URL: https://stvp.stanford.edu/clips/de-risking-a-lofty-enterprise

Payam Banazadeh, the founder and CEO of Capella Space, explains how the disappearance of a Malaysia Airlines flight in 2014 led him to focus on improving satellite infrastructure. He describes the first stage of the company as an exercise in systematically retiring a series of risks.

Transcript

- A little context on Capella very quickly.. We are trying to build an infrastructure around our planet in space using satellites, in order to monitor our planet and observe changes.. Believe it or not, this doesn't really, really exist.. I mean, we have certain capabilities, but there are a bunch of gaps that requires, in our opinion, to be changed.. And the reason we started the company was this, how many of you remember MH370, which was a Malaysian flight going to China and it just disappeared, right? I think this was around 2014, I was at Stanford, and everyone was looking for this plane for multiple weeks.. I mean, if you were watching the news outlets, this is all that people were talking about, across all the channels.. There were multiple governments superpowers, China and US and Russia, with all of their assets looking for one plane, and it was not a small plane, it was a triple seven with 280 passengers that just went missing and we couldn't find it.. And at that time, we were thinking to ourselves, wow, why is that? Why is it that we couldn't monitor that area? And why is it that on this one planet that we call home, such a big plane can go missing and we have nothing that we could do about it? And so we just started asking questions of why is that, what are we doing and, and how we doing? And we thought it was really important, we thought monitoring this one planet and this one home that we have is really, really important.. So we started taking classes at Stanford, we took a class called hacking for defense, which was taught by Steve Blank.. And it was all about customer discovery..

Our vision was, we wanna live in a world where nothing goes missing, where we can monitor all these important places around the world.. And if something does go missing, we can go back and we can look at it.. So in parallel outside to the class, we were sort of doing technology development and conceptual feasibility of, can we actually build a satellite that can do that, it could see through the clouds, can see at nighttime, could it be small enough that we could launch an array of them and build business out of that? We took a class with Steve Blank, and it was all about customer discovery.. And the question you're asking in the class is, imagine you did build that, so what? Who cares about that? What is the market? What are the opportunities? What's the business? And after 10 weeks of pretty tough challenges by Steve, we thought to ourselves that this would be interesting.. And there's a big opportunity in it.. So we went out and we decided to do fundraising and start the company.. And as I was kind of thinking about this talk, I dig my notes, and I found a whole bunch of pictures from three years ago.. There's actually a whiteboard in the Venture Studio at GSB and we were trying to figure out how much money we should raise.. And it's like, it's super high level, was super basic.. Looking back at it, I'm kind of sort of embarrassed..

But we were like, you know what, if we raise 200K, we have one objective and our objective is to essentially retire some of these risks, and then go back to investors and say, we did look at it, we're the right team.. And this is the right idea.. And we know how to build this thing.. And the major things that we wanted to derisk and I think every startup that starts, these are the four pillars that every investor is gonna look at at the very beginning of the company.. One is the technology risk, sorry for the handwriting.. One is the technology risk, right? Is this technology actually feasible to be built? Are you dreaming of something that is feasible or not? And for that, we wanted to use our summer, this was sort of a three month period that we had, we wanted to use that summer and build a small little prototype of the hardware and fly it on a helicopter and demonstrate that we could actually build such a little prototype and execute on it.. Then there's the product risk, okay, well, for us the product and the technology was slightly different 'cause we had to launch these satellites, capture imagery, and then the imagery had to turn into a product.. Well, can you actually do that? Then there was the market risk.. Imagine you do have the tech and you do have the right product, is this actually a big enough market for venture? A lot of businesses or not and that's totally fine.. But is this a big enough market for venture, so we wanted to talk to a bunch of customers, get letters

of interest and show that if we did this, people would be interested in consuming this type of imagery and information..

    And then there's the sort of company risk or team risk, which is, is this the right team who's gonna be able to bring the technology together, execute on the market and take this to the finish line? And then at that point, early on in the company's life, the company risk, the team risk is all about the people.. And I had this one investor that told me, I am really not looking at the business model 'cause I know the business model's gonna change.. Everything that you're doing from now until the final product, how you get there is going to be vastly different than what you're proposing now.. I am looking to figure out if this team is the right team, that when they hit the wall, and when things don't work the way is intended to, does this team have the ability to sort of go around it?..