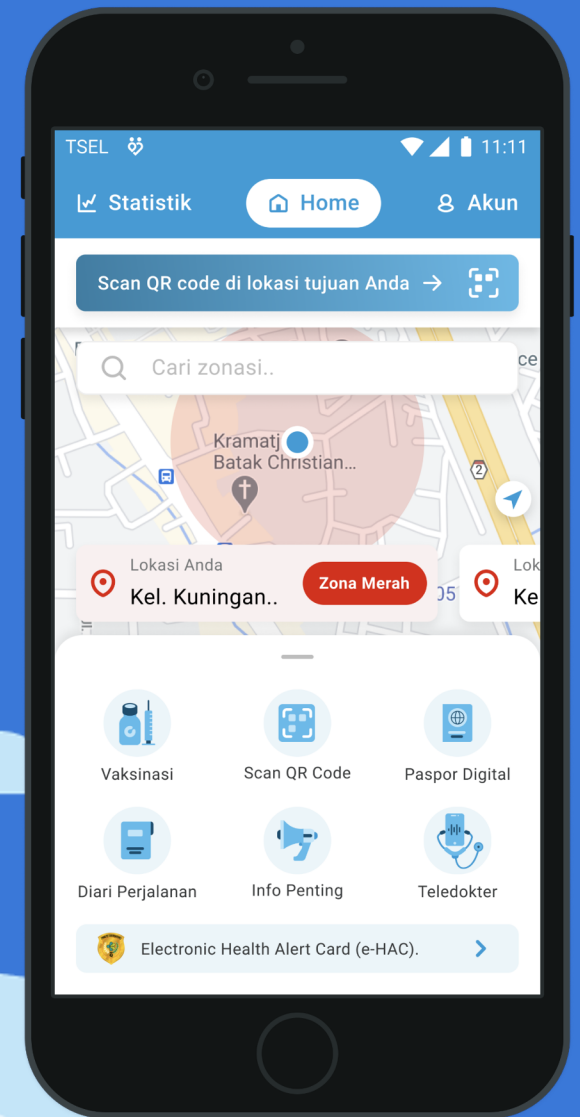




PeduliLindungi

Sertifikat Vaksinasi Digital

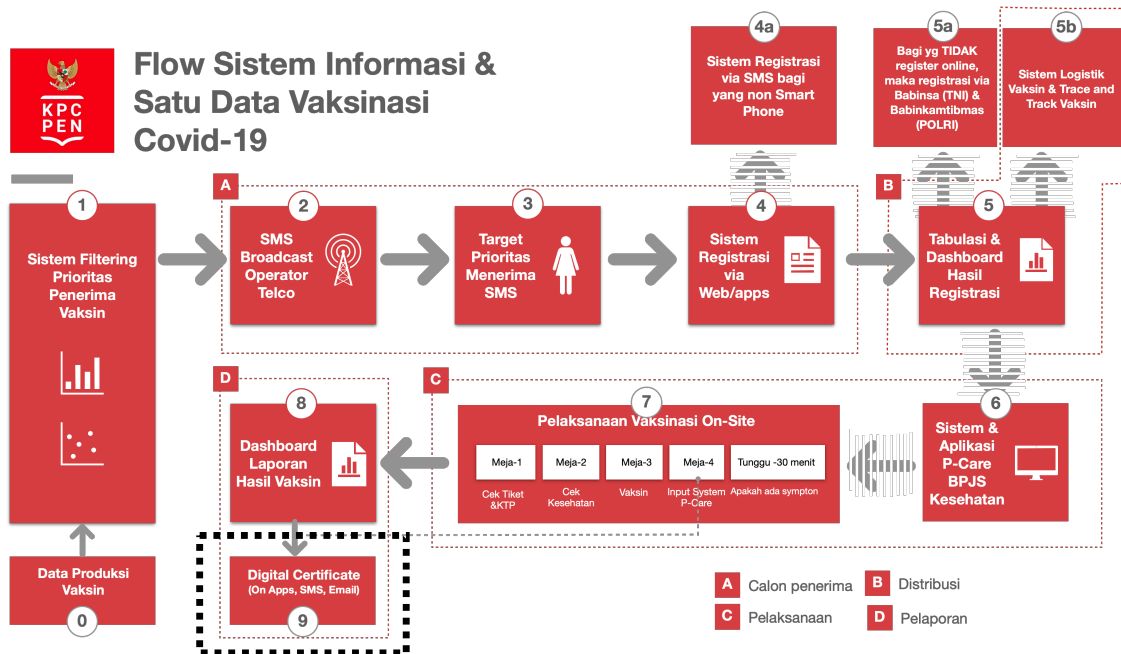
Andri Qiantori, PhD
PT. Telkom Indonesia





Awal Penggunaan Sertifikat Vaksinasi

Pemberian sertifikat merupakan layanan komplementer program vaksinasi



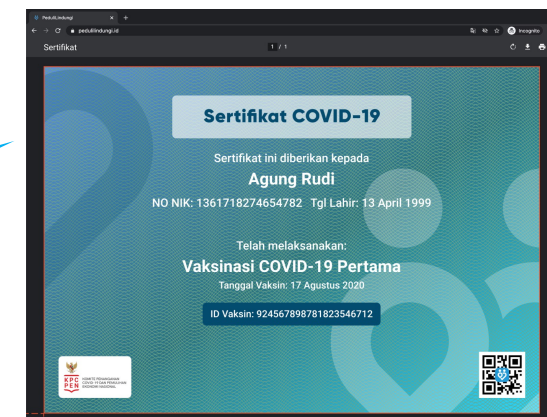
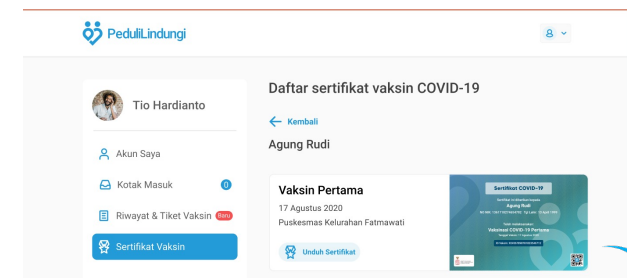
Setelah proses vaksinasi selesai di Meja-4, maka link Digital Certificate dikirimkan ke SMS dan juga dapat dibuka pada app PeduliLindungi

SMS sudah vaksin pertama.

Sertifikat vaksinasi ke-1 TIO HARDIANTO (NIK: 35xxxxxxxxxxx01) tersedia di: bit.ly/9182682. **PERHATIAN:** hanya berhak diakses yang bersangkutan!

