Texas students use 3D printer to make prosthetic limbs

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COLLEGE STATION, Texas (KBTX) - Faster, cheaper and more accessible than ever before. Two Texas A&M doctoral students are developing new technology that will be a game changer when it comes to making prosthetic body parts.

Their product isn't even on the market yet and the demand is already high.

In a small lab on A&M's campus, big things are happening.

Brandon Sweeney says, "It's really the driving force of why I come to work in the lab. It's those eureka moments of oh my gosh this is really going to go somewhere."

For Brandon Sweeney and Blake Teipel, that eureka moment has been two years in the making. They've figured out a way to make prosthetic body parts using a 3D printer.

Teipel says, "For us, in our case, we're taking polymeric nano technology and coming up with applications

that can actually make a difference in people's lives."

The secret to their success is a special coating they now have a patent for.

Teipel says, "With a typical 3D printed part, it'll just peel apart in between the layers, so it's a pretty fragile piece, but for this technology, with the coating, as you print the layers you heat up the whole part and cause fusing to happen all across the entire component."

The demand for their new invention is growing.

Teipel says, "Globally, every 30 seconds, there is a new amputee."

The problem is the two prosthetic options currently on the market are extremely expensive and often out of reach. The device can easily cost upwards of $50,000.

If you want a custom prosthetic, that price can easily triple.

Teipel says, "Our hearts all want to help these people, but how do we do that? For the first time, 3D printing technology can actually do that.">

Sweeney adds, "Because you can customize it to that individual user and you don't have to spend that $100,000 or $200,000."

In fact, you don't have to spend anywhere close to that.

Sweeney says, "At the very basic level, the materials cost and the time it would take to make it? $20."

Teipel adds, "Next generation materials are really making it possible for us to address problems that have so far been to expensive to too technologically advanced, especially for the world's poor."

Sweeney says "Being in a field where sometimes people don't understand or really care what you do, when you do find those few applications where people say wow this is really cool, that makes it worth it."

There are several large companies interested in their technology. They hope to team up with one of them soon that is socially conscious, someone who shares their philosophy of "doing well by doing good."