

A close-up photograph of a person's hand using a fingerprint scanner. The person is wearing a dark suit jacket and a blue patterned tie. The scanner is a small, circular device with a glowing orange light on the tip of the person's index finger. The background is a plain, light-colored wall.

# Status and Development of Online Authentication Applications for Public Services in Taiwan

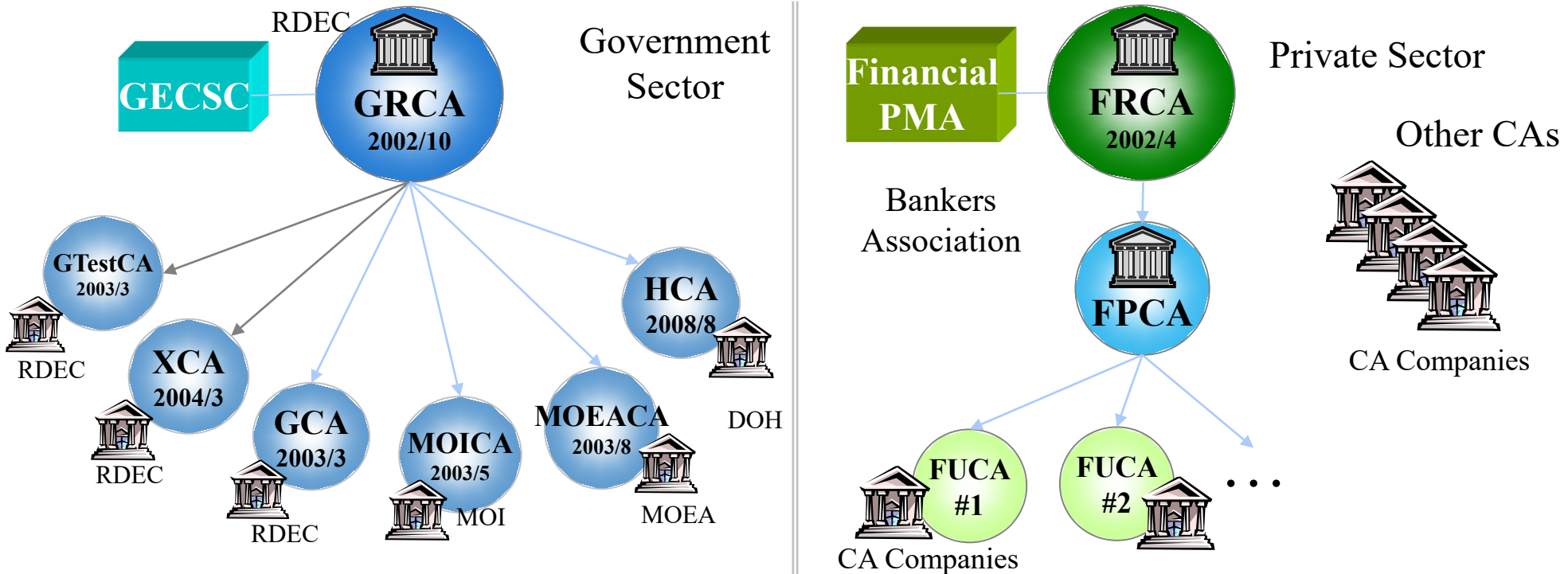
Wei-Chung Hwang, Deputy General Director, Deputy General Director, Institute for Information Industry

