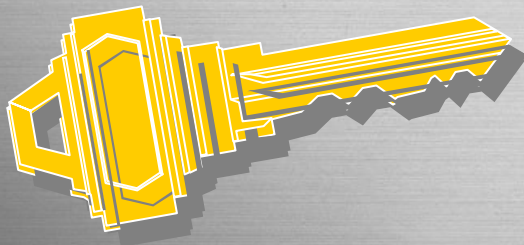


How PKI-enabled applications change government services

- An example from MOICA

- Jeremy Shen
- Director of Information Center
- Ministry of the Interior, Taipei, ROC
- November 12, 2014

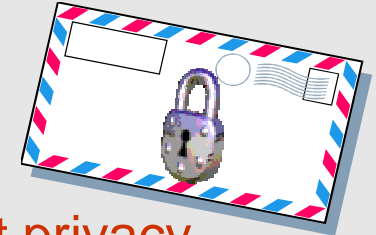


Contents

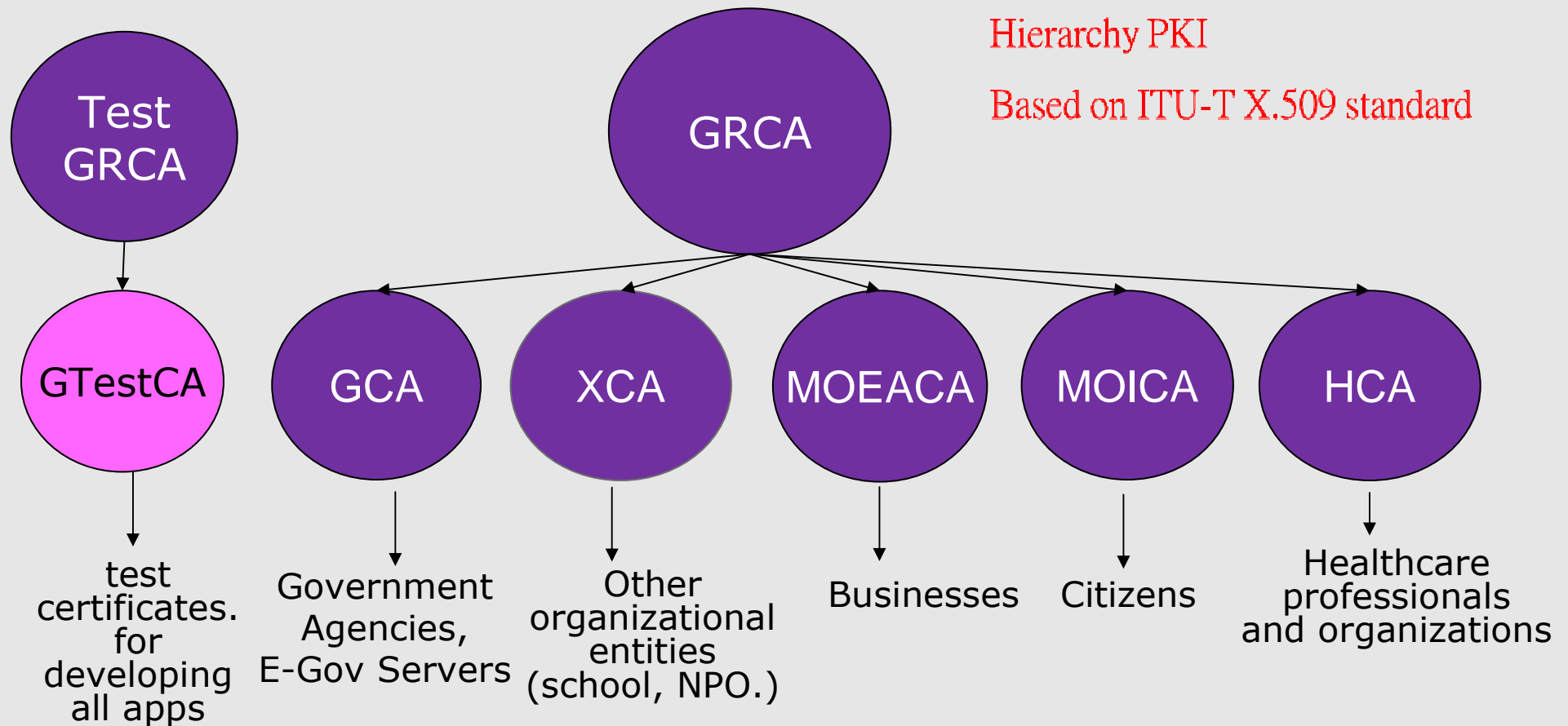
- Overview of MOICA in Taiwan
- MOICA-Enabled Applications
- Future Development of MOICA
- Conclusion

Why We Need PKI and What Is MOICA ?

- PKI (Public Key Infrastructure) Technology supports two security mechanisms, as countermeasures against network security threats, to establish an secure e-gov environment :
 - **Authentication:** to confirm the identity of the signature
 - **Encryption/Decryption:** to keep confidentiality and protect privacy
- MOICA stands for Ministry of the Interior Certification Authority (Taiwan)
 - a PKI-enabled certificate issued by MOI for G2C services.
- MOICA enables government to provide all-weather, around clock services to the public.



