Bruce Riordan (00:02):

Welcome to the Berkeley Climate Change Network podcast. I'm Bruce Riordan. I'm the director of the BCCN, and today we're going to spotlight the very cool clean tech to market program at the Haas School of Business and our special guests to talk about C2M. Brian Steele, director of the program, and Anna Torres, associate Director. Welcome Brian, and welcome Anna.

Brian Steele (00:29):

Thank you, Bruce. It's great to be here.

Bruce Riordan (00:32):

So tell us before we get into the program, tell us a little bit about yourselves and how you got here. We'll start with you, Ana.

Ana Torres (00:41):

Okay, great. As you mentioned, I'm the associate director. Thanks for having us, Bruce. So my background has really focused around corporate innovation and connecting startups with corporates for commercial applications or investments or even acquisitions. So outside of C two M, I have a consulting firm where I do this work, and previously I focused on doing that work for many years. And the connection with climate is that for many years, corporates set really ambitious sustainability goals, but they didn't know how they were actually going to reach those goals. And so a lot of the work that I've been doing the last few years has been helping corporates partner with startups in the climate space to help them reach the sustainability goals. Great. So now I'm really excited to be part of the C two M program now, helping startups commercialize their technologies.

Bruce Riordan (01:35):

Excellent. Brian, how about your background a bit?

Brian Steele (01:39):

Well, I've always been drawn to building things, and so in the very early years in my career, the first 10 or 12 years I was involved with commercial real estate development, building high rises and industrial parks and hotels and resorts. And then in the early nineties, I switched over to what really was more of a telecom focus, but very quickly evolved as the world did towards an internet focus. So the internet became broadly available in the mid 1990s with Netscape and that sort of thing. And I just kind surfed that wave along with it and ended up being the CEO of Ideal AB Silicon Valley, which is the world's most prolific incubator for internet companies. And did that for nearly 20 years doing large companies and small companies. I was on the board of Pandora Internet radio and over 20 different companies, but by the time we started getting closer to the early two thousands, I was really getting tired of what felt like another ad in an iPhone app and ended up switching to the energy industry and ended up being the vice president for strategy and development at pg&e. And it was there that I connected with C2M, the founding director, Bev Alexander was a former pge executive, and she came and said, would I like to be a corporate sponsor? And I said, it sounds great. And from there, I became an advisor to the program. And a couple years later when I left pge, I joined the faculty and I've been here ever since.

Bruce Riordan (03:12):

Okay, great. Thank you for that brief intro on each of you. Okay. Let's talk about why the program, and then we'll get into the what of it. But why did Haas or someone else here at Berkeley start the program? What was the point here?

Brian Steele (03:28):

Well, I think one of the coolest things about that story is that it was the students. I mean, our focus is the students that is our true north. What keeps us coming back every year are how cool the students are and what potential they have. And it was the students that came up with this in 2008, deciding that they could help researchers at Berkeley Lab with very early stage, in some cases, mostly concepts, figure out how to bring these ideas and fundamental research projects to the market. And that was so successful for both the researchers and the students that the university decided to institutionalize this initiative. And that was done through the Energy Institute at Haas. Bev Alexander, whom I mentioned was hired in 2009 as the founding director. And the first class, the first group of students in which this was done on an organized basis was in 2010.

Brian Steele (04:27):

The origin story is wonderful, and we've seen many changes over the years every year in many ways, but fundamentally, the essence of the program remains very true to its roots in 2008.

Bruce Riordan (04:41):

So let's talk about the program, get into how the program works and how many students you have in it and how you get the startups and all of that. Either one of you can start with that. Let's explain the program.

Ana Torres (04:54):

Yeah. The best way to explain the C2M program is actually through our annual cycle timeline, which we repeat every year. So we'll both explain it. I'll start first in January and February is where we really focus on recruiting the startups that will participate in that year. So how we reach these startups is by leveraging our ecosystem of partners, including government agencies like ARPPA E and DOE, other accelerators like Greentown Labs and plug and play, many venture capitalists like also Activate is a huge partner of ours. So we tell these partners, Hey, we're recruiting for startups in this space, and then the startups apply this year. By the way, if you're a startup listening, our applications are due February 22nd. So we really encourage you to apply.

Brian Steele (05:46):

And so once that happens, and just to give you a sense, so last year we had about 80 complete applications, and from those, we ended up through a multi-stage process selecting 10 finalists. And that begins the next phase, which is the students. And so once we've picked those 10 finalists, and those will be announced around March 12th or 13th this year, we then start reaching out to the student community at uc, Berkeley. So the startups come from across the country, the students are 100% uc, Berkeley Go Bears. And so we reach out to the graduate student communities, both Haas things related to Haas, like the new Masters of Climate Solutions program, which can be done independently or in conjunction with an MBA and a wide variety of non Haas programs, a lot of PhD programs, physics, chemistry, biochemistry, applied materials, et cetera, but also law and public policy and many others.

