



Implementation of Lebanon's National Digital Transformation Strategy

Workshop 1

June 11-12, 2024

DAY 1

INTRODUCTION TO NATIONAL DIGITAL TRANSFORMATION STRATEGY (DTS) AND WORKSHOP SERIES

OVERVIEW OF LEBANON'S NATIONAL DIGITAL TRANSFORMATION STRATEGY



Vision

Make Lebanon one of the most advanced digital countries in the Arab world



Objectives

Build cross-cutting digital foundations and digitalize public services to enhance efficiency, quality, transparency, accountability, and user satisfaction



Ownership

Led by OMSAR, in collaboration with the PCM and all ministries and governmental agencies



Timeframe

2020-2030



WORKSHOP SERIES (TENTATIVE)

June

- Digital ID
- E-Signature



July

- E- Government
- Data Hosting/Cloud



September

- Cybersecurity
- Service Digitalization



November

- Presentation of DTS Implementation Roadmap



AGENDA

- A Introduction to DTS and digital ID
- B Global initiatives around digital ID
- C Overview of the digital ID landscape and opportunities for Lebanon
- D Crafting Lebanon's digital ID blueprint: *use cases, opportunities, financing model, and governance*

INTRODUCTION TO DIGITAL ID

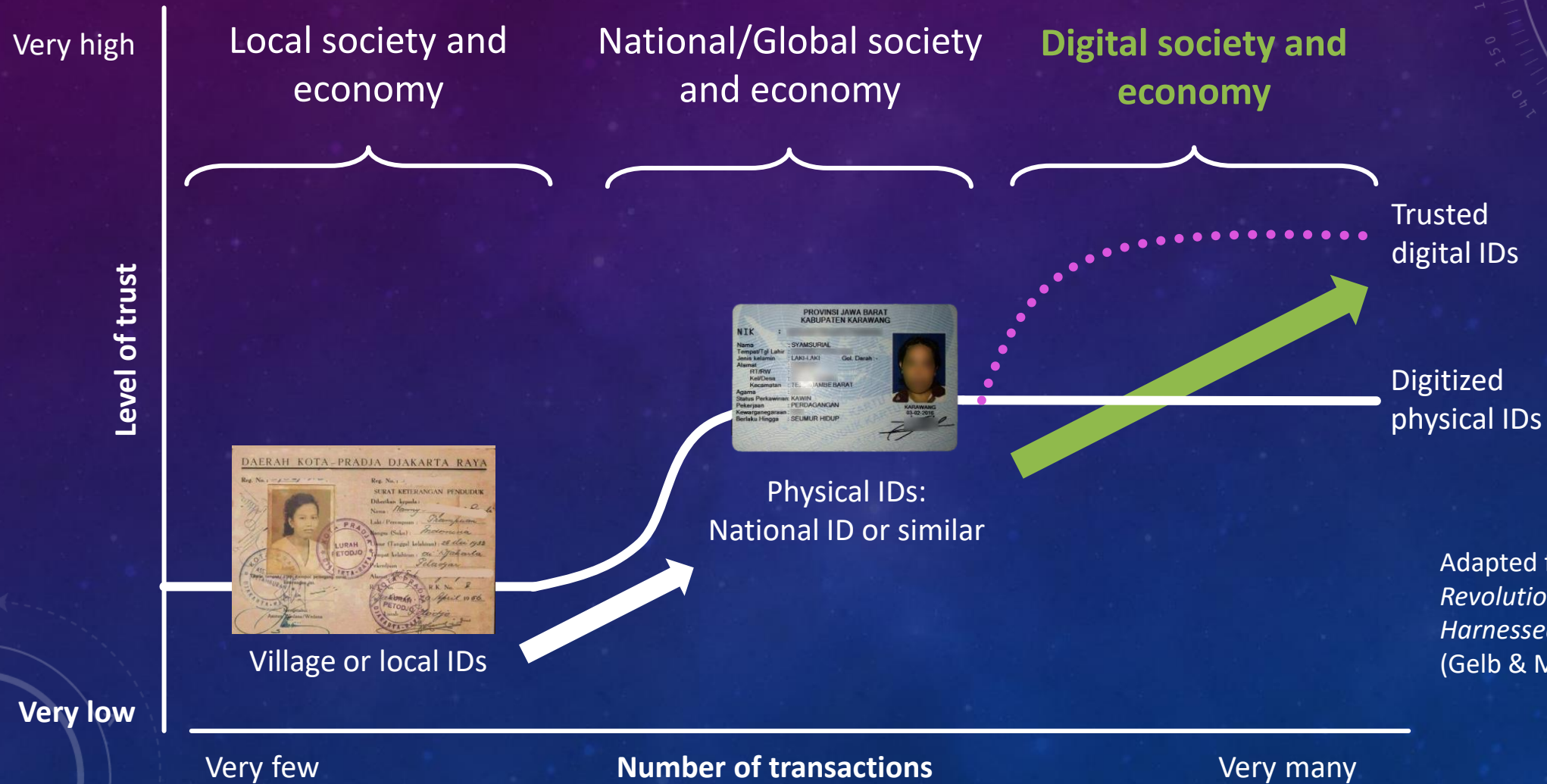
INTRODUCTION TO DIGITAL ID



Digital ID is not an identifier.

Digital ID provides proof that you are who you say you are and can be used for digital transactions.

INTRODUCTION TO DIGITAL ID - THE EVOLUTION OF ID



Adapted from *Identification Revolution: Can Digital ID be Harnessed for Development?* (Gelb & Metz, 2018)

INTRODUCTION TO DIGITAL ID

Digital ID provides individuals with the ability to:

- Hold a digital ID credential that includes a digital proof of issuance and validity
- Provide that proof of identity to online and offline services
- Share that digital proof through secure and privacy protecting methods



DIGITAL ID AS AN ENABLER FOR DIGITAL TRANSFORMATION

*“Users don’t really care about digital identity;
they just want better access to services.”*

DIGITAL ID AS AN ENABLER FOR DIGITAL TRANSFORMATION

Digital ID is the great enabler. It makes it possible for individuals to engage with digital transactions remotely and at high levels of trust.

Being able to reliably prove who we are also means that **trusted data** can be shared as part of these **rich transactions**.