Taiwan Government PKI Framework (GPKI)



Status of Government CAs in Taiwan

as end of 2014/10/31

6 Million Certificates

Types	Agency In charge	Year of starting services	Number of Certificates Issued (cards)
GRCA	NDC	2002	15
GTestCA	NDC	2003	54,520
GCA	NDC	2003	171,368
XCA	NDC	2004	79,220
MOEACA	MOEA	2003	1,111,901
MOICA	MOI	2003	4,361,251
HCA	MOHW	2008	293,904

Overview of MOICA in Taiwan

MOICA



- Name : Citizen digital certificate, MOI
- First card issued : 2003/04/28
- Only citizens of 18+ years old can apply
- Non-mandatory, US\$ 8.5 per certificate
- Total investment : US\$ 10 million



Statistical facts as end of October 31, 2014

Certificate Issued : 4,361,251 Cards

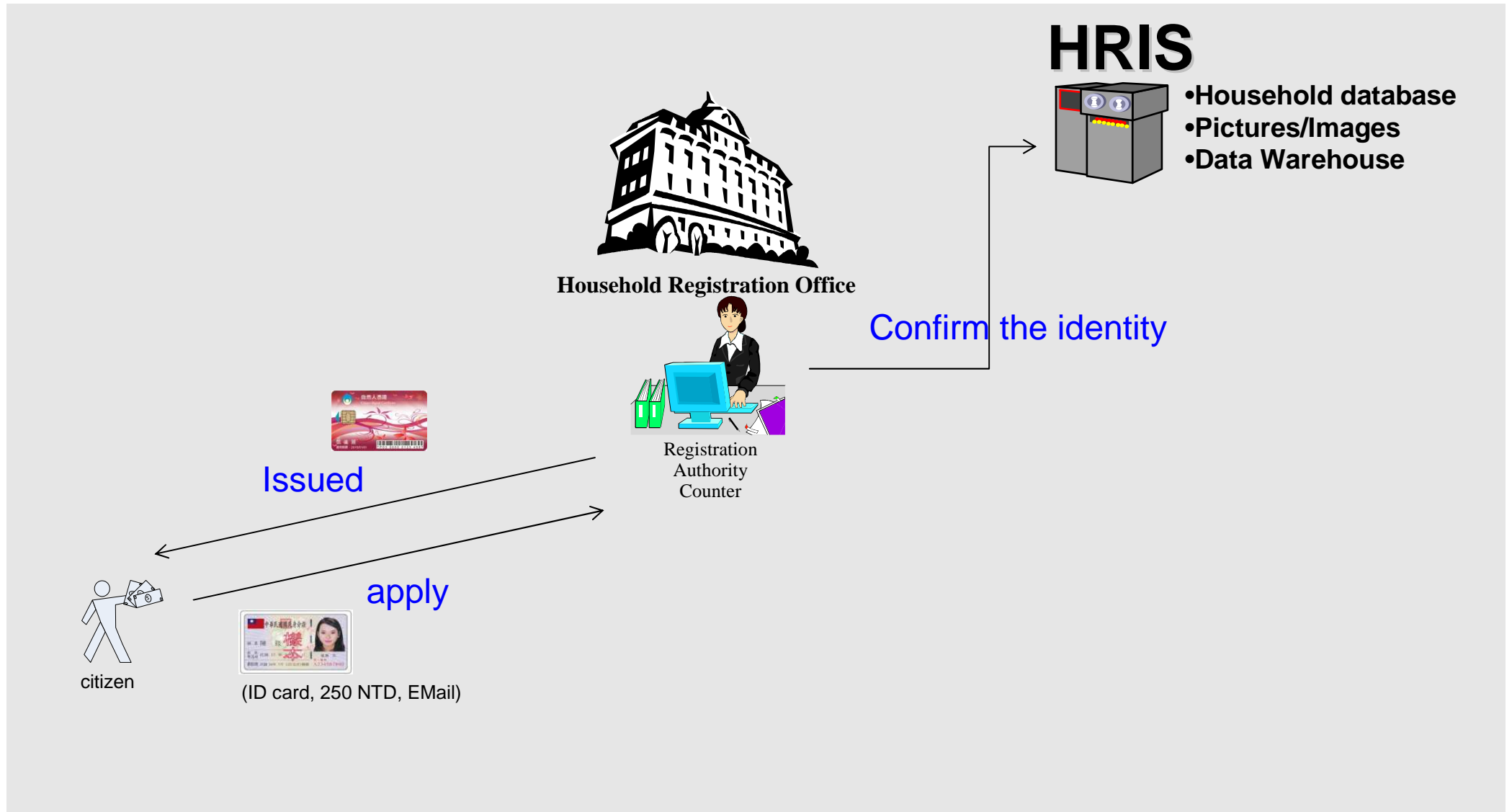
Applications for G2C and G2G: 6,460 functions

