



Transcript:
CEPI investment case launch event, March 10, 2021

Presentation

Sonal Patel
Host

Welcome, everyone. My name is Sonal Patel and I'll be your host. Thank you for joining us today, as CEPI launches its new investment case, *The Urgency of Now: Turning the Tide Against Epidemic and Pandemic Infectious Diseases*. We have a great line-up of speakers who'll talk through the challenges we face, preparing and responding to pandemics and the unique and important role that CEPI will play. But first, we hear from CEPI's chair, Jane Halton for some opening remarks.

Jane Halton
Chair, CEPI

Thank you for joining us today at the launch of CEPI's five-year strategy, which, if funded, will see us emerge from this pandemic stronger than we were before. We live in extraordinary times. We now are working online, and it's almost a year to the day since the WHO declared a health emergency of international concern.

Sadly, since that time, many lives have been lost, and I would like to pay tribute to those on the frontline who are working to assist those so sadly affected by COVID-19. I'd also like to acknowledge those people who've lost loved ones and whose lives will never be the same. Very few of us have been untouched by this pandemic.

Now, when CEPI first invested in vaccines, there were about 700 diagnosed cases globally. Very sadly today, we've got around 2.5 million deaths. CEPI has stepped up. We have the largest portfolio of vaccines, three of which are already rolling out. We've scaled up manufacturing with the first right-of-refusal on a billion doses and we've cocreated COVAX.

Our challenge is double edged. First, let's end this pandemic for all and, secondly, let's prepare for disease X. We've taken amazing strides in vaccinology in this last period. We've taken 10 years' worth of initiatives in under a year and we believe we need to be ambitious looking forward. Our ambition should be to eliminate the threat of epidemics and pandemics, and CEPI has a \$3.5 billion plan to achieve that ambition. But we can't

do this alone. COVAX has shown us the power of collaboration, and so we need commitment and investment and that collaboration to achieve our ambition. We look forward to working with you to make that ambition a reality.

Sonal Patel

Host

Thank you very much, Jane. Co-chair of the Bill and Melinda Gates Foundation, one of the original founding members of CEPI, Melinda Gates, joins now to remind us of CEPI's raison d'être, developing vaccines to stop future epidemics.

Melinda Gates

Co-Chair, Bill & Melinda Gates Foundation

Hello and thank you for joining us. I'm so proud of everything that CEPI has already accomplished and so optimistic about what it could achieve in the future with sustained support. It breaks my heart to see the damage COVID-19 is still doing every day. In the United States, we recently passed the terrible milestone of 500,000 lives lost. Our energy is rightly focused on ending the pandemic for everyone and starting the recovery process that leaves us more resilient. But it's worth reflecting on how much worse it might have been without CEPI.

After the lessons of Ebola in 2014, we joined other philanthropies and governments to provide CEPI its start-up funding. Through its role in COVAX and the ACT Accelerator, the organisation was able to help the world to do the unthinkable, deliver vaccines less than a year after identifying a new virus. With full funding, CEPI could accelerate this process even further to just 100 days. This is critical, because it's not just a question of if there will be another pandemic, but when.

In addition to speeding up development timelines, CEPI has also spearheaded the global movement for vaccine equity. We've seen again in this crisis that some people benefit from scientific breakthroughs more than others do. Changing that is core to CEPI's mission, and they're working every day with partners to ensure that people in lower-income countries don't always finish last in the race for vaccines during pandemics.

This challenging year has taught us the dangers of complacency. We know that COVID-19 will not be the last time our global community faces an emerging disease threat. Will we be ready to respond quickly and equitably to whatever comes next? The way to make sure the answer is yes is to give CEPI the support it needs. Thank you.

Sonal Patel

Host

Thank you, Melinda. CEPI has played a central role in the global response to COVID-19 through its quick and early response to the pandemic and its work with Act Accelerator and COVAX. The current path the pandemic is taking shows the need to

do more to mitigate the immediate threat of COVID-19 variants, as well as prepare now for the next pandemic. We're going to mark some of CEPI's achievements and take a closer look at CEPI's role in the global fight against COVID-19 and how the investment CEPI made before the world even knew about it actually laid the groundwork for CEPI's rapid response to COVID-19.

[Video playing]

An inspiring story from early-stage development to millions of doses being distributed around the world. It's quite something. To tell us more about CEPI's role in preventing pandemics and the need for global collaboration to ensure nobody is left behind, we'll hear from director of the Wellcome Trust, Sir Jeremy Farrar and head of the Africa Centres for Disease Control and Prevention, Dr John Nkengasong.

Sir Jeremy Farrar
Director, Wellcome Trust

I am delighted to join everybody today to both acknowledge the critical contribution that CEPI has made over the last four years and particularly over the last year as we've lived through COVID-19, but also to think forward to the future, a future in which CEPI is an absolutely critical component of the global health architecture, helping keeping us all safe wherever we are in the world.

