Digital ID Solution as a Part of Digital Trust for SPBE Platform Infrastructure

Rakornas Kolaborasi Implementasi SPBE

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Digital Business Ecosystems Starts With Trust

Digital business ecosystems are like romantic relationships:

- They are built on a foundation of trust from the first flutters of interest to a deep and long-lasting harmony
- Productive partnerships require confidence in the other participants' motivations and honesty.

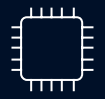
“Building trust in the online environment is key to **economic and social development.** Lack of trust, in particular because of a perceived lack of legal certainty, makes consumers, businesses and public authorities hesitate to carry out transactions electronically and to adopt new services.”

eIDAS Regulation No 910/2014

- **eIDAS (electronic IDentification, Authentication and trust Services)**

Governments are embracing digital transformation and putting Digital Trust as Foundation

e-ID, Estonia



(90+% adoption)

- Launched by public sector in 2000, with over 940 public and private sector institutions connected today
- Facilitates authentication, data storage and sharing, and digital signature through chip-based card or digital keys

SecureKey Concierge, Canada

(~50% adoption)

- Federated system launched in 2012 led and operated by financial institutions
- Enables authentication only with a range of public and private sector institutions through online login

Aadhaar, India

(90+% adoption[1])

- Launched in 2009 by agency established by public sector
- Enables biometric digital authentication, as part of broader digital ecosystems with additional functionality
- Key use cases include direct transfer of benefits to bank accounts, e-KYC, digital document storage

What is Trust ?

... from TRUST to Digital Trust..

