Profitcard

13th July 2023

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APRIL 20, 2023

Ein Strauss Buntes – was sind neue Optionen im Payment

Basics:
Payment Status Quo und 3DS-Roadmap
- Umsätze sichern

Digital Receipts:
zur Steigerung Transparenz & als Kassenzettelersatz,
- weniger Reklamationen
- Umsätze sichern und
- zusätzliche Erträge generieren

Basics:
Empfehlungen zu 3DS
- Umsätze sichern

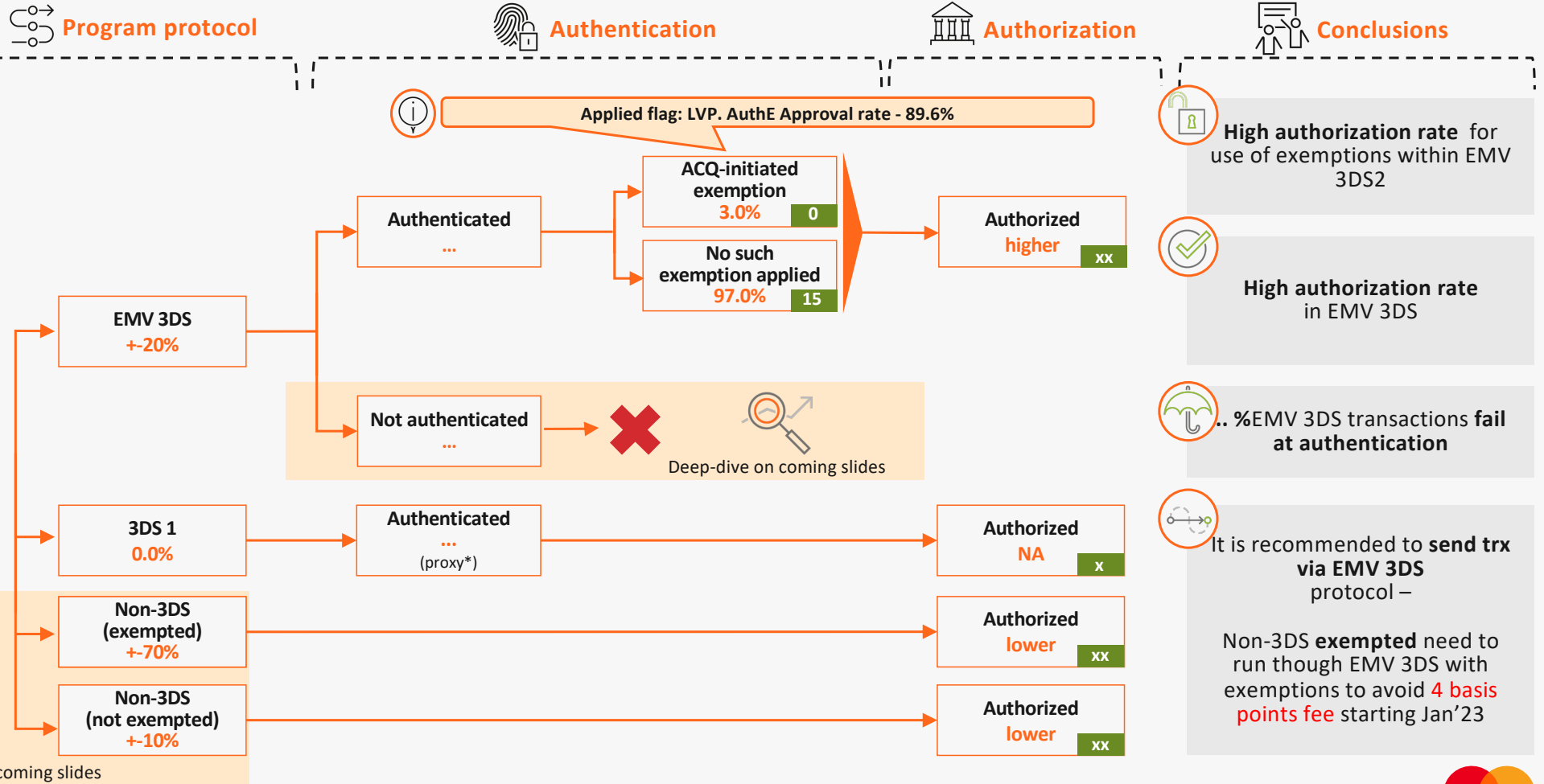**Alters- und Namensverifikation über 3DS:**
Non-payment und Payment
- Umsätze sichern und
- zusätzliche Erträge generieren

