DIVOC

Open Source Digital Infrastructure for Vaccination and Certification

Pronounced \ dī-vōk \

DIVOC

SHARED VISION

Enable countries to digitally orchestrate
large scale vaccination and certification programs
using open source digital infrastructure as a public good.

UNDERSTANDING DIVOC

WHAT IS DIVOC?

DIVOC is a flexible & extendable software that helps countries to digitally orchestrate large scale vaccination & certification using open source technologies and a scalable, data driven architecture

Digital Infrastructure for Vaccination and Certification

VACCINE
TESTING, APPROVALS,
SUPPLY MANAGEMENT

TRAINING,
eLEARNING
WORKFORCE MOBILIZATION

ROLLOUT, CERTIFICATE
ISSUANCE, FEEDBACK
MONITORING

DIVOC

Platform Details

Guiding Principles

- Versatile
- Allows for plug & play
- Trustworthy
- Citizen-centric approach

Architecture Principles

- Micro-services & API based
- Interoperable
- Scalable
- Flexible & Configurable
- Observable
- Resilient
- Privacy & Security by design
- Open Standards
- Trustable
- Internationalizable

Technologies

- Registry - Opensaber
- API - golang / java spring boot
- Kafka queue for certification requests and Domain events
- Redis for caching

DIVOC has 3 core modules

each of which can be used independently or together and integrated with existing systems

Certificate Module

Feedback Module

Orchestration Module

Digital credential for the vaccinated population

Digital feedback collection to aid AEFI reporting

Registration functions and management of program, vaccine, facility, vaccinator registries

WHY DIVOC?

WHAT DO COUNTRIES NEED FOR LARGE SCALE VACCINATION ROLL OUT?

Works at **scale** and **scales what works**

Elastic system

Digital first design

Last Mile Connectivity

Real time observability

Agile, scalable and responsive

Expandable and **able to manage new** vaccination facilities and trained personnel

DIVOC'S ROLE IN COUNTRY ROLL OUT

DIVOC

WHAT DO COUNTRIES HAVE AND WHAT MORE IS NEEDED?*

Vaccine approval

Vaccine supply chain management

Institutional Capacity Building

Continuous Learning

Mobilization of field staff

1

2

3

Orchestration

Registries

Vaccine administration

DIVOC OFFERINGS

5

4

Structured Feedback

Configurable

Expert driven

Certificate Management

Digital credentialing

Travel authorization

Countries need underlying IT infrastructure to support the vaccination roll out

Certificate Module

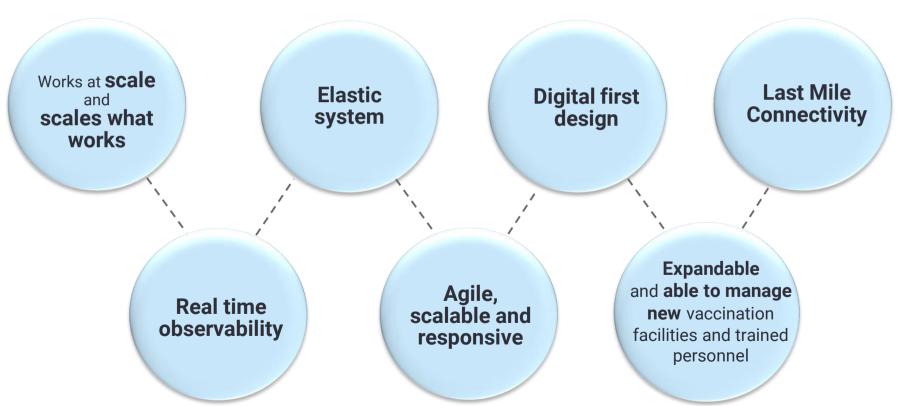Digital credential for the vaccinated population

