



One for All

An Updated Action Plan for Global Covid-19 Vaccination

Foreword

Right now, the world is only a little closer to ending the Covid-19 pandemic than it was at this time last year. Despite the tireless work of health care workers, the miracles of vaccine researchers and producers, and the trillions of dollars spent by governments, there are still too many people falling ill around the world and too many who have yet to receive the benefits of vaccination. And, with each new infection, we risk a mutation that could produce a variant – like the B1.1.7, B1.351 and B.1.617 variants we are seeing now – that could break out, cross borders and challenge vaccine efficacy.

Nearly everyone agrees that we must vaccinate the world as soon as possible, or risk wasting all this work, sacrifice and investment. Unfortunately, until this report, *One for All: An Updated Action Plan for Global Covid-19 Vaccination*, there have been few workable, comprehensive plans to meet that objective nor the support to achieve it. The result has been inertia – a global vaccination initiative that lacks resources and ambition – and a growing gulf between the vaccinated world and the unvaccinated world.

The risks of missing this moment go far beyond a prolonged pandemic or a new one driven by a coronavirus variant. The longer the world goes unvaccinated, the higher the economic cost – some estimate the global economy will lose US\$9.2 trillion this year – and the higher the personal, social and political toll of prolonged lockdowns and other response measures will grow.

Thankfully, the world knows how to vaccinate at a large scale. Based on previous inoculation campaigns, including Gavi, the Vaccine Alliance, which launched 20 years ago with The Rockefeller Foundation's support, we know any serious plan must address the three biggest obstacles: supply, delivery, and financing. This report includes recommendations for how to overcome some of those challenges and what is needed to achieve a level of global coordination and commitment unseen in history.

If the past year has shown us how important it is to end this pandemic, this report finally reveals what steps the world must take to do so. In the months ahead, The Rockefeller Foundation and those who have collaborated on this initiative will now work to ensure the world's nations and multinational institutions do all that is required to vaccinate enough people by the end of next year.

With this plan, today's leaders – beginning later this month at the G7 meeting – can take the first steps required to meet that goal. If they do, the benefits will not just be confined to health and economics. While Covid-19 succeeded in shutting down international travel, closing borders and stoking nationalism, individuals everywhere can now share a common experience. One by one, they can roll up their sleeves and get a shot for their own protection and to finally end the pandemic for everyone. In that way, vaccinating the world will unite us in a way few things ever have.



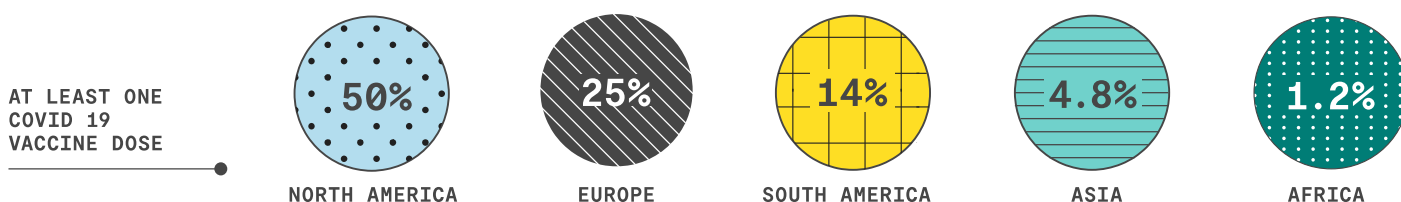
Onward,

A handwritten signature in blue ink, appearing to read 'Rajiv J. Shah'.

Dr. Rajiv J. Shah,
President of
The Rockefeller Foundation

Global Vaccination Report

As vaccinated communities begin to take off their masks, Covid-19 is still raging in India, parts of South America, and is beginning to rise in Africa. While half of Americans and more than a quarter of Europeans have received at least one vaccine dose, only 1.2 percent of people in Africa, 4.8 percent in Asia and 14 percent in South America are vaccinated. No one is safe from Covid-19 until everyone is safe and that means vaccinated. The goal of any plan to achieve herd immunity must be to achieve sufficient immunization: around 70 percent by the end of 2022. Unfortunately, COVAX, the global initiative to vaccinate 92 low- and middle-income countries, has neither the financial resources nor access to the vaccine supply it needs to vaccinate just 27 percent of those populations.

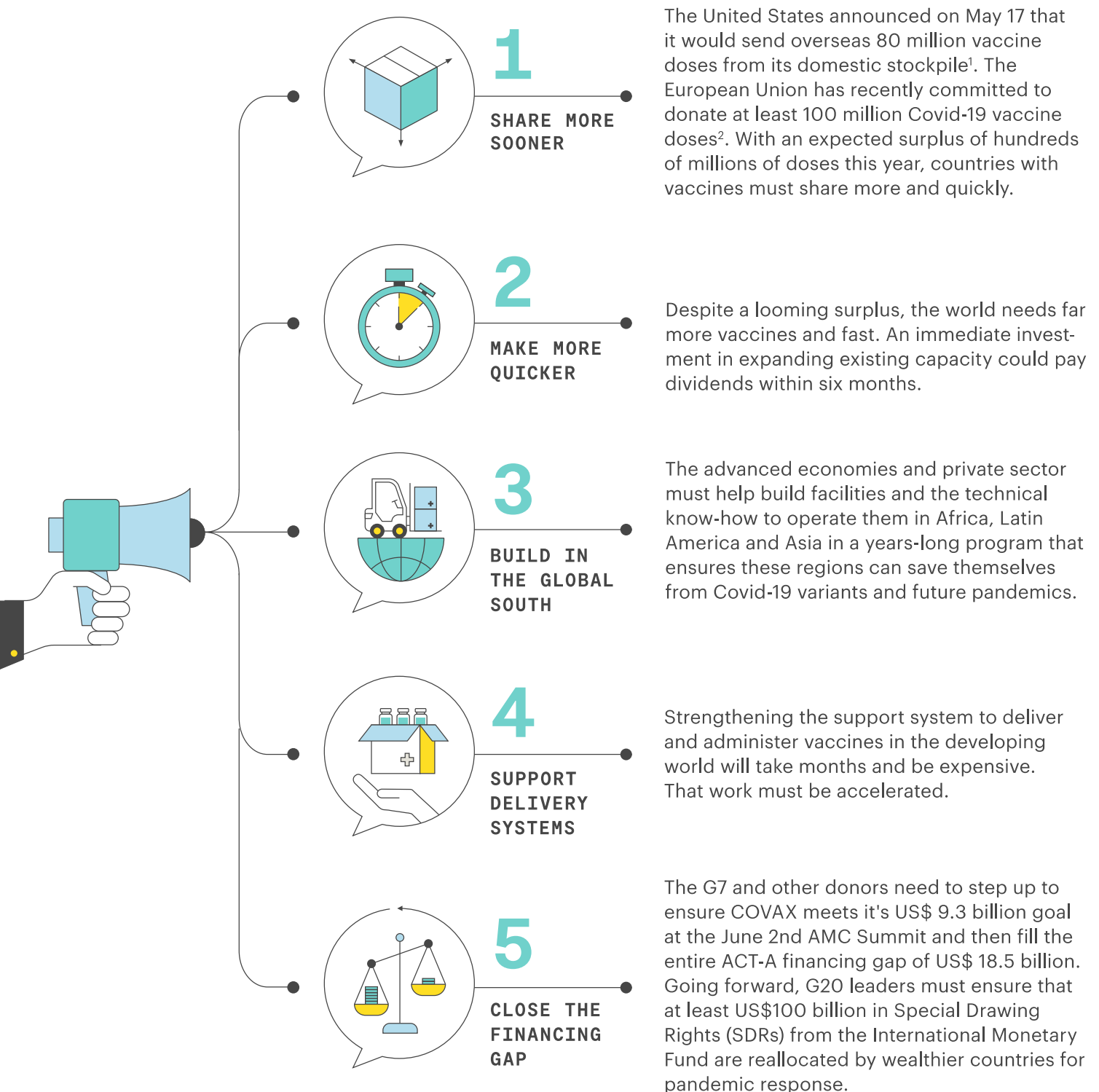


We have extensive experience using vaccinations to save lives. Currently global immunization campaigns prevent 4-5 million deaths every year. Because of the dedication of health workers and effective vaccines:

- polio is now only endemic in three countries; cases have decreased from 350,000 cases in 1988 to 33 in 2018;
- measles deaths dropped 73% between 2000 and 2018;

But what would a Covid-19 vaccination campaign look like? Current vaccination campaigns mostly focus on children; Covid-19 will prioritize adults first. Most childhood vaccines have been around for decades thus, supply is generally less of a challenge, unlike the Covid-19 vaccine supply. But given the severity of the virus and the detrimental impact extensive shutdowns have had on lives and the economy, the level of urgency for scaling Covid-19 vaccinations is unparalleled. Achieving the ambitious goal of creating population protection through vaccination will require unprecedented coordination and collaboration.

A Call to Action



ACT-A is a global collaboration to accelerate development, production, and equitable access to Covid-19 tests, treatments, and vaccines in low and middle-income countries. For the purposes of this report we've used cost assumptions provided by ACT-A and its partners except where highlighted. Funding for the various activities under the ACT-A pillars is provided directly to various implementing institutions. We note that various other cost estimates have been developed by GAVI, the IMF and other leading institutions that have highlighted a similar scale of financing gap, with different cost assumptions driving discrepancies in the overall scale of the gap.

