



Cherri

Cherri - 3D Secure 2.0 Solution.

Secure Merchant Conversion Rate and Online Transaction.



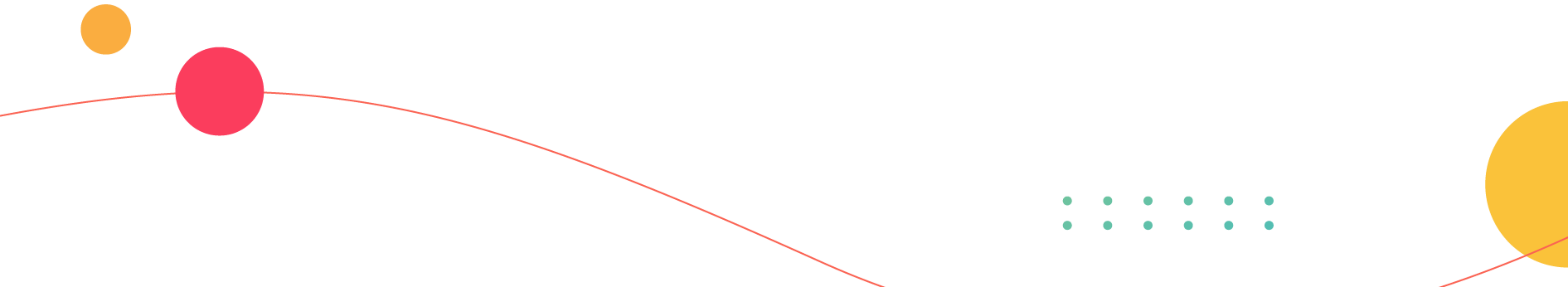
1 - About Cherri

2 - Cherri 3DS 2.0 ACS Solution

3 - Cherri 3DS 2.0 Server(MPI) Solution

Cherri

1 - About Cherri



1.1 - Briefing

Ranked #63

KPMG Global 100 FinTech Company

DID Partner

of Visa & MasterCard

9 Countries

Mainly in Asia

500 + Clients

Digital ID & Anti-fraud Detection

> 5 Years

Research and development

Core Value

Reliable Risk Management Partner

1.2 - Core Culture at Cherri



Experience

Open-minded

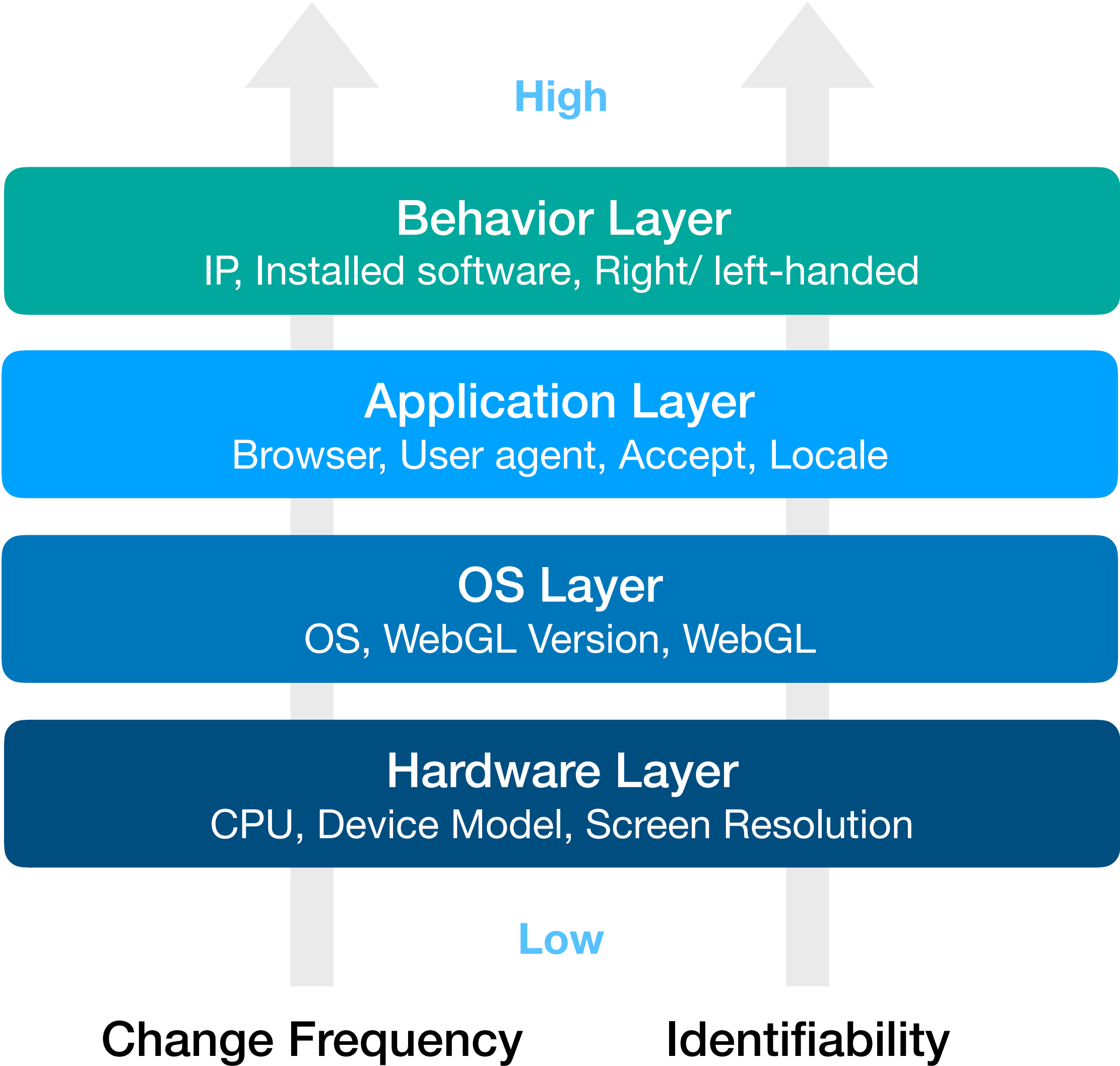
Reliability

1.3 - Core Technology at Cherri

Cherri offers the most promising **device-centric** risk engine for card issuers.



