

Rapid Response Transcript – John Doerr

“How to decarbonize your business”

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JOHN DOERR: What we are doing is not enough, and it's not happening fast enough. There's a revolution underway. And in real revolutions, there are winners, and there are losers.

One monster objective, it's the mother of all OKRs, and that's to take 59 gigatons of greenhouse gas emissions, that's the carbon pollution that we pour into our precious atmosphere every year as if it's some kind of free and open sewer, down to net zero by 2050. This is a tall order.

In the early days of the internet, I kicked up something of a firestorm by declaring that the internet had been under-hyped. And I'm of the same view about the climate transition. The transition from the dirty fossil fuel economy to the new clean energy economy is I think the greatest economic opportunity of the next century.

BOB SAFIAN: That's legendary investor John Doerr, partner at Silicon Valley venture firm Kleiner Perkins.

As author of the new book *Speed and Scale*, John is aggressively goading business leaders and all of us, to address the climate crisis with existential urgency.

I'm Bob Safian, former editor of Fast Company, founder of The Flux Group, and host of Masters of Scale: Rapid Response.

I wanted to talk to John because, rather than simply rail about the need for change, his new book quantifies what specifically is needed, in six discrete areas, to achieve a carbon-neutral world.

John isn't arguing that we all need to be vegan ascetics. He talks about the need to “go for the megatons.” And the critical role that business plays in advancing that movement.

He also talks about the huge economic opportunity that decarbonizing is unlocking across all industries and enterprises.

To win the battle to preserve the planet, he says, we need to apply lessons of speed and scale more broadly and more aggressively than ever before.

[THEME MUSIC]

SAFIAN: I'm Bob Safian, and I'm here with John Doerr, partner at Kleiner Perkins and author of the new book *Speed and Scale* about the climate crisis. John is coming to us from California as I ask my questions from my home in New York. John, thanks for joining us.

DOERR: It's a pleasure to be here. I love your program, and it's an honor to be on it.

SAFIAN: Well, thank you. As an investor you've backed some of the world's most successful entrepreneurs from Amazon to Google, many, many more. You authored the influential book, *Measure What Matters*, spreading the gospel of OKRs, objectives, and key results. And you've also been involved with addressing the climate crisis through investment, and now through *Speed and Scale*.

But I wanted to start by asking you about the COP 26 conference in Glasgow in November. There were many high hopes going into it, but it didn't quite go as it might have. You were in Glasgow for the conference. I'm curious what your experience was like, what you were expecting, and what happened?

DOERR: Well, more than 200 nations send representatives, ministers to the COP, the Conference of the Party's conference. First COP I've attended, but it was an imperfect mix of both progress and disappointment.

The bold commitments that were made were to curb methane emissions and to halt and reverse the loss of forests. There were also steps taken to align the finance sector with net zero emissions by 2050, and to retire the internal combustion engine. There was agreement to phase out fossil fuel subsidies.

All the parties agreed to return in 2022, that's in one year with stronger 2030 emissions targets to align them with net zero by 2050 and try to get to the still possible goal of limiting global warming to one and a half degrees celsius. And that's what the science tells us we must do, Bob, to avoid a runaway climate disaster.

So everything I've said so far is the good news, the bad news: what came out of Glasgow is too little, and it's too late. If the countries fulfill their full plans, this is based on UN data, the earth will be two and a half degrees celsius warmer by the end of the century, which is terrible.

There's also quite a credibility gap. A number of countries set 2030 targets that are so weak that they don't credibly support a net zero by 2050. And I'm going to call them out. Australia, Brazil, China, Russia, and Saudi Arabia.

There was quite a contentious debate around the notion of climate injustice. Should the nations of the world that have emitted this carbon pay for that. As you would if you owned a home and your neighbor engaged in actions that ruined your home. There's no

agreement on that, and I think it leads to a larger conversation around climate justice and redressing long standing inequities in the world.