AP developed : 566 systems from 302 agencies

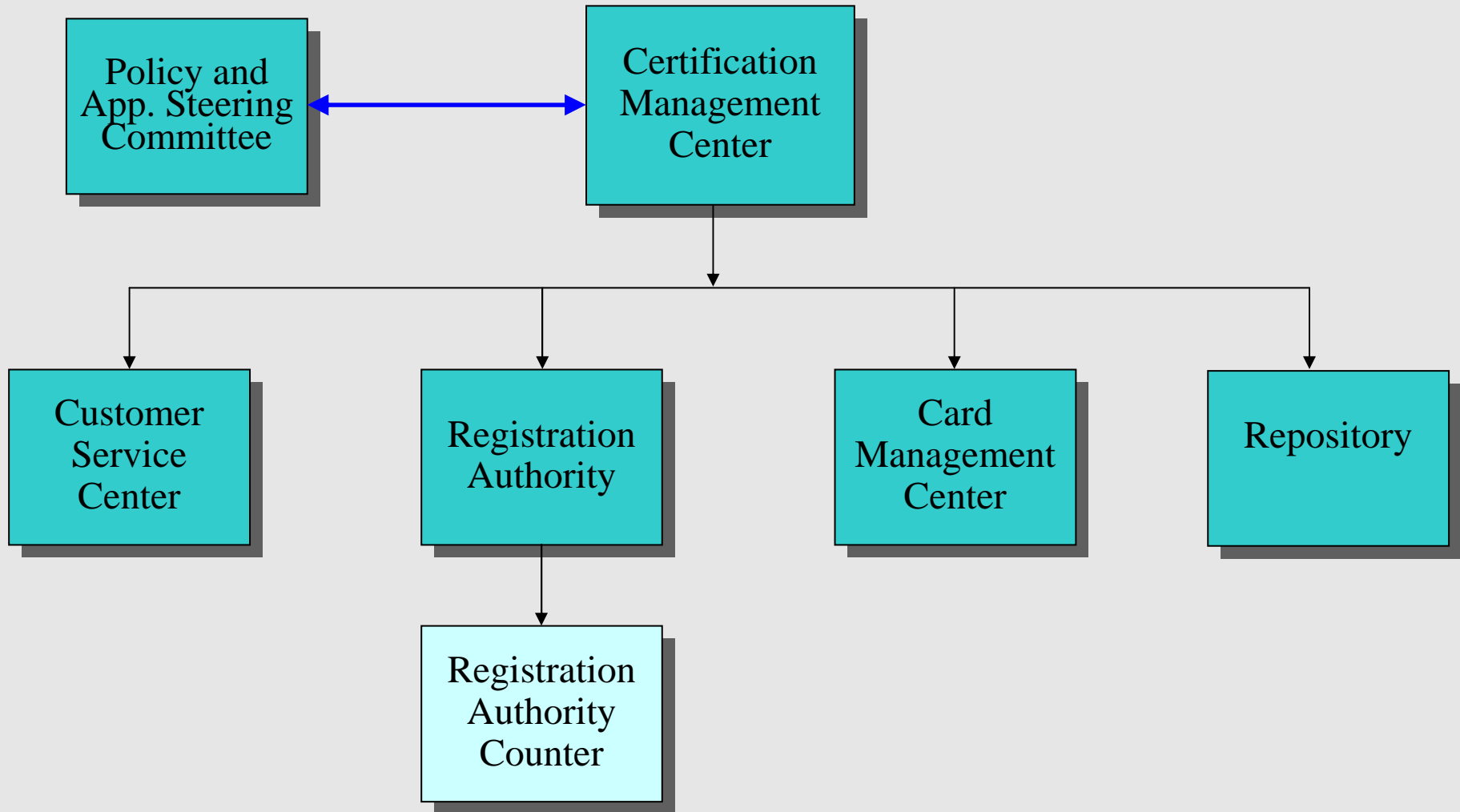
Total internet transactions: 328 million

Money saved for users: US\$ 1,100 million

Relationship of MOICA and HRIS



The Structure of MOICA



Legal Framework of MOICA

Laws and regulations need to be initiated

- Electronic Signature Act (**ESA**) and its enforcement rule
- MOICA Certification Practices Statements (**CPS**)
- MOICA Issuing Regulations
- Terms and Condition for Holding/Using MOICA
- Enforcement rules of related laws

Online Services for G2C

- Right holders: certificate subscribers, relying parties, service provider
- Limitation of liability
- Dispute resolutions and refund policy