Karen Chang, Vice President, Egis Technology

Shally Lu, Institute for Information Industry

Jun 2019

# Overall PKI Infrastructure & Applications



*Government Applications*

*Financial Applications*

*B2B Applications*

*B2C Applications*

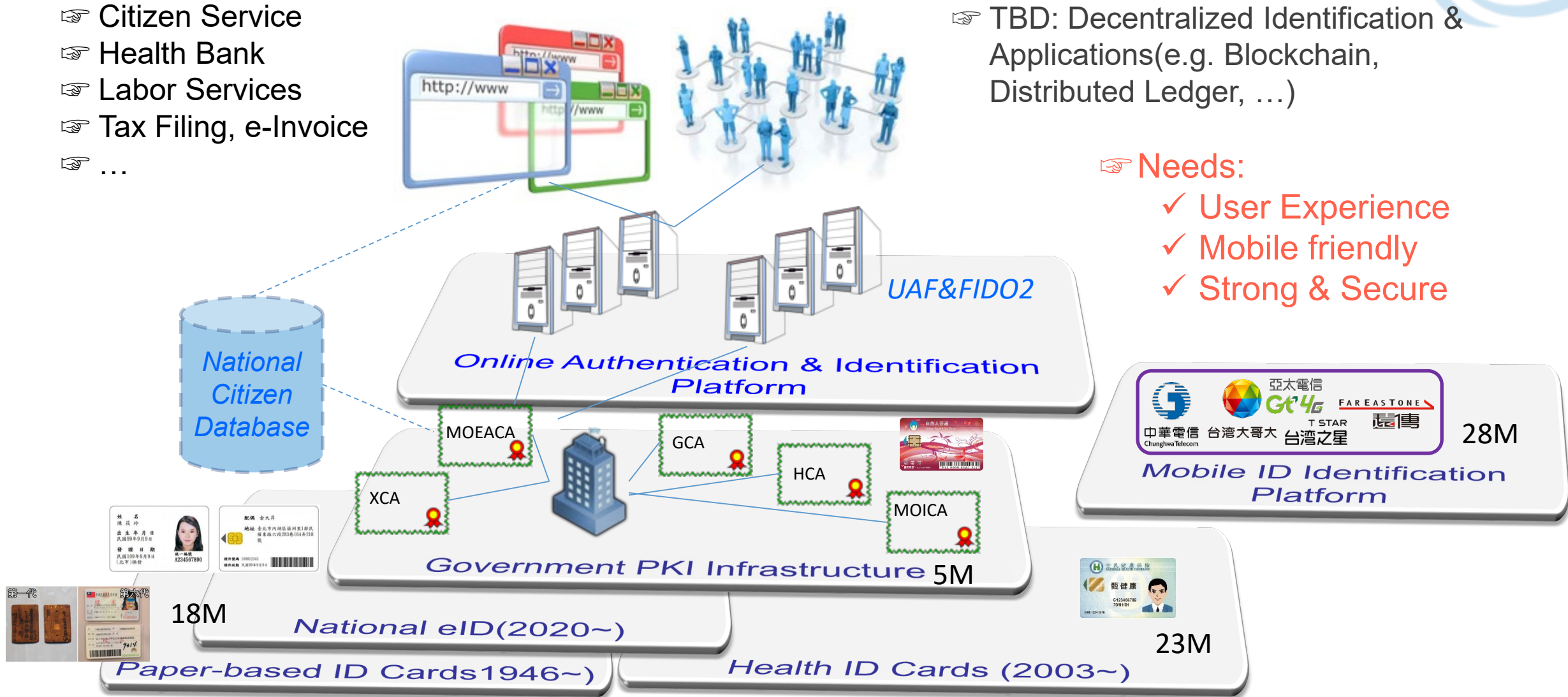
*Enterprise Applications*

# Online Authentication & Identification Services in Taiwan

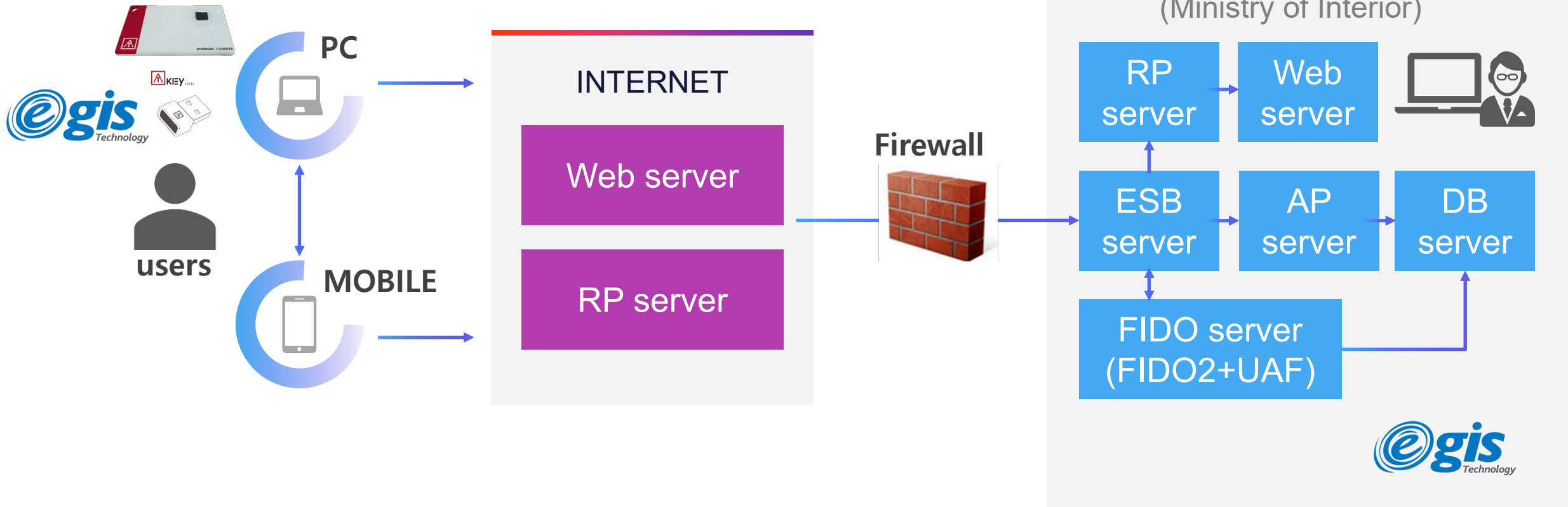
