



Connecting the Dots Initiative
African manufacturers coming to Africa's aid



CONNECTING THE DOTS INITIATIVE (CDI) VACCINES ACCESS PROGRAMME (CDI-VAP)

TABLE OF CONTENTS

INTRODUCTION	3
VALUE PROPOSITION	4
I. FOR NATIONAL GOVERNMENTS	
II. FOR PRIVATE SECTOR PLAYERS	
SERVICES AND PRE-REQUISITE	7
I. NATIONAL GOVERNMENTS	
II. PRIVATE SECTOR PLAYERS	
SOURCING	11
I. PRODUCERS	
II. CTAP INITIATIVE	
PURCHASING	16
I. COVAX - PARTICULAR TO LMIC	
COVAX FACILITY	
COVAX AMC	
WHY COVAX AMC?	
WHO WILL PAY FOR IT?	
WHAT WILL THE AMC ACTUALLY DO?	
WHAT DO AMC COUNTRIES NEED TO DO NOW?	
WHO WILL BE FIRST IN LINE?	
II. OTHERS	
LOGISTICS	20
I. COUNTRY PORT	
II. LAST MILE	



INTRODUCTION

The global effort to ensure access to COVID-19 vaccines for all countries is in earnest and the world's richest nations such as the United States, the United Kingdom, Canada, France and Germany have pre-ordered billions of doses of vaccines – enough to protect some populations several times over, the majority of the world's poor are still unlikely to be immunized in 2021 – prolonging disruption.

The aim of the CDI Vaccine Access Programme (CDI-VAP) is to make the COVID-19 vaccine reach the last mile in low- and middle-income countries of Africa. The programme would support African countries through sourcing, purchasing, logistics and distribution of COVID-19 vaccines.

The programme will also explore avenues to support African input in the reproduction and rightful storage of the vaccines, thereby ensuring the equitable distribution COVID-19 vaccines across the continent.

To this end, the CDI-VAP, an initiative of DFSAfrica is galvanising a consortium of health ministries, continental institutions of health and virology, key logistics stakeholders and local health authorities on the continent to ensure COVID-19 vaccines reach the last mile in Africa.





VALUE PROPOSITION

While it is significant that many commitments have been made to ensure equitable distribution of COVID-19 vaccines in Africa through initiatives such as COVAX, there remains a need to build an African system that makes use of existing national organs for effective storage, distribution and vaccination tracking.

Leveraging on the CDI reach and previous engagement in the implementation of the Pharmaceutical Manufacturing Plan for Africa (PMPA), DFS Africa is well placed to connect the dots and ensure a seamless system that leverages and enhances present frameworks to ensure the last mile is covered, and people across Africa are vaccinated and records of vaccinations are tracked and documented.

I. FOR NATIONAL GOVERNMENTS

- i. We support national governments to source COVID-19 vaccines by aligning African governments with funding initiatives such as COVAX, vaccine manufacturers that are predisposed to licensing for generic manufacturing of the vaccines and multilateral institutions that support the financing of vaccines.
- ii. We equally support African governments to analyse existing healthcare frameworks so as to identify gaps that would prevent vaccine distribution from reaching the last mile. We address identified gaps by leveraging relationships with multilateral bodies and our experience in structuring successful public-private partnerships between African governments and the private sector.
- iii. Our advisory team works with African governments to kickstart economic transition process by leveraging the DFS Africa technology solution for tracking citizens who have been vaccinated.

Specific National Government offerings includes:

1. **Data Management:** A central database would be created that includes all the necessary actors necessary in the ecosystem for a seamless vaccination program. This would either leverage on existing systems, in instances where they suffice, or involve commissioning a new system. This system, at the very least, would include details about healthcare workers, vaccines, patients vaccinated and any other details necessary to measure the level of national immunity
2. **Training:** The level of competence of healthcare workers administering the vaccines would be evaluated and they will receive training about the Coronavirus vaccine, the vaccination process, record keeping, and any clinical support required. The training programme will be conducted mostly virtual and some training modules are already in flight.
3. **Operational Enhancement and Implementation Plan:** Procedures for ensuring appropriate supervision would be offered. This would be enhanced by any significant operational improvements
4. **Governance:** A technical working group to include all necessary parastatals is needed to ensure adherence to existing protocols and guide the operating team on necessary best practices.
5. **Funding:** Low- and Middle-Income Countries can subscribe to the COVAX facility to access discounted doses of the Vaccine. This is initially estimated to cover 15 percent of the population before getting subsequent doses at market price. We can help with further sourcing of discounted doses and also raise long term monies for subsequent purchases.
6. **Procurement Process:** We would assist in the procurement of private sector suppliers, or in instances where procurement process exists, support it.



