

Transcription

ASTC on Air with **Cristin Dorgelo**

January 25, 2018

START

Walter Staveloz, ASTC Director of International Relations: Well, hello, everybody. Welcome to this new edition of *ASTC on Air*. It's a very special one! As you know, *ASTC on Air* is the chance that we have to bring in experts from outside of the field to inspire us in the work that we do every day, and today we tried to combine these two things because we have the chance to welcome today Cristin Dorgelo, who is the new president of ASTC. But that was not the case three days ago, so she's more an expert from outside the field today, but starting as ASTC president, and so we are really thrilled to have you here. Cristin, welcome to ASTC. We have had some kind of intense days with you in the start here, and we'll certainly talk about that, but maybe you should start with telling something about yourself.

Cristin Dorgelo, ASTC President and CEO: Oh well thank you, Walter, and I'm so excited to be here. It's been such a great few days here during my first week at ASTC. Really excited to be on board. You know, I'm based in D.C. now—have been for the last six years—but originally I'm a California girl. I grew up in Southern California, went to UCLA—I'm a proud UCLA Bruin—and moved out here for a job at the White House. I've really been enjoying my time in D.C. I've been enjoying this transition to ASTC, and so hoping to talk to you a little bit more about my background, and what I'm hoping for here during my time at ASTC.

Walter Staveloz: Good, good, and that's what we're here for, so . . .

Cristin Dorgelo: Great.

Walter Staveloz: If we look at your career, there are three great large periods from my point of view, big chunks if you say. First start in L.A. with the media, and then working for the . . .

Cristin Dorgelo: The XPRIZE Foundation?

Walter Staveloz: The XPRIZE Foundation! Ah, I forgot it!

Cristin Dorgelo: No, you got it! No, it's good!

Walter Staveloz: And then to the, to the White House. And I guess in each of these steps of your career that you've learned a few things that you may bring to us. And what is your experience in these three different phases of your life . . . that you can help us with here?

Cristin Dorgelo: Sure, and I appreciate that you have constructed the history of me. So that will help me organize my own thoughts. You know, I did start my career at the *Los Angeles Times*. At the *L.A. Times* I worked in operations and I worked in professional development, and that means I'm a bit of a geek for how organizations get structured and what makes them really effective. It's also made me love facilitation and post-it notes—something that you and I have shared together already—and so one thing that I'm hoping that, that period of my life, along with the period that I spent at IdeaLab where I was starting technology companies, can help me think about how ASTC can function best as an organization. And we'll really be looking at our business strategy, our business model, to make sure we're serving our members. I think that history, and professional development, and organizational development, and operations will hopefully serve us well here at ASTC.

Walter Staveloz: Definitely, I think, and we're all looking forward to personal growth as members of the staff, but also how that can help our members as well.

Cristin Dorgelo: Exactly.

Walter Staveloz: So, we're looking forward to that. And then you went to the, the—

Cristin Dorgelo: . . . the XPRIZE Foundation.

Walter Staveloz: The XPRIZE Foundation! Why would I forget it all the time? And what is it that you did there that can teach us something here?

Cristin Dorgelo: Right, so, if you're not familiar with it, the XPRIZE Foundation is a nonprofit in Southern California that runs large incentive prize competitions to try to drive technology breakthroughs. So what that meant in reality is that I was running summer camp for engineers.

We were running competitions for super-efficient cars, for rapid oil cleanup technology for lunar landers. And what we saw there was the power of science and technology to address hard challenges that the world is facing. Also, what a small team of individuals can do if they put their mind to it. So I think coming out of that experience at XPRIZE, I feel committed to the power of innovation, of **open** problem solving—so what we can do in our ASTC community of opening up the questions we’re asking ourselves to a broader audience—and also what we can do to share with more youth how science and technology can really be a participatory sport. Something that we can all get our hands dirty in, get to work, and help solve problems together.

Walter Staveloz: And it’s more actual than ever, because the conversations that are going on about artificial intelligence, for example, focus our work maybe into that direction and it’s really going to become more and more important whether it’s good or not, you know . . . and so, we don’t give all the answers, I guess, but certainly we can address the topic as such . . .

Cristin Dorgelo: And engage the community in dialogue about it, yes.

Walter Staveloz: It’s going to be interesting to see how we—artificial intelligence will alter things. This can actually help solve communication problems.