leverage digital trust to become digitally trustworthy and trust others

Digital User Expectation

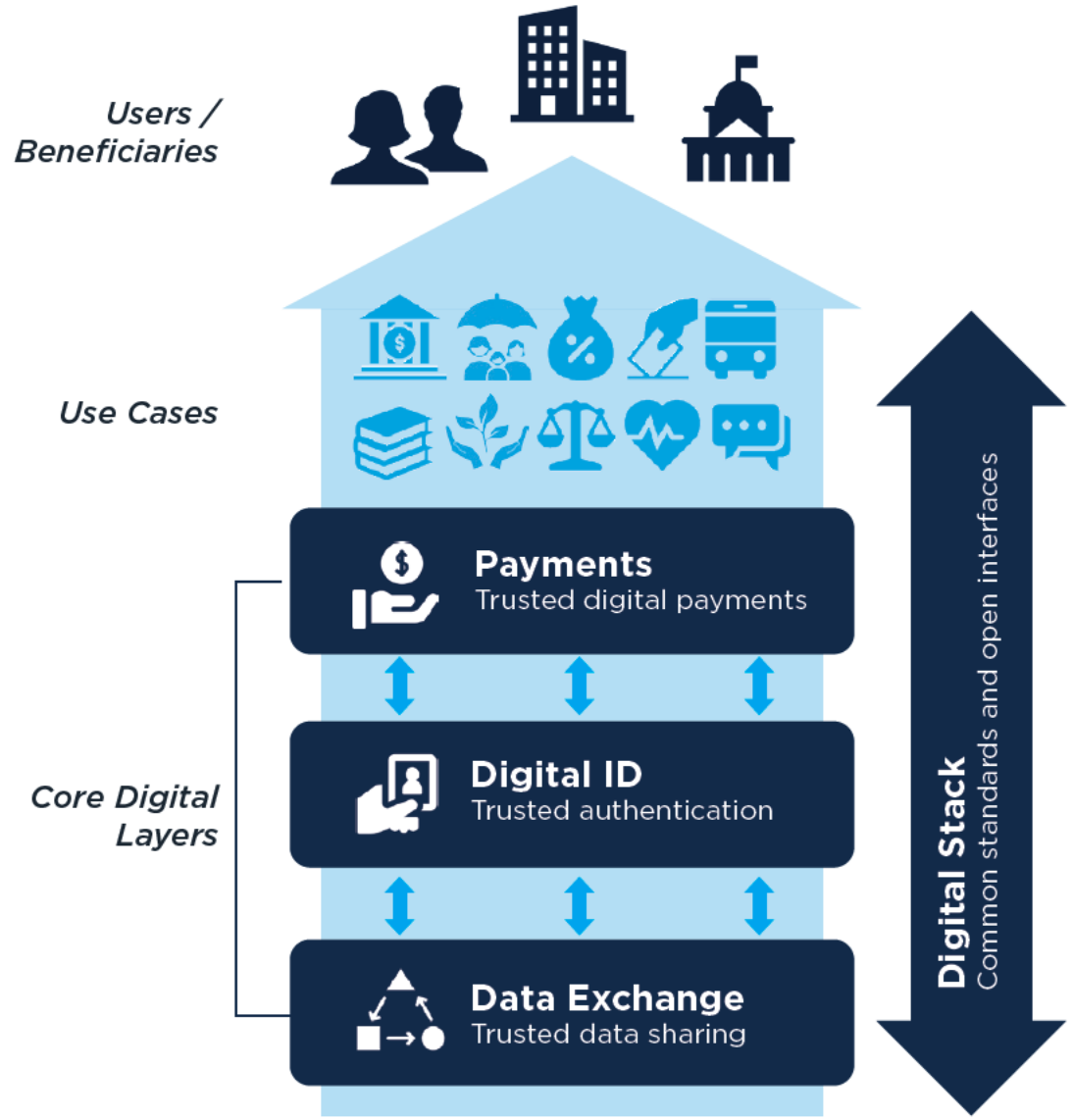
Security with Simplicity

User – Device – Activity – Environment – Behaviour

There must be an effort to make it simple

Digital Trust
as Fundamental of **Digital Public Infrastructure**

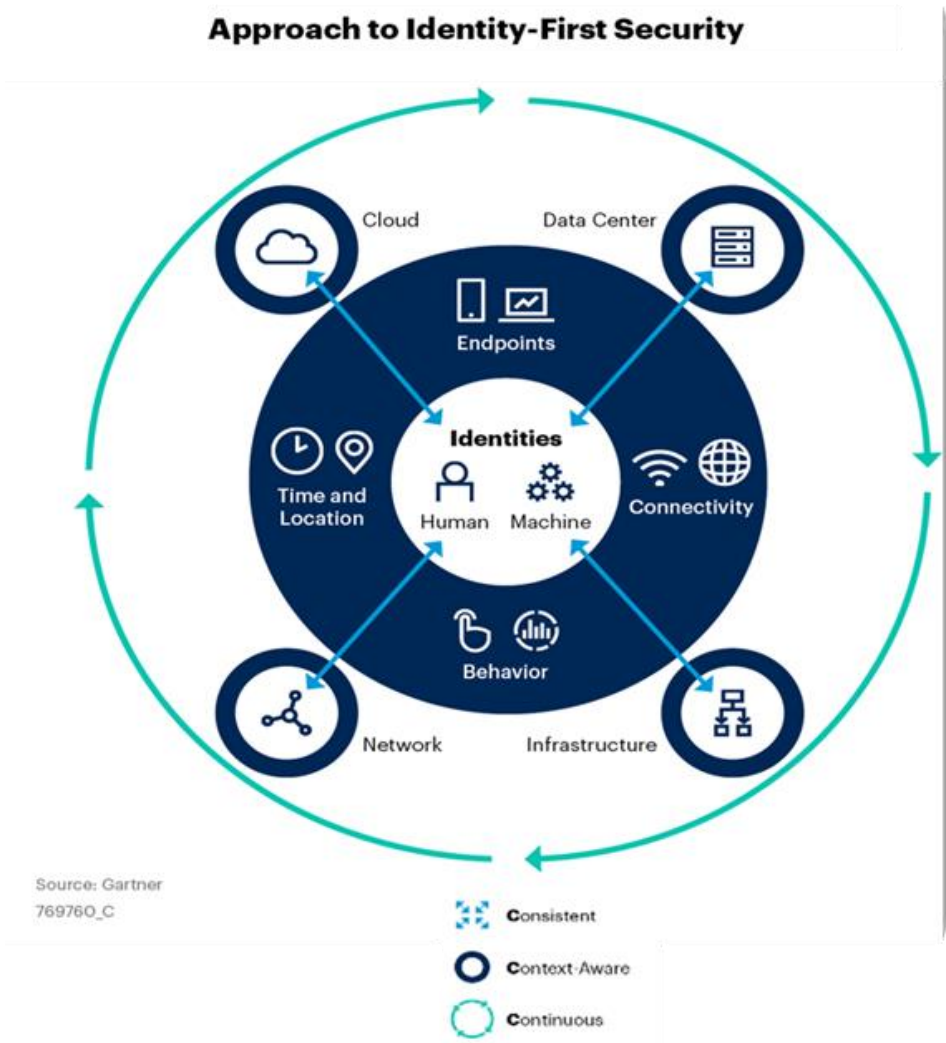
Digital Public Infrastructure (DPI) is a foundational framework essential for modern digital economies. It integrates systems from Digital ID for secure authentication, Digital Payments for seamless financial transactions, and Data Exchange for reliable and safe data sharing, establishing a cohesive digital environment built on trust and interoperability.

