




**ESVISION**



# Face Recognition SDK For Bank

# FR Application in FSI




**01**  
Counter

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- ✓ VIP Recognition
- ✓ FR-based interactive marketing
- ✓ FR Access Control
- ✓ Counter “ Person-ID” Verification
- ✓ Blacklist




**02**  
ATM

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- ✓ FR Hardware for ATM / VTM
- ✓ Embedded Solution



**APP**  
**03**  
Online Banking

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- ✓ FR for mobile APP
- ✓ FR for PC Client
- ✓ FR for H5 Web



**04**  
Risk Management

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- ✓ Liveness Verification
- ✓ Biometric Database
- ✓ FR Risk Management
- ✓ Finance Risk Management

# Application Scenarios



## Banking Branch

- Remote Verification
- Counter Verification
- Transferring FR Verification
- VIP Recognition

## Smart Machine

- Counter Person-ID Verification
- FR ATM/VTM

## Trading

- Remote personal foreign exchange settlement and sale
- Face ID authentication for large funds withdrawal

## Risk Management

- Credit online Application
- FR ATM
- Access Control
- Surveillance

## Personal Banking

- ATM
- Counter Verification
- Password Reset
- Non-Card Transaction
- VIP Recognition
- Customer User Graphic

## Internet Banking

- Online Password Reset
- Online Banking FR Verification
- Mobile Banking FR Verification
- Online Application FR Verification
- Online Signaniture

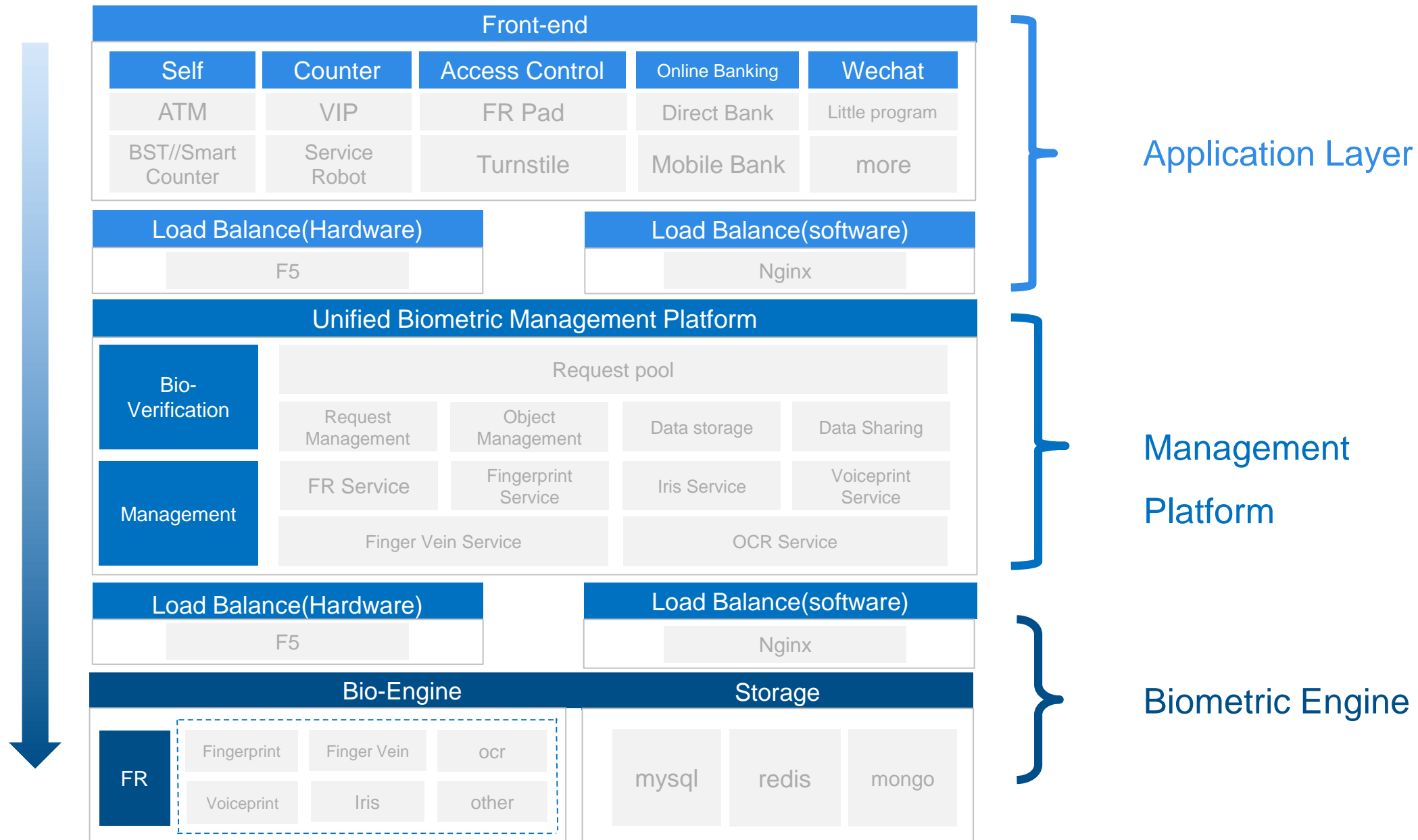
## Credit Card

- Credit Application
- Credit card guarantor face authentication
- Precision marketing
- Credit card online account opening