Payments
in Germany

Majority of traffic non-3DS (80%) with good performance with exemptions and 3DS with improvable authE rate – but good authO rate

Program protocol   **Authentication**   **Authorization**   **Conclusions**

Applied flag: LVP. AuthE Approval rate - 89.6%

ACQ-initiated exemption
3.0% `0`

No such exemption applied
97.0% `15`

Authorized higher `xx`

Authenticated ...

EMV 3DS +-20%

Not authenticated ... ✖ Deep-dive on coming slides

High authorization rate for use of exemptions within EMV 3DS2

High authorization rate in EMV 3DS

.. %EMV 3DS transactions **fail at authentication**

100

🇩🇪

All CNP eCom TRX

3DS 1 0.0%

Authenticated ... (proxy*)

Authorized NA `x`

Non-3DS (exempted) +-70%

Authorized lower `xx`

Non-3DS (not exempted) +-10%

Authorized lower `xx`

Deep-dive on coming slides

It is recommended to **send trx via EMV 3DS** protocol –

Non-3DS **exempted** need to run though EMV 3DS with exemptions to avoid 4 basis points fee starting Jan'23

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100 = # of trx reaching this state of initially 100 trx (rounded). E.g.: Out of 100 trx, 3 fails the authentication in EMV 3DS
* = calculated fixed proxy

Period investigated: 03.01.2023 – 03.31.2023
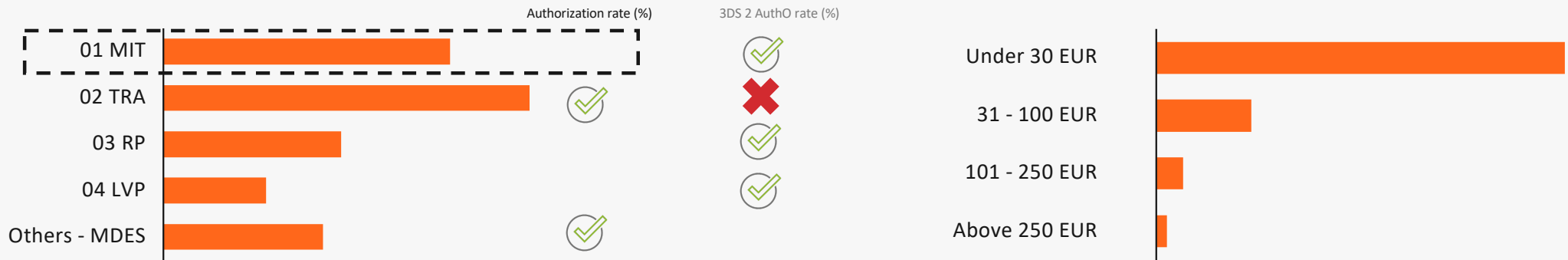Filtering criteria: trx with issuer = Germany

Use of MIT, RP and LVP exemptions within EMV 3DS2 have higher authorization rates as compared to direct to AuthO; however TRA performs worse in EMV 3DS2
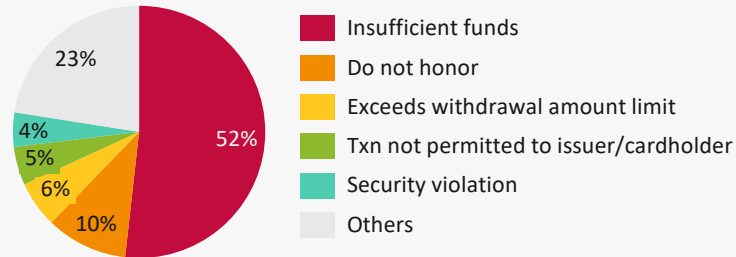
1 **Use of exemption flags**

