

# Seminar: How are Identity Regulations Shaping the Digital World? In-Depth Overview of PSD2, eIDAS and New Upcoming Identity Initiatives



February 27 2018

Time: 16.30 – 18.30 CET



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# US Digital Identity Landscape

# NIST's vision for trusted identities

NIST works with its partners to drive trust, convenience, and innovation in the digital identity marketplace by promoting government and commercial adoption of privacy enhancing, secure, interoperable, and easy-to-use solutions.

The NIST Pilot Program leverages commercial innovations to accelerate the proliferation of the trusted identities market. The guiding principles were subsequently codified in the [Cybersecurity Enhancement Act of 2014](#):

- improve interoperability among identity management technologies;
- strengthen authentication methods of identity management systems;
- improve privacy protection in identity management systems, including health information technology systems, through authentication and security protocols; and
- improve the usability of identity management systems.



# No national identity regulations

There are no U.S.-wide regulation or guidelines governing digital identity for consumers.

NIST advances the vision for trusted identities by:

- Working with federal regulatory agencies on digital identity in their regulations, requirements, and guidelines.
- Partnering with the private sector to catalyze the market.
- Working with industry to reach consensus in standards development organizations.



# Federal government: NIST Digital Identity Guidelines

NIST publishes Special Publication 800-63-3: *Digital Identity Guidelines*.

- The document suite covers the components of digital identity: identity proofing, authentication, and federation.
- Federal agencies are required to comply with SP 800-63-3. Some private sector organizations use the guidelines as best practices.
- Organizations that conduct business with the US government may also be required to comply.



# Financial Services: Dept. of Treasury, Federal Financial Institutions Examination Council (FFIEC)

The FFIEC is an interagency body that makes recommendations to promote uniformity in the supervision of financial institutions.

- Recommends performing risk assessments, implementing strategies for mitigating identified risks, and raising customer awareness of potential risks, but does not endorse any specific technology for authentication.
- Provides guidance for determining compliance with Anti-Money Laundering (AML) and Know Your Customer (KYC) requirements.

FDIC recently reinforced the importance of identity controls in the financial sector.



## Healthcare: Dept. of Health and Human Services, Office for Civil Rights (OCR) & Office of the National Coordinator for Health Information Technology (ONC)

The **Health Information Portability and Accountability Act (HIPAA)** provides rules and regulations protecting the privacy and security of health information.

- Requires covered entities and businesses implement reasonable and appropriate authentication procedures to verify a person or entity seeking access to electronic protected health information.
- Organizations often use SP 800-63 for guidance in complying with its authentication requirements.

The **Trusted Exchange Framework and Common Agreement (TEFCA)** is a proposal recommending a trust framework for the exchange of Electronic Health Information.

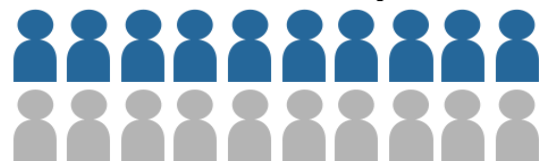
- Would enable patients to electronically access their health information without special effort, leveraging SP 800-63-3-compliant identity proofing and authentication technologies.

NIST partnered with ONC on an Identity Pilot at Cedars-Sinai Hospital in Los Angeles.

- The pilot is deploying federated identity and authentication between healthcare organizations to share personal health information across organizations.
- Releasing a publication with ONC on how healthcare organizations can implement trusted identities.

# NIST's Pilot Program has funded over 23 identity pilots

over **9.6 million**  
individuals impacted

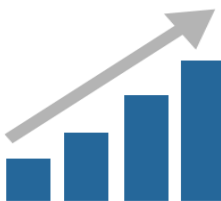


**200+**

partner  
organizations  
convened



advances across



**12**

market  
sectors

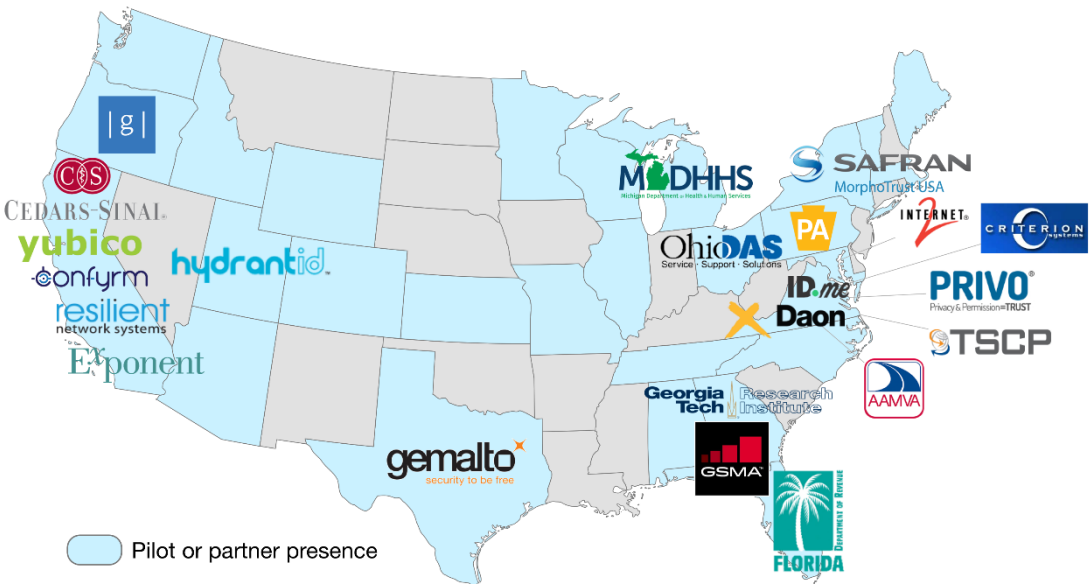


development of

**16**

multi-factor  
authentication  
solutions

Since 2011, the Pilot Program has seeded the market with trusted identity solutions across a number of verticals and industries, funding 24 pilots to address barriers in the Identity Ecosystem and catalyze the marketplace of solutions.





# Mobile Network Operators: GSMA Mobile Connect 4 US Pilot

GSMA partnered with AT&T, Sprint, T-Mobile USA, and Verizon to pilot a common approach to use mobile devices for identity and access management.

The goal:

- Enabling relying parties to easily accept identity solutions from any of these major network operators.
- Reduce significant barriers to online service providers accepting mobile-based credentials.

The pilot includes:

- Financial sector use case with Visa.
- Consumer goods use cases with InterBev to demonstrate age verification for age-restricted products.
- Healthcare use case with San Diego Health Connect enabling paramedics to access electronic health records remotely from ambulances and enable patient and doctor services through a Health Information Exchange.



# Mobile Connect International Pilot

- The GSMA MC4US project is working on an international pilot demonstrating how citizens can assert their identity across borders over a mobile network in a more efficient, trusted manner within the financial sector.
  - Identifying attributes needed to support processes such as AML and KYC, and to validate the process by which to trust the Operator's data.
  - Mapping eIDAS to US, Canadian, and UK identity frameworks.



# International Digital Identity Standards

US NIST, UK Cabinet Office, and Canada Treasury Board provided joint submission to four ISO open study periods to revise and develop new ISO digital identity standards, based on standards mappings and approaches from SP 800-63-3 and UK GPG 44/45.

- Call for contributions for a new ISO WG5 standing document (SD) for an identity-related standards landscape to address alignment and synchronization across ISO digital identity standards.
- Next steps: Expanding the mapping to include eIDAS and ongoing efforts.



Contact – NIST wants to hear from you!