## Analysis

- Abnormal Behavior Analysis
- FR for VTM

# Unified Biometric Management Platform



# ATM/VTM/STM



## Product:

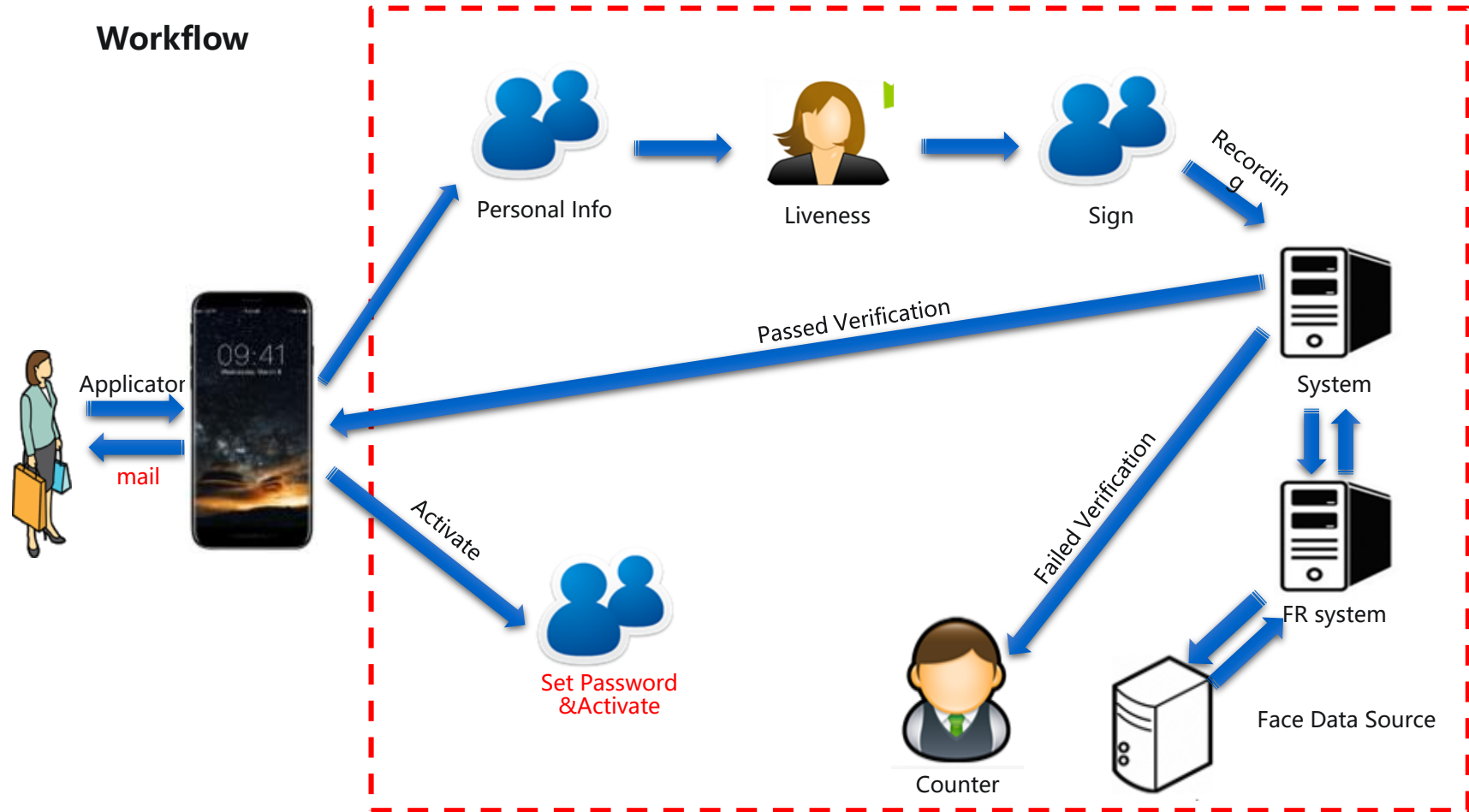
- 1) 1:1 Service (On-Premise);
- 2) Dual Camera for Liveness ;

Item	Name	Remark
1	Comparison (1:1)	1:1 (On-Premise)
2	Near-infrared binocular liveness detection (Hardware + Software)	Camera 1 (ESEye-C3V-71Y )
		Camera 2 (ESEye-C3V-72Y ) - main
		Camera 3 (ESEye-C3V-73J )
		Camera 4 (ESEye-C3V-73JK) - main
3	3D structured light liveness detection (Hardware + Software)	Camera (ESEye-C3D-92H) -BCTC Basic
		Camera (ESEye-C3D-92HP) -BCTC Advanced