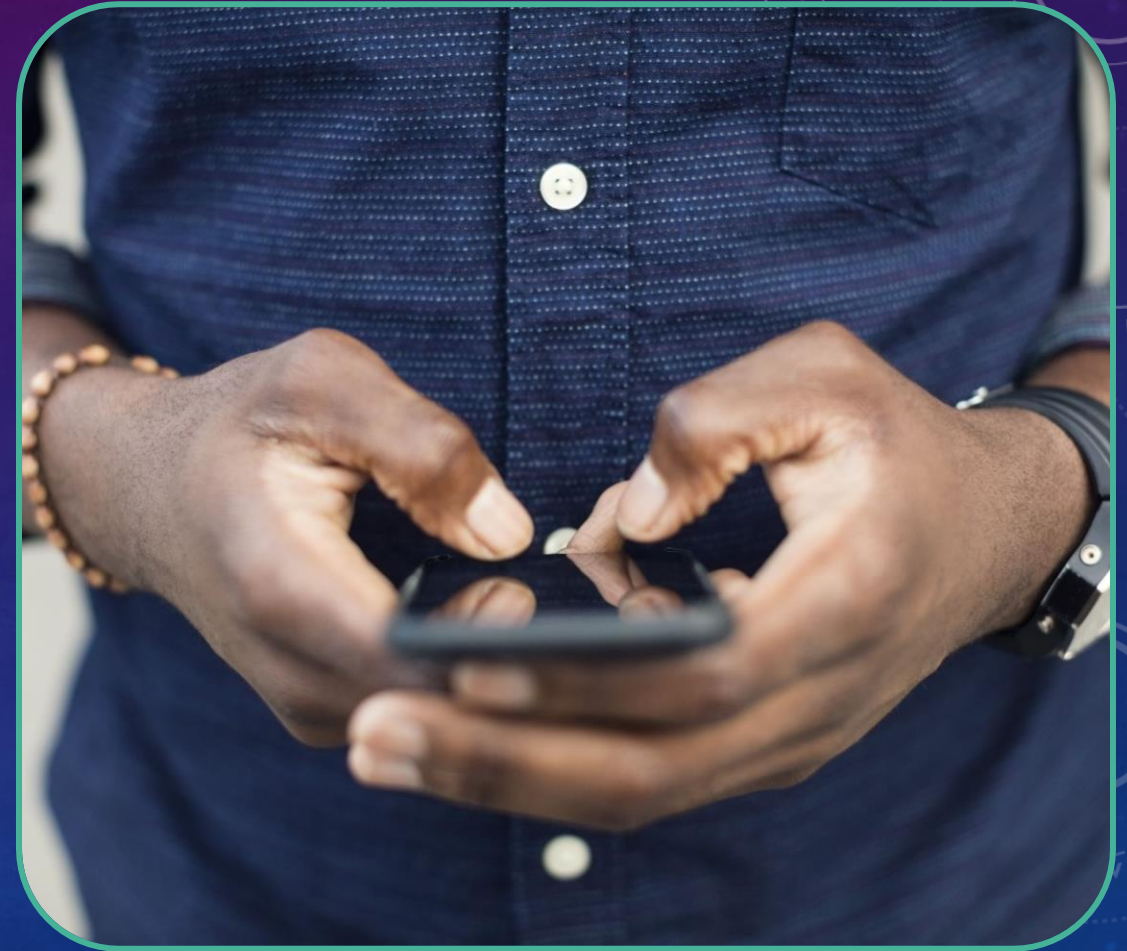
DIGITAL ID AS AN ENABLER FOR DIGITAL TRANSFORMATION

Digital ID is an enabler.

Identification is just one way it can be used.

“Meaningful transactions demand trusted data about the individual.”

The reality is that authentication, identification, authorisation, data completion, age verification, mobile IC, digital signatures, are just some of the ways digital identity can be utilised.



DIGITAL ID AS AN ENABLER FOR DIGITAL TRANSFORMATION

Service providers need to know more than who individuals are, they need to trust the process.

The level of assurance required should be **proportionate to the risk involved** in completing the transaction.

eIDAS	OUT OF SCOPE	LOW	SUBSTANTIAL	HIGH
ISO 29115	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Identity proofing during registration	No identity proofing	Presentation of identity information	Verification of identity information	In-person registration with verification
Credentials and authentication	Weak e.g., legacy password	Secure e.g., seamless, SMS + URL, USSD, SIM applet, smartphone app, token or OTP	Strong e.g., USSD, SIM applet, smartphone app in TEE, token OTP + password, biometrics	Very Strong e.g., SIM applet w/ PKI, smartphone app in TEE with PKI, PKI eID (PIN), PKI ID [PIN + SE (SIM/ eSE)], biometrics

Security level for transactions

Low
High

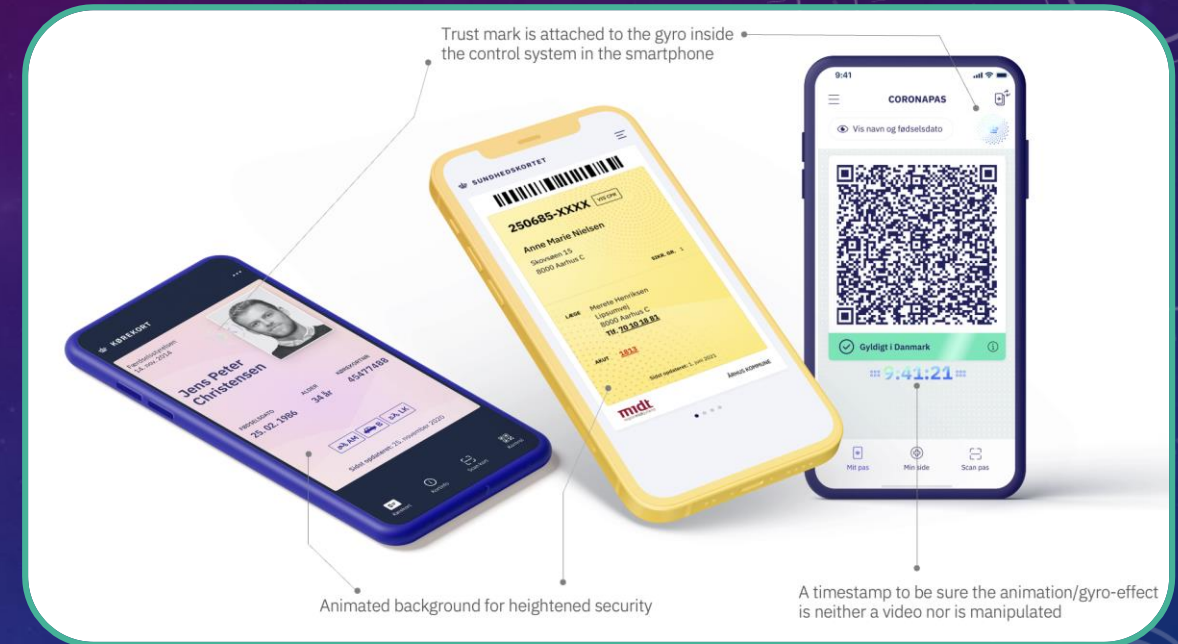
Key: SMS = short message service, SIM = subscriber identity module, USSD = unstructured supplementary service data, OTP = one-time password, TEE = trusted execution environments, PIN = personal identification number, SE = secure element, PKI = public-key infrastructure), eID = smartcard, eSE = embedded secure element.

DIGITAL ID AS AN ENABLER FOR DIGITAL TRANSFORMATION

Presenting digital ID cards:

A wallet feature could be considered to hold 1 or more digital ID or entitlement cards.

Rather than a static image of a physical document these are dynamic digital documents that protect against fraud and provide ways of verifying the authenticity of the card.



DIGITAL ID AS AN ENABLER FOR DIGITAL TRANSFORMATION

Authentication to digital services:

Login is an authentication that enables a user to access a digital service.

Single-sign-on (SSO) usually refers to an authentication that persists for multiple services. For example, sign-in to a portal.