# of transactions by amount category (non-3DS exempted)

■ # of transactions

Authorization rate (%)   3DS 2 AuthO rate (%)

Category		Amount category	
01 MIT	✓ ✓	Under 30 EUR	
02 TRA	✓ ✗	31 - 100 EUR	
03 RP	✓	101 - 250 EUR	
04 LVP	✓	Above 250 EUR	
Others - MDES	✓		

2 **Decline reasons for non-3DS exempted transactions**

Share of unsuccessful non-3DS exempted trx by decline reason (%)

- 52% Insufficient funds
- 10% Do not honor
- 6% Exceeds withdrawal amount limit
- 5% Txn not permitted to issuer/cardholder
- 4% Security violation
- 23% Others

ⓘ **Assess feasability of implementing BNPL solutions in the long term to reduce decline due to "Insufficient funds"**

Period investigated: 03.01.2023 – 03.31.2023
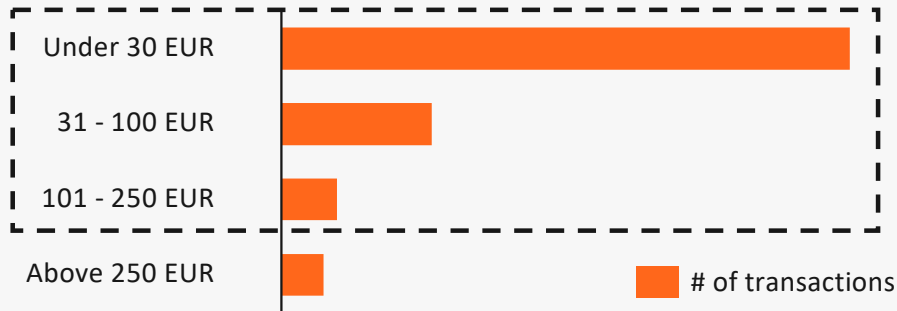Filtering criteria: trx with issuer = Germany

Acquirers within Germany should send non-3DS non-exempted flag trx via EMV 3DS to avoid soft declines and use of TRA exemption for txns under 250 EUR is possible
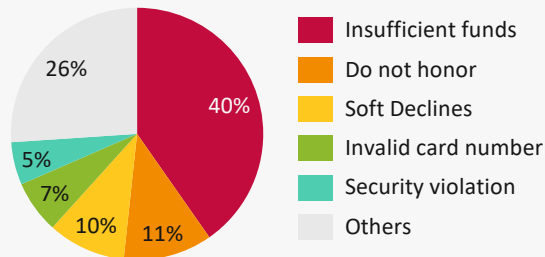
1   **Using exemption flags**

# of transactions by amount category (non-3DS non-exempted)

Under 30 EUR

31 - 100 EUR

101 - 250 EUR

Above 250 EUR

■ # of transactions

Flag transactions under 250 EUR with TRA / LVP exemption to be compliant with PSD2 regulations and become non-3DS exempted

2   **Decline reasons for non-3DS non-exempted transactions**

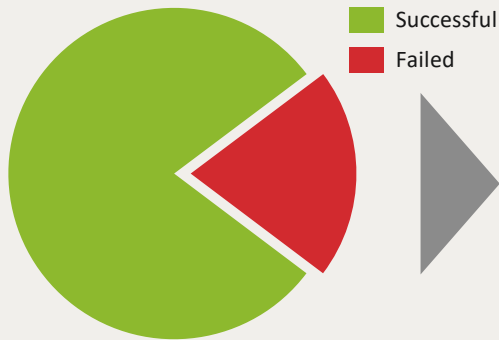**Share of unsuccessful non-3DS non-exempted trx by decline reason (%)**

- Insufficient funds — 40%
- Do not honor — 11%
- Soft Declines — 10%
- Invalid card number — 7%
- Security violation — 5%
- Others — 26%

Assess feasability of implementing BNPL solutions in the long term to reduce decline due to "Insufficient funds"