Cristin Dorgelo: Yes, indeed. And that was a type of question we would take on in the White House role that I had. You know, I worked for President Obama’s science advisor and his U.S. Chief Technology Officer. We worked to develop science and technology policy on a wide range of issues. The work that was sometimes most interesting was these questions of emerging technology. What they mean for society, and how do we make sure that the benefits and capabilities and potential profits offered by those technologies are shared with all, not just with a lucky few. And that really came down to questions of education and access to learning opportunities, and something that I think we’re going to have to be talking about with our members a lot.

Walter Staveloz: Yes, I imagine so. So that’s a segue into your transition to the White House . . .

Cristin Dorgelo: Yeah!

Walter Staveloz: Now, you gave us a little bit about that, but maybe what's your essential role that you had there?

Cristin Dorgelo: Yes, so I would say two things. One, from a policy point of view, I worked mostly on open innovation and grand challenges. The grand challenges role was about setting moonshot goals so that cross-sector partnerships could set course for those ambitious goals and try to solve big problems. That was like President Obama's brain initiative when we have bipartisan support, \$3 billion dollars in funding, to try to understand more of *[points to head]* what's going on up here, and solve diseases of the brain. We also were looking at how to use tools like crowdsourcing, citizen science and its enterprises—those open approaches that many ASTC members are also already deploying—and trying to see how more people around the country could get involved in doing that type of work. Citizen-solved science . . . being citizen solvers. I loved that work. I moved on from that to become the chief of staff to the President's science advisor. That meant wrangling our whole team at OSTP [White House Office of Science and Technology Policy] and making sure the President was getting the best science advice through our science staff.

Walter Staveloz: Ok, so how does that then relate you think to what ASTC does?

Cristin Dorgelo: Right, so two ways. One, the Office of Science Technology Policy where I was looking at STEM education—at science, technology, engineering, and math education. That includes the informal science education that ASTC members are daily involved in doing good work towards. So that's one direct way. A broader way is that when we're looking across all those emerging technology fields and breakthroughs in science, we're thinking about how to engage the general public in understanding what that means for their community. I see a huge role for science centers to play in that local dialogue about the impact of emerging technologies. So that's the other relevant piece, is that as the world changes rapidly, new information technologies, what can we be doing through science centers to build that community dialogue about the future.

Walter Staveloz: So we have the impression sometimes that we are in a little bit of a bubble—that no one knows about us outside of the organization, so but, is there a vision . . . when you were at the White House, did you have a vision about informal science education, I guess about science centers and ASTC . . . did that come up in the conversation?

Cristin Dorgelo: Yeah, it's often hard when you work in a given field to figure out "How do I fit in the bigger picture?" "How do I fit in the national picture?" "How do I fit in the global picture?" When you're at the White House, you're looking at nationwide and sometimes global policy goals. You know, "How do we get more students prepared to solve problems of the future?" "How do we get more students having hands-on experience in making things?" And so, you'll see broad policy initiatives launched, like, for example, the Maker Education Initiative—trying to get more maker spaces across the country. The way that a policy person in the White House would view science centers is, "What could science centers be offering either through partnerships or on a one-on-one basis to advance those policy goals in their community?" So, I think a challenge for the science center community is to read the tea leaves about what people in an administration might be seeking in terms of policy outlooks and make the case for why this field is best positioned to bring those outcomes forward. Often the most powerful approaches come through cross-sector partnerships. Not a science center alone, but a science center paired with its local education institution or local community organizations. Those make powerful labs, powerful pilots for policies that could potentially be expanded nationwide. That's how we would think about it.

Walter Staveloz: How do we make sure that when we do projects to kids like that, that we do not just address the top ones who know things already? And that we are going large enough to make sure that all kids have the chance to come in contact with these new technologies and solve the problems of their communities?

Cristin Dorgelo: Yes, really important and very hard question that we wrestled with on a daily basis with at the White House and that I know our members are wrestling with as well. I'd say a couple of things. I'd say, one, we need to get better as a field about our practice related to building welcoming and inclusive environments. This topic came up on an "Ask Me Anything" we just did on the ASTC General Forum, and we were talking a bit about what it takes—the skills it takes—for a professional in this field to learn about emerging research about inclusive environments, to be able to welcome everyone in their community into their institutions. One way we do that at ASTC is by connecting peers to each other, so that science centers who are doing good work can share those practices with others and vice versa. It's really the community learning from the community, and connections to the research community as well.