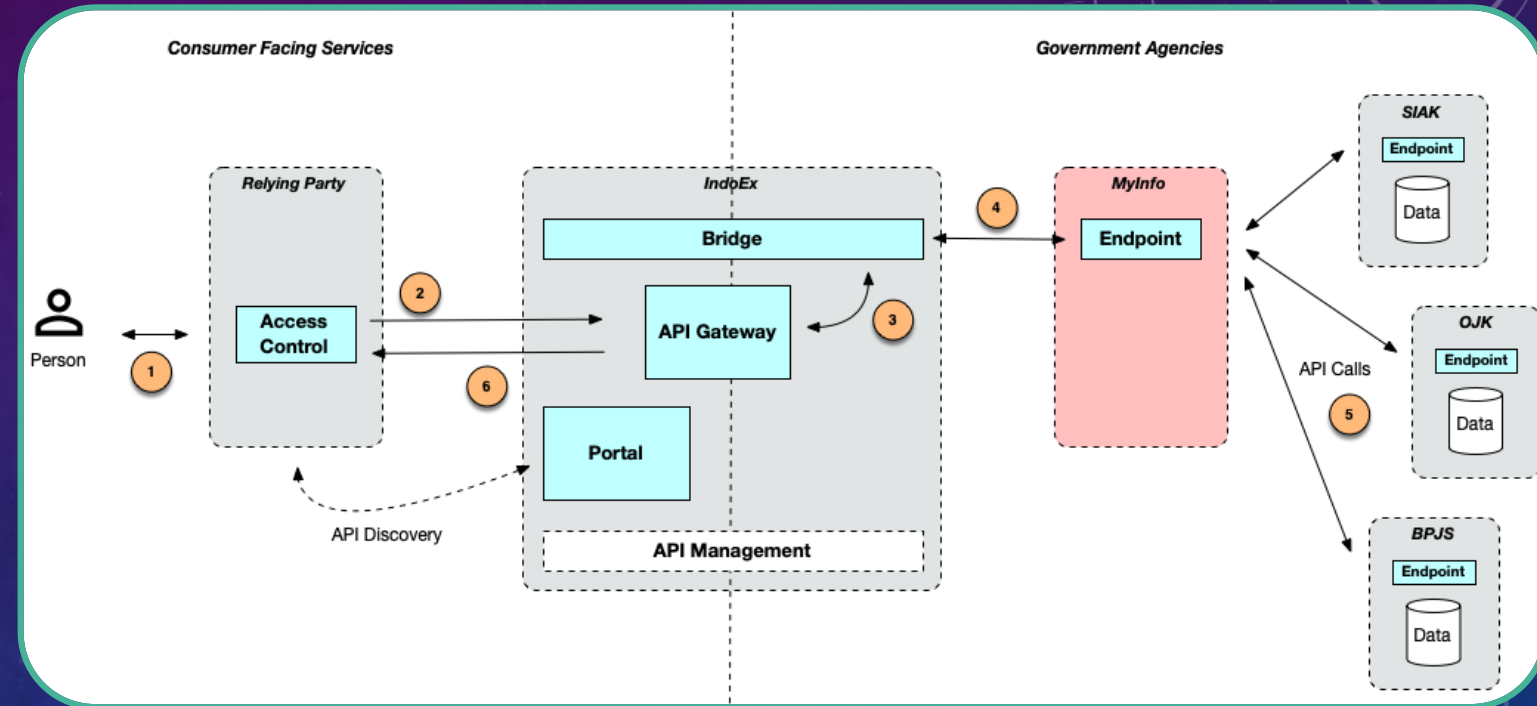
DIGITAL ID AS AN ENABLER FOR DIGITAL TRANSFORMATION

Data exchange and user consent:

The method of data exchange can vary widely in complexity and capability. Requirements should be driven by needs – of services, citizens, and government.

Where possible computational or checking services should be adopted.

Visibility and consent should be supported for the end-user.



EXPLORING GLOBAL DIGITAL ID INITIATIVES AND DISCUSSING KEY INSIGHTS FOR LEBANON

FRENCH CASE

IN FRANCE, FRANCECONNECT ALLOWS SECURE ACCESS TO OVER 1,400 ONLINE GOVERNMENT SERVICES USING LOGINS AND PASSWORDS FROM OTHER PLATFORMS

FranceConnect overview



Product overview



Overall description: A state solution to facilitate and secure access to over 1,400 online services, including government procedures & services, via identity providers



Main feature: Allowing citizens to connect to any of the multitude of services using login credentials from either one of 6 partner accounts



Creation date: 2018



Number of users [2023]: +40 millions



Online services examples: payment of taxes, passport application, vehicle transfer declaration...



Partner accounts examples: Health insurance, Post office, Tax payment site

Steps to follow to connect to one of FranceConnect's 1,400 services

1

When accessing the online service site (e.g., passport application) site I wish to access, a **France Connect button** is provided **among the login options**



2

I have the flexibility to select **from 6 partner accounts** (e.g., Health insurance, Post office, Tax payment site) to login



3

I enter my **username and password for the chosen partner account** (e.g., fiscal number and associated password used to connect to the tax payment site)



4

Seamlessly **unlocking access** to the service, I securely verify my identity, ensuring that the **service recognizes me**



FRANCECONNECT PROVIDES ACCESS TO A WIDE RANGE OF PUBLIC AND PRIVATE E-SERVICES, SUCH AS ONLINE TAX FILING, PASSPORT APPLICATIONS OR HEALTHCARE INFORMATION

Overview of services accessible through FranceConnect



Money

- **Personal income tax** payment
- **Income tax** return
- Report fraudulent use of a bank card



Citizenship

- **Passport** application
- **National identity** card application
- Change of address



Healthcare

- **European Health Insurance Card** application
- Attestation of payment of daily allowances



Transport

- **Driving licence points** balance check
- Vehicle transfer declaration



Retirement

- **Retirement rights** consultation



Family

- **Birth declaration**
- **School records** consultation



Work

- **Social security rights** simulation



Local life

- **GrandLyon Connect** (municipal website of Lyon) access
- Nantes city website access



Energy

- **ENGIE** (French electricity provider) individuals portal access
- **Energy renovation grant** application