Over the last year, indeed over the last 20 years, we've seen a series of major national regional or now global epidemics, epidemics that have the capacity to disrupt all of our lives. They will become more frequent and, indeed, more complex as a result of the world we now live in with changing ecology, changing environment, urbanisation and huge, dense, populated cities and, of course, trade and travel. This is the 21st century and we need to be able to prepare for it, we need to prevent these epidemics and we need to respond to them when they inevitably do happen. CEPI is absolutely critical to that now and in the future.

In 2015, along with two other colleagues, I wrote about the need to establish a global vaccine fund. Two years later at the World Economic Forum CEPI was launched. Here we are, just four years on, and CEPI has played a pivotal role in what has turned out to be an absolutely devastating pandemic of SARS-CoV-2.

CEPI has brought enormous expertise and skill and no little ability to navigate its way through a very complex ecosystem. But it's changed the way we think, and it's changed the way we've worked. It's worked in partnership with others in a very generous way and it's also led the research and development, but also thinking through in an end-to-end way the whole process by which we need to turn science into vaccines and vaccines into vaccination and to make sure that at the heart of it, at the start, is a commitment to global equity and global access that was very much in the founding principles of the founding partners who set up CEPI back in 2017.

So, it's a proud moment. It's a moment to acknowledge the progress, but it's a moment to think forward and think forward to the way we will all support CEPI in the future.

Wellcome is committed to CEPI and we call on all governments, philanthropy, the private sector, the public sector and, indeed, the public to support CEPI in its mission to make us all safer, by making sure we have the critical interventions to address the inevitable epidemics that we will face in the coming years. Thank you to CEPI for all you've done over the last year, over the last four years and we look forward to an even better future. Thank you very much indeed.

Dr John Nkengasong
Director, Africa Centres for Disease Control and Prevention

Today, I want to briefly talk to you about why investing in CEPI is so important for the ongoing COVID-19 pandemic and beyond. To start, COVID and CEPI's commitment to equitable access is critical in ending the acute phase of the ongoing COVID-19 pandemic. In recent days, seven million COVID vaccines have begun to arrive in African Union member states, including Ghana, Nigeria, Kenya, Côte d'Ivoire, Rwanda, and many other countries, with many more COVID doses expected to be delivered to other countries around the world over the next weeks.

Infectious diseases such as COVID-19 can have a disproportionate burden on low and middle-income countries and their healthcare systems. Secondly, CEPI is the key partner in helping to strengthen Africa's capacity to prevent, to detect and to respond to emerging and re-emerging infectious disease traits. In short, we have an opportunity to address these gaps and to help build a resilient and capacity in low and middle-income countries to deal with these threats.

The time to invest is now. That is why the Africa Centres for Disease Control and Prevention welcomes and fully supports CEPI's vision to strength global epidemic and pandemic preparedness, including its commitment to support low and middle-income countries in developing the research and development infrastructure and knowhow needed to effectively tackle the threat of emerging and re-emerging infectious diseases. Thank you.

Sonal Patel
Host

Thank you very much, both. Now, Richard, we've heard about the challenge and the opportunity to transform our response to future pandemics. In just a few seconds, I'll hand over to you to set out CEPI's investment case. Following that, we'll be joined by CEPI's Director of Vaccine Research and Development, Melanie Saville, and the two of you will take some time answering questions from our online audience. So, viewers, do send your questions through now by the chat box below us on the screen. Over to you, Richard.

Dr Richard Hatchett
Chief Executive Officer, CEPI

Your Excellencies, friends, colleagues, partners, ladies, and gentlemen. Thank you for making time in your busy schedule to join us today as we roll out our strategy and investment case for the next five years.

Four years ago, when CEPI was founded, there might have been some who discounted the threat of emerging infectious diseases who wondered whether that threat had been overblown. Today, this is no longer the case. For more than a year now, COVID has dominated the lives of every person on the planet in a way rivalled only by the great wars of the 20th century. COVID-19 represents the greatest global public health crisis in more than a century and the greatest economic crisis since The Great Depression.

The news of the last few weeks however gives much needed hope. Long awaited vaccines have begun to roll out. New vaccines are on the way. Where vaccines have begun to be widely administered, hospitalisations and death rates are falling, and we have begun to reduce the equity gap. COVAX has begun the largest, widest vaccine rollout in history.

By the end of last week, more than 12 million doses had been delivered to 13 countries on four continents in just 10 days, bringing hope to millions of people and much more will follow. At CEPI, we are proud to have been instrumental in conceiving and establishing COVAX and the Act Accelerator and to have secured over one billion doses of vaccine for COVAX. We are proud to have enabled through our funding extraordinary scientific achievements in the face of a dismal global disaster. We are prouder still to see all the long days and the long nights of the last year working hand in hand with our partners coming to fruition.

COVAX is an expression of global solidarity against pandemic disease. It embodies what can be accomplished when we all work together. Obviously, much remains to be done. As we look toward the future, CEPI is fully engaged in addressing two profound questions. First, how can the world end the pandemic, and second, how can the world emerge stronger, more united, and more prepared for future threats?

