

I-Corps at NIH for Small Businesses

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Webinar Transcript

Michael Weingarten:

This is Michael Weingarten from the National Cancer Institute. I want to thank each of you for joining us today to learn more about the I Corps at NIH program, which we launched just about a week ago. The goal of this webinar is to provide a little bit of background about the program. I'm going to be doing the overview of the next 10 to 15 minutes and I'll talk about the goals the overall program and then I'm going to be followed by two of our instructors that are joining us today, Dave Charron and Edmund Pendleton, they are actually the two lead instructors for our I Corps program and they're going to be walking you through really how the overall I Corps model is set up and how the course is going to be taught.

And they are also going to share lessons learned from the very first cohort that we ran on this program last fall.

So following Dave and Edmund's presentation, I'm going to come back and just really get into some of the details on the Funding Opportunity Announcement, which is currently out now for you to apply for. And really go through some of the key criteria and the things that you

should be focusing on in your overall application and then we'll take some Q&A at that point.

So we are very excited about launching I Corps here at NIH. We ran the initial pilot, again, last fall. And just three months ago, President Obama actually announced the expansion of the I Corps program at the white House. As you might know, I Corps was initially started by the National Science Foundation about four years ago, and they have offered the program to over 600 teams across the country. So we started working with NSF about two years ago to really figure out how we could work with them to modify the program and especially to apply it in the life sciences area.

So just a little bit of a brief description about I Corps. The way I think the best way to describe I Corps is it's really focused on at the NIH it's focused on startups and early stage projects and the goal of the program is to really teach small businesses how to build a business model around the technology that they're developing.

And we do that through an intensive entrepreneurial immersion program that takes place over a seven week period and the curriculum really emphasizes getting the different teams that participate in I Corps to get out of the lab and actually go and meet with a whole range of different customers or potential partners that can really help

you define the business model around the technology that you're developing.

So one of the key components of I Corps is that each team is expected to actually meet with and interview over 100 different people over the course of the program.

So the format is very focused on the experiential learning.

Our program was actually based on a program initially developed by entrepreneur Steve Blank. Steve has actually done a number of startups.

He's out of the Bay Area. He works to develop the I Corps program from a program he initially started I think about seven years ago out on the West Coast.

So we worked with both Steve, as well as the National Science Foundation, to modify the program for life sciences start ups.

The way, you know, if you look at SBIR and the way that we're structured, as you know, it's a three phase program. In order to be eligible for I Corps, you need to have a Phase I SBIR or STTR from the program. And one of the key take-aways and benefits to I Corps is that it's really going to help inform the commercialization strategy that you'll be developing for your Phase II application. So that's you know, as opposed to the research strategy, which all of you are focused on, I Corps is really much more focused on the

business model and the commercialization strategy, really building that out through the course of the seven week program.

The way we do that is through a focus on what we call a business model canvas. This is kind of the organizing proposition for I Corps, but the business model canvas is made up of nine different components. And it includes things such as value proposition, which is really trying to help each of you really understand what specific customer problems are you helping to solve with the technology that you are developing and which customer needs are you satisfying. So that's really the first key question of I Corps is really trying to define where the value proposition of the technologies and what features of the technologies that you are developing are actually going to help match customer needs.

The other just some of the other key components of the business model canvas include things such as customer segments, customer relationships, channels for how you would actually reach your customers, also things such as key activities, which would include regulatory strategy and reimbursement strategy, as well as key partners. Who would you actually collaborate with and partner with as you're developing your technology in order to move it all the way through clinical trials and all the way to the marketplace to meet the needs of patients.

And it also includes key items such as cost structure, what your cost structure is, as well as revenue streams.

So, again, this is kind of the organizing principle of the I Corps program and Edmund and Dave are going to share examples from companies that went through the first cohort on exactly how they developed their business model canvas and some of the key changes that they achieved over the course of the program.

So again the key component, and I think what really separates I Corps from other programs, is it's really driven by your team, by your company and by the three team members that are going to be participating in the program.

And the goal is to really develop a series of hypotheses around each of those different pieces of the business model canvas and then through the course of the 100 interviews that you are going to be going through over the course of the seven to eight week program you actually end up modifying that initial hypothesis based on the direct feedback that you get from customers or potential partners. That has a major effect on the business model canvas as you go through the program.

And what we found for the first cohort is that companies that have gone through the program have seen major improvements and major benefits in areas such as clinical utility, data and data quality that is needed as they develop their technology, and really defining

the key aspects of the product that are really the most valuable to the ultimate customers that the technology and product will be sold to.

And based on what our companies did learn from going through the pilot phase of this program a year ago, is that the new insights really are having a dramatic effect on their future Phase II applications, but really on the whole course of the business itself and how it moves forward.

So I think you'll be very interested in just seeing how many of you, I think, could potentially benefit from the program and why we're encouraging each of you on the line to apply to participate in the I Corps program.

Just a little bit of data. From the initial pilot of the program, last year, we had a total of 19 teams that participated. All of these were either SBIR or STTR companies. There were four initial institutes that participated in the pilot, those included the NCI; National Heart, Lung and Blood Institute; the National Institute for Neurological Disorders and Stroke; and the National Center for Advancing Translational Sciences. From those 19 teams that went through, they actually conducted a total of 2,128 interviews with customers. which played a huge role in really affecting the future of many of these companies that they as they go forward.

we surveyed companies both at the beginning of the process and throughout the program. And the feedback we got from all of the different participants is that 82% of the companies found the program to be very good or excellent and 82% would recommend that others participate in the I Corps program and that really is why we decided to take this program from just a pilot stage and to make it an ongoing program that we plan to run at the NIH going forward.

And really none of this would have been possible without the huge role that the NSF played. We have a very close working relationship with the National Science Foundation and they have nodes that they have established all over the country of different organizations that are now offering I Corps and we never would have been able to offer it here at the NIH without the collaboration and the support from NSF. So we greatly appreciate that.

For our initial pilot, we actually had three different tracks among the different participating companies. So we had a therapeutics track, a diagnostic track and also a medical devices track. As you can see, you know, the teams were split up amongst those tracks based on what their technology focus was.

So this is going to be driven by which kind of companies and what areas those companies fall under in terms of the applications that we receive. Those will affect the ultimate tracks that we go into.

But we're anticipating we'll probably have these three tracks, we're also thinking we're probably going to be getting applications in the area of digital health and probably research tools, too.

So we'll be accommodating and we will be set up to meet the needs of those teams, also.

Just a little bit more detail on some of the survey information that we did from the participating companies.

So I mentioned that the business model canvas, which is kind of the organizing way that the course is taught, is made up of nine different components and they are listed here on the chart, with some data. As you can see, in areas like channels, cost structure, customer relationships, customer segments, et cetera, when companies first came into the program, which is kind of the before section at the top of the chart, they had very little knowledge about each of those different segments when they first came into the program.

Then we surveyed the companies at the end after they had already gone through I Corps. As you can see, there's a lot of very nice learning done in each of those different categories.

