

# Solar Solution

**The Thrive Projects team of SU alumni and students is bringing power to parts of earthquake-ravaged Nepal with an easy energy fix and empowering its citizens to take the work even further**

**By Denise Owen Harrigan**

The first time Brian Kam '16 assembled a solar-powered battery unit, two lights went on. The first signaled the battery was ready to charge Kam's cell phone. The second flashed through Kam's mind like a lightning bolt: Could this simple system help restore communication—and save lives—in disaster zones?

It was summer 2015, shortly after the Gorkha earthquake struck Nepal, killing 9,000 people, injuring 21,000, and leaving 3.5 million homeless. Kam, a U.S. Marine Corps veteran, was in Nepal as a disaster relief volunteer. After one steep hike to a remote mountain village, Kam discovered an elderly couple in need of immediate hospitalization. Without power to recharge his cell phone, there was no way to summon a helicopter. "Right in front of me, they breathed their last," says Kam, who could not accept that lives were being lost for lack of something as simple as a cell phone charger. During Kam's three-month relief tour, his friend Danny Iland, a computer scientist at University of California, Santa Barbara, taught him to make a solar-powered battery unit and encouraged him to pay it forward. In the bare-bones, unpatented system, Kam saw an off-the-grid solution to restoring electricity in disaster zones. Kam posted the idea on Facebook and set up a GoFundMe page, with help from Ryan Brinkerhoff '16, his roommate in the Maxwell in D.C. program. To Kam's surprise, the idea quickly gained traction. Back at Syracuse, Joshua Moon '16 saw Kam's Facebook post and offered to help build a team around the idea.

Fast forward nine months to May 2016: Kam and Brinkerhoff are en route to Nepal with a prototype battery system they've named SPARK, for solar-powered auxiliary relief kiosk. They're traveling at their own expense, but their new nonprofit, [Thrive Projects Inc.](#), has raised close to \$15,000 for battery parts, including a \$10,000 first-place prize in the Central New York qualifier for the New York State Business Plan Competition.

For Thrive's inaugural venture in Nepal, Kam and Brinkerhoff bring four SPARK units plus parts for four more. The plan is to teach Nepalese students to assemble the systems. Moon remains in the United States, launching Thrive's website and managing its daily operations. Taking Thrive from a

lightning-bolt idea to a registered nonprofit “took over our lives. We wolfed it down,” says Brinkerhoff, a policy studies and economics major. Moon, a biology major, says his academic advisor warned, “You’ve got to put on the brakes.”

Instead, their momentum kept growing, fed by their determination and the rich entrepreneurial culture on campus. The core challenge has been tailoring their venture to best serve the Nepali people. Kam’s original idea was to provide solar-powered batteries for emergency use. But after witnessing disaster relief firsthand, he grew skeptical about importing a solution, “as if the West has all the answers,” he says.

After months of discussion, Thrive’s founders realized the SPARK unit was a critical tool, but not the ultimate solution. “The community is the solution,” Kam says. “The SPARK unit is a platform for engaging with the community.” As its mission shifted toward engagement, Thrive’s inaugural itinerary focused on teaching Nepalis to assemble the SPARK system.

Thrive’s founders also questioned the wisdom of limiting the SPARK units to emergency use. Nepal’s power grid is famously unreliable, under the best of circumstances. Perhaps the SPARK units could be scaled up to address such challenges as lighting classrooms, powering streetlights, and purifying water. As more ambitious applications emerged, Thrive’s mission evolved into helping local residents to both build and creatively utilize the SPARK units.

### **Becoming Social Entrepreneurs**

As its mission and organization evolved, Thrive needed a solid foundation. That’s where the [Blackstone LaunchPad](#) came into play. Located in Bird Library, the year-old incubator offers personalized support to entrepreneurial students, alumni, faculty, and staff, regardless of academic discipline. “With social entrepreneurs like Brian, Ryan, and Josh, our first job is to help them ground their idealism in reality,” says Linda Dickerson Hartsock, executive director of the LaunchPad. “We build teams and coach them through the phases—and risks—of entrepreneurship.”