SMS sudah vaksin kedua.

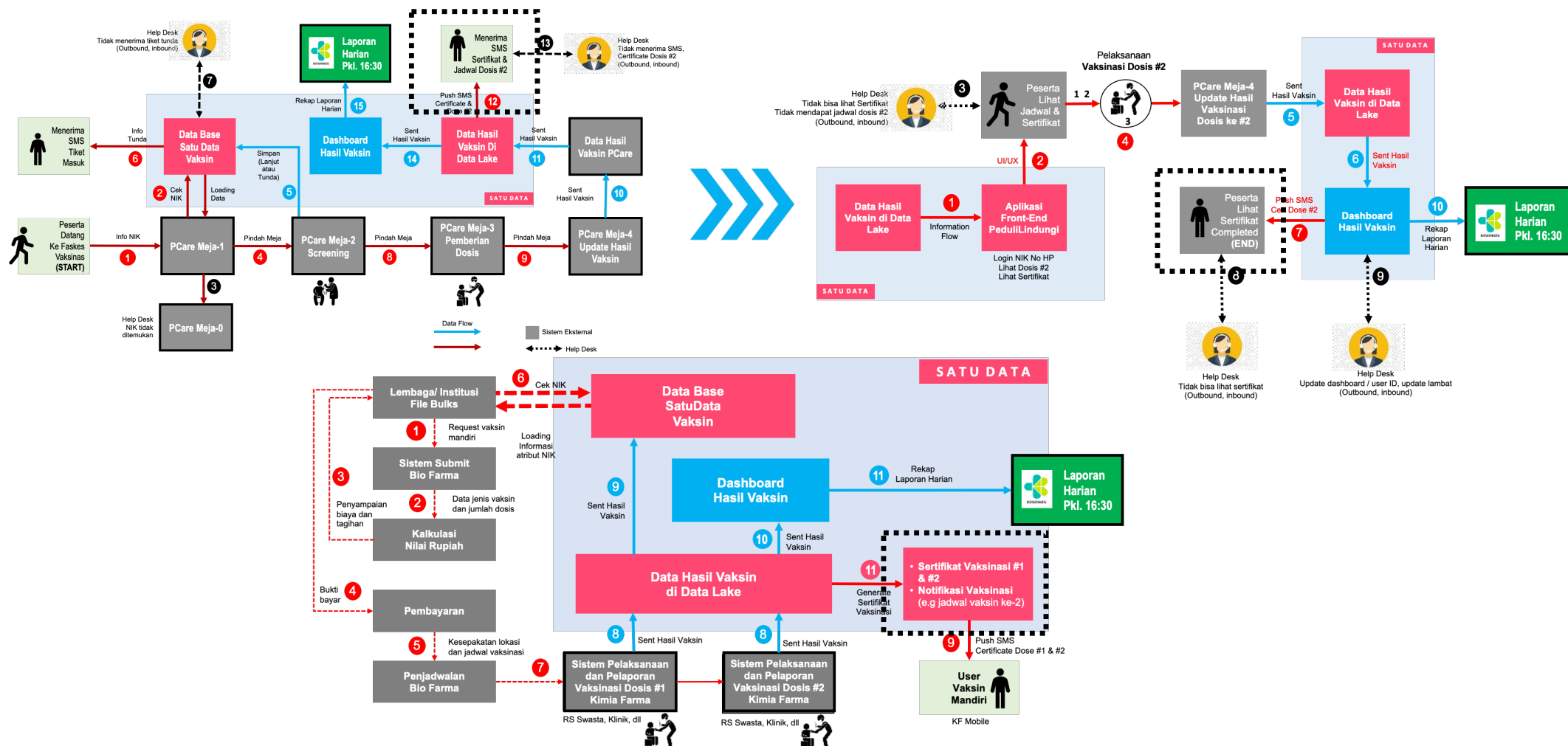
Sertifikat vaksinasi ke-2 TIO HARDIANTO (NIK: 35xxxxxxxxxxx01) tersedia di: bit.ly/91123982. **PERHATIAN:** hanya berhak diakses yang bersangkutan!





Pembuatan Sertifikat pada Proses Vaksinasi

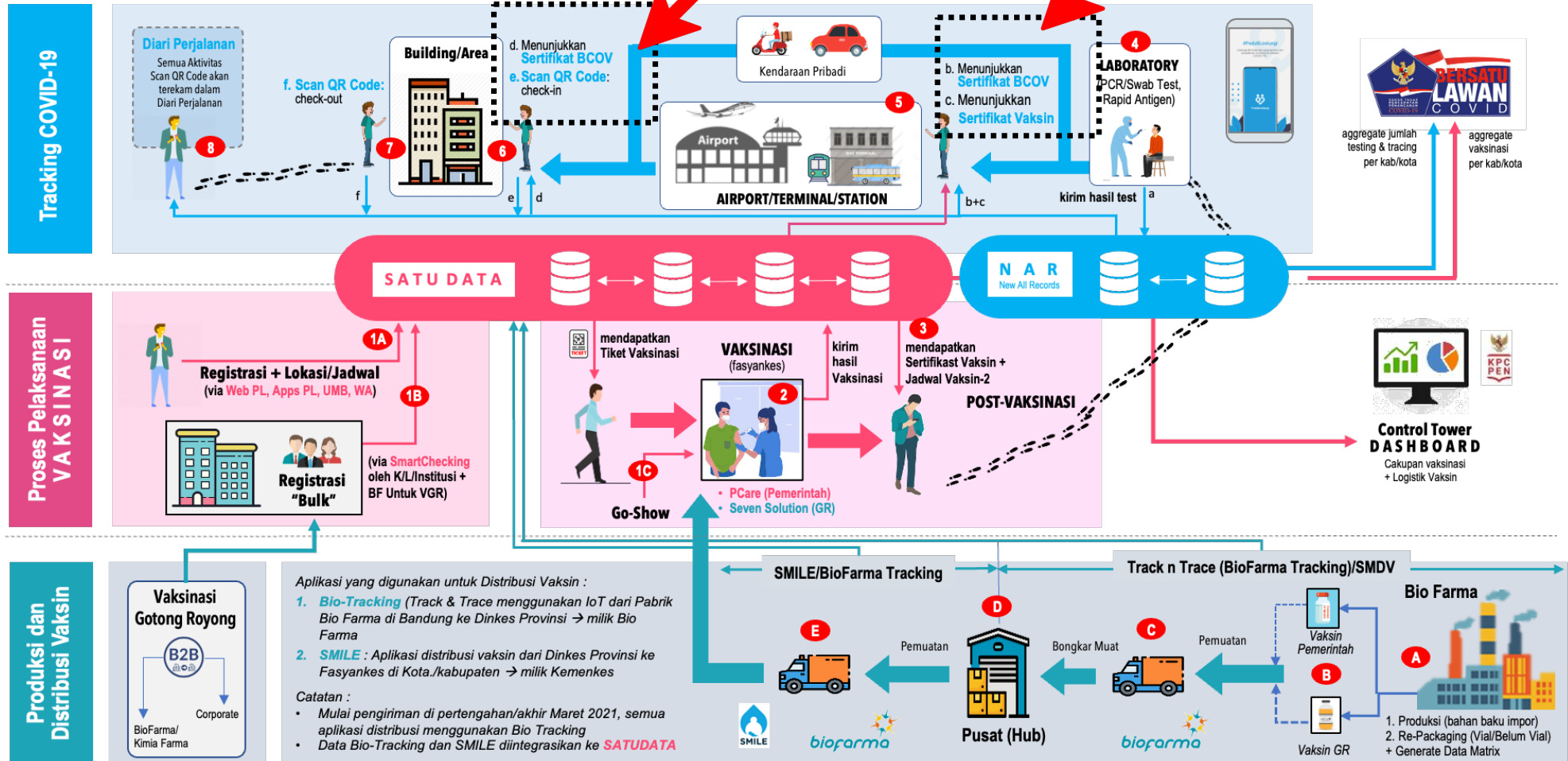
Sertifikat menjadi evidence selesainya pemberian dosis #1, #2 dst di VPP dan VGR