- Citizen Service
- Health Bank
- Labor Services
- Tax Filing, e-Invoice
- ...

- TBD: Decentralized Identification & Applications (e.g. Blockchain, Distributed Ledger, ...)

- Needs:
  - ✓ User Experience
  - ✓ Mobile friendly
  - ✓ Strong & Secure



# Deployment Architecture



# PKI-based ID Proofing for FIDO (2019)

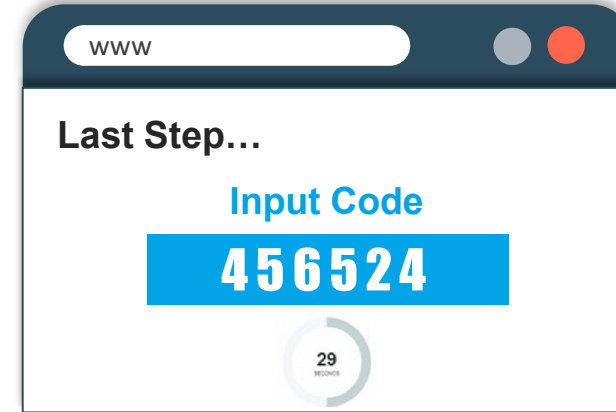
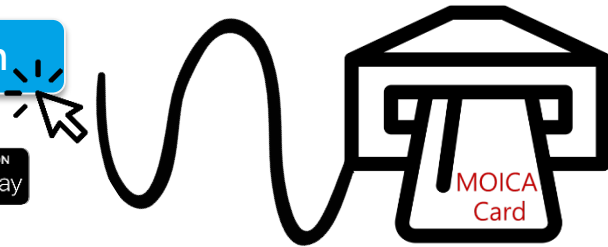