1.4 - Core Technology at Cherri: Four Layer of Device Data



1.5 - Our 500+ Clients

— Merchants —



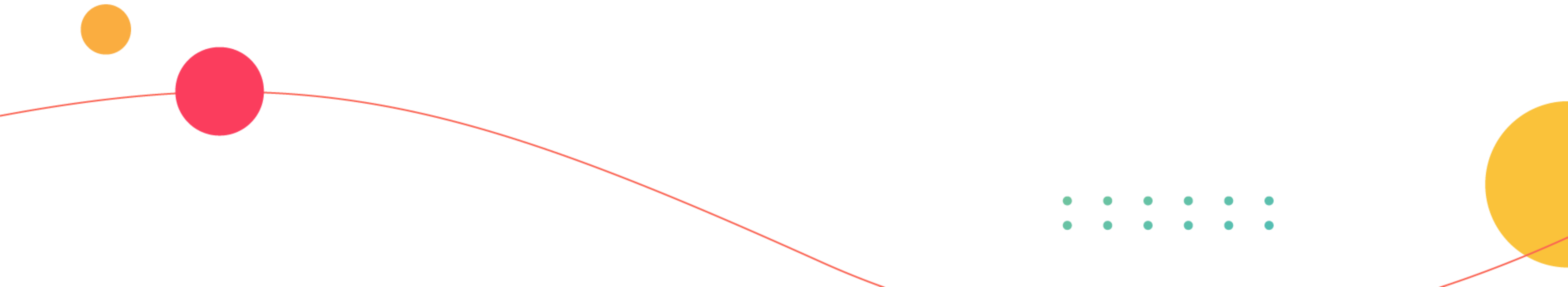
— Banks —



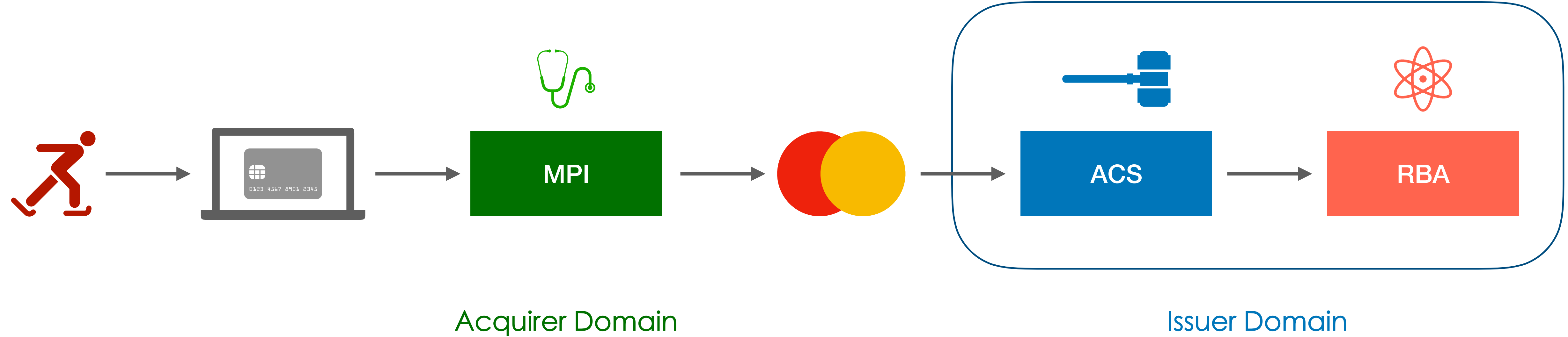
— Card Schemes —



2 - Cherri 3DS 2.0 ACS Solution



2.1 - What is 3D Secure?




2.2 - EMV Certified

Cherri 3DS

EMVCo Certified

Date: September 26, 2018



Steven Chuang
Cherri Tech, Inc.
6F, 106 Xinyi Road, Section 3, Daan District
Taipei 106
TAIWAN, PROVINCE OF CHINA

Re: EMVCo Letter of Approval – EMV 3-D Secure Product

Approval / Reference Number: 3DS_LOA_ACS_CHTI_020100_00043
Approval Date: September 26, 2018
Approval Expiration Date: September 25, 2020

Product Provider Name: Cherri Tech, Inc.
Registration Number: CHTI.V 18 0036
Access Control Server Name: Cherri 3DS ACS
Access Control Server Version: 2.0.1
Operating System Version: Ubuntu 16.04.4 LTS
Implementation Conformance Statement: 3DS_ICA_ACS_CHTI_020100_00043
EMV 3-D Secure Specification: Version 2.1.0

EMV 3-D Secure Specification Bulletins: 204 V3
3-D Secure Test Plan Name: EMV® 3-D Secure 2.1.0 Test Plan
3-D Secure Test Plan Version: 2.1.0.12.1


3-D Secure Test Plan Bulletin(s): N/A

EMVCo LLC, 900 Metro Center Blvd, Foster City, CA 94404 USA
V180807 / 3DS_LOA_ACS_CHTI_020100_00043

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26 September 2018

Date: September 26, 2018



Steven Chuang
Cherri Tech, Inc.
6F, 106 Xinyi Road, Section 3, Daan District
Taipei 106
TAIWAN, PROVINCE OF CHINA

Re: EMVCo Letter of Approval – EMV 3-D Secure Product

Approval / Reference Number: 3DS_LOA_SER_CHTI_020100_00042
Approval Date: September 26, 2018
Approval Expiration Date: September 25, 2020

Product Provider Name: Cherri Tech, Inc.
Registration Number: CHTI.V 18 0036
3DS Server Name: Cherri 3DS Server
3DS Server Version: 2.0.1
Operating System Version: Ubuntu 16.04.4 LTS
Implementation Conformance Statement: 3DS_ICA_SER_CHTI_020100_00042
EMV 3-D Secure Specification: Version 2.1.0

EMV 3-D Secure Specification Bulletins: 204 V3
3-D Secure Test Plan Name: EMV® 3-D Secure 2.1.0 Test Plan
3-D Secure Test Plan Version: 2.1.0.13.0


3-D Secure Test Plan Bulletin(s): N/A

EMVCo LLC, 900 Metro Center Blvd, Foster City, CA 94404 USA
V180807 / 3DS_LOA_SER_CHTI_020100_00042

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26 September 2018

Visa Certified



05/13/2019
Paul Tsai
No.69, Sec. 2, Nanjing E. Rd., Zhongshan Dist.
Taipei, Taipei 104
Taiwan

RE: Visa's 3-D Secure 2.0 Testing Suite(V3DSTS) Approval ID: 3DS2.0Che227ACS

Dear Paul Tsai,

We are pleased to notify you that Visa has approved the 3-D Secure 2.0 product identified by the above Visa Reference Number ("the Product") for inclusion in Visa's Approved 3-D Secure 2.0 product list, subject to the conditions set forth herein.

When granted, Visa testing and approval helps to ensure that certain security and operational characteristics important to Visa's 3-D Secure 2.0 program are met, but Visa approval does not under any circumstances include any endorsement, guarantee or warranty regarding the functionality, quality, security or performance of any particular product. Visa does not warrant any products or services provided by third parties. Visa approval does not under any circumstances include or imply any product warranties from Visa, including without limitation any implied warranties or merchantability, fitness for purpose, or non-infringement, all of which Visa expressly disclaims.

Specifically, Visa has approved the following product type:

3-D Secure 2.0 Component

Manufacturer:	Cherri Tech, Inc.
Product Name:	Cherri 3DS ACS
Product Version:	2.0.1
Product Type:	ACS
3-D Secure 2.0 Compliant Version:	3DS 2.1.0
ACS Reference #:	3DS_LOA_ACS_CHTI_020100_00043
Visa Approval Date (valid for 2 years from this date):	05/13/2019



Visa Inc.
P.O. Box 8999
San Francisco, CA 94128-8999
U.S.A

April 16, 2019

Steven Chuang
Cherri Tech, Inc.
7F, No. 69 Nanjing East Road, .
Taipei, Taiwan 10457

RE: Visa Reference Number: 3DCHE455

Dear Steven,

We are pleased to advise you that the 3-D Secure product identified by the above Visa Reference Number ("the Product") has successfully completed all necessary requirements of the 3-D Secure Vendor Compliance Testing Program and is in compliance with 3-D Secure Protocol Version 1.0.2 for the product listed below.

When granted, this compliance letter does not under any circumstances include any endorsement, guarantee or warranty regarding the functionality, quality, security or performance of any particular product or service. Visa does not warrant any products or services provided by third parties. This compliance letter does not under any circumstances include or imply any product warranties from Visa, including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by Visa.