Our immediate goals are to bring the pandemic to an end and ensure the world is prepared to deal with COVID-19 as an endemic disease. The emergence of the new variant makes this a priority of the greatest urgency. The first element of our strategy is therefore strengthening our defences against COVID-19 and reducing the risk of future pandemics by optimising our current vaccines, addressing the variants, developing next generation vaccines, and initiating the development of broadly protective or universal coronavirus vaccines.

The challenge we face looking forward is how to prepare for the threats of the future while leaving no one behind. The story of the last year is a story of what directed and motivated science can accomplish. Our remarkable success in developing COVID-19 vaccines did not come out the blue. The story of how they came to be points the way toward a more secure future.

We highlighted our work with Oxford earlier in the program. Our partnership with Oxford and AstraZeneca on COVID-19 leverage our prior investments in Oxford's ChAdOx1 vaccine platform, which had been applied to a number of diseases, including

MERS, Lassa and Nipah. These investments in the work on MERS in particular enabled Oxford to pivot within days to work on COVID-19.

Similarly, in the United States, scientists at the National Institute for Allergy and Infectious Disease Vaccine Research Centre or VRC had worked on a MERS vaccine for several years. Recognising the threat posed by coronaviruses, VRC scientists viewed MERS as a prototype pathogen and used structure-based antigen design to optimise their MERS vaccine and dissect how the immune system responds to it. Importantly, they identified mutations that stabilised the spike protein and elicited a more potent immune response.

What the scientists learned enabled them to respond with lightning speed when COVID-19 emerged. Within 24 hours of the release of the SARS-CoV-2 genomic sequences, they were able to design a vaccine for Moderna that has now been shown to be 94% effective. 10 years ago, this would have been regarded as science fiction. These are thrilling scientific developments. They provide proof of concept for the prototype pathogen approach to pandemic preparedness.

The prototype pathogen approach is predicated on identifying generalisable solutions for problems of vaccine development for different viral families. About 25 viral families with known to infect humans. Coronavirus has been one of these and about 220 viruses are known to cause human disease. Portions of that landscape already covered. When coronavirus vaccines are fully licensed later this year, we will have vaccines for viruses within 15 of those families, vaccines against the CEPI-priority pathogens Lassa and Rift Valley Fever would add two more.

Few of these vaccines lend themselves to rapid adaptation, it is true, but they do provide a head start in understanding the challenges that their targets present. Replicating what we have accomplished with coronaviruses across the remainder of this viral frontier is a large, but finite problem, one we can solve if we work together in as little as five or 10 years. It is a question of coordinating our efforts and being systematic.

The second and third elements of our strategy commit us to this effort, developing vaccines for known threats, such as chikungunya, Lassa fever, Nipah, MERS and Rift Valley Fever and completing additional clinical trials to broaden the populations eligible for the Ebola vaccines and producing a library of vaccines and other biological interventions against prototype pathogens from critical viral families using platforms that will allow rapid adaptation if related viruses emerge. These vaccines will be developed at a minimum through phase 1 clinical trials.

These prescient investments by Oxford and the VRC enabled the fastest vaccine development effort in history. The United Kingdom approved the Pfizer vaccine for emergency use just 326 days after the release of the genetic sequences. No vaccine was ever developed more rapidly. This was a heroic achievement, yes, but it was not fast enough. 68 million cases and 1.5 million deaths due to COVID had been confirmed by the time the first jabs were administered. We must do better.

The centrepiece of CEPI's efforts over the next five years, the goal that will drive all our other activities, will therefore be working to compress vaccine development

timelines to 100 days. This is our moon shot. The head start that the work on prototype pathogens will provide will be the necessary underpinning for this goal. But by itself, it will not be sufficient. Our 100-day goal can be achieved only by working with CEPI's many partners to ensure systemic readiness. We must shave every day we can off every step of the process if we are to deliver on the promise of the science.

We must optimise our rapid response platforms, but also prepare clinical trial networks to respond on a moment's notice; work closely with regulators to streamline regulatory requirements and link global manufacturing facilities together to facilitate rapid vaccine production.

CEPI will both invest in and help link together the scientific infrastructure necessary to realise our 100-day goal by establishing global networks for lab capacity, assays and preclinical models that are critical for rapid vaccine development and developing arrangements with national or regional partners who can contribute. Achieving the 100-day goal will give us a fighting shot to deliver vaccines before a new emerging disease becomes completely unmanageable, especially if coupled with improved surveillance for early detection and warning in public health authorities who are empowered to intervene rapidly to limit the spread of diseases with pandemic potential.

CEPI's success in the future will depend on the existence of a well-financed preparedness and response system and that system in turn must be committed to leaving no one behind. With pandemic threats, we have to solve for everybody if we want to solve for anybody. Therefore, the final and one of the most important elements of CEPI's strategy is to make investments supporting the efforts of low- and middle-income countries to take full ownership of their national health security by developing the infrastructure and expertise to conduct epidemiological and clinical studies, support technology transfer and establish national and regional vaccine manufacturing.

