Tech Backbone of India’s Vaccination Program
India – A Perspective

Population
1.36 Billion

Male: Female
1000 : 943

Rural : Urban
65 : 35

Tribal Population
100:8.6

Low internet & mobile density
Real Time tracking of Stock and Temperature through **Electronic Vaccine Intelligence Network (eVIN)**

COVID-19 Vaccine Delivery Management System

Planning & Conducting Vaccination

- Beneficiary Vaccination
- Beneficiary Registration
- Session Planning
- COVID Vaccination Centre

Real time recording of Vaccination event using **Co-WIN**

- Beneficiary acknowledgement
- Unique Health ID
- QR Code based Certificate
- AEFI Reporting

Vaccine Storage & Transport at 28,934 Cold Chain points
Co-WIN – A Scalable, Inclusive and Open Platform for Universal Vaccination by 2022

Co-WIN

Covid Vaccine Intelligence Network
A tech-based platform facilitating the planning, implementation, monitoring, and evaluation of Covid-19 vaccination in India

Guiding Principles

Equitable and Inclusive
Equitable vaccination across multilingual states, with multiple modes for registration to ensure accessibility for all

Single Source of Truth
Unbiased distribution of vaccines through a single source of data to remove information asymmetry and align stakeholders

Evolvability and Scalability
Dynamic architecture capable of evolving and accommodating changes as per circumstances, built for a scale of a billion plus citizens

Feedback and Analysis
Data on vaccination and recording of AEFI helps form data-driven public health policy and evaluate the efficacy of different vaccines
Architecture of Co-WIN – Open and interoperable

Application Service Providers

Portal

Connected via Protected APIs

3rd Party Apps allowed to build above these APIs

Registration & Scheduling Module
Vaccination Facility Module
Vaccination Module
Certification Module

Co-WIN Database

Registration
Facility
Vaccination
Certificate
Multiple Access Points

**Registration and Scheduling APIs**
- Provide more fronts to let citizens register for vaccination
- Discover available vaccination slots and schedule or re-schedule appointments

**Vaccination at Facilities APIs**
- Government and Private Hospitals can integrate these APIs with existing systems
- Record vaccination data for certification
- Report AEFI for a beneficiary

**Certification APIs**
- Travel or office portals can gain integrate these APIs with their user-facing platforms
- Access vaccination certificates based on a reference id / registered mobile number
### Advantages for Citizens – *Agency at the core, luxury of choice*

#### Core Functionalities

<table>
<thead>
<tr>
<th>Core Functionality</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Blended Registration</strong></td>
<td>Digital &amp; Offline Walk-ins, Mobile #</td>
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<tr>
<td><strong>Track Vaccination Schedule</strong></td>
<td>Guidance on interval between two doses based on vaccine brand</td>
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<tr>
<td><strong>Convenience in Slot Booking</strong></td>
<td>Choose vaccination slot based on convenient time and location</td>
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<tr>
<td><strong>Instant Digital Certificate</strong></td>
<td>Issued post vaccination, Universally authenticable</td>
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#### Modes of Registration
- Offline on-site registration
- Online registrations through portal
- Assisted registration through support centres and call-centres

#### Simplified Access
- Find vaccination centre using maps
- Sign-up with mobile number and verify with a four-digit OTP
- Multilingual – Power of vernacular

#### Minimal Data Inputs
- Non-sensitive data inputs
- Required - Name, age & gender
- Multiple photo identification options
- Monosyllabic / single-word prompts
Easy Registration – Option of 9 photo IDs and 12 languages
Choice of Time and Location – Book a vaccination slot as per convenience
Tracking Vaccination – Book for up to 4 individuals, check schedule & download certificate
For the Managers & Vaccinators
Advantages for Managers – Uniform access across private and public, fixed or mobile

Process Flow

Login
District Admin logs in with "User Id" and "Password"

Create new vaccination facilities
Add new Vaccination Center details

Create new vaccination sessions
Create new vaccination sessions

Edit Existing Facility Details
Edit / Delete existing Facility details

Edit existing Vaccination Session
Edit, Delete existing vaccination session details

View all sessions for the District
Details of all vaccination session happening in the District

Update Vaccines for Sessions of a Facility
Edit, Delete Vaccine details

Features for Vaccinators

Vaccine Stock Management
Verify validity of stock supplied
Traceability of each vial of vaccine

Publishing Vaccine Schedules
Declare availability based on stock daily & define quotas for categories

Verification of Citizens
Authenticate at point of vaccination 
Upload records of HCWs/ FLWs