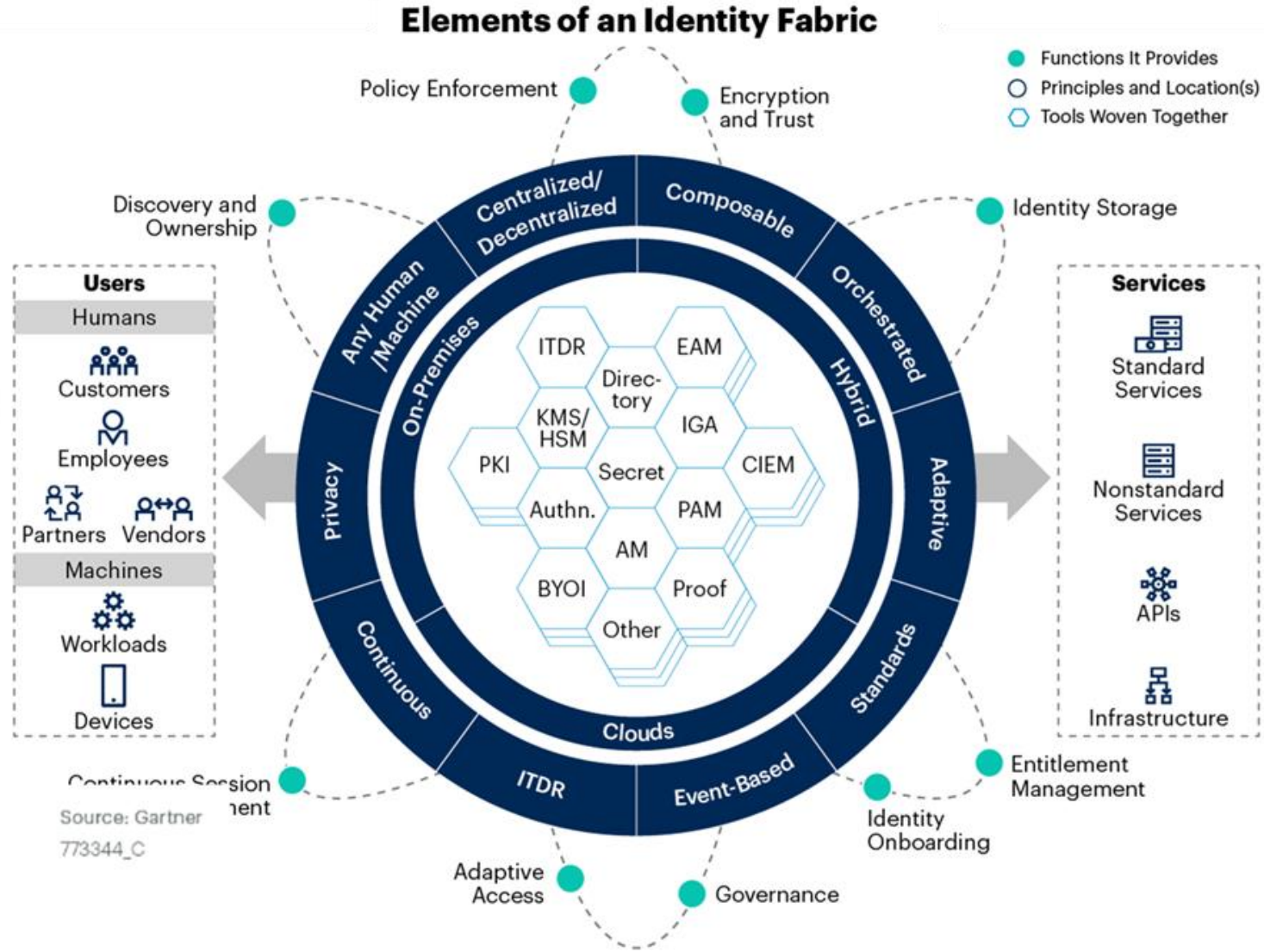


Digital Public Infrastructure position **Digital Identity** as one of Key Core Components

Digital ID not just at login.

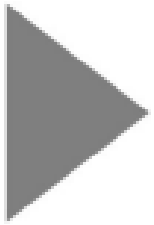
Trusted Digital ID is about ensuring that the right users can access the right resources for the right reasons at the right time . Now, it's important to focus on verifying who is using the system (identity) and make sure security checks adapt to different situations and keep running all the time.





Digital Identity and Verifiable Claims

- The world is moving towards Digital Identities and Verifiable Claims both of which are built on the foundation of cryptographic trust
- This presents an interesting opportunity for Peruri to allow other agencies/enterprises to
  - Verify user identity and potentially associated details (education, employment)
  - Consume a layer of federated authentication/single sign on across a range of online/mobile based services
  - Leverage keys/signature service that provide cryptographic legal binding
- A Digital Id itself is a type of verifiable claim that contains user's personal data presented in a digital legally binding format using cryptographic technology.
- The same model can be extended to issue other types of user claims around Education, Trade, Employment, Ownership of Assets, Bank Accounts or even complex claims relating User Identity and Asset Ownership etc



Layered Innovation

Consent Layer	Modern consent framework for data sharing
Data Sharing Layer	Secure data sharing by users backed by Issuers
Payments Layer	Supporting instant high value fund transfers, recurring debits
Paperless Layer	Supporting Qualified eSignatures
Presenceless Layer	Unique digital identity and federated authentication

Element of Identity Management

Unified Identity Management

Use of **strong, unified identifiers for people** (residents, citizens) **and businesses** (local and external) in government systems and transactions

Trusted **verification and provisioning process** linking digital credentials to physical identity

Digital methods of authentication of people, people representing companies, and company systems

Citizen's Perspective

Multi-factor Verification
e-KYC Process

Authentication
(Yes/No Mechanism) such as: KTP validation

Authorization
(such as: signing request)

