URL: https://ecorner.stanford.edu/clips/first-principles-thinking/

Michelle Lee, CEO of Medra, explains how she applies first principles thinking to guide her company's goals and focus. She gives examples of how she determines which problems to solve and advises founders to find clarity by imagining how things would turn out if taken to an extreme.

Transcript

- On this idea of first principles, 00:00:03,540 is it the scientific method? Is it basically just articulating some basic premises of inputs that you think are driving an output and then testing that? Or is there, I don't know if there is an example, are you dealing with that right now with hiring, for example? Is that coming up with issues on the team or is there tangible example we can walk through on how you applied first principles? - Okay, so let's take the example of 00:00:34,267 what should my team focus on right now? In the beginning when we started working on these, we had a customer, so they told us exactly what we should be working on.. Once we finished that customer, then it's what's next, right? Should we get another customer? Should we be doing R&D? Should we be building A, B, or C? And I think that first principle thinking is really thinking first about like, what is that goal? What is the goal you're trying to achieve here? And really be able to work backwards from there.. So our goal is to create a product that scales and a product that customers truly want, that really solves their problems.. That's really our main goal is like, I believe if we can solve customer's problems, then we're building something with value.. Well then the question is how do we actually figure out what problems to be solving? Let's say we just signed another customer and we built for that customer, but the question is like, maybe that customer just had a very specific need that is not what every other customer wants, right? So then that wouldn't be helpful.. So if we really wanted to understand what's going to solve problems for a whole market, in a whole field, we have to go talk to people.. And so I realized that actually instead of spending my time doing more engineering work and trying to maybe build for new customers or like building like what we think would be really cool.. I just need to go out there and talk with scientists, talk with biologists, talk with founders of biotech companies and really understand like, what do you actually need? And can we help you with that? And maybe figuring out like are there clusters of things where we see there's like a huge need in, so we can really focus our time and energy on that.. Another example here would be, oh, or Ravi, I don't wanna- - No, keep going, these are great, this is great, 00:02:48,870 it's like prompting all these other things, these are great, so keep going.. - Yeah, so another example is we now have customers 00:02:55,380 that deployed our systems and with every new product, it's the first time, the MVP, right? The minimal viable product, the first time people ever used it..

And so there's going to be problems with it, right? And so we're now like supporting our customers and trying to fix all the problems.. And a question comes up of like, hmm, what should we be focusing on? Should we again try to get another customer? Should we try to make it easier to have new customers? Or should we try to really support our current customers?

And one tool that you can use when you're doing first principles thinking is to really think about things taken at extreme, right? Like, let's say we focused on making it really fast to scale our product right now, so every new customer, and maybe it takes like, two weeks to be able to set up a new robot for them.. Well if you take it to the extreme, and say, let's now deploy hundreds of robots, like every two weeks we're gonna deploy 100 robots.. But support actually takes us, let's say 10 engineers, I'm just exaggerating here.. Then our company absolutely cannot scale just 'cause it's fast, we can have hundreds of robots out there, but now for every robot, we need 10 engineers to be able to support, right? So taking to that extreme, it was very clear to us that as a team we actually needed to focus on support now, and build out all that infrastructure for support, to be able to help us scale our product...