Africa Storytelling Challenge Winners: In Askwar Hilonga's Words

Recognized for the noteworthy contributions he is making to advance scientific innovations throughout Africa and beyond, Hilonga was named one of the five winners of the inaugural Champions of Science—Africa Storytelling Challenge. In the essay that follows, see how this pioneer is improving his community and inspiring the next generation to pursue scientific fields.

I want to be a millionaire. Not in terms of money, but in terms of impacting millions of lives. I am the inventor of low-cost water purification system (filter) called Nanofilter. Let me first say that I'm grateful because I got a lot of exposure. In 2015, I won the African price for Engineering Innovation, organized by the Royal Academy of Engineering. We had a competition with 55 people from 15 African countries and I won GBP 25,000! That's how I was able to build my company, Gongali Model Co. Ltd (www.gongalimodel.com).

Later-on, I won five different awards, including the Pitch@Palace Global in London, which is organized by The Duke of York: Prince Andrew. A pitch of three minutes in front of 300 potential investors. I thank God for my passion, and for getting a proper training in pitching! Next to the awards, I also won a GBP 350,000 - grant for the project from HDIF / UKAid through NM-AIST, where I am a senior lecturer. The university project is part of the academic movement that wants to push products from lab to market. So, I got great support from the university and other partners who were willing to risk it with me while the idea was still in early stages. My passion comes from three sources:

The first one is the poor background that I come from. I grew up in 'Gongali', a poor and humble village near the Ngorongoro Crater, where - like in most rural areas in Tanzania - drinking river water is still normal. I've been struggling with waterborne diseases myself and we still have terrible statistics in this country. Those under five years old and dying: horrible! If you go to the hospital now, 50% of the hospital beds are filled with people suffering from waterborne diseases. So this is a significant problem to solve. That is one of my motivations. I want to help people get solutions. "What does my PhD mean, what does all this fame means, if I cannot use it to solve challenges?"

Secondly, I want to utilize my education. I did my Ph.D. in South-Korea seven years ago, finished it in Nanotechnology. Do I want to make use of my education, because what does my Ph.D. mean, what does all this fame means if I cannot use it to solve challenges? Lastly, there is the business opportunity. The

water filter market is completely empty here! In Tanzania, there are about nine million households. About 70 percent—6 million households— are not using any kind of water purification technology. They still use tap- and river water. The imported filters are not addressing the local needs. Water pollutants vary in different geographical areas, depending on human activities and the geological formation of soil and rocks. In the Rift Valley, the main problem is fluoride, which affects teeth and bones. But if you go to Lake Victoria, the main problem is heavy metals; which are released into the rivers and water sources by mining companies. “The problems are not universal, so the solutions also have to be customized.” These challenges can’t and shouldn’t be solved by foreigners, who bring different kinds of universal filters on the market. The problems are not universal, so the solutions also have to be customized. These challenges can be solved by local engineers, who know their geography; their people; their community.

That’s also why I’m here! We want to scale-up in Tanzania, in Kenya and expand to other countries in sub-Sahara Africa. But before we can grow, I want the filter to be easily transportable, convenient and esthetical. We have our own lab, where we are working on this refined filter design right now. I’ve already received requests from India, Ethiopia, Djibouti, and Somalia. So the biggest challenge is not the money or the demand, it’s about human resource. Finding the right people; same thinking, same passion, same experience. Because with the right team, we can conquer the world! And that is exactly what I want!

One may ask, "Why do you think it is important to tell stories of science?"

I am convinced, with evidence (through the feedback after my inspirational talks and on my social media accounts), that telling science story is one of the best methods suitable to reach young people, particularly in Africa. First of stories motivate young Africans because they get an eye witness, not "hypothetical ideas"! They see benefits received when someone is determined to put his/her energy into innovation that impact the society. I want to challenge young Africans to NOT look for jobs abroad. If we can solve our problems in Africa, we will create employment opportunities and wealth. We will have an impact and we will start building our reputation as a country and a continent that can solve grassroots challenges. Many young Africans dream of going to Europe or America but there is a lot of potential here at home. My experience demonstrates that if you go back home and serve your people, one day your community and the world will appreciate your efforts.

The content and views presented here are those of the individual Challenge participant.

About the Africa Storytelling Challenge

The inaugural Champions of Science—Africa Storytelling Challenge took place between May and August 2018. Open to all scientists doing innovative work in Africa, the contest drew more than 100 submissions. An independent selection committee of scientists, policymakers and science journalists reviewed the applications and selected the winners. Each winner will be awarded $5,000 and will have the opportunity

to share their stories at the 2019 American Association for the Advancement of Science (AAAS) annual meeting in Washington, D.C.