And by the end of the program, almost all of the companies had deep knowledge about each of the different pieces of the business model canvas.

One of the things that was a little bit of a surprise to us, you would

have expected there to be good learning on the different components of the canvas because the course was very focused on that. But what we also saw was that there was a great deal of learning also in areas such as medical reimbursement, as well as regulatory strategy, and preclinical development and clinical trial strategy, too. But you see a great change, particularly in the areas of medical reimbursement and regulatory strategy for a number of our Phase I companies when they came into the program. They really had not planned out their approaches and their strategies. But based on the interviews that they had and a number of people did talk to representatives from the FDA as an example, as part of their interview process, by the end of the class we saw a major shift in the knowledge gained through the program.

And I think that was one of the great take away benefits that a lot of our companies received from the program.

So these are the 14 participating centers from the NIH as well as the CDC. And these are the in order to be eligible to apply to this program, you have to be getting funding under a Phase I SBIR/STTR or STTR from one of these participating institutes or the CDC.

And now we're going to go ahead and shift into a little bit more information on I Corps history and Edmund Pendleton is going to take that on and, again, we're going to be going through some key lessons

learned to give each of you a real sense of how you and your company can directly benefit from the I Corps program. Thank you, Edmund.

Edmund Pendleton:

Thank you and everyone we really appreciate you joining us here today. We are definitely going to have plenty of time at the end for questions, so feel free to make note of those and we'll get back to them. Before we get started, I do want to introduce David Charron, who's on the West Coast, actually, in San Francisco. I know Dave has a prior commitment that he has to leave for, so I'm going to let Dave do a quick introduction and turn it over to him and then I'll come back and we'll get started with some of the things that we want to talk about. Dave, if you can hear us, why don't you go ahead and jump in??

David Charron:

I can, thank you, Edmund. This is David Charron. Edmund is correct, I'm out here at the University of California San Francisco today. I wanted to also mention that Todd Morrill, one of the other faculty, is on the line with us, too. This is a perfect slide to start. The I Corps history is a very interesting history. Particularly with respect to life sciences. We're delighted to have you all participating in the call today and we hope to see your applications

come in as Michael has described earlier.

The history of this entire program starts probably about six years ago. Steve Blank out here was doing a customer discovery class inside Berkeley and Stanford, and he was basically discovered by the National Science Foundation as running this particular program. The National Science Foundation said, "Hey look, it looks like you're doing something really good that could be applied to the science that we're working on across all of our different programs." So they ran an experiment and that really was the first I Corps cohort many, many years ago now. That was primarily focused on, A, scientists in the lab who didn't have a company yet; and it was primarily focused on technologies, whether that was software technology or a piece of hardware or some new device that they were going to create. And that set up a set of experiments that Michael alluded to and that Edmund is going to tell you a little bit more about, around two aspects of the I Corps program. One is it's applicability to life sciences, what does that mean; and it's ability to accelerate the SBIR Phase I companies.

And those experiments have been run successfully over the past year and a half. The NIH activities, life sciences focused I Corps program, both at UCSF, which was a while ago now and the one that was run last year, has shown the basic business model canvas and this

idea of customer discovery works extraordinarily well for early life science activities. And it works because of all of the same reasons that it works for every other activity. The entrepreneurs love to believe that they have an opportunity in front of them. And their interests in actually going out and getting market data using the scientific method to understand the needs of the customer seems to be very small. That wasn't true across the board, but what we find in looking at the life sciences area is that there is an extraordinary amount of learning that occurs when teams go out and look at the marketplace and look at it broadly and that learning might be formulation of a business model, pivoting the business model, understanding a weakness or a strength within a business model. And that really has come through to us over the past year, that it's applicable in the life sciences, applicable basically everywhere. Then Edmund is doing some fabulous work, not to give compliments to Edmund by any means, you will learn about our relationships here in a while, but Edmund is doing fabulous work with respect to the SBIR program. What we are learned there is that you guys have come in with really good understanding of what you want to do. But even in the SBIR program, there's a lot of learning that you have to do as you're moving your science through this Phase I application, to understand your marketplace. And that marketplace learning is actually

accelerating, as Michael was alluding to, the movement from Phase I to Phase II, the creation of the commercialization plan, the understanding of the market dynamics. It's really incredible in terms of its ability to move the companies forward.

So I'm going to leave it at that. Edmund has a lot more to say about this. But I'm excited to have you here and I'm excited to work with you and I know Todd and the other faculty involved are also excited to do that and happy to answer any questions that you might have. I'm going to turn it back to Edmund. Edmund, thank you.

Edmund Pendleton:

Dave, thanks, I certainly appreciate the compliment. I don't know if it's well deserved or not. But I will point out at the end we're going to come back and introduce some of the other instructors in the program, some of which like Todd are on the line, you will get that in a little bit. I appreciate that overview, Dave. A couple of things, we've already talked about obviously NSF initiative. I do want to review kind of a simple point that I make to everyone when I do an intro to what I Corps is, which is, you know, the NSF budget is \$7 billion, we're going to talk about NIH in a moment. Really, they were trying to answer this fundamental question. You know, if you asked them how I Corps got started, they will often point to this

question. It's the following: How can we increase the economic impact of the research dollars we invest every year? And that's fundamentally the essence upon the course and how it actually evolved, why they went to Steve as Dave mentioned, and created this program. And why we are now seeing it spread to other agencies and go beyond just to academic researchers and to Phase I and even Phase II companies. Even into certain corporations. By the way a lot of the folks that work in I Corps are working with existing companies, they are adopting these methodologies.

So a couple of things that I really want to emphasize, not only was the program developed by entrepreneurs, it is also taught by entrepreneurs. I really want to emphasize this, because it's very important. I've been an SBIR Phase I grantee. I know what's involved. I've been a startup founder and exited the company, so I know all of the tricks, I know all of the lies I'm being told, so to speak. So I am here to actually help you. I think one of the reasons that instructors really enjoy this program and have gotten involved is because we all recognize how valuable it would have been to us had we known about it when we started our own companies.

Now, some of you will have heard this phrase. In the popular press there's a phrase called lean startup. In fact if you do a little digging, you will find plenty of blog posts that say lean startups

do not apply to life sciences. Not apply to physical sciences and heavy duty tech.

I'm going to explain to you how we're different than what you hear about in the popular press and why it really does apply. There are several really good articles that I like to reference people to. These slides will be available for you for download, so don't worry if you don't get the notes here. But a great article Steve wrote in Harvard Business Review, one I actually happen to like better is one The Economist did a little bit after that that talks about how start ups now are created very, very differently than they were five or 10 years ago. Pretty interesting. But I always wrap up by telling people I'm a big space buff. So this article had absolutely nothing to do with I Corps, but it was from Buzz Aldrin in the MIT Tech Review, I love this quote. You promised me Mars colonies, but instead I got FaceBook. The basic point I make is, I Corps is really the first program to take these sort of lean startup principles, some of the underlying methodologies that lean startup created and apply them to heavy duty complex engineering and technology based businesses and of course life sciences , which we're going to talk about. Michael mentioned the fact that I Corps actually is a network. I'm going to show you here quickly a snapshot of some of the universities that are involved. The reason I want to emphasize this is because once

you come into the I Corps program, you're part of a larger family. Part of a larger network. So after the seven week program, you're still part of us, so to speak. You'll have resources available to you throughout this network. This is one of the greatest benefits, in my personal opinion, of the program. It's not just seven weeks, it continues to go on beyond that and there are a lot of folks across the country to help you.