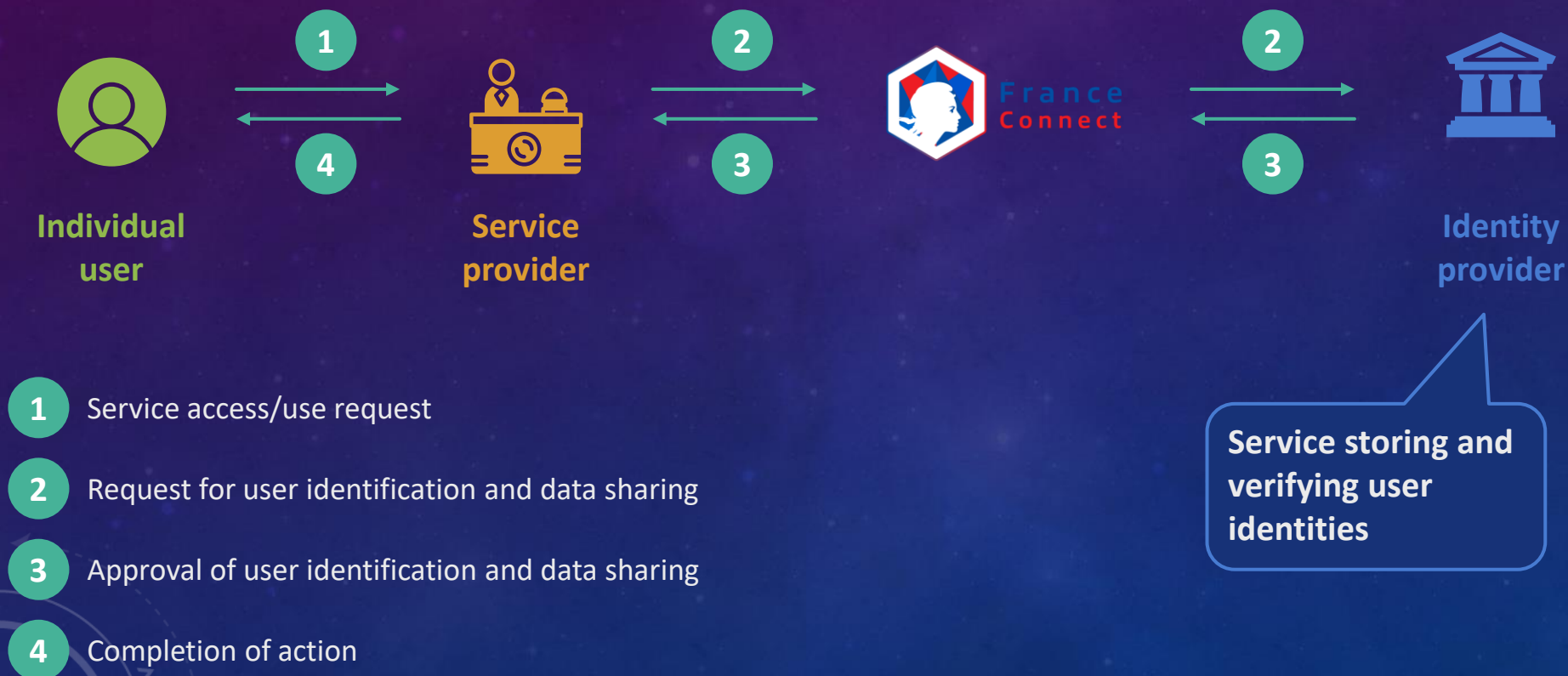


Housing

- **Rental insurance** application

FRANCECONNECT IS AN AGGREGATOR ACTING AS A BRIDGE BETWEEN SEVERAL IDENTITY PROVIDERS, CITIZENS AND E-SERVICES

French Identity providers



Identity Providers



Social security platform



Online tax website



Pure identity provider



Post office website



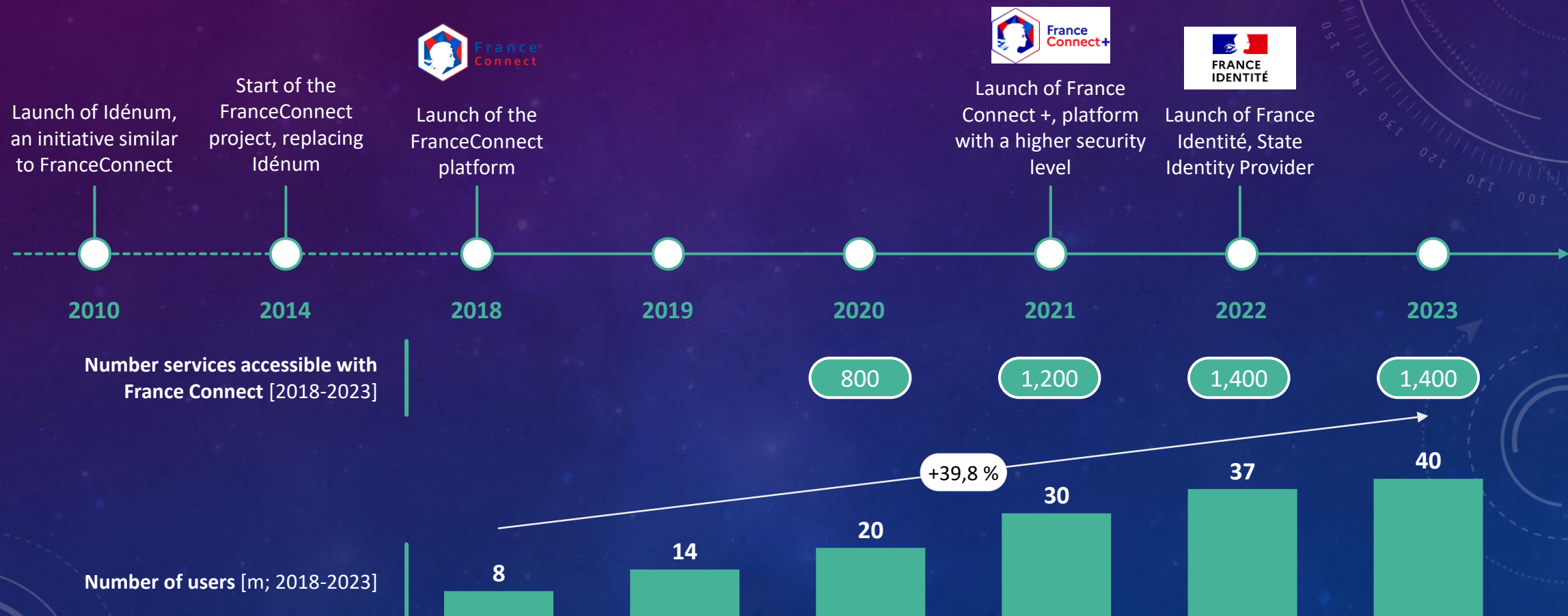
Agricultural social security platform



Pure identity provider

FRANCECONNECT, BUILT ON PRECURSOR INITIATIVES THAT DID NOT ACHIEVE WIDESPREAD ADOPTION, HAS GRADUALLY ADDED NEW SERVICES, WITH A MORE SECURE VERSION INTRODUCED IN 2021

French Identity providers



FRANCECONNECT OFFERS SOLVED KEY USER PAIN POINTS BY PROVIDING SECURE YET CONVENIENT AND EASY ACCESS TO A WIDE RANGE OF SERVICES - 79% OF FRENCH CITIZENS TRUST THE PLATFORM

FranceConnect's key benefits

Key benefits



Simplified Access to +1,400 online services, saving time for users



User-friendly interface, providing a consistent user-experience across different services



Enhanced Security thanks to strong authentication methods



Cost Efficiency for the government due to the centralization of efforts



Trust and transparency, being a government-backed platform, strictly regulated

FranceConnect confidence survey results

Do you trust FranceConnect ?

Very confident

27 %

31 %

Confident

43 %

48 %

Rather not confident

20 %

13 %

Not confident at all

10 %

8 %

2021

2023

79% people trust FranceConnect



FRANCECONNECT'S SUCCESS STEMS FROM A RELIABLE SINGLE CITIZEN INFORMATION DATABASE, THE EXISTENCE OF RELIABLE IDENTITY PROVIDERS, AND A MINDSET SHIFT

Challenges encountered by FranceConnect

Challenge 	Description 	Actions undertaken by France 
 Unique reliable citizens database	Have a single, clean database on citizens, which can be built up from new identity cards issued/renewed and/or the digitization of the existing identity database	• Cleaning of the existing base and creation of a new one, cross checking each other • Keeping staff motivated throughout the database creation process
 Reliable identity providers	Need for secured databases linked to the single database, operated by a public/private player responsible for storing and verifying the data	• Existing entities (e.g., post office) linked to central database • Creation of a new identity provider ("France identité")
 Cultural shift	Part of the population still reluctant to digitize , lacking confidence in digital capabilities and/or fearing for the protection of their data	• Inability to perform certain actions (e.g., make an appointment online) • Advantages (e.g., file taxes later) • Organization of training workshops
 High-performance hardware	Need for high-performance hardware to ensure similar response times for all , regardless of location, as well as paper backup in the event of a breakdown	• Purchase and configuration of appropriate hardware, sized for the population's future needs

BELGIUM CASE

BELGIUM, WITH ITS MODEST POPULATION SIZE, COMPLEX INSTITUTIONAL LANDSCAPE, AND RELATIVELY MODEST DIGITAL INFRASTRUCTURE, BENEFITS FROM HIGH USAGE OF DIGITAL SERVICES