# Comparison 1:1 (Mobile)

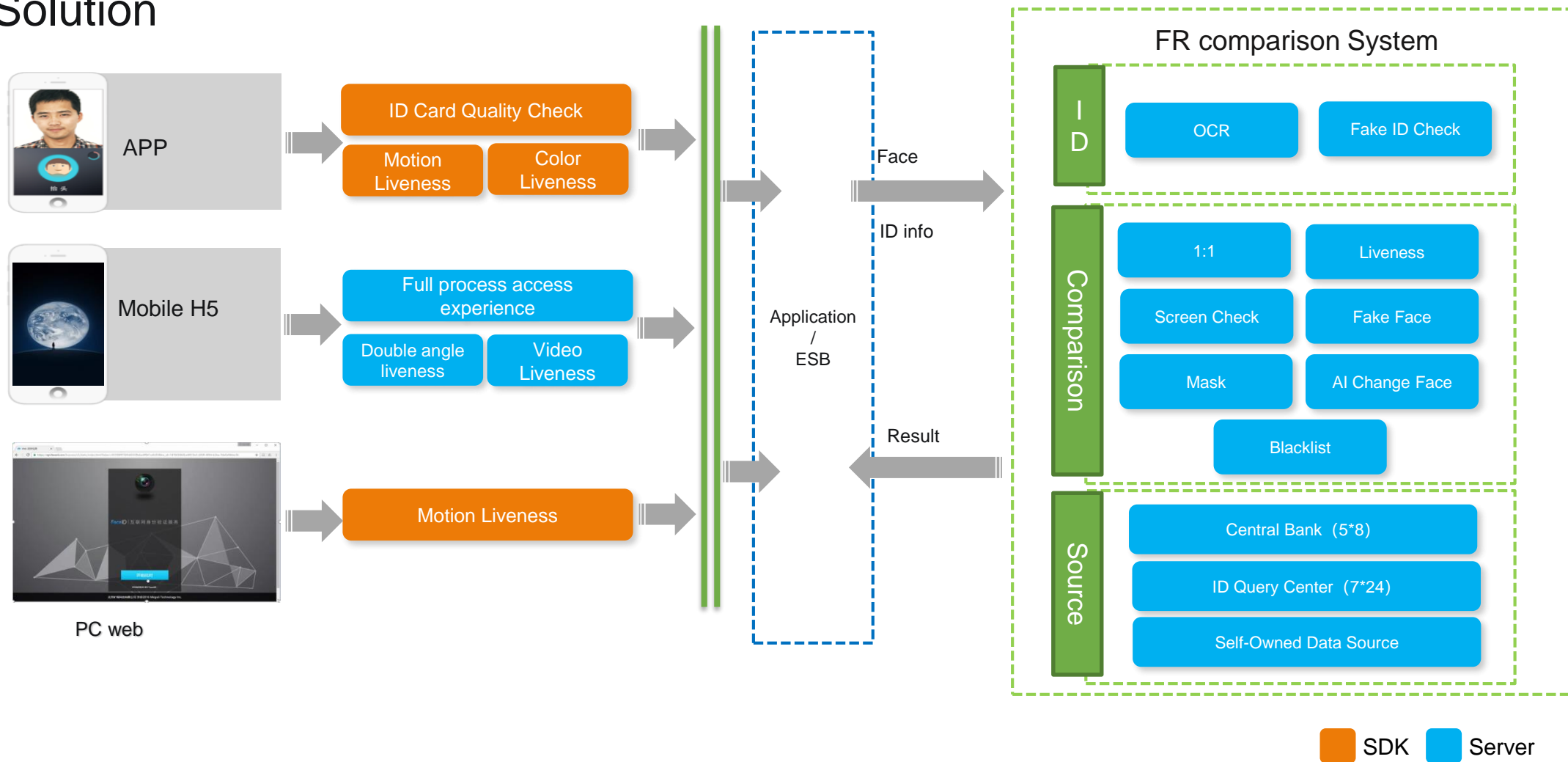


Mobile Banking



# Mobile

## Solution



# Mobile-FaceID



## Product:

- 1) 1:1 (On-Premise);
- 2) Motion Liveness (Android、IOS、 Windows) ;
- 3) H5 Video Liveness;
- 4) FMP Liveness ;
- 4) OCR;

### Note:

- 1) Motion liveness detection can only be used in the occasion of own APP, when H5 page, you need to select H5 video live body;
- 2) When using motion liveness detection , it needs to be used together with the server-side FMP live body, which can greatly increase the anti-attack ability;