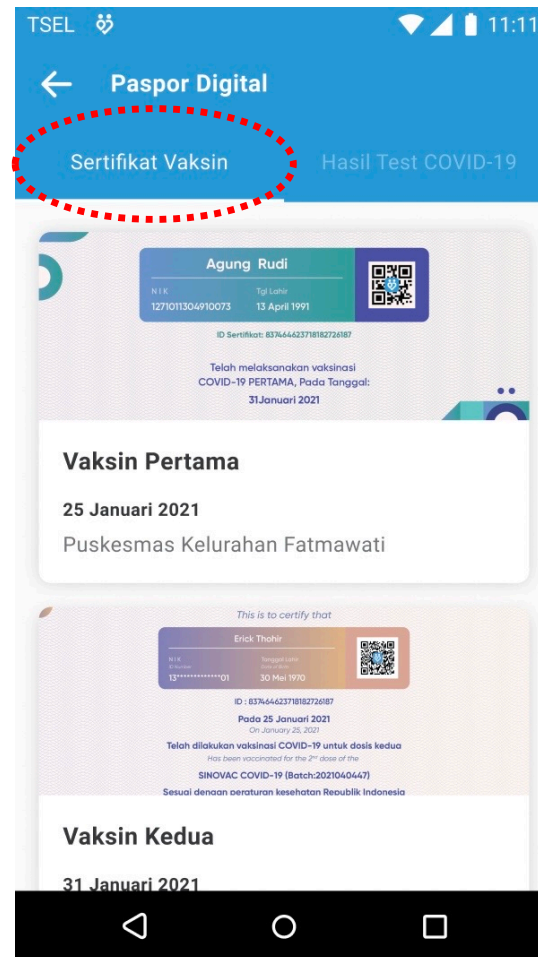
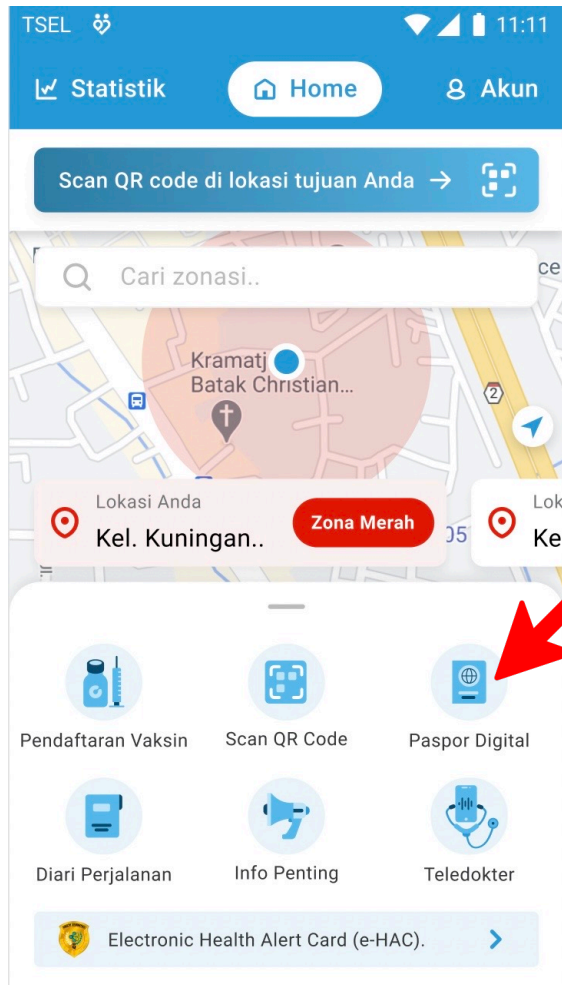


Penggunaan Sertifikat Vaksinasi untuk Aktivitas

Sertifikat dijadikan persyaratan untuk perjalanan, masuk Gedung dll.



Akses sertifikat menggunakan Apps PeduliLindungi

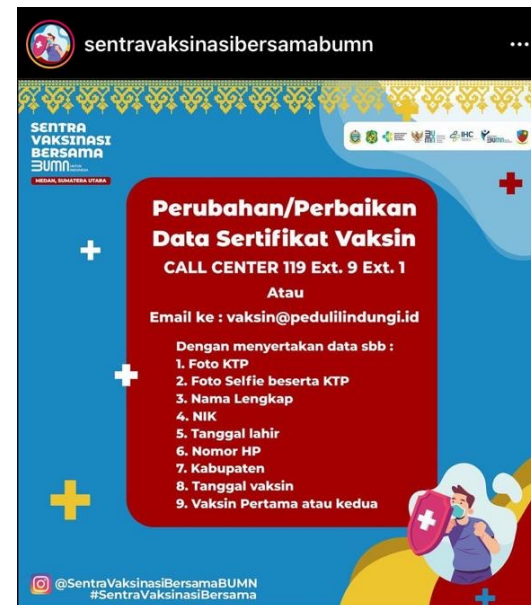


Problem Seputar Sertifikat

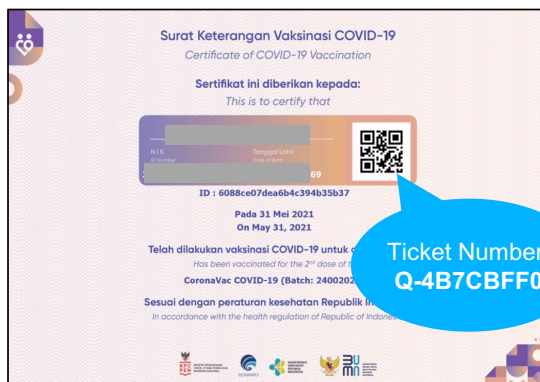
Fraud



Kesalahan Data pada Sertifikat



Kesalahanpahaman Penggunaan QR



Kanal customer handling:

- 119 ext 9
- vaksin@pedulilindungi.id
- sertifikat@pedulilindungi.id → rata2 +2000 email/hari
- sdmkesehatan@pedulilindungi.id
- Chatbot (under development)
- Ticketing system (under development)

Problem Seputar Sertifikat



- Kapasitas Penyimpanan & Dinamika Perubahan Format**

- > Minio capacity:**

- 2 MB x 180,000,000 users x 2 dosis x 2 bilingual = 1,1 PB**

- > Bahasa, logo, warna, komposisi, dosis tambahan, alasan keamanan: watermark (image, time)**

Solusi: Runtime Generated Certificate

Versi 1: Seluruh gambar sertifikat statik (.jpg 400kb, 83ms)

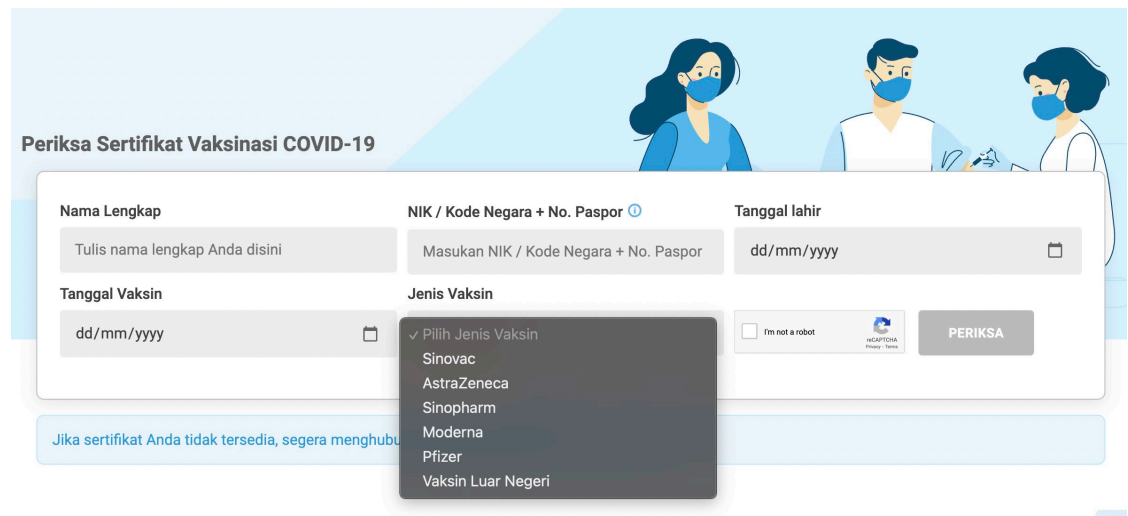
Versi 2: QR dinamis (d disesuaikan kebutuhan)

...

- Potensi Penyimpanan Sertifikat bukan oleh Pemiliknya**

Sertifikat vaksinasi ke-2 Agung Rudi (NIK. 32xxx01) tersedia di <https://asset.pedulilindungi.id/cert/1/rgd2f/gsdwe3d7fhgj1dsf.png>
Perhatian: Sertifikat ini hanya dibuka pemiliknya. Bila ada keluhan hubungi dokter./Akses lebih mudah lewat aplikasi PeduliLindungi di PlayStore dan AppStore

Solusi: Klaim sertifikat di pedulilindungi.id/periksa-sertifikat



Periksa Sertifikat Vaksinasi COVID-19

Nama Lengkap: Tulis nama lengkap Anda disini

NIK / Kode Negara + No. Paspor: Masukkan NIK / Kode Negara + No. Paspor

Tanggal lahir: dd/mm/yyyy

Tanggal Vaksin: dd/mm/yyyy

Jenis Vaksin:

- ✓ Pilih Jenis Vaksin
- Sinovac
- AstraZeneca
- Sinopharm
- Moderna
- Pfizer
- Vaksin Luar Negeri

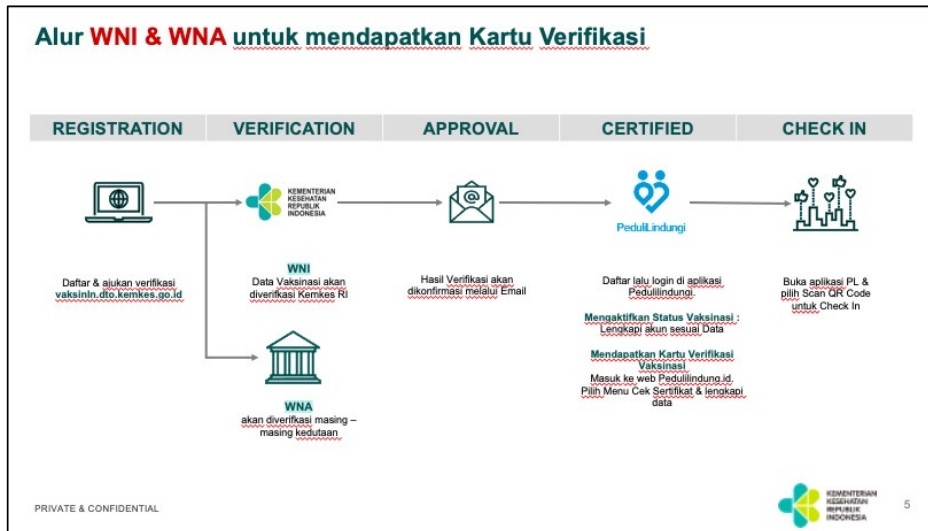
I'm not a robot

PERIKSA

Jika sertifikat Anda tidak tersedia, segera menghubungi...

