QR-code standard, etc.).

R15 It shall be easy for the consumer to understand what payment instrument and brand are proposed by default and it shall be easy to find other accepted payment instrument and brands through the POI interface. Example: a visible and easy to access button "*push here for other card brands or payment by SCT Inst*" shall be available.

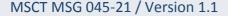## 7   Requirements for virtual POI

Virtual POIs, as defined in the Book 1 of the ECSG Volume ([6]) are POIs for card-based payment instruments relying on a web page (payment page) for entering card data and optionally as a support in the flow of cardholder authentication. By extension, it is assumed that Virtual POIs also support existing or upcoming SCT Inst based payment instruments for e-commerce and m-commerce.

Compared with physical POIs, from the point of view of the action of choosing a payment solution by the consumer, virtual POIs have the following specificities such as:

- There is no physical contact between the physical card or consumer device and the POI
- No dialog is possible between the consumer and the salesperson. Some e-commerce platforms propose consumer support during online purchases via phone calls or chat messages, but this does not change the way the consumer make their choices or the options they have for making selections.
- Technical interface (as a component of a *payment solution*) is irrelevant. Even if some solutions allow the use of a QR-code displayed on the payment page for easing the entering of card data, this part of the interaction does not change the payment flow, which remains essentially an e-commerce or m-commerce flow with card data being entered by an action of the consumer.
- The consumer is expected to choose a payment instrument and brand among those proposed by the POI. As stated in the art 8.6 of the IFR ([4]) with regard to card-based payment instruments and by extension to SCT Inst, the choice of payment instrument or brand shall not be limited. Merchants can configure a preferred payment instrument or brand, but they shall not prevent the consumer from overriding this preference.

Therefore, the requirements specific to virtual POIs will cover the configuration of the payment instruments and brands, the definition of merchant preferences, if any, and the configuration of the consumer device/environment.

7.1   Configuration of payment instruments and brands in virtual POIs

R16 Requirements **R1, R2, R3, R6, and R8** are also applicable to Virtual POIs.

R17 If the merchant makes use of components hosted and operated by third parties different from their PSPs or acquirers, such as payment gateways or providers of e-commerce platforms that operate payment pages, these third parties shall not implement additional restrictions to the choice of payment instrument by the consumer other than those accepted by the payee and their PSPs or acquirer for business or technical reasons.

R18 In addition to card-based or SCT Inst based payment instruments, the market offers solutions such as:
   - Payment by SDD
   - Payment by credit transfer (including SCT Inst, SCT or other non-SEPA credit transfers) after receipt of invoice
   - Payment by cash on delivery
   - Payment by e-money payment instruments

It is not the purpose of this document to describe how these payment instrument should be configured and how the consumer can choose them.
However, if they are proposed in the virtual POI, they shall not hinder the free choice of card-based or SCT Inst based payment instrument by the consumer.

7.2   Configuration of merchant preferred solutions in virtual POIs

R19 Between card-based and SCT Inst based payment instruments, or between multiple brands of the same payment instrument, the merchant can configure their own preferences. However, the consumer shall be always able to select alternative payment instruments or brands in an easy way (e.g. a button/link "click here for other brands", or "click here for a payment by SCT Inst". For technical reasons some brands or payment instruments may temporarily not be accepted. A clear message on the webpage or mobile application shall inform the consumer accordingly.

7.3   Configuration of the consumer device/environment

A consumer may configure and enrol their payment instruments and brands either within a physical device they own (smartphone, wearable, tablet, ...) or in virtual environments such as customer spaces of a merchant e-commerce website, or e-wallet platforms (e.g. card data are tokenised and stored, provided that the merchant platform is PCI DSS compliant). These environments may be combined, for example a subscription to an e-wallet platform may be used through a mobile application for m-commerce or in a web browser for e-commerce. More complex combined use cases exist such as merchant presented QR-code started on a web browser, taken-over on a mobile device (scanned) for authentication, and finalised in the web browser.

The following guidelines may be applicable for implementation of configuration functions in the consumer device/environment.

Guidelines for the configuration consumer environments for virtual POIs:

G16 E-commerce and m-commerce platforms. If a merchant accepts a payment instrument or brand in its virtual POI and if for using this payment instrument a configuration is needed in the consumer device/environment, the merchant e-commerce or m-commerce platform should allow the consumer to perform this configuration during the transaction or independently from any transaction. Example: if an e-commerce platform proposes payments using a stored payment card, it should allow consumers to store card data.

G17 Configuration of mobile payment applications for virtual POIs. For m-commerce (e-commerce merchant dedicated mobile applications) and in-app purchases, the payee may accept payment instruments that can be embedded within mobile payment applications on the consumer device. The requirement R9 applies also to these use-cases. In addition, the mobile payment application providers should allow consumer to define a preferred payment brand and payment instrument to be used for m-commerce or in-app purchases.

8   Summary of requirements and guidelines

Requirements	
General requirements for POIs	
GR1 Display the range of available payment solutions.	
GR2 Present all payment solutions in a clear and non-discriminatory manner if no preferred solution is defined.	
GR3 Allow the consumer to override the merchant preferred solution, if defined	
GR4 Allow the consumer to be in control of the payment solution, if technically possible	
GR5 Do not overrule the consumer's selection	
GR6 Inform consumer on their rights and conditions related to payee-initiated solutions	
Requirements for physical POIs	**Requirements for virtual POIs**
R1 Configure card-based payment instruments according to acquirer's guidance	**R16** Virtual POIs to comply with R1, R2, R3, R6 and R8
R2 Configure SCT Inst-based payment instruments according to MSCT provider's guidance	**R17** Third parties to not add restrictions to the consumer selection
R3 Propose in a non-discriminatory manner all SCT Inst and card-based payment instruments that are properly configured in the POI	**R18** Availability of other payment instruments shall not hinder card or SCT Inst selection
R4 Configure technical interfaces in a way to not discriminate against any payment instrument	**R19** Enable merchant preferences and overriding option in virtual POIs
R5 A technical interface shall not hinder the payment solutions using other interfaces.	