II. FOR PRIVATE SECTOR PLAYERS

The CDI-VAP approach would facilitate local private players to ensure that the financial responsibility does not fall to the national governments. This will ensure that an equitable business model that compensates local private sector players is crafted and executed. Commercial agreements would involve:

- i. Working with health institutions to get **Access to and Delivery** of COVID-19 vaccines to their facilities in the most efficient manner.
- ii. Working with health services to be trained and set up to deliver WHO-approved vaccination facilities as certified **Point of discharge**. Pharmacies, Labs and Government health institutions would be encouraged to bid for the right to administer the vaccines after proper training.
- iii. Working with **Established Logistic Companies**, preferably with cold room facilities. The preference would be for companies with a national network, if they do not have national network, distribution can be shared between few companies with regional networks
- iv. Working via **public-private partnerships** the implementation of vaccine databases that maintains the records of citizens who have been vaccinated and issues the vaccine travel permit.



SERVICES AND PREREQUISITE

I. NATIONAL GOVERNMENTS

This table below details all the services DFS Africa can offer African countries as part of the CDI-VAP and prerequisites that National Governments and Private Sector participants must meet to avail themselves of the services.

CATEGORIES	THE SERVICES THAT WE OFFER	PREREQUISITE TO WORKING WITH THE GOVERNMENTS
Sourcing	Government representation with vaccine manufacturers	We require representation authority to source for vaccines on behalf of the government.
	Support or develop the national vaccine Governance framework	We require a good understanding of the following governance questions: <ol style="list-style-type: none"> 1. Has there been any governance working group set up? 2. If yes, what is the remit of their operation?
Purchasing	Government representation with multilateral funding	We require representation authority to source for financing to fund the purchase of vaccines on behalf of the government.
		We require a good understanding of any existing government funding plans e.g. <ol style="list-style-type: none"> 1. What is the government's plan for non-donor funded vaccine doses? 2. What is the government's plan for funding vaccines post donor funded initiatives?

CATEGORIES	THE SERVICES THAT WE OFFER	PREREQUISITE TO WORKING WITH THE GOVERNMENTS
Logistics	Support or develop operational Enhancement and Implementation Plan	<p>Having a national implementation plan is critical to a successful national vaccination programme. To this end, we need to understand the following:</p> <ol style="list-style-type: none"> 1. Is there any national plan in force already? 2. If answer to 1.) above is No, has any advisory company been commissioned to do the same? 3. Has GAVI been contacted? 4. Has any other vaccine manufacturer been contacted?
	Support or develop national Training programs	<p>Training of frontline workers will be essential to the efficient implementation of national vaccination campaign; therefore, it is critical to understand the skills set available in the country and the platforms that can be leveraged to train. That is;</p> <ol style="list-style-type: none"> 1. Is there any learning management system that can be leveraged on? 2. Is there a virtual platform that can be leveraged on to administer necessary training?
	Support or develop national Data Management programs	<p>Data management is critical to tracking and measuring progress of vaccination. In order to deploy the national vaccine database, we require a good understanding of the following:</p> <ol style="list-style-type: none"> 1. Is there an existing national healthcare database that can be leveraged on, If any? 2. Is there an existing national identification system if 1.) above is not available? 3. If points 1.) or 2.) are not available, is there any register of health workers or a census bureau that can be leveraged on? <p>If none is available, we will work with government agencies to develop a vaccine database.</p>
	Support or develop national Distribution programs	<p>Effective distribution structures are essential for the efficient national vaccination program. In order to support or develop a national distribution program, we need to understand the following:</p> <ol style="list-style-type: none"> 1. What type of ports approval is the country willing to provide? 2. Is the country planning to set up of last mile facilities or will last mile facilities be developed through PPP? 3. Is the country planning to develop an integrated distribution network i.e., Connect national framework to logistics solutions such as the Vaccine regional hubs?