So we've already had these question posed, does this really work for life sciences? Michael talked about the pilot that we ran last year, we will come to some use cases here in just a few minutes. Because there's been a lot of concern and confusion about whether we can even apply this process to life sciences. It actually turns out, that even at NSF, probably a third of the teams I see now come from life sciences oriented disciplines in their program. Our experience has shown that actually what we're doing is equally valuable for them. A lot of folks will say lean startup doesn't apply to life sciences. They say that, because they say well this concept of a minimum viable product really isn't applicable. You may not know about that yet, but this is something that if you Google it and look online. I want to emphasize again, what we do is very unique and different in I Corps. It's the only program of its kind.

So a lot of accelerators out there, people who invest money in you,

even life scientists who are in accelerators, people put money into your company, but they are definitely trying to pick winners and that's not what we do as we'll talk about here in a moment. I would reference you all to Steve's website, steveblank.com. A very good blog post. This happens to be about an early life science cohort run in California out of UCSF. There's a great blog about the NIH pilot we ran last year. I invite everyone to take a look at that when you get a chance. Sort of a fundamental point here we recognize a lot of you, myself included because I had a technology business, think if I can just make the science work, I can just make the technology work, this will all be just fine. The reality is, we are often faced with very daunting scientific problems to solve. But really the point of this program is not that. In I Corps we're going to emphasize getting out of the building, getting out of the lab, and really interacting with your customers in a much more intimate level than you probably have to date. Because you never know what you will learn when you talk to people, I like to tell them.

So we really push you outside the lab. We're not really going to focus on the technology risk. We will push you to talk to regulators, we want you to understand that, but the real focus here is to help you at this phase reduce the market and/or customer risk. Because we all know Phase I has the component of technical feasibility, viability,

but also this sense of commercial viability, and that's really where we're going to spend our time in I Corps. Just so that you know, that's what this program is set up to do. We talked about NSF seven billion dollars, NIH is about 30 billion. Let's talk for a moment of why this is so critical. One of the things that we haven't mention is that the I Corps program actually was the brain child, if you will, of a Program Director in the SBIR/STTR program who said, you know, he had been investing in a number of companies over many years and thought, I think we can do better. So really the genesis of I Corps came out of the SBIR/STTR world.

Why is that important? Well, a lot of people that we deal with, I deal with a lot of startups in different contexts, will say if I just had the money, right, if I just had the money I could get things done. But what you see, if you look at some of the numbers, these SBIR grants play a fundamentally important role in the seed funding of high tech and particularly life sciences, physical science based companies in the United States. Don't worry too much about these numbers here, I'll just point out that there are a significant number of investments, you can see that HHS, which of course is the agency that oversees NIH, the second largest here. Significant amount of money invested every year into the SBIR programs. If you look back, fairly complex chart and I apologize, this is from 2010, and someone did a study

of the number of startup investments that were made in 2010, and you can look, there's about 10,700 of these startup investments. What you see as venture capitalists on the right hand side really go after the later stage companies, people that are generating revenue, have traction, already have track records of some type. But the vast majority of seed stage funding, for those early companies that probably don't have revenue, right, that are still working out things, actually comes from the SBIR/STTR program. So if you look at it at the high level, about 94% of this country's seed stage investment by numbers comes from the SBIR/STTR programs. Why is that important? Well, it's important because the natural trajectory for a lot of you is probably on to the Phase II, right? You're probably still going to be in this program for a while longer.

Everything we're going to do in I Corps is to help build that foundation to continue to move along the commercialization pathway that's so important in Phase II. So bottom line, a lot of startups and a lot of startups in this country, particularly in life sciences, physical sciences, heavy duty tech, very much dependent upon the SBIR/STTR program, that's a good thing.

Okay. So globally speaking, why are we here? I like to tell people, our goal is very different than some of the other programs that you will see. We're really out to improve your odds for success. We're

not here trying to pick winners. Because we're not acting as venture capitalists. We are actually here to help everyone improve their odds to succeed as opposed to trying to select those that we think will generate the most returns. Those are fine in other programs, accelerators, other things that are out there, that teach the same methodologies in a different sense than we do. If you look at startups, this is probably something that you are familiar with, but basically it's a pretty gruesome scene, right? 90 plus percent of them generally fail. By the way I would like to tell you that I could completely change that, but the reality is that we realize that's not possible, either. There's no prescriptive formula for success. Again, we're trying to improve your odds for success, create or enable more winners if you will and shift that curve in terms of the chart that I show. So what are you going to do?

I always tell people you're going to jump in.

Now, Red Bull was not a life sciences startup as far as I know, although some might argue differently. It's a great story here. I like to show this picture because this is the first person to jump in space and I can only imagine what he felt standing on the edge like that. That's what a lot of these teams, you will feel like if you come into our program, you're going to have seven weeks and we're going to be pushing you to do 100 interviews. You are probably going to ask

yourself why. You're going to be standing there looking over the edge, you're going to have a real nervous pit in your stomach. Again I know you are all companies already, a lot of you have sales experience, some of you have probably exited a company. But the reality is, this is a challenging process. Even for those of us that have done it before, right? And we're really pushing you to go out and interact with the customers. The answer to the question is also why? Well, how about 30 interviews, why don't we do 30 really good ones? Why do we have to do 100? I like to quote two relatively famous people. I will let you decide which one best applies to you. One is Richard Feynman, I absolutely love this quote because I think it embodies what we try to convey in I Corps. The quote is: The first principle is that you must not fool yourself. And yet you are the easiest person to fool.

I want you all to step back and ask yourself if that applies to you. I will raise my hand high and tell you, I know it applies to me. But there's another famous startup guru, which is Mike Tyson who once said, "Everyone has a plan until he gets punched in the face." Right? This is kind of the spirit behind pushing you out there, because until you get punched in the face, sort of metaphorically, you don't really recognize it. If you look at the top 10 reasons that startups fail, I will zoom in on the top three here, number 1, and I know this is

probably not correct grammar. Building something nobody wants. A lot of you, particularly if you are coming from the therapeutic space think, what are you talking about? Of course people new drugs. But if you step back and you think about what this really means, building something nobody wants, the question is, collectively does the market want it or need it. Number 2 hiring poorly. I will let you all work that out. Number 3, lack of focus. I will tell you in I Corps, we actually hit on all three of these things because we're going to put you through the pressure cooker. If you are not working together as a team, we're going to see that, you're going to see that. Number 3, we're going to get you to focus. This is a big problem. Even for folks who have been there and done it before. We're going to really try to help you in all three of these areas, but the principal thing we're going to try to help you do is making sure that enough people care when you are done. How do we build a startup? What's different today than what we used to do? I like to break it into three phases, I will go through these relatively quickly but I want you to understand what they are as we talk about the canvas. Really this first concept that we call a problem solution fit.