Realtime Dashboards
Analytics provided to view all sessions at a vaccination facility
Onboarding Hospitals – Registering vaccinating organizations on CoWIN

- Create Vaccination Center

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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<tbody>
<tr>
<td>Hospital ID</td>
<td>Name of the Vaccination Center</td>
</tr>
<tr>
<td>Fee Type</td>
<td>Type</td>
</tr>
<tr>
<td>Sub Type</td>
<td>Sub Category</td>
</tr>
<tr>
<td>Address Details</td>
<td></td>
</tr>
<tr>
<td>State/UT</td>
<td>District</td>
</tr>
<tr>
<td>Address</td>
<td>Pincode</td>
</tr>
<tr>
<td>Location Details</td>
<td>Latitude, Longitude</td>
</tr>
</tbody>
</table>
Session Management – Vaccination control, based on both vaccines & categories
Mobile Access for Vaccinators – Plug and play solution for Vaccinators
For the Policy Makers and Administrators
Advantages for Policy Makers – *No information asymmetry and alignment of departments*

**Single Source of Truth**
Aligns all stakeholders to prevent any form of rent-seeking and truly making each stakeholder accountable for their actions.

**Tracking AEFI for Vaccines**
Allows recording of AEFI to form data-driven public health policy and evaluate the efficacy of different vaccines.

**Efficient Tracking of Certificates**
Providing a reference point post first dose to guide citizens to follow the vaccination schedule and get the same second dose as first.

**Evaluating Geographical coverage**
Facilitates coverage at a granular geographical level that helps get a view of each district at a state level to evaluate progress of vaccination.

**Inclusivity**
Multiple modes of registration in offline walk-ins, online and assisted through help centres and call centres ensure access for all.
**CoWIN Dashboard** – *Transparency of data for all stakeholders*

**Features provided by Dashboard**

- Live Vaccinations Centres
- # of Citizens Registered
- # of Vaccine doses Administered
- Split b/w 1st & 2nd Dose
- AEFI reports
- Distribution by States & District
- Split by Age and Gender
- Split by Vaccines brands

**Accessible by all**

- Hospitals
- Policy Makers
- State & District Administrators
- All Citizens and foreign entities

National COVID-19 Vaccination Milestones

Phase 1 aim – To protect & strengthen the healthcare & pandemic response system and professionals who man it.

Phase 2 aim – To protect the most vulnerable population i.e. ≥ 45 years (contributing to 80% of COVID related mortality in the country).

Phase 3 aim – To protect the entire at risk population i.e. 18 years and above via a rapid scale up of vaccination.
Vaccination Coverage in priority groups

(As on 2nd July ’21)

- **Health Care Workers**: 87.4% 1st Dose, 79.6% 2nd Dose
- **Front Line Workers**: 90.9% 1st Dose, 90.3% 2nd Dose
- **45+ age-group**: 45.4% 1st Dose, 59.4% 2nd Dose
- **18-44 year age group**: 15.8% 1st Dose

2nd dose coverage against eligible beneficiaries i.e. 4 weeks after 1st dose of Covaxin and 12 weeks after 1st dose of Covishield
Population
136 crore
~29.35 crore - at least one dose

Male: Female
1000 : 943
Coverage (doses)
1000 : 861

Tribal Population (9%)
Coverage (doses/million)
100:122

Rural : Urban
65 : 35
Coverage (doses)
57:43

Availability of internet – No constraint
Coverage (Doses)
22:78 (Online : Onsite)
Sustainability of Co-WIN – *Fastest to be built, sustainable at scale of billion+ users*

**Time to Market**

*Fastest tech platform globally* to amass 200 million registrations in <four months

Even tech giants took 14 months or more to even reach 100 million users

**Robust System**

Co-WIN handles a billion+ visits daily, and recorded **3.1 billion visits in a day**

Handled 13.7 million registrations within 8 hours of opening for 18 to 44 years

**Privacy and Security**

Minimal data inputs are taken from citizens, and no breaches of security recorded till date

State-of-the-art security checks in place
A BIG SALUTE AND THANKS TO OUR FRONTLINE WORKERS WHO OVERCAME ALL THE CHALLENGES TO MAKE INDIA THE FASTEST COUNTRY TO ADMINISTER MORE THAN 350 Million DOSES
#जज़फ़ दो सलाम #शक्ति को प्रणाम
OUR PARTNERS

National Health Authority

Aarogya Setu

CSC

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UMANG

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THE SPIRIT OF NEW INDIA
Thank You