



Ministry of External Affairs
Government of India



Ministry of Health
and Family Welfare
Government of India



national
health
authority



RIS
Research and Information System
for Developing Countries
विकासशील देशों की अनुसंधान एवं सूचना प्रणाली

GDC
GLOBAL DEVELOPMENT CENTRE

CO+WIN

Tech Backbone of India's
COVID-19 Vaccination Program

Ambassador Dr. Mohan Kumar
Chairman, RIS

CoWIN – *Championing South-South Cooperation*

- Co-WIN is the backbone of India' COVID-19 vaccination drive
- India offers it as a ***Global Digital Public Good***
- ***Excellent example of South-South Cooperation*** (unserved or underserved resource constrained partners)
 - ***Mutual Benefit – COVID is global concern***
 - ***Non-interference - Demand driven and voluntary***
 - ***Non-conditionalities – Open Source***
 - ***Concessional Financing – No licensing fee***
- In May 2021, GDC organized a webinar on 'Coping with COVID: Experiences of developing countries in vaccine platforms and rollout'
- India hosted Global Digital Conclave in July 2021: Hon'ble Prime Minister of India addressed the conclave
 - 142 countries participated; Many have expressed willingness
 - Adoption in advance stage in case of some countries
- GDC is fostering the Co-WIN in the partner countries of Asia, Africa and Indo-Pacific

Enabling Vaccination – *Thinking ahead of time*



Vaccinate a Billion plus Fast

Needed efficient coordination to achieve scale, prudence in cost, and revive socio-economic activities timely



Authenticable Certificate for All

Digital Vaccination Certificates through QR-coded, printable, verifiable - to allow frictionless movement for people



Evolving Landscape and Policy

Keep all stakeholders apprised of latest practices as per research and vaccination policy to follow due protocols



Multiple Locations for Vaccination

Ensure large number of access points, including camps, mobile vans, etc to avoid crowding or panic at a few central places

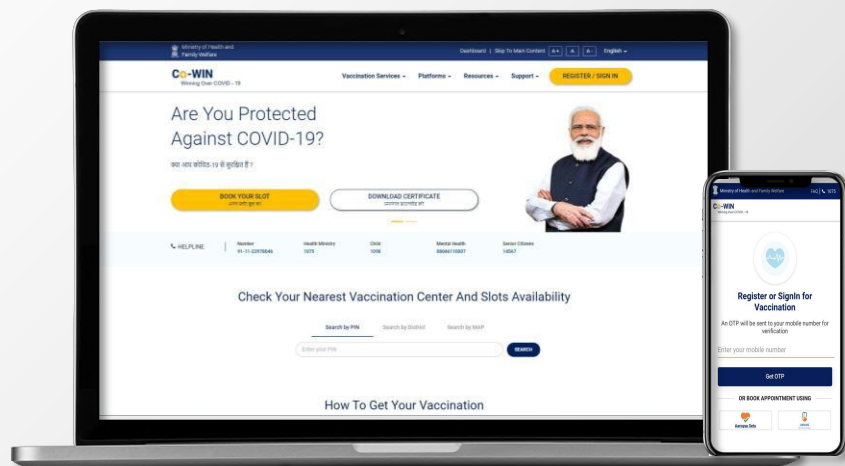


Managing Money-flow at Scale

With free vaccination for all, outreach could be improved by payment support from Corporate CSR at Private CVCs

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

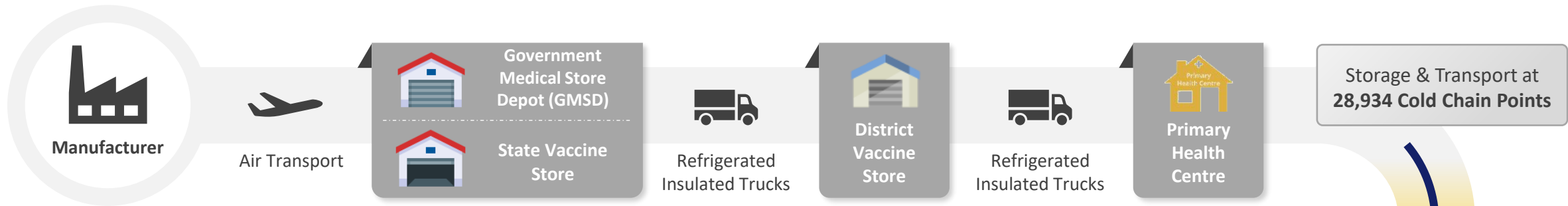


Feedback and Analysis

Data on vaccination and recording of AEFI helps form data-driven public health policy and evaluate the efficacy of different vaccines