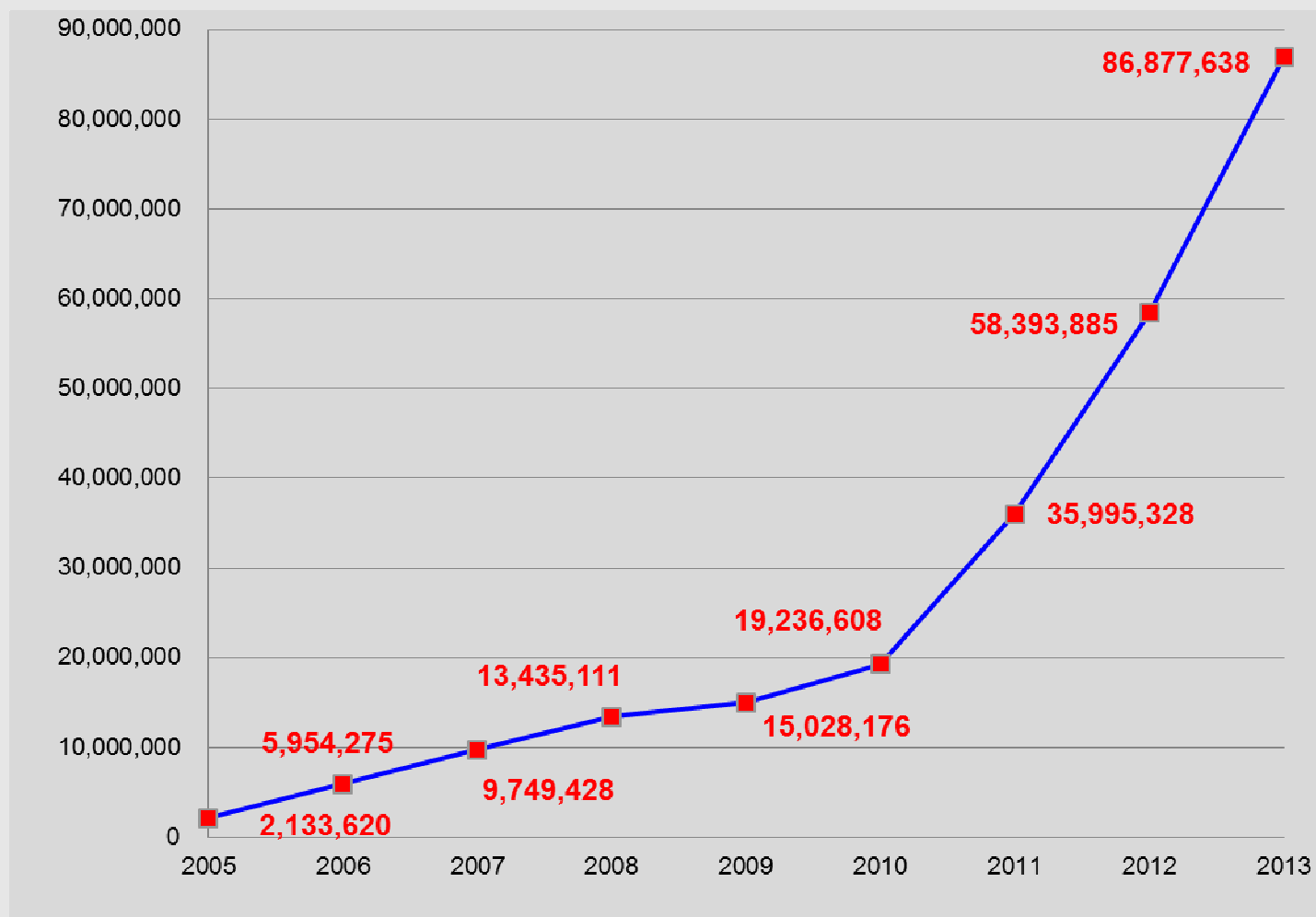
MOICA Application Statistics

AP developed : 566 systems from 302 agencies

Date : 2014/10/31

Organizations	Application System Name	Users' Entry Counts
Hospital and Social Welfare Organizations Administration Commission Ministry of Health and Welfare	Consolidated Pharmaceutical Ordering System	34,778,395
Land Administration of Ministry of the Interior	Online Land Information Service System	34,040,986
Bureau of Labor Insurance, Ministry of Labor	e-Service System	29,472,120
New Taipei City Government	New Taipei City Government e-Service	14,837,661
Department of Commerce of Ministry of Economic Affairs	Commerce Industrial Services Portal	12,915,981
National Immigration Agency of Ministry of the Interior	Entry and Departure Data Inquiry for Government Units	7,644,044
Financial Data Center of Ministry of Finance	Online Tax Filing System	5,162,228
Workforce Development Agency, Ministry of Labor	Training Information Management System	4,336,828
Department of Finance, Taipei City Government	Taipei City e-Payment System	2,975,774
National Development Council	My e-Government	34,778,395
	Others	145,117,962
	Total	328,126,492

MOICA Application Statistics by Year



MOICA-Enabled Applications

2012 : Mobile Tax-Filing by Using Citizen Digital Certificates

Individual Income Tax E-filing Services

- The Ministry of Finance has set up “Online Inquiry” at its “Taxation Portal”.
- Citizens can inquire online taxation information such as
 - comprehensive income tax, finance data
 - unpaid tax