Introduction to Belgium

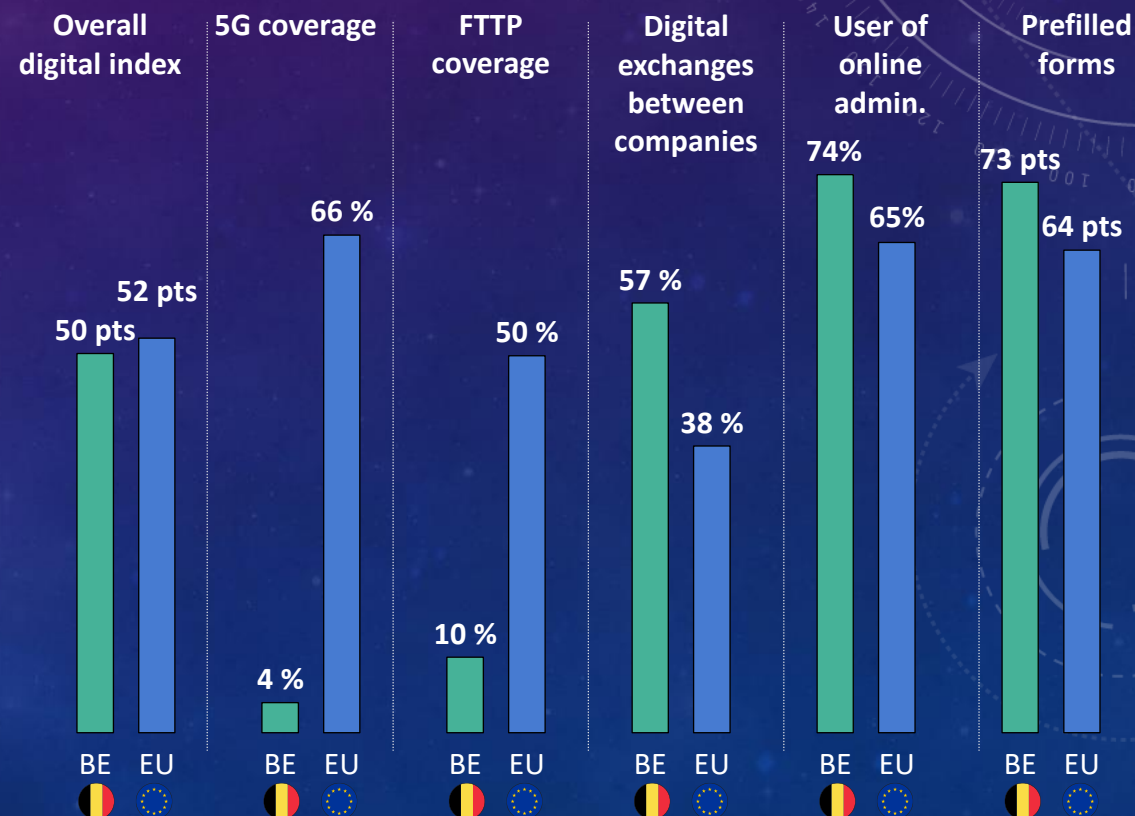
 Digital Index: 50



A small country with a complex institutional landscape



A high usage of digital services despite a lack of infrastructure



ITSME IS A DIGITAL IDENTIFICATION AND SIGNATURE PLATFORM FOR INDIVIDUALS AND ORGANIZATION, ENABLING ONLINE IDENTIFICATION, LOGGING IN, TRANSACTIONS CONFIRMATION AND SIGNING

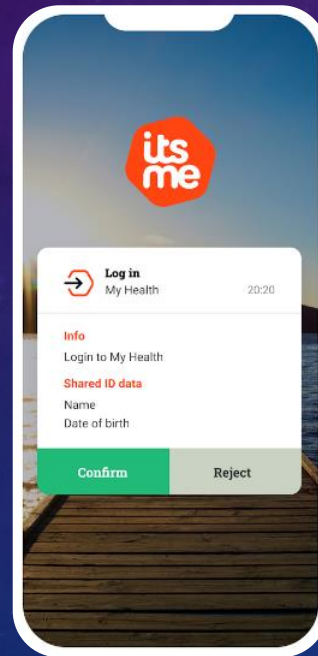
Introduction to ITSME

Product overview

Digital identification and e-signature platform, supporting:

-  Online identification
-  Logging in
-  Confirming transactions
-  Signing documents

Operating diagram



Click on the itsme® button and your itsme® app opens automatically



Check the action and confirm



Enter your the itsme® code



You're logged in!



ITSME SERVES ORGANIZATIONS AND COMPANIES IN +20 SECTORS, INCLUDING THE CIVIL SERVICE, BANKING AND HEALTHCARE

ITSME client portfolio



Government



Banking



Healthcare



Insurance



HR



Telecom & utilities



Document platforms



And many others...



THE ITSME APPLICATION HAS EXPERIENCED RAPID USER GROWTH TO BECOME THE REFERENCE (85% OF 16+ POPULATION COVERAGE) - ACCELERATED ADOPTION DUE TO THE “COVID PASSPORT”

ITSME development history and key figures

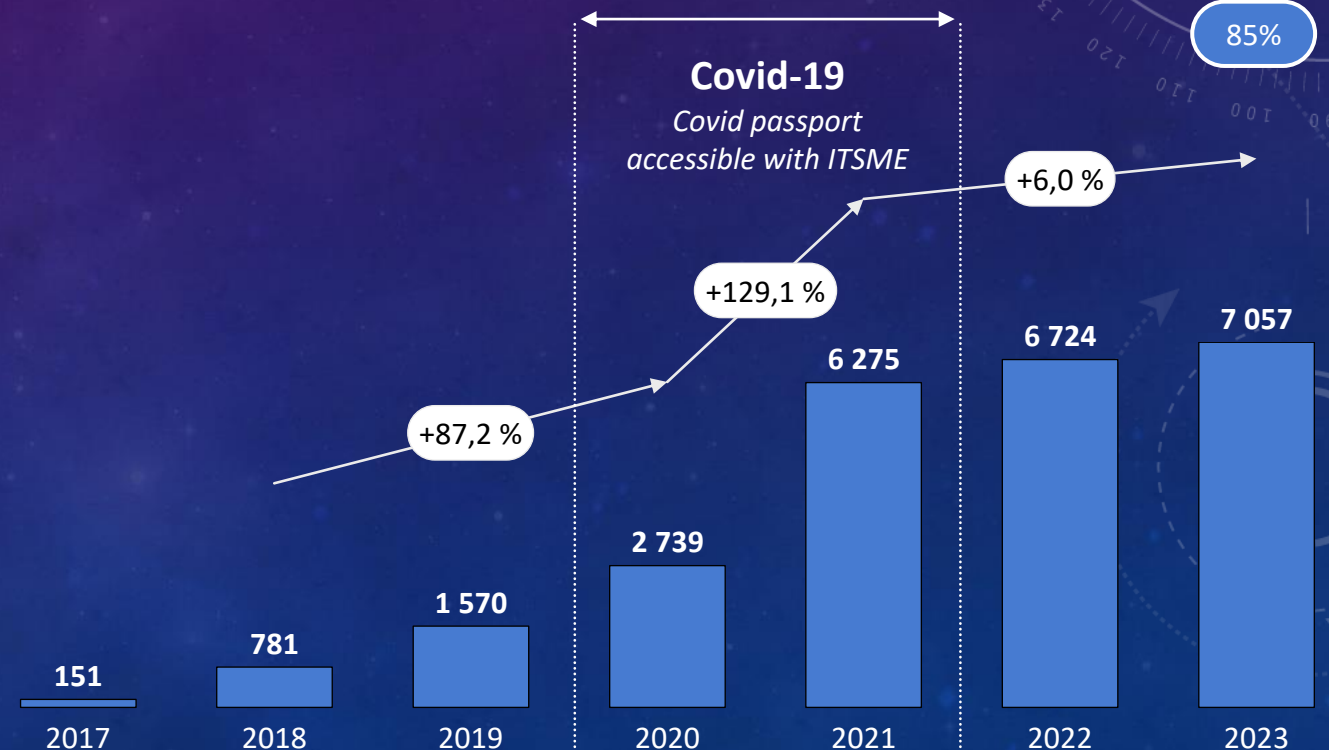
Key figures

-  **Number of users [2023]:** 7 millions
-  **# of private companies using the app [2023]:** +1,000
-  **Average number of uses per year per user [2023]:** 60
-  **# countries [2024]:** 10 (planning 15)
-  **Revenue [EUR m; 2022]:** 16
-  **Profit [EUR m; 2023]:** 1.6