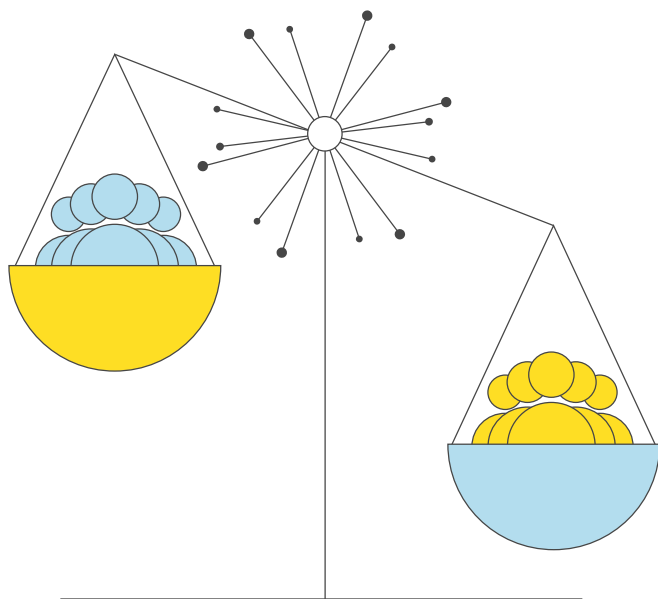
The Inequality Virus

“There is a huge disconnect growing, where in some countries with the highest vaccination rates, there appears to be a mindset that the pandemic is over, while others are experiencing huge waves of infection. The situation in a number of countries continues to be very concerning. The pandemic is a long way from over, and it will not be over anywhere until it’s over everywhere.”

Dr. Tedros Adhanom Ghebreyesus,
Director-General of the World Health Organization

In many advanced economies where vaccination rates have been increasing, restaurants are opening, airports and beaches are packed and life is returning to normal. In India, a massive spike in infections has led to dire shortages of oxygen, hospital beds and medicines and a sudden surge in corpses washing up along the Ganges River. The coronavirus’ impact during its first year was remarkably democratic, with rich and poor countries suffering alike. But as hundreds of millions of vaccine doses are distributed in rich nations, the world’s wealth divide has grown into a chasm.

Infections and death are declining in North America and Europe but are on the rise in Africa and soaring in India, Brazil, Thailand, Cambodia and Malaysia. This divergence is not only a moral outrage but a threat to all of humanity. As SARS-CoV-2, the virus that causes Covid-19, circulates freely in the alleys of Old Delhi and barrios of São Paulo, it is rapidly mutating into more infectious and deadly variants that could boomerang back onto wealthy nations and sicken and kill those previously vaccinated. The longer vaccination efforts in the developing world are delayed, the greater the risks that Covid-19 never goes away and that mutations – the variants – break through the immunity of current vaccines. Until every place is safe, no place will be safe. Beyond the threat of mutations, a lack of equity in vaccine distribution exacerbates fiscal and debt crisis in the developing world which can lead to further instability.



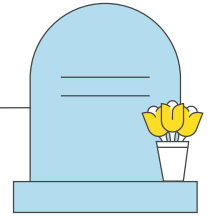
Already, more than 3.5 million people in the world have died from Covid-19 and 170 million have been infected, numbers that are likely substantial undercounts. The economic toll has been almost as shocking. Tens of millions lost their jobs, with millions newly destitute. Nearly US\$10 trillion will be sucked out of the global economy by the end of 2021 according to the United Nations Conference on Trade and Development (UNCTAD).³ Rich countries have spent at least US\$14.6 trillion in stimulus funds propping up their economies and protecting the newly unemployed from desperation, admirable efforts that poor nations cannot afford. Economic growth is roaring back in the United States and China, but lower income countries are expected to take years to return to 2019 levels.

An estimated 150 million people will fall into extreme poverty⁴ and 34 million will be pushed to the brink of famine as a result of the pandemic⁵, according to international estimates. The economy in Latin America contracted by an estimated 8.1% percent in 2020⁶, the worst decline since 1821. Infectious diseases like measles and malaria are surging in central and west Africa as health systems strain under the twin burdens of a virus pandemic and economic disruptions⁷.

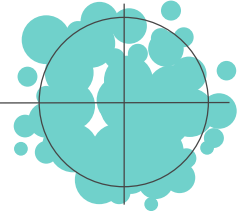
“This has become the inequality virus,” said Amina Mohammed, Deputy Secretary-General of the United Nations. “The diverging world we’re hurtling towards is a catastrophe.”

This inequity is yet another pandemic-related disaster that will boomerang back onto rich nations. The International Chamber of Commerce (ICC) Research Foundation has found that the global economy stands to lose as much as US\$9.2 trillion if governments fail to ensure developing-economy access to Covid-19 vaccines; as much as half of which would fall on advanced economies⁸. Focused almost exclusively on vaccinating and protecting their own populations, leaders of G7 and G20 nations have paid insufficient attention to the dire health, social, economic and political crises threatening much of the rest of the world. As stated in the preface, half of Americans and more than a quarter of Europeans have received at least one vaccine dose, while only 1.2 percent of people in Africa, 4.8 percent in Asia, and 14 percent in South America have received any.⁹

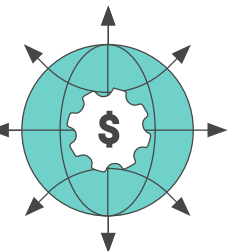
3.5 MILLION PEOPLE
IN THE WORLD HAVE
DIED FROM COVID-19



170 MILLION PEOPLE
HAVE BEEN INFECTED



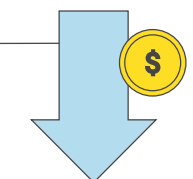
NEARLY US\$10 TRILLION WILL BE
SUCKED OUT OF THE GLOBAL ECONOMY
BY THE END OF 2021



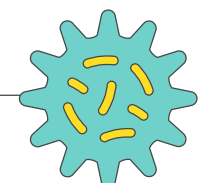
RICH COUNTRIES HAVE SPENT
AT LEAST US\$14.6 TRILLION
IN STIMULUS FUNDS



150 MILLION PEOPLE WILL FALL
INTO EXTREME POVERTY, 34 MILLION
WILL BE PUSHED TO THE BRINK
OF FAMINE



INFECTIOUS DISEASES LIKE MEASLES
AND MALARIA ARE SURGING IN
CENTRAL AND WEST AFRICA



Rich nations have also relied almost entirely on a small number of pharmaceutical companies to develop and manufacture the hundreds of millions of vaccine doses needed for their populations. These companies deserve enormous praise for their efforts and the billions in profits that some have reaped are richly deserved. But private manufacturers will not invest the further billions needed to vaccinate much of the developing world without purchase contracts in hand, let alone ensure the equitable distribution of vaccines. In short, private enterprise alone cannot resolve the Covid-19 pandemic.

Advocates have called for governments to waive intellectual property protections for commercially produced Covid-19 vaccines in hopes that other manufacturers and particularly those in the developing world can make these life-saving medicines themselves much less expensively. But patents are not the principle hindrance to immediate vaccine production. Negotiations to waive intellectual property protections will take months and must resolve the technical and regulatory barriers that copy-cat manufacturers cannot resolve on their own in order to produce safe and effective vaccines.

The Access to Covid-19 Tools Accelerator (ACT-A)

In April 2020, the World Health Organization (WHO) and partners launched the Access to Covid-19 Tools Accelerator (ACT-A). ACT-A contains four pillars to drive equitable access: one for diagnostics, one for therapeutics, one to support in-country delivery of Covid-19 tools, and one focused on vaccines, also known as COVAX.



VACCINES



THERAPEUTICS



DIAGNOSTICS



HEALTH SYSTEMS
CONNECTOR

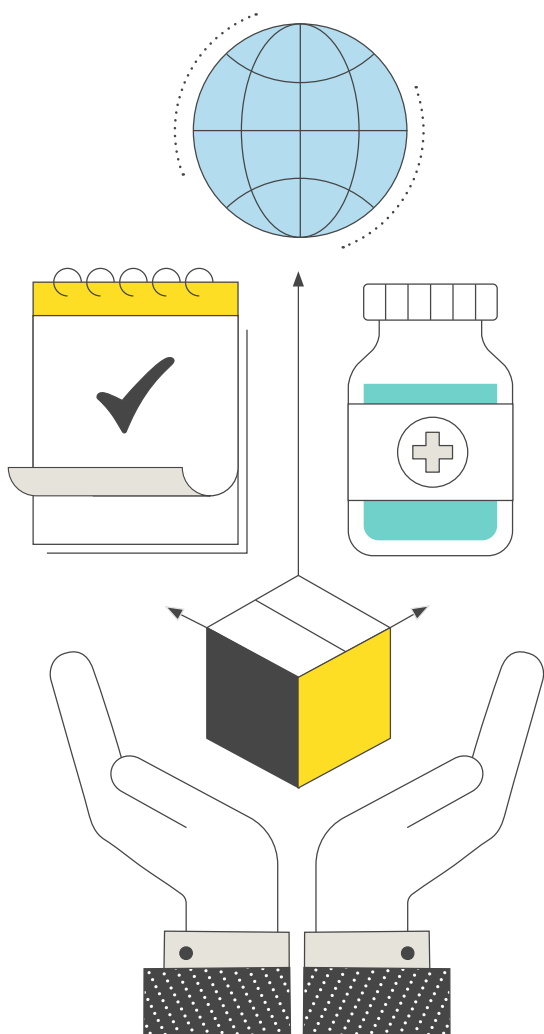
COVAX drives the research, development, and manufacturing of a wide range of Covid-19 vaccine candidates with the ability to negotiate pricing. The initiative's initial aim is to have two billion doses available by the end of 2021 to cover frontline workers and high-risk populations in low- and middle-income countries. Unfortunately, COVAX's efforts to vaccinate 92 low- and middle-income countries has neither the financial resources nor access to the vaccine supply it needs and therefore is not on target to meet its modest objectives for 2021. All four pillars of ACT-A currently face an US\$18.5 billion shortfall for the full breadth of the pandemic response (costs for testing, treatment, vaccines and in country support).