Income tax filing: over 1,516,402

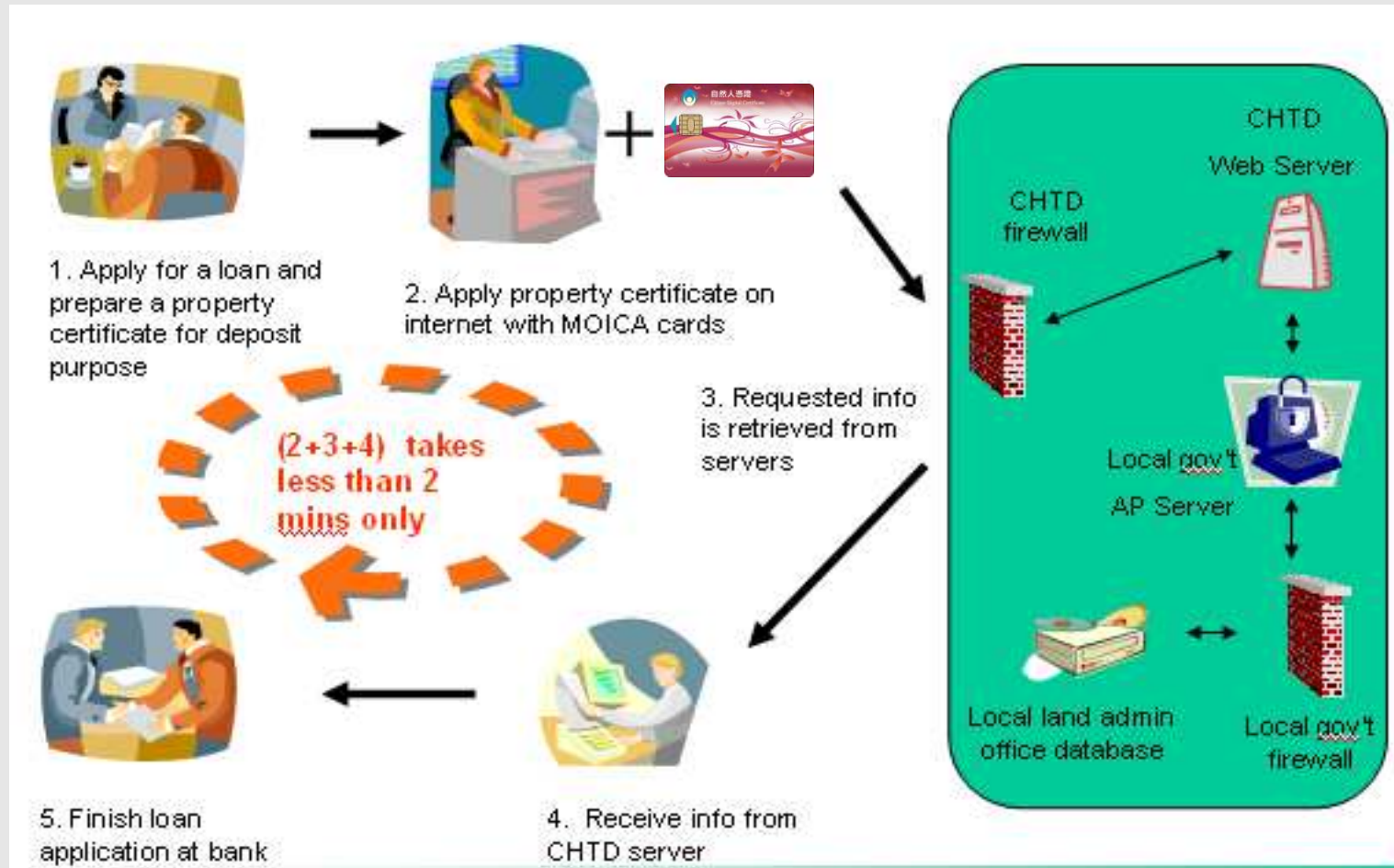
The screenshot shows the '99年度綜合所得稅電子結算申報繳稅系統' (99th Year Comprehensive Income Tax E-filing System). The interface includes a navigation menu with options like '基本資料' (Basic Information), '扶養親屬' (Dependents), '所得資料' (Income Data), '標準或列舉扣除' (Standard or Itemized Deductions), '扣除額' (Deductions), '稅額試算' (Tax Calculation), '投資抵減稅額' (Investment Tax Credit), '重購自用住宅' (Repurchase of Self-used Residence), '大陸地區所得稅扣抵' (Mainland Area Income Tax Credit), '基本稅額' (Basic Tax), '列印試算表' (Print Calculation Sheet), and '計算及上傳' (Calculate and Upload). The main form area contains fields for taxpayer details, spouse information, and contact information. A summary table at the top right displays the following data:

綜合所得總額	0	全部免稅額	0
綜合所得淨額	0	全部扣除額	0
扣繳稅額	0	可扣抵稅額	0
基本稅額	0	應納稅額	0
應納稅額	0	不備不足	0

1-2-3 finish tax declaration in 3 min

MOICA-Enabled Applications

Land Administration



MOICA-Enabled Applications

- E-Household Certificate Applying System
- ID Card Loss Report/Revocation System