Problem Seputar Sertifikat

- **Status vaksin bagi yg vaksinasi di LN**
> akses: <https://vaksinln.dto.kemkes.go.id/>



ROBBYANTO BUDIMAN Wednesday, 8 September 2021

Profile

Birth date : Tuesday, 1 January 1
Nationality : Indonesia
E-mail address : h@gmail.com
Phone number : +62 81

NIK number : 31
Proof of document :

Verification

Verification result
Approved Rejected
Reset Submit

Vaccine Dose #1

Name : Moderna
Location : Singapore
Date : Saturday, 27 March 2021

Proof of document :
COVID-19 Records
VACCINATION RECORDS

Periksa Sertifikat Vaksinasi COVID-19

Nama Lengkap
Tulis nama lengkap Anda disini

NIK / Kode Negara + No. Paspor
Masukan NIK / Kode Negara + No. Paspor

Tanggal lahir
dd/mm/yyyy

Tanggal Vaksin
dd/mm/yyyy

Jenis Vaksin
✓ Pilih Jenis Vaksin
Sinovac
AstraZeneca
Sinopharm
Moderna
Pfizer
Vaksin Luar Negeri

☐ I'm not a robot
PERIKSA

Jika sertifikat Anda tidak tersedia, segera menghubungi...

Sudah melakukan vaksinasi COVID-19? Cek sertifikat Anda di sini

Status vaksinasi & tes COVID-19

Nama Lengkap
Ev

Nomor Induk Kependudukan (NIK)
33

HIJAU

Saat ini Anda dapat bepergian dengan aman ke fasilitas publik.

Problem Seputar Sertifikat: Perjalanan Internasional



Tribunnews.com Asia Selasa, 21 September 2021

Virus Corona

Sertifikat Vaksin RI Tidak Bisa Diverifikasi oleh Kuwait, 56 WNI Terancam Di-PHK

+62 81 [redacted]
Forwarded

Dok bila

Tolong ditanyakan ke Tim kemenkes.
QR code di sertifikat vaksinasi kenapa tidak terbaca atau tidak kedetect yaa

Baru Saja di grup angkatan kuliah adanya cerita ada anaknya teman yg terpaksa dikembalikan lagi ke Indonesia Karena barcode sertifikat vaksinasinya tidak terdetect Oleh otoritas bandara di Qatar...

Kalo Kita scan jg QR code hanya menampilkan angka Dan huruf.
Tdk terbaca info Dr QR code tsb.

20:56

Surat Keterangan Vaksinasi COVID-19
Certificate of COVID-19 Vaccination

Sertifikat ini diberikan kepada:
This is to certify that

NIK
ID Number

Tanggal Lahir
Date of Birth

3 [redacted] 7 Desember 1969

ID : 6088ce07dea6b4c394b35b37

Pada 31 Mei 2021
On May 31, 2021

Telah dilakukan vaksinasi COVID-19 untuk dosis kedua
Has been vaccinated for the 2nd dose of the

CoronaVac COVID-19 (Batch: 24002021)

Sesuai dengan peraturan kesehatan Republik Indonesia
In accordance with the health regulation of Republic of Indonesia

QR code

???

Ticket Number:
Q-4B7CBFF0

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA

Implementasi Sertifikat Vaksinasi Internasional



Vaccination Certificate	
תעודת חיסון	
GADI	גדי
Full Name	שם מלא
Passport Num.	מס. תעודת זהות
31.01.1985	31.01.1985
Date Of Birth	תאריך לידה
תאריך תפוגת התוקף Expiration Date 18.07.2021	תאריך כניסה לתוקף Inoculated Since 18.01.2021
	21.12.2020 Dose 01 Covid19 EK4175, Pfizer, EK4175 Shaare Zedek שעי צדק
	11.01.2021 Dose 02 Covid19 EK4238, Pfizer, EK4238 Shaare Zedek שעי צדק

Vaccination Certificate	
IMMUNISEERIMISE TÕEND ДОКАЗАТЕЛЬСТВО ИММУНИЗАЦИИ	
DISEASE OR AGENT TARGETED MILLE VASTU IMMUNISEERIT БОЛЕЗНЬ, ПРОТИВ КОТОРОЙ ВАКЦИНИРОВАЛИ	COVID-19
VACCINE/PROPHYLAXIS TOIMEAINED ТИП ВАКЦИНЫ	covid-19 vaccine
VACCINE MEDICINAL PRODUCT IMMUNIPREPARAAT ПРЕПАРАТ	Comirnaty
MARKETING AUTHORIZATION HOLDER MÜÜGILOA HOIDJA ДЕРЖАТЕЛЬ ТОРГОВОЙ ЛИЦЕНЗИИ	BioNTech Manufacturing GmbH
NUMBER IN A SERIES OF VACCINATIONS MANUSTAMISE KORDSUS КОЛИЧЕСТВО ВВЕДЕНИЙ	2 out of 2 doses kaks doosi kahest две дозы из двух
VACCINATION STATUS IMMUNISEERIMISE SEIS СТАТУС ИММУНИЗАЦИИ	Completed Lõpetatud Завершено
DATE OF VACCINATION IMMUNISEERIMISE KUUPÄEV ДАТА ВАКЦИНАЦИИ	2021-03-04
COUNTRY OF VACCINATION RIIK, KUS IMMUNISEERITI СТРАНА ВАКЦИНАЦИИ	EST
Estonian Health Information System Health and Welfare Information Systems Centre Центр информационных систем здравоохранения и социального обеспечения	
Estonian Health Information System Tervise infosüsteem Инфосистема здоровья CERTIFICATE ISSUER TÕENDI VALJASTAJA ДОКАЗАТЕЛЬСТВО ВЫДАНО	
HELPDISK KASUTAJATUGI СЛУЖБА ПОДДЕРЖКИ	+372 7943 943 abi@tehi.ee

Provisional Certificate for COVID-19 Vaccination - 1 st Dose	
 Ministry of Health & Family Welfare Government of India	
Beneficiary Details	
Beneficiary Name / लाभार्थीचे नाव	
Age / वय	34
Gender / लिंग	Male
ID Verified / ओळखपत्र	Aadhaar # XXXXXXXX1567
Unique Health ID (UHD)	
Beneficiary Reference ID	
Vaccination Details	
Vaccine Name / लसीचे नाव	COVISHIELD
Date of Dose / डोसची तारीख	14 Jun 2021 (Batch no. 4121Z096)
Next due date / पुढील देय तारीख	Between 06 Sep 2021 and 04 Oct 2021
Vaccinated by / याच्याद्वारे लसीकरण	S S BANDKAR
Vaccination at / लसीकरणाचे स्थळ	Rajapur RH 1, Ratnagiri, Maharashtra
 औषध सुद्धा आणि शिस्त सुद्धा Together, India will defeat COVID-19 - पंतप्रधान श्री नरेंद्र मोदी	
In case of any adverse events, kindly contact the nearest Public Health Centre/ Healthcare Worker/District Immunization Officer/State Helpline No. 1075 कोणत्याही अशुभ घटनेसंदर्भात कृपया जवळचे सार्वजनिक आरोग्य केंद्र/आरोग्यसेवा कर्मचारी/जिल्हा लसीकरण अधिकारी/राज्य हेल्पलाइन क्र. 1075 वर संपर्क साधा.	

