

Rapid Response Transcript — Charity Dean

“Protecting against the next bio threat”

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CHARITY DEAN: Once you know the truth, you can't unknow the truth. The kind of capability that needed to exist in the world, government couldn't build it.

So I was asking myself: Is something new needed? I had enough money in my bank account to pay my mortgage for two months, and that was it.

Would I regret building this capability with everything I had and it didn't work out, or would I regret never trying? As hard as it is to be an entrepreneur in Silicon Valley, you know what's harder? Trying to be an entrepreneur inside government.

The stakes were high, the resources were limited, I had a short period of time to pull off something absolutely insane, and how do you do it? You do it by people buying into the mission.

BOB SAFIAN: That's Charity Dean, CEO of The Public Health Company, a new venture aiming to deliver biosecurity as a service.

As a top public health official in California, Charity rang an early alarm about the threat of COVID-19, when most others were ignoring the signals.

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 Charity because she's trying to build an all-new category of business, using software to help companies and leaders navigate the now-clear risks of health disruptions.

She's also chosen the private sector over government as the tool for enhancing societal preparedness for the next bio-crisis — an acknowledgement of both government's limitations and the leverage for change provided by the marketplace.

She also explains how she's trying to teach herself about running a business — even as she tries to teach businesses how to approach health risks in more sophisticated ways.

Whether the Public Health Company succeeds in transforming business and culture, its model points the way toward more evolved solutions. And Charity herself provides an inspirational example of how one motivated individual can unlock potent possibilities.

[THEME MUSIC]

SAFIAN: I'm Bob Safian, and I'm here with Charity Dean, founder and CEO of the Public Health Company, PHC, and former assistant director of California's Department of Health, where she helped lead the state's COVID-19 outbreak response. Charity is coming to us from her home office in Santa Barbara, California.

DEAN: It's great to be with you today.

SAFIAN: So your background is not as a business person or start-up executive. You're a medical doctor and a public health professional. Even before COVID, you dealt with a range of outbreaks in California: meningitis, tuberculosis. You served as an attending physician for TB and HIV and homeless medicine. And you were a key protagonist in Michael Lewis's book, *The Premonition*, about the COVID-19 outbreak, which you started warning about in January of 2020.

And then in the summer of 2020, with the pandemic still very much in full swing, you decided to leave your public health post with an eye toward the private sector. Can you explain that decision? That trajectory?

DEAN: I was 42 years old, and loved being a public health physician. My great obsession was communicable disease and complex systems, and operating scenarios under high risk situations where the outcome really mattered. I loved being a public servant and thought I would be for life, and still very much consider myself in that category. So the decision to leave, I wrestled with. And it really came down to knowing the truth. And once you know the truth, you can't unknow the truth. And the truth was the kind of capability that needed to exist in the world government couldn't build it. It would have to come from Silicon Valley. So I made the decision to leave the governor's team.

SAFIAN: It's counterintuitive because you're working directly with Governor Newsom in the biggest U.S. state by population. That would seem like a perfect platform for having impact in a crisis. And yet, there was something that convinced you that a commercial business could have more impact than staying in government.

DEAN: The answer to the question, what does the country need or what does the world need was a real-time intelligence with early threat identification to answer the question, what do we do now? And who is the "we" in that equation? It's businesses, it's economies, it's enterprises who all learned during COVID no one is coming to save them. And the capabilities they needed to answer the question, what do we do now, did not exist.

SAFIAN: You said something to me when we talked before, that all companies, it turns out, have to be public health companies.

DEAN: I think so. It's a big lesson I've learned the last year and a half. The decision makers inside enterprise before COVID, they thought someone would come and save them, or the government would have a plan should a worse case scenario happen for an outbreak or a pandemic.

And so what happened during COVID was pretty remarkable, where large enterprises essentially put together COVID task forces. Sometimes, it was the guy that had been in charge of mechanical engineering before, and now he's the infectious disease data scientist, or it was someone who was maybe their head of people. And now, they're head of communicable disease precautions and probabilistic risk based on rapid antigen tests. Now they have to be a microbiologist.

Most enterprises stood up essentially a duct-taped-together public health department. And the only way to do that was by individual vigilance of watching websites and looking at data from different countries across the world. And when you have 50 offices around the world, and you're trying to figure out what the threat level is in that location and make business decisions based on it, that's pretty frustrating. And human vigilance is not adequate.