Given the progress vaccinations are making in slowing the spread of the disease, funding COVAX is critical to get control of the pandemic. COVAX needs US\$9.3 billion to lock in 1.8 billion vaccine doses. Securing 1.8 billion doses would enable the vaccination of roughly half the adult population of the 92 Advance Market Commitment countries (AMC). On June 2nd, Japan will host a Summit to try to raise the necessary support. Once funding for 2021 is secured, the G7 and the G20 need to be ready to step up to complete funding of vaccinations for all countries as well as to expand Covid-19 testing and treatment capacities across the rest of ACT-A to fully end this pandemic.

1

SHARE MORE SOONER

The biggest vaccination campaign in history is underway. More than 1.6 billion doses have been administered across 176 countries, enough to vaccinate 10.5% of the global population¹⁰. But distribution is lopsided. Countries and regions with the highest incomes are getting vaccinated more than 30 times faster than those with the lowest incomes. The gap between North America and the rest of the world in Covid-19 vaccination efforts continues to widen. The immediate answer is for wealthy countries to share more of their vaccine abundance faster.



Principles for Shared Doses

Given the increasing number of authorizations for Covid-19 vaccines by stringent regulatory authorities (SRA), some countries have secured sufficient doses to begin sharing a portion of those doses with other countries. COVAX requests countries follow these principles for sharing doses:

Safe & effective

Shared doses must be of assured quality with, at a minimum, WHO prequalification/emergency use listing or licensure/authorization from an SRA.

Early availability

Shared doses should be made available as soon as possible and ideally concurrently by the sharing country as it receives vaccine.

Rapidly deployable

Sharing of excess doses should be signaled as early as possible in the manufacturing process so doses are shipped directly from the manufacturer with universal labeling and packaging, allowing rapid deployment and maximum shelf-life.

Unearmarked

To facilitate equitable access and in keeping with the COVAX allocation mechanism, doses should not be earmarked for specific geographies or populations.

Substantive quantity

Shared doses should be of sufficient and predictable volumes to have a substantive impact.

(Source: COVAX)

2

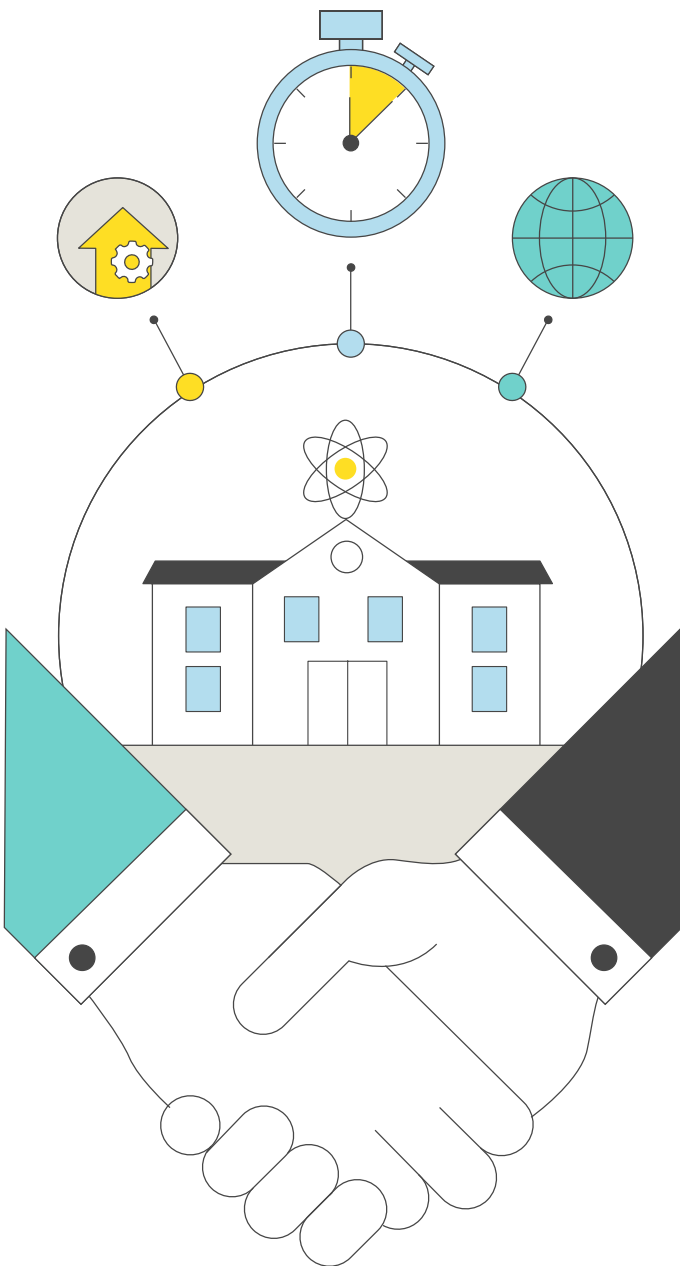
MAKE MORE QUICKER

Vaccine production can require more than 200 individual components including syringes, filters, tubing, glass vials, and stabilizing agents. The components are often manufactured in different countries and if the supply of one of the components falls short, the production of a vaccine can be delayed.

In addition, accelerating vaccine production requires collaboration. Already firms that would normally be competitors are working together at an unprecedented level. For example, Merck is manufacturing vaccines for its rival Johnson & Johnson. London-based GSK and Novartis in Switzerland are manufacturing millions of doses for CureVac, based in Germany. The biggest deals came from AstraZeneca for the vaccine it developed with the University of Oxford. It has arranged collaborations with multiple manufacturing facilities across more than a dozen countries around the world to produce more than 3 billion vaccine doses. But producing vaccines is more complex than producing drugs, so truly scaling production to the necessary levels will require technology transfer¹¹ and the know-how needed to put plans into action.

Crash programs to develop Covid-19 vaccines have been among history's greatest scientific achievements. In its first phase, countries, companies, and labs funded a number of vaccine technologies in the hope that some would result in safe and effective vaccines needed for a global vaccination campaign. For example this year, Pfizer-BioNTech and Moderna are expected to deliver nearly 4 billion doses and as many as 7 billion doses next year.

For that reason, we must continue to push for and invest in increasing manufacturing capacity and the supply chain enhancements needed to ensure that manufacturers are able to make Covid-19 vaccines at their full capacity. Unfortunately manufacturing equipment, bioreactor bags, tubing, filters and other supplies that are needed are all still in short supply. As we have seen, any hiccup along the way can derail or slow production increases.



Supply Chain

India's drug industry rescued millions when HIV/AIDS threatened Africa, and the hope was that it would do the same during another pandemic. More than half of the vaccines delivered through the end of April to COVAX, the international vaccine-sharing initiative, were made by the Serum Institute of India. Such a heavy reliance on one manufacturer in one country leaves the world vulnerable to the kind of shocks that pandemics invariably bring. In April, India stopped exporting Covid-19 vaccines, one of several national bans that have left the developing world unprotected.

The hard lesson of the present global calamity is that each country or region must ensure its own vaccine supply chain, and that will require a whole-sale retooling of biological manufacturing around the world. This will not be easy.

Vaccine plants are specialized facilities that are expensive and time-consuming to build. Manufacturing capacity is far from the only problem bedeviling vaccine supplies. Critical ingredients for almost every step in making vaccines have been in short supply, from basic raw materials like buffers and resins to laboratory consumables like single-use bags, tubing and sterile filters to the vials and stoppers used to package vaccines.

While some manufacturers of these critical supplies have been able to expand rapidly, others are facing supply shortages of their own. Indeed, there was a shortage of biological manufacturing capacity for drugs even before the pandemic, a constraint that has worsened significantly with nearly 180 different Covid-19 vaccines in various stages of development.

Beyond parts and materials, operations require a highly trained workforce that keeps a tight control on process parameters like pressure, temperature, aeration, and stirring rates. The slightest misstep or contamination and tens of millions of vaccine doses must be jettisoned. Creating a set of independent but globally connected plants should become a priority. Among the needs for this network:



1. Advance purchase agreements, capacity subsidies, grants and concessional loans with favorable terms to encourage local manufacturers.



2. Hub facilities that serve as training centers to facilitate the transfer of technical expertise and product-specific instruction.