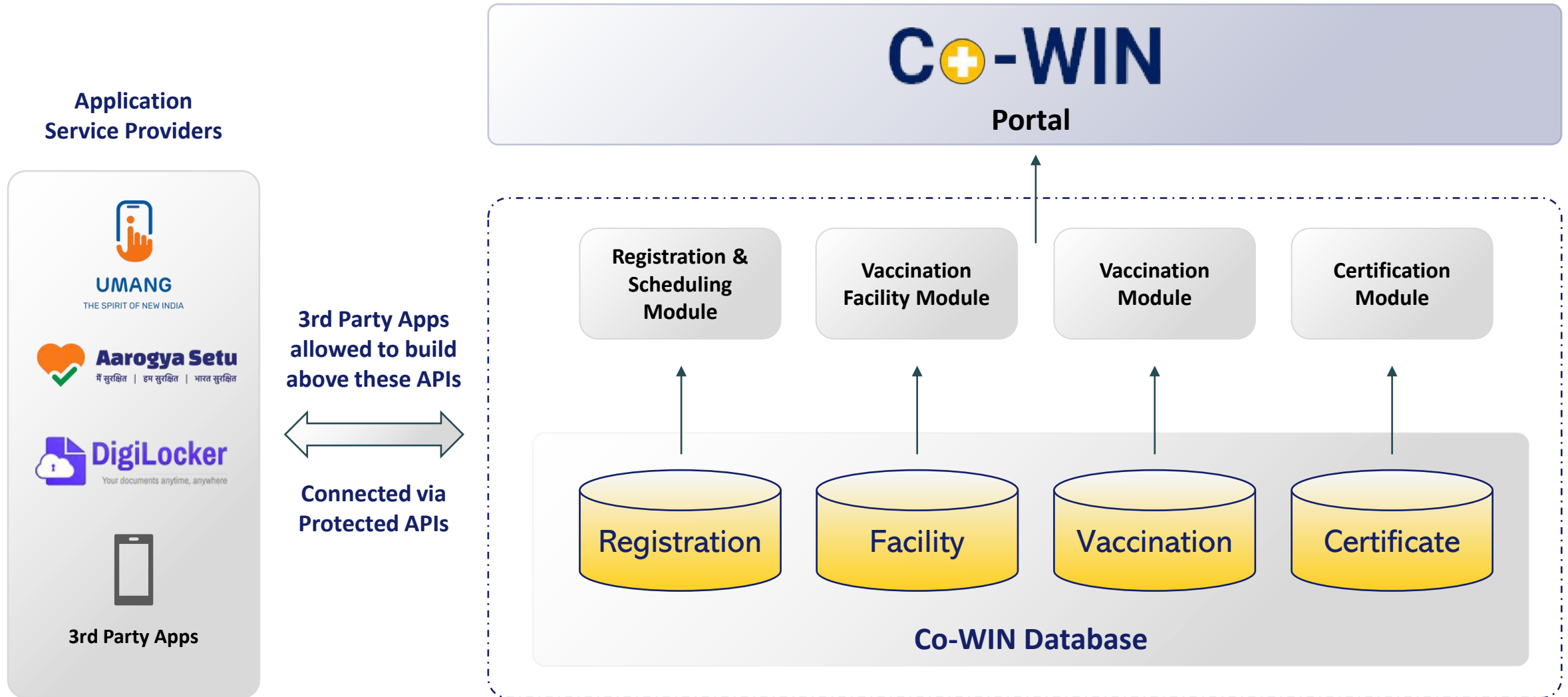
Supply Chain – COVID-19 Vaccine Delivery Management System

Electronic Vaccine Intelligence Network (eVIN) - Real Time tracking of Stock and Temperature

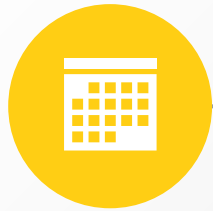


Covid Vaccine Intelligence Network (Co-WIN) - Real time recording of Vaccination event

Architecture of Co-WIN – *Open and interoperable*



Open APIs – *Interoperability that enables innovation*



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

Multiple Access Points



Advantages for Citizens – *Agency at the core, luxury of choice*

Core Functionalities



Blended Registration

Digital & Offline Walk-ins
Mobile # | Choose from 9 Photo IDs



Track Vaccination Schedule

Guidance on interval between two doses
based on vaccine brand



Convenience in Slot Booking

Choose vaccination slot based on
convenient time and location



Instant Digital Certificate

Issued post vaccination
Universally authenticable



Modes of Registration

- Offline on-site registration
- Online registrations through portal
- Assisted registration through support centres and call-centres