CEPI as a coalition bringing together sovereigns, philanthropies, NGOs, and the private sector will build on our experience and leverage the creditability we have gained during the pandemic to forge connections and partnerships across sectors and around the world. We will work with our coalition partners and with the regional arrangements that are already beginning to emerge from the pandemic. We gain strength by working together and it will only be through working together that we can tackle the enormity of the task in front of us.

The cost for the programs we envisage implementing over the next five years is \$3.5 billion. That is a substantial sum, but it is trivial in comparison to the cost of a pandemic. If it gives pause, remember that for as bad as COVID-19 pandemic has been, it is not the worst case. The influenza virus that caused the 1918 pandemic killed 20 to 50 million people in a world with a population less than a quarter of today's. The coronaviruses that cause SARS and MERS have far higher mortality rates than COVID, but, fortunately for us, were significantly less transmissible. We might not be so lucky next time.

The COVID-19 pandemic is not the first pandemic of the 21st century, and unless we act now, we can be sure that it will not be the last. There is nothing, nothing at all, to prevent the next emerging virus from being far more lethal. This is why it is so urgent

that we begin this work now. This is why CEPI is advancing some of the elements of CEPI 2.0, those pieces that relate to COVID-19 and the coronavirus threat more generally into 2021. The technology and institutional solutions the world have developed over the last year enabled us to think about preparedness differently and we should.

We must draw inspiration from what we have accomplished. We must elevate the angle of our gaze and of our ambition. We must act, so that the losses we have experienced and the sacrifices we have made over the last year shall not have been in vain, so that we honour the memory of those who have perished, and the terrible suffering inflicted on the living by resolving to do whatever it takes to ensure that this will not happen again, because we have the tools. We know what we need to do, and we need only the commitment and will to create a world in which epidemics and pandemics no longer threaten human society.

Sonal Patel
Host

Thank you very much, Richard. We're now joined by Melanie Saville to take questions coming through the chat and the first one is for you, Richard. Equitable access is at the heart of CEPI's mission and work, but it's fair to say there have been challenges in ensuring vaccines get to all those who need them. How will CEPI 2.0 make sure that equitable access is delivered?

Dr Richard Hatchett
Chief Executive Officer, CEPI

Great. Thank you, Sonal. There have been challenges, it is true, but I think we have also changed the conversation. COVAX has created new expectations for global equity in terms of access to vaccines that we can never walk back from. To address your question, first, we will continue to link our investments in R&D with access commitments. CEPI, as we have demonstrated over the course of the pandemic, is wholly committed to the idea of leaving no one behind.

Second, we see tremendous opportunities to link our efforts with those of low and middle-income countries seeking to take charge of their own health security. We will work with our partners and investors to support the development of capabilities and capacities that will allow countries to respond more rapidly and more effectively to future threats. Third, our efforts under our Connect pillar, working with regional and national partners, will foster important networks of mutuality and cooperation that will provide for greater global equity in responding to future threats.

Equitable access is part of CEPI's DNA. It informs every action we take, every decision we make, and it will continue to do so in the future.

Sonal Patel
Host

Great. Thank you. Richard, this next question is also for you. Why should vaccines cost different amounts for different groups - I'm paraphrasing here - and, in particular, cost even more for those who are less able to afford it?

Dr Richard Hatchett
Chief Executive Office, CEPI

We don't think cost should be a barrier to access to lifesaving medications. Different vaccines do have different costs of production, that is true, and so the cost to produce them sustainably may differ between different vaccine products. Through our work with Gavi and WHO and UNICEF in COVAX, we have developed a three-tiered system that our partners, our vaccine manufacturers, have been willing to work with us to provide vaccines at costs that are sustainable for them and that make vaccines available to all participants in COVAX.

Sonal Patel
Host

Great. Thank you. Melanie, a question for you. The ability to produce vaccines will be a major step forward in ensuring vaccine equity, but what more could CEPI do to enable vaccine production in countries with limited capacity to make vaccines?

Dr Melanie Saville
Director, Vaccine Research and Development, CEPI

Indeed. You see that most of the capacity for vaccines is either in the high-income countries. We also do see the developing country vaccine manufacturers who make an enormous contribution, even up to about 60% of the world's vaccines come from the developing country vaccine manufacturers. But we clearly do see the need to further increase the global footprint for manufacturing of vaccines and it - one of the important parts of CEPI 2.0 is to look at how we can bring innovative manufacturing, which will enable rapid response in a pandemic or epidemic situation to all of the regions of the world, so really focus in on those types of innovations that could further build the manufacturing capacity.

Then the second piece, which is important and really part of our Connect pillar of CEPI 2.0, is obviously with COVID-19 we've seen a huge increase in manufacturing capacity and interest to continue to do that. CEPI really does want to be a partner within that global network to ensure that the manufacturing capacity will be available in future outbreaks and pandemics.

Sonal Patel**Host**

Thank you, Melanie. Richard, a few questions coming in around vaccines. This one says 100-day vaccine development is an ambitious objective. What needs to come together to make it a reality?

Dr Richard Hatchett
Chief Executive Officer, CEPI

Well, as I mentioned in my talk, first, we need to have that foundation and we envisage building that on the prototype pathogens. Essentially, working out the problems of vaccine development for pathogens of across the entire range of viral families that are known to cause human disease.