Under Blackstone’s wing, Thrive Projects soared. “The LaunchPad became our second home,” Moon says. “Linda continually took us to the next level.” Hartsock encouraged Thrive to enter the local qualifier for the New York State Business Plan Competition, where it **won first prize**. “Without that \$10,000 prize, we couldn’t have gone to Nepal last summer,” Brinkerhoff says. “We call Linda ‘mom’ because whatever we need, she’s there to help.” As Hartsock provided critical insight and helped guide them toward nonprofit status, she recognized they had the drive and teamwork to achieve their goals. “They are extraordinary human beings,” Hartsock says. “We call Brian ‘commander,’ because he runs Thrive like a Marine platoon,

scoping out each mission from a strategic perspective. Ryan is the organizational man who focuses on every aspect of implementation. And Josh is the pragmatist who analyzes every option and asks insightful questions. Every successful team needs this combination of visionary leadership, attention to detail, and thoughtful analysis.”

Though each founder certainly has a specialty, Kam says he envisions the trio “as Special Forces, doing everything required—including an ungodly number of long nights and weekends—for completion and success.”

Another invaluable Thrive mentor is Steve Suhowatsky, a Syracuse businessman with a network of Nepalese contacts that’s almost too good to be true. Every year, Suhowatsky travels to Kathmandu to visit his daughter, who lives there. In Nepal, Suhowatsky volunteers with a variety of nonprofit and educational organizations. His contacts in Kathmandu have opened many doors for Thrive. During last summer’s pilot program, they introduced Kam and Brinkerhoff to community leaders and invited them to present at the First International Conference on Social Entrepreneurship sponsored by Kings College. In Kathmandu, Kam was also asked to deliver his second TEDx talk on Thrive Projects. (His first was at Syracuse.)

Thrive’s founders refer to Suhowatsky as their “magical mentor.” His credentials include running a publicly traded company and taking a health care equipment startup into 38 states before its sale. He was the first entrepreneur in residence at the Syracuse Tech Garden, a downtown incubator, and has spent the last decade mentoring entrepreneurs. When he first met the Thrive team, Suhowatsky was drawn to their passion. “Ideas don’t go far unless you have a strong passion for them,” he says. “And Thrive’s idea is explosive, in terms of its potential impact on the quality of life in Nepal. Nonprofit work in Nepal is very rewarding—you get addicted to helping people. The Nepali people are very kind. They focus on what they have, not what they don’t have.”

After last summer’s pilot, Kam and Brinkerhoff echoed those sentiments. “The Nepali people are full of strength and determination, despite a gross scarcity of necessities,” Kam says. Brinkerhoff believes they have the same ability as people in the U.S. to become change makers. “The difference is the lack of opportunity available in Nepal,” he says.

## From Power to Empowerment

During their pilot, Kam and Brinkerhoff primarily worked in Siddhipur and Dhulikhel, communities still reeling from the Gorkha earthquake. They taught 26 local college students to assemble SPARK systems and make them available as public charging stations. They were embraced by village elders, who called them *tulley* and *chiri baby*—older and younger brother. They felt a strong sense of accomplishment, until one of their Nepalese mentors, Santoshi Rana, asked, “What will happen when you leave?”

This was the moment, Brinkerhoff says, when “our focus truly shifted from power to empowerment.” They realized their Thrive students should teach other students, become solar entrepreneurs, and challenge each other to design sustainable energy solutions.

At Syracuse, Brinkerhoff had studied the concept of a narrow epistemic base, which occurs when a country’s underlying knowledge is insufficient to find higher-level solutions. If Thrive taught basic energy concepts to young Nepalis and encouraged them to develop their own energy solutions, it could expand the potential for innovation.



Before Kam and Brinkerhoff left Nepal last summer, they hired one of their top graduates, Raskin Maharjan (left), an engineering student, to rally and teach more local students. Soon there were 60 solar entrepreneurs and 12 SPARK systems ready to explore sustainable energy solutions. Within months, those solar entrepreneurs reconfigured the SPARK system to power 16 streetlights in Siddhipur. On Thrive’s Facebook page, Maharjan triumphantly announced, “Locally sourced parts and locally run education programs breed locally developed and sustainable solutions!”