Simplified Access

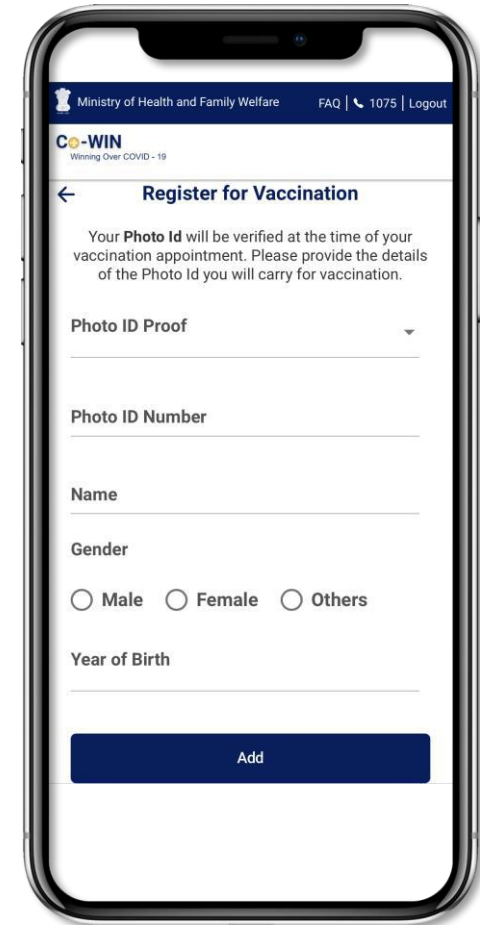
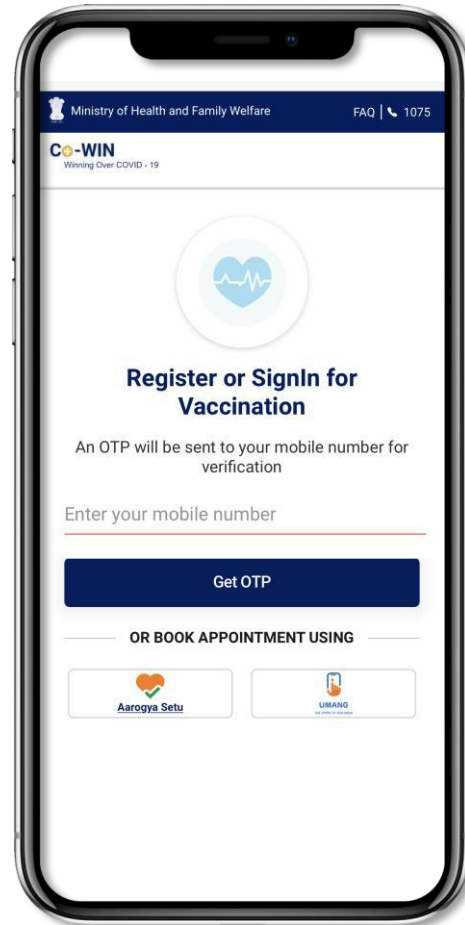
- Find vaccination centre using maps
- Sign-up with mobile number and verify with a four-digit OTP
- Multilingual – Power of vernacular