And in simple words what that means is that is there a big enough problem or need out there, right, in the market, are there enough people that are going to buy the thing that you've envisioned? The

answer to that is often relative, depending on what you are doing. Again in the life sciences space, often this is a fairly obvious thing. There is a need, okay? But the question is: Is it big enough? Like can you fulfill that? So we always start with all of our teams and companies with this very first step. Can you identify a problem or need out there that you are really going to solve. Then there's the second concept. This product market fit. All right. Same product, also needs service here. But the concept is, okay, well there's a need out there, can I build a product or service to meet that need? This is a very different proposition. You might identify a really big need or problem, and not be able to solve it. So there is this phase, of course. A lot of you are probably thinking about this already because most people are thinking about products straight off. Then finally the question is okay, do you actually have a business? Or do you just have some really cool technology, right? Maybe you're going to license it to somebody. Maybe just have a one product idea. But the real fundamental question we're trying to get at, do you have a business at the end of the day? Do you have a business model? So we spend a lot of our time in the course helping companies understand what it means to search for a business model. Because as we say, as a startup, you're typically searching for that business model. And existing big companies often knows its customers, knows the channels

and other things and executes to that business model. But startups are typically searching for one.

Michael already mentioned it, I have to apologize it's been a couple of issues in the translation here, a couple of typos that I will fix when I tune up and finalize the slide deck. But I want to go through quickly some of these nine boxes so you have a sense. We have already talked about customers. We always start there. I don't want you to just think about someone that's going to write you a check. In I Corps we spend a lot of time pushing teams to understand the difference between an end user, a decision maker, a payer, even people called saboteurs and there are other folks that we talk about and in some life sciences companies you even have a beneficiary, a patient that may not have anything to do with a purchase decision. But how is that person involved, if at all, you know, in your business model. That's customers.

value propositions. Michael already alluded to this. But really think about the primary problem or need and keep in mind that different customer segments are probably going to have different problems and need different value propositions. Rank them differently. That's why we really spend a lot of time working out this customer segment value proposition matching in the course.

There are other elements of the canvas. Again here's where the typo

comes in, I apologize. Channels, how do you get your product or service to market, this is very critical for some of the life sciences companies, which you'll hear in the examples in a few moments. Customer relationships. This is just another way of saying, how are you going to get, keep and grow customers? Seems so obvious at times, until you go out there and you start to really understand what's required to get them. Because fundamentally this is going to drive your cost of customer acquisition. The lifetime value of a customer . if you don't have a good sense of that, you're not going to have a working business model. We'll talk about revenue streams. How you're going to make money, how you're going to price your product or service. Key partners are very important, particularly for the life sciences companies. You are going to see some of the learnings some of the example companies had to key partners there. When we say 100 interviews, one of the things that I do want to come back and mention is that it isn't just interviewing customers. It's also interviewing partners and others in your ecosystem so that you are building up this business model. Key activities, what are you really going to focus on. What's your core competency or set of core competencies. As I tell people, the left hand side of the canvas here is really a balancing act, what are you going to do, versus what you going to outsource, what are the resources that you need to understand

that business model and we'll wrap up with the costs.

The one thing that I will point out here is that I went through that in sort of a linear fashion. But all of these elements actually are interconnected. So it's not sequential. It's very dynamic.

There's a lot of iteration, a lot of pivoting that goes on.

But fundamentally we use this process called customer development to build the business model. What does that actually mean? We have kind of talked a little bit about that. In essence, it means this.

This is the point behind the 100 interviews. That's this concept of getting out of the building as we like to say. You're not going to learn what the market needs sitting behind a computer, as tempting as it is, as comfortable as it is in your office or your lab, right, until you get out there and have face to face conversations with people, you really won't get the answers that you need.

We talk about this concept quite a bit.

Validated facts versus untested guesses. Or hypotheses.

So when you come into the course, I know that you've put a lot of effort already in, you've got a Phase I award, you're ready to get started, you're already started, but you're going to start with a canvas. And we're going to treat everything there as kind of a starting point. Okay? Guess, guesses, maybe they are very informed guesses, but we want to treat them as guesses, then the ultimate goal

is to find a way to convert those to facts, so to speak. So shorthand for customer discovery, customer development is how do you turn these hypotheses about the business model into validated facts?

The way we do that is the customer development and getting out of the building and interviewing the folks that are out there in the ecosystem.

Now, I'm going to give you a quick graphic to show you what happens to most people. The simple fact is, I have yet to see a team I've dealt with hundreds of them not only in the SBIR programs, but also in the I Corps program, academic teams, I've not seen a single team go through this process without making pretty significant changes to their business model. It may be they're still going after the same customers, but they've made a significant change with respect to either their value proposition or channel or some other element of the canvas, but I can assure you that changes happen. Typically this is what we see on day 1. Everyone throws a bunch of stuff up there, all of these customer segments I can go after, my market is seemingly unlimited. We quickly get teams to kind of focus in. Start out, try to pick something you can go after and over time you'll see even within a couple of weeks, they're going to add, change things, take something off that turned out not to be correct or not validated through their hypothesis. I will share a quick story with you, I just took a team

through - an SBIR Phase I - through NSF's program. At the very end, after this team, it was a short course, they had only done 30 interviews, after 30 interviews this Phase I company came to the Program Director and said we realized nobody wants what we got our Phase I for. What do we do?

I want to emphasize that in this program, in I Corps, you have the coverage to be able to admit to this. We want you to discover these things. It's not as drastic as that, it's not common that happens, but it can happen. You have coverage in this course to do that. We expect changes. We expect things to change. Your customers may change. Your value proposition, your channels, other fundamental things may change as you go.

So this is the typical sort of trajectory, you will end up in the seven week mark after 100 plus interviews, you will have the final canvas. We're going to look at you, congratulate you, everyone is going to be very happy with your progress and then we're going to tell you you just got started, right? Because the reality is this continues to go on beyond the course, but you will have at least assembled quite a bit of evidence based, as we like to say evidence comes from customer discovery interviews and this process really is what we call evidence based entrepreneurship.

So that's I Corps sort of from a philosophical 30,000 foot level.

Really, I think sets the stage now for some of the use cases, some of the folks that we had go through the pilot program. I will tell you that unfortunately we are not able to show the videos that I hoped to show.