Citizen Digital Identity Hub as Foundation for Digital Trust

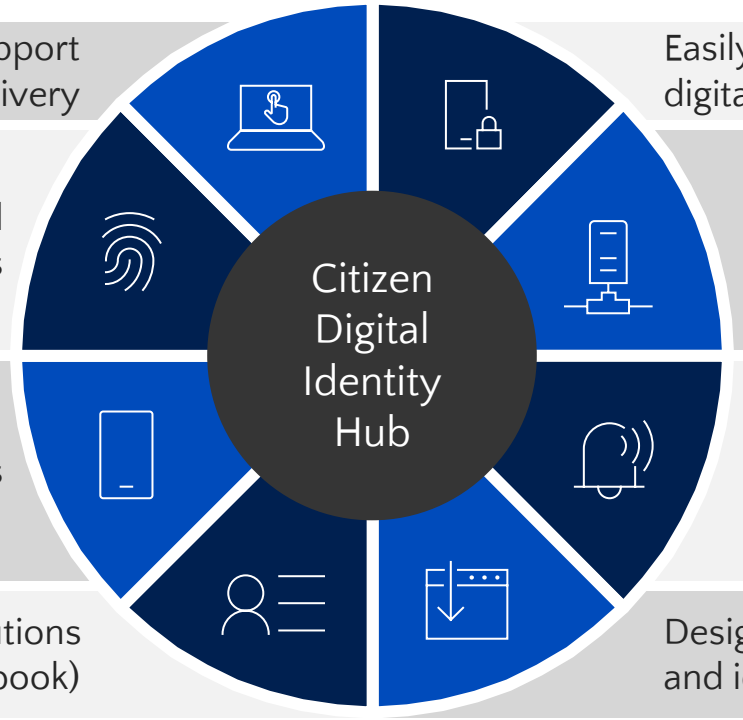
the Citizen Digital Identity Hub can improve trust by promoting transparency and accountability. By centralizing citizens' personal information, the government can better track and monitor the use of this information.

Enable rich profile management to support personalized government e-services delivery

Enable citizens and businesses consistent and secure joined-up access to digital citizen services

Available over multiple devices and channels

Utilize existing identity management solutions including social (e.g. Facebook)



Easily control the right level of citizen access to digital services

Enable newest technologies and cyber best practices to be leveraged for ongoing threat protection and innovation

Enable digital government service subscription management (e.g., property tax notification, drivers license renewal reminder)

Designed to easily expand and plug-in more services and identity providers over time

IDENTITY HUB

PROFILE MANAGEMENT

SUBSCRIPTION MANAGEMENT

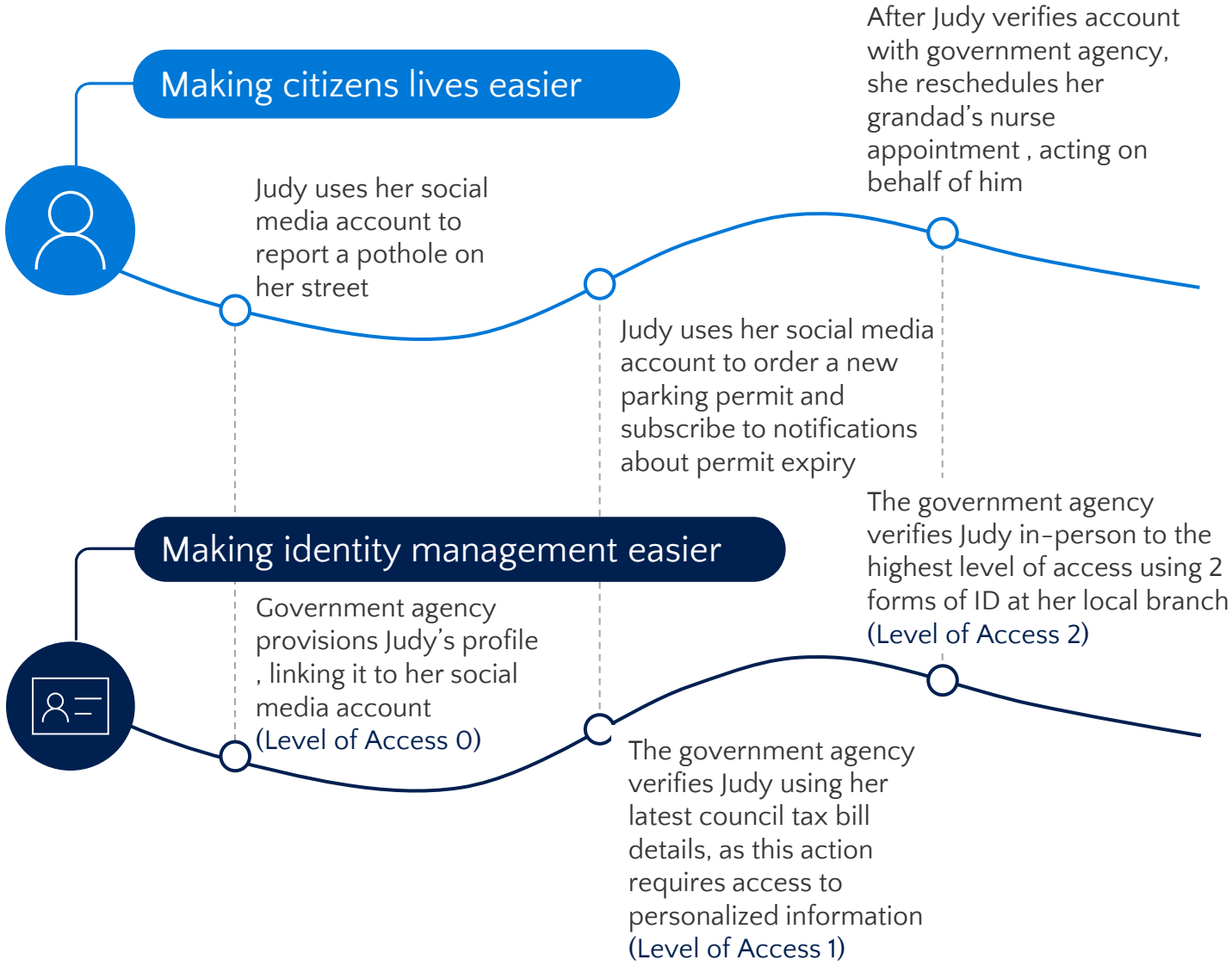
INSIGHTS

How does Citizen Digital Identity Hub work and become core element for Govtech movement?