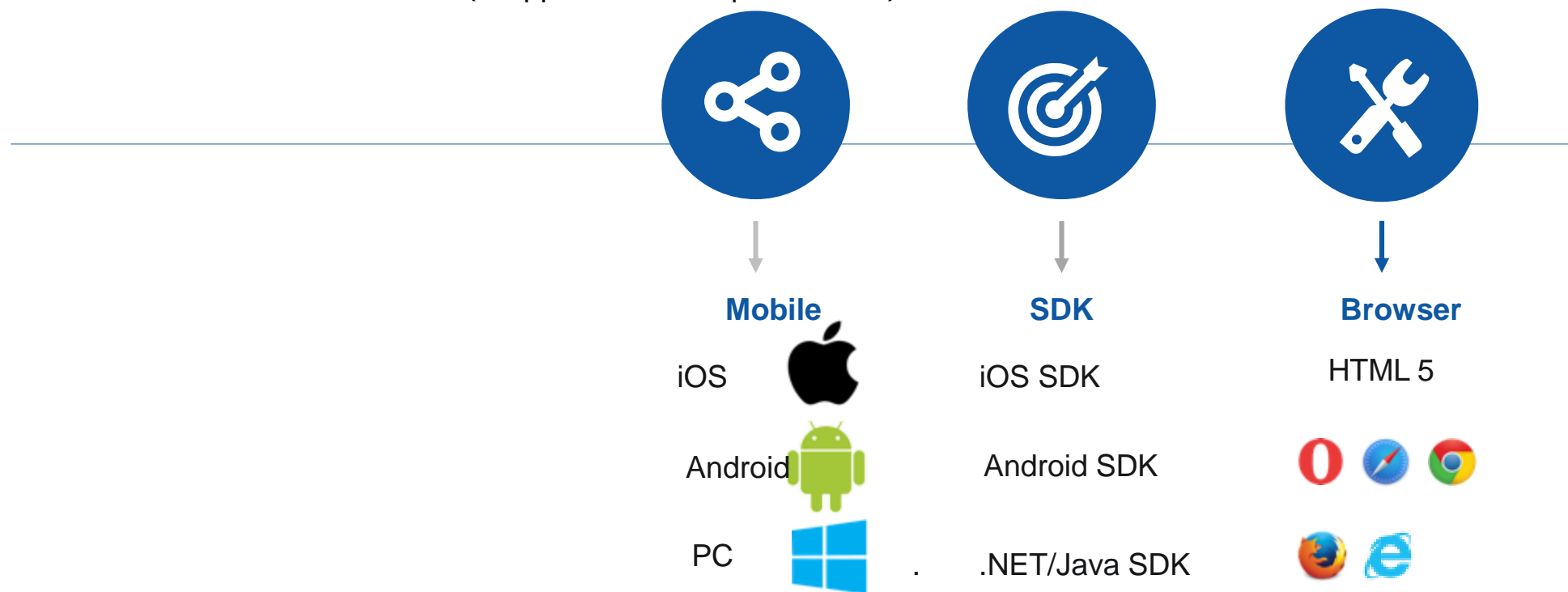




# Compatibility

## Full Stack Solution

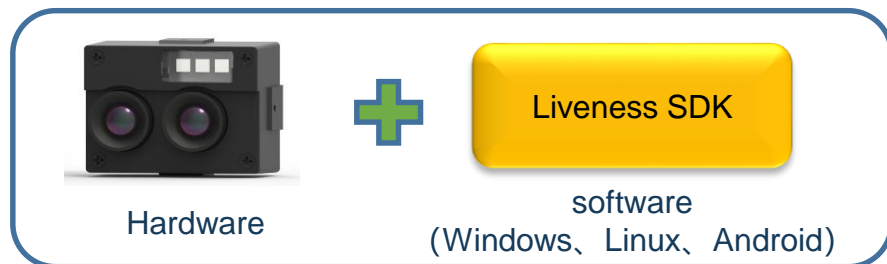
- Support iOS、Android和PC
- The client solution supports two service delivery methods
  - Client SDK (iOS / Android / PC)
  - Client for Browser:
    - HTML5 ( Support most major browsers )
    - ActiveX ( Support Windows platform IE )



