CONVERSATIONS WITH MIKE MILKEN

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Mike Milken: Good morning, Eric, and thank you for joining us.

Eric Schmidt: Thank you, Mike. I'm so glad to be on your show.

In terms of getting the world started up again, as we've seen, many people have asked the question, is the cure worse than the disease? All the pain and suffering and loss of life. We hear the numbers every day. What we don't see every day is the destruction of lives for millions of entrepreneurs that had created small businesses for their families. And people that felt they had a surety in life: their job. How do we turn it around and get it started as soon as possible?

We need a solution that gets this over in three months or less, and the only way I can think of is to have a much more aggressive attack on the disease and a much quicker restart. You've pointed out that this is costing us trillions of dollars every month. The cost is enormous – economically, in terms of global positioning, in terms of jobs and

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This interview has been lightly edited for clarity and readability.

social life and psychology and people's health and so forth. At the same time, people are losing their lives, which is completely unacceptable.

I think we need to go to a different footing, a much more aggressive footing. I think we're going to need to do something like some kind of shock treatment for seven, eight, nine days where we shut down everything to stop the spread between people who don't know each other and then a very much state-driven reopening it with a three-month plan per state. Each state is different. I don't think you have a national strategy. I think you put the governors in charge, and maybe you have a competition among the governors as to how they can do this in the most clever way.

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When you think about Europe, during August in many ways Europe shuts down for a couple of weeks. And so a period of time of seven to 10 days that you've put forth, what can we accomplish in 10 days?

Let's understand the course of this disease. Ninety-eight percent of the people who have the disease have symptoms, sometimes severe, within 10 days, not 14. It's slightly less than seven or eight days. So let's say we shut the nation for eight days, and when I say shut down, I mean really shut down. You just have to stay at home unless you're an emergency provider or you're going to the hospital or you're going to the pharmacy. Literally everything else – construction and churches and so forth – you just have to stay home. That's enough to stop the transmission from people who don't know each other.

Then – and by the way, during that week, each of the states would have to come up with an aggressive plan of what to do on the ninth day – you would go and you would do aggressive contact tracing. Remember the federal government can help here. The tech companies tend to know where people are because phones tend to tell you where they are, and it's relatively simple to build contact-tracing applications that roughly know you were in a dangerous area. You could publish a map of the danger areas. You could also, in that week, figure out a way to start a testing program so that people with some kind of certificate could start to go back to work.

Think about it: the jobs are shut down, the factories are shut down, the office is shut down. We can't go like this for months. It's enormously bad for our economy. Yet we have to stop the spread.

This suggestion you've made, obviously we'd have to prepare for it. How much advanced notice would you give?

The disease is doubling every four to five days, so you wouldn't want to give more than say four or five days notice. But during that seven days period, so we're clear, I'd shut down the domestic aviation system unless it's emergency related. I wouldn't allow people on the subway unless they were doing something that involved emergency health. We need to stop the random collections. And even the security workers encounter each other, they don't know each other. So it has to be incredibly restrictive for the shortest period of time.

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We have to basically stop and then restart with due care. We're dealing with a terrible killer here and one-third of the people are asymptomatic; furthermore one-third of the tests are not accurate. So, with that level of inaccuracy, our best strategy is social isolation while we work hard on the biology of the disease and on improving the quality of the testing. We need to do that in the next weeks.

Decades ago at the Global Conference, we pointed out that quite possibly the defense companies of the 21st century will be the bioscience companies. Now you are the chairman of the U.S. Department of Defense's Defense Innovation Advisory Board. How can your leadership of that board help us today?

In the time I spent with the military, I've come to have great respect for them and in particular in their ability to operate in these ambiguous crises. As part of my proposal in this three-month period, I would – during the emergency period and not after – allow the military to help support the initiatives within the states to do social distancing, contact tracing and enforcement of the temporary rules.

The fact of the matter is that Americans support our military and they have great high standing along with the National Guard. And the states are going to need help. They just don't have enough people to implement this. The military of course itself has a whole pandemic group and so forth focused on foreign pandemics, and that will need a great deal more work in the future, now that we've been through our first pandemic. The role of the federal government is crucial here because for example, the tech companies are not going to go and build all these applications unless they're told to, and in a national emergency they can be told to.

Plus there's all sorts of privacy rules that have to be at least temporary suspended or analyzed to avoid it. Why in a situation that we're in now with trillions of dollars at stake, are we not putting billions and billions of dollars into a Manhattan style project around

testing improvements, diagnosis improvements, drug improvements, and of course vaccine improvements.

So Eric, what can tech do to help us get through this pandemic?

There's a lot of things that can happen very quickly. I was part of a team that funded an open source design for ventilators. Open source means that anyone can use the design and manufacture without payment or worry about licensing. It sure looks to me like 3D printing and the ability to manufacture this would allow you ... for example, a ventilator has 800 parts in it and there are five that are stuck in Malaysia. You can 3-D print the five pieces to complete your ventilator with 795 pieces you already have.

There are all sorts of things that can be done. During this time we need to continue to educate and improve everything. We have an extraordinary experiment in remote learning involving millions and millions of students. This is something where, let's take this advantage to see if we can actually get remote learning better than traditional learning, at least for some cases.

In the biotech world, I spent a lot of time on AI, and Google of course is the leader in AI. It looks like you can use the AI to predict which antibodies will match with which drugs in the right way. And there are complicated calculations involving energy and receptors and proteins which allow us to identify much faster drug candidates, which can then be tested en masse. And this cycle of AI candidates and so forth is the center of synthetic biology today. And then of course the other thing is building a real 5G infrastructure for our nation, or at least a faster infrastructure. Think about how bad this pandemic would be if you didn't have the internet.