One of the most important developments out of COP was a bilateral agreement between China and the U.S. And despite all of the tensions in trade and human rights issues that exist between the world's two great superpowers, their leaders came together and said they are going to meet regularly and work in many areas – methane, coal, carbon capture – to try to do better than China's commitment, which is net zero by 2060. That's 10 years, at least, too late.

SAFIAN: It sounds like the people who are there like they are taking it seriously, which may be a difference from years ago. But they're not moving aggressively enough or fast enough.

DOERR: What we are doing is not enough, and it's not happening fast enough. To the credit of the hardworking ministers of environment and government leaders who were there, it's hard for them to get very far ahead of their populace, ahead of their people. And so there's no point making a pledge that you cannot enact into policy when you return to your nation. And the participation in all of this is voluntary, there's no UN authority that will force a nation-state to do whatever we believe is the right thing. This is not some kind of green party that we're having, and everyone comes together, kumbaya. There's a revolution underway. And in real revolutions, there are winners, and there are losers.

SAFIAN: I want to ask you the solution that you write about in the book is to sort of apply the measure what matters formula to climate efforts, right? That the way to get to a net zero future is to embrace an OKR-based approach.

DOERR: It's exactly right. 10 big objectives, one monster objective, it's the mother of all OKRs, and that's to take 59 gigatons of greenhouse gas emissions, that's the carbon pollution that we pour into our precious atmosphere every year as if it's some kind of free and open sewer, the science tells us we've got to take that 59 gigatons down to net zero by 2050. And importantly, we've got to cut it in half by 2030, which is just eight years from now. While the planet grows from 7 billion to 10 or 11 billion people, while economic activity increases. So this is a tall order. This is an audacious objective.

SAFIAN: The first half of the book you're breaking down what's required, like transportation has to break, food, energy grid, and so on. Like for food, we're going to cut consumption of beef and dairy and lower food waste and that sort of thing. You're doing the math part by part so that we can figure out how to get there without necessarily having unsavory or impractical impact.

DOERR: Yes, exactly. Every one of these objectives is like a good OKR. It's bold, it's visionary, it's clear, it's long-lived. And the six sectors, the six objectives where we can cut our emissions, are each supported by a handful of key results. And you'll remember from OKRs that the objectives are what I want to have accomplished. The key results

are how I'm going to get it done. And good key results are measurable, timebound, specific, clear. And for example, I'll pick one. Let's just go to objective number one, which is to electrify transportation, which simply means: power our vehicles with electricity instead of with gas and diesel. If we achieve that objective, we'll take eight of our 59 gigatons per year down to two gigatons per year. We won't entirely eliminate it, but we're very quantitative about that. And then to get there, there are six key results.

The first one key result 1.1 says we have to get to price performance parity between electric and internal combustion engine vehicles in the United States by 2024 at a price point of \$35,000. And since this is a global plan, Bob, we also specify that in India, in China, we've got to get to \$11,000 for an electric vehicle by 2030 to be competitive.

So these are carefully curated, thoughtfully chosen, vetted by scientists and policy makers. I want to invite your readers to go to the website, speedandscale.com, because they can get this plan. Download it for free. Each of the 10 objectives, the 55 key results.

SAFIAN: And so, you're doing the math sort of piece by piece and part by part to get that 59 down to zero. And I can imagine at some point, as you're working on this project, on this book, you're like, okay, can we really get to zero? Or like at what point do you realize like, oh, actually it all will add up. We can get there.

DOERR: Oh, that's such a great question. The first five are: electrify transportation, decarbonize the grid, fix the food system, protect nature, clean up how we make cement and steel. Those are five great areas, but the sixth and hardest one is called: remove carbon. And there's 10 gigatons of carbon emissions that are going to remain after those first five objectives are achieved. And honestly, we don't know how to do that economically today.