#IoTSecurityNIST



iotsecurity@nist.gov



<https://www.nist.gov/programs-projects/nist-cybersecurity-iot-program>

**Special thanks to Elaine Newton and Mike Hogan for their contributions to this presentation**



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Electronic Governance

# Digital identity : a catalyst for a better socio-economic progress

GSMA Mobile Connect Seminar  
Tuesday , 27 February 2018

*Ibrahim Kholilul Rohman*

The views and **opinions expressed** in this presentation are those of the author and do not necessarily reflect the official policy or position of UNU-EGOV



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*Based on the latest estimates in 2017, there are still 1.1 billion people around the globe live without ID*

- The World Bank (2017)

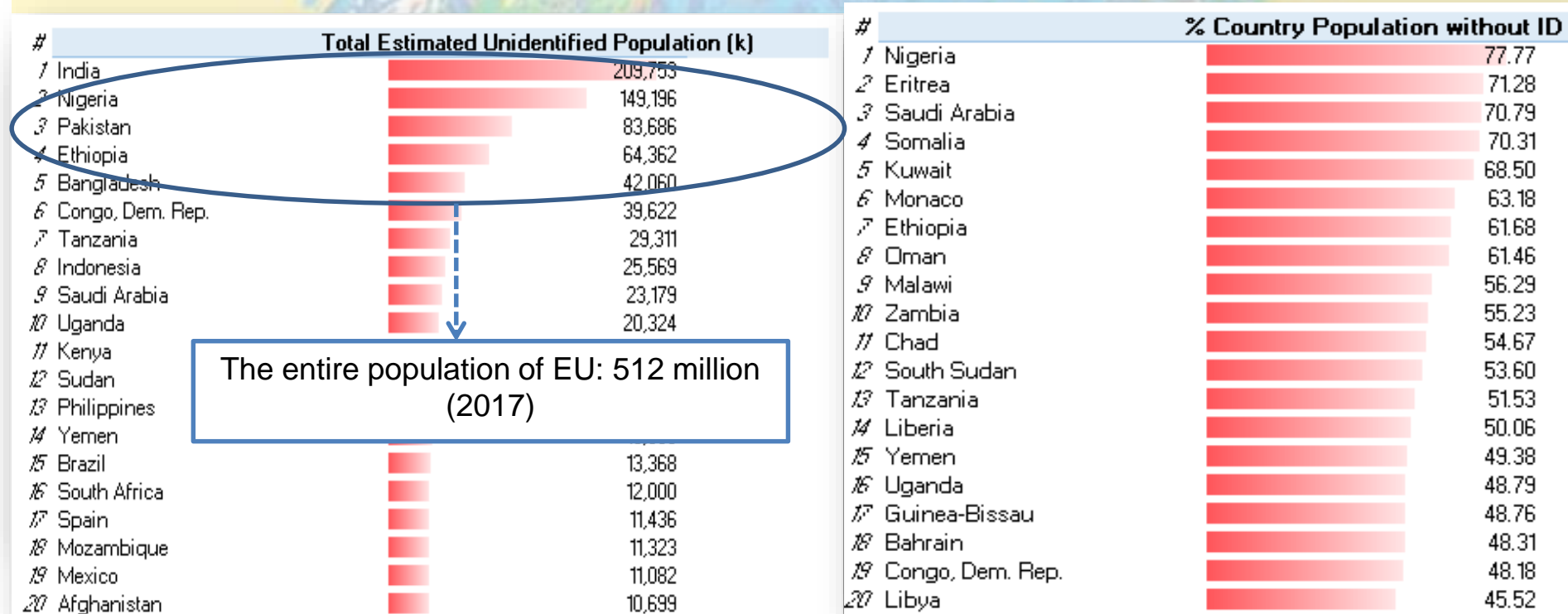


“  
*The economic cost of cyber attacks in Asia was about 81 billion USD (100 million USD per day).* - GSMA(2017)

# Identity as a global problem



## *People living without ID across the globe*



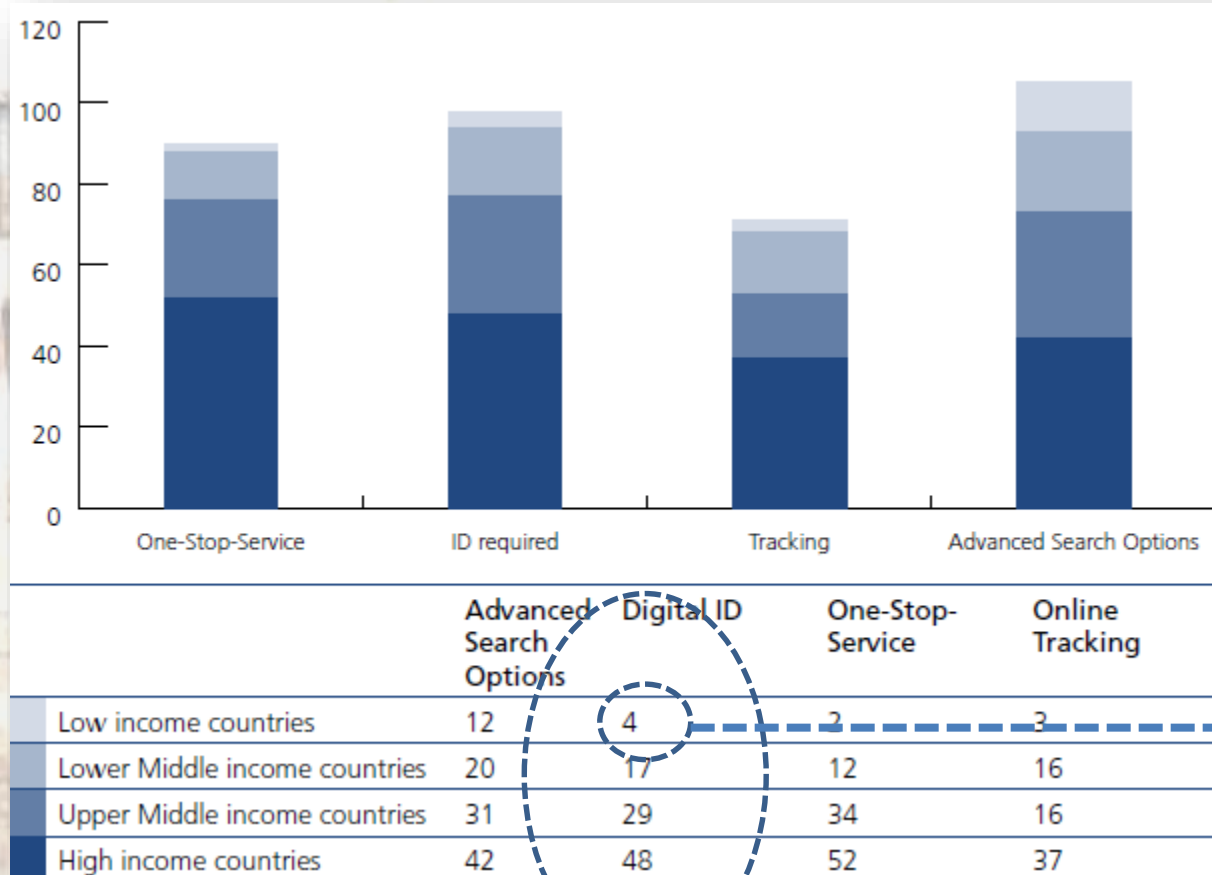
Source : World Bank's ID4D



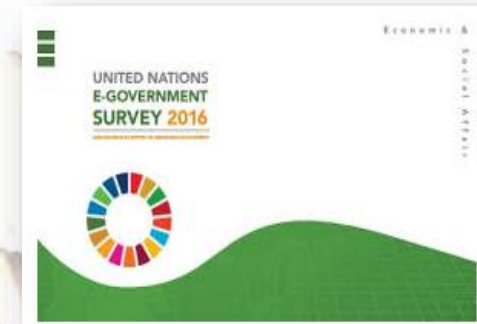
# Identity as a global problem



*Countries offering WoG-related online features, by income level*



Source: UN E-gov survey (2016)