New Service : KIOSK—ibon



Over 10,000 stores

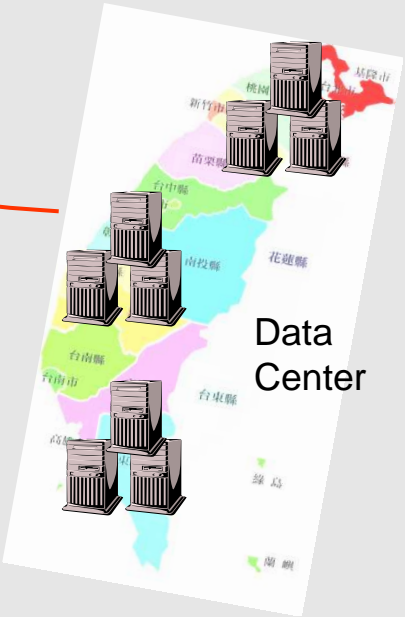


Contact IC Card Reader



Services include :

Online Service System for Laborers and Farmers、Online Land Information Service System、E-Household Certificate Applying System etc.



New Service : Real Estate transaction Price Registration System



Purpose:

- 1.To promote the transparency of real estate market price
- 2.avoid improper pricing manipulation

What:

- 1.Land Adm. Offices receive buy-sell registration.
- 2.Real estate agents sign a rental contract.
- 3.Real estate agents sign a sales agent contract and make the deals.

Who:

MOICA: Seller, Buyer or Land Registrar
MOEACA: Real Estate Agents

When:

Within 30 days after transfer of the real estate

Future Development of MOICA

● Mobile application solutions

➤ Virtual Smart Card 

➤ Combi/ICAO Card 

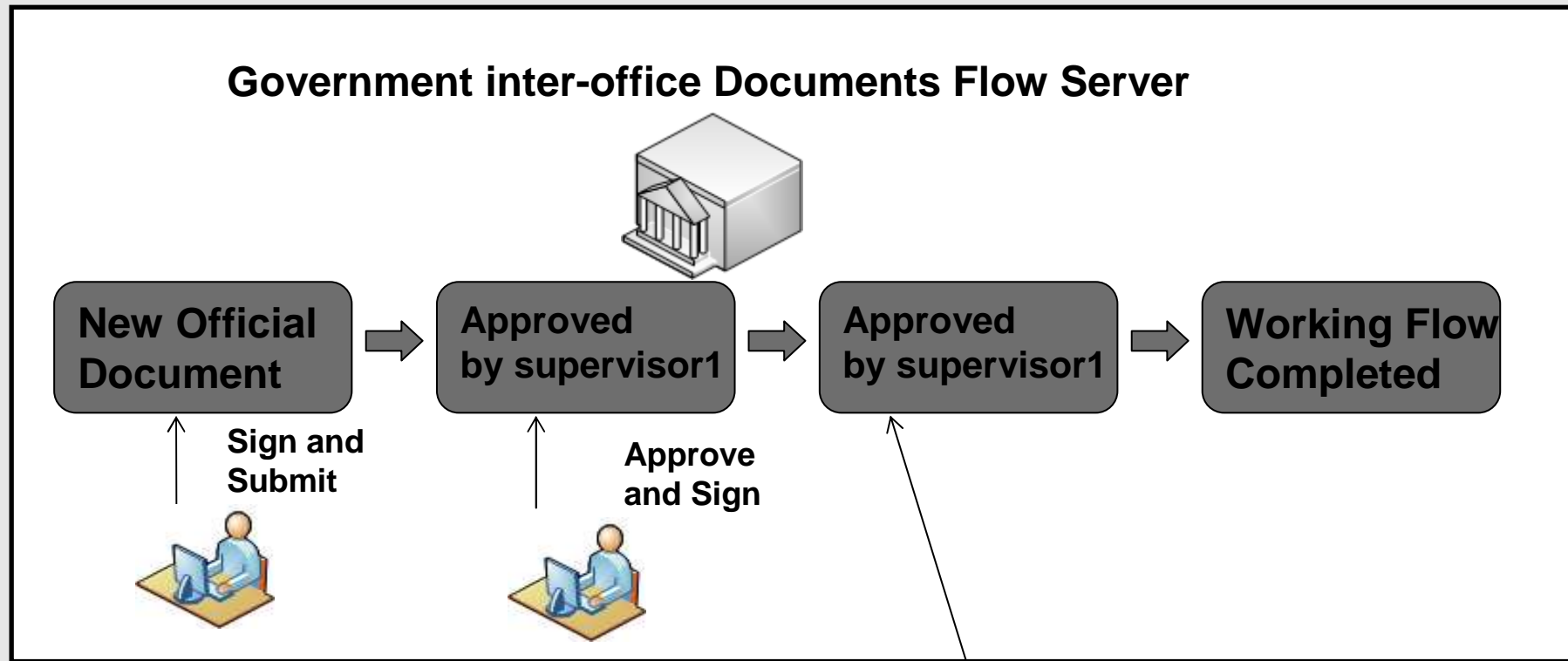
➤ NFC/SWP SIM 

● All-in-one multi-cards solutions

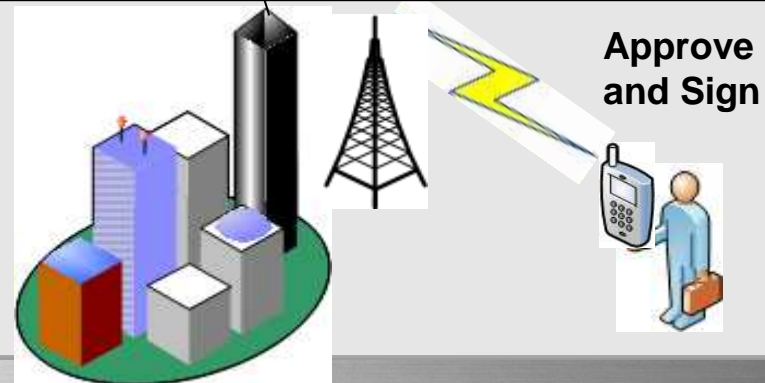
➤ Electronic Identity Card 

➤ Health Insurance Card 

Application Scenarios of Mobile PKI

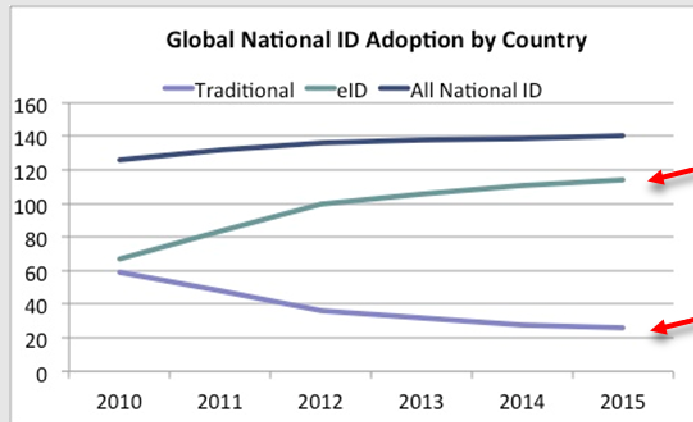


Government officers on a business trip may digitally sign urgent inter-office documents by using PKI-enabled mobile phone.