So if you're a glass half empty, you say, "Doerr, your plan doesn't add up." You're 10 gigatons short. If you're an optimist, you respond, "Well, I believe in the power of innovation and investment and entrepreneurs. And somehow, I don't know how, we're going to lower the cost of taking carbon out of the atmosphere from \$600 a ton today to \$150 or \$100 a ton by the time we need to get it done." So we're in a race for the survival of our planet. We're all in this race together, and we've got to win it.

SAFIAN: The second part of the book you get into this issue of speed about sort of four ways to accelerate things so that all this actually happens. And you talk about policy and about government and about investments. What popped out to me was, and it's a word you mentioned earlier about movements, which evokes people marching in the streets, but if I'm reading you right, you're also applying that to how businesses operate, that business leaders can themselves make decisions to advance these goals. And that business itself is part of a movement?

DOERR: Business is one of the most exciting things about this movement. 70% of the emissions in the world come as a result of business activity. I profiled Doug McMillan, the CEO of Walmart, as the leader of a movement because Walmart, a Fortune 1 company, has immense power. And so when they gather together their supply chain, when they make a personal commitment or a corporate commitment to get to net zero, they also are bringing their suppliers along and aim to do that by 2040.

I profiled Jeff Bezos as a movement leader. He established the Amazon Climate Pledge and has a couple hundred companies in the Amazon supply chain who have signed up to get to net zero by 2040, 10 full years ahead of the Paris Accord.

Now, we have to be hardcore about this. We can't just accept pledges. We need to track people's progress against these pledges. I kicked up something of a firestorm by declaring that the internet had been under hyped. And I'm of the same view about the climate transition. The transition from the dirty fossil fuel economy to the new clean energy economy is I think the greatest economic opportunity of the next century.

SAFIAN: And the people who look at commitments by the likes of Walmart and Amazon, as you mentioned, to decarbonize themselves to get to net zero. This isn't just greenwashing. That word gets thrown around a lot. That it's just greenwashing.

DOERR: It's not greenwashing, though we want to be on guard for that. I've done the research, spoken to members of the supply chain, and these business leaders know what's at stake. And I think they know what needs to be done. I make an analogy in the book with the mobilization that occurred for World War II. In 1942, General Hap Arnold had a meeting with FDR, and things weren't looking very good in the battle against the Nazis.

FDR pulled out a napkin, and he sketched on it a handful of objectives needed to be achieved. We stopped manufacturing automobiles for four years, and we turned that manufacturing capability over to making battleships, airplanes, ammunition, and tanks. We need a similar mobilization of all of the activity, all of the manufacturing, all of the consumption on the planet, a total system change to realize this new clean economy. In one case, democracy was at stake. In this case, it's the survivability of a habitable earth that's on the line.

[AD BREAK]

SAFIAN: Before the break we heard John Doerr, author of the book *Speed and Scale* and partner at Kleiner Perkins, talk about what's required to combat the climate crisis, the importance of measuring our progress, and how business is a critical part of that movement.

Now John talks about the massive economic opportunity in decarbonizing as we "go for the gigatons," as he puts it. He says labeling the emissions created by every product and service

will shift behavior, as will closing the green premium. Most of all, he talks about the lessons of leadership – how impact can come from any and all industries, including big oil, and how each of us has a role we can play.

I think back to when Lyft and Uber first emerged and at the outset, the theory was that ride sharing would reduce the number of cars on the road, but that actually hasn't really materialized that way. And sometimes I find myself confused. Like, is eating a plant-based burger actually better for the environment, practically versus theoretically? Like in terms of emissions impact, is a shirt from a plastic bottle really better than cotton? Like, do we even know? Am I just making myself feel good? How do I know if something's really helping, or what really is going to have the most impact?

DOERR: We can know from the science, all of the questions that you're asking. It's largely known, but it's not well communicated. So the book calls out the need for greater transparency. We need to have labels on emissions. Just the way there are nutrients labeling for foods, all products, all services ought to be scored so that consumers don't need to figure these questions out for themselves.