The idea there is to replicate what we have done this time with COVID-19 where we built on scientific foundations that we explored with MERS and were able to rapidly pivot this. That's the first element. That by itself will not deliver vaccines in 100 days, but it will give us a fighting chance to move vaccine development out instantaneously if we identify new threats that have pandemic potential.

The second thing that we will need is to have a systemic readiness across the entire vaccine development cycle. We need to be able to begin that immediate development of vaccine candidates, building on the prototype pathogens. We need to then be able to move those candidates rapidly into clinical development, have clinical trial networks that are ready to conduct phase 1 clinical trials and demonstrate safety in immunogenicity of the vaccine candidates.

We then need to have a very close working relationship with regulators around the world who need to be familiar with the vaccine platform technologies that we are using so that they can make informed and risk-adjusted decisions about whether those vaccines are ready to be distributed more broadly. In a circumstance where we are facing a pathogen with very high lethality, I have confidence that our regulators will be flexible and will be responsive to the needs of the moment.

Finally, we must have manufacturing capacity ready to rapidly stand up and to increase production at risk while the early clinical trials are being conducted. We have to look at the entire sequence of vaccine development and we have to spare every day, every moment, that we can through that process. We need to work those processes out in advance, so that we are not doing it in real-time, which is what we did in 2020.

Sonal Patel**Host**

Thank you. Thank you, Richard. Melanie, could you elaborate on your view on a One Health approach, considering the health and resilience of man, animal, and ecosystem.

Dr Melanie Saville
Director, Vaccine Research and Development, CEPI

Yes, and when we started with CEPI, the main ambition was really to look at developing human vaccines for infectious diseases. One of the things that you can see is that many of the priority pathogens that we have, whether that be MERS, Nipah, Rift Valley Fever also are important pathogens for animal health, as well. So, looking to move forward, we are looking to see where it may make sense potentially to look at more one-health approach towards vaccines, although our primary focus is clearly to make sure that vaccines are developed against priority pathogens and being prepared for the newly emerging threats that will come.

Sonal Patel
Host

Richard, what are some of the bottlenecks we still face in ramping up COVID-19 vaccines and how can what we're learning from them improve pandemic preparedness beyond COVID-19?

Dr Richard Hatchett
Chief Executive Officer, CEPI

Well, we've just come out of a two-day conference that was hosted by Chatham House where we were looking at this specific issue of bottlenecks. As we are ramping up vaccine production to meet global needs with many vaccines now trying to scale up production simultaneously at the same time and drawing on the same pool of resources, raw materials, critical consumables, equipment, and people, what we are finding and what we are concerned about is that we could have shortages of certain components of the vaccine production process actually slow the entire process down.

All of the stakeholders who met with us over the last two days recognised that this was a real, not theoretical problem. All of them are working as hard as they can to scale up production so that the entire system can work better. All of them recognise that if we want to meet the challenge of COVID-19 we are going to have to increase global manufacturing capacity further.

I think the challenge looking forward is that the capacity that we build now to meet the immediate threat of COVID-19, we must find a way to be able to sustain that capacity so that we have it in the future, and we must learn the lessons of how we respond to a threat which is essentially we are going to triple or quadruple the global production of vaccine in a single year.

How can we be ready to do that in the future, building on the capabilities and the capacities that we install in the response to COVID-19, how can we be ready and how

can we do that sustainably and how can we do that efficiently, that will be one of the critical tasks in coming years, and of course, one of the areas of focus for CEPI 2.0.

Sonal Patel
Host

Thank you, Richard. A final question for you both. I'll go to you, Melanie, first. After SARS-CoV-2 what other pathogens should CEPI and the world be focused on?

Dr Melanie Saville
Director, Vaccine Research and Development, CEPI

I think the first thing to say is we do need to maintain the focus on the other priority pathogens that we have been funding and facilitating over the last four years and ensuring that those vaccines get further developed.

We have already made a lot of progress in terms of priority pathogens; that's Lassa, MERS, Nipah, chikungunya, Rift Valley fever, and Ebola. We have the most advanced chikungunya vaccine in phase 3. We have Lassa and Nipah vaccines in phase 1 clinical trials. Really, moving those towards licensure is a key priority and really important that CEPI continues with those unmet medical needs.

I think the other piece that's really important is really looking at the virus families and how to be better prepared, because that will not only help, that will help in all sorts of different ways and prepare for indeed the next disease X situation.

Sonal Patel
Host

Richard.

Dr Richard Hatchett
Chief Executive Officer

Melanie reviewed the priority pathogens that we're already working on and that we have drawn from the WHO priority pathogens list well, so I won't rehearse it. I will say though that there are diseases that present epidemic threats, and we must address those diseases specifically. We must have vaccines for those diseases and bring those to a state of readiness where we can use them if we have epidemics of those diseases.

