



Stanford eCorner

Matching Your Product to Customers

Scott Summit, *Bespoke Innovations*

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Bespoke Innovations Co-Founder Scott Summit shares his company's challenge in finding a working business model and matching product to customers in a viable market. Originally inspired to bring prosthetic legs to customers in the developing world, Summit and his team faced issues of cost, time and complexity, which lead them to eventually focus on higher-end offerings for customers in the U.S. market.



Transcript

So, the idea worked great. We printed a leg \$4,000 and it had the feature set of a leg probably in the sixty to a hundred thousand dollars set range. And my hope of getting this virally spread throughout the world fell apart because the rest of the world doesn't have \$4,000 to spend on it. I talked to the International Red Cross and they said yeah, \$400 tops, try to get it down to the 200 range. So, I was an order of magnitude off, you know. So all of a sudden, the idea that I had of creating this very disruptive change in the prosthetic leg world didn't really happen, kind of fell apart. So, I thought about it, redesigned everything and thought okay, if I am going to create a leg that's now for the U.S. market, let's shift markets and gears. How do you make something that is just flat out beautiful? That's the thing that I want to see when I wake up in the morning, that's the sports car that I get to wear and get to show off to the world. So, I set about to that and this is what was created.

This is a guy named John Siciliano, hit by a drunk driver at 18. And so again, a 3D scan of his leg mirrored over. In this case thinking of a higher dime, higher budget, so did leather, chrome, polished metal and the idea is just to make it look good. Now he gets a couple of other details. He gets to switch out the leather in the front because if you are going to treat it little bit like fashion why not? The leather is going to wear out, swap it out from one time to the next. And this was looking great. His girlfriend saw him wearing this, I guess, wearing is a term when there isn't even a term that's terribly good for this. His girlfriend saw him with this and she said 'Wow, I like that leg better than your other leg'. And here he is scratching his head and he turns and he says 'Nobody has ever said that, nobody says that to an amputee, that's the weirdest thing I ever heard'. And I was like yeah, that means score, that was a victory.

So, the problem there is that I started realizing that the amount of time it takes to create this and the complexity, the pure geometric complexity to create this leg was pretty prohibitive. I'd narrowed my market down to probably about five and so the business model, for all the business people here, they'd do the math and realize, yeah that is... So, I started thinking okay, really how do I strip this down to the core with the essence of it, giving it, giving something that is otherwise clumsy machinery, giving it a beauty and a grace and a form and a sensuality and a uniqueness that wouldn't inheritably have. And so I was riding around on the motorcycle - this isn't mine, I wish - but riding around on my motorcycle, thinking okay well motorcycles do this all the time. You know, why don't we just strip it down to its basics, it's essence here. And so I tried making something that was the lowest cost way to get the job done here and had a test pilot. Chad here tried it out. Now Chad is a competitive soccer player and his challenge was that you can't play competitive soccer when your legs have been replaced by a thirty millimeter titanium pipe because somebody is going to kick you at full speed and bust their toes and all their metacarpals. So, he was not allowed to play, and on top of that he couldn't feel the ball because you can't anticipate the trajectory of how the ball is going to ricochet off your leg when it's a 30 millimeter titanium pipe. So, scanned his sound-side limb, mirrored it over and 3D printed this leg and we put it on him and watched him play soccer.

And what was interesting is after a few weeks - this is not entirely expected - he said all of a sudden, his brain started to recognize and remap this new leg to his body again. He lost his leg, eight years before he lost his leg to cancer. All of a sudden he is playing soccer, competitively again, because his brain is thinking that his body is in some form back. So, it's a type of, it's a way of really regaining your sense of self, your sense of physicality.