SAFIAN: So your start-up, the Public Health Company, would fill that gap, that need, through a software-based platform that identifies health risks.

DEAN: Yeah. I would frame that as how do you know what signals to pay attention to, and how do you know what signals are just white noise from all of the signals coming all over the world? Either from the beginning of COVID-19 or pick any other bio threat from the past or even today. For example, if you see case numbers being reported by a certain country that are spiking, is that an artifact? Is that just because they're doing a better job at testing the cases and reporting them, or is that real? So if you are the poor soul inside of a large enterprise, whose job it now is to run the COVID task force, and you've never done probabilistic threat identification for communicable disease and bio risks, that's a daunting task.

SAFIAN: You made an analogy about computer-led stock trading on Wall Street. I know your co-founder, Brian Levine, helped create automated trading platforms for Goldman Sachs. What's the analog between Wall Street and tech and health and tech?

DEAN: 30 years ago, stock traders may have called it gut instinct or an intuitive understanding of what the market is going to do.

And I loved the story that I have heard from others in the financial sector of the great success now that machines actually can make many decisions faster and better than human vigilance. Yet, us as humans would tend to fight that. We would like to think that our brains are faster and better. So I do think that financial markets and the risk thinking of stock traders and how they put much of that into automation, into machines, and

discover that machines absolutely can do it better and faster in many circumstances. I think it's an interesting analog to probabilistic risk thinking and disease control.

SAFIAN: So Public Health Company is sort of using the same kinds of techniques for disease forecasting, taking what had been done more anecdotally, or as you say, things that are difficult to scale for humans, to use the machine-learning to be able to do that?

DEAN: I do like the metaphor to financial institutions and how they took some of their smartest traders and began turning them into software. And I also do like the metaphor to cybersecurity. Looking back 20 years ago, many enterprises thought, "Well, yes. This is a tail-end risk, but this is a risk that someone else will come in and help us manage." And after some high-profile cybersecurity attacks 10 to 15 years ago, it was clear to enterprise this was a risk they owned.

COVID has been an awakening for businesses that this is absolutely a risk they owned, that no one is coming to save them. They have to have an internal capability that enables them to keep their business going and thriving, keep their people safe, preserve their revenue, even during bio threats.

And so the decisions that CEOs make have massive implications across the whole population. It is public health.

SAFIAN: So you see this possibility, you decide to leave government. I can imagine that there must have been interest from lots of different players potentially saying, "Hey, maybe bring that idea, bring your experience to us."

DEAN: Yeah.

SAFIAN: How did you weigh what those options were against what you ended up deciding to do, which is to sort of do this yourself?

DEAN: I knew the answer to the question, "What capability needs to exist in the world?" And the problem with knowing the answer to that,= is I couldn't stand it if it didn't exist. I couldn't stand it. I couldn't live with myself if this didn't exist. I was getting pretty appealing job offers from a wide variety of companies. That seemed like the path of least resistance, to join a large, established company and see if we could carry out these ideas inside of it, or find someone who was already building it and join them and help. And so the problem was no one was building this capability. No one was building the kind of intelligent software that I knew was the answer to this pain during COVID, and so I wrestled with it for a while.

And again, 42 years old, have been a government executive for many years, leading high-stakes scenarios. Had stood up a number of entrepreneur-like capabilities within government. I was always causing trouble. Always had some bright idea, would launch

something new, build out an initiative, build out a new task force, build out a new line of services for the community. And so I was asking myself the question, "Is this something that anyone else can build, or is something new needed?"

SAFIAN: Is there a moment where there was an epiphany where you're like, "Yes."

DEAN: I was living in Sacramento, I left my job working for the state, I had enough money in my bank account to pay my mortgage for two months, and that was it, and I wasn't afraid of that. I have led an adventurous life. My life has burned down around me a few times, and I'm not afraid of having nothing, and I'm not afraid of taking risks. I think of women who have been through a lot in their life, they're like the planes that came back. That yes, they're covered in scars and bullet holes, but those are the ones that survived.

And so I was sitting on my front porch. It was really hot out. It was July, and I had some job offers from incredible companies. But the other door is I knew this capability needed to exist, and I knew that no one was building it.