**Registration** 1 On PC's browser, use MOICA Card or eID Card to request for a code (OTP)

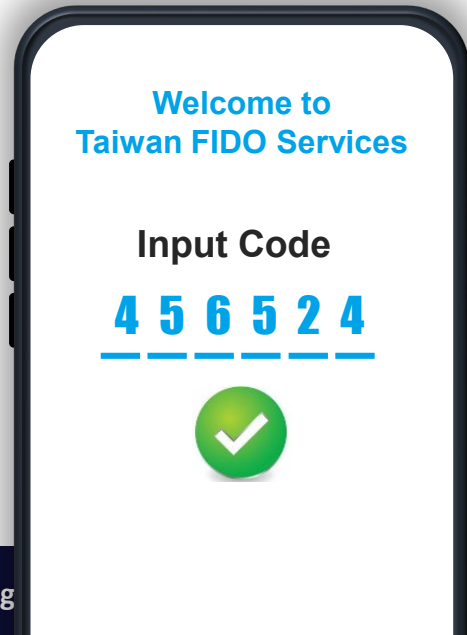
2 Download App on smartphone

Online Authentication Platform by MOI

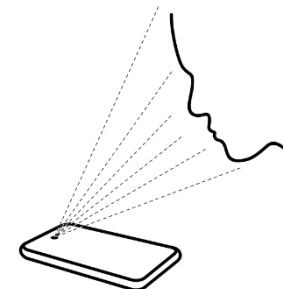
Start registration



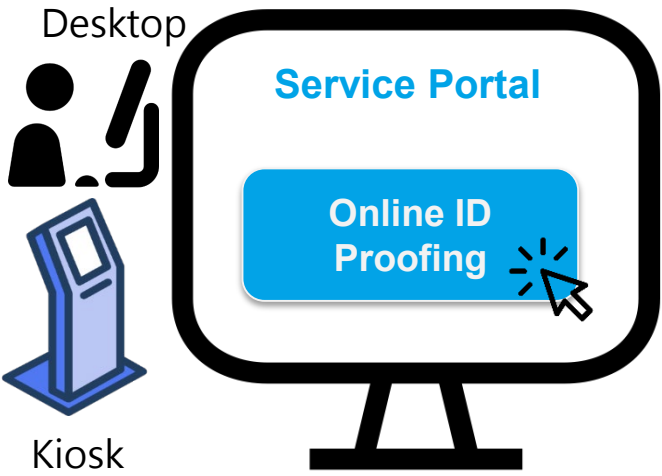
3 Input code on App



4 Enroll on smartphone with Biometrics



# Online ID Proofing (2020~)



1 Fill in basic information

Name	Telephone
ID Number	Address
Birthday	Email
Household Number	...

2 Upload both sides of ID Card



NO

Have Card Reader?

YES

Insert eID Card

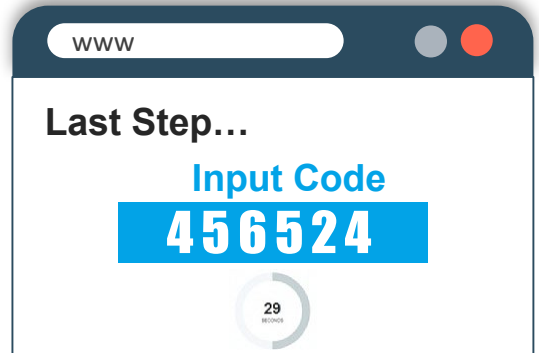
3 Selfie of Face & ID Card



4 Review & Check



5 Approval – Issue OTP



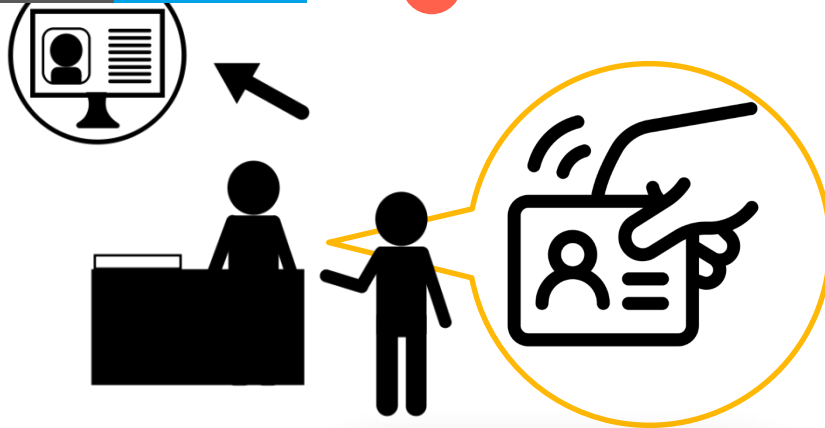
# Over-the-Counter ID Proofing (2020~)