Remuneration model

- **Digital ID: revenue per generated unit**, i.e. fixed fee paid by companies for each of their own customers using the solution, regardless of the number of times the application is used by the customer
- **Signing: transaction-based model**

Number of Belgians using the app [k; 2017-2023 end of year ; 16+ population coverage]



 Population coverage

ITSME'S SUCCESS IS ATTRIBUTED TO ITS CROSS-INDUSTRY APPLICABILITY, ROBUST SECURITY MEASURES (INCL. FOR ITS DATABASES), SEAMLESS INTEGRATION CAPABILITIES, AND USER-FRIENDLY INTERFACE

Key success factors for ITSME



Cross-sector applications / use cases

ITSME can be used in all types of sector (20+ today) and for a variety of applications (identification, authentication, confirmation e-signature), boosting adoption



Secured platform and data sources

Based on ultra-secure databases (government and banks) guaranteeing personal identity and state-of-the-art security technology (e.g., encryption)



Flexible and scalable model

Flexible, easy-to-integrate model (interoperability) for different customer platforms - included in customer platforms (no interruption to the customer journey), with white-label capability (incl. at international scale)



User-friendly

Easy to set up and use, with just a few steps to perform each action (no password mandatory), accessible on mobile and computer



OVERVIEW OF THE DIGITAL ID LANDSCAPE IN LEBANON

LEBANON'S FOUNDATIONAL IDENTITY ECOSYSTEM ENSURES BROAD DATA COLLECTION, BUT INTEROPERABILITY REMAINS A KEY CHALLENGE (1/3)

Overview of Lebanon's foundational identity ecosystem

Civil registration



- Organizing the **collection, processing, and archiving of records related to vital events** (e.g., as birth, marriage)
- Main credential produced: **civil status extract**, used for a wide variety of transactions (usually valid for 3 months)

National ID



- **Biometric NID card** launched in 1997, replacing a paper card
- Mandatory for Lebanese nationals over the age of 15



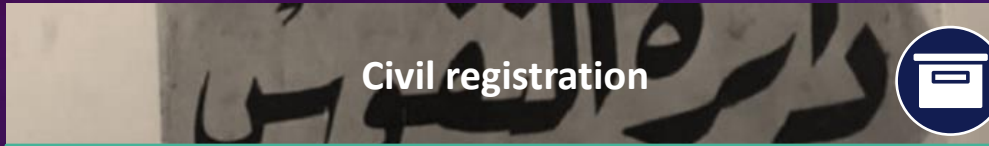
Description

LEBANON'S FOUNDATIONAL IDENTITY ECOSYSTEM ENSURES BROAD DATA COLLECTION, BUT INTEROPERABILITY REMAINS A KEY CHALLENGE (2/3)

Lebanon's foundational identity ecosystem overview



Strength



- **High coverage** (e.g., >99 % births registered)
- Recent upgrades allowing for some **digitalization** of the “flow” of the registration of vital events
- Efforts underway to **microfilm** legacy civil register books
- New civil extracts are digitally verifiable using a QR code



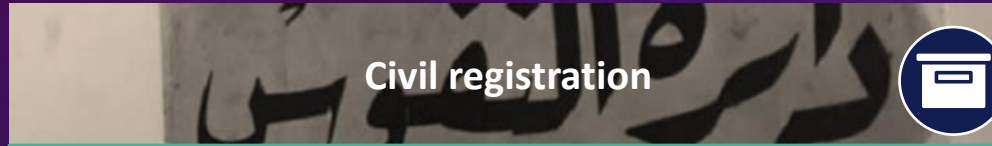
- **High coverage:** 97% of adults over 15 and 76% of the total estimated population
- Robust biometric deduplication system assures uniqueness
- Potential for barcode included in the NID card to be used by relying parties to verify the authenticity of the card

LEBANON'S FOUNDATIONAL IDENTITY ECOSYSTEM ENSURES BROAD DATA COLLECTION, BUT INTEROPERABILITY REMAINS A KEY CHALLENGE (3/3)

Lebanon's foundational identity ecosystem overview



Areas for improvement

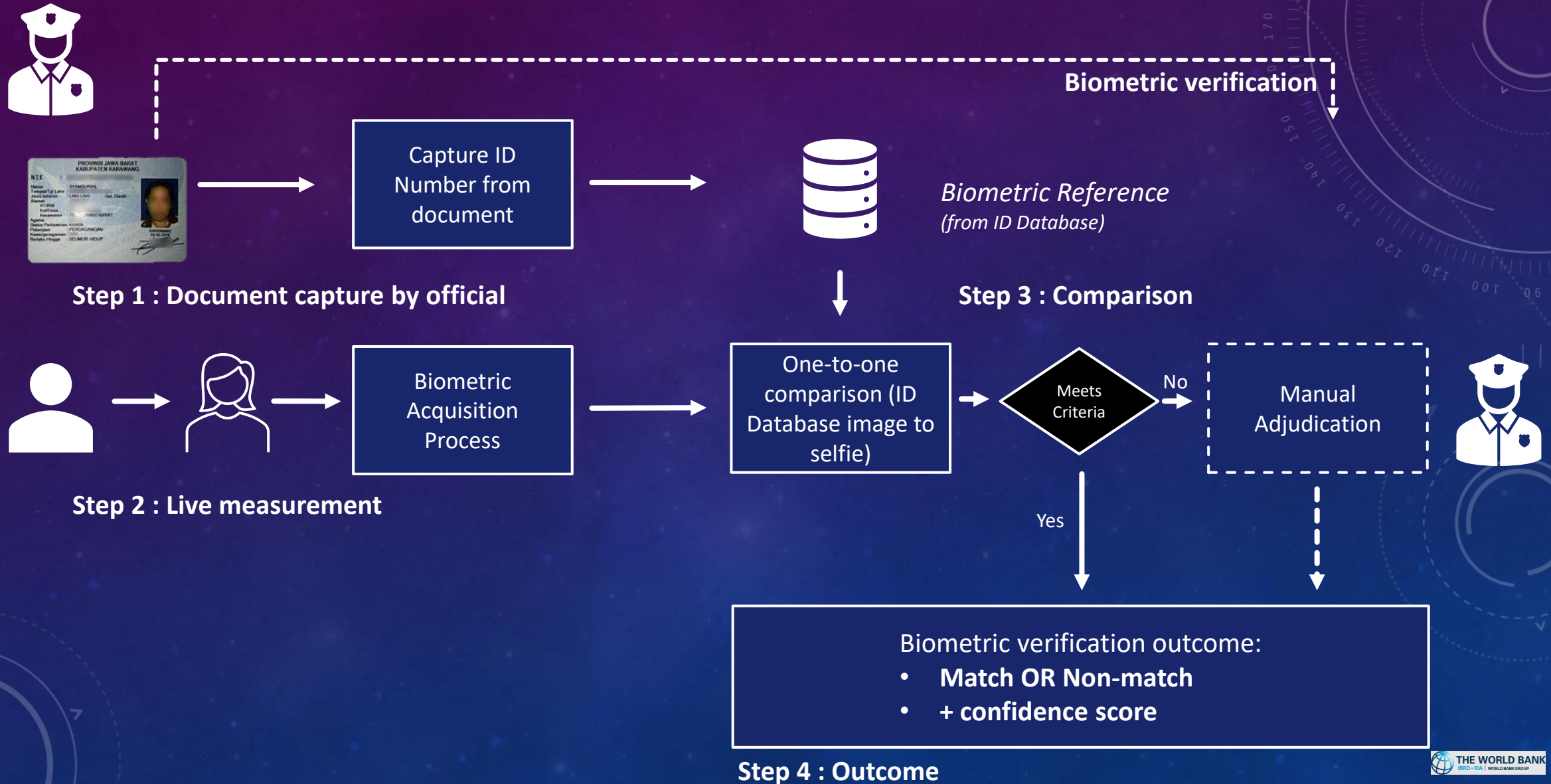


- **Database not yet interoperable** with the national ID (NID) card database and other sectoral systems
- Lifelong unique identifier **not attributed from birth**
- Not yet possible to obtain all documents without returning to **place of family registration**
- Some remaining **barriers to full digitalization** under current legal framework
- QR currently not usable by **verifiers outside of MOIM**