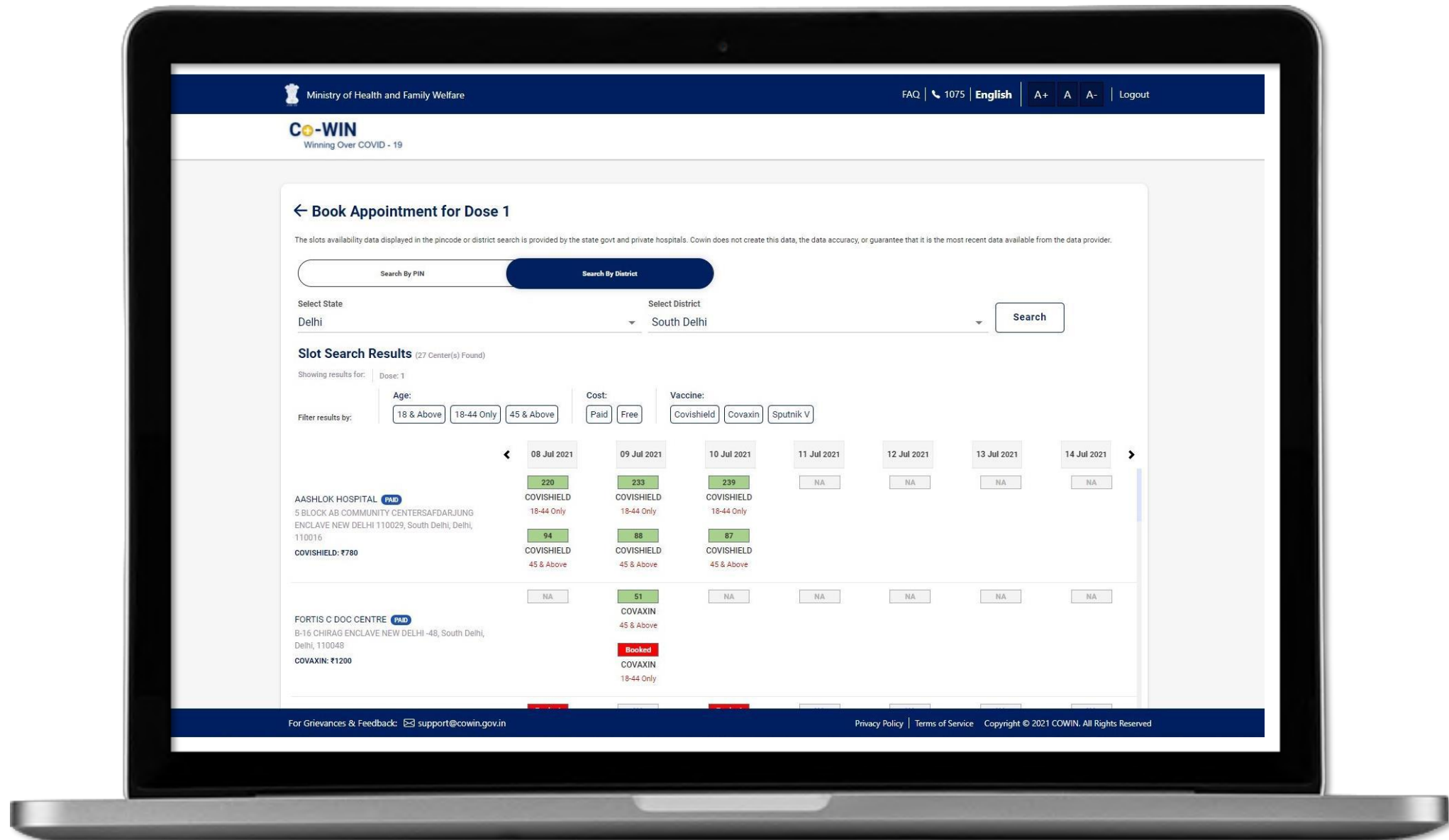
Minimal Data Inputs

- Non-sensitive data inputs
- Required - Name, age & gender
- Multiple photo identification options
- Monosyllabic / single-word prompts

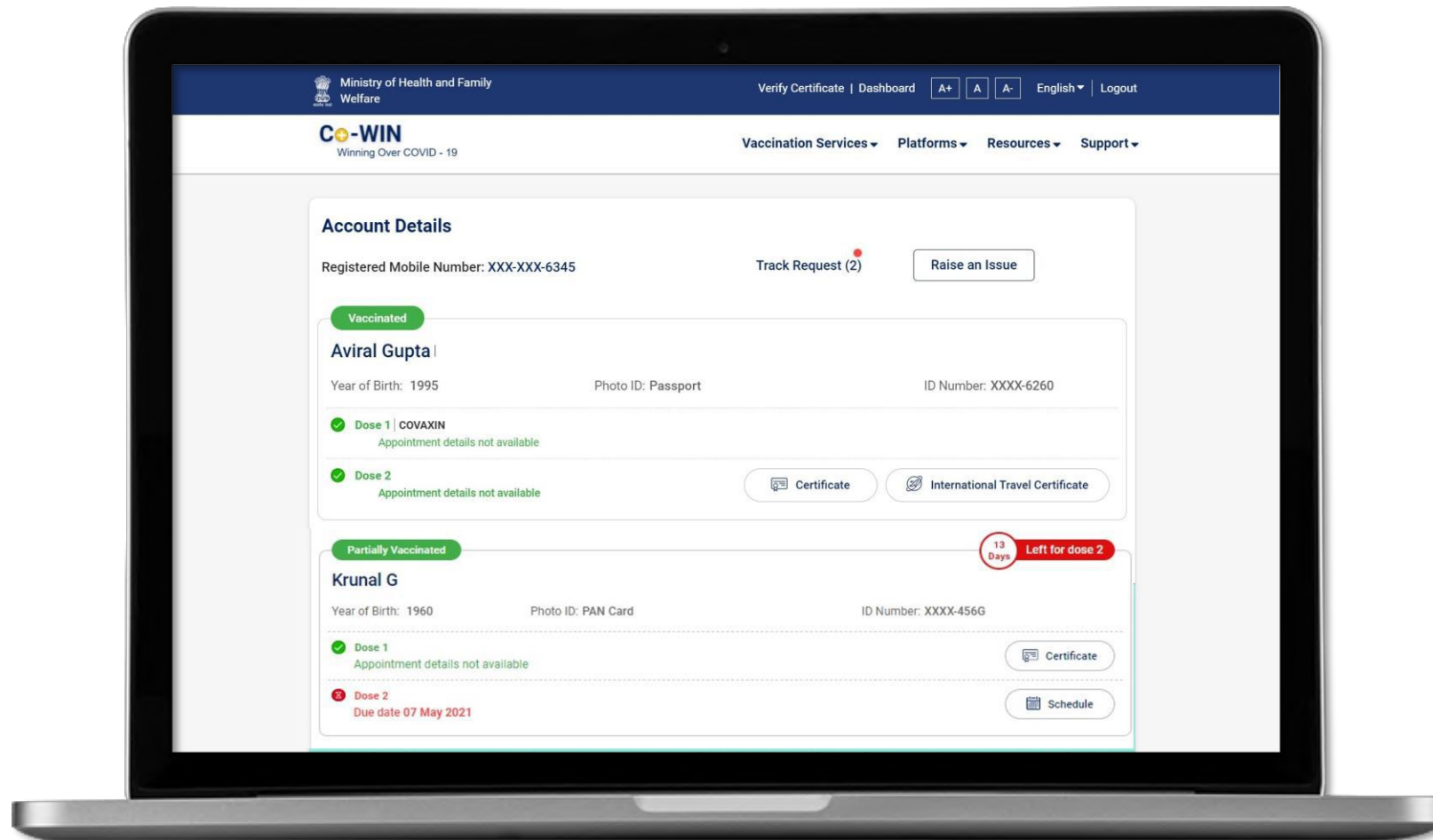
Easy Registration – *Option of multiple photo IDs and languages*