And I had to choose. I was on the phone with one of the amazing job offers, and I just couldn't say yes. And I had fast forwarded in my head, what decision would I regret more? Would I regret building this capability with everything I had, and it didn't work out, or would I regret never trying? And I knew the answer to that. And in about a five-second period where I just couldn't get the words yes out of my mouth, I knew what I was going to do.

SAFIAN: So fueled by the lessons of the pandemic, by the shortcomings in government to safeguard public health, you decided to break away from your past and launch a start-up. But you haven't been in the private sector in this way before. How did you think about it?

DEAN: I approached what we were doing with radical humility. When I was at the State of California, I had about 4,000 employees under me. Very, very large budget, high stakes. I knew I had to forget everything that I knew and ask really open-ended questions. What are the pain points? Who are the end users? What has enterprise experienced? What kind of solution are they looking for? What would solve their problems? And let the market tell me the answers to that. Not assuming I knew the answers.

And so it's a pretty humbling process. It surprised me how much I identified with their stories. It felt like every one of them had been a local health officer on their own, and no one was coming to save them, and I understood that. And then as we started to ask the questions about what the solutions would be, I identified with that too. It was simply the kind of individual vigilance that a domain expert would have, but scalable across hundreds or thousands of locations for hundreds or thousands of users and decision-makers. How do we replicate that at scale? That was the question.

SAFIAN: What's different about business and about government? Are there things that government prepared you for?

DEAN: I would say the biggest similarity is, in the end, it still comes down to working hard and grit and determination. As hard as it is to be an entrepreneur in Silicon Valley, you know what's harder? Trying to be an entrepreneur inside government. Anyone who has ever tried to stand up something new inside government knows how difficult that is. There are layers of red tapes and layers of approval. And so I had been contending with that my whole career. In many ways, what's different is that the ideas or the innovation, forging a new category within Silicon Valley with venture capitalists as partners, has been incredible because there are endless resources available for a really good idea.

Whereas in government, those ideas are really hard to push through. It's part of why I knew this capability, building this kind of global biosecurity platform, couldn't be done in government. Government is not designed to take risks and lean forward and innovate, but the private sector is. Capitalism is.

SAFIAN: You mentioned to me that there is a certain frugality that you brought with you from your government experience that has infiltrated the way you approach running the company.

DEAN: So I have always been a very frugal person. I grew up with very few resources in rural Oregon, was on a full-ride scholarship to college and medical school. I have always had to be frugal. And as a public servant, of course, you don't make a lot of money, and you learn to be frugal with your own finances. But in government, I also took it very seriously that I was spending taxpayer money. People would ask me as a local or state health officer, "Who do you work for?" And I would say, "I work for you." Anyone that pays taxes pays my salary, and tax money was blood money to me, and how I spent it, every dime had to be accounted for.

I brought that with me, for better or for worse, into launching a start-up. In the beginning of launching The Public Health Company, I had this old laptop, and it only had so much memory, and it would totally shut down about once a week, and I would be paralyzed until I could get it started again. But I didn't want to buy a new one because I knew it would be \$3,000, and did I really want to spend my investors' money on that? And so I would say that, at times, that frugality is a problem, that I had to relearn to spend resources in the place where there is a huge return on investment. Does the CEO founder need a laptop that works? Yes.

My Achilles heel is probably that I'm still overly frugal in times that are unproductive.

SAFIAN: Just so everyone knows, Charity is coming to us from a shed behind her garage, right?

DEAN: Yeah, well—

SAFIAN: With furniture you got from Goodwill.

DEAN: It's true. Well, oh. You have to bring that up. It's true. Well, the decision to launch the company, that moment we talked about, meant for me, personally, everything was on the line. I rented a home in Santa Barbara, and there happened to be a shed that was built on to the back of the garage.

And so I turned it into my office. So for the last year and a half I've been working from this location. We went to Goodwill to get furniture for the house and the office, and we found this \$5 office chair. Which was perfect, it was only five bucks. One arm fell off about six months ago, and the other one fell off last week, but I'm resisting getting a new one because it's a perfectly good chair. It works fine.

I just think at the end of the day, it's really important that we use resources towards an end that is a good investment of it. I'm not going to take any flack over it from my employees who laugh every time something falls apart.