Product Description


Product Name: ACS
Product Version: Cheri 3DS ACS V.2.2.0
3-D Secure Compliance Version: 1.0.2

Product Conditions

Visa performs limited testing to ascertain a Product's compliance with any required specifications. Visa's limited testing program is not designed to establish the functionality of your compliant Product in all potential conditions in which it may be used. This letter of compliance does not in any circumstances include or imply any guarantees, assurances or

Visa Confidential

1



06/07/2019
Paul Tsai
No.69, Sec. 2, Nanjing E. Rd., Zhongshan Dist.
Taipei, Taipei 104
Taiwan

RE: Visa's 3-D Secure 2.0 Testing Suite(V3DSTS) Approval ID: 3DS2.0Che3093DSS

Dear Paul Tsai,

We are pleased to notify you that Visa has approved the 3-D Secure 2.0 product identified by the above Visa Reference Number ("the Product") for inclusion in Visa's Approved 3-D Secure 2.0 product list, subject to the conditions set forth herein.

When granted, Visa testing and approval helps to ensure that certain security and operational characteristics important to Visa's 3-D Secure 2.0 program are met, but Visa approval does not under any circumstances include any endorsement, guarantee or warranty regarding the functionality, quality, security or performance of any particular product. Visa does not warrant any products or services provided by third parties. Visa approval does not under any circumstances include or imply any product warranties from Visa, including without limitation any implied warranties or merchantability, fitness for purpose, or non-infringement, all of which Visa expressly disclaims.

Specifically, Visa has approved the following product type:

3-D Secure 2.0 Component

Manufacturer:	Cherri Tech, Inc.
Product Name:	Cherri 3DS Server
Product Version:	2.0.1
Product Type:	3DSS
3-D Secure 2.0 Compliant Version:	3DS 2.1.0
3DSS Reference #:	3DS_LOA_SER_CHTI_020100_00042
Visa Approval Date (valid for 2 years from this date):	06/07/2019

2.3 - Greatly optimized UX - Web Transaction

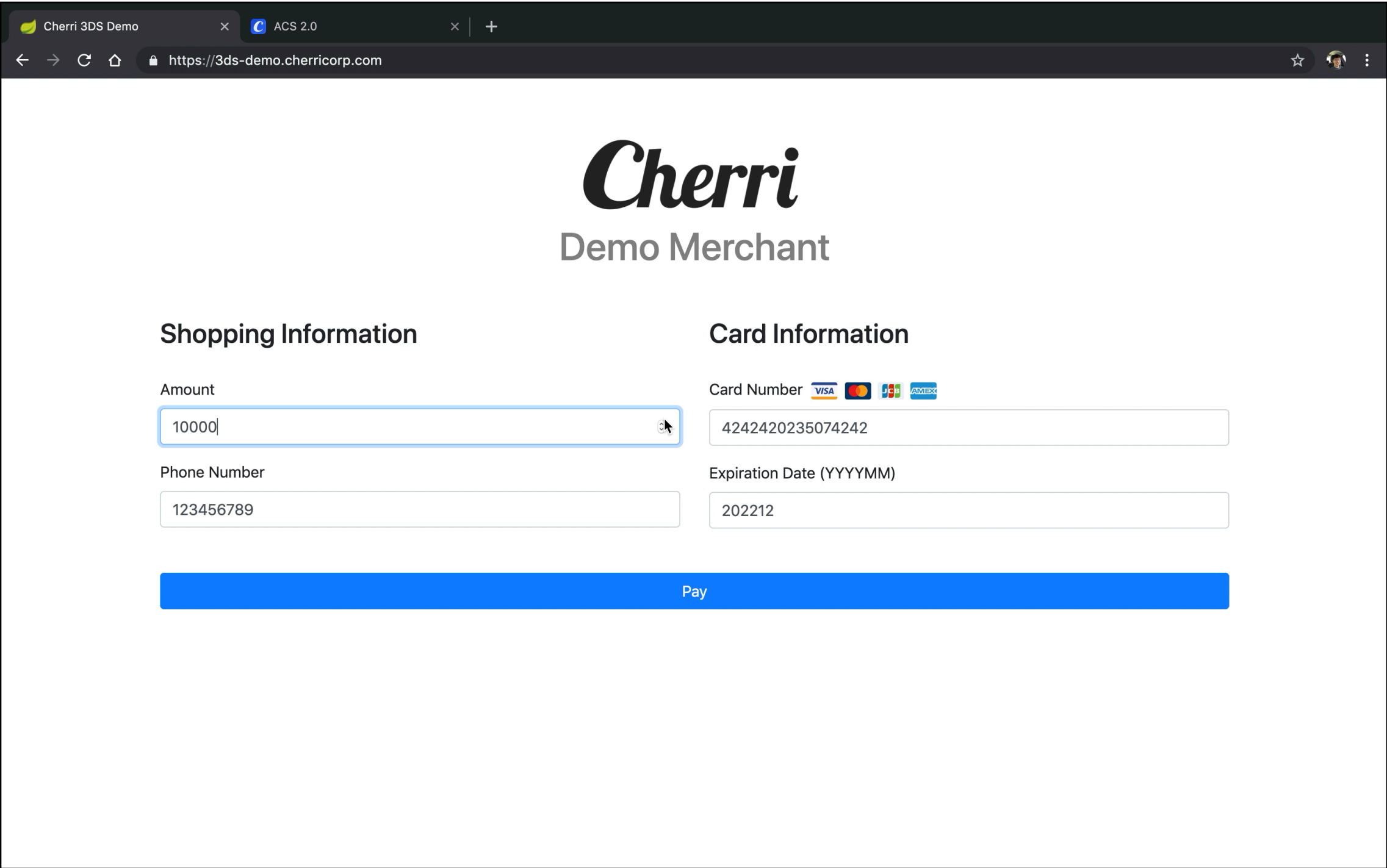
Evolution to Web-based Authentication

- 1. No redirection in OTP, eliminate drop-offs
- 2. Clarity UI for better UX
- 3. Auto-fit display



3DS 1.0

—V.S—



3DS 2.0

2.4 - Greatly optimized UX - Web Transaction

Evolution to Web-based Authentication

- 1. No redirection in OTP, eliminating the need for a second browser window
- 2. Clarity UI for better UX
- 3. Auto-fit display



3DS 1.0

Cherri 3DS Demo

ACS 2.0

https://3ds-demo.cherricorp.com

Cherri

Demo Merchant

Shopping Information

Amount

10000

Phone Number

123456789

Card Information

Card Number

4242420235074242

Expiration Date (YYYYMM)

