



Uku'Hamba Prosthetics & Orthotics

ENTREPRENEUR: Sibongile Mongadi

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TEAM: 5

LOCATION: Soweto, Johannesburg, South Africa

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Using 3D printing technology and plastics that are recycled and collected locally, Uku'Hamba Prosthetics and Orthotics create unique, lightweight prosthetics in bold styles, giving users access to empowering prosthetics that delight, at a fraction of the cost to both users and the environment.

“We get our material from discarded plastic water bottles which people usually throw away and we just need to pick it up. So, it's more affordable for the user, as well as being more profitable as a business.”

Words and photography by Chris de Beer-Procter



ABOUT THE BUSINESS

Sometimes inspiration comes from unexpected places, as Sibongile Mongadi, founder of Uku'Hamba Prosthetics & Orthotics discovered while she was being treated at Chris Hani Baragwanath Hospital in 2018. She had been booked in for a health issue of her own, a fact that she soon forgot when her interest was piqued by the story of a fellow patient who had been struggling to access a prosthetic limb from the public sector for over five years. "I forgot that I was ill, I forgot why I was there. I saw that something was happening, and I needed to pay attention to it" she says.

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Inspired, Sibongile began asking questions. She spoke to a surgeon at the hospital's orthopedic center who explained that even though the hospital wanted to help amputees, they did not have the capability to produce enough prosthetics to meet the demand. Sibongile wondered, 'is there nowhere to outsource this in the private sector?' As soon as she returned home, she got to work.

"I started doing more research, I thought one way or another there must be a way to solve this" she remembers. To start, she set out to understand the problem at hand. Prosthetics were partly so

inaccessible to most amputees in South Africa because manufacturers relied on expensive imported materials like silicone and carbon fiber.

As an alternative to these, she turned to an ubiquitous waste material, discarded plastic. Uku'Hamba works with local waste pickers, alongside some collection efforts of their own, to gather discarded plastic water bottles which are recycled into the material required for their 3D printing manufacture process.

The benefits of utilizing this waste product as their primary material are massive, says Sibongile. "We don't rely on imports, we find the bottles all over our communities. Plus, because it's something people throw away, we're not spending money on buying the material and we get to put that plastic to use again," she says. "It's more affordable for the user, as well as being more profitable as a business," she adds, noting that Uku'Hamba's prosthetics are close to 80% cheaper than other traditionally manufactured prosthetics.

During her research, Sibongile also engaged directly with prosthetic users about their concerns and desires. "We heard that some prosthetics are heavy, it's hard

to carry the weight. They're also not often designed according to a customer's exact needs, you just get what you get," says Sibongile. Sibongile realized then how the company could set themselves apart.

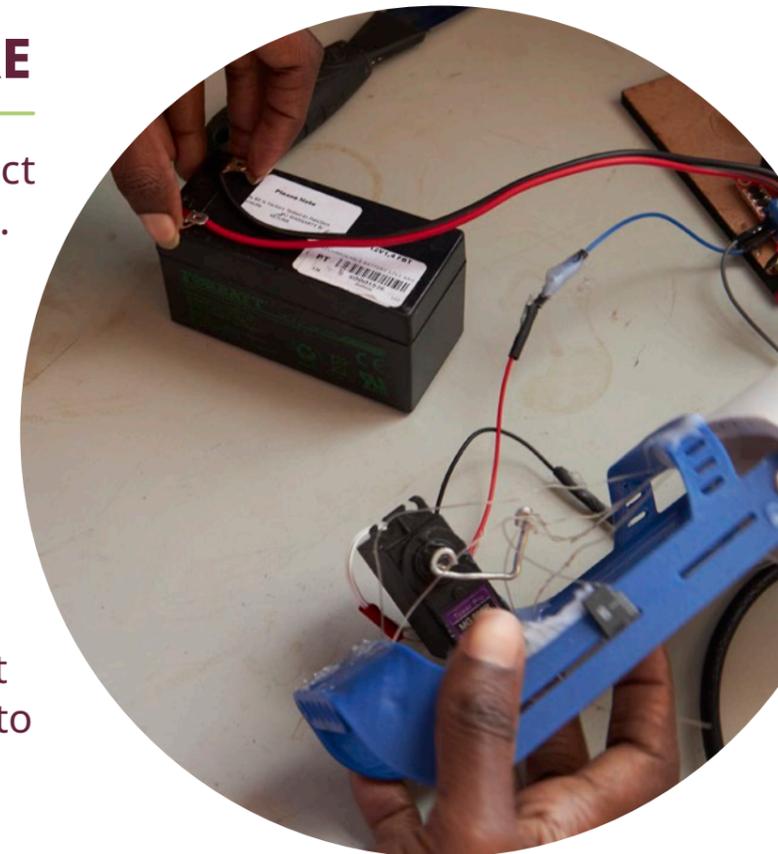
"We cater to a client's specification, they get exactly what they need," says Sibongile. "Plus, they're personalized. If you want your prosthetic to be purple, we can make it that way." Sibongile says that she wanted to bring the power of fashion to the experience so that users would be encouraged to display their prosthetics proudly

and possibly overcome some of the shame typically associated with disability. "We saw that if we could do something with flavour, we could excite the users," reflects Sibongile.

"What I'm most proud of is that this all started with an idea, born out of just a conversation" says Sibongile. "These are humble beginnings, but when you work on your vision day by day, you see it changing people's lives. It's so exciting to me."

VISION FOR THE FUTURE

"Our long term goal is to impact 70% of South Africa's amputees. Right now, only around 30,5% have access to prosthetics. Those people are usually of a higher income bracket or have been sponsored. Research has shown that there is a high increase in people with disabilities dropping out of the education system and out of civic life because they don't have access to mobility. We want to be a part of the solution."



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