[AD BREAK]

SAFIAN: Before the break, we heard Charity Dean explain why she decided to leave government to launch the Public Health Company.

Now she talks about why she continues to advise the White House, even amid her start-up demands.

She also shares key lessons on risk assessment, stressing that complete accuracy is less important than being fast and directionally correct.

Plus how she advises all business to prepare for the evolving COVID-19 crisis, which she warns is far from over.

Now you've got 60 people working with you. You've got a genomics lab in Oakland doing viral sequencing. You're building software to help identify early indicators. You said you're calling the platform Pharos, do I have that right?

DEAN: We've named it Pharos after the lighthouse at Alexandria. Yeah. And so I travel back and forth from Santa Barbara to Palo Alto all the time, many of my employees are there. It's been remarkable to see these incredibly talented tech engineers and data scientists and mathematicians, folks that have built software and built many start-ups before, quit their jobs and join the Public Health Company. They catch the vision of what we're building, and they want to be part of the mission.

SAFIAN: You told me we don't have time to waste. Is that what's at stake for Public Health Company right now? Is it about speed? About how quickly you can put this all together?

DEAN: It is, but this is a long-term issue. It will not be another 100 years before we see another pathogen like COVID. In many ways with COVID we got lucky, and that sounds dark to say but looking at the kinds of pathogens that we could have had caused a pandemic that could have largely impacted children and could have caused a much higher case fatality rate. I imagine that scenario where we had a 2% case fatality rate with a virus that disproportionately killed children, how different the response would've been and the sense of urgency for these kinds of tools.

We have a sense of urgency because we know that more threats are coming. We also know we're in this with COVID for the next few years, we are far from out of the woods and absolutely believe another meaningful variant of concern is coming. So not only is the current threat not over but more are coming. So I feel every day like we don't have a day to lose. We need to build fast and choose our battles carefully, choose our clients carefully, choose the use cases carefully so that we can build this platform out quickly.

SAFIAN: You've continued to offer your expert opinion about COVID-19 response to the White House, you've testified in DC. How do you balance that service and that impulse with the needs of a start-up business?

DEAN: They are the same. As a public servant when I was in government, my life was dedicated to serving and protecting the community, and that meant empowering decision makers — they happened to be in government at the time — with the answer to the question: what do I do now? What are their options? What are the risks of each option? It is no different in the private sector working with the clients that we do.

I was on a meeting with the White House this morning. They also recognize the need for this capability to exist because government is not going to build an intelligence platform for bio risk management for large enterprises. It's been really heartening to see the level of support from the top levels of government for what we're doing. We're not serving governments right now with the software that we're building, but we will be, that'll be coming in the future. I'm really focused right now on the highest needs of enterprise.

SAFIAN: When it comes to The Public Health Company, you said to me we're creating a new category, the world needs a new bio security platform. How important is it to you that PHC be that platform versus be sort of a seeding of the idea of a platform like this?

DEAN: This capability doesn't exist, and the entity that builds it has to have as their foundation trust and integrity and transparency. If we look at the amount of trust that's been lost with the CDC as a government example. Trust is the very currency of public health, and so I don't think it's an either/or question — does this capability need to exist, and does this company need to be the one to build it? — it's a yes and. Yes, this

capability must exist in the world and yes, this capability has to be built by a very trusted brand that is nonpartisan, non-political, operates based on science, understands the business use case and wants to solve the business problems.

SAFIAN: You said to me at one point that your goal is to be fast and directionally correct. In some ways the product is less about precision and more about risk awareness and preparedness. There's something counterintuitive a little bit about that.

DEAN: By the time you're accurate you've waited too long. With any communicable disease outbreak it always starts very quietly in the beginning. There are one or two signals in the noise. One or two signals does not a data set make. So in the very beginning the question is what signals do you pay attention to? How do you apply a weight to those signals? What is your confidence in them? In the beginning of a communicable disease outbreak the sources that I look at as a source of truth or that I index on are very different from later on in the outbreak. You might define that as sensitivity or specificity. You might define that as confidence.

By the time you have enough data to be academically correct, you're screwed, you've waited too long if you haven't made a decision. Anyone who's managed disease outbreaks on the front lines knows that this is true, you have to act really fast in the beginning.