Implementasi Sertifikat Vaksinasi Internasional: EU Countries



EL digitaalne COVID tõend

EU Digital COVID Certificate

Цифровая COVID справка ЕС



TÕENDI VÄLJASTAJA
CERTIFICATE ISSUER
ДОКАЗАТЕЛЬСТВО
ВЫДАНО

Tervise Infosüsteem
Estonian Health Information System
Информационная система
здоровья

See tõend ei ole reisidokument. Teaduslikud faktid COVID-19 vaktsineerimise, testimise ja läbipõdemise kohta võivad muutuda, sh sõltus pidades rõhuve vältimiseks uusi tõendeid. Enne reisimist kontrollige palun aktiivseid kohaldatavaid rahvusvaheliseid meetmeid ja nendega seotud piiranguid.
This certificate is not a travel document. The scientific evidence on COVID-19 vaccination, testing and recovery continues to evolve, also in view of new variants of concern of the virus. Before travelling, please check the applicable public health measures and related restrictions apply at the point of destination.
Этот справочник не является документом для путешествия. Научные данные о вакцинации, тестировании и заболевании COVID-19 могут изменяться, особенно с учетом возможных штаммов вируса. Перед поездкой ознакомьтесь с актуальными рекомендациями здравоохранения и ограничениями в стране назначения.

Veebivõrd kontrollimiseks lühike
Verification page for electronic usage
Вспомогательная страница для электронного
использования
<https://kontrol.digilugu.ee>



KASUTAJA TEGU
HELPER
СЛУЖБА ПОДДЕРЖКИ

abi@tehiik.ee
+372 7943 943

LÄBIPÕDEMISE TÕEND

CERTIFICATE OF RECOVERY

СПРАВКА О ПЕРЕНОСЕНИИ БОЛЕЗНИ



PERECONNA JA TÕENDI ISIKU NIMETUS / NAME
[Redacted]

SÜNNIAEG / PERSON DATE OF BIRTH / DATE OF BIRTH
[Redacted]

HAIGUS
DISEASE OR AGENT TARGETED
БОЛЕЗНЬ

COVID-19

ESIMENE POSITIIVNE TEST KUUPÄEV
DATE OF FIRST POSITIVE TEST RESULT
ДАТА ПЕРВОГО ПОЛОЖИТЕЛЬНОГО РЕЗУЛЬТАТА

2021-05-20

RIIK, KUS TESTITI
COUNTRY OF TEST
СТРАНА, ГДЕ ДЕЛАЛИ ТЕСТ

EE

KEHTIV ALATES
CERTIFICATE VALID FROM
ДЕЙСТВИЕТ С

2021-05-31

KEHTIV KUNI
CERTIFICATE VALID UNTIL
ДЕЙСТВИЕТ ДО

2021-11-16

Certificazione verde
COVID-19



EU Digital Covid Certificate



Surname(s) and forename(s)
Cognome e Nome

Date of birth
Data di nascita (aaaa-mm-gg)

<h1>EU DIGITAL COVID CERTIFICATE</h1>									
<h2>CERTIFICAT COVID NUMÉRIQUE UE</h2>	Certificat COVID numérique UE								
 FR	Nom(s) de famille et prénom(s) Nom, Prénom(s) et Nom de famille								
 MINISTÈRE DES SOLIDARITÉS ET DE LA SANTÉ <small>Autorité Française</small>	Date de naissance Date of birth								
	Par souci de confidentialité de vos données de santé, nous vous recommandons de ne présenter que le seul QR Code de preuve en plantant cette attestation								
<p>Ce certificat n'est pas un document de voyage. Un nouveau certificat pourra être exigé en fonction de l'évolution de la pandémie. Avant de vous rendre dans un pays étranger, vérifiez les mesures sanitaires locales applicables pour la Covid-19.</p> <p>Les informations personnelles peuvent être trouvées ici : https://heopen.europa.eu/en/</p> <p>Ce document est personnel et non transférable. Il est délivré en application du décret n° 2020-1090 du 25 décembre 2020 autorisant la création d'un traitement de données à caractère personnel relatif aux vaccinations contre la Covid-19.</p> <p>Conformément aux dispositions relatives à la protection des données personnelles, vous disposez d'un droit d'accès, de rectification et de limitation aux données qui vous concernent, ainsi que d'un droit d'opposition sur une partie du traitement. Ces droits s'exercent auprès du directeur de votre caisse d'Assurance Maladie de rattachement en contactant le ou la délégué(e) à la protection des données. Pour en savoir plus sur le traitement de vos données, rendez-vous sur le site d'information ameli.fr (https://www.ameli.fr/information-informations-sis-ameli-covid/)</p> <p>La loi rend passible d'amende et/ou d'emprisonnement quiconque se rend coupable de fausses ou de fausses déclarations (articles 441-1 du code pénal). En outre, la falsification ou l'utilisation abusive de faux documents, ainsi que l'utilisation de tels documents sont passibles d'une peine financière aux termes des articles L. 152-5-14 du code de la Sécurité sociale.</p>	<h2>CERTIFICAT DE VACCINATION VACCINATION CERTIFICATE</h2> <table><tr><td>Maladie ou agent ciblé Disease or agent targeted</td><td>COVID-19 B40539006</td></tr><tr><td>Vaccin/prophylaxie Vaccine/prophylaxis</td><td>Covid-19 vaccines J07BX03</td></tr><tr><td>Médicament vaccinal Vaccine medicinal product</td><td>Comirnaty EU/1/20/1528</td></tr><tr><td>Fabricant ou titulaire de l'autorisation de mise sur le marché du vaccin Vaccine marketing authorisation holder or manufacturer</td><td>Biontech Manufacturing GmbH CRIS-100030215</td></tr></table> <p>Nombre dans une série de vaccins/doses Number in a series of vaccination/doses and the overall number of doses in the series</p> <p>Date de la vaccination Date of vaccination</p> <p>État membre de vaccination Member State of vaccination</p> <p>Émetteur du certificat Certificate issuer</p>	Maladie ou agent ciblé Disease or agent targeted	COVID-19 B40539006	Vaccin/prophylaxie Vaccine/prophylaxis	Covid-19 vaccines J07BX03	Médicament vaccinal Vaccine medicinal product	Comirnaty EU/1/20/1528	Fabricant ou titulaire de l'autorisation de mise sur le marché du vaccin Vaccine marketing authorisation holder or manufacturer	Biontech Manufacturing GmbH CRIS-100030215
Maladie ou agent ciblé Disease or agent targeted	COVID-19 B40539006								
Vaccin/prophylaxie Vaccine/prophylaxis	Covid-19 vaccines J07BX03								
Médicament vaccinal Vaccine medicinal product	Comirnaty EU/1/20/1528								
Fabricant ou titulaire de l'autorisation de mise sur le marché du vaccin Vaccine marketing authorisation holder or manufacturer	Biontech Manufacturing GmbH CRIS-100030215								
 Flashez pour ajouter dans TousAntiCovid	2/2 2021-06-09 FR CNAM								