**Out of 31 countries**

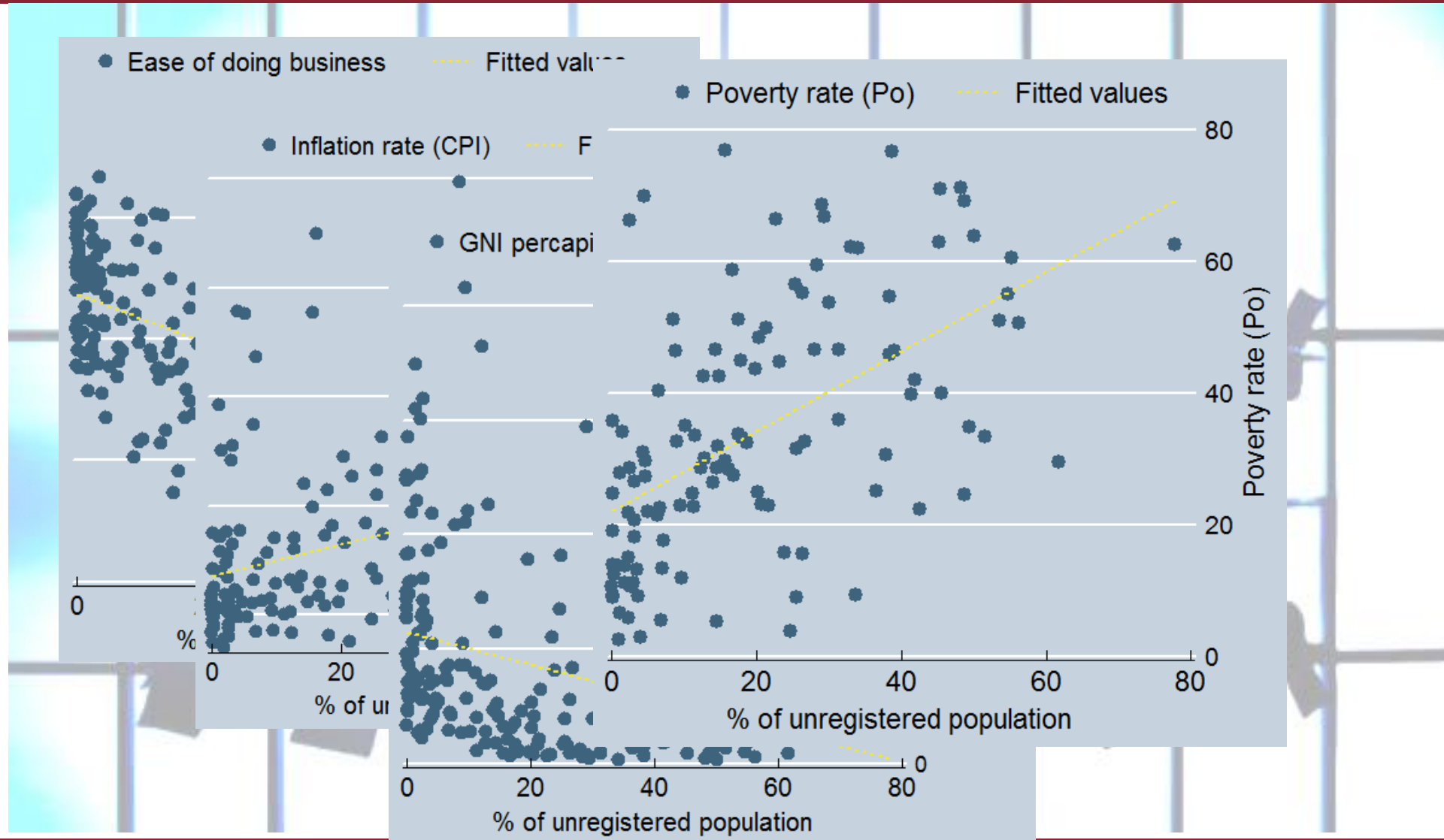


# Why is it important?

## 1. Governance indicators



## Why is it important? 2. Socio economic indicators



## I. Identity for a better governance

*Identity is the first step for a better public service delivery*

**“eIDs and eSignatures enable online service delivery through secure identification and signature of electronic documents”**

In Estonia, it yields to 2% of GDP in time saving (Go. Office of Estonia, 2015).

Less bureaucracy has saved 0.9% of GDP – from 3.7 to 2.8% in the Netherlands with other like the UK achieving similar results (World Bank Group, 2007).

**“Lower the risk of corruption”**

The costs of running elections and limiting the potential for fraudulent voting (e.g. In Estonia, approx. 1/3 of votes cast online due to convenience )

## I. Identity for a better governance



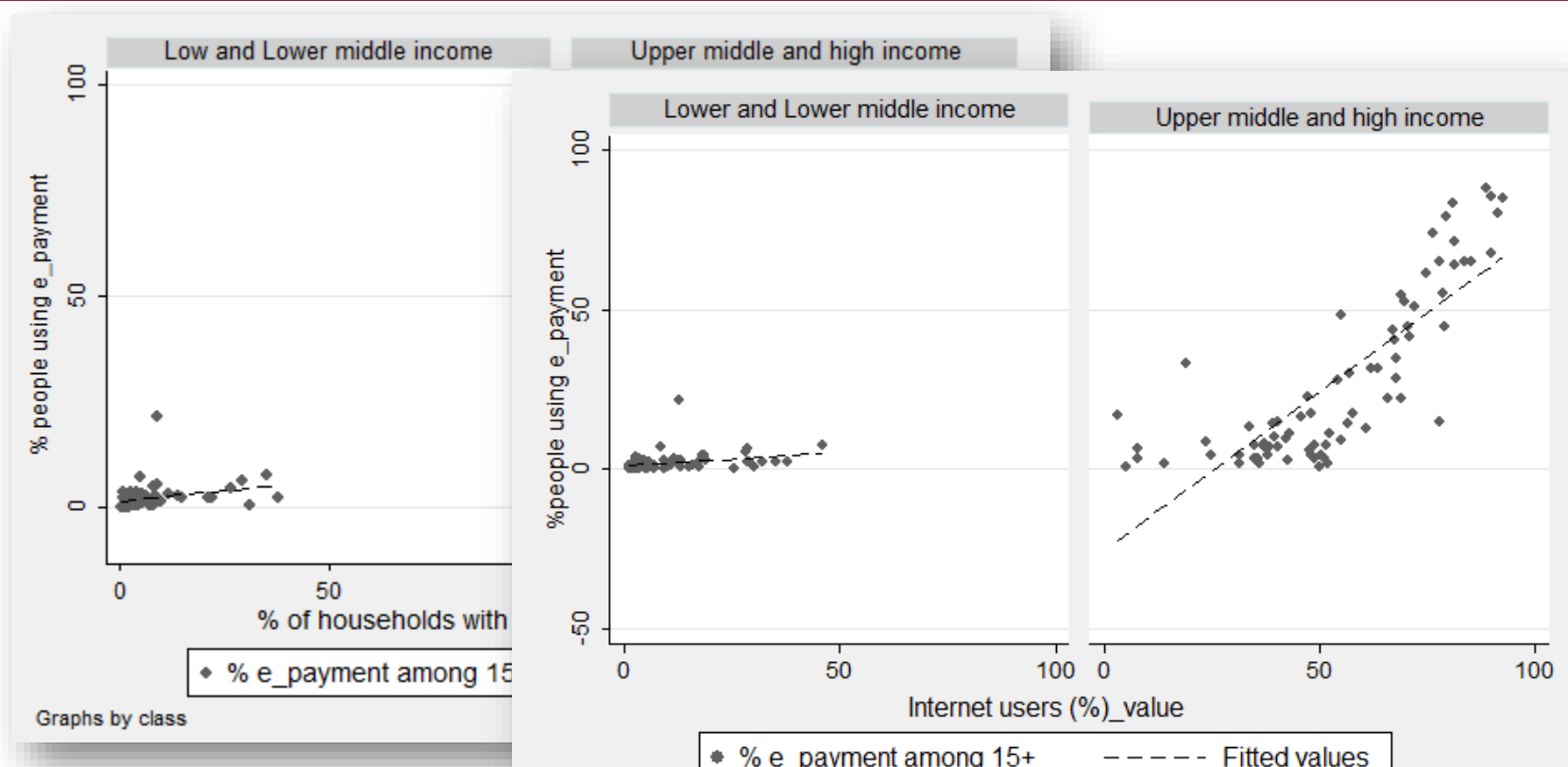
*Identity is the first step for a better public service delivery*