(06:40):

And we reach out to them and say, Hey, it's that time of year again. Here's the 10 really cool startups that we have rigorously selected. Any one of them will present a great experience for you. The Haas students bid in the third week of April. Non Haas students apply by the end of April. And therefore at the beginning of May, we sit down with the Haas students who have bid in the non Haas students who've applied, and we pick the teams who will assist the startups. They will end up being five or six students on a team. Up to eight of the 10 finalist startups will be selected. So the maximum number of students we can have in the class is six on a team times eight startups. That's 48 students. And we were essentially full up this year with 46 students and eight startups. So that's what it looks like. And so by the time we get to mid May, we have a full cohort of startups and students and we introduce them to each other and off we go.

Ana Torres (07:37):

And over the summer, our students go out to do really amazing things, do internships or travel around the world. And during that time, Brian and I really focus on revamping the curriculum. So while we've been around for many years, every year we take student feedback very seriously and take a lot of time to revamp the curriculum. We also focus on gathering the mentors that we have in our program, many who are alumni that work hand in hand with the students, and also focus on recruiting the guest speakers as well as we like doing events outside of the classroom such as visiting startup facilities, which has always been really a nice add to the program. And we've gotten positive feedback from the students. So that's what we do over the summer, we're pretty busy. And then August rolls around and that's when the fall semester starts.

(08:31):

So I'll briefly talk about the curriculum. So we have a 16 week curriculum that's really focused on helping to commercialize the technologies of the startups and the students will be doing this work. So how do they do this work? As part of the curriculum, they will do market research and also do about 20 to 50 interviews with experts to gain the insight information they will need to actually help make recommendations to the startups. And we as faculty provide them with a lot of frameworks along the way to help synthesize all of this information. At a high level. We ask the students to really understand their technology of the startup they're working with, and then think about all the potential applications that technology could be used in different markets. And then through the semester, we narrow it down to ultimately have two to three very tangible recommendations at which point we start focusing on our summit, which Brian we'll talk about.

Bruce Riordan (09:35):

Great. Let me just jump in with a question before that even. How do you pick the kind of topics somehow in picking the startups from, I think you said 80 maybe applicants and all, and you get it down to eight or 10. Is part of that picking certain topics that are really hot topics right now?

Brian Steele (09:57):

Well, there's a couple different facets to the answer to this. So the answer is yes. We work hard to make sure that we have a balanced cohort, so we're not going to have all eight of them working on carbon capture and sequestration. We also look at what we did in a prior year. So we do try to mix it up as the years go by, but there's obviously some areas that are hotter than others, right? There's things that people are really focused on in the industry. And because approximately half of the several dozen people that pick the final startups are alumni,

(10:32):

The most salient question that we pose at the end of the debate is we turn our attention to the students and say, would this be something that you'd want to work on if you were to take C two M again? And we really try to see things through the student lens. And so yes, we do apply kind of a macro filter based on what's happening externally, but at the end of the day, we don't have our finger on the pulse nearly as much as the students themselves do. So we try to have a strong student overlay in terms of what actually gets into the cohort. Great.

Ana Torres (11:02):

I'll just add real quick, Bruce. We have a three stage selection process. So the first is faculty review the companies and narrow it down. Second is this selection committee that Brian was mentioning that includes a lot of alumni. We get their input and that's how we end up with the 10 finalists. But ultimately, the students themselves that will be in the class will select the startups that will actually participate in that year's cohort by letting us know which projects and companies are most excited in working with. So those are the three stages.

Bruce Riordan (11:35):

Excellent. So back to your chronology, Brian.

Brian Steele (11:39):

Yeah, thanks. So as Ana said, you got a 16 week process, and it culminates with two really valuable events. One is a public summit. This takes place in speaker forum on the house campus. We get people from across the country. I think we had over 350 registered attendees this year. And it's a wonderful event representing over 150 organizations. And the students stand up in a very TED talk quality manner, present, very refined presentations in which they are summarizing their work, their recommendations, the actionable next steps for the startups they've been supporting. They get live fire q and a from the audience. There's several networking events throughout the day, culminating in a large reception at the end. It's a phenomenal day. We've had people going to this event for over a decade now. It's a highlight of the year for everybody, and a great high energy way for the students to wrap up all the wonderful work they've done the following week.

(12:41):

They sit down with the startups on a much more private basis and hand them a report, quite often comprising about a hundred pages of detailed summaries of what they have actually done, the markets they've researched, the markets they thought about researching and didn't, and why didn't they? Because the world changes frequently. And when the entrepreneurs have this work product, they can always go back and pick up where the students left off if circumstances change. And so these reports, entrepreneurs tell us they will carry around for several years afterwards. They are really gold, and they're the very first document they will hand to a new hire to give them a comprehensive sense of the sector of the technology and the opportunities. So that's how the semester ends for us with those meetings the students have, we wrap it up in the middle of December, take a couple weeks off and do it all over again.

Bruce Riordan (13:38):

Thank you. Great. No, it's one of my favorite events on campus to come to. So you run a good show there. You get a lot done quickly with the students and the startups. It's great. Go ahead.