Melanie has gone through the list that we're already working on. We could potentially expand that for known diseases. I think the priority pathogens, I spoke in my remarks about the viral frontier which is spread out across those 25 viral families. We already know that there are well over 200 viruses that can cause human disease. Potentially,

scientists estimate that there may be millions of viruses in those viral families that could cross that frontier, and some of those that cross that frontier could cause pandemics.

What we need to do to be prepared for that, essentially by working with the prototype pathogen concept is to build outposts all along that frontier so that whatever comes across, wherever it comes across, we are ready to respond to it. We will need to work very closely with our scientific advisory committee and the global scientific community to think about how to do that most effectively, and how to spread our investments in a way that maximises our ability to respond instantaneously to any new threat.

Sonal Patel
Host

Thank you very much, both, for those answers and that important discussion. I'm sure there will be more questions and many more chances for engagement over the coming year, so if we didn't have time for your question, do please get in touch with us by email after today's event.

We're now going to hear from some of the original founding members and key partners of CEPI on why we need CEPI now more than ever. We'll hear first from Her Excellency Angela Merkel, Chancellor of the Federal Republic of Germany; the Prime Minister of Norway, Her Excellency Erna Solberg; and Her Excellency Dr Lia Tadesse, Ethiopia's Minister of Health.

Angela Merkel
Chancellor of the Federal Republic of Germany

[Spoken in a foreign language – English subtitles transcript below]

Ms Halton, Dr Hatchett, Ladies and gentlemen. The world has been in the grip of the COVID-19 pandemic for over a year. Considerably, more than 100 million have contracted COVID-19 and more than two and a half million have already died after being infected. But we are not defenceless against the virus. We can prevail over the pandemic – by means of international cooperation and by participating in scientific progress. Effective vaccines have been developed at record speed. CEPI has played a key role in accelerating this development.

And through its contribution to COVAX, CEPI is helping people around the world to obtain fair access to these vaccines. German organisations and scientists are among those working closely with CEPI. The more we pool our resources, the more likely we are to win the battle against COVID-19 and all kinds of infectious diseases. It was with this in mind that Germany helped launch CEPI and provided funding to the tune of 440 million euro.

We must make it possible for the world to respond rapidly to epidemics and pandemic threats. As one of CEPI's founding members, Germany will continue to support the coalition. I would be delighted if many among you were also to participate in this

project. And let me encourage those of you who already do: keep up the good work for global health! I wish CEPI the success that all of us – wherever we are in the world – need so badly. Thank you very much for your commitment!

Erna Solberg
Prime Minister of Norway

Norway is proud to be a founding member of CEPI. With the pandemic, CEPI is more important than ever. Ensuring access to vaccines for all is a necessity, not a luxury. As the emergence of new variants tells us, no one is safe before everyone is safe. The mutations underline the need for continued investment in vaccine development.

On top of the \$450 million to CEPI's lifesaving work, Norway has granted \$23 million to vaccines against new variants, and I'm glad to see that Germany and others have made large contributions. We need to stay ahead of the curve. As Co-Chair of ACT-A, we work with South Africa and others to mobilise resources for global response. We are making a simple point: the cost of vaccines for all are considerable, yet they are minimal compared to the cost of the economic downturn.

The pandemic has led to severe setbacks on many of the Sustainable Development Goals, so we need to build back better. We need to emerge from this crisis with a stronger sense of global collaboration. One bright example of such collaboration is the work on vaccine development. We have shown that we can act together and respond quickly when faced with crisis.

Norway will continue to mobilise around CEPI and other much needed building blocks in global health. If anything, the pandemic has reminded all of us that we need better preparedness and response. We have focused on this agenda for a long time, and this is not the time to give up, so you can count on Norway's continued support. Thank you.

Dr Lia Tadesse
Minister of Health, Federal Democratic Republic of Ethiopia

Greetings Excellencies, Jane Halton, CEPI Board Chairwoman; Richard Hatchett, CEPI CEO, distinguished participants. It gives me great pleasure to give this message on CEPI's investment case launch on behalf of the Government of Ethiopia. Like all countries around the world, Ethiopia has felt the cruel effects of the COVID-19 pandemic. We have not only witnessed the cost in human lives and illnesses, but also the devastation this crisis can have on our economies.

Ending this pandemic as swiftly as possible is a priority and I thank those organisations involved in COVAX for playing their part towards ensuring we make this a global effort. In the past couple of weeks, CEPI and its COVAX partners have begun to roll out the largest global vaccination campaign the world has ever seen. Ethiopia is a proud

member of CEPI and fully supports its mission to speed up development of vaccines against emerging epidemic threats.

We were the first African nation to partner and invest in CEPI and we hope over the next year many others will follow. We have seen the power of science to meet the challenge of this virus, but that must go hand in hand with commitment to equitable access, because as we always say, no one is safe until everyone is safe. Looking forward, Ethiopia will work with CEPI to strengthen Africa's capacity to prevent, detect, and respond to emerging infectious diseases. I thank you.