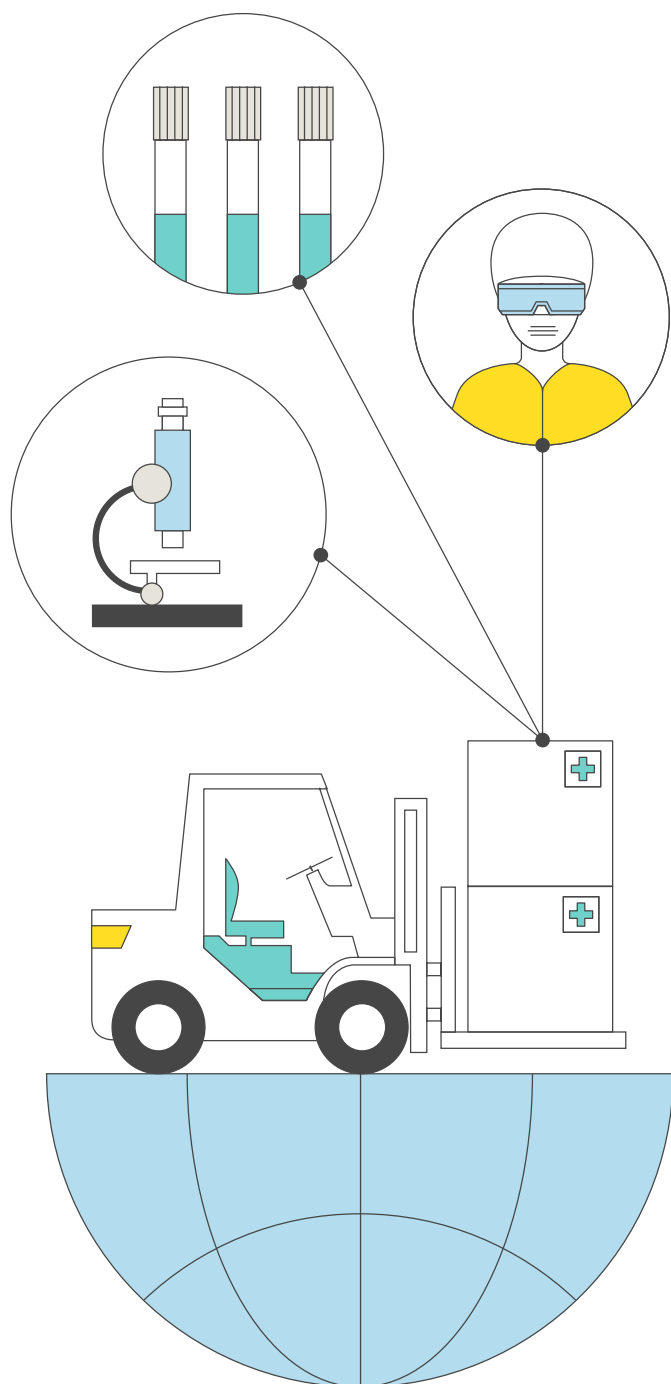
3. Special localized regulatory pathways to verify the safety and efficacy of the resulting vaccine products in a timely and consistent manner.



4. Regional supply chain intermediaries to catalog, harden and diversify vaccine supply chains to ensure crisis resilience.

3

BUILD CAPACITY IN THE GLOBAL SOUTH



Vaccine nationalism has created an appalling divide between the developed and developing world in coping with the second year of the Covid-19 pandemic. The hard lesson learned by leaders around the globe is that vaccine manufacturing capacity is a national security priority. Leaders in Africa, boosted by recently announced support from a cadre of multilateral development banks (MDBs) and development finance institutions (DFIs)¹², have already vowed to correct this deficit by creating regional manufacturing hubs, and similar efforts are underway around the world. Members of the G7 must support these efforts by pledging to provide the technical know-how and some of the funding needed to make these facilities operational.

One possible remedy is to support licensing agreements for production and distribution in the developing world. Pharmaceutical companies routinely make such arrangements. Gilead Sciences signed such agreements a year ago with five generic companies in India and Pakistan to manufacture and distribute in 127 countries remdesivir, the company's experimental medicine for Covid-19. The agreements were similar to ones the company made previously for its hepatitis C treatments. Such deals eliminate the controversy and hurdles involved with waiving patent rights.

Other proposals seek a middle ground between the two extremes: compulsion and voluntariness, including a push for the World Trade Organization and WHO to work with countries and vaccine manufacturers with relevant IP and technology to move towards technology transfer and voluntary licensing on a defined timeline before a Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) waiver comes into effect. These proposals should be explored.

Such arrangements would also make Moderna, Pfizer, J&J/Janssen or another major pharmaceutical company an ally for manufacturing efforts in the developing world, vital in helping build the technical expertise these plants would need to be successful.

These and other options need to be explored in a coordinated manner with all relevant stakeholders as soon as possible.

4

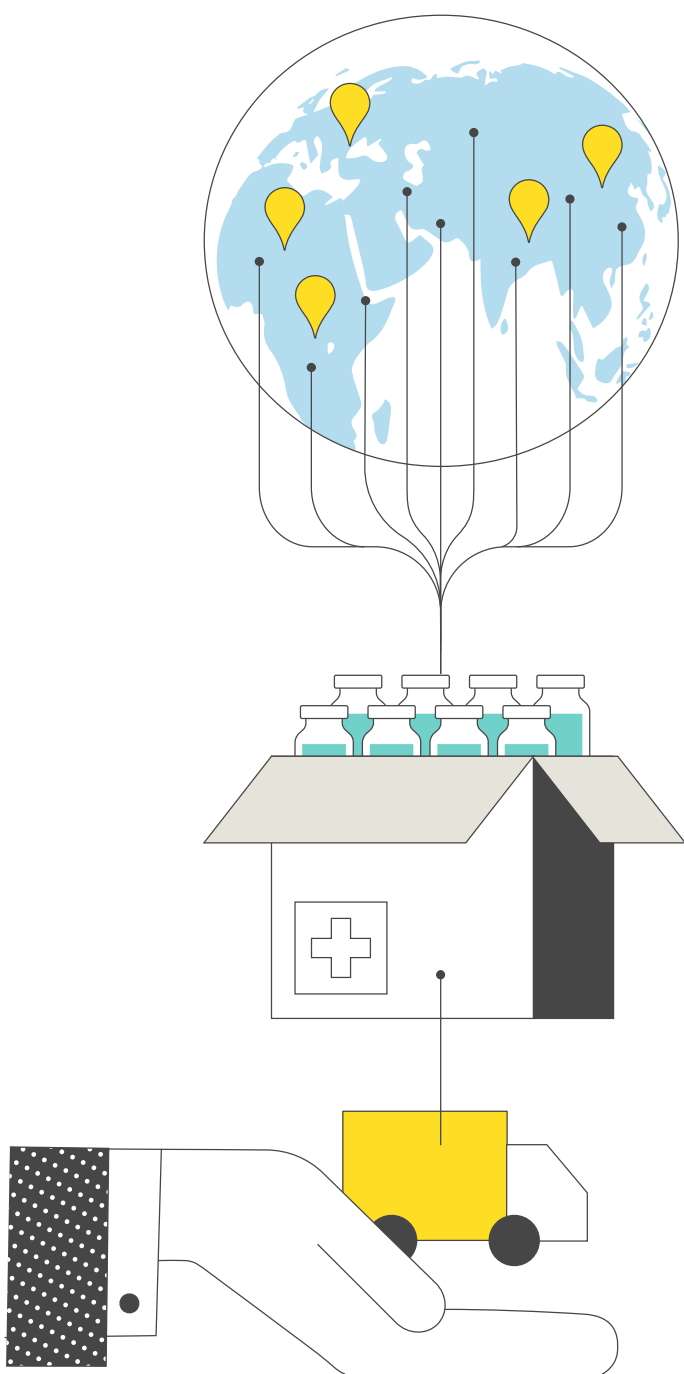
SUPPORT DELIVERY SYSTEM

The challenges of delivering Covid-19 vaccines are among the greatest ever faced by public health authorities. Current plans under ACT-A, including COVAX, call for distributing more than two billion vaccine doses by the end of 2021 to achieve a vaccination rate of just 27 percent in 92 countries that are part of the Advance Market Commitment group.

Delivering and administering vaccines takes logistics, people and money. The successful infrastructure built by PEPFAR, the Global Fund and other programs to deliver HIV medicines must be expanded to create national vaccination initiatives that do not bleed money or resources from other needed health programs. Higher-income countries should work with Gavi, the Vaccine Alliance, and other partners to continue strengthening this infrastructure in the developing world¹³.

A basic problem is that the world's delivery infrastructure has long revolved around infants and children, not adults. Vaccination campaigns against polio, Ebola and some other infectious agents suggest that most of the cost of vaccinations will not be the vaccines, but the services needed to deliver them. A key priority is ensuring that Covid-19 vaccination efforts have enough money to prevent the cannibalization of other crucial health programs.

Covid-19 vaccination programs require data systems to monitor coverage and safety, effective communications on where to get vaccinated and combat vaccine hesitancy, and personal protective equipment for medical personnel. This investment will help build capacity and pay dividends for future disease outbreaks.



Vaccination

An old saying in public health is that vaccines do not save lives, vaccinations do. It is a reminder that getting vaccines from manufacturing plant to people's arms is an enormously complicated task that often costs more than the vaccines themselves.