Why Electronic Identity Card

The International trend



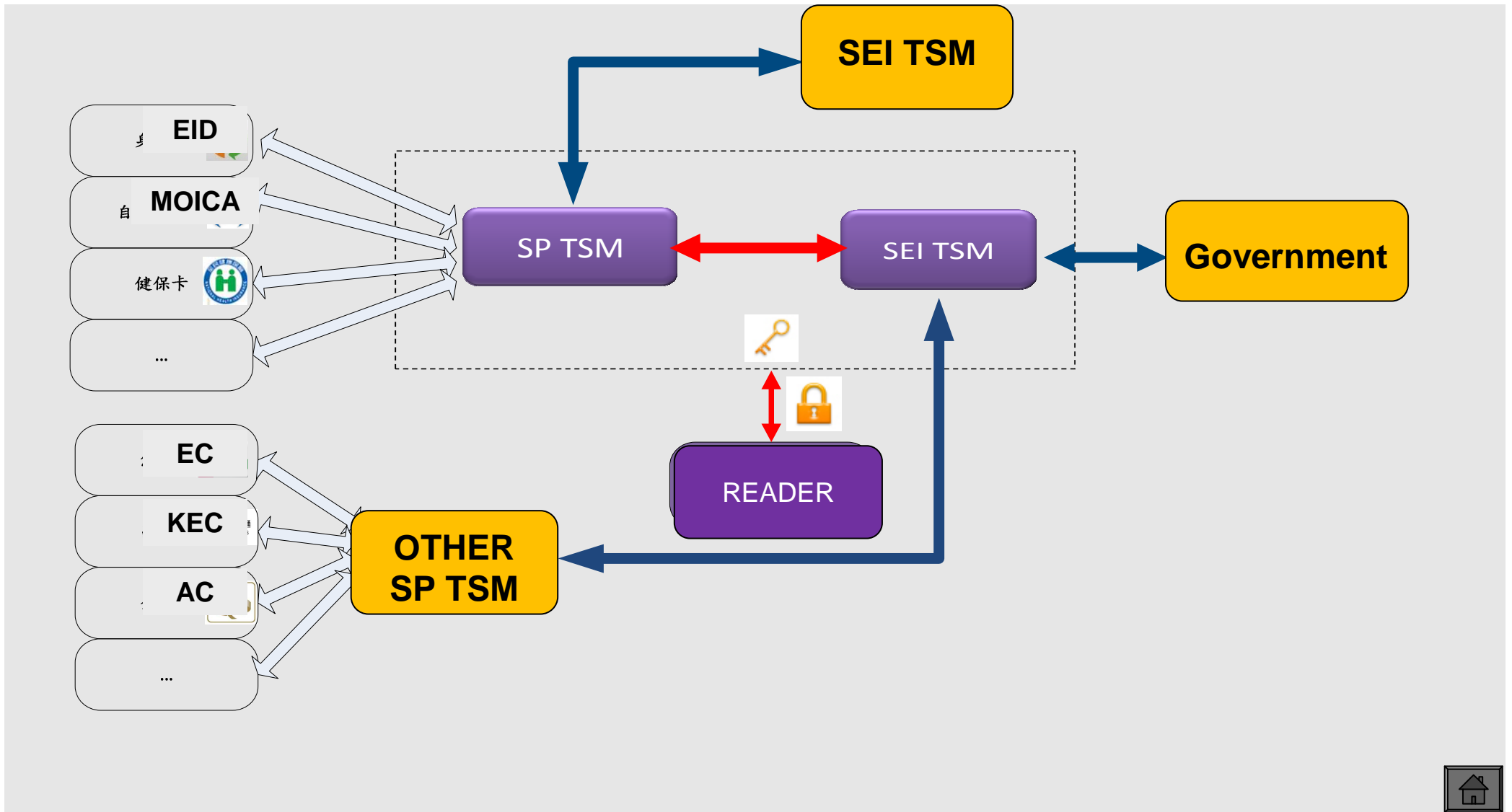
Electronic Identity card

Traditional ID card

-  With well-developed skill of EID card.
-  People are looking forward to an era of all-in-one multi-cards.

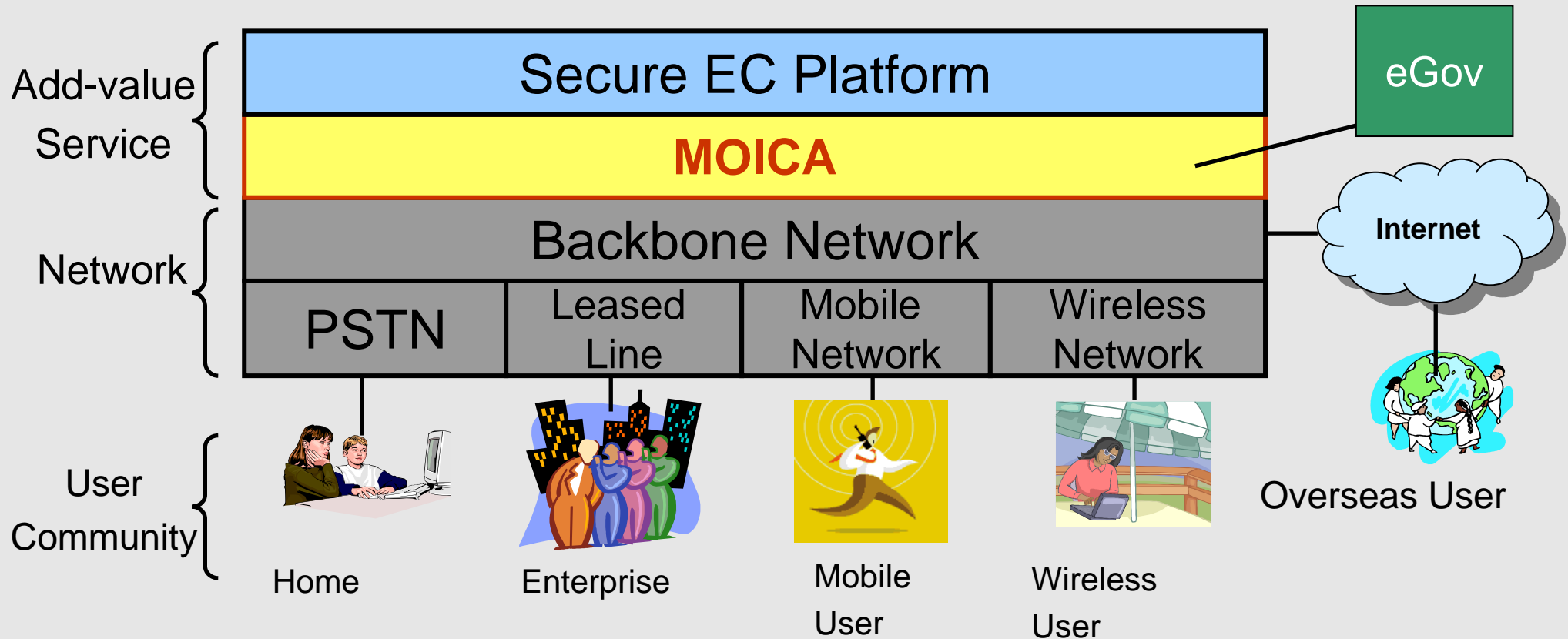


All-in-one Multi-Cards Solution



Conclusion for MOICA

- MOICA provides 24/7 life-enhancing, timely and reliable government services
- Future goal – to create efficient and effective G2B2C services in any environment



Thank you for your attention

Jeremy Shen

Director of Information Center

Ministry of the Interior, ROC

moi0795@moi.gov.tw

<http://moica.nat.gov.tw/en/index.html>