But I'm going to give you some places to go because the absolute best thing, when people ask me, you know, how can I learn about I Corps, you know, Edmund can you tell me why I should do it? I give them sort of my sales speech that you just heard, but I always tell them talk to somebody that's been through the program because they're going to be better able to advocate for it and explain to you sort of one on one what they got out of it. So I'm going to try to do this, not having been on any of these teams, but I'm going to try to convey what some of the teams that went through in the fall really learned. But I also want you to go back And Steve's blog post has a great selection of videos, I would highly recommend you take a look at them. Only two minutes long, each is a snapshot, if you will, of the team's experience, so I would recommend that you try to go take a look at these. First I want to talk about a team called BCN Biosciences. Their presentation is available online in addition to the video. They came in with some pretty interesting assumptions, which we'll get to in a moment. You can see their total interviews here was a little over 100, very good for them. They came in pretty confident. I

remember the team from the first day. They had pretty much locked down what they needed to do. I won't get into the technology here because I'm not from that space and I'll just leave that if you look online you will see a really great video they have which we have taken out unfortunately here, but what I want to point out are some of the things that they thought coming in and then what they actually learned.

Now, I won't read to you each one of these, I'm going to actually skip ahead to this is the slide they came in with on the first week. And at the end of the course, this is what they showed us. They came in here and they ended here. You can see that several things really were kind of important to them. I like to go straight to the first one here where they were looking at one indication, when they came in and by the time they left they were looking at three indications. They thought initially if I flip back here that they needed to talk to radiation oncologists, but they learned they really need to understand what it takes from the pharma company to make a decision to license our stuff, that's probably our path to market. Seems obvious now. But it was not obvious to them coming in. And they learned a tremendous amount by actually going out and talking to people. The other thing that I thought was pretty interesting, very last point here, which is they thought they needed to raise \$5 million,

it was going to take six years and it turns out at least by the time they were done, they felt like no, no, I actually we can do it with significantly less money, maybe less than two million and exit in three years. Now, whether these things come out to be the truth or not, it's not so relevant to the point as the fact they learned in six or seven weeks here that these things were possible. They learned more in that period of time, that's what the video says, unfortunately we can't show it, they learned more in that six week period than they did in the 12 months prior to that. I think that's a pretty common thing. Let's move to another example. Again this is one of the teams I anticipated showing the video and I apologize I don't have that. For technical reasons, it's my fault. This team came in and what was really very interesting here, the team that thought well, you know, we have this new new way to create something for folks that need antibodies, can't make their own antibodies. They ended up talking to more people than we've had anyone in any I Corps program talk to. They talked to over 163 people and they traveled to I think four or five continents, again, very well described in their video. Shows you where they went. Really fantastic story. The reason that we like to show this one, again without belaboring the point here, no reason to go into the detail, is that this team really mapped out their resources, activities and partners here, exceptionally well. Now,

this is just a chart. But what I want to point out is they validated the elements that are on this chart through their interviews. This is not something they Googled and picked off the web and created this thing sort of hypothetically. It was through their interviews that they were able to put together this and validate this particular ecosystem for them. So that was also a very interesting story, again I highly recommend that you take a look at the video online when you get a chance.

I will wrap up with another team, this one actually happened to be looking at electronic health records, it was a digital health team, I didn't grab the video here. I actually have some slides. So this one will be a little bit easier for me to show a few of the things that I want to convey. We talked a lot a few minutes ago about what it means when we say go talk to customers. But what you see here is a snapshot of some of the folks that this team went out and talked to. Right? They talked to health care executives, electronic health record users, vendors, other industry executives and others in their ecosystem and what they learned from that, that's pretty amazing, I won't literally go through here, because it's one of their charts again that showed how the customers changed, but I want to show you some of the things that they put together. Again, I want to point out all of these are figures and schematics. These are not created

by sitting behind a computer and searching online and getting the data. They actually created this based on interviews that they had done. You can see they mapped out a very, very detailed, if you will, purchasing decision for their primary segment. Again, when we say talk to customers, we don't just mean end users. We don't just mean decision makers and payers. We mean all of them and fundamentally one of the biggest issues that I see most of our teams, companies and startups in general have, just came from a series of investor pitches this morning, heard three pitches trying to raise over a million dollars each, not a single one of those pitches could talk to this in this level of detail. This is fundamentally important if you are going to be successful, not only in raising money, but more importantly in actually selling something in the market.

So again this team did an excellent job. This is the kind of outcome you can expect if you go through the program. So purchasing decision, and really understanding in a nuanced way, very, very critical to the program and to your success.

Finally, I'll wrap up by pointing out we also have all of the teams really try to identify an archetype, that prototypical person, either the prototypical end user or decision makers or payer and sometimes particularly in life sciences, you are selling into a hospital, where there's not a single decision maker, there's a panel of decision

makers, right? And understanding how that works is absolutely critical. Again, great examples, great stories, I apologize I couldn't show you the videos, they are all available online, including several more, several on Steve's blog, great testimonials, much better than I can do in a webEx or webinar, I should say, I highly recommend you take a look at them. I'm going to wrap up quickly, turn it back over to Michael, then time for Q&A. We reserved a fair amount of time for that.

I did just recently had to give a quick sort of TEDX style talk on why I Corps. I'm going to wrap up with sort of my why I Corps for you real quickly. I know Dave was kidding with me, my co instructor said I read this slide and tears came to my eyes, how can you say this? Really, you know, it's really pretty incredible how much over the past few years how much the I Corps program has grown. We are so excited to be expanding it into NIH. Its' been a great opportunity for us. I will point out we also started to do with this other countries, it's not just a model that NSF and NIH have adopted, there have been plenty of other countries that looked and said this is really what we should be doing. It's really the first program, as I mentioned, really geared towards complex technology, engineering, life sciences based startups. It really is. We're not picking winners, remember we're here to help increase your odds of success.

It's really becoming the premier federally funded program for innovation. Michael alluded to this, I will just point this out, you might enjoy taking a look at it. The White House Demo Day this summer where President Obama talked about the program, there's a nice YouTube link you can actually hear him talk about it, then this recent strategic plan for innovation in America where he talks about I Corps there. He mentions the fact that we've expanded into six new agencies. NIH really being the premier one to be quite honest, we're so excited again to be here doing that with you all and hope that we can get you all in the program. I'm going to delay the Q&A until after Michael is done, we'll come back for that. Sorry for the long monologue, I hope that was helpful. Mike, I'll let you wrap it up and we'll take questions.

Michael Weingarten: Okay.

Edmund Pendleton:

Maybe not. Sorry about that, I forgot was going to click through the teaching team introduction. You have already heard me, I won't go into this. We'll talk more later. I will say again fundamentally and foremost I'm a technology entrepreneur, been doing this for a number of years and you get to hear plenty from me if you come into the program. David Charron who you heard from in California, who I

know had to go to another engagement. Has a tremendous amount of experience in this area, also a startup. Lydia McClure who is from Texas will be joining us in the instruction team. She's fantastic. She spent half of her experience in the life sciences area, and then I really want to highlight three folks that actually are our domain experts. One of the things that we do in the NIH program that's different, unique, we don't do it in other versions of it, we bring in domain experts. Again, we expect to have tracks in the program coming up, we'll have tracks on therapeutics companies. Nancy will be leading that. I'm excited to work with her. She's going to provide that domain experience. The great thing about Nancy and others is that they are also I-Corps instructors, they understand the process and really do have deep knowledge of the domains, as well. Bob Storey a good friend of mine, actually works with Johns Hopkins, has a tremendous amount of devices experience, he's going to be leading the devices track in terms of being that domain expert. Finally Todd Morrill who I believe joined us on line here. Todd is going to lead the diagnostics track and provide that deep domain experience there as well. All six of us have really a lot of I Corps experience, but also domain experience.