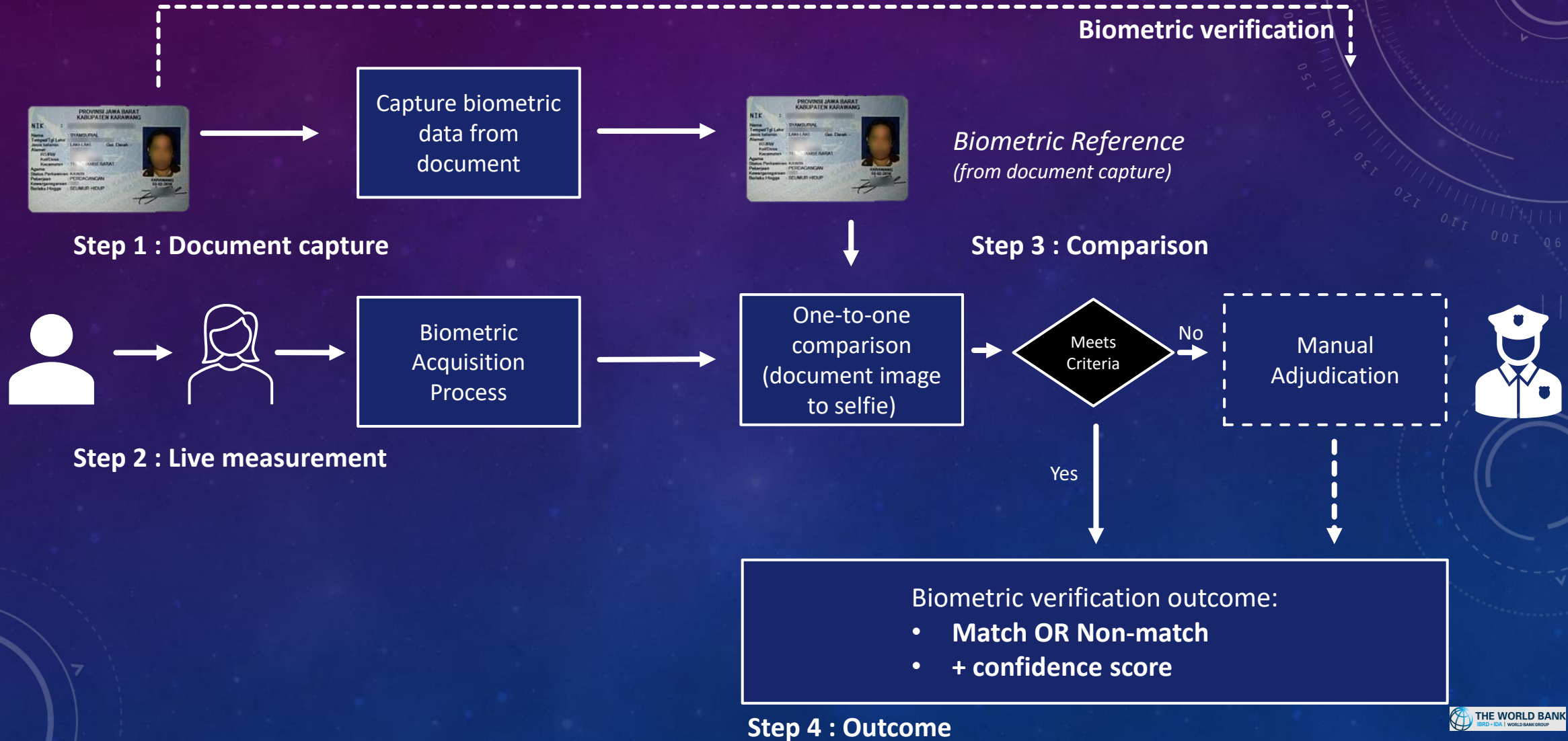


- No reliable **process to manage or revoke lost** cards or remove deceased persons
- No obligations for citizens to update or renew their card implying a **data not always up to date**
- No **expiry date on card**
- **Lack of interoperability** with other systems including withing MOIM (e.g. passport, civil registry)
- No way to verify the **accuracy of identity data** against the authoritative source
- No way to digitally **verify a person's identity** to allow for secure online transactions

IN-PERSON ONBOARDING PROCESS MODEL (IN-PERSON VERIFICATION)



REMOTE ONBOARDING PROCESS MODEL (BIOMETRIC ID CARD)



THE DIVERSE FUNCTIONALITIES OF DIGITAL ID WILL ADDRESS NUMEROUS CHALLENGES IDENTIFIED ACROSS VARIOUS SECTORS IN LEBANON (1/4)

Selection of relevant use cases

Sector	Use cases	Main challenges of sectoral initiatives	Digital ID functionalities as a solution
Financial	Remote onboarding (eKYC)	Requirements of robust identity checks during the onboarding/opening of new accounts	• Checking service • Digital Authentication
Financial	Credit registry	No reliable way to uniquely identify individual credit histories	• Unique identification • Checking service
Social protection	Social assistance targeting	Inability to verify eligibility for social payments	• Data sharing
Social protection	Social assistance registration	Potential for fraudulent and duplicate registrations	• Unique identification • Checking service
Health	Medical records data sharing	Inability to share data on treatment	• Unique identification • Data sharing

THE DIVERSE FUNCTIONALITIES OF DIGITAL ID WILL ADDRESS NUMEROUS CHALLENGES IDENTIFIED ACROSS VARIOUS SECTORS IN LEBANON (2/4)

Selection of relevant use cases

Sector	Use cases
Health	Medical records creation
Health	Medical records access
Health	Medical insurance claims
Health	Tracking medications
Health	Remote medical consultations

Main challenges of sectoral initiatives

Difficulties to onboard a patient

- Unique identification
- Checking service

Patients have no access to their medical records

- Digital authentication

Process for verifying the eligibility of medical claims for reimbursement is paper-based

- Unique identification

Tracking system lacks a unique identifier for patients across all medical systems

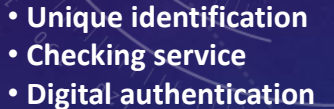
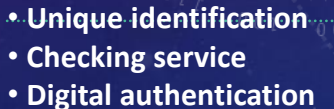
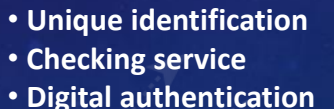
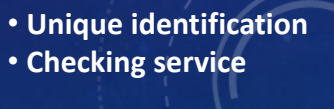
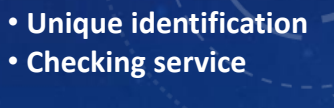
- Unique identification
- Digital authentication

Incapacity to verify the identity of patients

- Data sharing
- Digital authentication

THE DIVERSE FUNCTIONALITIES OF DIGITAL ID WILL ADDRESS NUMEROUS CHALLENGES IDENTIFIED ACROSS VARIOUS SECTORS IN LEBANON (3/4)