202212

Pay

— V.S —

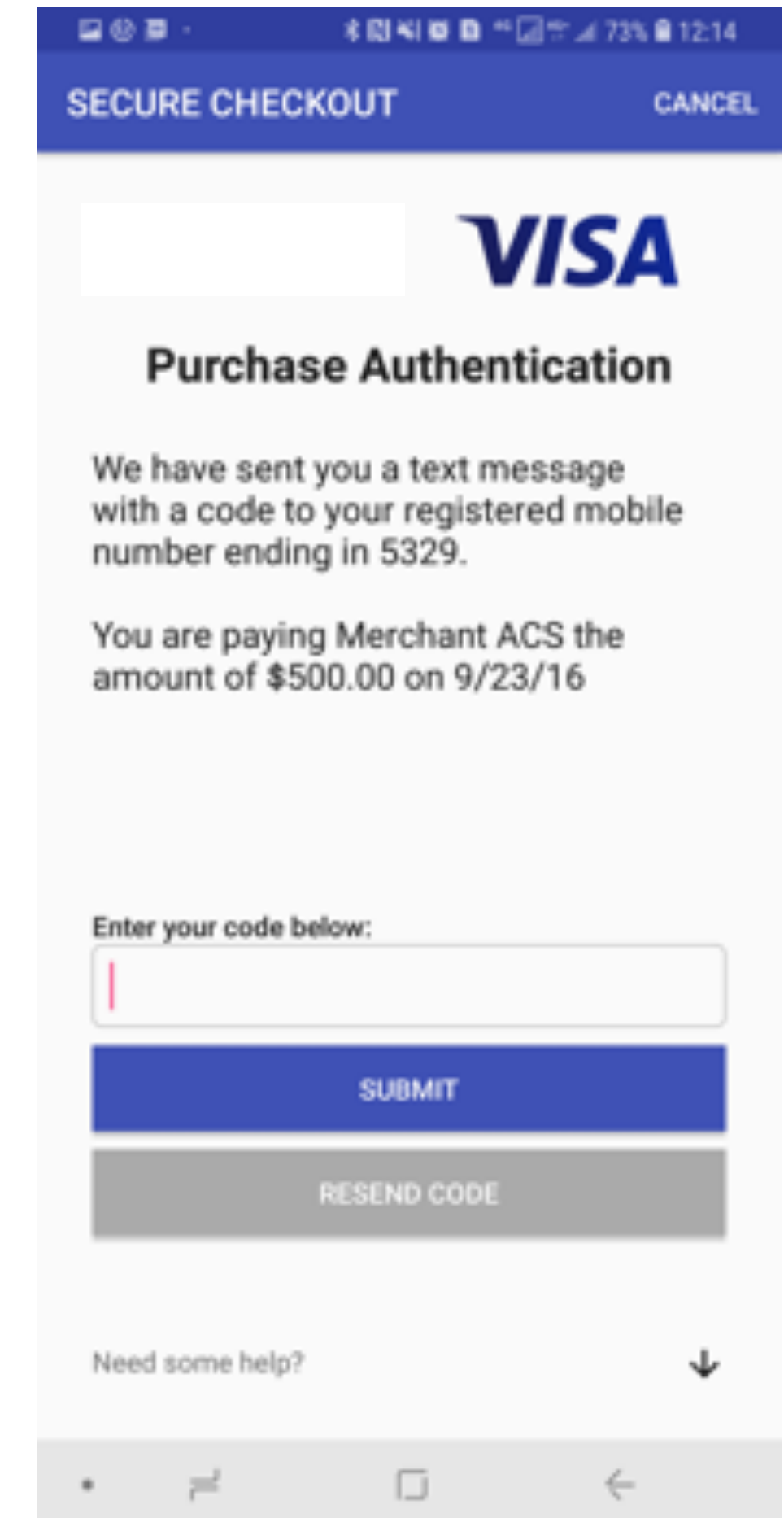
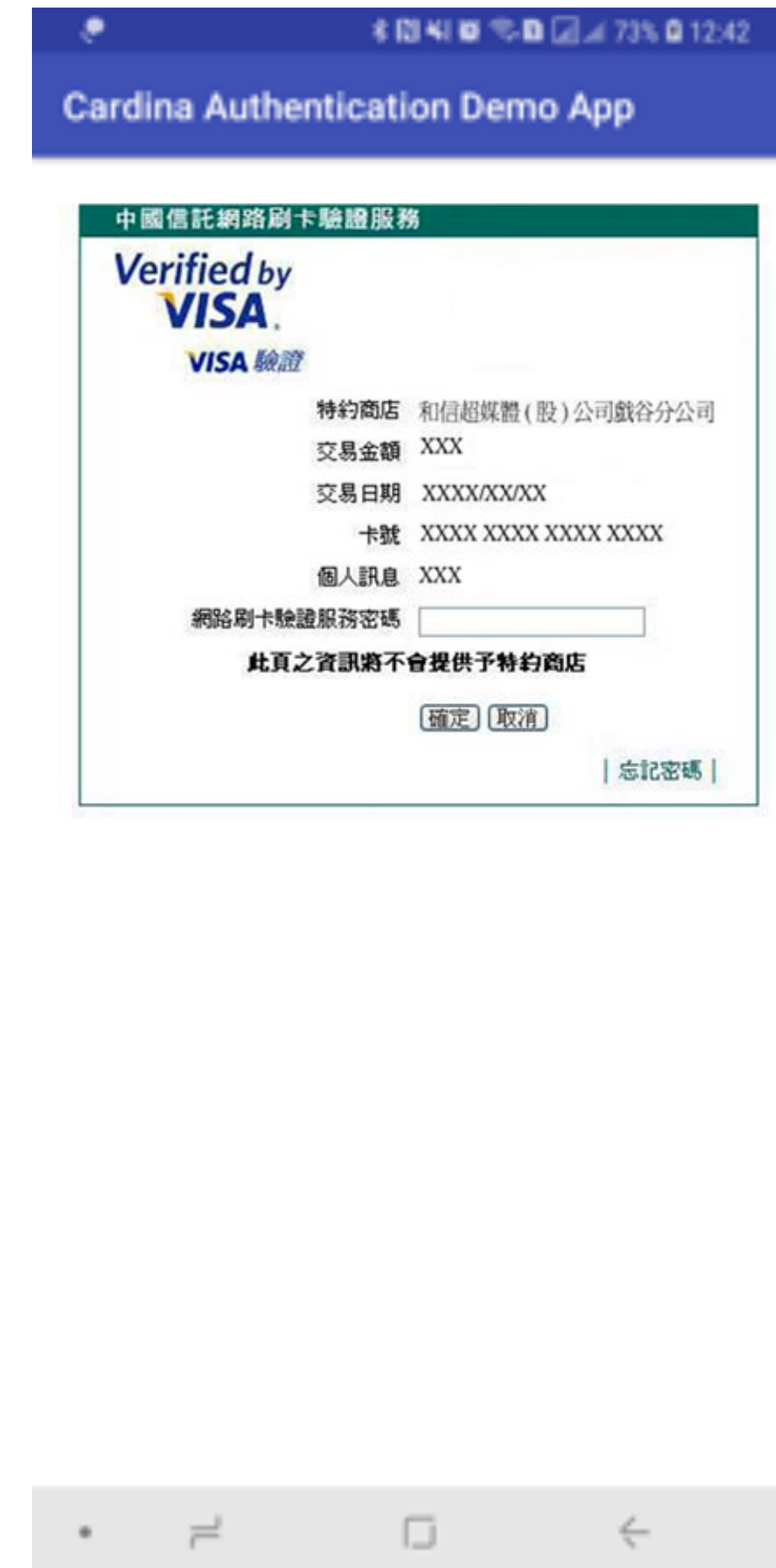
3DS 2.0