II. PRIVATE SECTOR PLAYERS

CATEGORIES	THE SERVICES THAT WE OFFER	PREREQUISITE TO WORKING WITH THE PRIVATE SECTOR PLAYERS
Sourcing	Post the acute phase of the Pandemic, representation with vaccine manufacturers	We require representation authority to source for vaccines on behalf of Private Sector players.
	Support in accessing national vaccine Governance framework	<p>We have a good understanding of many African Countries governance framework. To help further, we would need answer to the following questions:</p> <ol style="list-style-type: none"> 1. Has there been any governance working group set up? 2. If yes, what is the remit of their operation? 3. If yes to 1.) and 2.) Have you been part of it?
Purchasing	Funding with multilateral bodies and private funders	We require representation authority to source for financing to fund the purchase of vaccines on behalf of the Private Sector players.
Logistics	Support to procure for national and continental bodies as they implement operational Enhancement and Implementation Plans	<p>Having a national implementation plan is critical to a successful national vaccination programme. To this end, we need to understand the following:</p> <ol style="list-style-type: none"> 1. Is there any national plan in force already that you know? 2. If answer to 1.) above is No, have you submitted any bid?
	Support in tapping into national Training programs	<p>Training of frontline workers will be essential to the efficient implementation of national vaccination campaign; therefore, it is critical to understand the skills set available in the country and the platforms that can be leveraged to train. That is;</p> <ol style="list-style-type: none"> 1. Are you part of present training programmes? 2. Do you have existing facility to tap into one
	Support in complying with Data Management programs	<p>Data management is critical to tracking and measuring progress of vaccination. In order to deploy the national vaccine database, we require a good understanding of the following:</p> <ol style="list-style-type: none"> 1. Is there an existing national healthcare database that can be leveraged on, If any? 2. Is there an existing national identification system if 1.) above is not available? 3. If points 1.) or 2.) are not available, is there any register of health workers or a census bureau that can be leveraged on? <p>If none is available, we will work with government agencies to develop a vaccine database.</p> <p>Based on the answers above, are you part of any of the data management programmes?</p>

CATEGORIES	THE SERVICES THAT WE OFFER	PREREQUISITE TO WORKING WITH THE PRIVATE SECTOR PLAYERS
	Support or develop national Distribution programs	<p>Effective distribution structures are essential for the efficient national vaccination program. In order to support or develop a national distribution program, we need to understand the following:</p> <ol style="list-style-type: none"> 1. Based on the type of ports approval required, are you able to meet such required approvals? 2. If the country is planning to set up last mile facilities through PPP, do you have the infrastructure to deliver vaccinations efficiently and in a manner that can be measured? 3. Most countries are planning to develop an integrated distribution network i.e., Connect national framework to logistics solutions such as the Vaccine regional hubs. Are you able to distribute either regionally or nationally?



SOURCING

I. PRODUCERS

The table below lists producers/manufacturers in the COVID-19 vaccine race and their progress

Phase 1 - are undergoing safety tests in **healthy young individuals**

Phase 2 - are being tested in **broader groups of people**

Phase 3 - are in large international trials to **test their impact on COVID-19**

Approved - are approved and licensed for general use

ID	DEVELOPERS	TYPE OF CANDIDATE VACCINE	NUMBER OF DOSES	PHASE
1	Sinovac Research and Development Co., Ltd	SARS-CoV-2 vaccine (inactivated)	2	Phase 3
2	Sinopharm + Wuhan Institute of Biological Products	Inactivated SARS-CoV-2 vaccine (Vero cell)	2	Phase 3
3	Sinopharm + Beijing Institute of Biological Products	Inactivated SARS-CoV-2 vaccine (Vero cell)	2	Phase 3
4	AstraZeneca + University of Oxford	ChAdOx1-S - (AZD1222) (Covishield)	1-2	Approved
5	CanSino Biological Inc./Beijing Institute of Biotechnology	Recombinant novel coronavirus vaccine (Adenovirus type 5 vector)	1	Phase 3
6	Gamaleya Research Institute ; Health Ministry of the Russian Federation	Gam-COVID-Vac Adeno-based (rAd26-S+rAd5-S)	2	Phase 3