In January, Kam and Brinkerhoff revisited Nepal to strengthen partnerships and register their subsidiary, Thrive Nepal, as a local not-for-profit. As Nepalese citizens assume greater responsibility for the SPARK system,

Thrive is focusing on consulting, fundraising, and expanding into a global brand, with hurricane-stricken Haiti as a possible next site. Kam, Moon, and Brinkerhoff graduated in December, but regularly Skype with the team of Syracuse students who continue to support their mission. Amanda Chou '18, Thrive's director of marketing, says working with Thrive is addictive. "I didn't know the first thing about solar power—I have yet to build a SPARK box—but I love, love, love the history of Thrive and creating its narrative," she says. "Everyone claims they want to make a change. It sounds so generic. But Thrive proves you can do it. You can help empower young people to turn on streetlights in a remote Nepali village."

This year, Thrive's campus contingent is creating a registered student organization with a complementary mission. "Syracuse students are most likely not going to Nepal anytime soon," Chou admits, but they can engage with young people here at home and teach them to be good stewards of energy.

In an afterschool program sponsored by the Spanish Action League (*La Liga*), Thrive students work with young immigrants new to this country. While introducing the concept of clean energy, "our primary role is to befriend them and help them assimilate," says Khalid Khan '17, Thrive's chief of staff. He was drawn to Thrive because the Gorkha earthquake also struck Bangladesh, his mother's native land. And his paternal grandparents were forced by war to relocate from India to Bangladesh. "I have been blessed with a much better life," Khan says. "Working with Thrive is one way I can give back."

After their whirlwind effort to launch Thrive, Kam, Brinkerhoff, and Moon are exploring its role in their postgraduate lives. Moon is studying for his MCATs while continuing daily duties as Thrive COO. Brinkerhoff, who graduated a semester early, is devoting the spring semester to further advancing Thrive. He's making time for job interviews, but says, "so far, nothing excites me the way my work with Thrive does." Kam has accepted a position with Target as a warehouse manager in Amsterdam, New York, but remains committed to Thrive. "Brian has so much passion and fire for this project," Brinkerhoff says. "In close quarters, it can be overwhelming. But when you go out in the field and see what he has accomplished, you ask yourself, 'Why aren't we doing more?'"

Hartsock, for one, sees the team building on its vision and expanding its reach. "Thrive is one of the most amazing stories I've seen in 30 years of working with entrepreneurs," she says. "They are not only lighting up Nepal, they are inspiring its next generation of solar entrepreneurs. It brings us personal and professional joy to nurture them."

Santoshi Rana, a mentor in Nepal, also sees Thrive's founders as role models. "Having them come all the way from the U.S.—and at such a young age—shows the people in Nepal that, if you have the will, change is possible," she says. «



Brian Kam '16 (left) and Ryan Brinkerhoff '16 pose with a SPARK (solar-powered auxiliary relief kiosk) unit. They've introduced the battery system to places in Nepal devastated by the 2015 Gorkha earthquake.



In Nepal the goal is for the residents to gain a sustainable energy education that they, in turn, can share with one another through team efforts.



In Nepal, Ryan Brinkerhoff '16 (at right in photo) and Brian Kam '16 (photo below) teach local residents how to build and use the SPARK units for power.



# Driven by Childhood Turning Points

Fierce commitment to a common goal helped Thrive Projects take root in record time. Each of its founders —Brian Kam, Joshua Moon, and Ryan Brinkerhoff— is a first-generation college student, and each traces his personal commitment to a life-changing childhood experience.

Kam can't remember a time when he didn't feel a deep ache for anyone in distress. Growing up in Hong Kong, he remembers begging his mother to give money to homeless people. When he was 11, Kam's family moved to Rochester, New York, where he experienced a profound sense of displacement. Kam spoke no English and struggled in school, graduating 490th in a high school class of 500.

As Kam watched 9/11 unfold on television, he felt compelled to help. He enlisted in the Marine Corps at age 17, joined at 18, and served in the Iraq War and post-Katrina New Orleans. "It was a rapid transition to adulthood," Kam says, "but I found more courage, discipline, and determination than I ever thought possible."