Dataset EU Digital Covid Certificate



Certificate datasets

1. Data fields to be included in the **vaccination certificate**:

- ☒ (a) name: surname(s) and forename(s), in that order;
- ☒ (b) date of birth;
- ☒ (c) disease or agent targeted: COVID-19 (SARS-CoV-2 or one of its variants);
- ☒ (d) COVID-19 vaccine or prophylaxis;
- ☒ (e) COVID-19 vaccine product name;
- ☒ (f) COVID-19 vaccine marketing authorisation holder or manufacturer;
- ☒ (g) number in a series of doses as well as the overall number of doses in the series;
- ☒ (h) date of vaccination, indicating the date of the latest dose received;
- ☒ (i) Member State or third country in which the vaccine was administered;
- ☒ (j) certificate issuer;
- ☒ (k) unique certificate identifier.

2. Data fields to be included in the **test certificate**:

- ☒ (a) name: surname(s) and forename(s), in that order;
- ☒ (b) date of birth;
- ☒ (c) disease or agent targeted: COVID-19 (SARS-CoV-2 or one of its variants);
- ☒ (d) the type of test;
- ☒ (e) test name (optional for NAAT test);
- ☒ (f) test manufacturer (optional for NAAT test);
- ☒ (g) date and time of the test sample collection;
- ☒ (h) result of the test;
- ☒ (i) testing centre or facility (optional for rapid antigen test);
- ☒ (j) Member State or third country in which the test was carried out;
- ☒ (k) certificate issuer;
- ☒ (l) unique certificate identifier.

3. Data fields to be included in the **certificate of recovery**:

- ☒ (a) name: surname(s) and forename(s), in that order;
- ☒ (b) date of birth;
- ☒ (c) disease or agent from which the holder has recovered: COVID-19 (SARS-CoV-2 or one of its variants);
- ☒ (d) date of holder's first positive NAAT test result;
- ☒ (e) Member State or third country in which test was carried out;
- ☒ (f) certificate issuer;
- ☒ (g) certificate valid from;
- ☒ (h) certificate valid until (not more than 180 days after the date of first positive NAAT test result);
- ☒ (i) unique certificate identifier.

```
{
  "ver": "1.3.0",          # schema version
  "nam": {
    "fn": "Qiantori",      # family name
    "gn": "Andri",         # given name
    "fnt": "Qiantori",     # standardized family name
    "gnt": "Andri"         # standardized given name
  },
  "dob": "1974-01-03",     # date of birth
  "v": [
    {
      "tg": "840539006",    # target disease (COVID-19)
      "vp": "1119349007",   # vaccine (SARS-CoV2 mRNA vaccine)
      "mp": "CoronaVac",     # vaccine product id
      "ma": "SinovacBiotech", # vaccine manufacturer
      "dn": 1,               # doses received
      "sd": 2,               # total number doses
      "dt": "2021-03-1",    # date of vaccination
      "co": "IA",            # country of vaccination
      "is": "Ministry of Health, Indonesia", # cert issuer
      "ci": "10807843F94AEE0EE5093FBC24BD8" # certificate id
    }
  ]
}
```

DDCC: WHO Technical Specification & Policy Guidance

27 Aug 2021



Data Avail. Indonesia	Requirement status for Continuity of Care	Requirement status for Proof of Vaccination	Section	Data Element Label
✓	REQUIRED	REQUIRED	Header – input once	NAME
✓	REQUIRED	REQUIRED		DATE OF BIRTH
✓	OPTIONAL	OPTIONAL		UNIQUE IDENTIFIER
✓	OPTIONAL	NOT NEEDED	Data needed for each vaccination event	SEX
✓	REQUIRED	REQUIRED		VACCINE OR PROPHYLAXIS
✓	REQUIRED	REQUIRED		VACCINE BRAND
✓	CONDITIONAL	CONDITIONAL		VACCINE MANUFACTURER
✓	CONDITIONAL	CONDITIONAL		VACCINE MARKET AUTHORIZATION HOLDER
✓	REQUIRED	REQUIRED		VACCINE BATCH NUMBER
✓	REQUIRED	REQUIRED		DATE OF VACCINATION
✓	REQUIRED	REQUIRED		DOSE NUMBER
✗	OPTIONAL	OPTIONAL		VACCINATION VALID FROM
✓	OPTIONAL	OPTIONAL		TOTAL DOSES
✓	REQUIRED	REQUIRED	ADMINISTERING CENTRE	COUNTRY OF VACCINATION
✓	REQUIRED	OPTIONAL		SIGNATURE OF HEALTH WORKER
✗	OPTIONAL	CONDITIONAL		HEALTH WORKER IDENTIFIER
✓	OPTIONAL	OPTIONAL	DISEASE OR AGENT TARGETED	DUE DATE OF NEXT DOSE
✓	OPTIONAL	NOT NEEDED		

DDCC:VS - Technical Specifications and Implementation Guidance, Web Annex B. Technical briefing

