

Keynote Speaker Q and A: Using Innovation to Tackle Challenges

Terese Hudson Thrall, MFA

Mick Ebeling is an executive producer who has worked in film, television, and commercial advertising. However, Ebeling is also the founder and chief executive officer of Not Impossible Labs and the Not Impossible Foundation, organizations committed to creating technology to improve the quality of life for



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individuals who have suffered limitations. Ebeling will speak at AONE 2017 to share his passion for innovation and problem-solving. His collaboration with software designers, hackers, and engineers resulted in the creation of the EyeWriter, globally disrupting the high-priced market of eye tracking software. The solution, or *The EyeWriter*, which allowed a paralyzed graffiti artist to draw again, was named by Time Magazine as one of the 50 best inventions of 2010; more than 900,000 people have watched Ebeling's TED talk about the creation of Not Impossible Labs and *The EyeWriter*. In 2013, Not Impossible traveled to the Sudan and established the world's first 3-dimensional (3-D) printing lab to fabricate prosthetic arms for amputees in the war-torn region. Ebeling is recognized as a 2015 *Wired Magazine Agent of Change* and a recipient of the 2014 *Muhammed Ali Humanitarian of the Year Award*. He is the author of *Not Impossible: The Art and Joy of Doing What Couldn't Be Done*, and he recently spoke with AONE Managing Editor Terese Hudson Thrall about tackling challenges and creating successful teams.

AONE: What was the impetus for starting the Not Impossible Foundation?

ME: Starting Not Impossible was a beautiful accident. On a date night, my wife and I stumbled upon a gallery event, a fundraiser for Tony Quan, a paralyzed graffiti artist known as TEMPT1, and saw that he was forced to communicate with a piece of paper and a caretaker pointing to alphabet letters. We set a course to change that, even though—this is important—we had no clue what we were doing. We also wanted to give TEMPT1 a way to draw again. It just didn't seem proper that people with paralysis were confined in this way. My wife and I

had never said the words “ocular recognition technology,” but we found the solution by assembling a team of really brilliant people who created something that allowed TEMPT1 to draw. We finished the project and then we woke up one day, and suddenly, it was one of *Time Magazine's* Top 50 Inventions and got all this press. We did it to help somebody and told a powerful story about it, and thought maybe we should continue this—that was the beginning of the whole Not Impossible movement.

AONE: What skills gained from film production carried over to leading an organization that uses technology to solve problems?

ME: At the end of the day, life is project management. You have a problem, you have to figure it out. And in the world of nursing, you are figuring out problems all the time. In film, the steps include conceiving what that story is going to be, seeing the steps to get to that end solution, building the schedules, budgets, and teams that will work on the project to completion. Sometimes reaching a solution is simple, and sometimes it's complicated, but the skills remain the same.

AONE: Can you describe your philosophy about facing challenges when your team worked on Project Daniel, creating prosthetic limbs with a 3-D printer in a Sudanese refugee camp?

ME: Where do I begin? Where wasn't there a challenge? Our process is this: commit and figure it out. So the first challenge was, how are we going to create inexpensive prosthetic arms for amputees? And then every solution we tried was a failure. Literally, nothing worked. For instance, one of the first testers of our prototype prosthetic arm needed a left arm, and we printed her a right arm. It was a parade of horrors. But failure is a critical aspect the dogma of what we do and how we go about it. One chapter of my book is entitled, “Fail, Fail, Fail, Succeed, Repeat as Necessary.” Now we almost celebrate failures because we know it is getting us closer to what we want to accomplish. It's funny when you make that shift from being daunted by hitting challenges to having the attitude, “This is good because it's going to refine what we are doing.”

AONE: Can you give an example of working through a challenge during Project Daniel?

ME: We were in Sudan, and it was so hot, the 3-D printer was malfunctioning, so we printed at night when it was cooler. But the printer gave off light, light attracts bugs, so gigantic moths were dive bombing the printer, and it jammed. At the time, we thought, “Oh, no, not another problem!” but now we laugh at them. We expect problems—it’s part of the process. To solve the moth problem, we borrowed oscillating fans from people in the refugee camp. Sounds great—but we were in a building with a dirt floor, so we ended up blowing dirt in the motor of the printer, which also jammed it. We ended up placing the fans around the printer to create a wind tunnel, so the moths that approached the printer were blown away and dirt was not blown into the printer. When facing challenges, just keep going. Don’t complain and moan when you run into roadblocks. It’s about committing to something you know needs to change, and then doing *whatever* you need to do to make that happen.

AONE: Why is it important to create sustainable change?

ME: It’s that whole idea of give someone a fish, he eats for a day, but teach someone to fish, and he can eat for a lifetime. Our objective in Project Daniel was not to come riding in on white horses as first worlders, to fix the one problem and then leave, taking our solution with us. Our objective was not just to make an arm for Daniel, but to teach others to make them after we left. Upon returning to the US, I received one of the best e-mails ever. While we were in flight back to the US, the doctors in the refugee camp had made 2 arms. That’s exactly what we wanted to do—teach someone to fish.

AONE: You have said your expertise lies in recognizing who has the aptitude and letting those individuals get to work. What are your insights for gathering teams that can successfully complete the Not Impossible projects? Besides technical skills, do you look for individuals with certain qualities or characteristics?

ME: There’s talent and intelligence, and then there’s drive. I will take people with drive for my teams any day of the week. We start every project with a lack of intelligence and experience, but it’s the people with drive that push the ball over the goal line. It’s about people who refuse to fail and refuse to be daunted. It’s about people who want to help others, come in with a lack of ego and [leave with] a feeling of project ownership. We talk a lot about people who don’t take no for answer, who keep the project’s objective in the

forefront and believe we are going to figure this out. Those are the people I want on my team.

AONE: How can leaders use stories to motivate others to innovate?

ME: Leaders do this naturally. Our entire existence is based on stories. Where are you from? Where did you go to school? Who are you married to and divorced from? We are an amalgamation of the stories that surround us. It’s about us being able to use those stories to drive ourselves and others to reach an objective. You can use this as a tool by telling the story of one person. And if you can motivate your team to help one person, the team can help many.

AONE: What advice do you have for nurse leaders seeking to innovate to improve patient care?

ME: Nurses are connected to the patient and so are in a position to see problems that need solving. Nurses are naturally thinking, “How can I help patients?” My grandmother and mom worked as nurses, so I know this. You have the patient in mind. When working on solutions to problems, do not follow convention when it fails. And just don’t take no for an answer.

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