I think we're going to turn it over to Mike and then Todd if you're still on the line at the end we'll bring you in and any other

instructors online I would love to have them jump in as well. I'm going to let Michael wrap up and introduce the Q&A.

Michael Weingarten:

Thanks very much, Edmund, I appreciate it. That was a great presentation. I kinda want to amplify something that Edmund was talking about that really speaks to the value of the I Corps program, that's that one slide where Edmund you showed the learning that one team had done where they were able to define by the end of the course all of the key players in terms of purchasing decision. And that is so critical for many of our companies, when a number of our companies come into the class and you ask for the first time, you know, who are their customers, they've got things listed like patients, hospitals, very, very broad terms and what I Corps really helps teams do is it really helps them narrow down at a very targeted level who they need to be engaging and ultimately who are the people that need to be making decisions in order to purchase the products down the road once they get to that stage. And that's really driven by the companies themselves and they become experts as they get out in the community, they interview, you know, all of these different either customers or partners or people involved in the value chain. They become experts. You as teams will become experts in defining this.

So it's not about the NIH going out and hiring a bunch of experts to advise you on what the right plan is. It's more we're bringing, you know, this great team of instructors who can kind of guide you on your journey as you learn as you are learning by getting out in the community yourself and talking to all of these key players that can then help you define, you know, who your target customer is and what the process is going to be for actually, you know, getting them to have buy in to the product that you are developing. So I just wanted to reiterate that that's one of the key things that I found. There are lots of entrepreneurship type training programs that are out there. There are a lot of assistance type of programs. But what really separates I Corps is we try to offer people who can really guide you so that you can go out and do a lot of this discovery work yourself. But ultimately that's what that the way you will gain knowledge and success through this program.

So let me just spend a few minutes talking about how the program is going to work. So our plan is we're going to have two different cohorts that will go through this program over the coming year. The one that we're focused on right now is going to be we're going to be selecting a cohort of 24 different teams. Those teams will be made up of currently funded SBIR and STTR Phase I grantees. Across the 13

different institutes as well as the CDC that are currently participating in the program. And we will fund we will provide funding to those teams who apply to the program and that are accepted into the program, we will fund them through an administrative supplement to their Phase I SBIR or STTR grant. That supplement can be up to \$40,000.

And again that is described in the program announcement. That is accessible if you don't have it in front of you, if you go up to SBIR.cancer.gov you will be able to link to the program announcement from there.

The program is designed to provide three member project teams with access to instruction and mentoring, you know, the expectation is that everyone that applies and is accepted into this program will at least have those three team members. No more or less. And I'll be going through the roles of the three members in just a minute. Applications for the first cohort are required and they are all due by December the 10th this year. So just under a month from now, you will all have to have your applications in in response to the Funding Opportunity Announcement. And participants for the first cohort will be selected on a competitive basis and they will be notified around mid February.

So here's the specific links to the course description, I mentioned

SBIR.cancer.gov, the link to the full course there, also a link to the actual program announcement. Again due date December 10th. Selections will be made in February. And then the class will start March the 13th, it will be there will be a three day kickoff meeting here in the D.C. area and then the class will actually end May the 3rd. So a seven week program.

This just shows you, you know, what the program announcement looks like and the participating institutes and centers.

There's the website with the links on it.

And let me just go through some of the frequently asked questions. And then we'll be happy to take questions from the audience here. So the first question is may I apply for a no cost extension to meet the eligibility requirements? of the funding announcement. So our answer to that is that grantees should not request an extension for the sole purpose of participating in the I Corps program. We understand, you know, Phase Is are typically six to nine months, just based on the timing, you might be coming to the end of your period for the Phase I. So it does make sense to apply if you think, you know, there's an opportunity for you to learn through the program, and you still have some additional time and budget left on your R&D activities for your Phase I, then it is fine to request a no cost extension.

But, again, not just for the purpose of participating in I Corps, but if you do have some activities left on the grant, then that's fine.

Eligibility. So in order to be eligible, you have to be a small business that's supported by a currently funded NIH SBIR or STTR Phase I grant from one of the participating institutes. The predicate grant award must extend at least through May the 3rd, 2016, and it as I mentioned before, it should still have remaining budget R&D activities on the grant. SBIR contractors are not eligible to apply, it's just open for grantees. SBIR and STTR fast track grantees are eligible to apply providing that the grantee is currently completing the Phase I portion of the award.

Another question: Is the I Corps training program only for new companies and/or for inexperienced teams?

Actually, it's not necessarily. So we certainly believe that teams that are developing early stage projects, that might not have much in the way of prior experience, on the business side, that's true of a lot of startups that apply to the NIH, they will certainly benefit from the program.

But we also think that all teams would actually get a lot out of participating in I Corps. Even if you have prior commercialization experience. Because just a lot of the insights that you get through

going through the process of talking with 100 different customers or partners really just can have a huge impact on the overall course of your project and the course of your company as a whole, too. Here's a little bit more description of the three member project teams. Our expectation is that you're going to have what is known as the C level corporate officer, number one. The C level corporate officer would be the equivalent of a chief executive officer, or chief operating officer, really someone at that decision making stage who has relevant knowledge of the technology, deep commitment to investigating the commercial landscape of the technology for the company, but also substantial decision making authority within the company. That's the first team member.

The second team member would be an industry expert. This is someone with experience in translating technologies to the market. It can either be someone who already has an established relationship with the company or it might be, you know, a third party resource, someone that you are bringing in just to participate in this program. We really saw a mixture of that with the first cohort. People who were actually in some cases were part of the company or maybe on the board of the company or on an advisory committee for the company. You know, that made sense. The key is, you know, that you really want to have someone who has knowledge of the business phase that your company

is in, so that they can really play a role in really helping reach out to set up a lot of these interviews. Finally the third member is going to be the Principal Investigator of the SBIR or STTR Phase I award.

The time commitment. This is key, this is important. Each team member should plan so that each of the three team members should be planning to spend at least 20 hours per week on I Corps activities over the course of that seven week program. That's really required for you to get everything out of the program that the program offers. That the program offers. So the reason that, you know, that's just from prior experience, we've found that that 20 hours is really the time frame that participants are required to get out of the labs and meet with these different customers and if you divide up, you know, if you are targeting 100, that means that you've got to be doing probably 15 or so of those kinds of meetings every week, really planning for those meetings and then, you know, taking that information down and incorporating it as part of your business model canvas. So 20 hours is a commitment that we will ask everyone on the teams to make. And that will be part of, you know, the requirement. Who makes a good industry expert? Someone really with the right Rolodex, that has the industry contacts in your area of commercialization. That is important when first getting started with

the program because right from the start you need to identify who your targets are going to be for these customer interviews. So people maybe spend the first day or two having to struggle a little bit with that. If you have the right industry expert on your team already, they can really help with those first set of interviews, what we find is that those initial interviews ends up leading to other interviews and other interviews and your network grows and expands based on the interviews that you have. So one can really lead to another. Industry experts should also be someone who has prior entrepreneurial experience and really someone who has business expertise in your sector of focus.