Feedback Module

Digital feedback collection to aid AEFI reporting

Orchestration Module

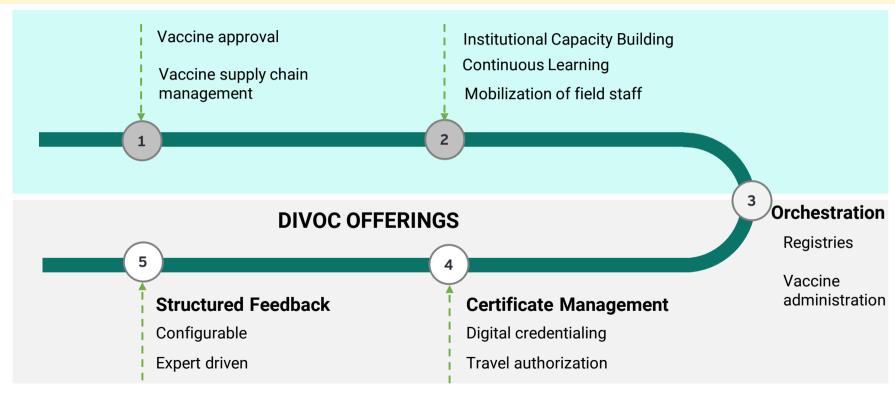Registration functions and management of program, vaccine, facility, vaccinator registries
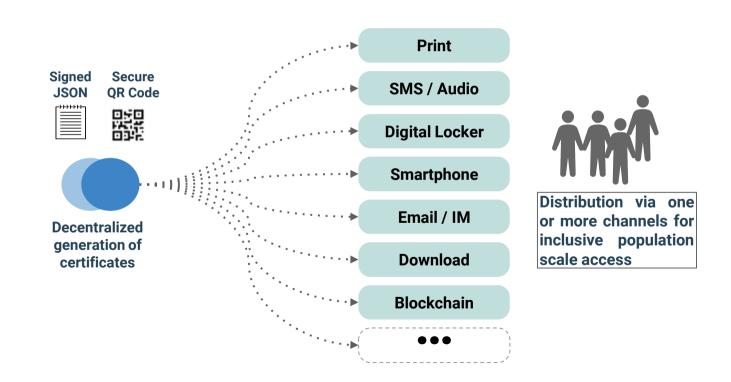
CERTIFICATE MODULE

FEATURES

- Conforming to WHO/IHR guidelines* based on W3C verifiable credential* specifications
- Authenticity verifiable via digitally signed QR code
- Available digitally on smartphone with QR code
- Printable for non-smartphone users
- Multilingual templates (for data and layout)
- Ability for users to download/print after vaccination either at facility or from home in self/assisted modes
- Easy integration with health and certificate lockers, as well as with immunization e-registries and EHR systems

Vaccination Certificate
टीकाकरण प्रमाण पत्र

Certificate ID / प्रमाणपत्र क्रमांक	711885659
Issue Date / जारी करने की तिथि	15-Dec-2020

Recipient's details / प्राप्तकर्ता का विवरण

Name / नाम	Madhav P
ID Details आईडी विवरण	Aadhaar / आधार # 111122223333
Gender / लिंग	Male
Age / उम्र	26

Centre of Vaccination / टीकाकरण केंद्र	ABC Medical Center
Vaccine and Manufacturer / टीका और निर्माता	COVAXIN Bharat Biotech

Date of Vaccination / टीकाकरण की तिथि	15-Dec-2020
Vaccine Dose / टीके की खुराक	1 of 2
Valid Until / वैधता	15-Jan-2021

Carona Harega India Jeetega
करोना हारेगा इंडिया जीतेगा

For more information / अधिक जानकारी के लिए
🌐 https://divoc.xiv.in/learn
📞 1800 000 000

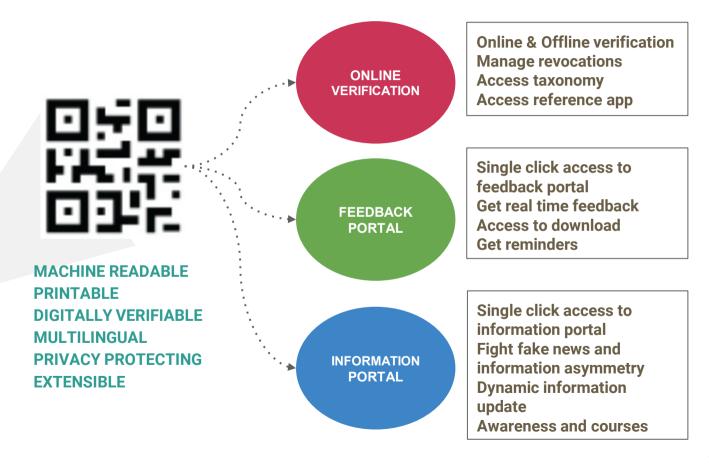# ONCE THE CERTIFICATE IS ISSUED, MULTI-CHANNEL DISTRIBUTION AND PRINT SCHEMES SHOULD WORK TO ENSURE COUNTRIES AND USERS HAVE A CHOICE

