William Kamkwamba stands on top of a windmill he built.

Power to the People

A boy comes up with an unusual way to save his family's farm.

By Siobhán McGowan

William Kamkwamba was born on a farm in Malawi, Africa. When he was a young boy, his country suffered from severe drought. With little rainfall to nourish the land, his family's

parched farm failed to produce any maize or soybeans. And since there were no crops to sell, his parents could not afford to send William to school.

William felt frustrated. He was determined to change things. But for that to happen, he would have to find a way to bring water to the farm. So, he went to the library to do some research. There, he looked at books about science and engineering. He read them as best as he could, even though they were written in English, and English was not his first language. He studied the pictures and diagrams. In a battered old textbook called *Using Energy*, William learned about how windmills could be used to generate electricity and pump water.

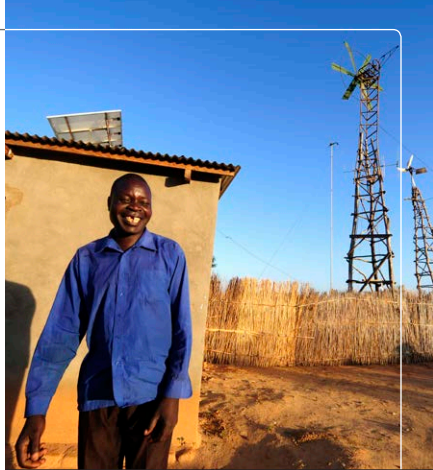
That's when William had a very bright idea. He would build a windmill!

Get Wind of This

In his poor, dusty village of Masitala, there was no shiny mega-mall where he could go shopping. William would have to make his windmill from spare parts and scrap metal. He scavenged the junkyard for materials. Plastic pipes, flattened, became the blades of the fan.

A one-wheeled bicycle frame became the turbine. He mounted his contraption at the top of a scaffold made from the trunks of blue gum trees.

"Many people thought I was crazy," William recalls.



William's father, shown here, is thrilled with the windmills his son has built.

"We were laughing at him," his mother, Alice Kamkwamba, says. "We thought he was doing something useless."

Power On!

But you can be sure everyone stopped laughing and started clapping when William's windmill worked! At first, the device generated only enough energy to light up one lightbulb in his house. But William worked some more on his design, connecting copper wires to an old car battery. Soon his windmill was powering several lightbulbs in the house, along with the radio and the television. According to William, not only could his six sisters now stay up after dark to study, but "soon people were turning up at the house to charge their phones!"

Now that William had a better understanding of windmill design, he could finally create a device that inspired his project in the first place. In 2008, he unveiled the "Green Machine." It was a windmill that could generate enough power to turn a water pump. That pump would be used to irrigate his family's farm.

Success Story

With his family farm back in business, William was able to complete his education. He attended the prestigious African Leadership Academy in South Africa, followed by Dartmouth College in New Hampshire. He graduated in 2014 with a degree in environmental studies. He also wrote a book about his experiences called *The Boy Who Harnessed the Wind*.

William understands that his story is exceptional, but he hopes it will inspire people. "Trust yourself and believe," says William. "Whatever happens, don't give up."

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