Brian Steele (13:55):

I was going to say, I thought I ran an on time event. Ana was running it this past year. Boy, I'm going to have to step up my game a little bit here.

Bruce Riordan (14:04):

Okay, excellent.

Brian Steele (14:05):

I've got nothing on her.

Bruce Riordan (14:07):

Well, speaking of time, I mean, you've been at this now, the program's been at this for almost 20 years. So let's look ahead, how do you hope that things might change and morph over the next five years, particularly with all of what's going on in our bigger world, not just federal funding, but federal policy and all of that within that context, what are you looking at do you think, for the next five years?

Brian Steele (14:39):

Well, it is a very interesting question, but I think whether it's your personal life, your professional life, it's kind of hard to look forward without knowing where you are. And so one of the things we really start with is, well, who are we? How did we get here? Where do we fit in the ecosystem, both at a Berkeley level as well as at a national level? And so when we started having those conversations first, we kind of recognize it's sort of a miracle will steer healer. I mean, the fact that we've been doing this since 2008, nine, depending on when you start the clock, it is both, I think, a testimony to how fundamentally right, Bev and the students got it in the early days and a testimony to how relevant C two M has been and remains. And one could assert, I think and defend that position that we are more relevant than ever for some of the reasons that you alluded to.

(15:37):

It is tumultuous out there, but the fundamentals are more clear than they have ever been. And it's so wonderful because the vast majority of what we do and try to do is not dependent upon hopes and prayers for future regulations that will have to take place for things to become more effective. We're looking at technologies that are effective on day one, and we'll just get better and better as time goes on and costs come down. So while there are lots of macro level changes, first of all, we start off by trying not to fix what's not broken. I mean, we have a really good machine that we've worked hard to refine every year, and so we remain current. But I do think that in as much as we have the fundamentals that we've kept alive, we will continue to fit within both what's happening nationally and globally, but also what's happening at uc, Berkeley and at the high school of business.

(16:43):

Because when we started this, we were almost the only game in town. If you were interested in entrepreneurship and sustainability, renewable energy, and you were a HA student, there wasn't a lot of choice. Well, there's a lot of choices now. There are a lot of classes. It's a dizzying array of sustainability, renewable energy, green chemistry, et cetera. And so we need to understand how we fit in that far more multifaceted environment. And so that's part of what we do. And the nature of some of the refinements that we're making is to ensure that we still stand out as a flagship program within the high school of business. So the experience is as good as it's ever been for the students who take the course

Bruce Riordan (17:29):

Within the startup campus as we're calling ourselves. Now, Ana, I want to add to that on looking ahead hopes and dreams here.

Ana Torres (17:39):

No, I mean, Brian articulated it really well. I would maybe just add part of what's ahead is why Brian hired me in the first place. So one thing I forgot to mention in the beginning is I'm actually a double bear. I went to Cal undergrad and also got my MBA. So as the program was thinking about how do we continue to stay relevant, and as Brian mentioned, an existing crowded space, one big piece of it is having someone on the faculty team that has been a student and that knows what students are interested in. So we always take current feedback from students, but also I think my role in the team has really helped to continue to lead the program into the next phases and continue to succeed for hopefully 20 more years to come.

Bruce Riordan (18:29):

Great. We hope that too. And what a great success story here on the campus. So to wrap up students, faculty, how can they engage with C2M? Obviously any of us can come to the big forum, but if we've got people from this podcast more interested in the program, where should they go to get more info and to talk with you?

Brian Steele (18:57):

Well, the biggest easiest answer is C2M@berkeley.edu. That gets to us period. So C2m@berkeley.edu. If you're a current graduate student interested and able to take the course, we will be announcing those finalists, as I said, on March 12th or 13th. Please consider bidding if you're a HSI W or full-time MBA or apply if you're from another graduate program. We have many other students throughout the year who volunteer to assist us with various things. We have many other people. Sometimes they're alums, sometimes they're people from industry who volunteer to come in and as a guest speaker, a subject matter expert, a coach, a mentor, there's so many ways to get involved with the program. And as you said, Bruce Summit this year, December 4th is always the second Friday after Thanksgiving, so that's December 4th this year. Circle that day on your calendars. It's an all day event, and it's wonderful if you can come and enjoy the whole day. So many, many ways to get involved. And we'd just love to hear from people. And so C2m@berkeley.edu is the easiest way to do that.

Bruce Riordan (20:08):

Great. And media deadline startups, February 22nd. So coming up rather quickly here. Great. Coming

Brian Steele (20:16):

Up quickly and that you go to Google Clean Tech to market, go to the four startups section of the website, the applications there. It's a Google form. It's quite easy. And we're already starting. It's like listening to the popcorn popping in the microwave. We're already hearing it pick up tempo as we look at the applications coming in. So we're excited about the response of the market this year.

Bruce Riordan (20:38):

That's great. Well, thank you, Brian. Thank you Ana, for telling us all about C2M. Great program. Thank you all for listening. I'm Bruce Riordan for the BCN podcast. We will see you next time on the BCCN podcast series. Thanks.