Signed JSON

Secure QR Code

Decentralized generation of certificates

Print

SMS / Audio

Digital Locker

Smartphone

Email / IM

Download

Blockchain

● ● ●

Distribution via one or more channels for inclusive population scale access
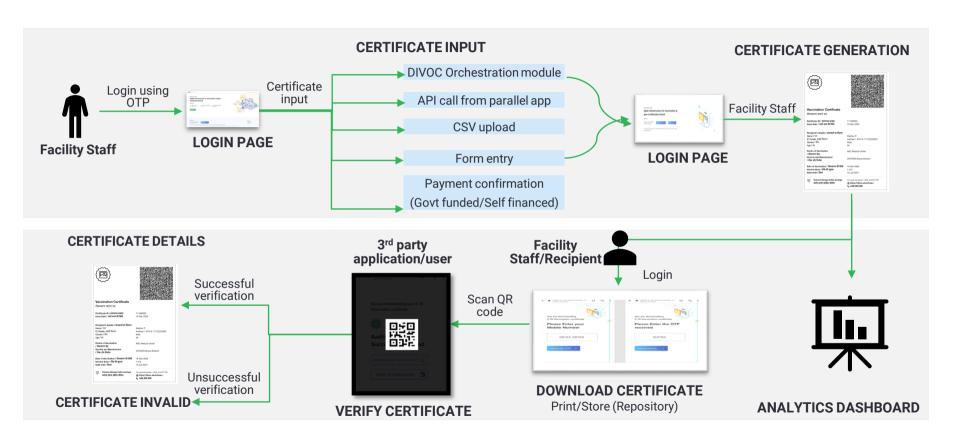
ENERGIZED VACCINATION CERTIFICATE

MACHINE READABLE
PRINTABLE
DIGITALLY VERIFIABLE
MULTILINGUAL
PRIVACY PROTECTING
EXTENSIBLE

ONLINE VERIFICATION

Online & Offline verification
Manage revocations
Access taxonomy
Access reference app

FEEDBACK PORTAL

Single click access to feedback portal
Get real time feedback
Access to download
Get reminders

INFORMATION PORTAL

Single click access to information portal
Fight fake news and information asymmetry
Dynamic information update
Awareness and courses

User Journey DIVOC: Certificate Module

CERTIFICATE INPUT

CERTIFICATE GENERATION

Facility Staff

Login using OTP

LOGIN PAGE

Certificate input

- DIVOC Orchestration module
- API call from parallel app
- CSV upload
- Form entry
- Payment confirmation (Govt funded/Self financed)

LOGIN PAGE

Facility Staff

CERTIFICATE DETAILS

3rd party application/user

Facility Staff/Recipient

Login

Successful verification

Scan QR code

Unsuccessful verification

CERTIFICATE INVALID

VERIFY CERTIFICATE

DOWNLOAD CERTIFICATE
Print/Store (Repository)

ANALYTICS DASHBOARD

Certificate Module

Feedback Module

Orchestration Module

Digital credential for the vaccinated population

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Registration functions and management of program, vaccine, facility, vaccinator registries

FEEDBACK MODULE

FEATURES

Structured feedback
- Configurable and expert driven
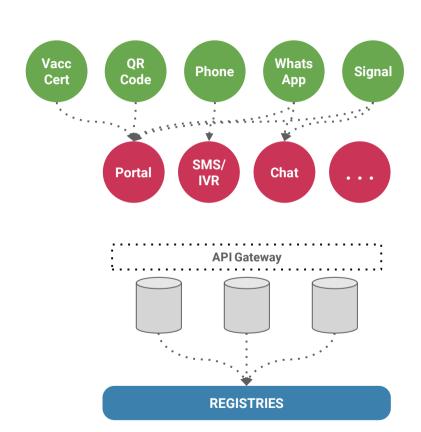
Various types
- Facility rating & feedback
- Vaccinator rating & feedback
- Vaccination response feedback

Multi channel/lingual
- Public portal, inbound SMS, IVR, WhatsApp, other apps via API
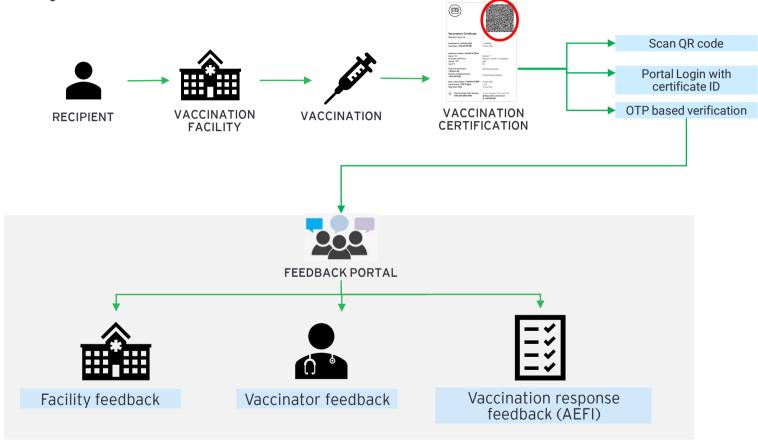- Multiple languages