There are delivery logistics that in some poor areas require small solar refrigerators and other forms of appropriate technology. Digital tools and data analytics can enhance and accelerate vaccine delivery. Indeed each step in the process, from the first mile to the last inch, must be planned and provided for.

Huge investments have already been made in creating a global vaccination infrastructure, one of the greatest successes in public health. Between 2010 and 2018, 23 million deaths were averted globally with the measles vaccine alone. More than 116 million infants are now vaccinated annually, representing 86 percent of all births.

But the world's existing vaccination infrastructure has largely been built to serve infants and children while Covid-19 vaccines must be given to adults first.

Expanding and strengthening this infrastructure in the coming year is vital not only to ensure the efficient delivery of Covid-19 vaccines, but as an investment in the immunization systems of the future, as described by the World Health Organization's Immunization Agenda 2030. Among them:



1. Immunization in primary care:

Giving shots must be made an integral part of existing primary health care operations and included in national healthcare coverage plans.



2. Health workforce:

Well-trained and well-resourced health workers must be used to deliver vaccines in a way that strengthens, not weakens, existing health programs.



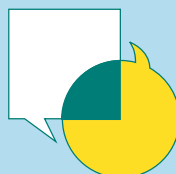
3. Supply chain and logistics:

Vaccines must be made available in the right place and time and stored and distributed under the right conditions. Data systems and other infrastructure must strengthen existing primary care.



4. Monitor vaccine safety:

Adequate systems to detect and respond to concerns about vaccine safety with continuous monitoring is vital.



5. Address reluctance:

Understand and respond to public concern about vaccinations and mitigate vaccine misinformation to reduce its negative impact.

ACT-A partners have estimated that in-country costs for logistics, training and community engagement will amount to about US\$1.66 per vaccine dose. Workforce expenses are higher, with a total cost of US\$5 per vaccine dose. Half of those labor costs can be carried by countries themselves, with the international community responsible for the remaining US\$2.50 to US\$3 per vaccine dose.

5

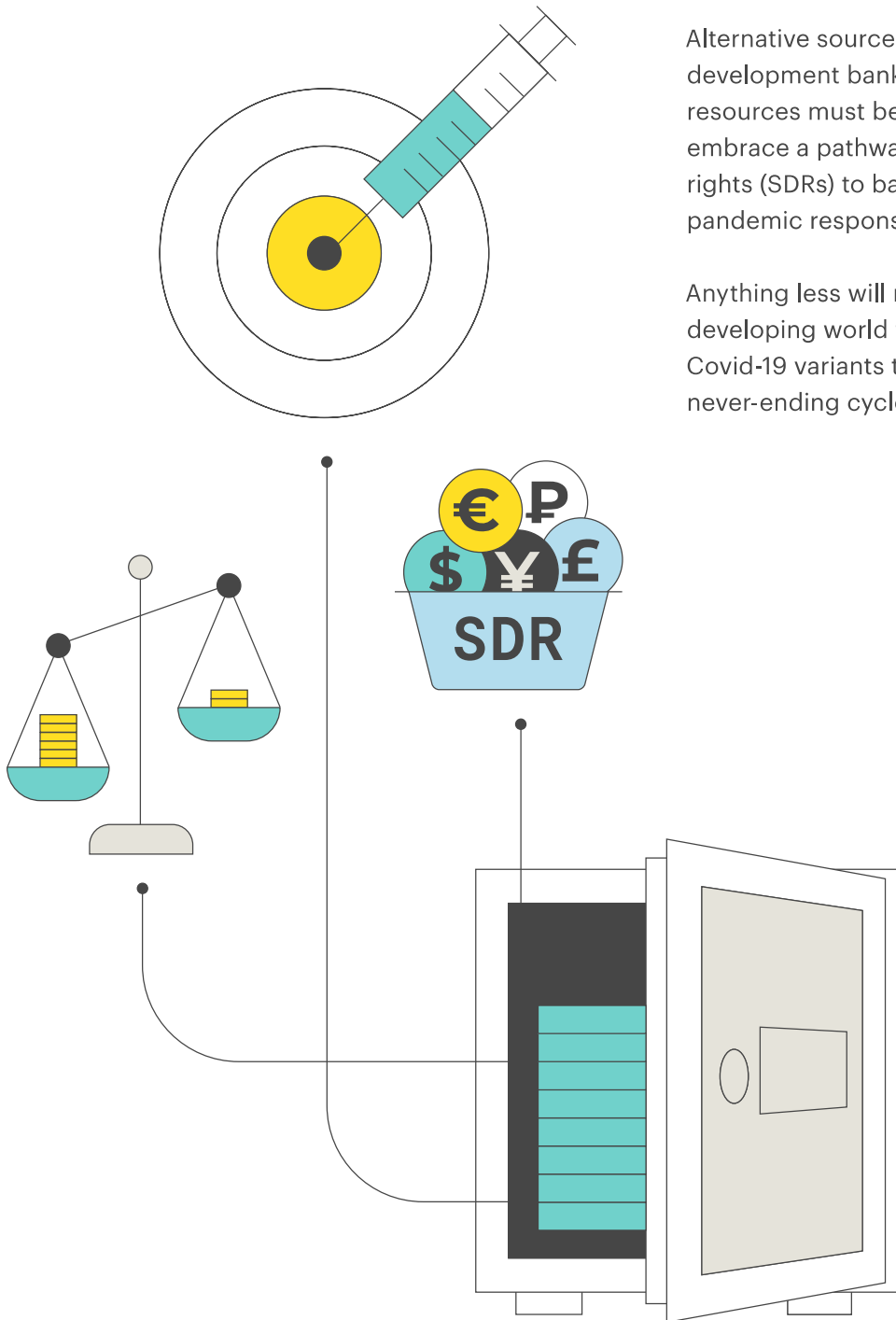
PAYING FOR VACCINES THIS YEAR, NEXT YEAR AND BEYOND

There is a funding gap across ACT-A for both 2021 and 2022 for all four pillars of work. To vaccinate just 27 percent of the population this year in 92 low- and middle-income countries is expected to cost US\$9.3 billion.

For 2021, the outstanding funding gap across all four ACT-A pillars amounts to US\$18.5 billion¹⁴. Advanced economies must fill these gaps with grant funding this year to complement domestic resources being mobilized in these markets.

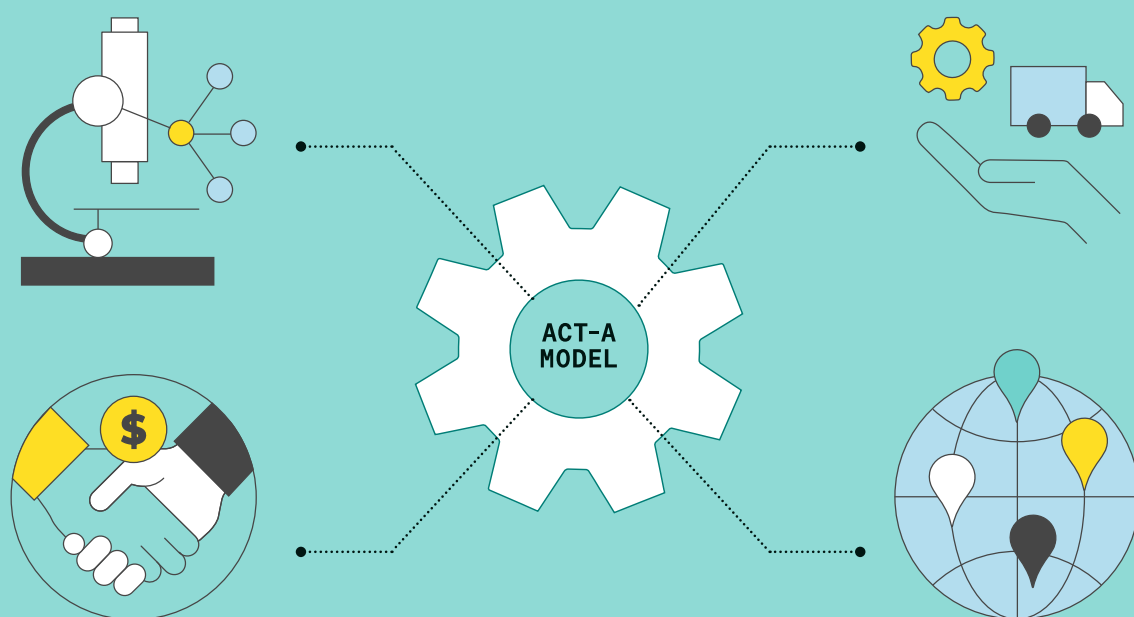
Alternative sources of financing via multilateral development banks, the private sector and domestic resources must be pursued. The G7 and G20 should embrace a pathway towards using special drawing rights (SDRs) to backstop increased lending to fund pandemic response in 2022 and beyond.

Anything less will not only condemn millions in the developing world to untimely deaths but will allow Covid-19 variants to spread, potentially creating a never-ending cycle of pandemic after pandemic.