Citizen Digital Identity Hub enables users to identify themselves on their own terms. A citizen creates an account enabling access to digital services in a way that suits them, whether that be using their existing social identity account or by creating a new account with the government agency.

Citizen Digital Identity Hub enables the agency to easily manage elevated access levels for citizen services and provides with ability to control access.

Whether the citizen needs to pay their tax, report a pot hole or schedule social care services, the Citizen Digital Identity Hub can be configured to meet the organisational and citizen needs in a seamless, safe and secure way.



Improved outcomes for citizens and governments

Protect sensitive and confidential citizen and agency information through a comprehensive integrated approach

Improve outcomes for citizens by connecting with government services effectively and enabling them to navigate the services and benefit delivery

Enable migration of existing citizen digital identities

Scale to hundreds of millions of users and based on a platform that can handle billions of authentications per day

Enable self –service sign up, profile and password management and single sign-on to all government services

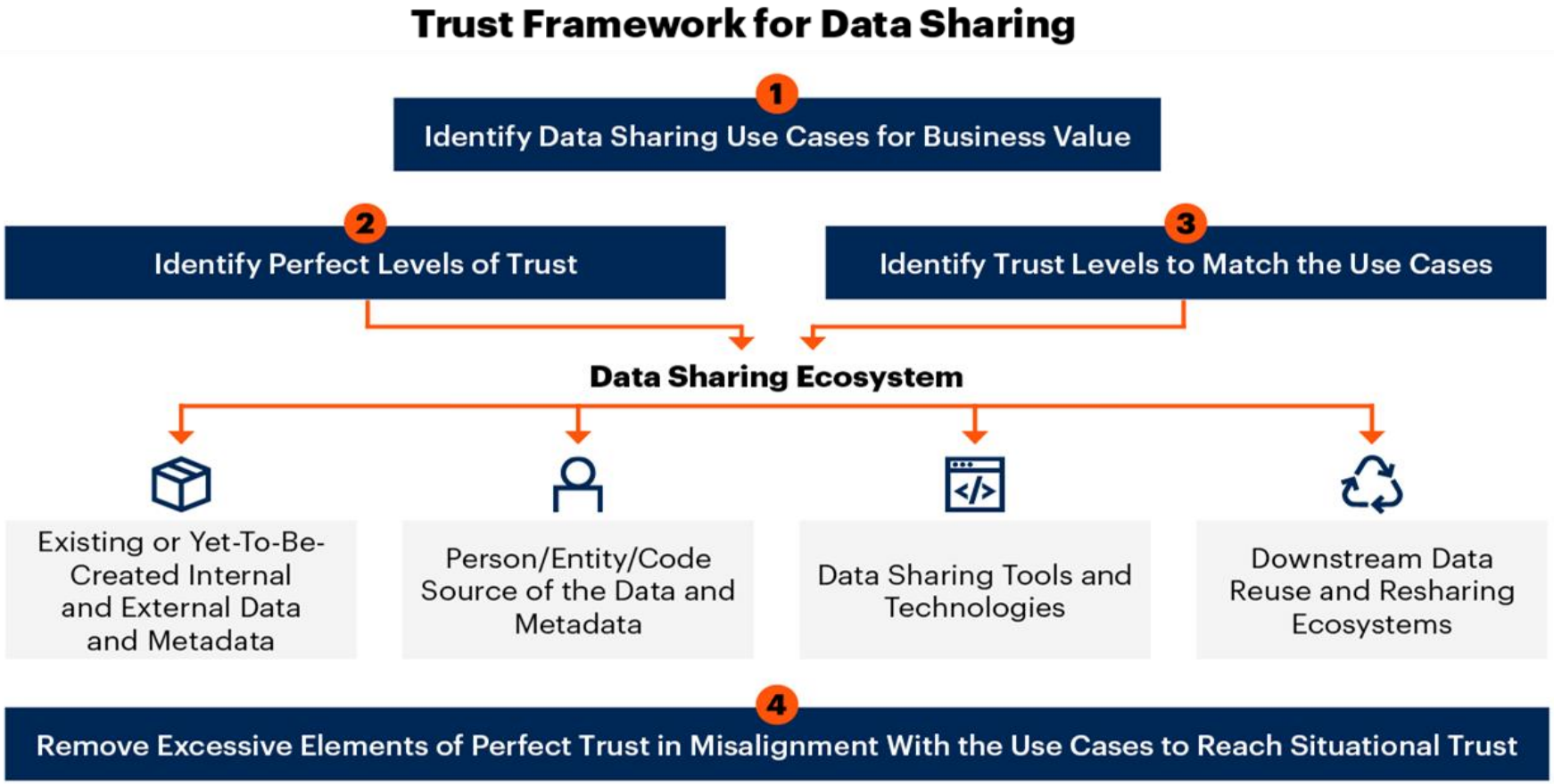
Keep citizens and governments engaged with all day, every day access to an omnichannel platform

Support advanced profile management by defining business representation, delegating access to services on behalf, subscribing to recurring services