Self service and assisted modes

Can be integrated with AEFI systems and processes

User Journey DIVOC: Feedback Module

Certificate Module

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Orchestration Module

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Registration functions and management of program, vaccine, facility, vaccinator registries

ORCHESTRATION MODULE
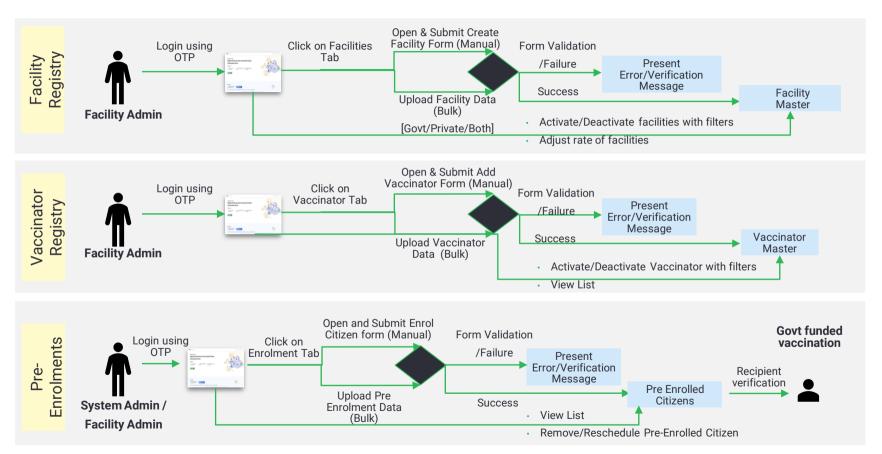
REGISTRIES

DIVOC can create registries or configure the existing ones

PROGRAM REGISTRY	VACCINE REGISTRY	FACILITY REGISTRY	VACCINATOR REGISTRY
Vaccination programs	Approved vaccines	Approved facilities	Trained vaccinators
Active status	Active status	Location	Active status
Allowed vaccines	Vaccination schedule	Active status	Training certificate
Start and End dates	Batch deny list	Vaccination daily rate	Associated facilities
Certificate templates	Max retail price	Total supply	Rating & Feedback
	Vaccination method	Rating & Feedback	
	Age/Gender/Geo filter	Maximum vaccination stations	

USER JOURNEY: Admin – Management Portal (1/2)

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Facility Registry

Facility Admin — Login using OTP → [portal screen] → Click on Facilities Tab → Open & Submit Create Facility Form (Manual) / Upload Facility Data (Bulk) → Form Validation → /Failure → Present Error/Verification Message; Success → Facility Master
- Activate/Deactivate facilities with filters
- Adjust rate of facilities
[Govt/Private/Both]

Vaccinator Registry

Facility Admin — Login using OTP → [portal screen] → Click on Vaccinator Tab → Open & Submit Add Vaccinator Form (Manual) / Upload Vaccinator Data (Bulk) → Form Validation → /Failure → Present Error/Verification Message; Success → Vaccinator Master
- Activate/Deactivate Vaccinator with filters
- View List

Pre-Enrolments

System Admin / Facility Admin — Login using OTP → [portal screen] → Click on Enrolment Tab → Open and Submit Enrol Citizen form (Manual) / Upload Pre Enrolment Data (Bulk) → Form Validation → /Failure → Present Error/Verification Message; Success → Pre Enrolled Citizens → Recipient verification → [recipient]

Govt funded vaccination
- View List
- Remove/Reschedule Pre-Enrolled Citizen

USER JOURNEY: Admin – Management Portal (1/2)

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Vaccine Program

System Admin

Login using OTP → Click on Vaccine Programs Tab → Open & Submit Form (Manual) → Form Verification → Validation Error

Success → Program Master

View List of Registered Vaccine Programs

- Activate/Deactivate Program
- Edit Program

Vaccine Registry

System Admin

Login using OTP → Click on Vaccine Tab → Open & Submit Form (Manual) → Form Verification → Validation Error

Success → Vaccine Master

View List of Registered Vaccine

- Activate/Deactivate Vaccine
- Edit Vaccine Details

DIVOC

A fully open source digital public good for any country to adopt
From the team who have experience in building population scale platforms

[Credential Documentation](#)
[DIVOC Documentation](#)
[Project Repository](#)

THANK YOU