Sonal Patel

Host

Inspiring words from these three leaders. Thank you. We're now going to hear from steadfast and crucial allies of CEPI in our collective fight against global health threats and health inequality. We'll hear from WHO Director General Dr Tedros Adhanom Ghebreyesus; Dr Seth Berkley, Chief Executive Officer of GAVI; Professor Klaus Schwab, Founder and Executive Chairman of the World Economic Forum; and UNICEF's Executive Director Henrietta Fore.

Dr Tedros Adhanom Ghebreyesus **Director General, World Health Organization**

My friend Richard, Excellencies, dear colleagues, and friends. The past year has been ample demonstration of why the world needs CEPI. When the pandemic erupted more than a year ago, we knew that vaccines would be a vital tool for bringing it under control. CEPI's investment and partnership through the act-accelerator and COVAX has been very vital. We are now seeing the fruit of that partnership as vaccines are rolled out globally.

I would like to thank you, Richard, for your leadership and your entire team for your collaboration and support over the past year. But we know that COVID-19 will not be the last virus with pandemic potential. Next time, the world must be more ready. CEPI will continue to have a vital role to play in global preparedness as an essential to complement WHO's normative standard-setting work to build capacity across all member states.

So, I welcome the CEPI investment case, and I urge donors to support it. The investments we make now may well save millions of lives and a global economic disaster. A fully funded CEPI is essential for building the healthier, safer, and fairer world we all want. I thank you so much in advance for supporting CEPI. Supporting CEPI is supporting humanity.

Dr Seth Berkley **Chief Executive Officer, Gavi, The Vaccine Alliance**

After the Ebola outbreak that occurred in West Africa where we work to try to make an Ebola vaccine available, I did a TED talk and explained why we needed a new effort to

make vaccines for diseases of developing countries, and so I was so pleased to be part of the birth of CEPI. But of course, a little over a year ago a new pathogen emerged and since, that has changed our worlds.

From the onset, it was clear we had to think and act differently if we were going to meet the challenge of this new disease and GAVI has worked hand in hand with CEPI to enable equitable access of COVID vaccines through COVAX. The first deliveries of vaccines are now underway and we're on the path of protecting those that are most vulnerable, but this has only been possible because of this unique collaboration which leverages CEPI's vision and expertise in R&D with our combined mission that nobody gets left behind in the fight against COVID.

It's been tough but the partnership is leading to the start of the ever-largest rollout of vaccines in history. It's a testament to the leadership of everybody involved, and of course, the vaccines that are now being rolled out, including Oxford AstraZeneca, have benefited from the early R&D investments from CEPI and is a key product in our portfolio. But there's still a lot of work to do, not just to deliver vaccines to those who need them but to make sure we're prepared for the next stage of the pandemic.

We must ensure that vaccines can be used against emerging variants and that those are available through COVAX as quickly as possible, and CEPI will have a key role in doing that through their R&D portfolio. In a post-pandemic world, GAVI will continue to work with CEPI to build on the COVAX model to address future development and distribution challenges and to deal with the many other pathogens we need vaccines for. Together, we can emerge from the pandemic stronger than we were before. We have the building blocks now for the future and with CEPI's involvement we can, with the right focus and resources, build a world where everyone benefits from lifesaving vaccines and no one is left behind. We need to do this because it is evolutionarily certain that there will be more outbreaks and we have to be prepared for it.

Professor Klaus Schwab
Founder and Executive Chairman of the World Economic Forum

The World Economic Forum is proud to be a founding member of CEPI, launched at Davos only four years ago. CEPI was conceived by public and private sector actors as a new model for fighting emerging infectious diseases. COVID-19 of course was CEPI's first big, very challenging test. CEPI has played a crucial role in fighting the pandemic, supporting vital vaccine development work and being instrumental in the leadership of COVAX, which is delivering equitable access to vaccines.

There is still a lot to do to defeat COVID-19, but we have to build on the lessons learned and prepare already now for the next pandemic. We urge all stakeholders in the public and private sector to join the forum's efforts in support of CEPI's strategy to

systematically reduce the threat posed by future epidemics and pandemics and enable these benefits to be shared by all.

Henrietta Fore
Executive Director, UNICEF

On behalf of everyone at UNICEF, we proudly salute the achievements of CEPI, and we lend our support to the launch of CEPI 2.0. This week, we have seen what we can achieve, the first batches of COVID-19 vaccines have landed in Africa, a clear milestone in our work to ensure the equitable distribution of vaccines. Less than one year since the pandemic was declared, the CEPI team under Richard's leadership can take a lot of credit for making this happen, and for building the partnerships that made it possible, partnerships with scientists, industry, governments, and global health institutions.

As Melinda Gates said, CEPI was created for this crisis, and through the strategic priorities and investment case being launched today, CEPI has its sights set on the future. Looking ahead, we see CEPI as a key partner in rapidly moving from R&D to clinical trials and eventually scale up of lifesaving vaccines. To this effort, UNICEF is bringing our expertise in procurement, supply, and delivery, and our community-level presence to build trust and confidence in vaccines and other public health innovations. We fully support this ambitious aim of delivering new vaccines for global health emergencies in just 100 days, a measure that would save countless lives and prevent the spread of viruses like COVID-19. We call on the global community to support CEPI's call for an investment of US\$3.5 billion over the next five years, a modest investment when weighed against the economic disruptions that we have seen from COVID-19 over the last year. UNICEF looks forward to working with CEPI and our partners worldwide to step up our fight not only against COVID-19, but against any future emergencies. Thank you.