Financing Solutions through the end of 2021












Funding the four pillars of ACT-A fully for 2021 requires around US\$34 billion when all associated costs, including delivery costs, are considered. Of this total, US\$15 billion has already been put forward from donor nations, philanthropies and multilateral institutions, leaving a shortfall of nearly US\$18.5 billion¹⁵. The table on page 15 highlights the key cost assumptions behind the ACT-A model, which we have relied upon in this report. Vaccines and the associated price per dose are a critical and volatile variable which can cause differences between the costing models being developed by various stakeholders. In country labor costs, estimated at an additional US\$2.5-3.0 per dose, are also an important cost driver added to the 2022 modeling scenario.



2022 Cost Assumptions (in USD)

Critical cost drivers in the Act-A model for 2021 and 2022, which have been determined by key stakeholders, are given in the table below.

These assumptions represent one of three costing scenarios developed by the ACT-A team.

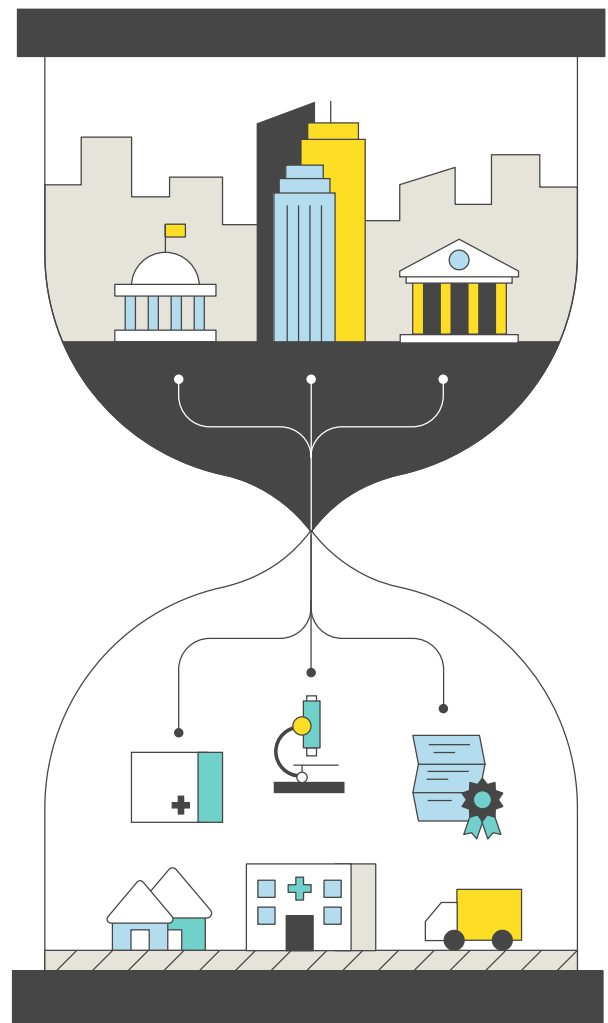
			IN 2021	IN 2022
	RESEARCH & DEVELOPMENT, MARKET PREPARATION & MANUFACTURING			Carry-over 2021 effort, with costs adjusted by 2% for inflation
	PROCUREMENT		VACCINATION TARGET	Vaccinate 100% of total adult population (18+) of AMC countries (assumes 2021 COVAX target achieved and a maximum of 20% of available COVAX doses go to India)
			UNIT COSTS <i>For major cost drivers</i>	Vaccine: \$5 Testing (RDT): \$2.5 Testing (PCR): \$25
				Vaccine: \$7 (\$4.2 India & Indonesia) Testing (RDT): \$2 Testing (PCR): \$9.1 Sequencing: \$175/ 0.25% of tests Oxygen: \$377/course Therapeutics: \$10-\$20/course PPE: \$1.7/Community Health Worker & \$8/other Health Worker per day
			TESTING RATE <i>Per 100k inhab/day</i>	LIC: 250 LMIC: 250
			PPE COVERAGE <i>In % of Health Workers</i>	40%
			INTERNATIONAL FREIGHT <i>In % of procurement</i>	10% for PPE 20% for Tests, Therapeutics 5% Oxygen
	TECHNICAL ASSISTANCE AND DELIVERY SUPPORT		CATALYTIC NEEDS <i>In % of procurement</i>	Vaccines: 20% Diagnostics: 7%
				Vaccines: \$1.66/dose for logistics & technical assistance PPE: 10% procurement for logistics Diagnostics: 20% procurement for logistics
	IN COUNTRY ADDITIONAL LABOR COSTS		SURGE FTE <i>Mix of skills</i>	\$2.5–3 per dose for additional labor cost model, in addition to in country labor costs. (Additional in country labor costs are not part of ACT-A funding model)

Countries could secure loans to bridge the 2021 funding gap. However, the severe economic impact that has accompanied the pandemic has strained balance sheets, making further debt an even more onerous burden. The International Monetary Fund (IMF), through its Poverty Reduction Growth Trust (PRGT), has increased its concessional lending over the past year, but many multilateral development banks (MDBs) have not effectively followed suit. Facilities like the World Bank's (WB) US\$12 billion commitment for vaccination and pandemic response have largely gone underutilized.

Private efforts such as a coalition of major investment banks working to issue a bond that would appeal to ESG investors and whose proceeds would be channeled to vaccine procurement via COVAX, are under development and could lever up additional grant resources provided by donors and others. This facility could act as a bridge loan for countries that could be repaid with longer term funding from the IMF or the WB, but it still needs to be structured and to raise requisite grant funds to launch.

For all of these reasons, increased borrowing is not likely to fill the short-term financing gap required to scale ACT-A and vaccinations globally. To have any hope of meeting this year's modest vaccination goals, the G7 and other advanced economy governments must heed the call and increase its donor commitments to ACT-A and COVAX at Japan's COVAX AMC Summit on June 2nd and at the G7 Carbis Bay Summit in June 2021. A burden sharing formula, akin to the proposal put forth by the Governments of Norway and South Africa¹⁶, should be agreed by the international community and should allocate costs based on an assessment of each country's ability to pay.

Additional sources of grant and grant-like funding, including resources from philanthropies, corporates and other non-sovereign donors must continue to be catalyzed, with leadership from the G7. Public advocacy campaigns such as the *Go Give One Campaign* have the potential to tap into public goodwill and drive vaccine equity and should continue to be scaled wherever possible.






Financing Solutions for 2022

The financing gap in 2022 is projected to be even larger. Utilizing the ACT-A scenario whereby COVAX targets for 2021 are met, and 100% of all adults are vaccinated by the end of 2022, the total costs per country grouping are given in the table below.

The plan to fund this shortfall must be finalized soon to facilitate necessary advance procurement and to build out delivery modalities highlighted in the first part of this report. Additional funding to fill a portion of 2022 ACT-A funding costs must come from grant support from sovereigns and other donors in addition to resources mobilized from domestic sources. However, starting in 2022, additional funding can come from the International Monetary Fund's Special Drawing Rights (SDRs). As SDRs were not designed with this purpose in mind, designing and delivering a solution will require creativity, technical innovation and political leadership.

Projected Costs for 2022 by Country

	 70 PRGT-ELIGIBLE COUNTRIES¹⁷ (BILLION USD)	 92 AMC COUNTRIES (BILLION USD)	 133 LOWER AND MIDDLE INCOME COUNTRIES (BILLION USD)
VACCINE PROCUREMENT	\$ 12	\$ 25	\$ 34
OTHER	\$ 8	\$ 24	\$ 36
TOTAL	\$ 20	\$ 49	\$ 70

Includes in country labor costs using mid-range ACT-A estimate

Utilizing SDRs to Close the Funding Gap

SDRs are an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves. The IMF Executive Directors have conveyed broad support to move towards a new US \$650 billion allocation of SDRs this year. A formal proposal on this new allocation will be presented to the IMF Board in June 2021. The sheer scale of the liquidity provided by SDRs makes them an attractive option for financing pandemic response.