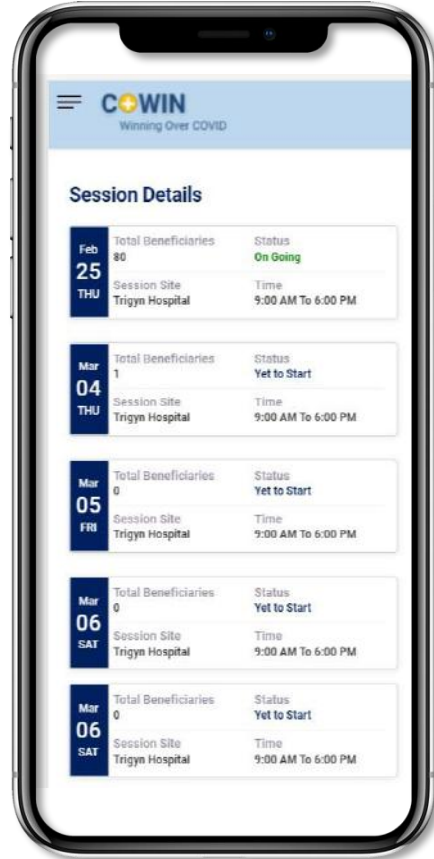
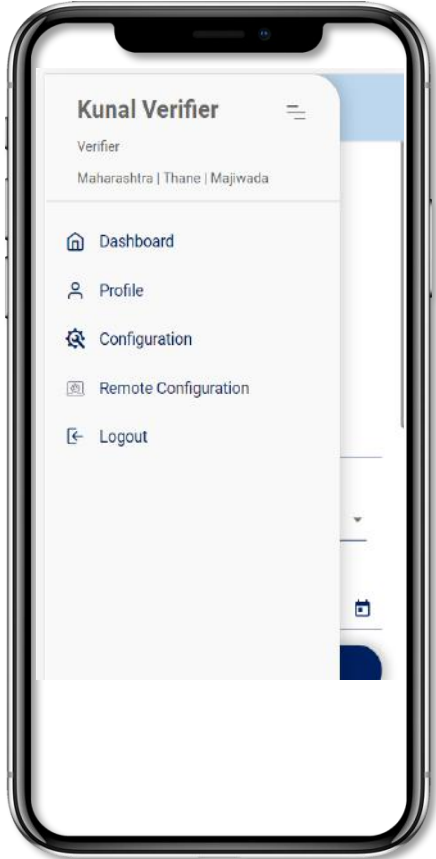
Choice of Time and Location – *Book a vaccination slot as per convenience*



Tracking Vaccination – *Check schedule & download certificate: Domestic & International*



Advantages for Managers – *Uniform access across private or public, fixed or mobile*



