

Dancing with Elephants: Startup Entrepreneurs and Corporations Collaborate on Massive Clean Energy Innovation

Until recently, environmental protection discussions have mainly centered on law and policy. But the rapid emergence of advanced technologies has opened opportunities for established corporations and innovative startup companies to partner and thereby play a vital role in shaping 21st century environmentalism. A panel of experts described the massive, elephantine opportunities during the Environmental Law Institute's January 14 GreenTech webinar on "Liberating Digital Solutions for the Environment: Catalyzing New Ideas," the second in an eight-part series launched November 17, 2019.

Webinar moderator Nicole Systrom – founder of consultancy Sutro Energy Group that seeks to accelerate high-tech climate solutions – set the stage by noting that all three panelists had advanced the practice of fostering collaboration between corporations and startup companies to drive sustainable technologies into the marketplace. Although startups and corporations "are different animals," there is a lot to be gained if they tap into each other's strengths, she said. Often that opportunity goes unseized. But Systrom asked the panelists to share their knowledge of how best to facilitate such collaboration.

Panelist Nikhil B. Gargeya, Partnership Manager with management consultancy Activate, said an "absolutely huge" need and opportunity exist now that societies are rushing to decarbonize energy, industry, and other sectors. With the new push toward decarbonization, organizations that are part of the dynamic technological innovation system are operating differently today. For example, traditional venture capitalists' investment strategies now leverage government and corporate engagement, and government funding is supporting early-stage companies.

Within this new environment, corporations have an opportunity to move faster in supporting startup companies' technologies at the earliest stages, Gargeya said. If corporations get involved too late, it can be "a death sentence" for many startups working to bring hard-tech rather than software to the marketplace because of the sizeable capital expenditure and other factors. To avoid that pitfall, Gargeya's company works across the government and private sectors to help scientists with promising research get through the early stages of launching a company.

Activate expedites the technology innovation process by offering a two-year fellowship that provides entrepreneurs with a salary, lab access in Berkeley and Boston, and "intense curriculum and mentorship" to build their business and acquire funding from various sources. The company also works with industry partners to determine where and how a startup can plug into solutions demanded by markets.

Liz Ramsay Dalton, Vice President of Strategy at Powerhouse – which is both an innovation firm and venture fund – agreed that the transition to decarbonization over the next decade presents

a massive opportunity for technological innovation. She described her company's strategy of either directly investing in clean energy and mobility or helping early-stage startups engage with the appropriate investors and corporations.

Corporations are driving change in their sectors and "moving the needle on climate change" by investing in renewables, scalable battery storage, mass electric vehicle adoption, and other innovative developments, Dalton said. Companies such as Walmart, Morgan Stanley, Google, Microsoft, and even energy majors like BP and Shell are making major commitments to renewable energy. But the companies realize they cannot achieve their decarbonization goals alone and are looking to engage with startups as they pursue innovation as a key strategy. With corporations moving forward on sustainability, the opportunity is ripe, she said. It's a question of how innovators can get a foot in the door and, having done so, talk productively with investors.

Brandon Middaugh, Director of the Climate Innovation Fund at Microsoft Sustainability, said that from a technology corporation's perspective it is worth underscoring two key facets of innovation. First, there are opportunities for collaboration on the digital tools that enable the adoption of hardware innovation, and second, corporations across all sectors are engaged in developing and maturing markets for emerging solutions. For Microsoft to meet its commitment of becoming carbon negative, "water positive," and "net zero waste" within the next decade, the company recognizes it must create end markets for the goods and services needed in a "climate-forward economy" and develop digital tools for gaining insights into planetary conditions. Given this need, there are significant opportunities for collaborating across different types of organizations to move technologies to market.

Getting down to specific lessons for would-be collaborators, Gargeya said startup entrepreneurs must be very clear about how a corporate partner could fit into the startup's vision for a two-year developmental period. Also, because corporations have many different groups with varied resources and expertise, "corporations are a little like dancing with elephants," Gargeya said, and suggested that entrepreneurs pursue several conversations with different groups in a corporation, and even talk with more than one company because "things can change" in large companies as they shift personnel around.

Dalton, who said Powerhouse helps startups dance with elephants, emphasized that entrepreneurs eager to make a deal must be clear about whether a corporation is a good fit for the solution their startups are providing. Likewise, corporations can be too "laser-focused" on a specific goal and might need to consider whether a slight modification could make a startup's proposal suitable.

Middaugh urged entrepreneurs to understand the technology roadmap that will get companies to the net zero end-states they envision and where on the roadmap emerging solutions can contribute. In addition, she said "modularity," or being able to test or pilot an innovation at a "small level," is critical for technology adoption at any company and in any sector. As the

technology matures and confidence in it grows, a new solution can advance from research and development into a production environment or deployment, an approach Microsoft follows. Gargeya seconded Middaugh's idea of "bite-sized engagements" to build trust organizationally and interpersonally. People often jump into a very large engagement and then realize they are tied into an organization with which they may not work well or, even worse, with which they have a strategic misalignment.

As emphasized throughout the webinar, opportunities for entrepreneurs and corporations to "dance" together abound. That is true now more than ever as the new administration of President Joe Biden pursues an aggressive climate and environmental justice agenda and as the former emphasis on avoiding carbon emission gives way to a corporate demand for carbon removal using natural or engineered mechanisms.

Is that a band nearby striking up Henry Mancini's Baby Elephant Walk?