ID	DEVELOPERS	TYPE OF CANDIDATE VACCINE	NUMBER OF DOSES	PHASE
7	Janssen Pharmaceutical	Ad26.COVS.S	1-2	Phase 3
8	Novavax	SARS-CoV-2 rS/Matrix M1-Adjuvant (Full length recombinant SARS CoV-2 glycoprotein nanoparticle vaccine adjuvanted with Matrix M)	2	Phase 3
9	Moderna + National Institute of Allergy and Infectious Diseases (NIAID)	mRNA -1273	2	Approved
10	BioNTech + Fosun Pharma; Jiangsu Provincial Center for Disease Prevention and Control + Pfizer	BNT162 (3 LNP-mRNAs)	2	Approved
11	Anhui Zhifei Longcom Biopharmaceutical + Institute of Microbiology, Chinese Academy of Sciences	Recombinant SARS-CoV-2 vaccine (CHO Cell)	2-3	Phase 3
12	CureVac AG	CVnCoV Vaccine	2	Phase 2/3
13	Institute of Medical Biology + Chinese Academy of Medical Sciences	SARS-CoV-2 vaccine (vero cells)	2	Phase 1/2
14	Research Institute for Biological Safety Problems, Rep of Kazakhstan	QazCovid-in® - COVID-19 inactivated vaccine	2	Phase 1/2
15	Inovio Pharmaceuticals + International Vaccine Institute	INO-4800+electroporation	2	Phase 2/3
16	AnGes + Takara Bio + Osaka University	AG0301-COVID-19	2	Phase 1/2
17	Cadila Healthcare Ltd.	nCov vaccine	3	Phase 1/2
18	Genexine Consortium	GX-19	2	Phase 1/2
19	Bharat Biotech International Limited	Whole-Virion Inactivated SARS-CoV-2 Vaccine (BBV152)	2	Phase 3
20	Kentucky Bioprocessing Inc.	KBP-COVID-19 (RBD-based)	2	Phase 1/2
21	Sanofi Pasteur + GSK	SARS-CoV-2 vaccine formulation 1 with adjuvant 1 (S protein (baculovirus production))	2	Phase 1/2
22	Arcturus Therapeutics	ARCT-021	ND	Phase 1/2
23	Serum Institute of India + Accelagen Pty	RBD SARS-CoV-2 HBsAg VLP vaccine	2	Phase 1/2
24	Shenzhen Kangtai Biological Products Co., Ltd.	Inactivated SARS-CoV-2 vaccine (Vero cell)	1,2 or 3	Phase 2
25	ReiThera + Leukocare + Univercells	GRAd-COV2 (Replication defective Simian Adenovirus (GRAd) encoding S)	1	Phase 1
26	Vaxart	VXA-CoV2-1 Ad5 adjuvanted Oral Vaccine platform	2	Phase 1