**“Increase productivity, minimize errors , lower cost of correcting mistakes”**

The potential of better governance (BIG and OPEN data) estimated to 1.9% of GDP in 2020 in Europe (demosEUROPE & WISE Institute, 2014)

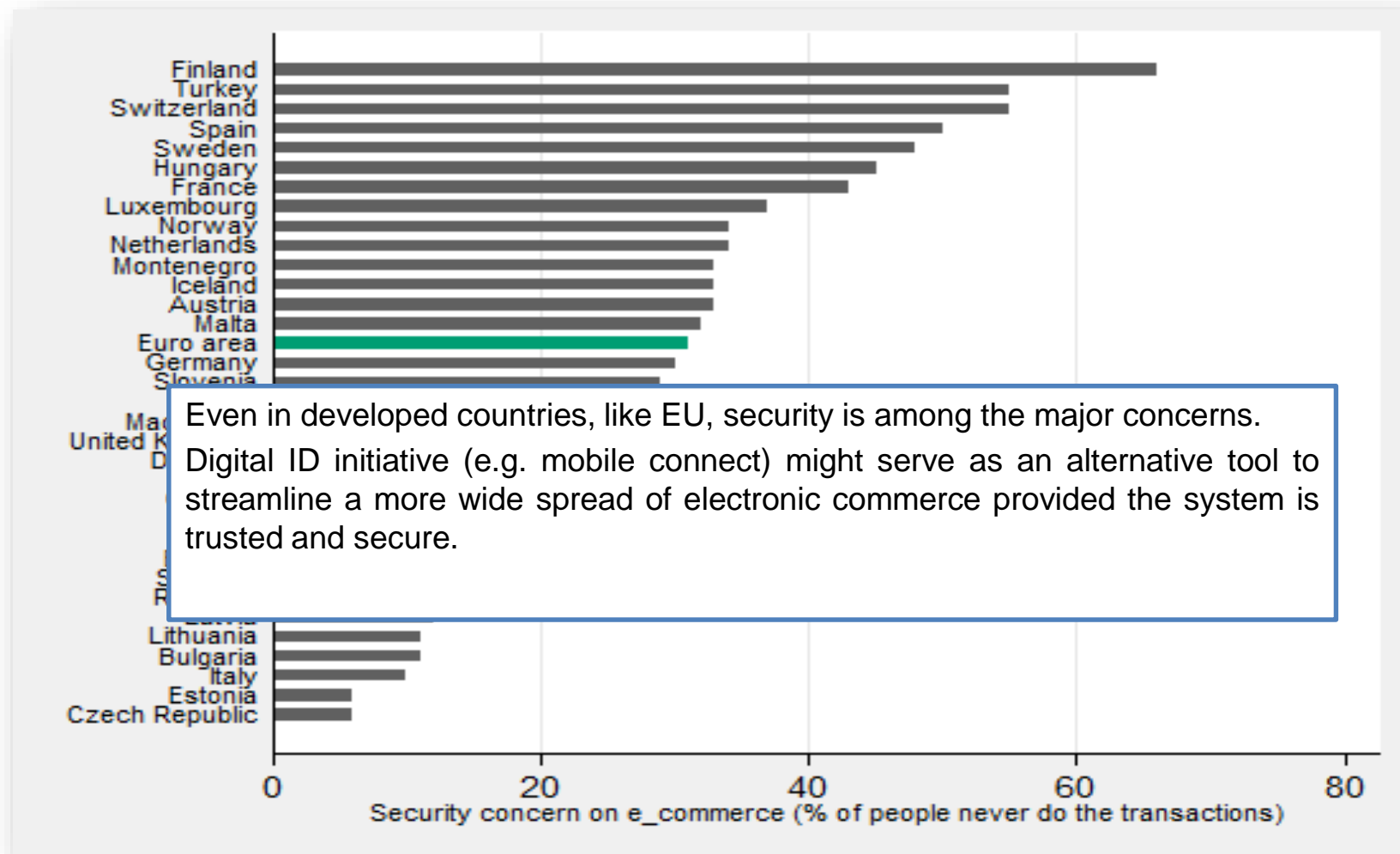
In Denmark, the reuse of data is expected to save € 3 million annually (Grunddata, 2015).

## 2. Identity and electronic payment



Clearly ICT provision plays as an important pre-requirement to support the diffusion of electronic payment and indirectly e-commerce.

# Identity and security to spur e-commerce



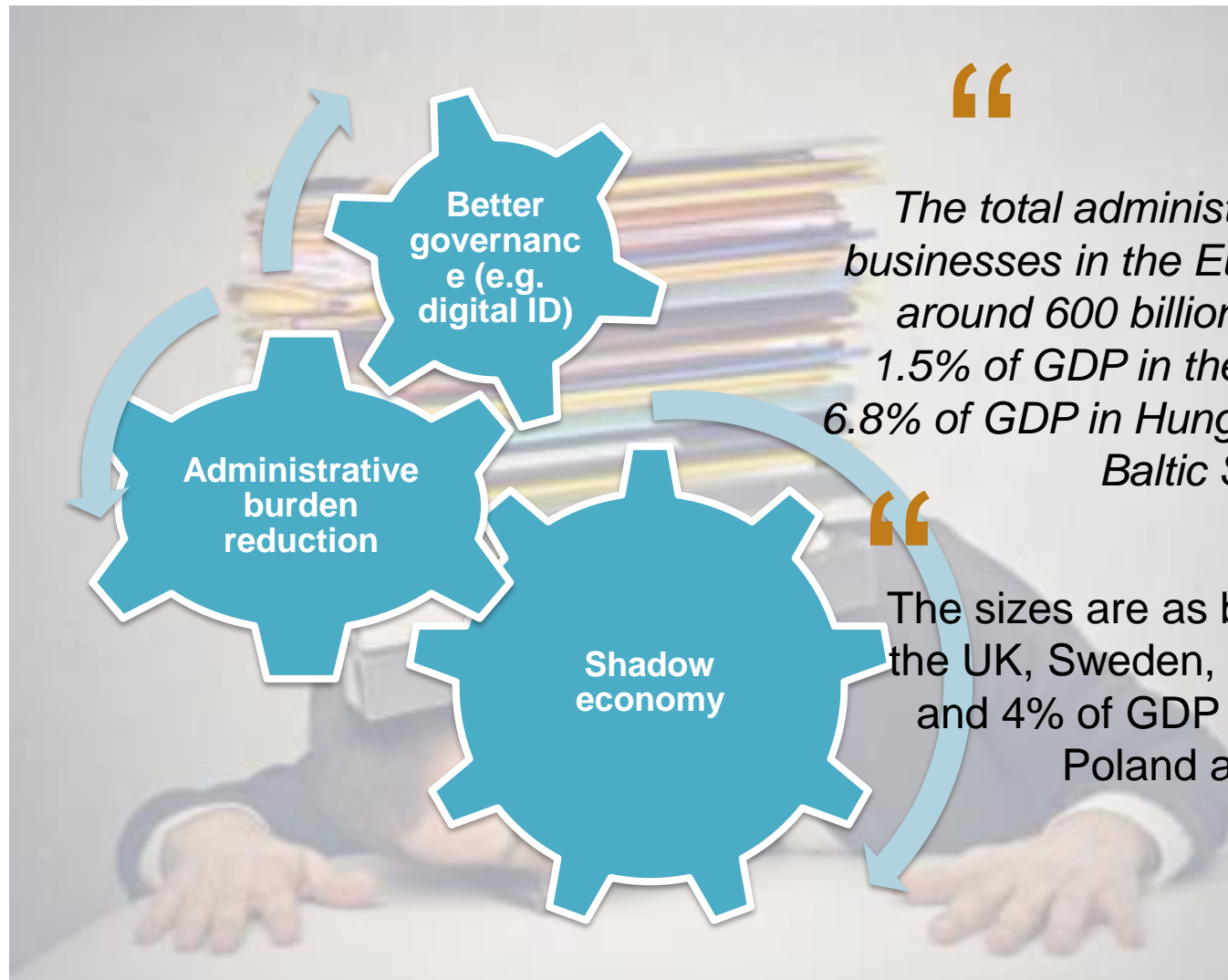
Source : [EUROSTAT](https://ec.europa.eu/eurostat)