Period investigated: 03.01.2023 – 03.31.2023
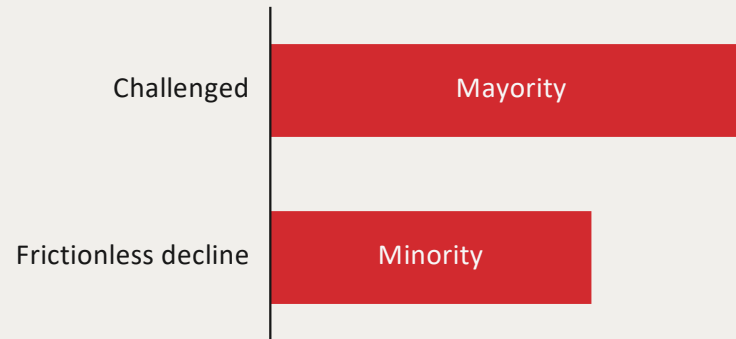Filtering criteria: trx with issuer = Germany

A large portion of EMV 3DS authentication failures could be completed with TRA exemption, but only in case fraud rates allow it

1 Authentication status
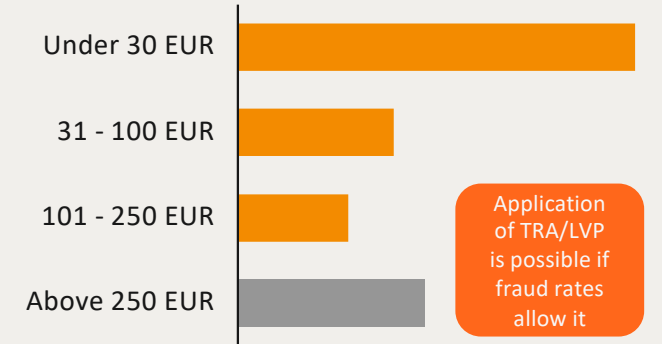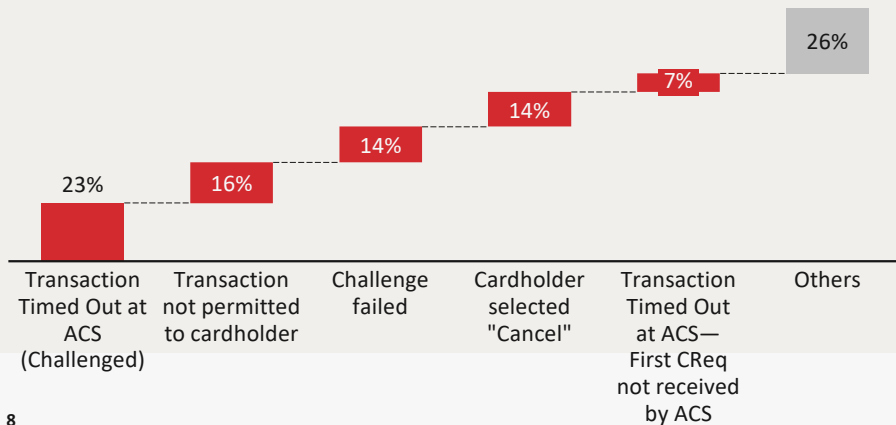
- Successful
- Failed