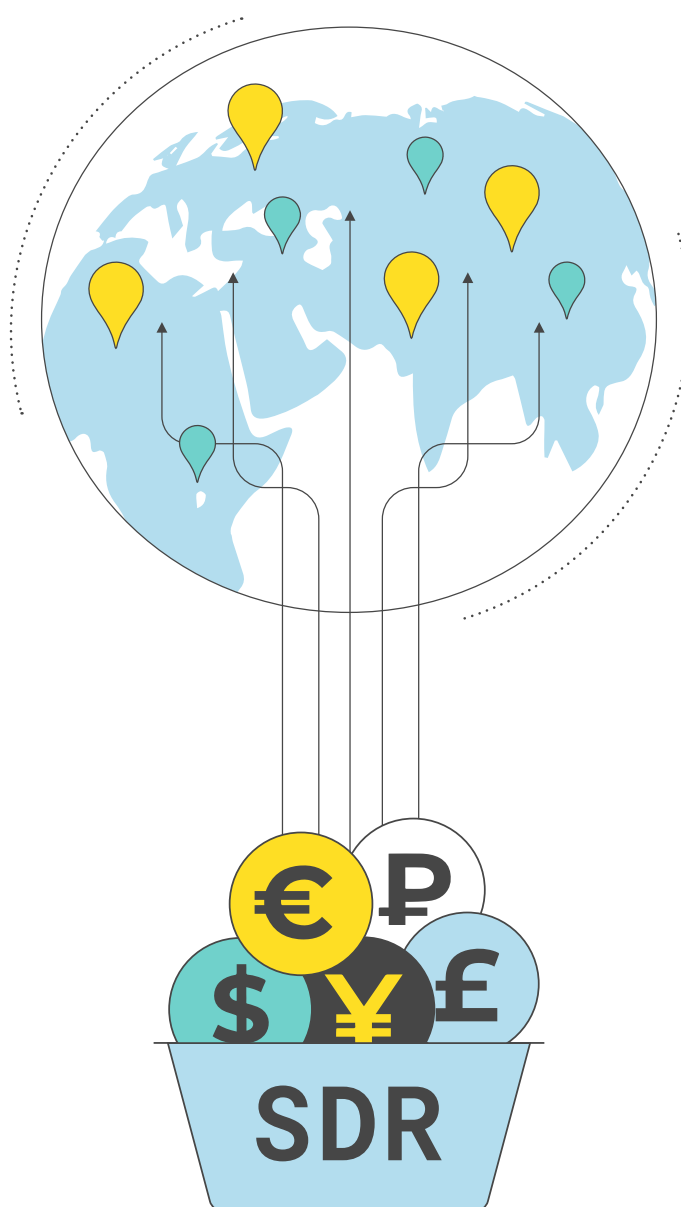
Under the current system, general allocations of SDRs must be distributed in proportion to IMF members' quotas, not on the basis of need. For this reason, the wealthiest countries will receive the great majority (67%+) of this proposed new allocation. So-called "excess" SDRs will sit on the balance sheets of wealthier countries and will do nothing to address balance of payment issues exacerbated by the pandemic. The solution is for wealthy countries to donate or on-lend a proportion of their new SDR allocation to fund pandemic response globally. Previous Rockefeller Foundation analysis illustrated several plausible scenarios through which at least US \$100 billion could be raised through SDR recycling, depending on the countries that contribute and the portion of their allocation they are willing to recycle¹⁸. African Leaders recently called for such a reallocation strategy at a summit in Paris in May of this year¹⁹.

It is important to note that there are limitations on the use of SDRs. First, SDRs are a reserve asset typically used to address balance of payments constraints/challenges and are not a fiat currency. Second, when a country holds fewer SDRs than it has been allocated, it must pay interest. This interest must be covered by some form of matching liability and/or subsidy when SDRs are on-lent or donated via any modality.

Three modalities below through which SDRs could be channeled to pandemic response have been designed within the context of these limitations. As detailed above, these options should not be considered mutually exclusive, with each providing a potential

path for countries seeking to reallocate or donate their SDRs to ensure an equitable pandemic response and pave the way for future growth.

Given its ability to mobilize additional concessional funding for low and middle-income countries quickly using existing lending facilities, Option 1 should be pursued in earnest. Options 2 and 3 are viable alternatives, albeit with longer lead times and higher levels of implementation complexity.



1. Dedicated Window for Pandemic Response

Option 1 calls for creating a dedicated window under both the Poverty Reduction Growth Trust (PRGT) and General Resources Account (GRA) that specifically underwrites loans to IMF members for the purpose of pandemic response²⁰. The GRA is the primary means by which the IMF and its members conduct financial transactions, whereas the PRGT is the IMF’s concessional lending window which currently provides zero interest loans to 70 low-income countries. New annual commitments from the PRGT grew from an average of US\$1.5 billion between 2015 and 2019 to over US\$9 billion in 2020.

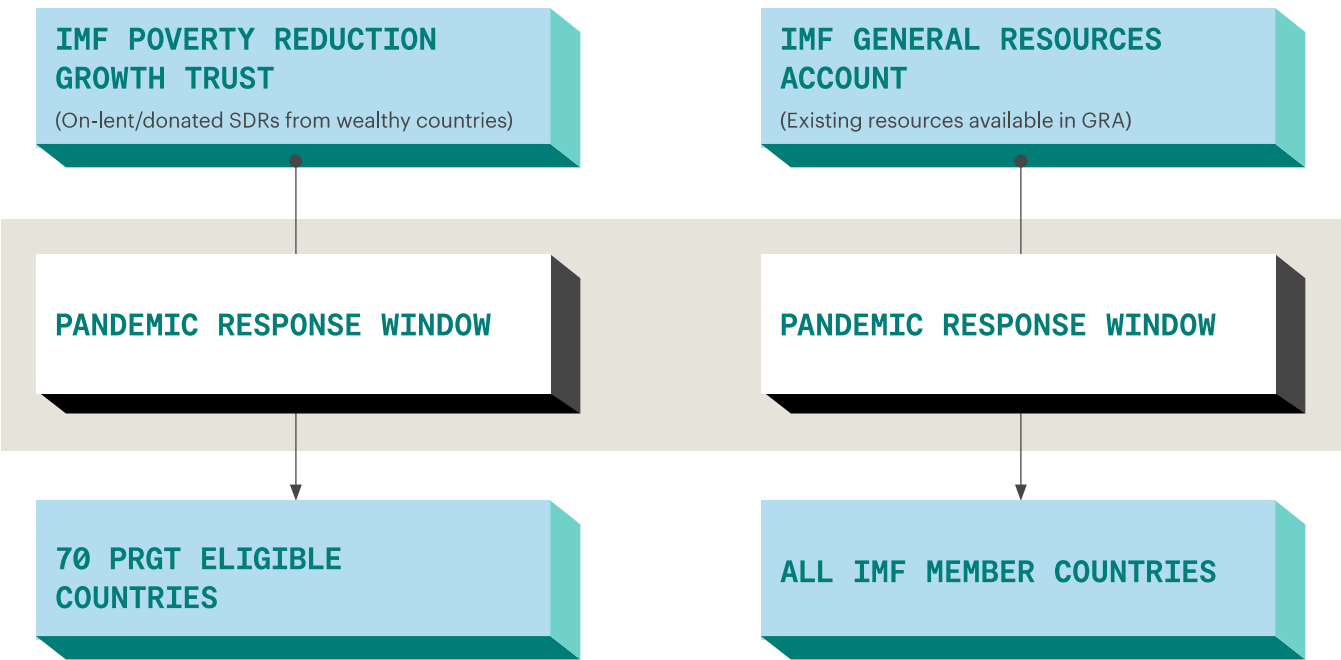
Under this option, dedicated windows within the PRGT and the GRA would be quickly established that leverage existing operational architecture to mobilize additional funding for pandemic response. The dedicated windows could be built into existing rapid credit facilities like the Rapid Financing Instrument (RFI), which is open to all countries, or the Rapid Credit Facility (RCF) which is open to PRGT-eligible countries. The windows would have dedicated criteria for pandemic response, including a clear indication of use of

proceeds by the borrowing country. Governance and loan reporting would also prioritize confirmation on use of proceeds and alignment against broader pandemic response objectives.

Stretching common criteria across both the PRGT and GRA ensures that all countries can benefit from the additional liquidity. The GRA is well capitalized and could therefore immediately begin disbursing loans under this new window to qualifying countries, albeit on non-concessional terms.

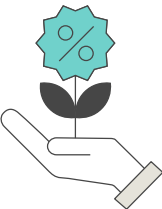
PRGT countries face a pandemic financing gap of US\$20 billion in 2022. SDRs would be used to increase concessional lending to this cohort. The PRGT subsidy account currently stands at about US\$5.5 billion. This could cover approximately US\$45 billion in new loan commitments made over the period from 2021-25 though the subsidy and reserve accounts will ultimately need to be replenished.

Ideally, and subject to legal review, resources at the ‘window level’ (i.e. within the PRGT or GRA), could be provided directly to the Global Fund or Gavi at the behest of the borrowing country. This would ensure clarity on use of proceeds and crucially facilitate the aggregation of funding that drives production,

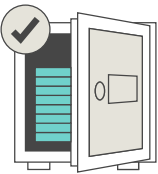


ensures availability of supply, and puts downward pressure on pricing. However, the standard operating model for both the PRGT and GRA is to provide loan proceeds directly to a member country. The IMF should, to the greatest extent possible, ensure resources go directly to the procuring entity (e.g. Global Fund or Gavi).

This approach also provides benefits from the perspective of Governments on-lending or donating their SDRs. When an advanced economy pledges to on-lend a portion of the newly allocated SDRs to the new window via the PRGT, it would:



Accrue interest from the on-lent SDR from the PRGT to match the interest liability due to IMF



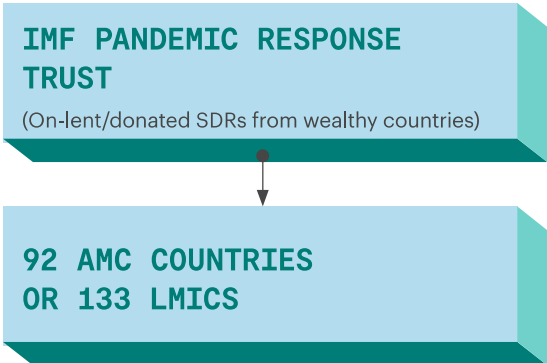
Experience no reduction in the reserve assets held by the country's treasury or central bank because it can replace the SDR as a reserve asset with the new loan asset



Experience minimal credit risk because the PRGT loss reserves provide a buffer against delinquent payment of loans

The challenge with this option is finding a means of making loans under the GRA available at attractive terms to middle-income countries with a vaccine financing shortfall that are not eligible for concessional PRGT financing. This includes countries such as India, Indonesia and Nigeria, for example.

