



# Building A Better Future

BY MICAH TOLL

Micah Toll

## My advice for young entrepreneurs:

1. Brainstorm — the biggest companies started from the smallest ideas.
2. Listen to feedback from friends and acquaintances. They want to help.
3. Be prepared to spend some money before you start making money.
4. Seek out advice from professionals. There are small business administration offices located in many cities that can give you free or very inexpensive advice.
5. Invest in yourself and your ideas. You never know where your ideas can go until you try.

Micah is an engineering student at the University of Pittsburgh and President of Disaster Rebuilding Solutions, LLC, an engineering research and development company that he founded to commercialize his invention for a new portable constructional beam. In October 2007, Micah was inducted into the National Gallery of Young Inventors and was a recipient of the first ever Edison Foundation Young Innovators Award. Micah can be contacted at [mlt34@pitt.edu](mailto:mlt34@pitt.edu)

In some ways I think that I have always been an inventor and an entrepreneur. The problem was that for years I came up with ideas that had already been invented. It was discouraging to come up with a great idea only to realize that I was too late getting there!

That changed in 2002. I watched on TV the horrific images of the war in Afghanistan with streams of helpless refugees swelling miserable shantytown relocation camps into masses of people living in improvised tent and lean-to structures. I was immediately struck with a sense that I could do better; I could find a way to house people in decent shelters that would give these people a feeling of worth and value. After months of developing crude prototypes, my design for a new type of structural beam began to take shape. Over the next four years, I entered my continuously improving prototypes, which had evolved into corrugated plastic stress skins filled with expanded polymer closed cell foam, in science fair competitions. It became apparent that I was on to something—an idea that had not yet been invented and could fulfill an enormous humanitarian need.

The reaction of people to my invention led me to talk to an intellectual property attorney. My parents joked that I was the only 15 year-old with an attorney that wasn't in some kind of trouble with the law. Four years later, my invention, Portable Constructional Beams, is patent pending and I am President of my own engineering research and development company, Disaster Rebuilding Solutions, LLC.

The road to success was not straight or easy. To fund the patent process and to purchase the materials to build my prototypes

in sufficient amounts to build and test full-sized buildings, rafts, and pontoon bridges, I had to find some money. I developed three businesses to raise capital. I became a balloon twisting artist, mowed lawns, and then got the idea to sell the plans for the balloon pump I built to do balloon parties on the Internet. I learned a lot about business: marketing, shipping, customer satisfaction, budgets, and plain hard work. It all paid off.

I have traveled all over the United States, presenting and defending my research. I am enormously fortunate to be a two-time Intel International Science and Engineering Fair winner, I have been honored by having a near Earth asteroid named after me, and have won scholarships and awards from the National Federation of Independent Business, Intel Science Talent Search, National Collegiate Inventors and Innovators Alliance, Merit Shop, Association of Intellectual Property Attorneys, Corvair Society Of America, American Society of Highway Engineers, and Junior Science and Humanities Symposium. I am also the recipient of a full tuition scholarship from the University of Pittsburgh Honors College and a University of Pittsburgh School of Engineering Scholarship. Most of all, I am proud to have developed a product that will hopefully one day help people to rebuild their communities and their lives. □