Is there flexibility in how the three required roles are filled on the I Corps team? And, yes, the answer is yes. So just an example, if the Principal Investigator is also the CEO, then you may designate an alternate C level corporate officer to really lead the team. That's kind of up to you as a company and as an applicant to really think what might be the best fit there. We're happy to advise you, if you have a question about, you know, we're thinking about having this person be the C level member or this person be the industry expert, you know, feel free to contact your institute and the point of contact at your institute to really answer that question.

In other cases, it might be more appropriate to select a different

senior level scientist to serve in the PI role.

So, you know, doesn't necessarily have to be the PI himself.

And all teams should include three members, they all should be led really by someone who has decision making authority within the company. So that after you finish the program you can actually move to implement a lot of the things that you have learned from the program. So we wanted to ask you real quick to just take a couple of minutes or a couple of moments to take our poll. And there are three questions for the poll. First is are you eligible to apply for I Corps at NIH? Second is if so, do you intend to apply. And finally, what role do you plan on playing on the team, if you guys are going to apply. So the poll is actually open for you to do right now and they all have access to it. Okay.

So I'm going to keep going. But please go ahead and take the poll. And just let me give you a little bit of background on the application itself. So the research strategy section actually has six pages that you can fill as part of your application. The first piece of that is really the executive summary of the predicate SBIR/STTR Phase I grant and also your team and really the second piece is the I Corps team and project plan, which is up to five pages.

So for the executive summary, which again is just one page, this is really going to be where you want to have, you know, kind of a

highlights of your application and what, you know, we'll put a lot of stock into what you have in the executive summary. What we would like you to do there is give us a brief description of the specific aims of the Phase I project, also describe any progress that has been made towards achieving those specific aims and, you know, current as of the time that you are applying. And then, also, describe any technical, administrative or commercial challenges that you've encountered as you've been working on the project.

And then finally, give us a brief introduction of the three proposed team members, what their I Corps roles are, you know, for each individual, and really, you know, give us your justification of why you feel that individual is really appropriate for their particular role.

And then finally, include a statement indicating that each team member is committed to the time requirements of the program. Again, that's something that we hold very important is the time commitment.

Next, for the additional five pages, you can provide a little bit more detail on the team members and what some of their backgrounds are and how based on their background they would really benefit from taking and participating in the I Corps program. Also please talk about the willingness of the team to modify or refine the overall commercialization strategy. Based on the knowledge that you gained

by going through I Corps. So flexibility is really going to be key here because what we're expecting you're going to learn from this program and the learning that you achieve will affect your strategy going forward. So we just want to make sure that you're open to modifying and pivoting your strategy based on what you've learned. Then please get into the potential commercial impact and that includes describing how the research has led the team to believe that a commercial opportunity exists for the specific project, provide a brief profile of who you believe the typical customer of the proposed innovation is, describe the customer need that will be met by the proposed innovation, and describe how the customer currently meets those needs. So we're trying to get a sense here of how what you're proposing is in effect going to be an improvement over what the current state of the art is. And, you know, how your technology development activity will have a competitive advantage over what's currently on the market right now.

And then, if you can, to give us a sense of how much a customer would pay for the solution, you know, giving us a it could be an estimate, but if you can give us some kind of sense of what a customer might pay for the solution that you are offering. Then finally, delve into the project plan, which includes this is the actual technical plan of describing the Phase I development for this project currently under

development: are you a proof of concept, a prototype stage et cetera. Then provide a brief description of the proof of concept for technology demonstration that will be achieved by the end of the Phase I project. Then finally describe the next steps that the company will be taking to advance the project closer to commercialization, assuming that the Phase I project is successful, you know, what will be the next steps after that. Will the plan be to progress to applying for Phase II, will it be a plan to go fund raise after that? You know, how are you going to move this project forward after the Phase I ultimately. What should be included in the budget.

Well, direct costs associated completing the I Corps program. So, again, applications are allowed up to \$40,000. Please nothing larger than \$40,000 or you will be disqualified.

So the \$40,000, \$20,000 of that will be to cover your team costs for registration, your total team costs are all three members in total will be paying \$20,000 to cover the registration costs of the class. The additional \$20,000 on top of the registration \$20,000 can go towards covering travel costs, for two trips to the course site for the entire team, are so for the first cohort we're going to be meeting twice in the D.C. area. And so you'll have to plan for each of your team members to travel first for the kickoff meeting and then to come back at the very end of the class for the lessons learned meeting,

so please include those costs in your budget. Then also travel costs to conduct interviews with customers or partners. And then finally any additional costs can go towards personnel time for the three members that are on the team. What is not allowed are indirect costs or R&D costs of the actual research and development costs. All of the costs are supposed to go towards the I Corps itself.

Applications will be reviewed in two stages. First will be a review of the written application. To consider whether the team's participation in I Corps will increase the parent award's overall impact. So I encourage you to take a look at the review criteria, which is included under section V.1 in the Funding Opportunity Announcement, PA 16 019 and be sure to address the key points in the written application that address the review criteria.

The most responsive and the best qualified candidates will be contacted in the second stage through an oral interview process. For those that make it to the next stage, we're going to NIH staff will call you really to clarify what are the questions that we had from the written application. And also to try to ask a few additional questions. Again, this is just trying to get more information to figure out which teams are really the best fit.

So again, if you look under the program announcement, in section V, you will see a list of some of the typical questions that we would

ask during those oral interviews. You should probably give some thought to those questions before we call.

Again, the class schedule, class length is March 13th through May 3rd. Opening class is March 13th through 16th. After that, that three day kickoff session, everyone will go back to wherever you are located and then we will have online classes and that online class will take place every Tuesday, following that initial kickoff, from 1:00 to 5:00 PM. We will be holding a webinar with all of the teams that participate, and those webinars will be guided by the instructors. That will take us through April the 27th. You know, again that's where you are doing all of your customer discovery work and a lot of the online classes are sharing what you learned from the customer discovery and then that learning is combined with the instructors guiding you for the next week's activities, also.

Then finally, our final presentations back here in the D.C. area, May 2nd and 3rd, where you will present kind of your key - your final business canvas, your lessons learned and sharing that with all of the other teams that participated in the program. And we find that that lessons learned is really a great experience for all of the teams because they've all come so far from where they initially started with the program.