2.5 - Greatly optimized UX - In App Transaction

Cherri 3DS

Evolution to App-based Authentication

1. No redirection in OTP, eliminate drop-offs
2. Mobile-friendly input field
3. Auto-fit display



3DS 1.0

—v.s—

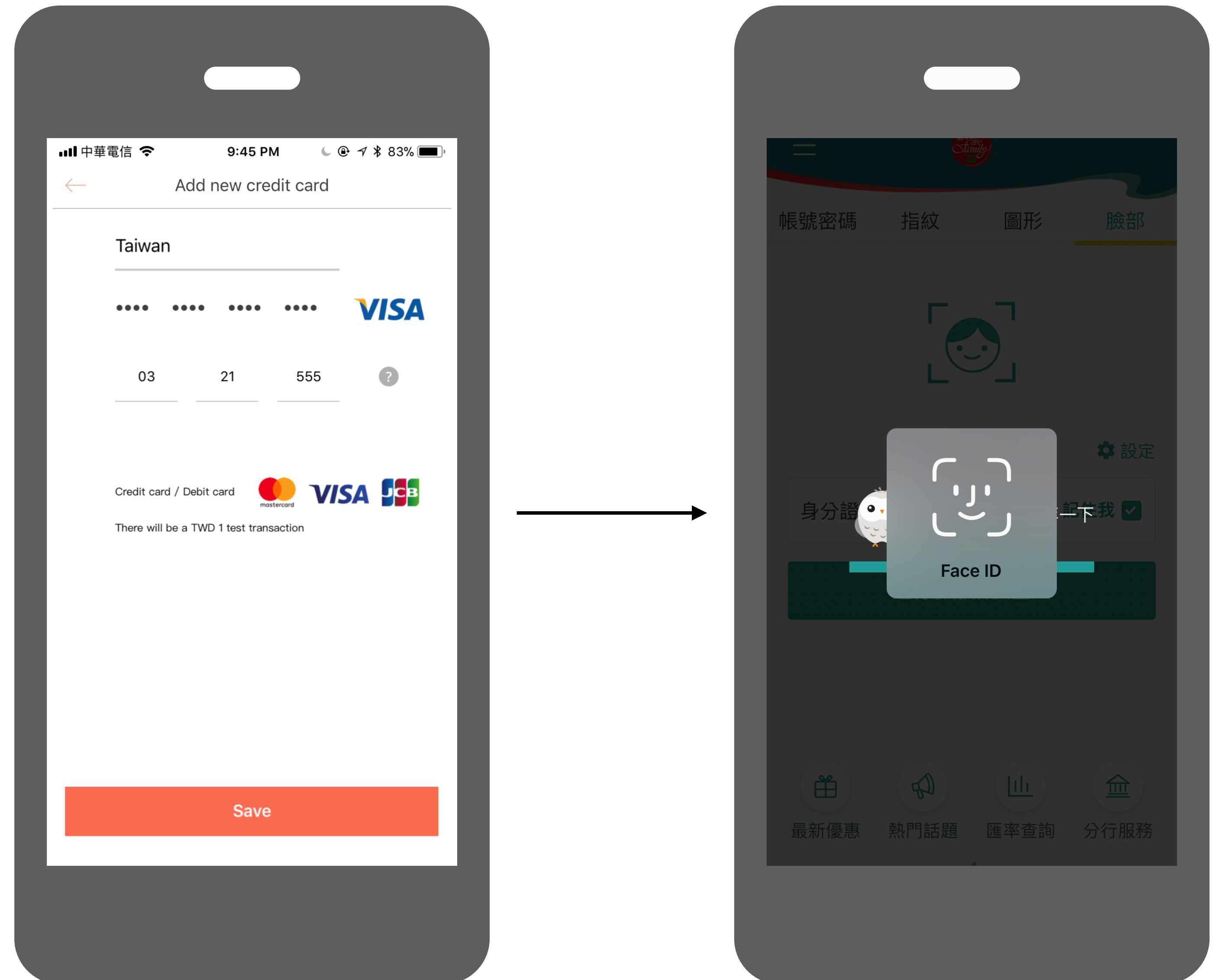
3DS 2.0

2.6 - Issuer Banking APP Biometric Authentication

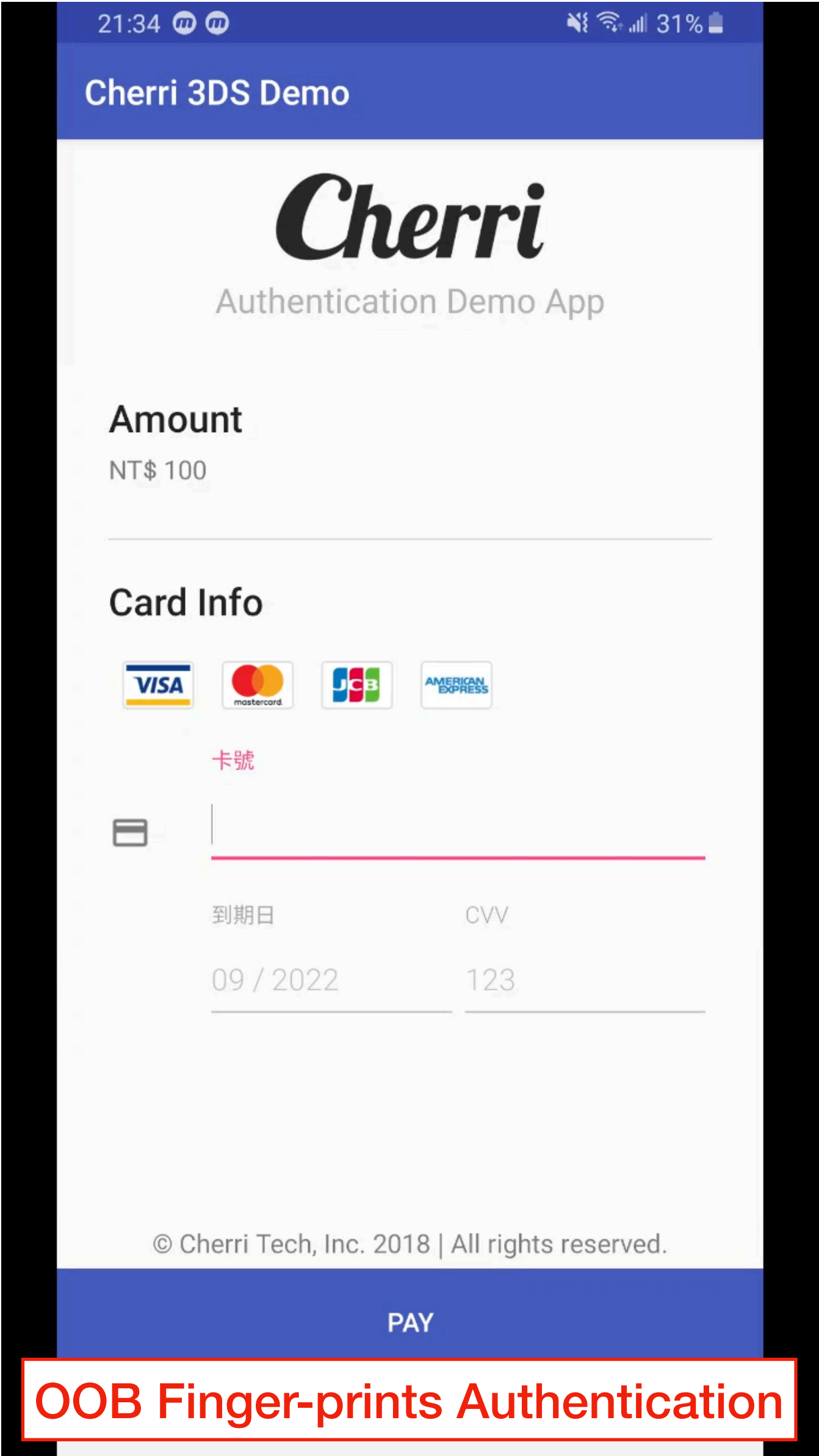
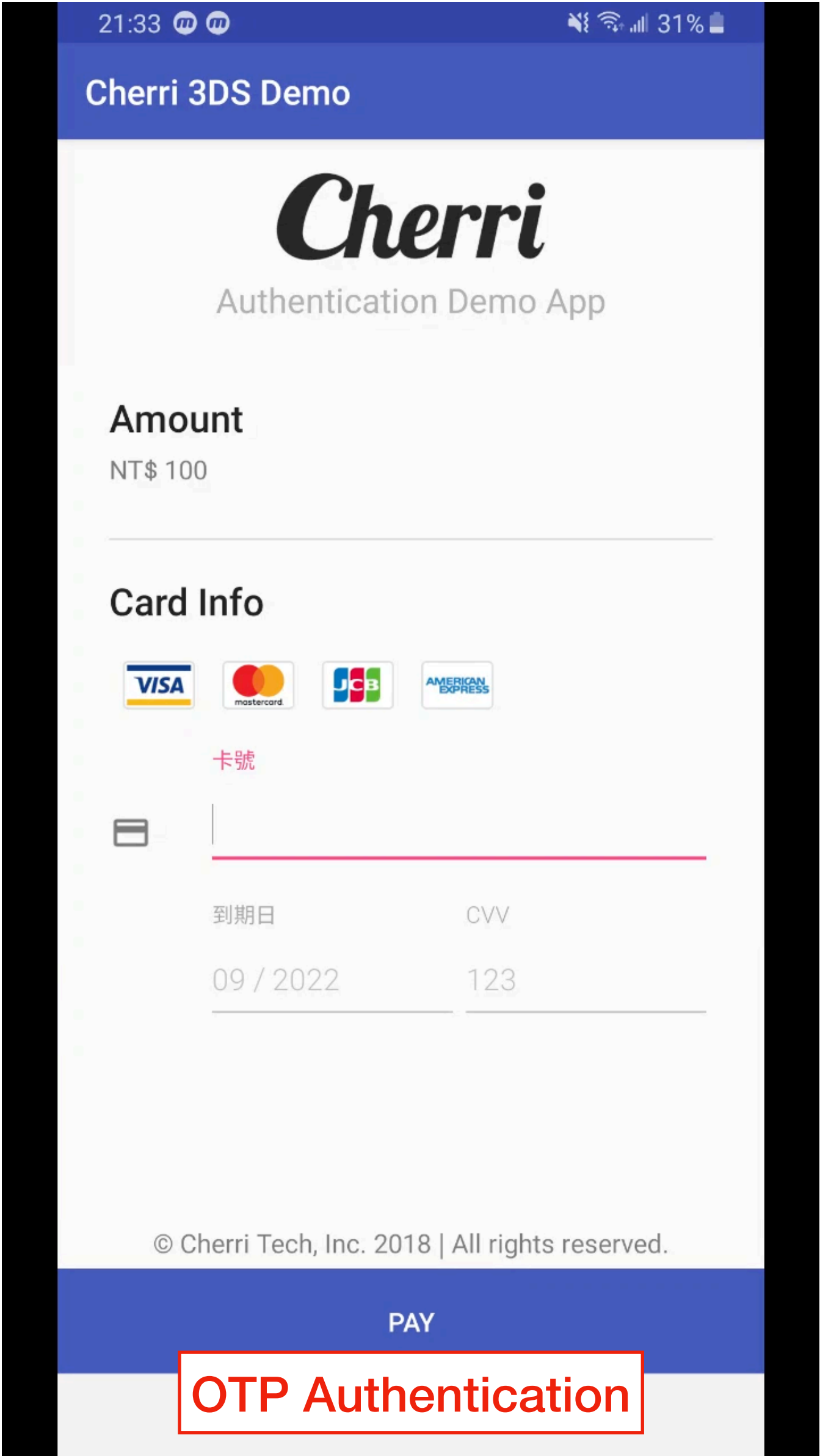
Cherri 3DS