R6 Loyalty applications shall not impact the availability of payment instruments to the consumers.	
R7 E-receipts applications shall be used upon consumer consent and should not limit the choice of the payment instrument.	
R8 Configure co-badging (including with SCT Inst) in order to enable consumer selection	
R9 Mobile payment application needs to be available, including the option to define consumer preferences	
R10 Definition of preferences shall be possible for the NFC interface	
R11 Inform consumers about limitations on technical interfaces at unattended POIs	
R12 Equally present all payment related choices at unattended POIs.	
R13 Configure unattended POIs for optional languages and features for people with disabilities	
R14 Configure unattended POIs to enable as much as possible a final selection for a given interface	
R15 Clearly present the preferences and alternatives in unattended POI	

Guidelines	
Guidelines for physical POIs	**Guidelines for virtual POIs**
G1 Equally present all supported payment instruments if the merchant does not configure preferences at the POI	**G16** Consumer preferences should be defined in consumer device/environment
G2 Define a POI preferred payment instrument (SCT Inst or card) and brand in chip with contact interface in multiple modes	**G17** Mobile payment applications should also be enabled for use in m-commerce and in-app transactions (requirement R10 applies)
G3 Define preferred payment instrument (SCT Inst or card) and brand in NFC interface in multiple modes	
G4 Define preferences in merchant-presented QR-code interface in various modes	
G5 If no preference is defined, allow the selection of the QR-code by the consumer in various modes	
G6 Define preferences in consumer-presented QR-code interface in various modes	
G7 Oher contactless interfaces should follow the G3 guideline	
G8 The merchant-consumer dialog should be combined with selections on the POI	
G9 The dialog resulting in the use of non-electronic payment instruments should be possible without discrimination against electronic payment instruments	
G10 Overriding the POI preferences in chip with contact interface should be proposed in various modes	

G11 Overriding the POI preferences in NFC interface should be proposed in various modes	
G12 Overriding the POI preferences in QR-code interface (merchant presented) may be proposed in various modes	
G13 Overriding the POI preferences in QR-code interface (consumer presented) should be proposed in various modes	
G14 Overriding in contactless interfaces other than NFC should follow the G11 guideline	
G15 Fall-back mechanisms should be implemented to not impact customer selection	

Table 3: Summary of requirements and guidelines

9 Conclusion and recommendations

This document responds to a demand for developing *standards, business and technical requirements* (leading to interoperable specifications related to the selection of card or SCT Inst based payment instrument at POI). On the basis of the current level of maturity and availability of:

    A. Operational SCT Inst based solutions at POI: local solutions only, no pan-European at this stage

    B. Specifications and standards in the POI domain for SCT Inst: QR-codes being developed by MSCT MSG – (soon available), EMVCo – (currently not deployed in Europe but supporting other payment instruments than cards), other not yet existing but expected specifications: NFC for SCT Inst, POI-consumer interaction, POI – merchant environment integration, specifications for merchant to MSCT provider space – non exhaustive list,

- The JTF considers that the *business* requirements proposed in this document should be fulfilled by the specifications mentioned in the above point (B.), and the proposed *guidelines* may help the specifications providers to further address specific needs.
- The JTF also considers that *standards* and *technical* requirements cannot be produced at this stage, independently and for the strict scope of selection of payment instrument, but they can result from the work on developing general specifications (B.) as appropriate and fulfilling the recommended *business* requirements.

The JTF has within the given timeframe delivered the requested report. However, as mentioned above, further work on standards and technical requirements is needed. It is recommended that the further work be incorporated into the larger scope of POI related specifications. This may include the items (or parts of) mentioned at item (B.) above and should be addressed in conjunction or merged with the follow-up work on the ERPB Recommendation G (see [9], the ERPB document ERPB/2020/034).

10 Annex: organisations represented in the Joint Task Force

Nominated by MSCT MSG
DNB Bank - representing EPC - Co-Chairing the Joint Task Force
National Association of German Cooperative Banks - representing EPC
European Savings and Retail Banking Group (ESBG) - representing EPC
BEUC - The European Consumer Organisation
Visa
OpenWay
Monei
Ikea - representing EuroCommerce
Colruyt - representing EuroCommerce
Carrefour – representing EuroCommerce
Latvijas Banka
Tink - representing European Third Party Providers Association (ETPPA)
PPRO - representing European Third Party Providers Association (ETPPA)
Huawei
Nominated by ECSG
Circle K – representing ECSG Retailers sector - Co-Chairing the Joint Task Force
Ikea – representing EuroCommerce and ECSG Retailers sector
RedSys – representing the ECSG Processors sector
SIA - representing the ECSG Processors sector
Verifone – representing ECSG Vendors sector
Smart Payment Association – representing ECSG Vendors sector
Frenchsys – representing the ECSG Vendors sector
ING – representing EPC and ECSG PSPs sector
Crédit Agricole – representing EPC and ECSG PSPs sector
Natixis Payments – representing EPC and ECSG PSPs sector
Mastercard – representing the ECSG Card Schemes sector
Cartes Bancaires – representing ECSG Card Schemes sector
Bancomat – representing Card Schemes sector