2. Dedicated Trust for Pandemic Response



Option 2 calls for creating a new, dedicated *trust* within the IMF for pandemic response. Unlike Option 1, a new trust could build off the design elements of the PRGT and GRA, but would entail the establishment of a new, dedicated entity for pandemic response. Creating a new trust would enable governance, underwriting, loan structuring and reporting to be specifically tailored to the needs of countries to respond to the Covid-19 and future pandemics. Another key advantage is that the set of countries eligible for concessional finance could be expanded beyond the 70 PRGT countries to include a broader set of countries.

The downside is that the creation of a new trust would require a higher threshold for approval by IMF shareholders and would therefore be politically more challenging. It would also require the creation of new architecture for the trust to be operationalized. For example, in order for the new trust to be able to lend on concessional terms to borrowing countries, lending, subsidy and reserve accounts would have to be established akin to the PRGT. While feasible, this would require significant additional time to design and operationalize than Option 1.

This new trust could also remain in place for future pandemics as needed, with the downside that ring-fencing resources in this manner could be considered inefficient and lead to underutilization over time. It could be available to all member countries, though

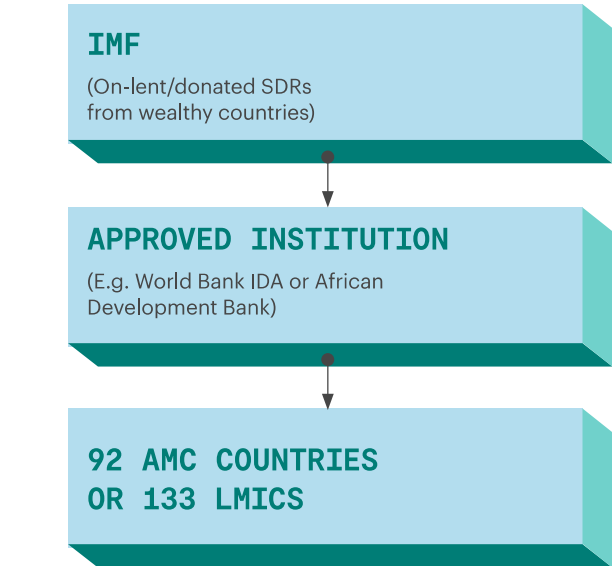
demand would be expected to come primarily from low-and middle-income countries.

The new trust could be bifurcated to include concessional and non-concessional facilities, while maintaining consistent governance, reporting, clarity on use of proceeds, etc. A combination of on-lent and/or donated SDRs could be used to provide the initial liquidity required to establish the trust and as required to ensure that lending is available on attractive terms (at least via the concessional window).

The ability for a new trust to provide proceeds directly to the Global Fund or Gavi would be greater than in Option 1, as a dedicated trust could define its operations accordingly, but would still require legal analysis and shareholder approval.

This approach also provides benefits from the perspective of Governments on-lending or donating their SDRs described above for Option 1.

3. Approved Institution for Pandemic Response



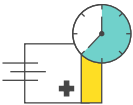

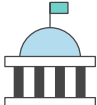




Option 3 calls for creating a new ‘fund’ within an IMF approved institution such as the World Bank/ International Development Association (IDA), specifically targeting pandemic response. Under this scenario existing lending, reporting and governance architecture of the approved institution would be leveraged to enable the efficient deployment of funding for pandemic response to eligible countries. By leveraging existing architecture and utilizing the IMF’s rule on approved institutions, funding could technically flow relatively quickly under this option. However, like Option 2, clear rules and governance structures would have to be created to dictate how the fund would operate and resources would flow and to overcome the issues that have hindered the deployment of resources from MDBs for pandemic response to date.

It is likely that this option could be designed to target all 133 low-income countries and middle-income countries.

Under this option, an advanced economy would pledge, and upon allocation lend, a portion of the newly allocated SDRs to an IMF approved institution such as IDA or African Development Bank. The MDB would use the SDRs directly to obtain fiat currency (either via liquidation or using the SDR as collateral), and then enter into a loan facility with a borrowing member, with loan proceeds ultimately being channeled directly to the Global Fund or Gavi. Repayment terms for MDBs are typically more flexible than for the IMF windows, which could further reduce the economic burden on the borrowing members.

While the on-lending country would owe interest for the portion of allocated SDRs that it no longer holds, this amount could be offset by interest payments from the MDB and/or a subsidy pool. Alternatively, the country could agree to internally account for the interest gap created from its exchequer.

The on-lending country could also replace the SDR as a reserve asset with the new loan asset so that there is no reduction in the reserve assets held by the treasury or central bank. Credit risk would be managed by the MDB, or a loss reserve account could be created to manage this risk.

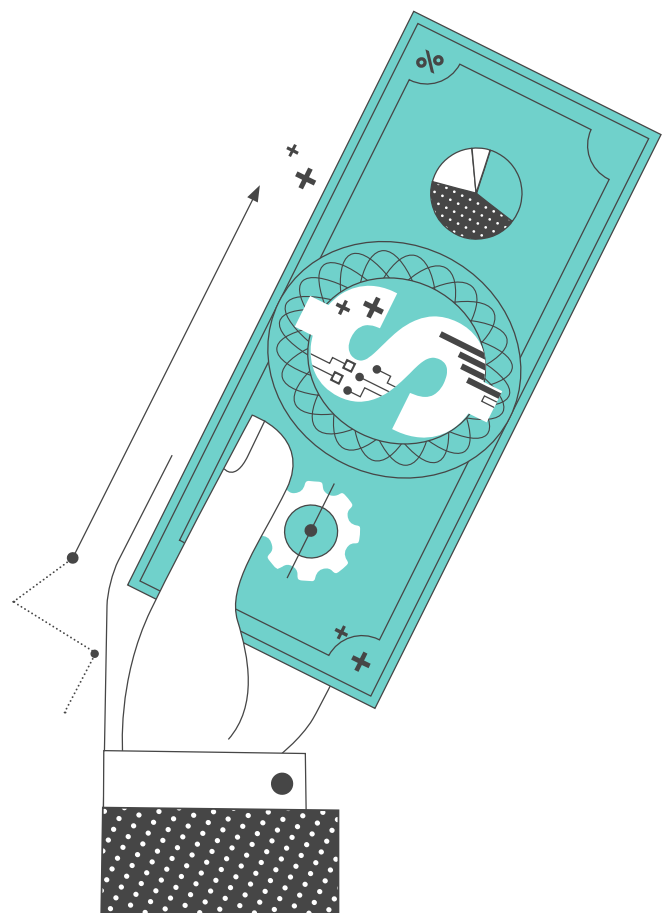
	OPTION 1: WINDOW	OPTION 2: TRUST	OPTION 3: APPROVED INSTITUTION
Speed of deployment 	1 – 2 months from commitment to lend	6 – 8 months to design and operationalize	2 – 4 months to formalize
Legal complexity 	Low, leveraging existing PRGT and GRA legal architecture	High, new entity with ability to leverage other vehicles (e.g. PRGT)	High, given new arrangement, but leveraging existing frameworks as feasible
Governance 	Status quo for PRGT and GRA	To be tailored accordingly	To be developed in line with approved institution
Operational efficiency 	High, leveraging operating framework of PRGT and GRA	High, facility to be tailored to pandemic response needs	Medium, leveraging existing infrastructure of approved institution (e.g. WB IDA), which comes with its own operational complexity
Ability to support SDR recycling (donation or on-lending) 	High, on-lending through PRGT and GRA	High, facility to be designed to support on-lending and SDR donation	Medium, ability to on-lend SDRs to approved institution to be clarified and stress-tested
Country scope 	All IMF member countries given PRGT and GRA	To be tailored to at least include AMC 92 countries and beyond as needed	Dependent on approved institution scope, to be designed to prioritize 133 LMICs
Repayment terms 	Commensurate with PRGT and GRA standards, potential to tweak on margins	Will be designed to be fit for purpose, with concessionality envisaged for LMICs ala PRGT	Will be designed to be fit for purpose, with concessionality envisaged for LMICs ala PRGT

In summary, the Covid-19 pandemic is still a grave threat to global public health and the international economy and will get worse if we do not act. An estimated 150 million people will fall into extreme poverty and 34 million will be pushed to the brink of famine as a result of the pandemic.

For this reason, the public and private sectors should all feel compelled to expand access to vaccinations. Grant funding needs to be quickly mobilized from the G7, G20 and other donors to provide immediate resources to secure additional vaccine doses in 2021.

Looking to 2022, the funding gap to scale ACT-A and its components is considerably larger than it was in 2021, an estimated US\$49 billion for 92 low and middle-income countries. This report attempts to find consensus among experts on what is needed in terms of action and resources and urge the G7 and G20 to push for innovative options to finance broader pandemic response efforts. The menu of options provided here for utilizing Special Drawing Rights to specifically fund a global vaccination campaign should be given urgent and serious consideration by the G7, G20, the IMF and its shareholders.

Strong leadership, innovation, coordination and cooperation will be required to supply what is needed from all nations to end this pandemic. Time is of the essence and there is no other way to defeat this viral enemy.



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The Rockefeller Foundation is grateful to the following people who have contributed to this Updated Action Plan through exchanges in person, via phone or other collaborations. Some may differ with aspects of it, or have stressed other matters of primary focus. All have contributed with the greatest sense of shared purpose at this time of international need.

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