ID	DEVELOPERS	TYPE OF CANDIDATE VACCINE	NUMBER OF DOSES	PHASE
27	University of Munich (Ludwig-Maximilians)	MVA-SARS-2-S	2	Phase 1
28	Clover Biopharmaceuticals Inc./ GSK/Dynavax	SCB-2019 + AS03 or CpG 1018 adjuvant plus Alum adjuvant (Native like Trimeric subunit Spike Protein vaccine)	2	Phase 1
29	Vaxine Pty Ltd. + Medytox	COVID-19 vaccine	1	Phase 1
30	Medigen Vaccine Biologics + Dynavax + National Institute of Allergy and Infectious Diseases (NIAID)	MVC-COV1901 (S-2P protein + CpG 1018)	2	Phase 1
31	Instituto Finlay de Vacunas	FINLAY-FR anti-SARS-CoV-2 Vaccine (RBD + adjuvant)	2	Phase 1/2
32	Federal Budgetary Research Institution State Research Center of Virology and Biotechnology "Vector"	EpiVacCorona (EpiVacCorona vaccine based on peptide antigens for the prevention of COVID-19)	2	Phase 1/2
33	West China Hospital + Sichuan University	RBD (baculovirus production expressed in Sf9 cells) Recombinant SARS-CoV-2 vaccine (Sf9 Cell)	2	Phase 2
34	University Hospital Tuebingen	IMP CoVac-1 (SARS-CoV-2 HLA-DR peptides)	1	Phase 1
35	COVAXX + United Biomedical Inc	UB-612 (Multitope peptide based S1-RBD-protein based vaccine)	2	Phase 1
36	Merck & Co. + Themis + Sharp & Dohme + Institute Pasteur + Univeristy of Pittsburgh	V591-001 - Measles-vector based (TMV-o38)	1-2	Phase 1/2
37	Jiangsu Provincial Center for Disease Prevention and Control	DeINS1-2019-nCoV-RBD-OPT1 (Intranasal flu-based-RBD)	1	Phase 2
38	Imperial College London	LNP-nCoVsaRNA	2	Phase 1
39	Shulan (Hangzhou) Hospital + Center for Disease Control and Prevention of Guangxi Zhuang Autonomous Region	SARS-CoV-2 mRNA vaccine	2	Phase 1
40	Medicago Inc.	Coronavirus-Like Particle COVID-19 (CoVLP)	2	Phase 2/3
41	Shenzhen Geno-Immune Medical Institute	COVID-19/aAPC vaccine. The COVID-19/aAPC vaccine is prepared by applying lentivirus modification with immune modulatory genes and the viral minigenes to the artificial antigen presenting cells (aAPCs).	3	Phase 1

ID	DEVELOPERS	TYPE OF CANDIDATE VACCINE	NUMBER OF DOSES	PHASE
42	Shenzhen Geno-Immune Medical Institute	LV-SMENP-DC vaccine. Dendritic cells are modified with lentivirus vectors expressing COVID-19 minigene SMENP and immune modulatory genes. CTLs are activated by LV-DC presenting COVID-19 specific antigens.	1	Phase 1/2
43	Adimmune Corporation	AdimrSC-2f (recombinant RBD +/- Aluminium)	ND	Phase 1
44	Entos Pharmaceuticals Inc.	Covigenix VAX-001	2	Phase 1
45	Providence Health & Services	CORVax	2	Phase 1
46	Chulalongkorn University	ChulaCov19 mRNA vaccine	2	Phase 1
47	Symvivo Corporation	bacTRL-Spike	1	Phase 1
48	ImmunityBio, Inc.	hAd5-S-Fusion+N-ETSD vaccine	1	Phase 1
49	City of Hope Medical Center + National Cancer Institute	COH04S1 (MVA-SARS-2-S)	1-2	Phase 1
50	Israel Institute for Biological Research	rVSV-SARS-CoV-2-S Vaccine	1	Phase 1
51	Aivita Biomedical, Inc.	Dendritic cell vaccine AV-COVID-19. A vaccine consisting of autologous dendritic cells loaded with antigens from SARS-CoV-2, with or without GM-CSF	1	Phase 1/2
52	Codagenix/Serum Institute of India	COVI-VAC	1-2	Phase 1
53	Center for Genetic Engineering and Biotechnology (CIGB)	CIGB-669 (RBD+AgnHB)	3	Phase 1/2
54	Center for Genetic Engineering and Biotechnology (CIGB)	CIGB-66 (RBD+aluminium hydroxide)	3	Phase 1/2
55	Valneva, National Institute for Health Research, United Kingdom	VLA2001	2	Phase 1/2
56	Biological E Limited	BECOV2	2	Phase 1/2
57	Cellid Co., Ltd.	AdCLD-CoV19		Phase 1/2
58	GeneOne Life Science, Inc.	GLS-5310	2	Phase 1/2
59	Nanogen Pharmaceutical Biotechnology*	Recombinant Sars-CoV-2 Spike protein, Aluminum adjuvanted	2	Phase 1/2
60	Shionogi*	Recombinant protein vaccine S-268019 (using Baculovirus expression vector system)	2	Phase 1/2

II. CTAP INITIATIVE

The COVID-19 Technology Access Pool (C-TAP) will compile, in one place, pledges of commitment made under the Solidarity Call to Action to voluntarily share COVID-19 health technology related knowledge, intellectual property and data. The Pool will draw on relevant data from existing mechanisms, such as the Medicines Patent Pool and the UN Technology Bank-hosted Technology Access Partnership.