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The internet is working, supply chains are working, people have access to food. The tremendous shift from a restaurant to a grocery store has occurred, and as you've pointed out, 3-D printing and everything exists today. Talking about a different world of technology, you use kind of a new term to summarize it called "tele-everything." What does that mean?

Well, for example, at the moment the hospitals are totally overloaded. You really don't want to go to a healthcare provider unless you have to. Plus it's not necessarily safe, so why are we not using the telephone system – that is, the internet – aggressively for health? Why are you not doing your doctor's visits online? Why is that infrastructure not built?

We might as well use this opportunity to get used to going to the doctor virtually. It's safer for the doctor, it's quicker, and so forth. There's so many examples where if we built applications for the iPhone, for example, that would take a picture of your skin, send it to the doctor and the doctor say, *Oh, you're worried about cancer? No, you're always worried about cancer. [It's] not cancer. It's never going to be cancer.* That kind of stuff is technically possible now, but it's been lagging because the system isn't used to it. "Tele-everything": Let's take advantage of the real digital infrastructure and let's use it for everyday things. It also makes the system more efficient. It allows us to recover more quickly.

What you've called for has begun, with many of the hospitals shifting a great deal of their interaction to telemedicine. I think what you're trying to suggest here is it needs to accelerate.

The point here is that human systems and bureaucracies change more slowly than they should because there's a natural conservatism in these systems. They don't want to make a mistake, and things are working fine, they're getting paid for it anyway. So now we have this massive shock. The hospitals are not getting paid. They're actually in financial trouble because they're busy doing the right thing, which is taking care of really sick patients. Let's move not only their systems but also their billing systems and so forth to more of a telehealth model. They will ultimately be more efficient and more profitable as a result. Everybody wins.

Eric, as we come out of this human crisis, we are sure that this disruption of life as people knew it – the loss of life, but also the loss of jobs and of companies – we're going to have a great deal of mental challenges to deal with. What types of societal or economic changes will become permanent, and how do you see technology helping us with that?

On the subject of mental health, anxiety, depression, there's no question that the current loss of jobs and anxiety about paying your rent and getting food is going to accentuate that in a terrible way. The loss of meaning in your life does not help. So to me the first priority is to get things back in shape, get people back to work in some form, get more activity around them, give them things to focus on to improve their mood.

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In addition to that, there are many technologies now which purport to both diagnose things like depression and also offer suggestions, at least as a monitoring mechanism. So you could imagine that you're depressed and you're in some form of community therapy. You could

do it online – the equivalent of Zoom visits. And so as people get used to this, it may be possible to do much of the treatment in mental health online, and in groups online, which is safer and also makes it more accessible and less expensive to operate.

I think understanding the humanity of these things is extremely important so that we're prepared for it.

There are people who are working on big data solutions where they're looking at surveys of mental health and they're trying to understand who's at risk. This kind of teenager gets depressed, and this other kind of teenager doesn't, and why. One consequence of tele-everything, a real digital infrastructure, is that we may get more data in a field which has typically been done episodically. It's a bespoke industry. It's like me, myself, and I and my psychiatrist. And the aggregation of health data – something you funded, heroically in my view – could really advance our understanding of these diseases as a byproduct of this tragedy.

It's interesting. Two things we've seen. Our center for Public Health at the Milken Institute has shifted a great deal of their work into the mental health area in preparation, and we have found how important communication is. And when you talk about Zoom or other types of things that allow people to see each other and talk to each other, my own family, for my wife's sister the other night, we had a Zoom birthday party with people from many locations.

Let me go to this important assignment you've had as the chairman of the Defense Innovation Advisory Board and think about not only defense, Eric, but government agencies and businesses. Is the workplace as we know it going to be revolutionized?

It will, and one of the things that's interesting is that consumers in the United States as well as businesses are largely now digital. However, the government, and in particular the military, are still stuck in the 1990s. For example, it would make perfect sense for the federal government to work from home. Absolutely, right? Many of those functions are better done at home. It's safer that way, and you wouldn't have spread of disease. They can't do it because their networks aren't fast enough. They don't have the ability to work anywhere other than on their PC and their desk. That's crazy – this technology has been in place, with great security, for 20 or 30 years.

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There are so many reasons why people are more productive when you have systems which are cloud-based and secure using modern networking. You get more accurate data. You could begin to mix and match. The government is very, very far behind and has been for a long time. If I were President, one of the first things I would do is have an infrastructure bill around getting fiber – and in particular high-speed connectivity – to the educational systems, the federal government and the state governments. Using all those tools would increase not only their efficiency but their understanding of their service model. They're literally 20 years behind.

So Eric, I know you're not shy. I'm assuming that you are passing these suggestions on and have played an exceedingly important role over the last number of years here. As you've moved from executive chairman of Google / Alphabet to advisor, is there any last thing that you think we, the American people, should be thinking about?

If we can get through a three-month period where we have an initial shock and then a fast recovery – which I would have be state-led, not federally led – with a compounding federal support around the tools that everybody needs, we can emerge with a much more efficient, much more scalable position in the world.

Investing right now in the technologies that you and I are talking about – in health and infrastructure, the digital world and so forth – compounding over years is very, very powerful. And the way that America leads is through innovation. And we need to innovate in these platforms such as in biology and in technology and the digital infrastructure, and that will allow the extraordinary creativity and the extraordinary entrepreneurship of America to return in a world-leading way.

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Eric, thank you for joining us and best of luck in your work in getting us back to work.

Thank you, Mike, and I admire everything you've done and everything you've done around COVID. Thank you so much.