## 4. UNU-EGOV empirical analysis



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*The total administrative burden on businesses in the European Union was around 600 billion euros per year: 1.5% of GDP in the UK and Sweden 6.8% of GDP in Hungary, Greece and the Baltic States* -Undheim (2007)

“

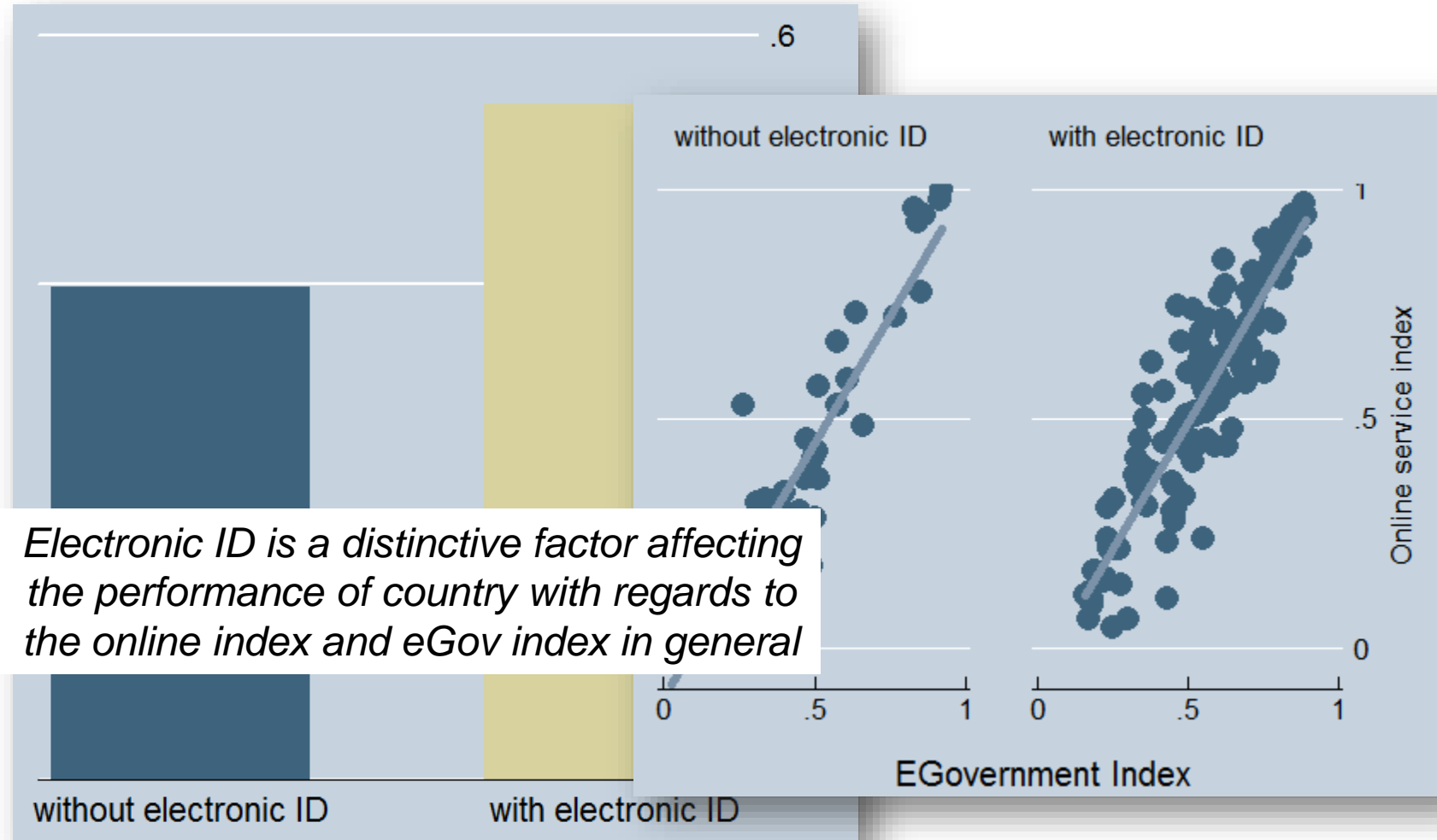
*The sizes are as big as 2.4% of GDP (in the UK, Sweden, Finland and Denmark) and 4% of GDP (in Hungary, Greece, Poland and Slovenia).*

-Gelauf & Lejour(2006)

# EGOV index and identity



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## 4. UNU-EGOV empirical analysis



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Electronic Governance

Variables	Overall	Starting Business	Deal Construct Permits	Getting Electricity	Register Property	Paying Taxes
EGDI	0.134***	0.352***	0.131*	0.178***	0.0691	0.188**
2005		2.941***				
2008		9.180***			4.603***	
2010		19.00***	4.020***		8.592***	1.787
2012	2.883***	24.26***	6.158***	2.944**	10.60***	5.019***
2014	6.432***	30.13***	9.726***	6.548***	13.78***	7.119***
2016	4.921***	39.51***	5.843**	-6.669***	4.528	8.093***
E-gov_index.2005		-0.0257				
E-gov_index.2008		-0.0309			-0.0411*	
E-gov_index.2010		-0.110**	-0.0181		-0.0477	0.0342
E-gov_index.2012	-0.0491***	-0.193***	-0.0619*	-0.0644***	-0.0688**	-0.0118
E-gov_index.2014	-0.0802***	-0.261***	-0.0842**	-0.0850***	-0.105***	-0.00606
E-gov_index.2016	-0.0557***	-0.379***	-0.00711	0.0962**	0.00300	0.00337
Gov_C	-0.196**	-0.192	-0.189	-0.127	-0.211	-0.276**
Openness	0.0298**	-0.00187	0.0263	0.0194	0.0285	-0.00831
Gov_Effect	5.102***	1.743	5.847***	8.496***	4.340**	7.758***
# of countries	170	174	172	172	174	172
Observations	662	1,102	828	662	969	828
Model	FE	FE	RE	RE	FE	FE
<i>Marginal effects of e-gov</i>						
2004		0.352***				
2005		0.326***			0.0691	
2008		0.321***	0.131*		0.028	0.188**
2010	0.134***	0.242***	0.112	0.178***	0.021	0.222**
2012	0.085**	0.159**	0.069	0.114**	0.000	0.176**
2014	0.054*	0.091	0.046	0.093*	-0.035	0.182**
2016	0.078**	-0.027	0.123**	0.274***	0.072	0.192**

If countries increase the eGov index by 1 pp, they might expect a reduction in SE by 20 pp (Veiga and Rohman, UNU-EGOV, 2017)

If countries increase the eGov index by 1 pp, they might expect several impact on doing business indicators ranging from 18-35 pp (Martins and Veiga, UNU-EGOV, 2017)

- ❑ **Identity is still a global problem:** Globally, 1.1. billion people still have no official identity, much less a digital identity. Of this total, 450 million alone live in the Asia region.
- ❑ **The direct and indirect impacts are real:** facilitating better governance and socio-economic progress
  - ❑ Trust and security are believed as key factors in e-commerce maturity where eID might play important role
- ❑ **Better ID policy contributes to better governance** and might mitigate a greater size of informality and increase business efficiency.
- ❑ Only 4 out of 31 low income countries have offered digital ID (about 13%) while they are still battling against the gigantic size of the shadow economy (as big as 51% of their GDP).