2 Share of failed trx by mode of decline (%)

Challenged — Mayority

Frictionless decline — Minority

3 Ticket sizes for failed trx (# of trx)

- Under 30 EUR
- 31 - 100 EUR
- 101 - 250 EUR
- Above 250 EUR

Application of TRA/LVP is possible if fraud rates allow it

4 Share of failed trx by decline reason (%)

- Transaction Timed Out at ACS (Challenged): 23%
- Transaction not permitted to cardholder: 16%
- Challenge failed: 14%
- Cardholder selected "Cancel": 14%
- Transaction Timed Out at ACS— First CReq not received by ACS: 7%
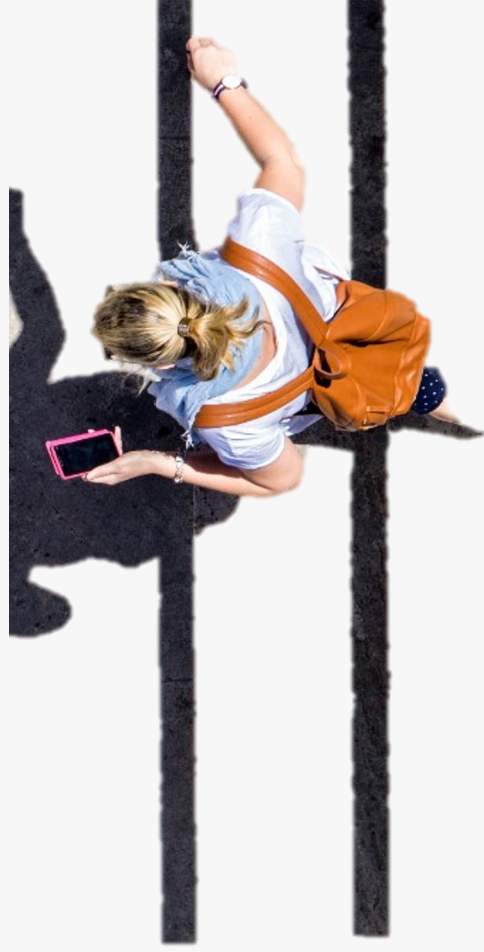- Others: 26%

5 Key insights

Apply TRA / LVP exemption for trx below 250 EUR to complete them without challenge

Consider the use of exemptions or encouraging MDES payments to improve customer experience (in terms of challenges)
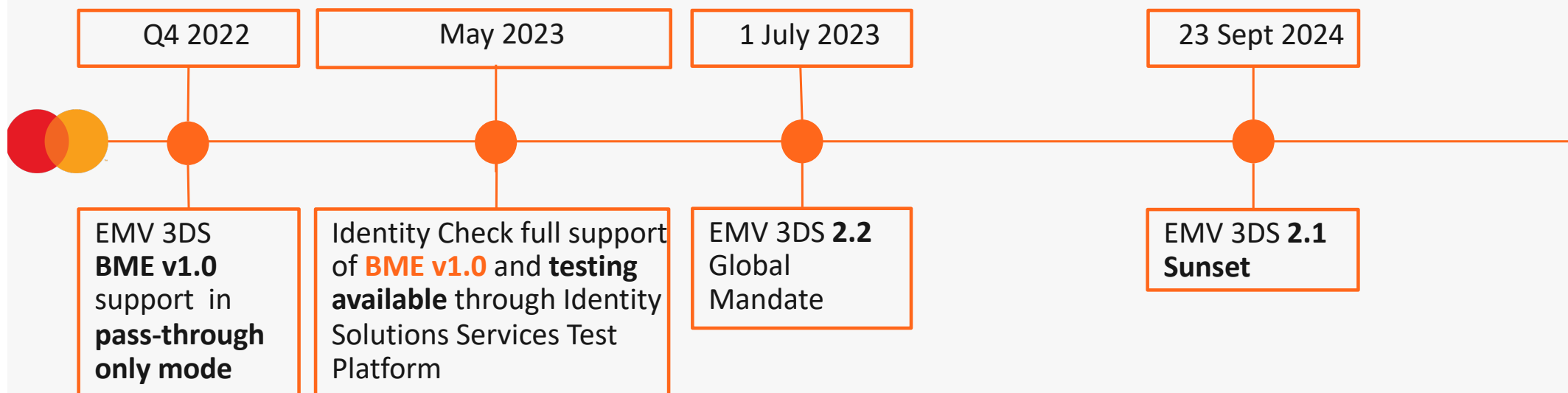
Period investigated: 03.01.2023 – 03.31.2023
Filtering criteria: trx with issuer = Germany