Shared knowledge, intellectual property and data will leverage our collective efforts to advance science, technology development and broad sharing of the benefits of scientific advancement and its applications based on the right to health. Holders of COVID-19 health technology related knowledge, intellectual property and/or data are invited to [“take action now”](#).





PURCHASING

I. COVAX - PARTICULAR TO LMIC

COVAX FACILITY

The Covax Facility is the only real hope for Africans sourcing the COVID-19 Vaccine. Coordinated by Gavi, the Coalition for Epidemic Preparedness Innovations (CEPI) and the World Health Organization (WHO), COVAX has an initial goal of making at least 2 billion doses of safe and effective COVID-19 vaccines available by the end of 2021. This should be enough to protect high-risk individuals, including health care workers and vulnerable people.

But how exactly will COVAX ensure that these vaccines are appropriately and equitably distributed? The answer is a bespoke governance system, building on existing management bodies rather than creating new management – designed with equity and transparency at the core of every policy and process. This is where DFS Africa will leverage its expertise in securing and ensuring the vaccine reaches the last mile.

COVAX facility allows access to donor-funded doses of safe and effective COVID 19 Doses. This is aided by the GAVI COVAX AMC, an innovative financing instrument that aids 92 LMIC countries in accessing the COVAX Facility.

COVAX AMC

At the Global Vaccine Summit on June 4, Gavi

launched the COVID-19 Vaccines Advance Market Commitment (COVAX AMC) as the first building block of the ¹[COVAX Facility](#). The Gavi COVAX AMC is the innovative financing instrument that will support the participation of 92 low- and middle-income economies in the COVAX Facility – enabling access to donor-funded doses of safe and effective COVID-19 vaccines. The AMC, combined with additional support for country readiness and delivery, will make sure the most vulnerable in all countries can be protected in the short term, regardless of income level.

Committed countries are listed here: https://www.gavi.org/sites/default/files/covid/pr/COVAX_CA_COIP_List_COVAX_PR_15-12.pdf Please note that not all African countries are committed to this yet, but most are eligible because they are classified as a Low Middle Income Country.

WHY COVAX AMC?

What is so unique about the COVAX AMC is that these doses will be made available to people in all participating economies – rich or poor – at the same time, with ²[almost 1 billion of these doses made available to people in the 92 poorest ones through the AMC](#). Never before has a life-saving health intervention against such an immediate global health threat been made available to people in the Global North and South simultaneously at

¹ <https://www.gavi.org/covax-facility>

² <https://www.gavi.org/news/media-room/92-low-middle-income-economies-eligible-access-COVID-19-vaccines-gavi-covax-amc>

such speed. When the moment comes, this will be the single largest and most rapid global vaccine deployment we have ever seen.

The COVAX Facility is designed to benefit all participating countries and economies. It provides a lifeline to the majority of countries that would otherwise have limited or no access at all to COVID-19 vaccines. For those that are already negotiating bilateral deals with vaccine manufacturers, it is an insurance policy, guaranteeing them vaccine doses even if those bilateral deals fail to produce safe and effective vaccines.

WHO WILL PAY FOR IT?

By paying in to the COVAX Facility, the procurement platform of COVAX, higher-income countries can place orders for the doses they need to protect their priority populations. Upfront payments on these orders will help the Facility ensure that manufacturing is ramped up before vaccines have been approved, not after.

Since many, if not most, vaccines are likely to fail, this comes with risks. But it is the only way to ensure that vaccines can be delivered at scale as soon as they are approved, and enough for all participating countries, including those that cannot afford to pay. Accelerating the availability of vaccine doses like this will save lives, save time and – given that COVID-19 is costing the global economy more than US\$ 500 billion a month – ultimately it will save money.