At age 27, Kam enrolled at Syracuse to study international relations, but he never abandoned his search-and-rescue mindset. "Infantry Marines stand ready to deploy at a moment's notice," Kam says. When he heard about the Gorkha earthquake, he signed on as a volunteer with [Aythos](#), an NGO in Nepal founded by Beau Miller G'10, a Maxwell School alumnus. Kam also credits "the amazing Maxwell faculty" for compelling him to engage in the world "not just as an American, but as a global citizen."

As a child, Brinkerhoff never experienced Kam's level of disruption, but had an early glimpse of how a global crisis plays out at the kitchen table. During the 2008 recession, his mother lost her job. Brinkerhoff, one of four children, began doing yard work to supplement his father's salary. By the time he graduated from high school—at the top of his class—he was working three jobs.

His family's financial crisis inspired an early interest in government policy and its impact on families. That led Brinkerhoff to Syracuse and a White

House internship. He was juggling six courses, a City Hall internship, and a part-time job when Kam recruited him to Thrive. “I jumped on board,” Brinkerhoff says. “I’m not intimidated by long days and sleepless nights.”

Moon traced his commitment to Thrive to a haunting childhood experience. At age 6, he was alone with his pregnant mother when she collapsed. Moon managed to call for an ambulance, but felt helpless to save his barely conscious mother. She was diagnosed with gestational diabetes, and Moon felt more guilt: For years he’d been begging his parents for a baby brother. “As I grew older,” Moon says, “I resolved to study medicine, so I would be ready to help when needed.” When Moon read Kam’s Facebook post about stranded earthquake victims, he instantly responded. He had years of medical training ahead, but Thrive was something he could do right away.





Each of its founders — Brian Kam (left), Joshua Moon (middle), and Ryan Brinkerhoff (bottom) — is a first-generation college student, and each traces his personal commitment to a life-changing childhood experience.

## Guiding Student Entrepreneurs

In a case of perfect timing, the Blackstone LaunchPad opened in spring 2016, just as Thrive Projects needed a big boost. “We build teams and coach entrepreneurs through the milestones necessary to build a business,” says Linda Dickerson Hartsock, the LaunchPad’s executive director. “We supply the structure, and the students supply the energy.”

The Syracuse LaunchPad, funded by the Blackstone Charitable Foundation, is one of 20 in the United States and Great Britain. It’s the first American LaunchPad to be inside a library. (Most are in student centers.) Bird Library, open 24 hours a day, is the busiest student space on campus and the logical location for the LaunchPad, says David Seaman, dean of libraries and University librarian. “Ideas have always been generated, researched, and nurtured in our Syracuse libraries. It’s a natural extension of our services to provide space and support for student entrepreneurship here.”

In its first year, the Syracuse LaunchPad has served more than 1,100 students, alumni, faculty, and staff from 31 countries. Some arrive with a solid idea. Some have identified a problem and are exploring ways to address it. Some students are looking for an opportunity to participate in other students' ventures. "The entrepreneurial mindset is a necessary life skill in a gig economy, which embraces short-term and freelance workers," Hartsock says. "Students will have to invent and re-invent themselves a dozen times in the course of their careers. Being innovative, resilient, and entrepreneurial will be professionally and personally essential."

In addition to individualized coaching and support, the LaunchPad sponsors speakers, competitions, and markets that showcase new products and services. Its Friday Forums and Toolkit Workshops are open to all ventures. The LaunchPad connects students to a regional network of mentors, as well as to attorneys and CPAs who offer their services pro bono. It also complements the University's entrepreneurship courses and rich array of entrepreneurial initiatives. "We are all building a collaborative entrepreneurial ecosystem together," Hartsock says.

Today's entrepreneurs are increasingly interested in nonprofit ventures like Thrive, she says. "They want to do well, but they also want to do good. They want to make a difference in the world."



Linda Dickerson Hartsock (second from left), executive director of the Blackstone Launchpad, finds it rewarding to work with members of

the Thrive team, including Joshua Moon '16 (left), Brian Kam '16, Amanda Chou '18, and Ryan Brinkerhoff '16.

Photos courtesy of Thrive Projects Inc.