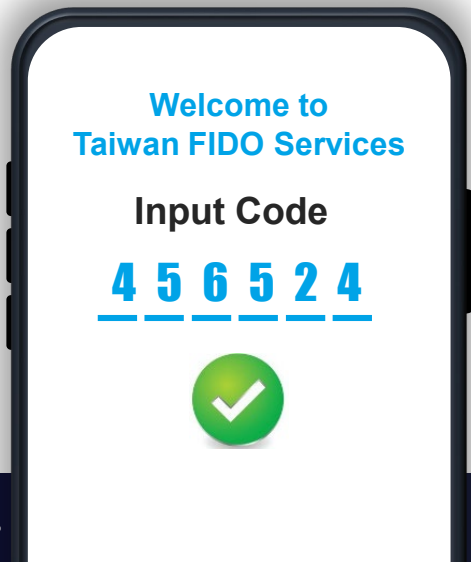
## Registration

- 1 Present and check dual-identification document and issue OTP Code
- 2 Download the client authenticator (App)

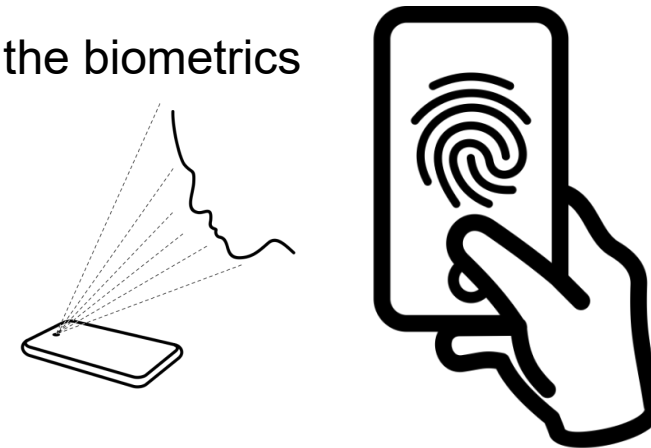
Code 456524



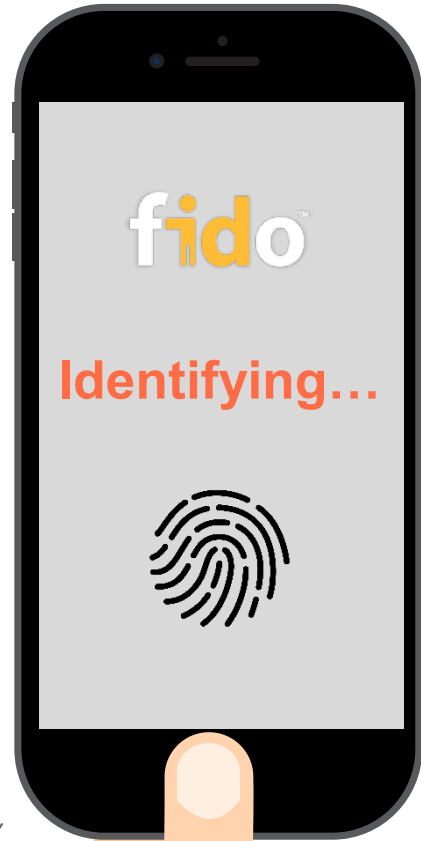
- 3 Input OTP Code



- 4 Enroll the biometrics



# Use Case #1: Access to Citizen Service Portal



## Citizen Cloud Services

- ✓ Identification Services
- ✓ Human Resource
- ✓ Household Administration...

## Government Cloud Services

- ✓ Online Application
- ✓ Resource Monitoring
- ✓ Auditing Logs
- ✓ Application Logs, ...