And it's been interesting as I've met with end users inside of businesses that have been impacted by COVID, who have had to make the decisions similar to that in the early days of COVID or now in the early days of a new variant emerging, they have to make a decision about return to office, vaccination policies, shifting supply chain, risk to third party vendors. And they have to make those decisions before there's a lot of data available. So I don't think we're inventing anything new; I think what we're doing is replicating that thinking with domain experts in software and then making it available at scale.

SAFIAN: At the same time though, you're trying to build an organization to have trust where the outcome is not necessarily always going to be 100% accurate, right? You have to educate your customers about what trust means as you talk to them. Because everyone wants to know the answer for sure.

DEAN: Here's what I mean by trust. When we look at science and data and make recommendations or look at early decision making, we don't index on any political point of view. We index on the absolute best thinking of what the threat is for businesses. And so when I talk about trust, that's what I mean. Trust is the currency of public health because if the public or the decision makers, whether it's an individual or a business leader, doesn't trust the guidance, advice, or data, or the intelligence they're being given, then they're not going to act on it.

When I founded the company, the first thing I did was I sat down and wrote our core values, and they sit right here next to me on the wall in the shed. I wrote into there that we have the highest regard for public health science and no regard for any political agenda. We've seen large institutions lose the public's trust during COVID because the public can sniff out political agenda pretty quickly.

Imagine if you're the end user inside a large enterprise and you have 50 office locations, let's say with 20,000 people spread across the globe, and ask yourself: what is my confidence in this source? Do I believe it was politically-biased? How do I back-engineer the truth based on the influences I think are there?

I think one of the gifts of the team that we have together is that some of us do come from government and were on the other side of it so we deeply understand the potential political influence that exists. And many of us come from Silicon Valley. Many of the folks in our company are entrepreneurs and have been in start-ups many times before. So bringing those two different archetypes together, it's been an adventure, and it helps us have more of a holistic perspective when we're talking with our clients or anyone in business that's had to make these decisions on their own.

SAFIAN: Before I let you go, I have to ask the question that I can imagine our listeners are asking, who are themselves running and operating businesses right now and they do not have access to the kind of tool yet that you would like them to have. What would you say to folks now about the way they should be thinking about managing themselves and their businesses around COVID-19 and all the noise and the swirl and things that go on around us?

DEAN: We are far from out of the woods and businesses who have been impacted by COVID, which is essentially every business, but particularly looking at businesses with thousands of employees globally, so they're tracking COVID in different locations and different variants, or there are external dependencies like third-party risk, whether it's supply chain or vendors. It is going to be really important to not let our guards down and to understand that more variants are going to emerge. We are far from the point where we have one vaccine to solve all of it. We're going to be in this for the next few years, and the ability to plan ahead, to have six or eight weeks planning ahead for different scenarios is going to be critical.

I think in the beginning of COVID there was this misnomer that we had to choose between preserving the economy or protecting lives, and that's a false choice. It's both. It's a yes and. Economic security is very closely linked with bio security, and businesses understand that now. I think it's really important looking at the next years with COVID, and even looking beyond COVID at the next threat, that businesses are now factoring this in, that this is a consideration in boardrooms when they quantify risk and have a plan for each risk, bio risk is now on their list.

SAFIAN: Yeah. A lot of people just want to be done, but they're things we want that doesn't mean that that's the way the world's going to unfold for us.

DEAN: That's right. That's right. Look, I'm in the same boat. I understand the frustrations. I have three kids who have been intermittently in and out of school, and I understand the day-to-day frustrations with how long this has gone on. I think the stakes, certainly for the United States but for the world moving forward from this, are much higher than they've ever been before because these threats have sped up, and we now know the capability doesn't exist for large organizations to respond, and government has not been able to stand up the solution, and I don't know that they will. I don't want to be too critical of anyone at this point. I think the humans are amazing and the public servants are my heroes, but the kind of capability that speaks to economic preservation or business security or economic security, that's what we're really focused on. I mean, that's where many have felt that no one's coming to save them.

SAFIAN: Well, Charity, I really appreciate your combination of realism and optimism in all of this. Your experience has been fascinating to listen to, so thank you. Thank you for joining us.

DEAN: It's a pleasure to join you.