Evolution to Issuer App Authentication

1. Advanced Biometrics speeds up the process
2. Increases Issuer Banking APP acceptance and usage
3. Elimination of SMS cost for OTP
4. Elimination of hijacked SMS texts



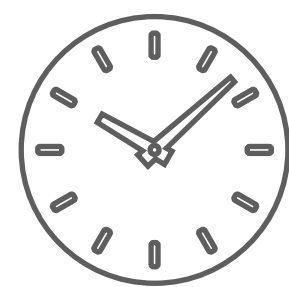
2.7 - App-based Authentication Demo



2.8 - 3DS 2.0 has 9.8 times more data than 3DS 1.0

Massive amount of business-valuable transaction metadata

- 1. Real-time transaction fraud detection
- 2. Cardholder/Account Risk Profiling
- 3. Loyalties, Incentives and Programs



Date & Time



Card



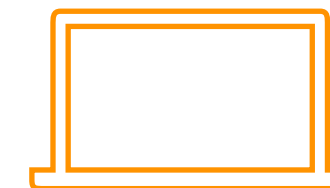
Shopper



Merchandise



Shipping



Device

.....

3DS 1.0

.....

3DS 2.0

2.9 - Risk detection, Dynamic Transaction Authentication system

中華電信 9:45 PM 83%

← Add new credit card

Taiwan

.... .. VISA

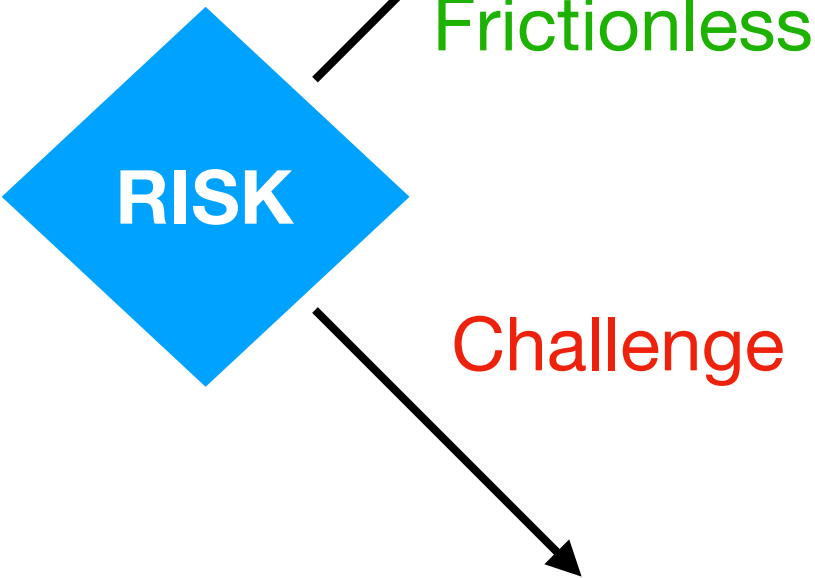
03 21 555 ?

Credit card / Debit card

mastercard VISA JCB

There will be a TWD 1 test transaction

Save



中華電信 9:45 PM 83%

← Add new credit card

complete

✓

Save

中華電信 9:45 PM 83%

← 3D 驗證 取消

台新銀行 VISA

3D 2.0 簡訊驗證

驗證簡訊已經寄送至您的手機 0919***307 , 請於下方輸入驗證碼 :

驗證碼 :

544121

確認

再寄一次

遇到問題嗎 ?