## ❑ An alternative ID strategy (e.g. Mobile Connect)

- ❑ It may provide security and authentication, secure and convenience accesses to users in several scenarios (billing, payments, public engagements, etc.)
- ❑ **BUT**, to be implemented in the emerging economies:
  - ❑ How to ensure that this system will cover the entire population?
  - ❑ How to deal with data security: who will keep the data and which institution is entitled to audit the system.





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# Key Trends for Digital Identity: A Smart Nation's Perspective

Jacqueline Poh

Chief Executive  
Government Technology Agency

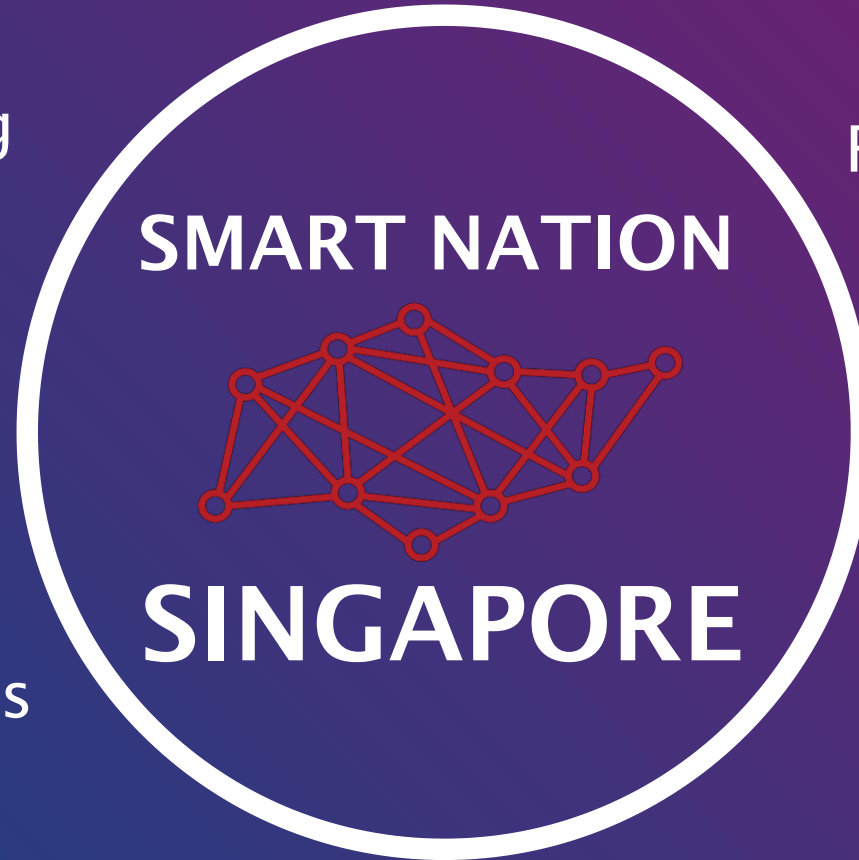


GOVTECH  
SINGAPORE

February 2018



Better Living  
Stronger  
Communities  
More  
Opportunities



For Economy  
For Society  
For Government

# NATIONAL DIGITAL IDENTITY (NDI)



Trade



eCommerce



Government



Financial



Health



Travel



Security



Small Businesses

Issued to  
citizens & residents



OUR  
DIGITAL IDENTITY  
FOUNDATION

Issued to  
businesses







Trusted Digital Services

Open and Interoperable  
Authentication & Authorisation

Trusted Identity  
*Secure & Pervasively-Issued  
Digital Credential*

Trusted Data  
*Personal & Business data*