EMV 3DS Roadmap

EMV 3DS Version Evolution – Mastercard Roadmap

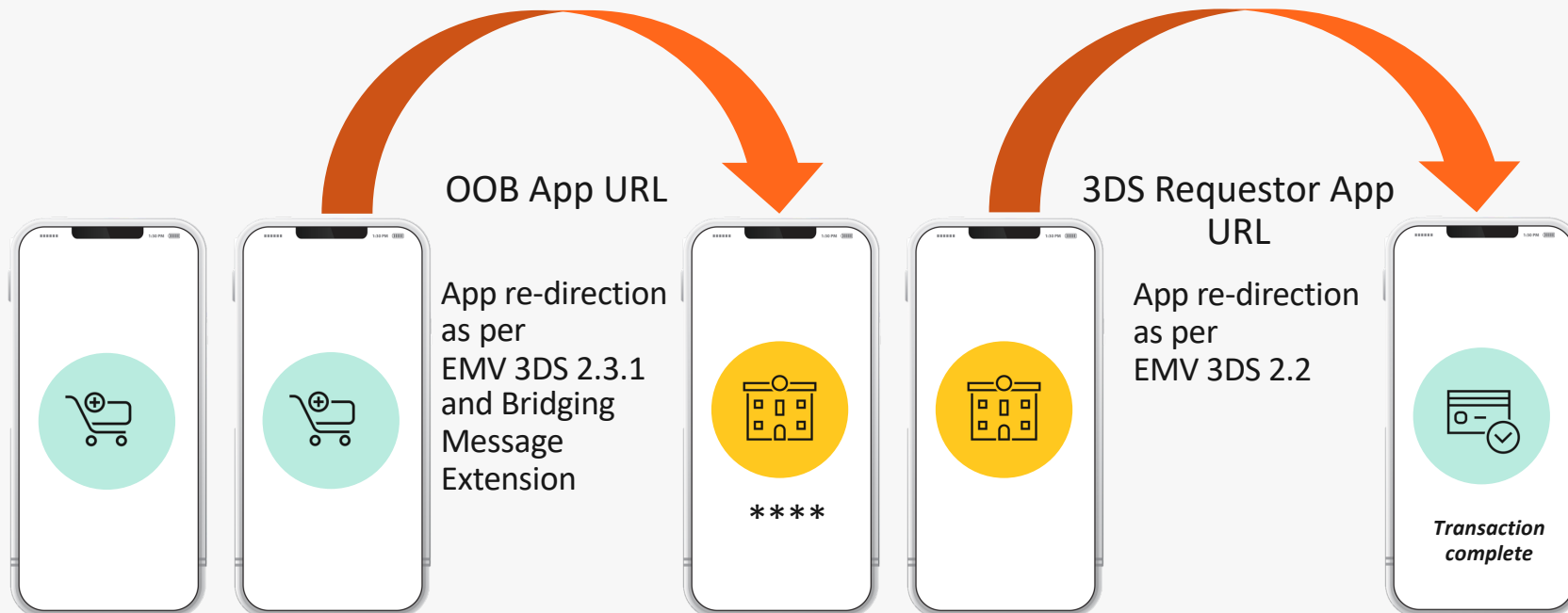Mastercard Identity Check Program integration and support of EMV 3DS Versions

Q4 2022	May 2023	1 July 2023	23 Sept 2024
EMV 3DS **BME v1.0** support in **pass-through only mode**	Identity Check full support of **BME v1.0** and **testing available** through Identity Solutions Services Test Platform	EMV 3DS **2.2** Global Mandate	EMV 3DS **2.1** **Sunset**

ID Check Roadmap - In-app automated re-direction feature focus

Initially and partially introduced with EMV 3DS 2.2, automated in-app re-direction is the only required feature from the Bridging Message Extension

Merchant App

Authentication App

OOB App URL

App re-direction as per EMV 3DS 2.3.1 and Bridging Message Extension

****

3DS Requestor App URL

App re-direction as per EMV 3DS 2.2

Transaction complete

Automated re-direction replaces the manual cardholder touch/friction points during the in-app checkout challenge process that currently causes a poorer app vs. browser performance

ID Check Roadmap – Improving EMV 3DS Data Quality is critical

Case Study: ***better data quality*** *of* ***one data point*** *led to a* ***decrease in step-ups***

Results: Authentication Success uplift from three 3DS servers

22%   **33%**   **57%**

- **Insufficient data/data quality** sent by merchants via 3DS prevents:

  - a **thorough risk assessment** leading to **unnecessary step-ups** in authentication

  - **authentication data from being used in authorisation**, leading to **lower conversion**

- **Fill all data fields** with **correct values** to **optimize conversion** and **reduce fraud**

  - IP address, Cardholder e-mail address, Name, Billing & Shipping Address and Mobile Phone number

  - Detailed use of **challenge indicator** by acquirer to indicate risk to issuer (use all values!)