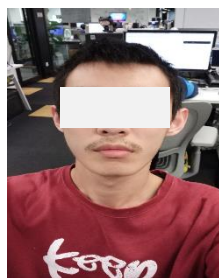
# Infrared binocular camera

## Near infrared binocular camera (single near infrared, single RGB)

Component



Liveness



### Improve user experience

No action required, fast live detection time



### High security

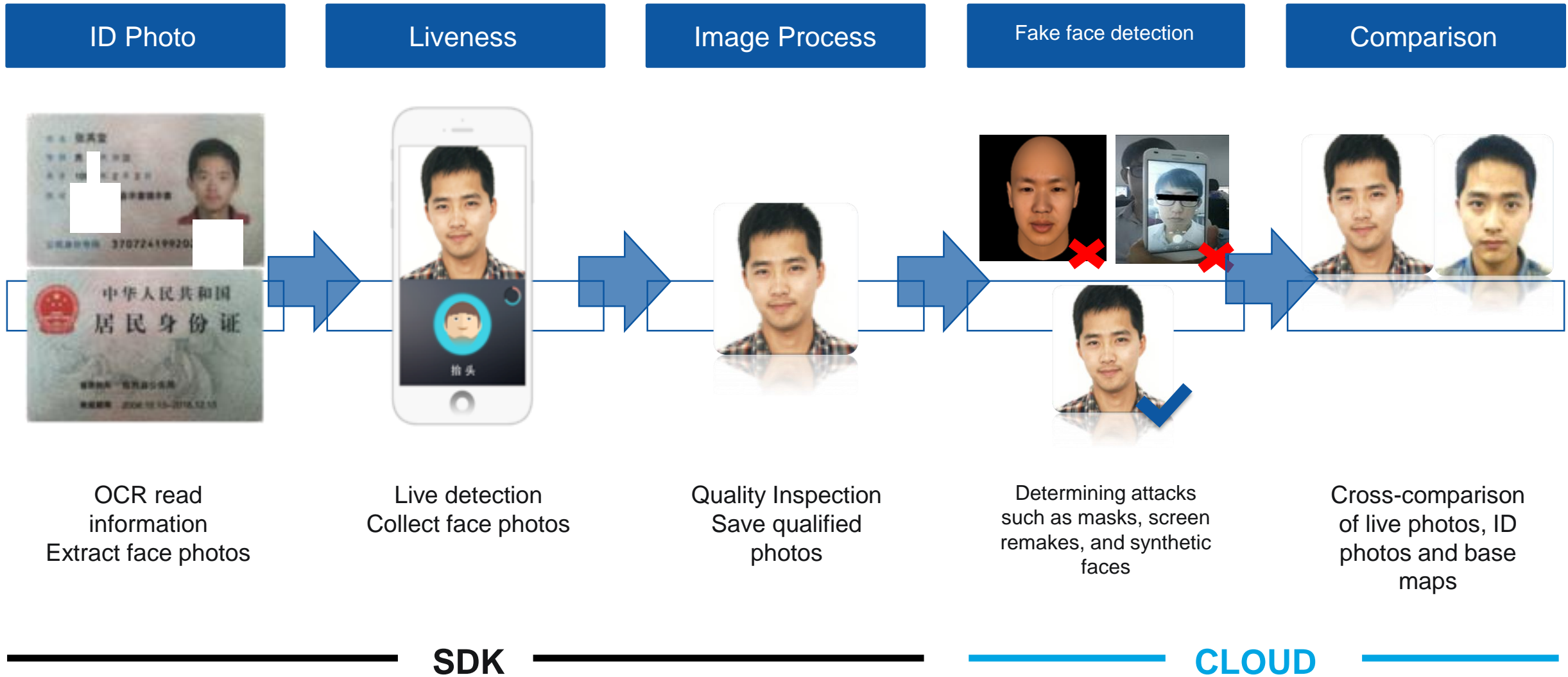
Effectively prevent attacks such as photos, videos, and 3D masks



### Adaptable

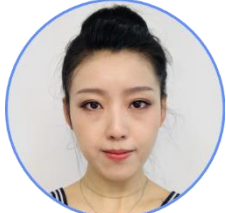
Less affected by light, can try a variety of scenes