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

Advantages for Policy Makers – *No information asymmetry*



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



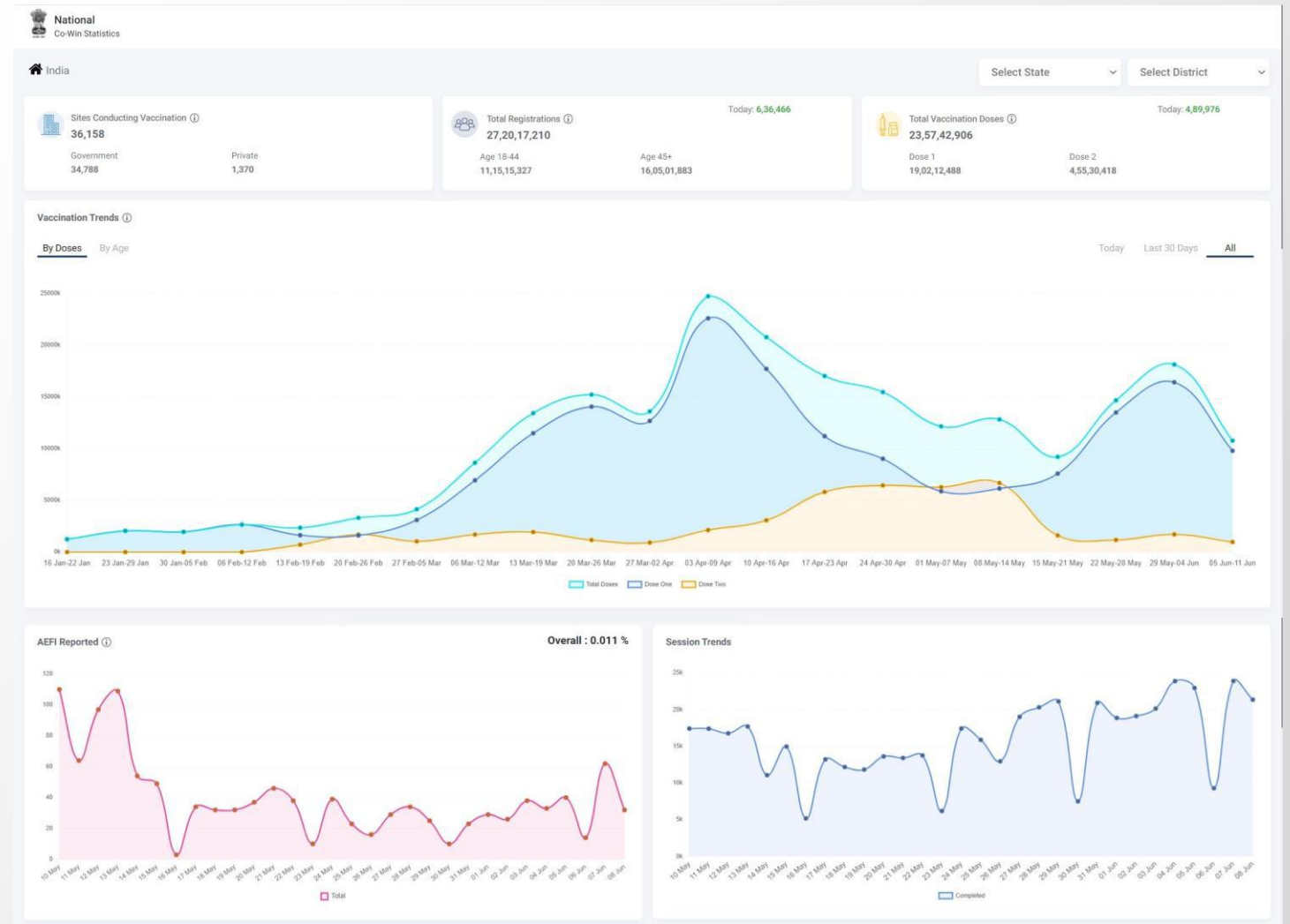
Hospitals
Vaccinators



Policy Makers
State & District
Administrators



All Citizens and
foreign entities



Live Co-WIN Dashboard - <https://dashboard.cowin.gov.in/>

Sustainability and Impact – *Fastest to be built, sustainable at scale of billion+ users*