The carbon accounting is as important as the financial accounting. In a year, we'll be able to pinpoint down to every emission the sources of emissions on the planet. And then there's a consortium called Climate Trace that is using AI to standardize and normalize and make freely available to the world a Google Earth-like globe, a map, that shows what the emissions are from smarter agricultural practices in fields and the losses due to deforestation in the Amazon. We've got to go for the gigatons. So your individual, my individual actions to not use plastic bags is probably not going to have a gigaton level impact on the climate crisis. And the book is an effort to identify the big gigatons, the big actions that we can take. We cannot afford to be distracted by bright, shiny objects.

SAFIAN: And so having transparency in what the actual emissions are created by each product that we buy will have this cascading impact to turn what might be individual purchases into industry wide practices and adjustments that are holding everyone accountable for the emissions on a much larger scale.

DOERR: Yes, I've written this book not to convince anyone to go vegan. I've written this book for the leader inside of everyone. We are fast running out of time. We truly need collective action, not individual action.

SAFIAN: I'm curious what the environmental impact of the tech industry is. Sometimes people talk about NFTs or crypto mining and cloud storage and so on. Is that issue one of the distractions you're talking about?

DOERR: Well first of all, Bitcoin, powered as it is today, largely by fossil fuels, emits as much carbon as several nations combined.

And that's equivalent to all the energy used by Malaysia or Sweden. So we've got to power our cryptocurrencies with clean and renewable energy.

But I don't think of Bitcoin as the tech industry. Honestly, I believe every business is a tech business, and it relies now on technology.

And the great big emissions come from how we generate electricity, and how we move goods around the world, and then how we make things. So decarbonizing the grid, shutting down coal plants, eliminating methane leaks and emissions from methane – this is a wicked greenhouse gas, because it's about 80 times more potent than CO₂. Those are going for the gigatons.

SAFIAN: So when I was editor of Fast Company, I had the team go through this exercise. Are there companies that we shouldn't take ads from because we didn't want to support them? And tobacco companies came up and gun makers, and then of course, big oil companies, and the challenge in our conversation was, "Well, are we telling our readers, don't fly on planes? Don't use any gas-powered vehicles or heat your home," or whatever. I'm curious what your perspective is about big oil?

DOERR: Well, my view of big oil begins with the belief that they engaged in near criminal activity in their misinformation campaigns that they staged, when they knew well in advance that carbon pollution was a threat to civilization. Even the International Energy Agency has called out that we must stop using fossil fuels in our lifetime. The dirtiest of industries, though, can seize an opportunity here. And the leadership of those companies can choose to adapt and evolve.

One of the best stories in the book is of the Danish oil giant Orsted, who used their expertise in offshore drilling to become the world's leading provider of offshore winds. In other emitting industries, producing cleaner materials will help them move into a hydrogen economy, or make steel and cement that drastically reduce the carbon emissions. So my advice to the oil and gas industries is to find ways to decarbonize your business to be part of this new clean energy economy. I think they know. They've seen in their market valuations that they've been counting on stranded assets, buried under the ground, that are never going to see the light of day.

SAFIAN: You talked at the outset about winners and losers in this revolution to the future. There's a lot of opportunity for growth, for winners and organizations that embrace this way the world will work in the future to generate a lot of opportunity for themselves.

DOERR: Totally. This move to electrified transportation is a massive change in over 100 million vehicles. The estimated size of the market for batteries for electric vehicles is \$400 billion per year for the next 20 years. All of online advertising, everything that Google and Facebook fight over in the US is \$80 billion. So that market is five times bigger. That's how enormous this transformation is, that we need to successfully make.

SAFIAN: Talk to me about the green premium. This is the extra that we pay for an electric car, versus a gas car, or whatever. For oat milk versus cow milk. Can the scale of impact happen if that premium persists? And how do we break it down?

