

2008 50x15 South Africa Partner Summit

William Kamkwamba Keynote

Discussion Transcript



Digital
Inclusion
With a
Deadline

Introduction

Dan Shine, 50x15

What you're about to see will probably be one of the most memorable parts of your time at this summit. The world of digital inclusion has many different communities, the World Economic Forum Community, the TED Community (technology, entertainment and design) and the Clinton Global Initiative to name a few. What you're about to see is one element of the digital ecosystem, but it is really two things. Firstly, it's about power and we have what I describe as a "renewable energy expert" with us today, but it's also about initiative, innovation and enablement. I think primarily what you will hear now is that what happens in one place can act like ripples in a pond and have a substantial impact over a period of time. (View Moving Windmills here: <http://www.youtube.com/watch?v=arD374MFk4w>).

I met William about a year ago this time at an event called TED Global in Arusha, Tanzania. William was the youngest of what we called the "Ted Fellows" of which there are about a hundred in all. A gentleman named Emeka Okafor found William through some bloggers and others who were telling his story. William's journey is an interesting one because of what he's done and the inspiration that he's provided to others, but most importantly for our context his journey talks to a very important part of this puzzle that we're putting together. William tell us a little bit about your journey. I know building the windmill took two months, but it wasn't a straight forward thing to find all the pieces and parts. There were some things you couldn't get so easily, can you describe some of that?

William Kamkwamba

I had difficulty finding some of the materials that I needed to build the windmill, so I changed some of them and just used what was available.

Dan Shine

What was the toughest piece of material you had to wait for to put the windmill together to make it work?

William Kamkwamba

The hardest thing to wait for was the generator, which I used to generate electricity, and also the battery, which I used to generate electricity when the wind isn't blowing.

Dan Shine

Where did you end up finding the generator?

William Kamkwamba

A friend bought the generator for me.

Dan Shine

You first powered a light bulb and then a radio and after we met, we thought it might be interesting for you to power a laptop. When were you able to start powering your laptop?

William Kamkwamba

I powered the light bulb and then added an inverter so I could invert power from AC current to DC current to power the laptop. The power the windmill generates is enough to power the laptop.

Dan Shine

You described a bit about how the people in the village weren't quite sure what you were up to, but it seems they are now fans of what you've done. How many windmills are in your village now?



William Kamkwamba

There are two windmills and I'm working on a third, which will be generating electricity and pumping water at the same time.

Dan Shine

How much more energy will the third windmill generate compared to the first two?

William Kamkwamba

The one I'm making now will be three times bigger than the first one.

Dan Shine

Has anyone else tried to repeat what you have done, and make their own windmill?

William Kamkwamba

Yes, there was a man who tried, but he failed and then contacted me for help. Unfortunately, I was at school and didn't have time to tell him what to do.

Dan Shine

Do you think a future opportunity for you could be to consult with others to help them to make windmills?

William Kamkwamba

Yes, I have taught my cousin to build a windmill and he is now able to fix a windmill. He will also teach some other people so that many people in Malawi can have windmills.

Dan Shine

Where is the nearest ground connection to electricity in relation to your village?

William Kamkwamba

The nearest ground connection is one km from our village, but in other places they are more than 200 kms away from a ground connection.

Dan Shine

While you were in the states for TED I heard that you also visited Las Vegas. What were the highlights of your trip to Las Vegas?

William Kamkwamba

I was amazed at the lights. The power they use in Las Vegas would, I think, be equivalent to the power they use for the whole country of Malawi.

Dan Shine

Yes, I think the electricity they use in Las Vegas for one day could power Malawi for a year. What were the greatest things that you've been able to do with your laptop? You already have your own blog (<http://williamkamkwamba.typepad.com/>). What is the most important thing for you and your family about having a laptop, what have you been able to do with it? What is the first thing you do when you turn on the laptop?

William Kamkwamba

The first thing I do is a search about solar power. I would like for our village to start using solar power instead of firewood. I am searching for a solar oven for baking or drying tobacco and through the Internet I can find the necessary details to use for solar power in our community.

Dan Shine

Is your intention to become a solar expert in addition to wind power?



William Kamkwamba

Yes and I also remember when I took my laptop to my former primary school to show it to the pupils. The headmaster phoned me afterwards to say that there had been more pupils at the school that day because of their interest to know how the laptop works.

Dan Shine

We have seen that in many other places too. Computers do create interest for pupils and encourages them to attend school. You're starting at school in Johannesburg in a few months. How long will you be attending that school?

William Kamkwamba

Two years.

Dan Shine

You have received a lot of support from many different people. What would you like to be doing in three years time?

William Kamkwamba

I would like to teach others across the world about windmills. I would like to share the knowledge I have and use it to change the world.

Dan Shine

William your story has been inspirational and I can't think of a more important story to tell about determination, innovation and being an inventor as you are. You started this when you were 14 and I think I can speak for all of us today when I say that, each day we get up and talk about the importance of digital inclusion and trying to help and do things that we all believe in, but everyone now will be figuring out how we can work as hard and be as creative as you've shown us today.

Audience Questions

What are you going to study at school in Johannesburg?

William Kamkwamba

I will be studying electrical engineering.

How did the government of Malawi and the local authorities take to your idea?

William Kamkwamba

Someone from the media came to the village to write a story about the windmill, but the government doesn't know about it.

What was the bicycle wheel on the tower used for?

William Kamkwamba

The bicycle wheel is used to hold the windmill. My windmill works the same as a bicycle, with a dynamo. When you ride a bicycle the dynamo is what turns, but instead of riding the bicycle, there is a plate in the front that turns a pulley that is connected to the bicycle wheel. When the wind blows, it makes the tire turn and the dynamo will rotate, which generates electricity.

Did you find language a problem when reading the books and how hard was it for you to relate to the English language?

William Kamkwamba

English was a difficulty. I mostly used the pictures and a few words that I was able to understand.

Do you have an estimate on the cost of building the windmill?



William Kamkwamba

I found the materials for the first windmill in the scrap yard, so I don't know how much the material would cost on the market. The only material I paid for was the welder and nails that cost about \$17 in total.

Have your neighbors benefitted from your work?

William Kamkwamba

Yes, because we have put solar panels in their houses for electricity and we have a solar auto pump in the area, so we now have running water.

Which is more exciting for you solar or wind?

William Kamkwamba

They are both just as exciting for me, but the benefit of wind is that it also blows at night.

Looking back at all you've achieved since you were 14 is there anything you feel you would have done differently?

William Kamkwamba

Yes, because I've learnt a lot since I started using the Internet and I think I would have done most of what I've done differently.

Do you have internet in your village?

William Kamkwamba

No, we have to go to the city to access the Internet, which is about two and a half hours by bus.