However, a critical part of this is that higher-

income countries participating in the Facility will only pay for the cost of the vaccine doses they receive. Doses for lower-income economies will also be procured through the COVAX Facility but will be paid for via the separate financial mechanism of the Gavi COVAX AMC, which will be largely funded through Official Development Assistance (ODA). Even so, it is likely that the 92 ODA-eligible countries accessing vaccines through the AMC may also be required to share some of the costs of COVID-19 vaccines and delivery, up to US\$ 1.60 – US\$ 2 per dose – a mirror of the amount paid upfront by self-financing participants.

WHAT WILL THE AMC ACTUALLY DO?

The AMC's role is to leverage the scale assured by the participation of higher-income economies to ensure that lower-income ones are also able to participate. The Facility will fund volume guarantees to specific manufacturers for vaccine candidates before they are licensed, as well as provide market-wide demand guarantees to all manufacturers in the longer term. Once vaccines are licensed and prequalified by the World Health Organization, AMC funds will then pay for the purchase of doses for all 92 ODA-eligible countries.

Such guarantees are designed to incentivise manufacturers to ensure that enough doses are produced for AMC economies, which collectively represent almost half the world's population. To make this possible, by the end of 2020 Gavi is aiming to raise US\$ 2 billion of initial seed funding. This will largely go towards advance purchase





agreements with manufacturers, to secure supply agreements for AMC doses.

WHAT DO AMC COUNTRIES NEED TO DO NOW?

For this to happen, a number of things need to be done both at the global and COVAX levels, but also within AMC countries. At the COVAX end, first the Facility needs its upfront payments from higher-income economies, in order to get manufacturing capacity in place, and Gavi needs to secure the remaining funding needed for the initial phase of the AMC. It will be important to get this US\$ 2 billion funding secured by the end of 2020 to ensure that agreements can be put in place with manufacturers so that they are in a position to produce enough doses for the AMC as soon as production begins.

Gavi already has commitments from donor governments for a large part of the funds it initially needs, but one attractive option to fund any shortfall may come through Gavi's International Finance Facility for Immunisation (IFFIm), which frontloads funds for immunisation by issuing bonds. This has already been used for over a decade to help fund other Gavi-supported vaccines and accelerated access to hundreds of millions of doses to children in poor countries, and has also helped fund the development of COVID-19 vaccines through Gavi's COVAX partner organisation, the Coalition for Epidemic Preparedness Innovations (CEPI).

In addition to funding, Gavi needs AMC economies to be fully engaged and start now to prepare for

delivery. Introducing a new vaccine is a highly complex process with many important steps involved, including: national regulatory pathways; human resources and training; logistics and cold chain; service delivery to establish priority target populations; data collection and monitoring to ensure coverage is adequate and safe; and social mobilisation and community engagement, so people are aware of what's going on and have confidence in COVID-19 vaccines.

To help each economy get to this point, Gavi is providing up to US\$ 150 million in initial funding to jumpstart support for COVAX AMC-eligible country readiness in preparation for COVID-19 vaccines delivery, in the form of planning, technical assistance and cold chain equipment. In addition to this, the Alliance has developed a number of tools to help countries prepare, including the Country Readiness Assessment tool. This will enable each country to develop a national vaccination deployment plan, to assess their capacity for vaccine storage and distribution, and, in the context of the infodemic of misinformation about vaccine safety we are experiencing, help them prepare a comprehensive communication plan, to ensure people understand why COVID-19 vaccination is so important and who will get priority.

WHO WILL BE FIRST IN LINE?

A founding principle of COVAX is that access will be equitable. That doesn't just mean ensuring that all countries get fair access to COVID-19 vaccines, it also means having an allocation mechanism, driven by the World Health Organization (WHO),

to guide how vaccines are distributed within countries and territories. In order to stop this pandemic from continuing to escalate, it will be absolutely critical that when doses first become available to countries and territories, they go to people where the impact will be the greatest. That means people most at risk and those most likely to transmit the virus.

To support this, the WHO has developed a Fair Allocation Framework for COVID-19 to provide guidance and recommendations on which priority groups should be vaccinated first, subject to recommendations and guidance on specific vaccine candidates from the WHO's Strategic Advisory Group of Experts (SAGE) on Immunization. The Framework identifies three groups of people as highest risk who should get priority access to COVID-19 vaccines: frontline health and social care workers; people over the age of 65; and people under 65 who have underlying health conditions.