# Financial-level identity verification process

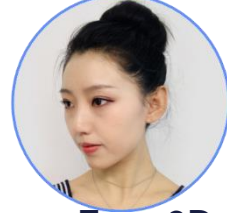


# Motion detection

Landmark & Track



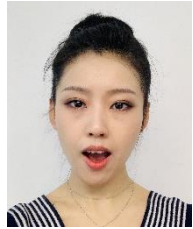
Face key point detection and tracking



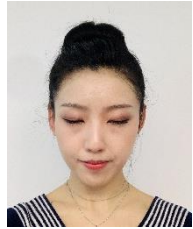
Face 3D pose detection and tracking



Random action sequence



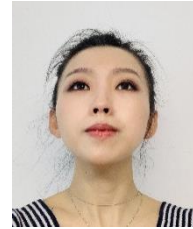
Open mouth



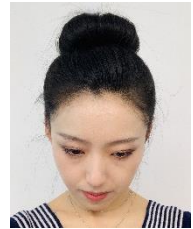
Wink



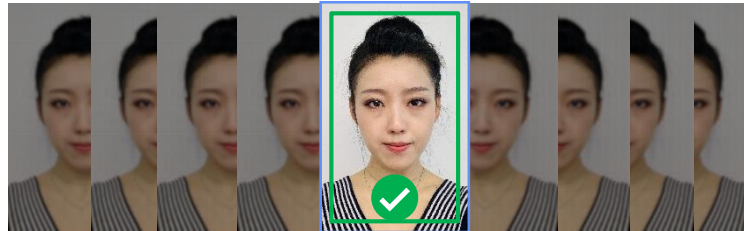
Shaking Head



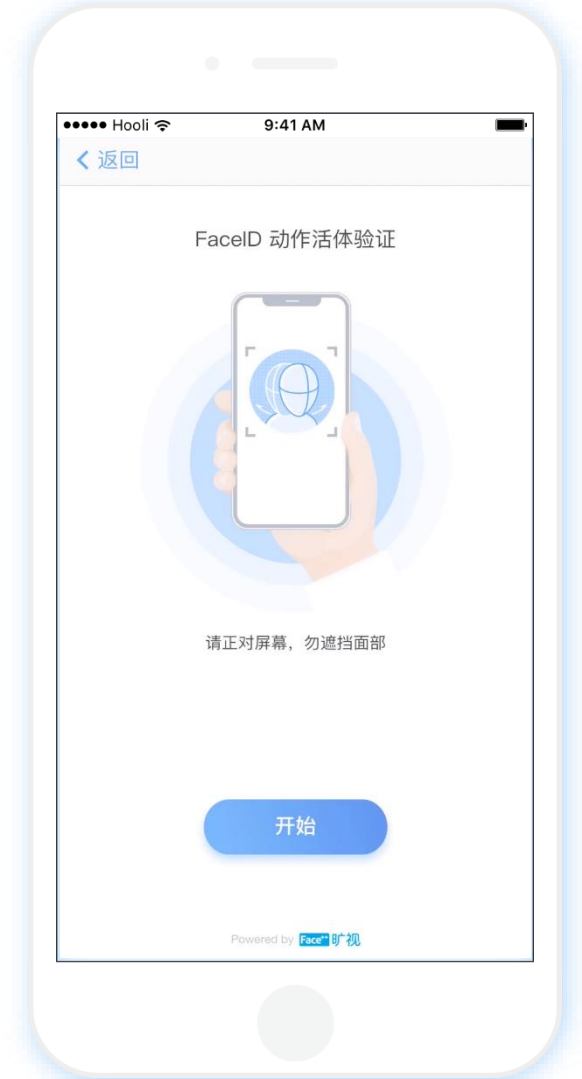
Nodding



Best Quality



Detect the best quality image in the captured video



# Liveness Image Quality Check



Face > 150 Pixels



85 < Brightness < 200



Gaussian blur < 0.15



Motion blur < 0.24



POSE

YAW < 15

PITCH < 10

ROLL < 15

Eye Closed

Open Mouth



**Best**

Image\_Best  
For subsequent face  
comparison

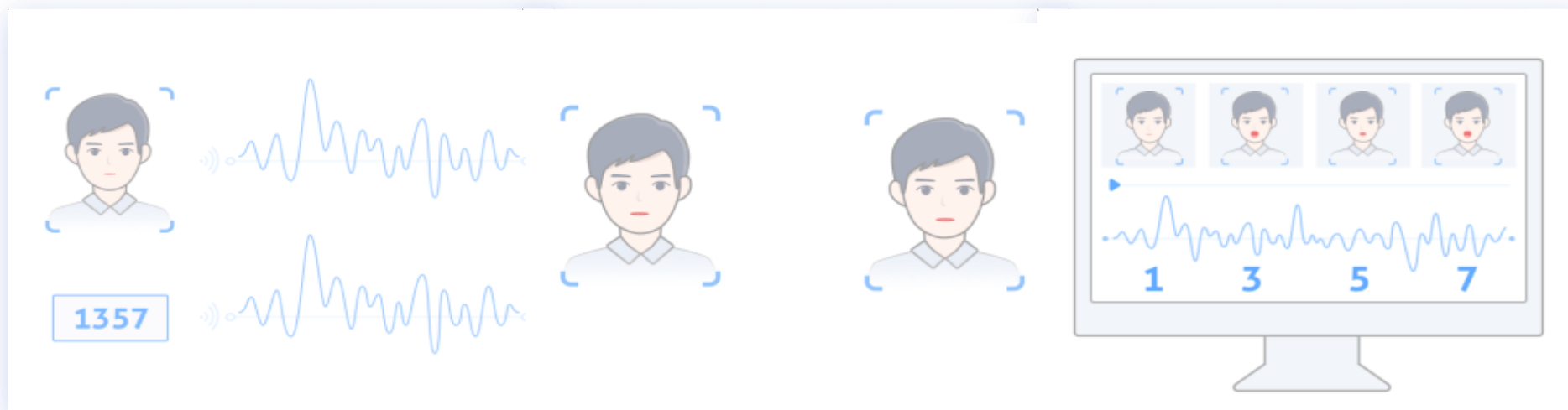
**Panorama**

Image\_ENV  
Used for subsequent  
cloud fake face  
judgment

**Action Images**

Image\_Action[X]  
For subsequent manual  
review or screening

## Video Liveness (H5)



Voice  
Recognition

Lip  
recognition

Sound and  
picture  
synchronization  
detection

# Case study – Fintech



ESVISION



Lend Money



Face Authorization

# Case study – Bank of Jiangsu



Face recognition on counter、  
VTM、 direct bank、 PAD。  
Save the handing time  
More accurate identification

Withdrew Cash



Face Authorization



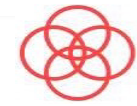
# China Merchants Bank Credit Card Center