Walter Staveloz: So you had a chance to meet with us a little bit already before, when coming to the ASTC conference in San Jose. What was your first impression when you came there and you met with the professionals from the science centers?

Cristin Dorgelo: Right, I was so glad to be at the ASTC conference in San Jose, and thanks of course to The Tech for hosting us there. The ASTC conference was a fire hose for me. I met hundreds, if not thousands, of people over a few days, and one of the most interesting interactions was the CEO Forum where CEOs of various institutions were talking with each other about the future of the field—wrestling with a lot of the relevance questions that you and I have been talking about today—and feeling committed to a collaborative approach for how we move forward. So that was an interesting discussion. Another thing that struck me was that “collaborative” word. How open to partnership, to collaboration, and to knowledge sharing individuals and institutions are in this field. That’s rare and it’s a wonderful thing. And it’s one of the reasons I’m excited about ASTC, because we can really facilitate that dialogue among our members.

Walter Staveloz: It’s interesting to see, actually, that the moment that you come on board we have this trend in the field to think more about itself, and then find solutions for big challenges that are ahead. So it’s a good time . . .

Cristin Dorgelo: Oh, I’m excited about this!

Walter Staveloz: We are, too! We are, too, because we think that people with the background that we were looking for to address that.

Cristin Dorgelo: Thank you, thank you.

Walter Staveloz: And then from there we went to Tokyo [the Science Centre World Summit 2017], right?

Cristin Dorgelo: We did!

Walter Staveloz: And somehow, the same trend was there . . .

Cristin Dorgelo: Yes.

Walter Staveloz: But also different things. What was your take on the World Summit?

Cristin Dorgelo: Yes, I mean, again, I'm lucky for the timing that I was able to join you at the Science Centre World Summit and so grateful to our hosts in Tokyo for the amazing event they pulled together. You know, we heard similar themes come up . . . heard these questions about "How do emerging technologies impact the work that we do in informal science education?" "What's the role of big data and data science, and how we do this?" And also, "How do we look at the role of international networks?" I was so excited to meet my counterparts at international networks around the world. How do we force that dialogue year over year, and also leverage what each other's networks and members are doing? I think we at ASTC are very excited to continue partnering with others on that work, and appreciate all the dialogue that was on stage there in Tokyo.

Walter Staveloz: And, I think, there are differences, but as you say, we have seen big similar trends . . . that are appearing in the conversations in Tokyo and in San Jose, so it's a good time for those who are local and on international level.

Cristin Dorgelo: Right, big questions being wrestled with all around the world in this field.

Walter Staveloz: So, when you've been through this—the experience that you have from your professional career and how they looked at our field, and then meeting with us at these different locations, what does that tell us, or tell you, about what the field should go towards?

Cristin Dorgelo: Right, well first thing I'll say is, I don't know it all yet. Right? So, I think—

Walter Staveloz: I don't know it either, so I'm asking you!

Cristin Dorgelo: Great, we're in the same camp! So one thing we're going to be doing this year is asking a lot of questions and doing a lot of listening to our members. We want to make sure we know what challenges and opportunities they're seeing in their institutions. We'll be doing regional dialogues—not just in the United States, but also with our international members. We're going to be engaging experts from outside of the field to get their good ideas for us and having shared dialogue. But, you know, I have some gut feelings about where we might want to go. One is I think ASTC needs to double down on its diversity and inclusion work. I think we can

continue building that—professional development opportunities with our members on that topic. We ourselves can do better as well, and that will help all of us broaden participation in STEM. The second is that I have a feeling we at ASTC can be helping do more of this future looking ahead that we've been talking about here today, to be sourcing good ideas for the field. And, again, on our recent "Ask Me Anything," there was a conversation about how we as a field, and informal science learning generally, prepare for the capabilities offered by information technology, data science, and as you mentioned, artificial intelligence—the impacts that has on the science of learning. I'm very curious about what ASTC can do to better support its members during that time of rapid technological change. So that would be another piece. And the third is around delivering increased value to our members so that not just the executive levels of the organizations, but emerging professionals in the field, are supported by ASTC as they pursue their own ideas for how to experiment with new approaches in informal science learning, and enable information sharing across those professionals.

Walter Staveloz: Do you see citizen science as part of that?