Since frontline health and social care workers are not just at risk of being infected but also pose a higher risk of transmitting the virus, it recommends they are initially prioritised. With demand for COVID-19 vaccines likely to outstrip supply,

at least initially, it estimates that if COVID-19 vaccines are equally distributed to countries and territories until all have enough to protect 3% of their population, this should be sufficient to protect every health and social care worker on the planet. Then as availability increases through 2021 and beyond, distribution should continue equally until all countries have enough to protect 20% of their population, which should cover all high-risk groups prioritised in most countries and territories. The only exception is those countries and territories that have opted to receive fewer doses than the amount required to cover 20% of their population.

In time, as more doses are produced, COVID-19 vaccines will be made available to wider groups if appropriate. But such a phased approach will be important if we are to turn a corner with this crisis. The COVID-19 pandemic is the greatest challenge of our time, and the COVAX Facility and the Gavi COVAX AMC are the only solutions to bring to a swift end to this crisis. COVAX is the biggest multilateral effort since the Paris climate agreement and the world's best hope of ending the pandemic, because it is the only way to protect people in all corners of the world from COVID-19, and ensure that we achieve one world, protected.

II. OTHERS

It is expected that the approved COVID-19 vaccines will be purchased by African governments through the Covax-19 facility for much of 2021 and some part of 2022. As other manufacturers and producers get their vaccines approved, it opens up the market for other players to source and distribute the vaccines

to a greater percentage of the population who would otherwise not have been vaccinated due to quantity available through the recently approved vaccines. The CDI-VAP will also serve as a 'pooled-purchasing' mechanism through its [CDI Portal](#) to ensure all of Africans have access to the COVID-19 vaccines.





LOGISTICS

COVID-19 vaccine logistics and distribution processes comprise many moving parts and the CDI-VAP has created a simple approach to ensure distribution goes smoothly and the vaccines reach the last mile.

Our approach, broken down into 2 components, will help national governments to successfully navigate a few challenges related to vaccine, access and distribution, including: local approvals, securing capacity, related temperature-controlled needs (e.g. the Pfizer vaccine needs to be kept at -70 Celsius), security, and seasonal challenges, among others

I. COUNTRY PORT

From when the vaccines arrive into each country, CDI-VAP's approach will ensure the following are in place for a safe and smooth transfer to vaccination centres. We would ensure that the following needs are met:

1. Infrastructure Needed
2. Approval Process
3. Clearing Logistics
4. Port Storage (If any)

II. LAST MILE

1. Existing healthcare framework for vaccination – currently primary healthcare centres are used across Africa for vaccinations. Our last mile approach will leverage these existing centres in addition to government and private hospitals to ensure the vaccines reach the last mile as fast as possible.

2. Distribution Logistics – financing cold room storage for distribution companies and leveraging logistics companies and industries with cold room facilities. All distribution partners must meet required quality standards and compliance to Good Distribution Practices (GDP). They must also meet the following service level needs:

- a. Temperature Tracking – availability on calibrated loggers (GDP certified) for tracking on pallet level.
 - b. GDP compliant overland transport – quality management and proper execution on overland transport and capacity availability.
 - c. GDP certified warehouses – meeting local healthcare authorities standards for quality assurance and having available capacity which will prove to be a challenge.
- 3. Business Model** - Who pays what and how much? This is a balancing act that must consider striking a balance between public health and a well-compensated and efficient distribution programme that might involve charging individuals.

4. Measurement and Tracking - There's a need to know who has been vaccinated to track progress nationally. In addition to knowing who has been vaccinated, there is also a need to monitor doses of vaccine taken. For example, the recently approved vaccines required two doses of the vaccine. Record keeping will be essential to remind patients to come in for the second dose. It will also be essential to ensure that the second dose will be with the same vaccine as the first dose, as there's no information yet on "mixing and matching of vaccines". Sample initiative is the **Digital Yellow Card Initiative** – <https://www.who.int/groups/smart-yellow-card-working-group>





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