DOERR: The green premium is the difference that we pay for a clean, zero carbon product or service, compared to its fossil fuel standard alternative. And I first heard of this term from our friend Bill Gates. So in the case of electricity, today the green or no carbon price is around 15 cents a kilowatt hour. Dirty electricity is about 13 cents per kilowatt hour, but that green premium of two cents is rapidly declining. For some industries, like in aviation fuel, the green premium is 400%. It costs \$7 a gallon, as opposed to \$1.80 to fly with fuels that are made without emitting carbon. The most important innovation we can do is to lower the cost of fuel, of food, of product, and ingredient, so that we drive the green premium to zero.

SAFIAN: And will that require subsidies? You mentioned that the traditional oil and gas industries have been receiving subsidies from governments for a while. Does this require government subsidies to be able to generate that, or eliminate that premium?

DOERR: Government subsidies are an important part of it, but there's not enough subsidies in the world to transform the whole economy. So I tell the story of Germany, and the feed in tariff subsidy that a German legislature enacted, which guaranteed that the German utilities would buy clean electricity at a declining price for two decades. And that was the catalyst that kick started the phenomenal reduction in the cost of solar photovoltaic energy, so that today, solar energy is, together with wind, cheaper than coal or gas or natural gas, fossil based fuel systems.

I'm very pragmatic about this. I want to see renewable energy subsidized, and I'd like to see the fossil fuel subsidies end.

SAFIAN: I often ask guests on the show what's at stake, but given this dialogue, it's obvious that the stakes are pretty enormous. So let me ask this a slightly different way. If I'm going to do one thing to change my life, to advance addressing the climate crisis, what should it be? Is it buying an electric car, or is it more about leadership and the movement? Or can it not be just one thing if we're going to overcome this burden, this crisis?

DOERR: Well, the one thing you should do, Bob, is move others to action. And I want to appeal not to your personal virtue, which is necessary, expected, and not sufficient. The time is so short. This is the decisive decade that we need you and your audience to take this plan, understand it, pick the one or two areas where you can have the most impact, and then declare that's what I'm going to do. Tell your friends, your family, your loved ones, enlist your coworkers, enlist them in this agenda.

If your employer has not made a commitment to net zero, get them to make that commitment and then get them to meet it. If in your school district, they're still using dirty diesel buses, join forces together with other parents and taxpayers and get your school district to go to clean buses immediately. We're past the point of time where we can talk or even debate. We need collective action, and we need it now.

I just want to do some basic Rice University math. If we have to cut emissions in half by 2030, and we're doing this in a world with growing demand and activity, that means we've got to cut emissions in 2022 by 8%, and another 8% in '23, and 8% in '24 and '25. Every year between now and 2030, we have to reduce emissions by 8%.

Bob, do you know we've never reduced emissions by 8% in the history of the planet? During the pandemic, they briefly reduced by 6%, but emissions came roaring back. So we've got to make the right outcome the profitable outcome, so it becomes the probable outcome. This is a wicked problem.

SAFIAN: You said at the outset that you're hopeful about all this, or you were coming out of COP. It's a little terrifying listening to you. And I guess you have to walk this line between scaring people into action, but not paralyzing them and having them throw up their hands and say, oh, this is too big. This is too hard. This is impossible.

DOERR: I think fear is a healthy emotion, but I want it to galvanize and catalyze action, not to paralyze people. Only concerted and global action is going to get us over the finish line here in time. We need the Greta Thunbergs to be angry and to engage in civil disobedience to make this a top two voting issue in every major emitting nation.

I'm not a world leader. I'm an engineer from St. Louis, Missouri. I need to establish credibility. The numbers need to add up, they do. We can achieve this plan, and I have actually great hope that we will.

SAFIAN: Well, John, this has been great. Thank you so much for galvanizing all of us, pushing me, and pushing all of us to keep this top of mind and constant.