Identity Check (3DS) - best practices for issuers "on one slide"

Consumer Experience

- Clarity of 3DS screen displayed on merchant side:
  - Remove "continue" button or warn consumer against „unconscious" usage before authentication
  - Include information in mobile flow with instruction in case „push notification" is being used

- Promote smart phone authentication (preferably with biometrics) – use the same authE-method as Online Banking

- For non-mobile authentication, reuse existing factors – no dedicated password/pin which requires dedicated setting and remembering (e.g. use login to e-banking, SMS OTP + biometry)

- Auto-enroll consumers to best possible authentication method (preferably same authentication as in online-banking)

Cooperation with acceptance partners

- Direct communication and problem solving (with acquirer / 3DS Server provider)

- In-app flow automatic redirection between merchant app and mobile banking (to be done in 2023)

Frictionless

- Recognize and accept (not challenge automatically) acquirer exemptions (LV, TRA, MIT, PP, DelAuth) in authentication and authorization
  - Use "Soft Decline" in authorization if exemptions cannot be accepted – but utilize own issuer TRA if possible

- Apply issuer exemptions (LV and TRA) in authentication and authorization

- Use Mastercard Smart Authentication for Issuers (SAI) and Data Transaction Insights (DTI) as one of security parameters in decision about exemption

Core functionalities

- Monitor quality of integration between host, ACS and mobile banking (availability, timeouts, etc.) – remove dependencies

- Properly handle key renewal process

- Properly flag authentication channel in 3DS messages to enable quality monitoring per channel

- Approve (do not decline systematically) Standin authentications
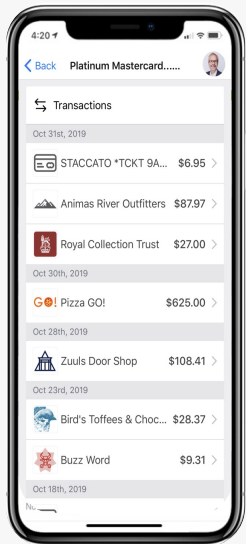
Digital Receipts

April 20, 2023

PHASED APPROACH: FROM ENRICHED TRANSACTIONS TO DIGITAL ENGAGEMENT
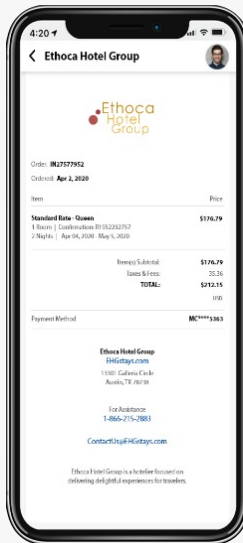One API - over time additional value-added services