Led by Private Sector

Led by Government

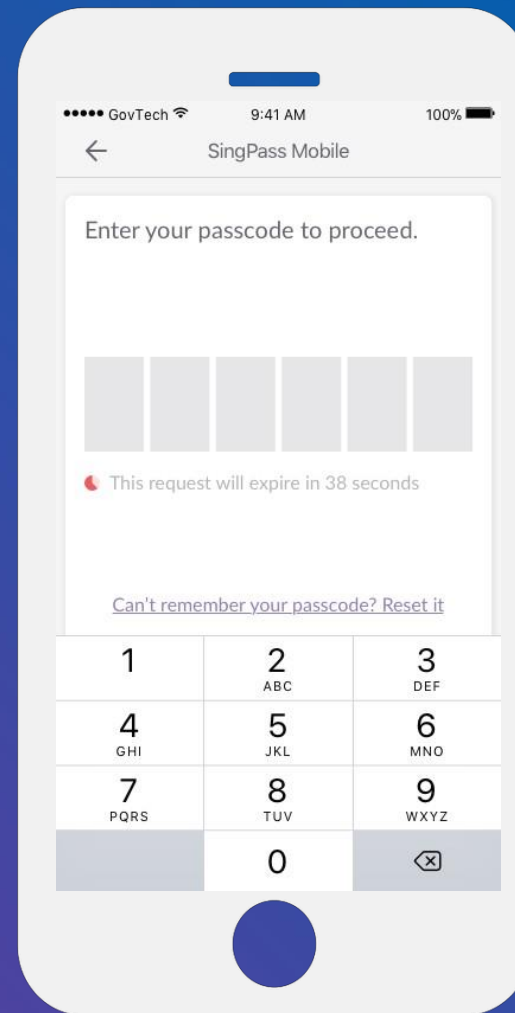


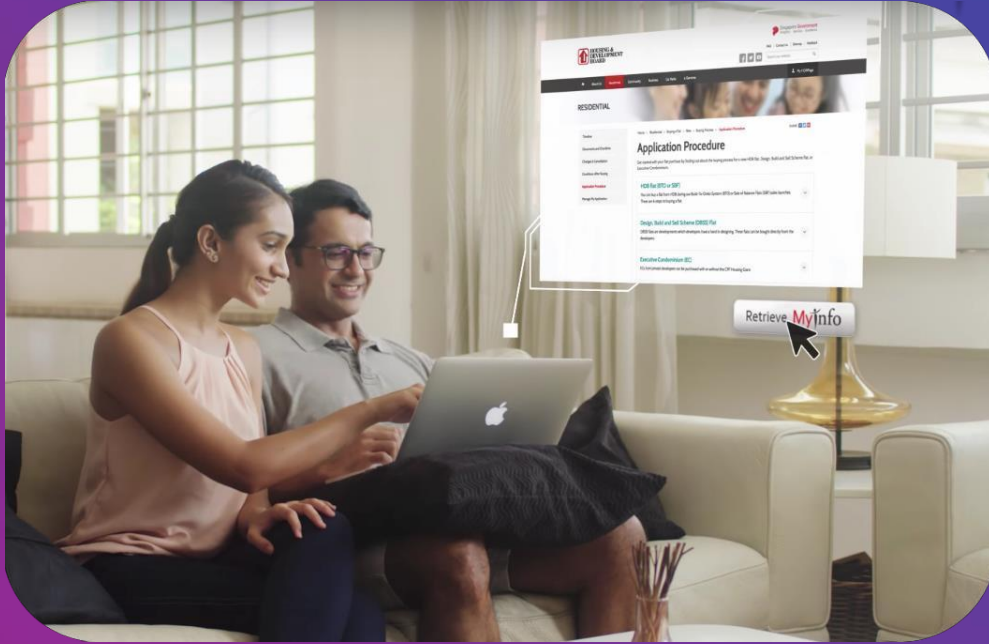
Usability

#1  
READY FOR  
ADOPTION



Security





**NDI**  
to be a  
*Digital Enabler*

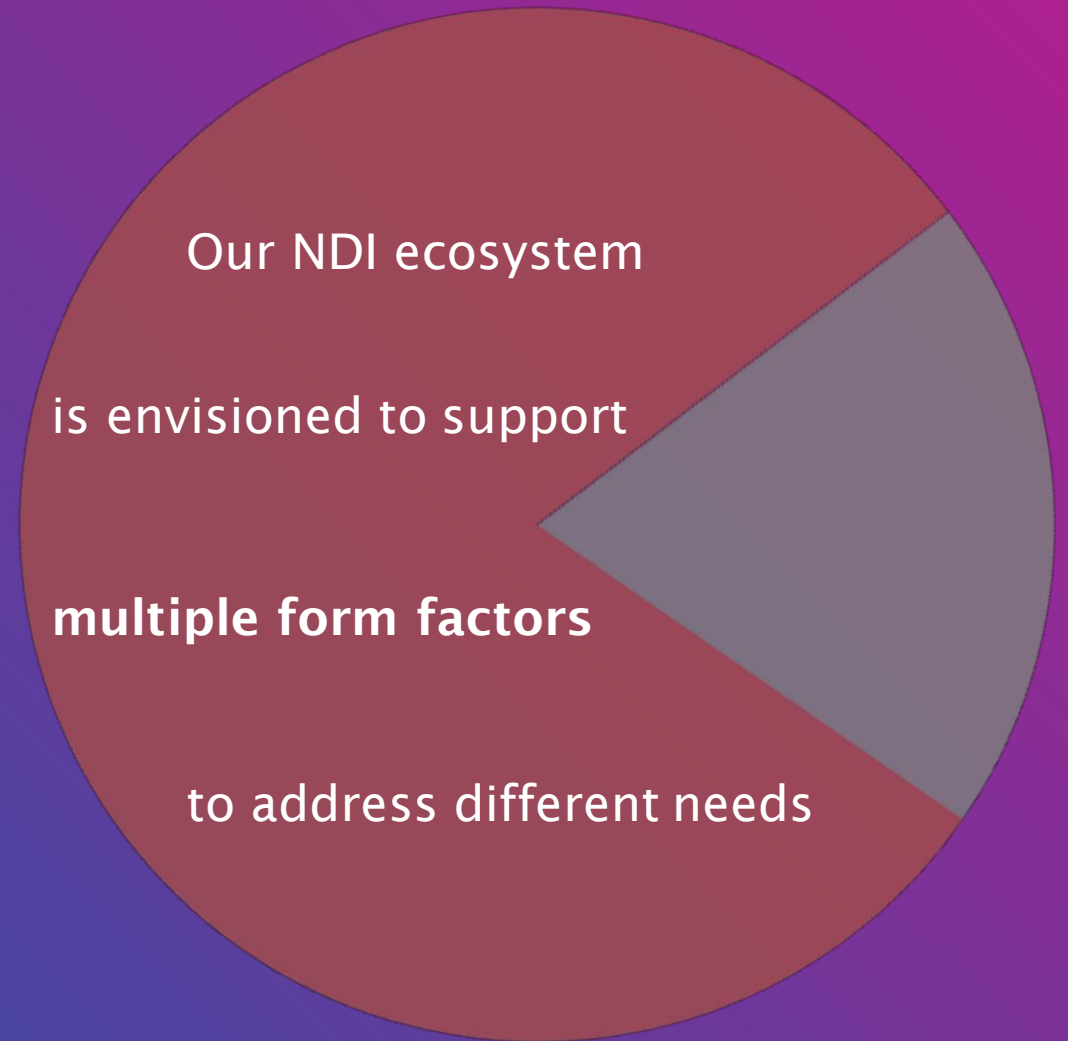
- ✓ Open & Interoperable
- ✓ Industry standards & guidelines
- ✓ Trust framework
- ✓ Clear legislative framework

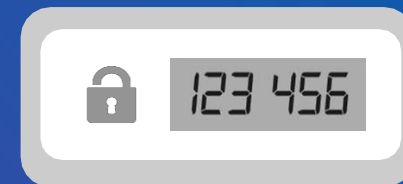
**#2 READY FOR GROWTH**





### #3 READY FOR INCLUSION







#5

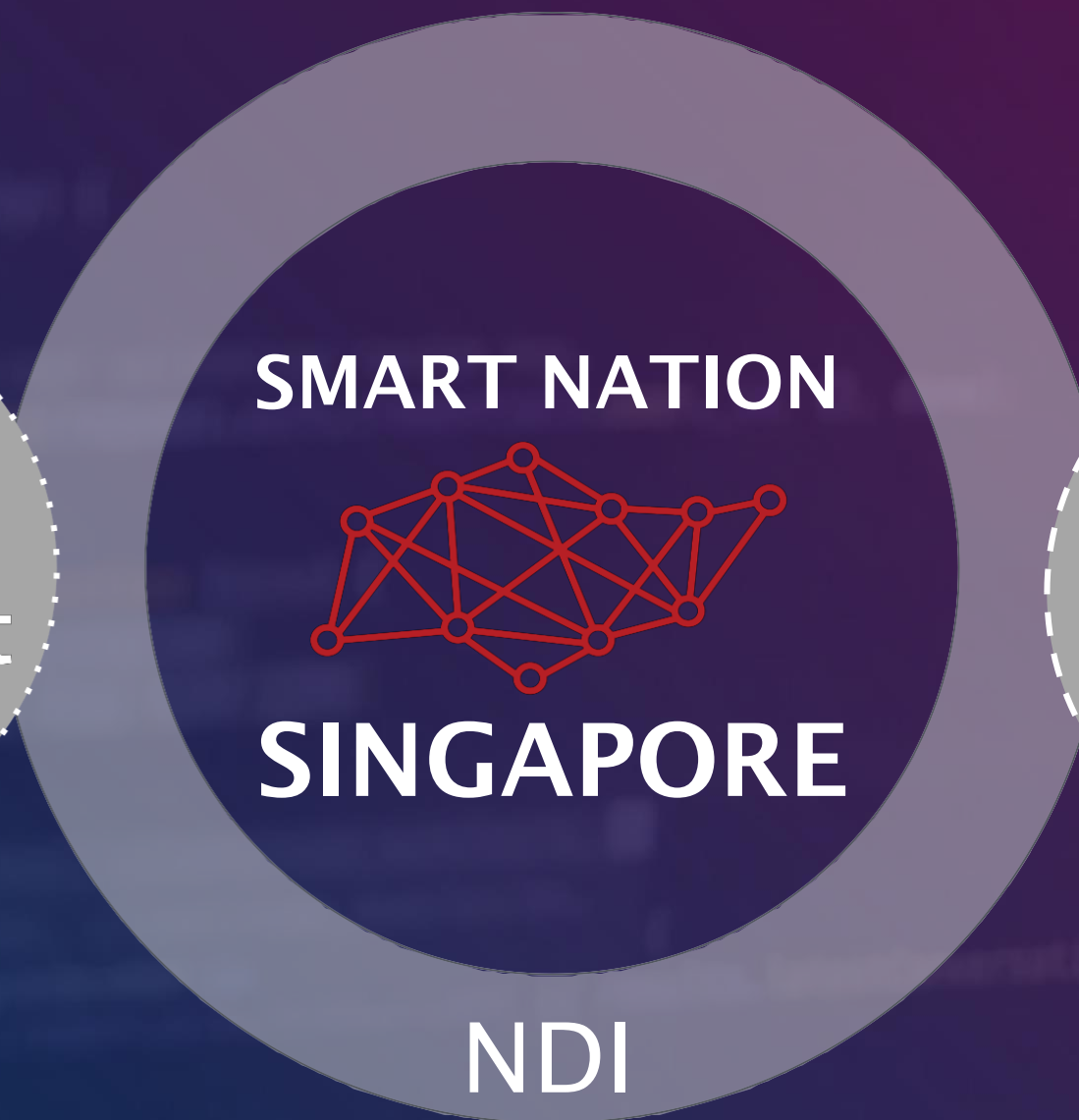
Ready to  
Connect



**NDI**



DIGITALISATION



# Thank You

 **@PohJacqueline**  
**Jacqueline\_Poh@tech.gov.sg**



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 **@GovTechSG**  
**[Facebook.com/GovTechSG](https://Facebook.com/GovTechSG)**



# **eIDAS: enabling secure cross-border electronic transactions between businesses, citizens and public administrations**

WMC - GSMA Seminar, 27/02/2018, Barcelona (ES)

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Andrea Servida  
DG CONNECT, European Commission  
Unit "eGovernment & Trust"  
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The journey from **paper-based** identification to **electronic** identification was challenging but fruitful.