“Handheld life”APP

Remote identification verification function enhance the security for your account

Credit Card Application → Face Authorization



# China CITIC Bank



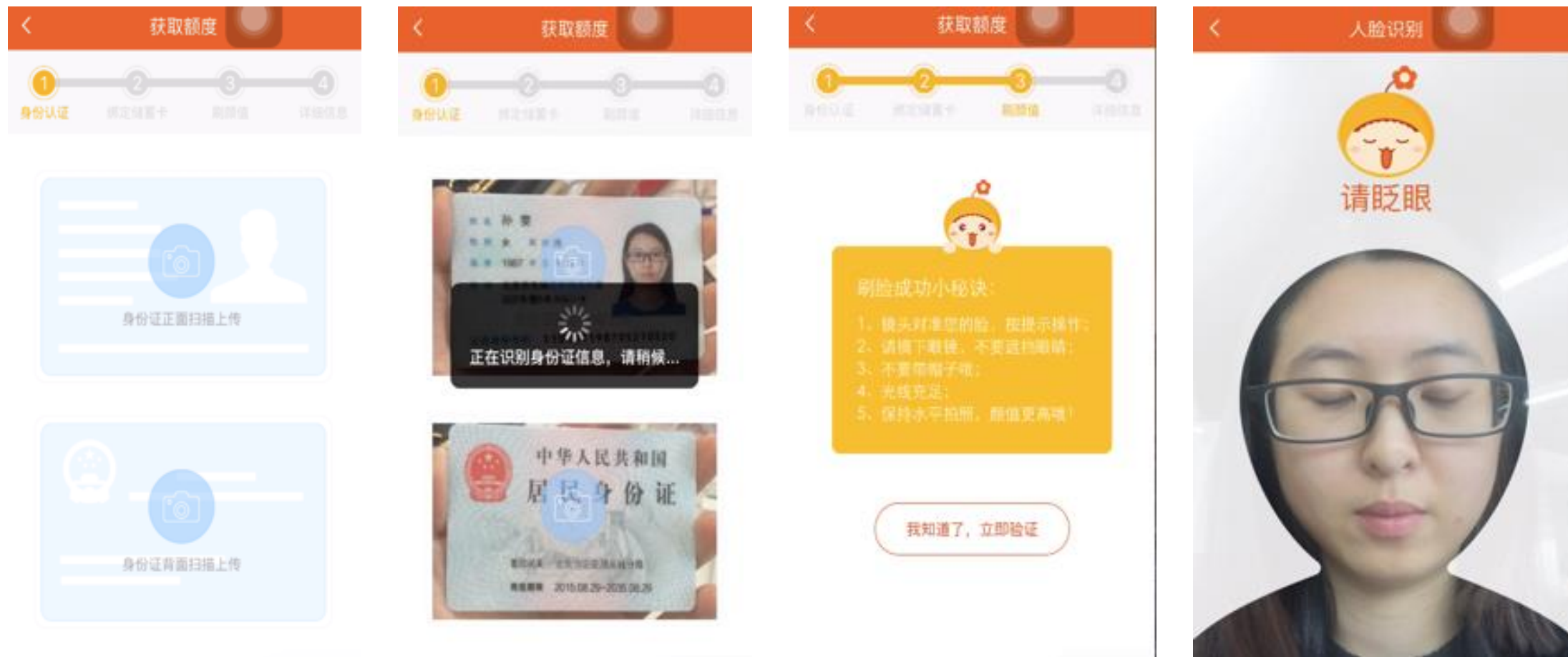
ATM and mobile app use  
faceID for CITIC,