Sonal Patel
Host

Thank you. We're now going to hear from representatives of the private sector, a key partner of CEPI. First, we welcome and hear from Thomas Cueni, Director General of the International Federation of Pharmaceutical Manufacturers and Associations.

Thomas Cueni
**Director General, International Federation of Pharmaceutical Manufacturers
and Associations (IFPMA)**

COVID-19 was not the first pandemic in the 21st century but it was the first of a truly global nature, impacting rich countries in the north as much, or even more than developing countries. Although we are still battling with the virus and concerns about

new variants rise, today's launch of the CEPI 2.0 strategy and the call for replenishment is also a moment to commemorate achievements made over the last year.

Personally, I am proud of what vaccine developers and manufacturers from industrialised and developing countries have achieved, but I'm particularly pleased to see the rollout of COVAX vaccines to developing countries within 60 days of WHO approving the first vaccine, because we all know that no one is safe until everyone is safe.

We were lucky to have CEPI at the onset of the pandemic and we were wise to join forces fast and co-create the COVAX partnership. CEPI, GAVI, WHO, UNICEF, joined by IFPMA and DCVMN. We are well advised to learn the lessons from COVID-19. Overall, the world was ill prepared for the current pandemic, a reason for the fast response was the willingness of all partners to join forces in a way which is business not as usual.

If we want to be better prepared for future crises, we need to build on the foundations of this incredible team effort and retain the collaborative mindset. A strong CEPI 2.0 should be a key component of this, and I wish Richard and his team all the success they deserve for the replenishment of CEPI. I am confident that today's achievements pave the way for future breakthroughs that will help create a better and safer world tomorrow.

Sonal Patel
Host

Now, Rajinder Suri, Chief Executive Officer of the Developing Countries Vaccine Manufacturers Network provides us with his perspective on the crucial part the private sector can play.

Rajinder Suri
CEO, Developing Countries Vaccine Manufacturers Network (DCVMN)

I am delighted to be here with you all today. The challenges of this pandemic have been vast, not only from the deployment of vaccines but also from raising billions of doses from zero level. What is important is that we have learnt lessons of how to work together, and there is a unity of purpose which has enabled us to develop, manufacture, and deploy vaccines at scale.

The rollout of vaccines for COVAX facility has also taught us how to work together with global agencies. In fact, CEPI has been at the very heart of this endeavour, and it has been stimulating to all of us to think differently and work together to produce vaccines which are really required to control this pandemic.

I would also like to say here that there are two things which are required. One is the political will and the other is funding, and we strongly encourage that at this stage CEPI should be supported fully from both sides, the investment point of view as also from the political backing. What I would say is that we at DCVMN are looking forward to

work closely with CEPI to ensure that not only this pandemic is controlled but any pandemic in the future is averted. Thank you.

Sonal Patel
Host

There is a clear consensus emerging from these contributions and a real sense of urgency to end the COVID-19 pandemic and finally turn the tide against other epidemic and pandemic infectious diseases. As we approach the end of our session today, Richard, it would be great to hear your closing thoughts.

Dr Richard Hatchett
Chief Executive

Great. Thank you Sonal.

First, I want to thank CEPI's distinguished collaborators and friends who have provided messages of support today, and in particular want to thank CEPI's founders and initial partners, the governments of Norway, Germany, Japan, India, the World Economic Forum, the Gates Foundation, and Wellcome for their foresight in establishing CEPI as well as the many investors who have joined since.

We have outlined today an ambitious but focused R&D agenda which could help prevent millions of deaths and many trillions of dollars in future costs to our societies. But to accomplish these goals, we must be financed and supported accordingly. We look forward to working with you all to meet our replenishment target of \$3.5 billion. Our investment case in full can now be found online at endpandemics.cepi.net, and I would like to emphasise that this is just the start of the process.

Throughout the year, we will discuss our plans with both current and potential investors, and our partners and stakeholders, and continue to hone our strategy and our role as a coalition. We will soon be announcing our replenishment conference, which will take place later this year and be the culminating moment of our replenishment campaign. The conference will bring together potential donors and supporters to ensure that we meet the funding target so that we can together turn our ambitions into reality.

There's one thing I can't stress enough, which is the urgency of taking action now. We are in a dynamic and frightening time, but science and solidarity have given us hope and we must seize the moment. With renewed leadership and a renewed global effort, I feel confident that we can not only put an end to COVID-19 but also start building a

global system that is far better equipped to prevent and respond to future pandemic threats.

Thank you to all of you who have joined us today to hear about CEPI's plans and strategic priorities for the next five years. I look forward to continuing the discussion.

Sonal Patel
Host

Thank you, Richard, and thank you very much, everyone, for joining us today. We'll now play you out with a short film that pulls together the key elements of CEPI's strategy.

[Video playing]

[End]