The journey now from **national** to **cross-border** eID is comparable, in terms of effort but also reward.

“

The cross border use of trusted eID gives Europeans a **new freedom**: to rely on the eID they already use at national level and to securely access digital services provided everywhere across the EU.

**Mariya Gabriel**

Commissioner for Digital  
Economy and Society

#eIDAS  
@eID\_EU



# eIDAS: boosting trust & supporting businesses!





“

**Building trust in the online world is crucial to accomplish the Digital Single Market.** Coupling mobile authentication credentials, such as Mobile Connect, with the identity security provided by eIDs under the eIDAS Regulation, is the way towards this goal

**Andrus Ansip**

Vice-President of the European  
Commission for Digital Single Market

#eIDAS  
@eID\_EU



# Where does eIDAS have an impact?

## **UMM&DS**

Uniform User Management and Digital Signatures

## **eHGI**

eHealth Governance Initiative

## **ECI**

European Citizens' Initiative

## **ESSN**

European Social Security Number

## **SUP**

Directive on single-member private limited liability companies

## **PSD2**

Revised Directive on Payment Services

## **AML5**

5th Anti-Money Laundering Directive (**Agreed on 20 December 2017**)



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## An example: the financial sector

- On 27 November → adoption of [Delegated Regulation on Regulatory Technical Standards](#) (RTS) on strong customer authentication and common and secure communication
  - **reference is made to both eIDAS notified eID means and trust services.**
  - **eIDAS notified eID means → possible solution for strong customer authentication**
  - **Qualified electronic seals or qualified website authentication certificates mandatory for the communication between payment providers.**
- On 14 December → adoption of [Commission Decision C\(2017\) 8405 final](#) setting up the Commission expert group on electronic identification and remote Know-Your-Customer processes
  - **Jointly managed by DG CNECT, DG FISMA and DG JUST**
  - **composed of up to 36 members comprising regulators, supervisors, identity experts, financial institutions and consumer organisations → Call for applications closed on 26.01**
  - **explore how to facilitate the cross-border use of eID and KYC portability based on identification and authentication tools under eIDAS to enable financial institutions to identify customers digitally for on-boarding purposes**
- On 20 December → political agreement on revised text of the [Anti-Money Laundering Directive \(AMLD5\)](#)
  - **explicit reference to eIDAS notified eID means as a possible way to fulfil Know-Your-Customer/Customer Due Diligence requirements for non-face-to-face interactions**



# Digital on-boarding

Customer initiates enrolment procedure

Customer accesses bank website → website authentication ensures that website belongs to bank



Notified eID under eIDAS →

1. Identity verification

2. Customer Due Diligence/Business Relationship

3. Check against fraud risk

Minimum data set:

- current family name
- current first name
- date of birth
- unique identifier

Depend on bank/national applicable rules on CDD/KYC

Additional attributes:

- first and family name at birth
- place of birth
- current address
- gender

How cross-border eID/authentication works



KYC



# ***Main requirements of the SDG***

## **Member States**

- Offer information on national rules online and in at least another language than the national one
- Ensure compliance with quality criteria
- Offer 13 key procedures online and accessible for EU cross-border users
- Ensure that national online procedures can be completed by EU cross-border users
- **Cross-border once-only for selected procedures**
- Link to the single digital gateway

## **Commission**

- Offer EU level information online
- Coordinate the networks of EU assistance services
- Ensure compliance with quality criteria
- Develop and manage common IT tools
- Ensure governance
- Monitor and report

# eID schemes notified



 **Germany**

National ID card

40.000.000  
registered users

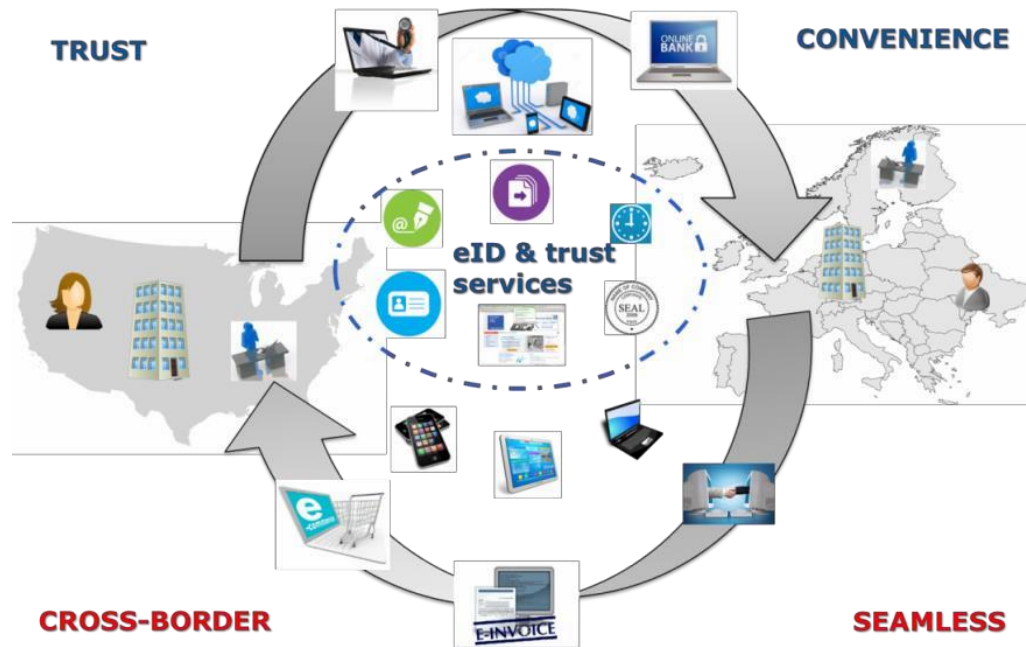
20.02.2017

- **On 23 August 2017, DE eID formally notified –Published to OJEU on 26.9.2017!**
- A milestone towards establishing eID and trust services in Europe achieved!

**IT, LUX and ES**  
have pre-notified their  
scheme!  
12 more expected by end of  
2018



# eIDAS: a world première



In EU we have:

- **World-class hardware, software and service** providers, and administrations at the forefront of **eGovernment**
- **25 MS have eID means** (3 planned) – 15 MS have eID cards (6 planned)
- Large Scale Pilot Projects to ensure **interoperability**

**EU the first and only region in the world to have:**

- Policy
- Regulation
- Rules
- Technology
- Interoperability infrastructure

## For further information and feedback

### **Web page on eIDAS**

<http://ec.europa.eu/digital-agenda/en/trust-services-and-eid>

### **eIDAS Observatory**

<https://ec.europa.eu/futurium/en/eidas-observatory>

### **Text of eIDAS Regulation in all languages**

<http://europa.eu/!ux73KG>

### **Connecting Europe Facility – Catalogue of Building Blocks**

<https://ec.europa.eu/cefdigital>

### **eIDAS twitter account**

[@EU\\_eIDAS](https://twitter.com/EU_eIDAS)

### **Andrea Servida**

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Unit "eGovernment & Trust"

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