Remote identification  
verification

Using face on self-service loan  
and self-service apply credit  
card in future



# Case study: Xiaohua purse (CITIC fund)



Lend Money



Face Authorization & OCR Scan



# Case Study: Ping An insurance



Lend Money



Face Authorization





# Case Study: MYBank



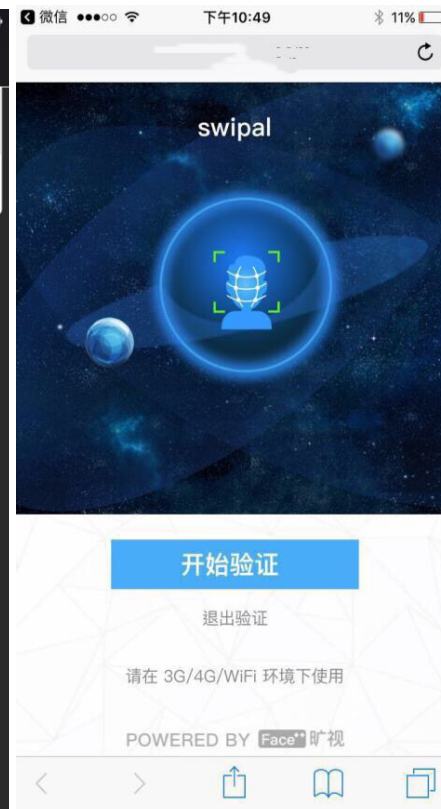
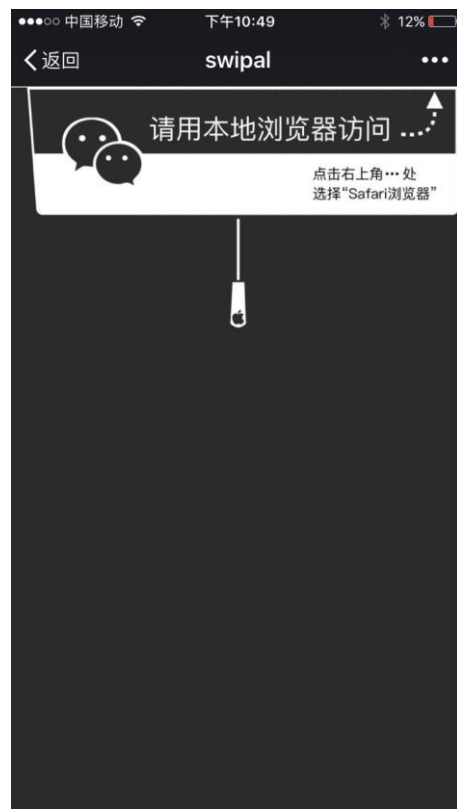
Create bank Account → Face Identify



# Mobile H5 Case study: Hua Xin



Lend Money

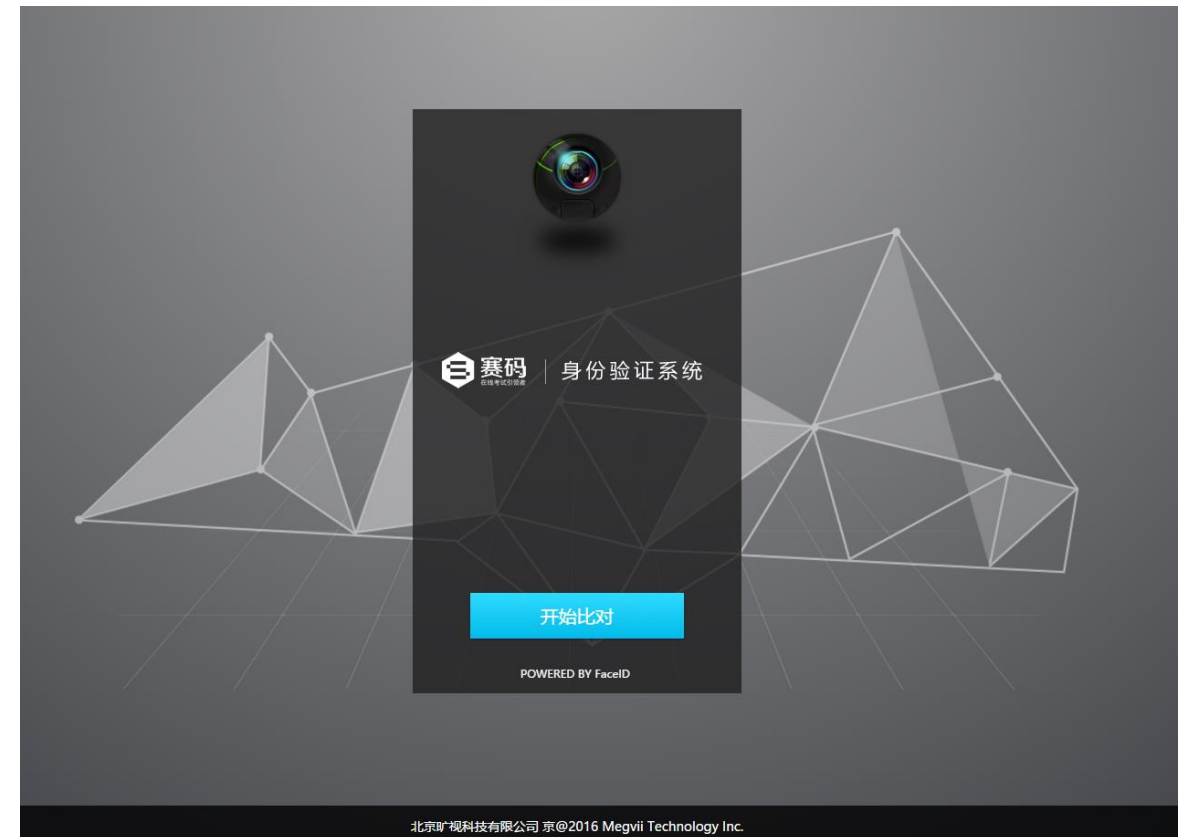


Face Authorization





# PC H5 Case Study: CIIC education



Recruitment



Face Identify





# Domestic Case



Powered by MEGV 旷视

# Overseas Case(NDA signed for confidential )

Thailand xxx bank, Brazil xxx online bank, Indonesia xxx bank, Philippine xxx bank