# Use Case #2: Access Citizen's My Data

## AS-IS



**Login with Password** : Need to register with Health ID Card

**Login with Cards** : Need Health ID Card(with passcode) or MOICA Card



登入

一般登入    健保卡    自然人憑證

身分證號:

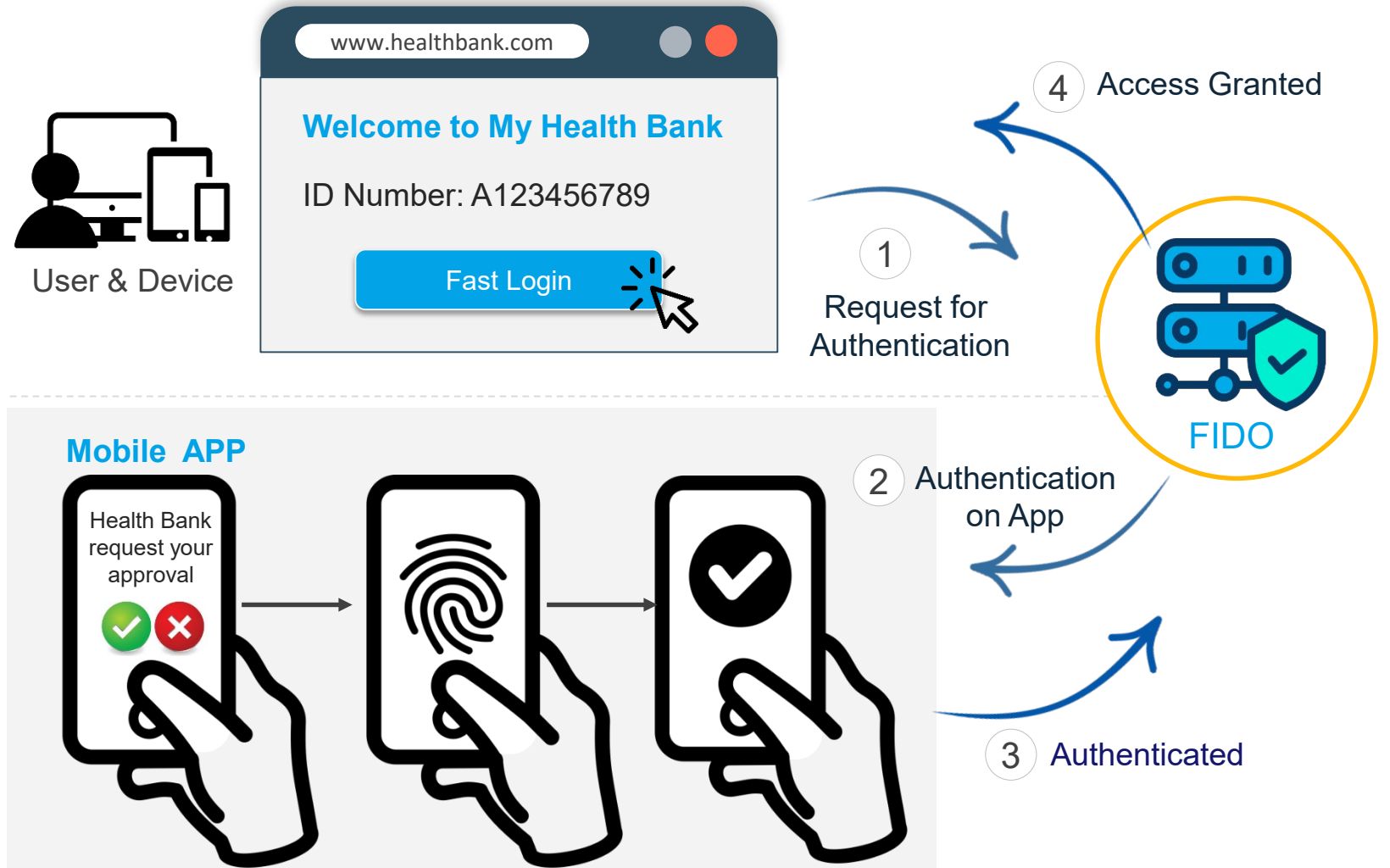
健保卡卡號:

健保卡網路服務註冊密碼:

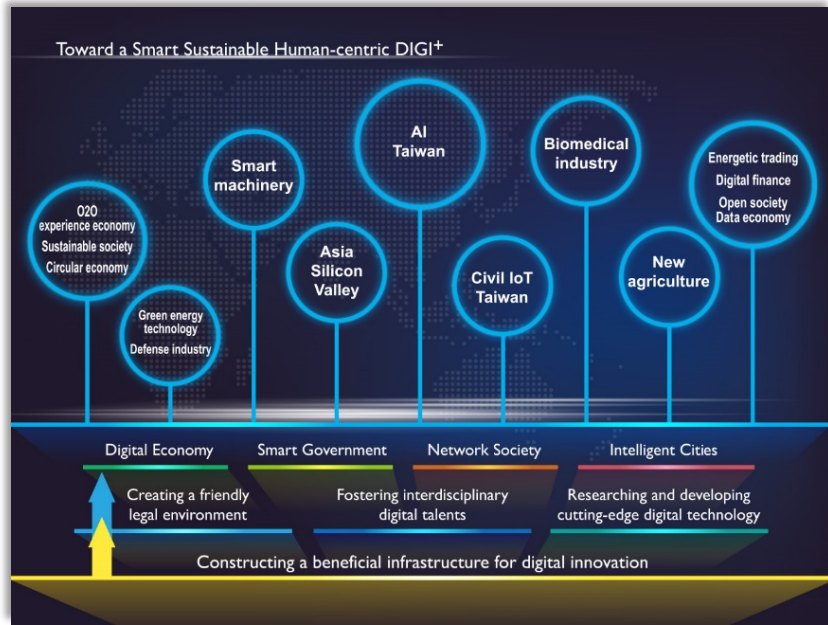
圖型驗證碼:  [重新產生](#)

[忘記密碼](#) | [申請密碼](#)  
\*首次登入，且無「健保卡網路服務註冊密碼」，請先申請密碼。

## TO-BE



# Milestones



Online application rate: 27.6%

2019

## 1. Deployment & Pilot

- PKI-based ID proofing
- MOI's citizen services
- Pilots on inter-ministerial services

0.5M users  
2019~2020

## 2. Promotion & Expansion

- Online ID proofing (Selfie & New eID)
- Central & Local Government Applications
- Support/work with various PKIs

1M users  
2020~2021

## 3. Open & Popularization

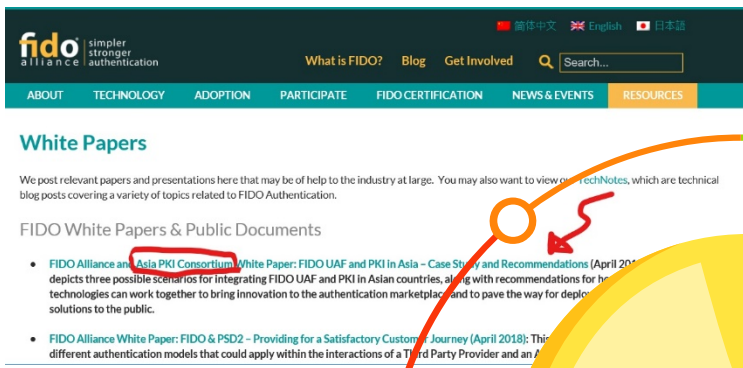
- Over-the-Counter ID Proofing
- Support/work with non-government services (Telecomm, Finance, etc.)

3M users  
2022

Online application rate: 50%



# Related Issues & Challenges



## 01 FIDO & PKI

- “Class 2” in the APKIC-FIDO white paper
- TBD: FIDO & Cloud-based PKI

## 03 FIDO & Federation

## 04 FIDO & “Mobile Connect”

**06 FIDO is complementary to PKI/eID/Mobile but also compete to each others**





# Pros and Cons

	PKI	eID	FIDO	Mobile ID
User Experience	★	★	★ ★ ★	★ ★
Mobility & Device Coverage	★ ★	★	★ ★ ★	★ ★
Ecosystem & Openness	★ ★ ★	★ ★	★ ★ ★	★
Online / Offline Usage	★ ★	★ ★ ★	--	--
Policy & Regulation	★ ★ ☆	★ ★ ★	★	★ ☆
Cost Effectiveness	★ ★	★	★ ★ ★	★ ☆

# QUESTIONS & EXCHANGE

- ✓ [wchwang@iii.org.tw](mailto:wchwang@iii.org.tw)
- ✓ [karen.chang@egistec.com](mailto:karen.chang@egistec.com)
- ✓ [shally@iii.org.tw](mailto:shally@iii.org.tw)