Selection of relevant use cases

Sector	Use cases	Main challenges of sectoral initiatives	
 Commercial	 Real estate	No link between the NID number and land registration	
 Commercial	 Commercial register	Time-consuming manual verification of documents and risk of fraud in commercial registries	
 Public administration	 Electoral lists	Voter fraud and misidentification at polling stations, against a backdrop of increasing numbers of Lebanese voters	
 Public administration	 Biometric passports	No interoperability between the NID cad database and other services	
 Public administration	 Civil servants' registry	Burdensome administrative overhead, duplicate wage payments and complex process for civil servants when changing jobs	

THE DIVERSE FUNCTIONALITIES OF DIGITAL ID WILL ADDRESS NUMEROUS CHALLENGES IDENTIFIED ACROSS VARIOUS SECTORS IN LEBANON (4/4)

Selection of relevant use cases

Sector		Use cases		Main challenges of sectoral initiatives	
 Public administration		Civil status records		Incomplete digitization of civil registry and lack of interoperability of identity databases	• Unique identification • Checking service • Data sharing
 Public administration		Tax		Inadequate assurance of the uniqueness of the Tax Identification Number	• Unique identification • Checking service
 Education		Verifiable diplomas		Inability to verify the authenticity of diplomas	• Unique identification • Checking service • Data sharing

RECOMMENDATIONS HAVE BEEN IDENTIFIED AS PRIORITY ACTIONS FOR THE LEBANESE GOVERNMENT TO CONSIDER IN ADVANCING A DIGITAL ID SYSTEM IN LEBANON (1/3)

Potential quick wins & short-term initiatives when moving towards digital ID system in Lebanon

-  Enable service providers to **validate NID card** using the existing **bar code**
-  Implement **checking services** to verify data from core authoritative sources
-  Leveraging the NID for **unique identification**
-  Conduct civil **society consultations** and **end-user research** to inform broader digital ID strategy
-  Establish **interoperability** between NID card and passport **databases**
-  Identify **authoritative sources of data**
-  Develop **data governance** and **data classification policies**



Quick wins



Short-term actions

RECOMMENDATIONS HAVE BEEN IDENTIFIED AS PRIORITY ACTIONS FOR THE LEBANESE GOVERNMENT TO CONSIDER IN ADVANCING A DIGITAL ID SYSTEM IN LEBANON (2/3)

Medium-term initiatives when moving towards digital ID system in Lebanon



Strengthen **legal and institutional enablers** for digital ID



Improve the **existing NID card provision** as part of wider digital transformation



Develop **multiple alternatives for digital identity to meet the needs** of various user categories



Increase **trusted data sharing** and **user-centric control**



Provide **support to relying parties** for wider rollout of digital identity

RECOMMENDATIONS HAVE BEEN IDENTIFIED AS PRIORITY ACTIONS FOR THE LEBANESE GOVERNMENT TO CONSIDER IN ADVANCING A DIGITAL ID SYSTEM IN LEBANON (3/3)

Long-term initiatives when moving towards digital ID system in Lebanon



Achieve **legal equivalence** of digital identity and electronic signatures



Develop **data sharing architecture** for the whole of government



Enable citizens to **manage their own data**



Implement a **national population registry** to complement existing systems

CRAFTING LEBANON'S DIGITAL ID BLUEPRINT

IDENTIFYING USE CASES WHERE DIGITAL ID WILL HAVE THE BIGGEST IMPACT

Examples of digital ID use cases per sector

Government and Public Services



- **E-Government Services** such as applying for passports, driver's licenses, and social benefits
- **Declaration of life events**
- **Tax Filing**
- **Reporting of life events** (deaths, marriages, births...)
- ...

Finance and banking



- **Online Banking services** (secure authentication for online banking and transactions, e-signing loan agreements...)
- **Digital Wallets and Payments** (seamless and remote customer onboarding processes...)
- ...

Healthcare



- **Electronic Health Records (EHRs)** (access and share medical records)
- **Telemedicine**
- **Health insurance**
- **Facilitated patient consent management**
- Accurate vaccination history, vaccination tracking and verification...

Education



- **Online Learning Platforms** (access educational resources and participate in online courses securely)
- **Examination and Certification**
- **Scholarship and Financial Aid Applications**
- ...

Other application sectors



Insurance



Travel and Transportation



Employment and Workforce Management



Property and Asset Management



Legal and Contractual Services



Telecommunications

IDENTIFYING A PATH FOR SUSTAINABLE FINANCING MODEL

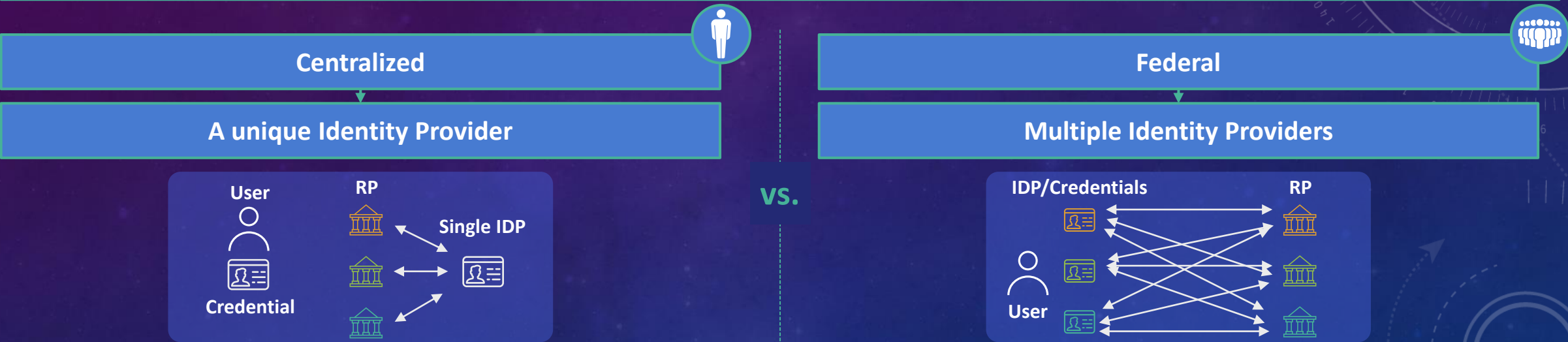
Examples of potential financing model for Digital ID implementation



DEFINING A RELEVANT GOVERNANCE MODEL (1/2)

Identity Provider and Foundational ID operating models

Identity Provider (IDP) operating models



 Who will be the IDP or the IDPs ?

Foundational ID operating model



DEFINING A RELEVANT GOVERNANCE MODEL (2/2)

Examples of potential governance models for Digital ID implementation

	Who oversees the definition of the legal framework ?		
	Operationalization Entity in charge of running and maintaining the system	Data protection Entity in charge of data privacy, grievance address, consumer protection and cybersecurity	Supervision Entity in charge of monitoring, conducting controls and audits
 France	Interministerial Digital Department (DINUM), within the Ministry of Public Transformation	ANSSI¹⁾ , within the General Secretary of Defense	National Commission on Informatics and Liberty (CNIL), independent administrative authority
 Estonia	Information System Authority (RIA), within the Ministry of Economic Affairs and Communication		Data Protection Inspectorate , operating independently but administratively attached to the Ministry of Justice
 India	Unique Identification Authority of India (UIDAI), within the Ministry of Electronics and Information Technology (MeitY)		
		National Informatics Centre (NIC), within MeitY	CAG²⁾ , independent constitutional authority
 Singapore	Government agency GovTech under the Prime Minister Office	Infocomm Media Development Authority (IMDA), under Ministry of Communications and Information	ICA (Immigration and Checkpoints Authority), a public agency
	There are also legal and regulatory enablers to digital ID (such as data protection regulation, authentication and trust services regulation, and Know Your Customer requirements) that facilitate its implementation and adoption.		

1) Agence Nationale de la Sécurité des Systèmes d'Information, 2) Auditor General of India

Thank you

Lebanon Digital Transformation Strategy

2020 - 2030