During the program, online consent will be hosted by the NIH to track

the progress of the teams. So you will be kind of trained on exactly how to use this online system. There's a lot of information there. I think you will be expected to look at that as you're going through the class and then sharing directly after you have each of your interviews, you post what you learned in the interviews online for the instructors but also for the other teams to see. The teams' progress will be shared with the entire cohort of I Corps teams to really facilitate group learning and this kind of fits in the overall teaching philosophy and a key part of the class is seeing how the various teams solve similar problems through listening to the instructors that really coach and critique the different teams and the success of the team is really less about what they came into the class with and really more about the learning and the discovery that they make and the pivot that they make in their overall strategy based on what they learn. That's really what makes the class exciting and really critical to all of the teams going forward and really what it makes why it makes it valuable for all of you to commit the time that you are going to be putting into this class. That's where the payoff is really because we see such a large change in improvement in the overall strategies that come out of the program.

Another key is just based on going through the program, we see that there's a lot of teams that really develop very close relationships

with the other teams that are going through the program. And they end up sharing ideas with each other that really help them move forward with their strategy.

will my intellectual property rights be protected when he discuss my ideas with the class? The answer is customer discovery does not require that you share the specifics of your IP. However, you will be sharing with the class what you learned on a weekly basis about things such as reimbursement, regulatory strategy, customers, partners, etc. So all of your presentations, customer discovery, validation notes and your business model canvas will be shared with the teaching team and will be shared with the other teams. If you do have specific legal questions or IP questions, I encourage you to consult an IP attorney. But we've had, again, a number of these teams have been through the NSF and also through the NIH and they are able to work through the IP questions.

Expected outcomes are going to be really an enhanced understanding of the business model canvas. Significantly refined commercialization plans and well informed pivots in the overall commercialization strategy. But we're also expecting that each of you are going to have much stronger Phase II SBIR and STTR applications. which should prove promising as you apply to the NIH in the future.

we will be conducting different evaluations as you go through the program. So we will be giving you an initial questionnaire when you come into the class and then at different points through the class, we will ask you also to fill out the questionnaire so we can kind of track, you know, your thoughts on how the course is going and use that to help us think about how do we continue to improve as class moves forward. We already talked about the 14 participating institutes. I wanted to thank all of the 14 institutes of the NIH for participating, as well as the CDC. We are really looking forward to working together with our colleagues on this.

And please submit questions that you might have. We can go up until 2:00, about? Okay. We have a few minutes left. So go ahead and send your questions in and Christie Canaria will be looking through them. We will try to answer whatever questions we can over the next few minutes.

Christie Canaria:

Hi, everyone, this is Christie Canaria, thank you all for sticking it out throughout the presentation. I've been collecting your questions over the course of the slides, I'm going to ask them out loud here and our experts, any of our additional staff on the line will be able to answer.

The first one here, if the company does have an active SBIR and wants to commercialize the technology in a slightly different area than what was proposed originally in the Phase I, is that acceptable?

Michael Weingarten:

This is Michael. Yeah, so what I encourage you to do is yes, we are expecting that you're going to see shifts and pivots in overall strategy. So just work with your Program Director at your specific institute and, you know, kind of be talking to them as you're going through the program or the end of the program and just stay up to date with them so that they know what you are learning and we're expecting that you are going to see some changes. And if based on what you learn in the in your by going through I Corps, you might find that you decide to come in for another Phase I application to take the technology in a slightly different direction. That actually happens a lot with the first cohort, but they wanted to go in a slightly different direction. They needed to get some additional research funds in order to support that so they came in for another Phase I application before they decided to go into Phase II. The results really come in a lot of different flavors and we are expecting that kind of result.

Christie Canaria:

The next question, if all we're missing is an industry member, is there a pool of industry experts to work with us and the rest of the company in this program?

Michael Weingarten:

Yes. So we have some similar situations like that, again with the first cohort. If you are having difficulty identifying an industry expert, again, I would contact your point of contact at the institute for I Corps, which is listed in the program announcement. And just kind of talk it through with them. And in a few cases we were able to connect teams that wanted to apply to the program with potential industry experts and then they had discussions and then, you know, in a lot of cases they were able to find the right person to add to their team. So we can help out with some of that. Did you want to say anything?

Edmund Pendleton:

I will make a quick comment, too. If you look back at the slide I showed the I Corps node locations where they are. All of these schools have, you know, relationships with potential mentors. I can't promise anything, but I would certainly reach out to them, too. That

would be a good starting point. A lot of these folks, even if they don't have somebody to recommend, know of other mentoring organizations in their area and can help.

Christie Canaria:

Another question: Is the program more suitable for life sciences companies than digital health companies?

Edmund Pendleton:

I'll take that if that's okay with you all. I'll jump in and say no that's not the case. Digital health is very different than therapeutics, and we realize that. We will have tracking. We will be able to handle teams that are slightly different than others, we do it all of the time in our other I-Corps formats where we have teams that are working on a variety of different things. Most of what we are going to be covering is pretty universally applicable to everyone in the course.

There will be occasions, and why we have the domain experts is, when we want them to come in and help with some of the main specific things. The short answer is no, if you are a digital health company, by all means apply, in fact this process really works well for those types of companies.

Christie Canaria:

Another question: Does the NIH or any individual institute offer life sciences I-Corps programs for projects prior to a Phase I SBIR/STTR?

Michael Weingarten:

Not under this funding announcement. However, there is a program that's offered through the Centers for Accelerating Innovation, which is another NIH program. That is focused on academic teams that are working on a technology that they think might be a good idea for a company. The Centers for Accelerating Innovation do support I Corps like programs that they can go to. And then NSF also sponsors education, I Corps educational programs that are more focused on academic teams and they some of those accept applications from non NSF grantees.

Edmund Pendleton:

Real quick points for those on the line that aren't companies already. The NSF program is for the academic teams, the pre company, at least the primary I Corps program. The requirement is that you have NSF lineage. However, if you approach one of the sites that I showed you there, we all have regional programs that allow us to back you and

get you into the system so that you can qualify. So, again, the thing is to do is to reach out to the closest node in your area and they can help you out. We can definitely find a place for you.

Christie Canaria:

All right. We've reached the end of our webinar slot. I want to thank you all for joining us. We will make the slides available as well as the transcript. I will also send out links to some of the videos that we were unfortunately not able to show during the time. Many of you have sent in some excellent questions. I will also be posting the answers to those questions when we put up the rest of the webinar materials. Again, thank you everyone for your consideration

Michael Weingarten:

Let me just encourage you to take a look at some of the videos. I mean, we're obviously enthusiastic about the program because we've seen it firsthand. But I think it's going to mean it's really going to connect with you if you actually take a look at what the teams that went through the program are saying and so Christie is going to send out a link to the videos and they are each about two minutes long. But I think a lot of you will get excited when you actually see what the companies are saying about what they got out of it and,

you know, I think they learned a great deal. I just want to wrap up, thanks very much for participating. If you do have additional questions, we encourage you to contact your institute with those questions. And we will get them answered. We encourage you to apply to participate in this program. I think you will get a great deal out of it. Thank you very much.

[End of webinar].