Get a unified view of all citizens accessing your government services while providing high availability and strong security

Data Exchange

Trusted Data Sharing



Source: Gartner
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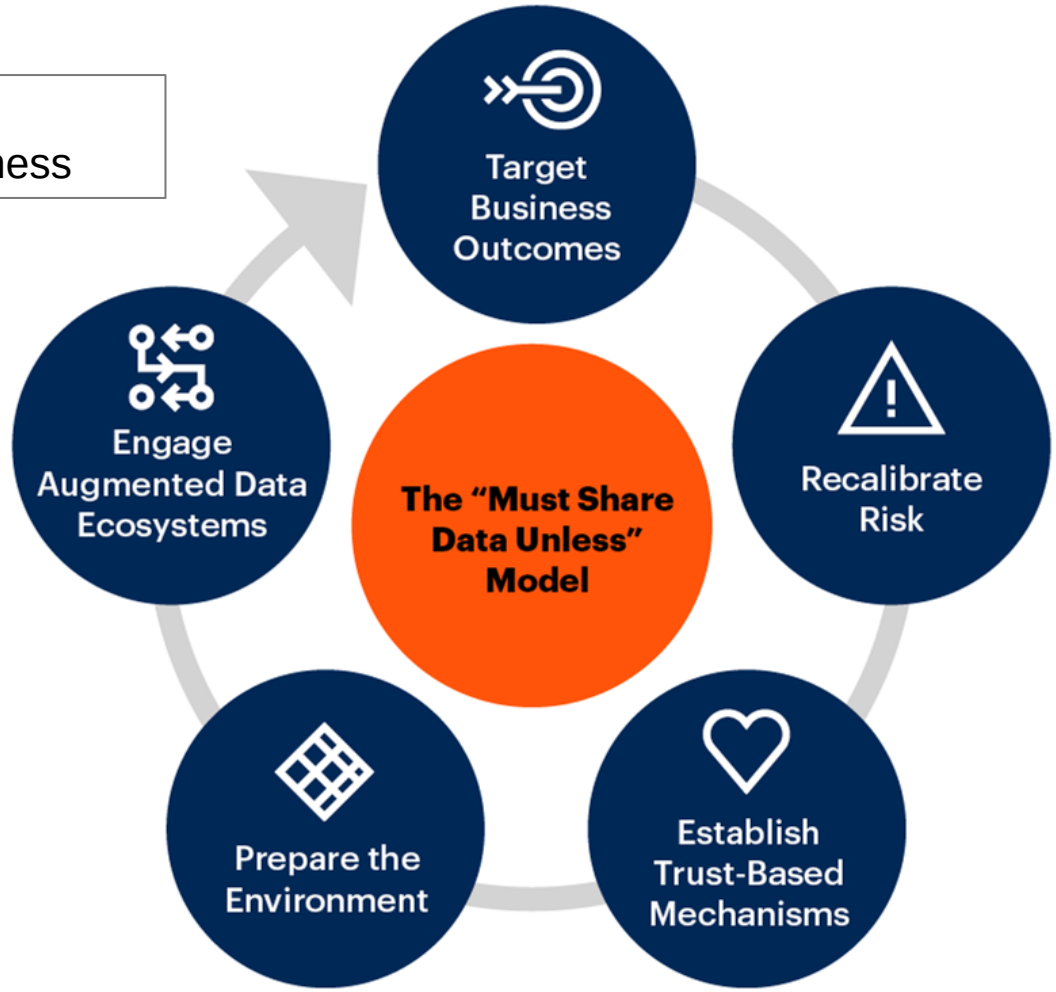
Data Exchange

Trusted Data Sharing

Data Sharing Model
To Accelerate Digital Business

Flipping the "Don't Share Data" Mantra



Source: Gartner
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Peruri Digital ID

PERURI ID

How Peruri ID works

IDENTITY BINDING

UNLOCK & APPROVE

ONE CLICK VERIFY

Peruri Digital ID Journey

Penerbitan Digital ID Peruri menggunakan Data Referensi Terpercaya (Trusted Reference Data) yang dimiliki berbagai otoritas yang memiliki data yang valid dan terkini

djp

IMIGRASI

BKN
BADAN KEPEGAWAIAN NEGARA

PERURI ID

Registrasi
Proses Registrasi Digital ID Peruri menggunakan nomor handphone yang aktif digunakan oleh pengguna

Verifikasi Nomor Handphone
Proses verifikasi nomor handphone dilakukan dengan mengirimkan kode OTP melalui SMS

Verifikasi Email
Proses verifikasi email dilakukan dengan mengirimkan link aktivasi ke email yang didaftarkan

e-KYC
e-KYC dilakukan dengan melakukan proses pengecekan data kependudukan dan face recognition menggunakan data referensi Dukcapil

Generate Digital ID
Pembuatan Digital ID Peruri membangkitkan Sertifikat Elektronik, Peruri Seal Digital ID, KEYLA ID, Transaction ID

PERURI ID

FRHFT29091

DIGITAL CERT

KEYLA ID

0491 8430 3409 1674

TRANSACTION ID

Current token:
MP4712IA
will change in 45 seconds

Data Referensi Trusted

Key For Digital Authentication (KEYLA)

PEMANFAATAN KEYLA SEBAGAI ALIAS DATA PRIBADI

Peruri ID (PID)

- Nomor Handphone
- Nomor Induk Kependudukan
- Nomor Pokok Wajib Pajak
- Alamat Email
- Sertifikat Elektronik

Data pribadi akan diwakili oleh Nomor HP yang akan dialiaskan ke sebuah PID (***static identifier***). PID kemudian diterjemahkan ke dalam bentuk token KEYLA (***dynamic identifier***).