Cristin Dorgelo: Well I'm a bit of a geek for citizen science, and one of the things I'm most looking forward to is visiting with our members who are running interesting citizen science programs, because I believe in the power of the crowd. And, I think that is not just a light-weight thing—it is not just a fun thing for individuals to do—it actually has meaningful research impacts and allows youth in particular an experience with hands-on learning, which research shows is key to making STEM skills stick. So you hit on a hot topic for me and one that I'm very excited about talking with our members more about.

Walter Staveloz: That's good. I think it's a big trend in the field and that more and more people are doing it, and for good reason, so I think we can make some progress on that as well.

Cristin Dorgelo: Yeah.

Walter Staveloz: So, having said that, what would ASTC then look like 10 years from now?

Cristin Dorgelo: Oh, well, we're still learning, but I see several things. One is an expanded membership around the world. Really as our field grows and strengthens, making sure that we are servicing that expanded field. The second is continued robust professional development. You know, really, world-class thinking within our institutions, but also harnessing the thinking

from other fields and within our own. So, a very strong professional development field. The other is a staff, a board, and a membership, and a community that we service that looks like the world. Right, that looks like the diverse communities that we serve. So, again, coming back to that diversity piece. And I think at the heart of it is the heart of the ASTC staff I have seen here in the last few days—this commitment to science education, a joy of learning in science and technology, and a commitment to spreading that dialogue and that love for science . . .

Walter Staveloz: And making sure that it not only serves the members, but the community . . .

Cristin Dorgelo: The communities as well, right. Really, really landing that ability to broaden participation in STEM and increase science literacy.

Walter Staveloz: So, that's ambitious but . . .

Cristin Dorgelo: We can do it.

Walter Staveloz: We can do it!

Cristin Dorgelo: I feel confident.

Walter Staveloz: And maybe, you just mentioned a couple of times that we had this “Ask Me Anything.” If you can respond more with the feelings that you had about that. What questions were most challenging or the most interesting to you?

Cristin Dorgelo: Yes, I'm hoping that more of our members can engage with me in future “Ask Me Anythings” like that, because we got into some big questions quickly. People weren't asking me what my dogs' names are; they were asking me about the future of the field. I was particularly excited to see questions about what skills emerging professionals need in this field, because that speaks to this robust future, and really figuring out what they need to succeed. And that's something we can all support our emerging professionals around. The other thing is, we got into some of this around public policy and advocacy, and we haven't talked about that much today, but obviously given my background in policy I believe ASTC has a role to play in helping its members prepare to advocate for science, science investments, science education. And I don't just mean advocating with our elected officials, but also organizing and advocating

within our own communities, so that our communities see the value of science and tech in their backyards.

Walter Staveloz: Maybe a challenging question, so don't get too wound up. Yesterday Google-- all of these are from Google!—finding out about research that they did with young people, that maybe STEM and just STEM alone is not enough. And that you really need to include humanities and skills and soft skills to prepare you to not only become an engineer, but have the soft skills to be successful in society.

Cristin Dorgelo: Yes.

Walter Staveloz: So, is that something that our science centers should listen to?

Cristin Dorgelo: I think many of our science centers are already engaging the arts and the humanities in the way that they communicate science, in the way that they talk about problem solving, and I think that we have many promising examples to point to. I mentioned my work toward grand challenges and related partnerships. Many of those moonshot goals are being pursued by teams of scientists, researchers, artists, humanitarians, and storytellers. You need to have all of that at the table. Good designers. And I think that many of our members are already communicating in that way. The “A” in “STEAM,” if we're not just saying “STEM.” But, that said, there is a rigor in how we communicate science and technology in fact-based ways that needs to get maintained while we partner.

Walter Staveloz: Great, so any last goals that you want to share with us?

Cristin Dorgelo: The most important last thought—I talked a little bit about the soliciting process we're going to engage in. The goal of that is to move ASTC forward, together with our members, so that we emerge with a strategic plan for this organization that serves the needs of our members. And that takes into account all these trends we've been talking about today. And so I want to invite all of you to participate in that process. Whether it's through the regional dialogues that we'll be organizing, or through the online dialogues that we will be pulling together through forums like the “Ask Me Anything.” And I really look forward to hearing from you, and to learning from you, and to meeting more of you as we move forward. You are the core of the work that ASTC does, and look forward to hearing from you.

Walter Staveloz: Thank you so much, we're really looking forward to—

Cristin Dorgelo: . . . and Walter, thank you!

Walter Staveloz: We're really looking forward to—

Cristin Dorgelo: I'm looking forward to working with you!

Walter Staveloz: Thank you!

END