Time to Scale - Registrations

200M
4 Months

400M - 6 Months

800M - 9 Months

Overall Statistics

as on November 11, 2021



810M+

Registered
Citizens



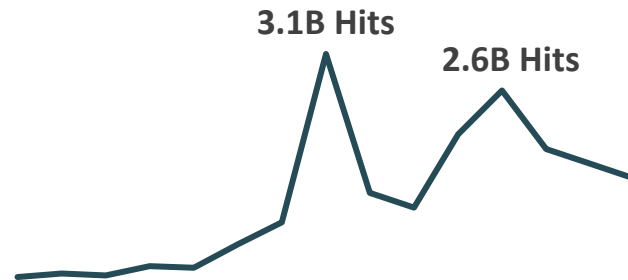
1.1 Billion

Total Vaccines
Administered

Highest Vaccinations in a Day

25 Million

Vaccinations
in a Day



Robust Platform: Handling large volume of hits on the website



0.004%

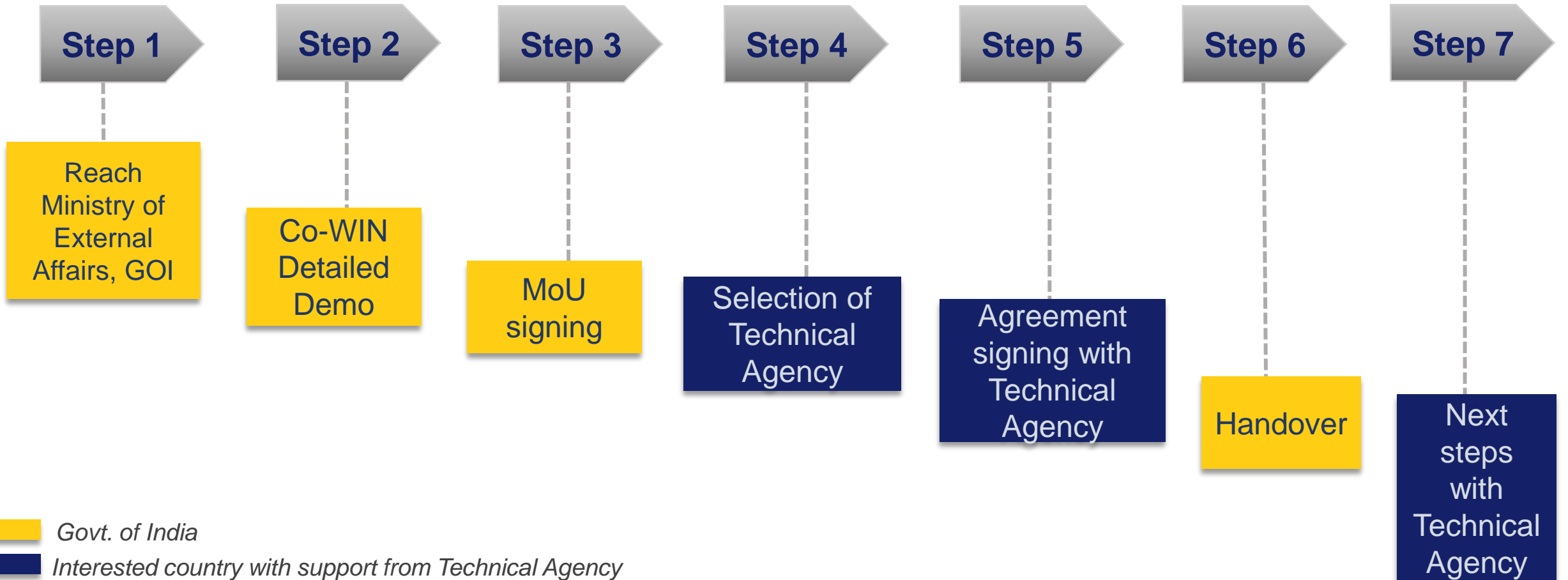
AEFI Recorded
Overall



429K

Vaccination
Centres

Availing Co-WIN – *End-to-end process*



Project Management

Team Mobilization, Planning, Monitoring and Governance, Reporting

Availing Co-WIN – *Detailed Steps*

Steps

Step 1

Interested country to contact the Ministry of External Affairs (MEA), Government of India through relevant Regional Office

MEA to connect the interested country with National Health Authority (NHA), Ministry of Health and Family Welfare, Government of India

Step 2

Request for Demo by interested countries (if needed)

Demo/detailed discussion with interested country

Demo details

- Functional demo (1 hr)
- Tech details (0.5 hrs)
- Q&A, Way forward (0.5 hr)

Availing Co-WIN – *Detailed Steps*

Steps

Step 3

MoU signing between the interested country and the Government of India appointed Authority

Step 4

Intimation of the list of Certified Agencies (Service provider) for technical support, implementation and maintenance to the interested country

Selection of a Technical Agency by the interested country

Step 5

Signing of agreement between the interested country and selected Technical Agency

Step 6

Handover to the selected Technical Agency

- Code repository
- Technical Documentation and Guides

Next steps

Requirement detailing, Customization, Testing & Demo, Go Live with support from Technical Agency



Queries:

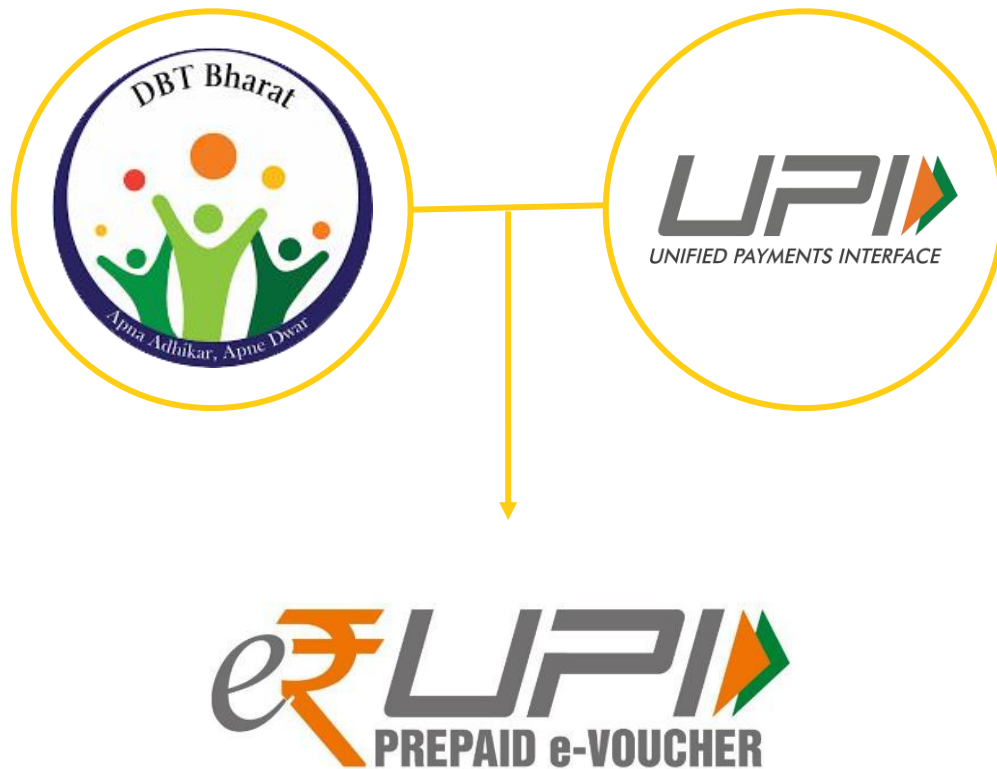
Dr. Vipul Aggarwal
dyceo@nha.gov.in

Thank You!



Annexure

e-RUPI Voucher – A prepaid UPI voucher, launched with vaccination as first application



Accessible by Government, Corporates and their CSR Funds, NGOs and Individuals alike

Vision and Applications



Person and Purpose Specific

Sharpens Direct Benefit Transfer by providing end-to-end traceability of fund utilization and redemption, eliminating fraud use of subsidies



Simple Adoption and Redemption

Beneficiary only needs a mobile number, and can redeem the voucher with a simple 2-step process at any e-RUPI enabled merchant



First Use Case: COVID-19 Vaccinations

Launched with vaccination, corporates, their CSR Funds and other organizations can sponsor e-RUPI Vouchers for various programs



Wide Range of Applications

Innovation on top of e-RUPI can pave way for peer-to-peer welfare vouchers, and even gifting and employment specific vouchers