- **Single Sign On**
- **Autentikasi Digital Signature**
- **Akses Layanan**

Token KEYLA dapat dimasukkan *user* ke dalam layanan sebagai pengganti dari data pribadi. Hal ini untuk menghindari serangan *man-in-the-middle* terhadap data pribadi tersebut.

Token KEYLA selalu berganti tiap 45 detik untuk menghindari *brute force* dan melindungi penyalahgunaan pemanfataan data pribadi. Hal ini supaya *credential* pengguna tidak dapat ditebak.

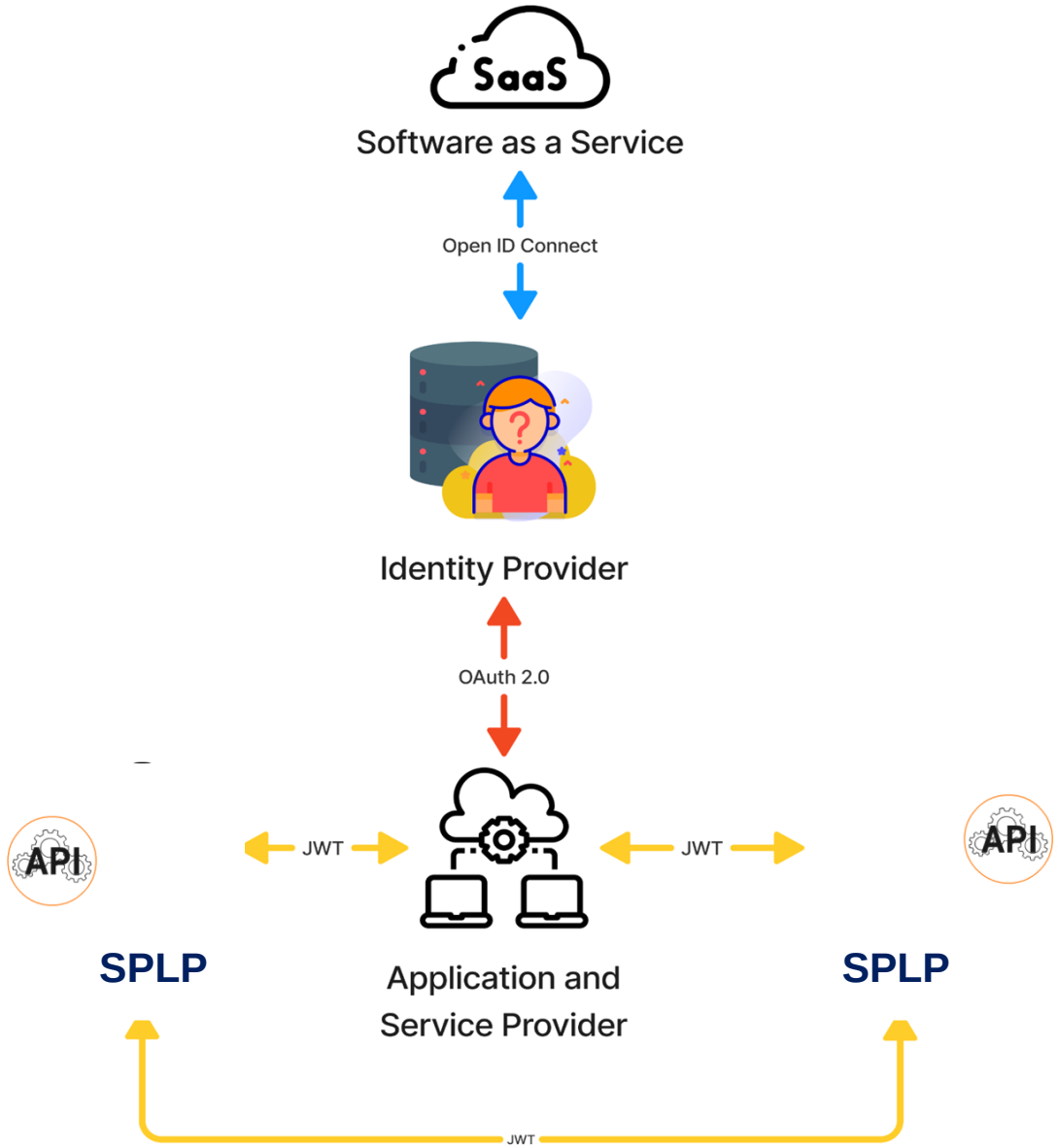
Peruri ID as a Identity Provider

Peruri ID sebagai Identity Provider membuka akses ke semua layanan untuk melakukan verifikasi identitas dengan standar protokol yang aman (Open ID Connect dan OAuth 2.0)

Untuk mendapatkan akses Identitas, pengguna layanan harus mendapatkan *Consent* dari pemilik data.