Save

3D OTP costs 13% of cart-abandon rates
(ref : MasterCard AP E-com Report)

3D 2.0 enables frictional transactions, reduces need to for OTP and abandoned transactions

Correct

中華電信 9:45 PM 83%

← Add new credit card

complete

✓

Save

2.10 - Built-in RBA Modules

- ① Device ID Blacklist
- ② PAN ID Blacklist
- ③ Merchant URL Blacklist
- ④ iOS Jail-break Detection
- ⑤ Android Rooted Detection
- ⑥ Web Proxy Detection
- ⑦ Private Browser (Incognito) Detection
- ⑧ Browser Language Consistency Detection
- ⑨ Cardholder Phone Number Comparison
- ⑩ Repeated Attack Blocking

☐

Cardholder Personal Information Comparison

Rejection Cap

30 %

Alert Cap

70 %

☒ Covering Unfinished Records

Anchor Points

PAN

Invalid Data Source Processing

Exclude the Average Calculation

Detection Points

☒ Name☒ Phone☒ Email☒ Mailing Postal Code☒ Billing Postal Code

☒

Network Configuration Detection

Action

Alert

Detection Points

☒ Activated VPN☒ Activated Proxy

☒

Browser Behavior Detection

Action

Alert

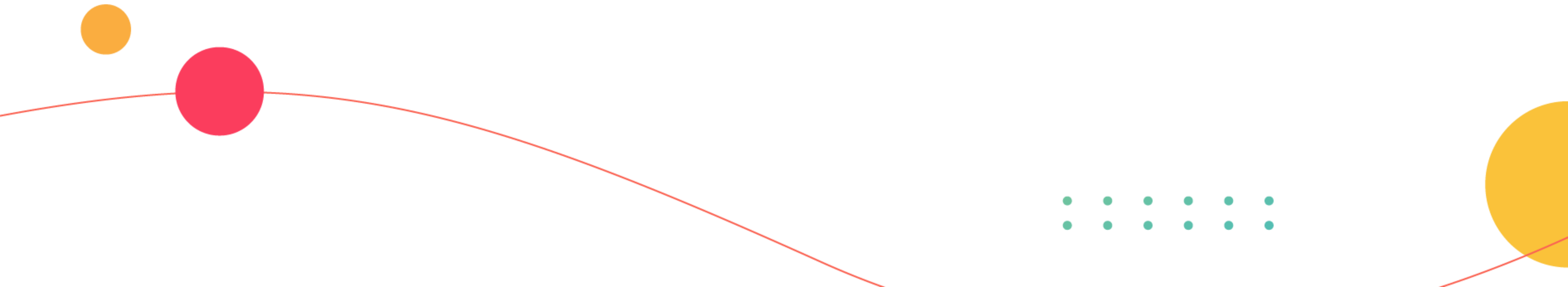
Detection Points

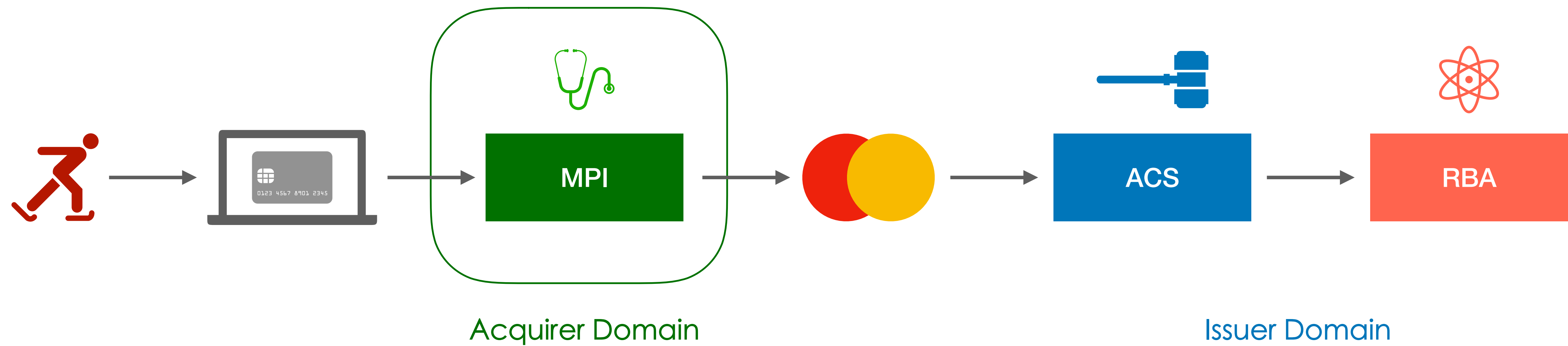
☒ Private Browsing



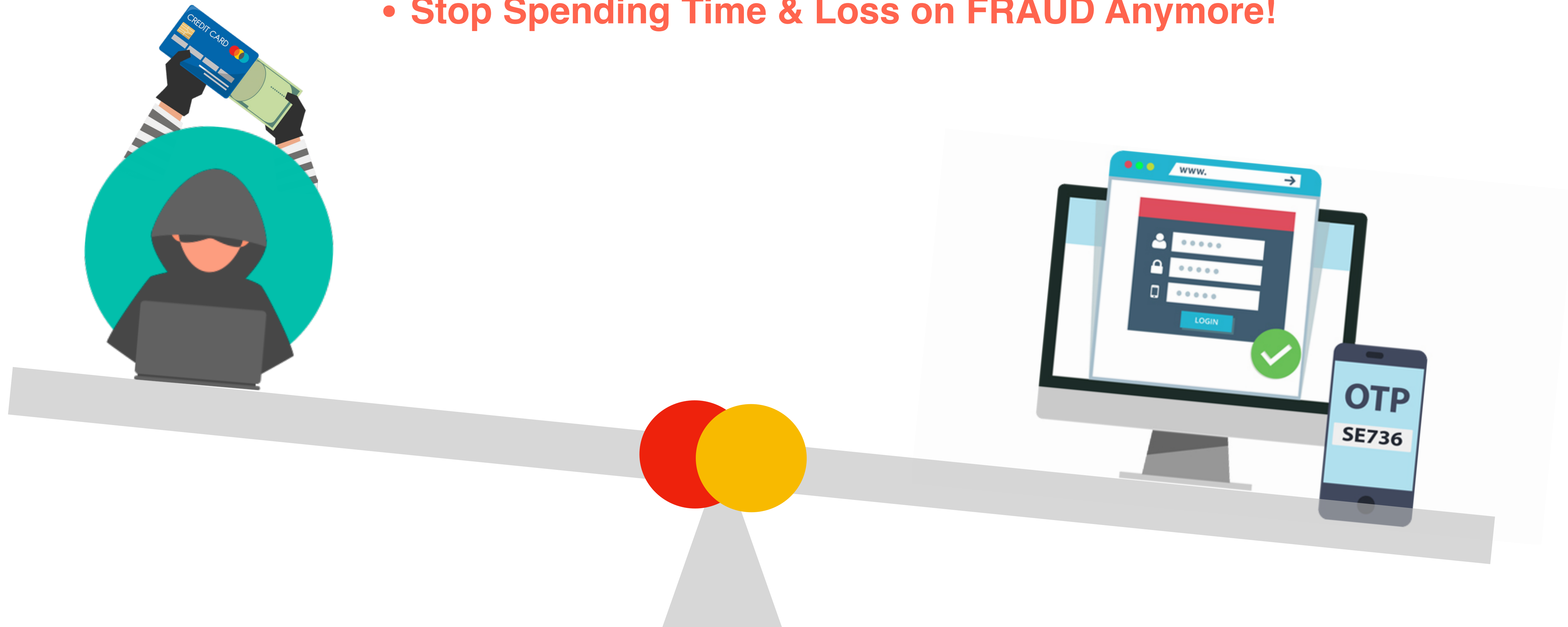
April, 2020 Mandate

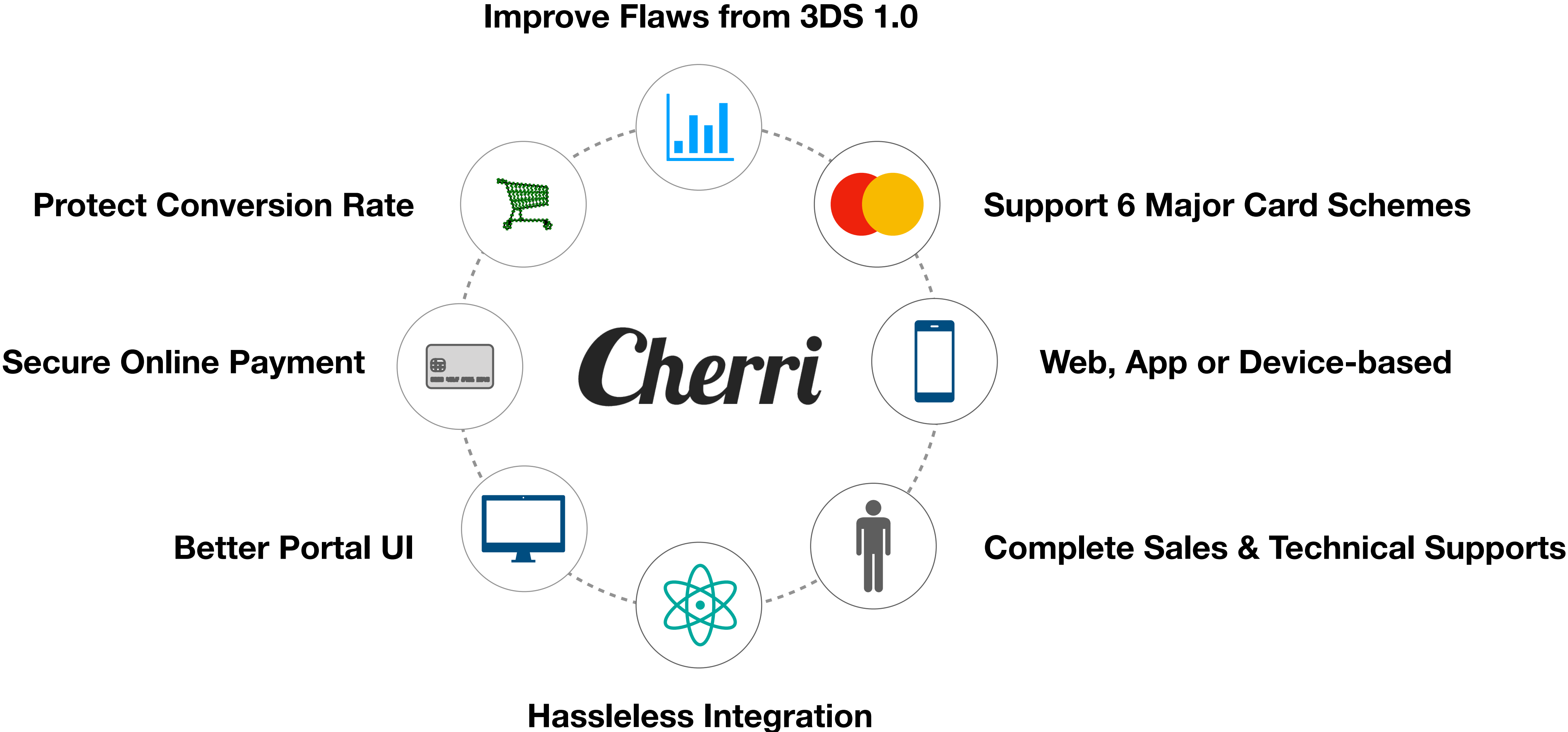
3 - Cherri 3DS 2.0 Server(MPI) Solution





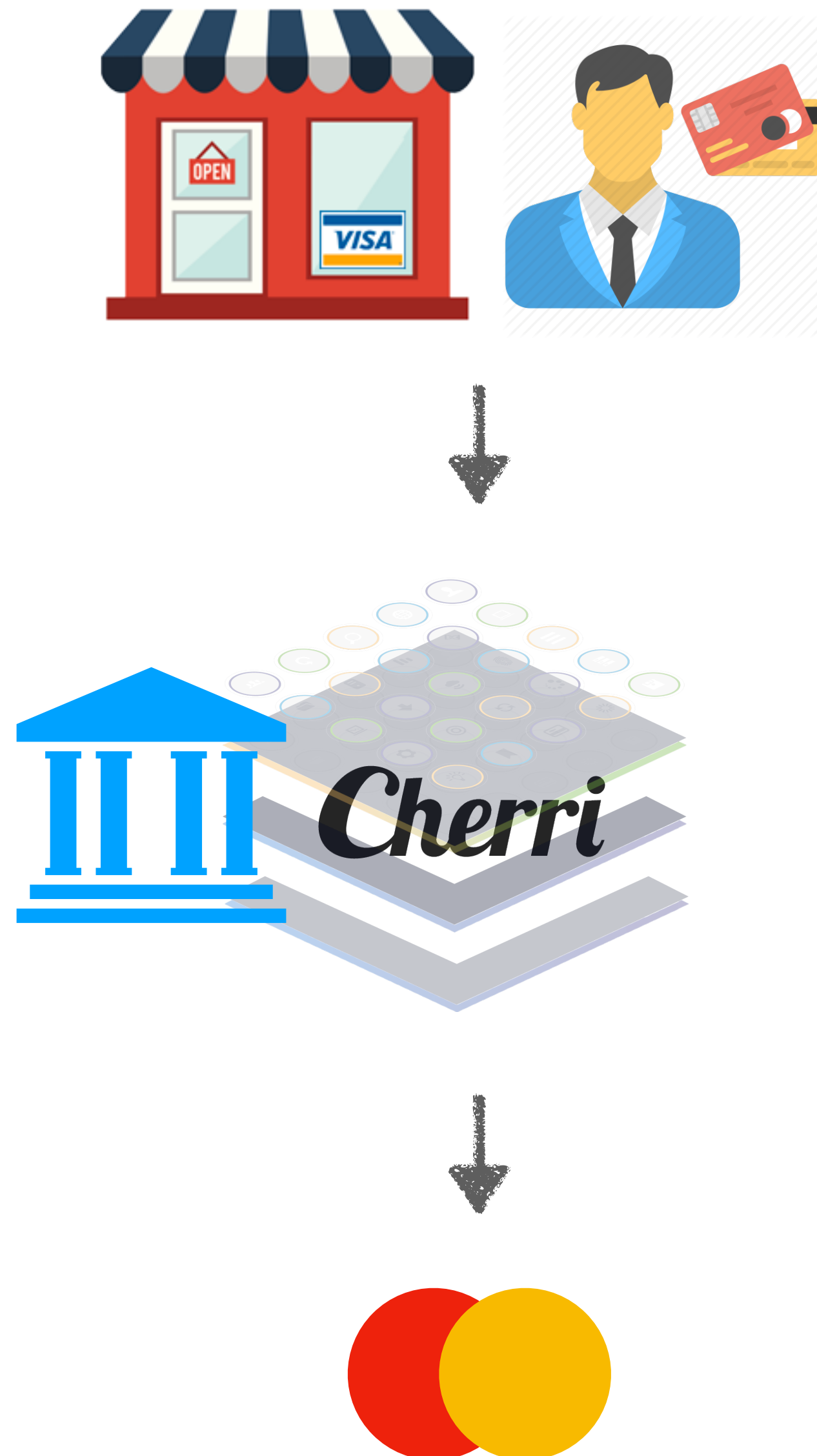
- **EMVCo. Mandate Coming SOON!**
- **Made Your Customers Feel SAFER When Using Your Platform!**
- **Stop Spending Time & Loss on FRAUD Anymore!**





3.4 - Our Service & Promise

Cherri 3DS



- Simple API for Quick Implementation
- Complete User Integration Kit
- Better User Interface on Management Portal
- Professional Technical Supports Team
- 24*7 Customer Service
- One-year Free Software Warranty
- Perpetual Software Upgrades for EMVCo. & Card Schemes.

Cherri

Cherri 3-D Secure 2.0 Solution.

Thank you for your time.