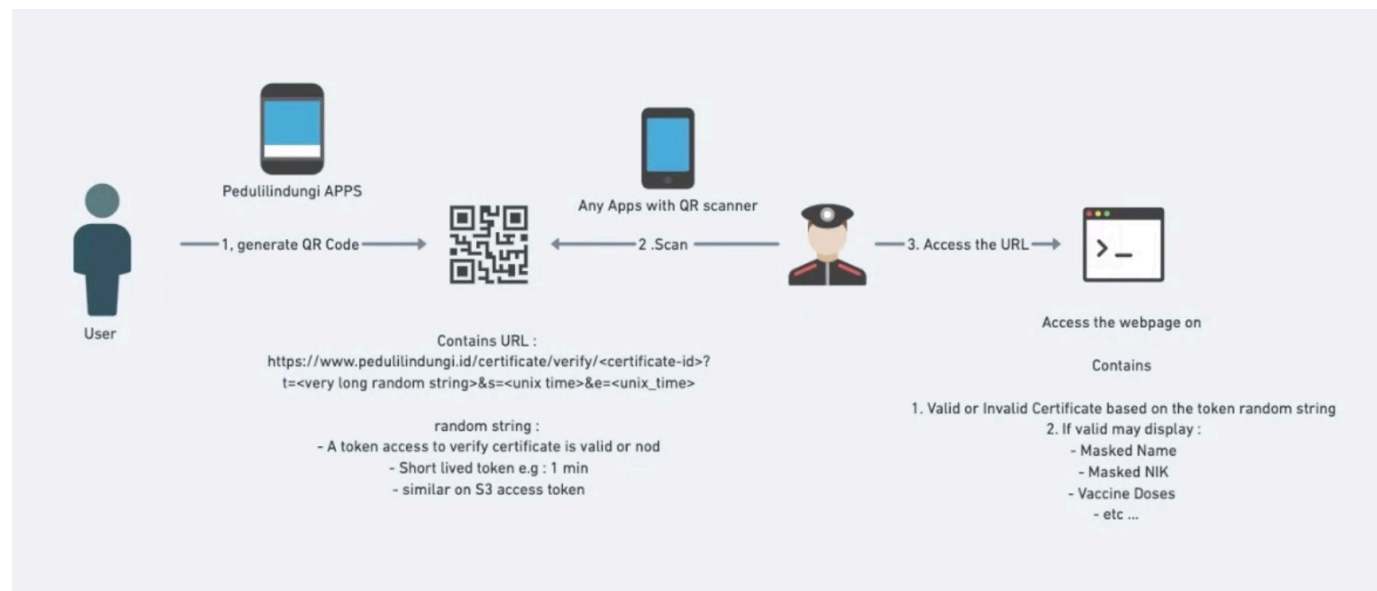
Scenarios for issuing DDCC:VS	Formats of DDCC:VS	Scenarios for verifying DDCC:VS
Paper first <ul style="list-style-type: none"> Health certificate identifier (HCID) barcode is pre-printed on a paper card. Core data set is expected to be handwritten. Data about the vaccination event is entered into a Digital Health Solution afterwards to create a digital record. Offline digital <ul style="list-style-type: none"> HCID barcode is pre-printed on a paper card. Core data set can be printed or handwritten. Data about the vaccination event is recorded using an offline Digital Health Solution, with the content uploaded once connectivity is available. Online digital <ul style="list-style-type: none"> The HCID barcode can be printed at the same time as the core data set at the time of the vaccination event. The Digital Health Solution can update the data about the vaccination event in real time. 	Handwritten paper certificate with only an HCID Possible issuing scenarios: Paper first, Offline digital Handwritten paper certificate with a 2D barcode containing the entire DDCC:VS core data set. *This will need to be provided to the DDCC:VS Holder after the vaccination event. Possible issuing scenarios: Paper first, Offline digital PDF print out with only an HCID Possible issuing scenarios: Offline digital, Online digital PDF print out with a 2D barcode containing the entire DDCC:VS core data set. *This will need to be provided to the DDCC:VS Holder after the vaccination event. Possible issuing scenarios: Offline digital, Online digital A DDCC:VS held on a smartphone application Possible issuing scenarios: Online digital	Offline status check <p>Manual verification A Verifier verifies a DDCC:VS by looking at the certificate and decides its legitimacy based on their subjective judgement. No digital technology is required.</p> <p>Offline cryptographic verification A Verifier verifies a DDCC:VS using digital cryptographic processes in an offline mode. *Only possible with DDCC:VS formats that contain a 2D barcode with the entire DDCC:VS core data set or a smartphone application</p> <p>Online status check</p> <p>National DDCC:VS Uses digital cryptographic processes in an online mode that includes a status check against the PHA's DDCC:VS Registry Service and optionally the DDCC:VS Repository.</p> <p>International DDCC:VS Uses digital cryptographic processes in an online mode that includes a status check against the National PHA's DDCC:VS Registry Service; and an International PHA's DDCC:VS Registry Service and optional Repository, if such services exist and agreements for use are in place.</p>



Implications on Issuing DDCC:VS	Implications on Verifying DDCC:VS
Centralized Architecture <ul style="list-style-type: none"> A centrally-deployed DDCC:VS generation service may be leveraged by the entire ecosystem. PKI requirements are significantly simplified. Centralized solutions present a single point of failure, so service level requirements can be onerous. There may be regulatory and/or data governance challenges associated with centralized processing. 	<ul style="list-style-type: none"> Only the HCID is needed to do an online lookup of the DDCC:VS content. Network access is required for verification against the central server; it does not work in offline mode. Revoked certificates can be identified. A Public Key Directory (PKD) is not required. Citizens' concerns regarding data privacy and online surveillance may need to be addressed.
Decentralized Architecture <ul style="list-style-type: none"> If there are multiple DDCC:VS issuers (e.g., hospitals, pharmacies, etc.), each QR code issuer will require a Document Signer Certificate (DSC). This will require national public key infrastructure (PKI) and Public Key Directory (PKD) deployment. Printing capacity would need to be widely available so that DDCC:VS Holders without a smartphone can receive a printed QR code. 	<ul style="list-style-type: none"> Each verifier needs a QR code reader which can: <ul style="list-style-type: none"> Access and download the public keys (e.g., from a global PKD) of every QR code issuer. Decode each supported QR code format (e.g., EU DCC, ICAO VDS-NC). The reader supports offline verification. Certificate revocation is not supported.

Rencana Pengembangan Sertifikat Vaksinasi Berikutnya

- **Otentifikasi Sertifikat**



- **Perjalanan International**

- > **Adopsi model EU**
- > **Bilateral agreement**

The background is a solid blue color. On the left side, there are several overlapping geometric shapes in different shades of blue. These include two circles at the top, a large circle with a smaller circle inside it below them, and a large, stylized, curved shape that resembles a 'C' or a partial circle on the left. The text 'Terima Kasih' is centered horizontally and partially overlaps these shapes.

Terima Kasih