Proses tersebut dilakukan di Peruri dengan mekanisme *Authentication* dan *Authorization*

Data yang sudah dipastikan asli dan benar melalui sistem Peruri, akan dihubungkan lewat SPLP

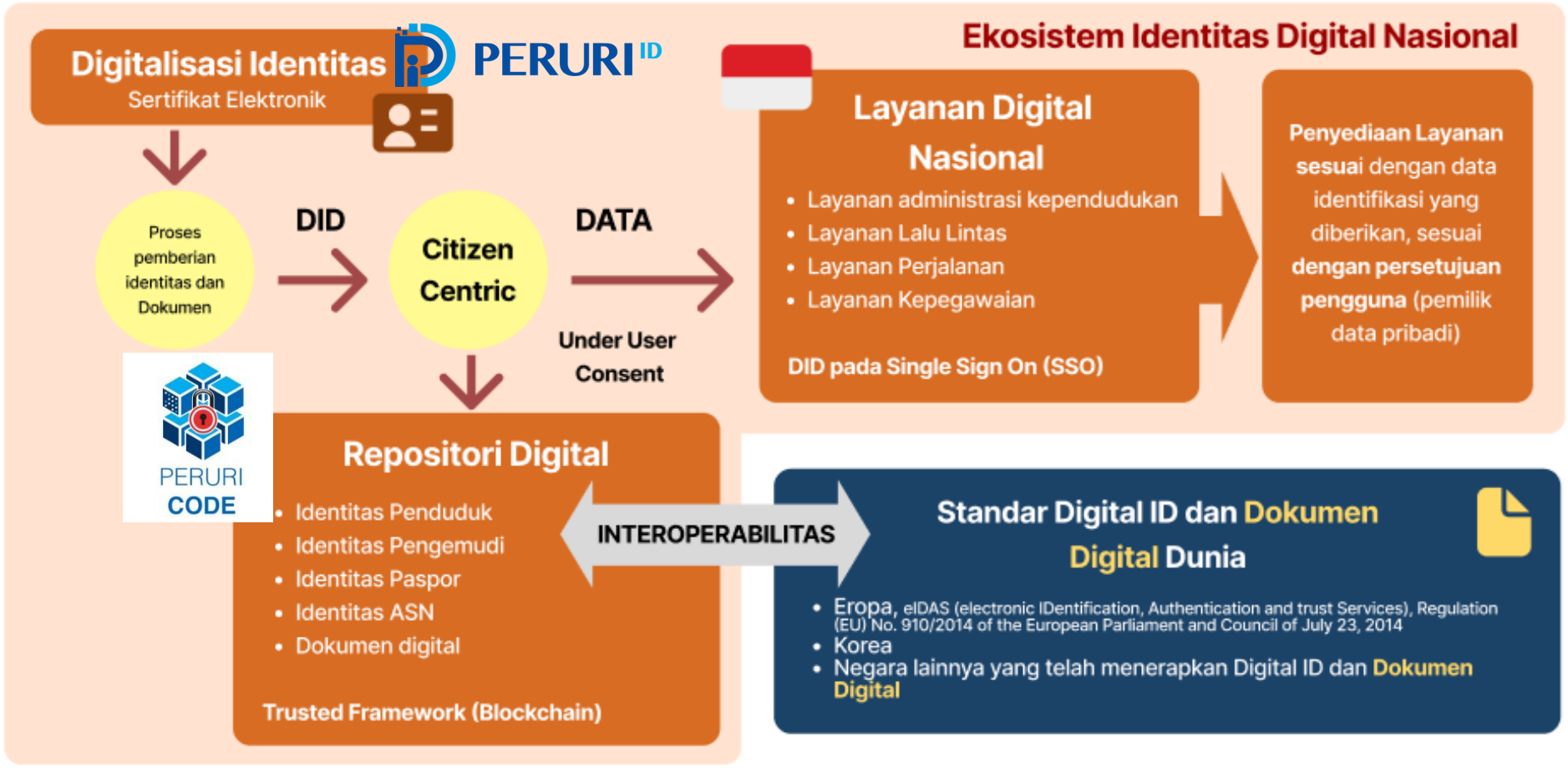


Self Sovereign Identity (SSI) with Peruri

Instansi Penerbit Identitas dan Dokumen

Jenis Layanan

1. Layanan Pendidikan
   a. Identitas siswa
   b. **Ijazah**
   c. **Sertifikat Pendidikan dan pelatihan**
2. Layanan Kesehatan
   a. Identitas pasien
   b. **Rekam medis**
   c. **Sertifikat vaksin**
3. Layanan Kepegawaian
   a. Identitas pegawai
   b. **Sertifikat penghargaan**
   c. **Surat Keputusan**
4. DLL



DID (Decentralized identifiers) adalah jenis pengenal baru yang memungkinkan identitas digital terdesentralisasi yang dapat diverifikasi. DID mengacu pada subjek apa pun (misalnya, orang, organisasi, benda, model data, entitas abstrak, dll.) sebagaimana ditentukan oleh pengontrol DID.

W3C (World Wide Web Consortium) adalah organisasi internasional yang menciptakan standar protokol dan panduan format web global demi meningkatkan kualitas web seluruh dunia, didirikan pada Oktober 1994 oleh Tim Berners-Lee, penemu dari World Wide Web. **Salah satu standar teknis yang disampaikan adalah DID.**

MORE SOLUTION? GET IN TOUCH WITH US

Our Contact

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Digital Cards – Issuing and Using: Example