Clean merchant name

Merchant Logo

Enriched Transactions

DRIVE BROAD ADOPTION OF ENRICHED TRANSACTIONS

Itemised Receipt to increase transparency

Targeted Contact Details / Messaging

Shopping line items

**SHOPPING LINE ITEMS
(non-compliant to German law)**
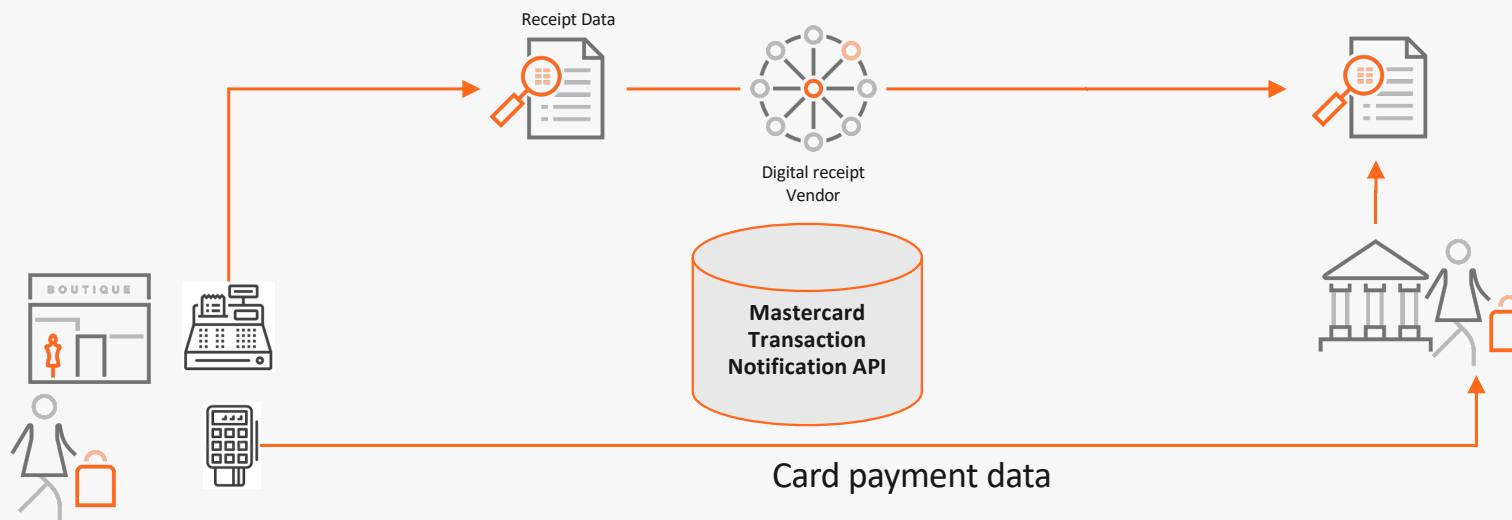
SUBSCRIPTION MANAGEMENT

CARBON CALCULATOR

CARD ON FILE MANAGEMENT

DIGITAL ENGAGEMENT

DIGITAL RECEIPT PILOT: IDEA IS TO BRING THE LAW-COMPLIANT DIGITAL RECEIPT OF CREDIT CARD PAYMENTS INTO THE ISSUER'S ONLINE BANKING

Receipt Data

Digital receipt Vendor

Mastercard Transaction Notification API

Card payment data

- **Idea of Pilot with issuer, DR Vendor and merchants to provide DR into the online banking**

  - Compliant to "Digitaler Kassenbon" and "Kassenzettel-Verordnung"

  - **Use of Transaction Notification API**

Age & Name-Verification

Age Verification – market need

Business opportunity and
Regulatory Pressure

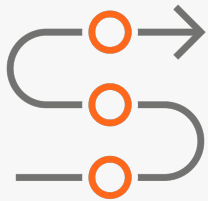Existing Payment +

Addt'l Non-Payment

The lack of online solutions prevent any soft/hard enforcement of existing regulations.

- **Gambling.** Strict regulation already existing around age verification. Most online solutions use self-ack for access. Payment of gains require id verification. See Gaming below.

- **Restricted goods.** This includes Alcohol, Tobacco, Drugs. Existing regulation but not enforced. Solutions in place use self-ack.

- **Adult content.** Existing regulation but not hardly enforced. Solutions in place use self-ack.

- **Mobility.** No regulation in place. Some business sectors (e.g. insurance) already perform age verification in CP environment.

- **Social networks ang Gaming (eSports).** Promising short term 'future scenario'.

Gambling	Adult Content	Cigarettes	Alcohol
Online gaming websites work under stringent regulation and are required to keep minors away.	Preventing minors from gaining access to adult websites is becoming a requirement around the world.	Many jurisdictions place a high priority in ensuring that minors do not have access to tobacco products.	Online stores selling alcohol need to verify shoppers' ages. The legal drinking age varies from 18-21 in most countries.

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Age Verification using EMV 3DS – early stage

In Evaluation

- Evaluation of the EMV 3DS protocol to include **"Message Extension"** which stores the age / name

- **proof of concept:** implement such data and flows to show feasibility

- Looking for participants

MARCH 23, 2023