

BILLIONAIRE



THE MAKERS ISSUE CELEBRATING THE HUMAN TOUCH

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PHILANTHROPY • John Caudwell on why more billionaires should give it away

TECH • How young inventors are tackling today's problems with unique ideas
REFUGEES • The photojournalists risking their lives in the pursuit of truth

FASHION • Designer Elie Saab sending a message of hope for Beirut
VEHICLES • Electrifying classic and vintage cars

Meet The Inventors

Unique inventions for unique problems.

by Daniel Nash

More than ever, the world needs its inventors to come up with remarkable solutions to the myriad problems we face, from decarbonising the atmosphere to more sustainable means of farming. We speak to four unique inventors of our time about their missions.



Easton LaChapelle, founder and CEO of
Unlimited Tomorrow.

“Her arm had cost some US\$80,000 and she would soon outgrow it. Mine had been built for a couple of hundred dollars in my bedroom.” — Easton LaChapelle

Unlimited Tomorrow: Smart, affordable prosthetic limbs

Twenty-six-year-old inventor Easton LaChapelle grew up in a tiny mountain town in the US, graduating from a high school with only 23 students. A born engineer, his childhood was never dull. “I had an abundance of Lego that I was constantly tinkering with, then I moved on to figuring out how things worked, like taking apart the microwave.” This was what he calls, his “high-voltage phase”. By the time he was nine, he was making small motors and cars that would move across the floor; at the age of 14 he created a wireless robotic hand controlled by a glove, using electrical tubing, fishing line, Lego and customised software and electronics.

It was at a school science fair where he was showing a more advanced version of the robotic hand that he met a young girl with a prosthetic arm. “Her arm had cost some US\$80,000 and she would soon outgrow it. Mine had been built for a couple of hundred dollars in my bedroom and it was far more functional than what was out there for children,” said LaChapelle.

After an internship with NASA, LaChapelle turned his mind towards this mission to help the 60 million amputees in the world, of whom only 5 percent have access to prosthetics, partly because of the high cost, partly because of accessibility in remote areas.

The outcome was Unlimited Tomorrow, founded when he was just 18. It produces TrueLimb, a bionic hand with a revolutionary sensing and control system that has sensors to detect muscle movements in the residual limb, translated into commands for the hand. It also offers a direct-to-consumer model, meaning if you don’t have medical insurance, you can buy TrueLimb directly for US\$8,000, (they even offer a monthly payment plan): a fraction of the cost of traditional bionic limbs.

LaChapelle says his “goal was always to create technology with a purpose”.

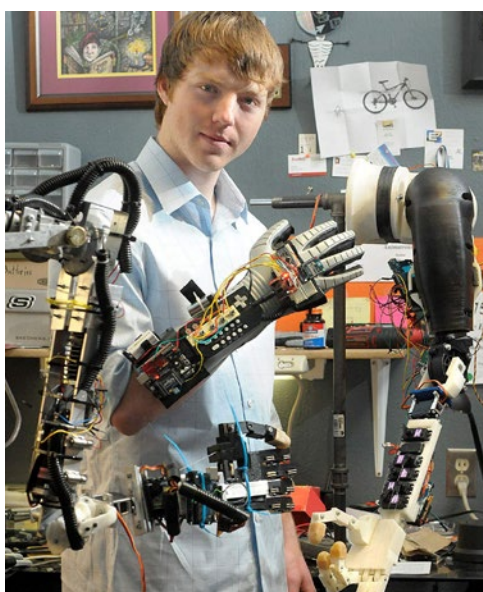
Supplant: AI-based Agritech

Israel-based Ori Ben Ner grew up with four generations of hardworking farming in his blood; his grandfather, at the age of 89, still farms today. It was his father, Zohar Ben Ner, who felt that irrigation could be done better. “Your daily income is at the mercy of nature, from day one since I grew up my father spent most of his years trying to answer the issue of how can farmers grow better with less risk, especially with increasingly hectic climate risks and a growing need for food production,” says Ben Ner.

Today, only 2 percent of the planet’s farmers use computerised models to irrigate; while 71 percent of the world’s water supplies go to irrigation. In 2014 Zohar Ben Her met a former NASA engineer who partnered with him to start translating plant behaviour, through sensors, into algorithms. The company, Supplant, was set up in 2015 and in 2020 the first product was commercialised, a sensor that is placed in five locations on the plant to monitor soil water content, plant health and growth patterns. All this information is uploaded every 10 minutes to the cloud to provide farmers with precise recommendations based on the evidence of the data.

Ori Ben Ner says the sensor technology answers two of the world’s major issues. “This technology will increase yields from day one by 20-30 percent, while cutting water needs by 30-40 percent.”

Now with 100 staff based in Israel, Australia and Poland, Supplant has raised US\$42 million to date and is about to receive B Round funding from private equity investors to help its global expansion. “We are going back to the roots of farming, it’s a personal mission to help 98 percent of medium and small farmers in the developing world.”



From top: Avery fitted with a TrueLimb prosthetic arm, made by Unlimited Tomorrow. Easton with his original invention for the science fair. Ori Ben Ner with his father Zohar Ben Ner, founder of Supplant.