Easy Generation & Redemption – Plug into UPI and leverage the Merchant Ecosystem

Creation Process



STEP 1

Government / Corporates share details of beneficiary (Name, Contact number, Amount & Purpose of voucher) with the bank for e-voucher generation



STEP 2

Bank will generate e-vouchers and shares with intended beneficiaries either directly or through Corporates

Redemption Process



STEP 1

Beneficiary presents the e-Voucher QR Code or the SMS string for scanning by the merchant / redemption entity



STEP 2

Merchant / redemption entity enters the amount and the verification code received on beneficiaries' mobile after scanning of e-Voucher code for verification

e-RUPI Issuing Banks



Bank-enabled Acquiring Partners



Ayushman Bharat Digital Mission – *Architecture to connect Digital Health Ecosystem*



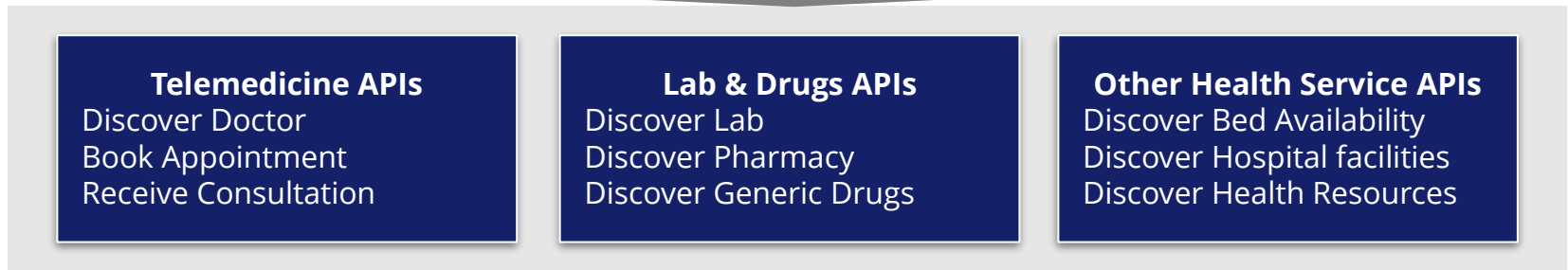
USER APPLICATIONS

Diverse user experiences & innovative solutions



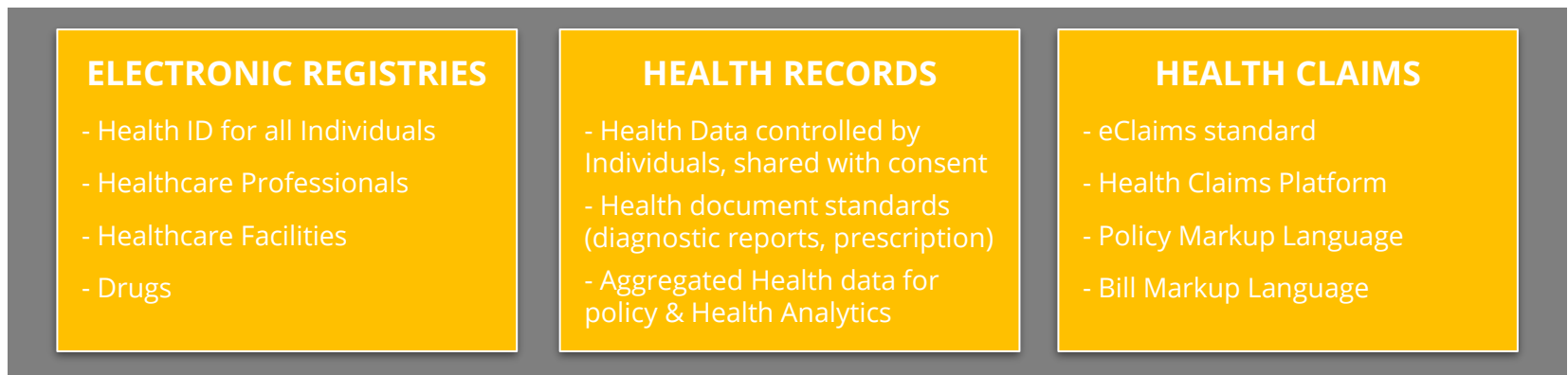
UNIFIED HEALTH INTERFACE

APIs for Health services



HEALTH DATA EXCHANGE

Streamlining flow of patients, health information and money



INDIA'S DIGITAL PUBLIC GOODS

Cross domain generic building blocks



Public & Private Innovation

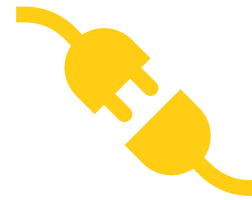
Digital Public Infrastructure

Enabling the Healthcare Ecosystem – *A new super highway for Healthcare*



Search

Healthcare Providers
Digital Health Solutions
Healthcare Facilities
Pharmacies
Drugs across pharmacies



Connect

Healthcare Providers
Hospitals
Laboratories
Pharmacies



Avail

Healthcare Services
Teleconsultations
Home Delivery of Services
Health Locker
Health Analytics