Andrews University

Digital Commons @ Andrews University

Lake Union Herald

Lake Union Herald

9-2023

Innovative Ways to Change the World

Isabella Koh

Follow this and additional works at: https://digitalcommons.andrews.edu/luh-pubs



Engineering, to Curtis Johnson, is something that runs in the family. He followed in both his father's and grandfather's footsteps when he began studying at Andrews and affirms, "It's very intuitive to me. I loved all the stuff we were learning about."

INS

Over his academic career, Curtis worked on several different projects, developing everything from bike glasses with rearview mirrors to automated welders. At the end of his senior year, he turned his attention to a special ongoing project created by his dad, Curt: Ezekiel Wheels.

Curt, who frequently visits manufacturing sites for his job, encountered several workers in wheelchairs who faced challenges due to the maneuverability of mass-market chairs. Primarily, the necessity of pushing both wheels at the same time decreased the workers' range of mobility and flexibility—it could be difficult to carry a box and operate their chair at the same time, for instance,

Curt recognized there was an opportunity to enhance the typical wheelchair experience and make users' lives easier. He built a prototype that helps individuals manipulate both wheels on a non-electric wheelchair with one hand—an inner ring allows both wheels to be driven straight forward from one side.

The name "Ezekiel Wheels" stems from the biblical Ezekiel's vision of a wheel within a wheel, serving as both a literal reference to the project design, as well as an opportunity to witness to others about God. Encouraging feedback was received on the first prototype, but the project was put on hold for several years due to a lack of funding.

When Curtis learned about a Pitch Competition at Andrews University, he realized it was an opportunity to revive the project. His mechanical engineering skills allowed him to help with the computer-aided design (CAD) portions of the original prototype. He worked on cataloging parts, minimizing waste, and streamlining



machining time. In the midst of midterms, he put together a presentation for the competition and presented it to the panel of judges. "[It was] a chance to show it to a wide audience and get their support and opinions, and potential investments," he explains.

The father-son team's hard work paid off when Ezekiel Wheels earned third place in the Pitch Competition, along with a Social Innovation Award. The project received a total of \$10,000 in funding, along with other in-kind services. "That \$10,000 is going to allow us to purchase our initial 200 kits," Curtis relates. "That's a massive investment for me, coming out of college. And there's potential to help a lot of people."

After purchasing the initial parts, Curtis will be connected with Benton Harbor community members in wheelchairs to learn how to customize the kits to different sizes of chairs.

He notes, "The Pitch Competition was a big encouragement. I'm not a great presenter. It's not something I practice a lot. But just the way people responded—all the people we talked to were super encouraging. I think it was a pretty clear sign from God that He wants us to pursue this and take it to the next step."

Curtis graduated from Andrews in May and now plans on pursuing a traditional career in the engineering field. He also looks forward to future developments of Ezekiel Wheels, which he has turned into an LLC. As the next steps of his career and new company progress, he expresses, "God's going to be in control of what happens, so I will let it happen."



From a very young age, Josalynn Clark knew she had a passion for ministry. Growing up in the Bronx, New York, she was deeply involved in Pathfinders, leading out in Adventist Youth (AY) programs and actively helping out her church, finding a sense of connection and spiritual grounding in each.

During the summer of 2020, Josalynn realized that COVID had deeply impacted the youth in her church. Lacking regular meetings and support, many individuals were struggling mentally and emotionally. With the help of her mom and sister, she created the "Youth Discipleship Mission: Bible Mentorship Program" to bridge the gap that the pandemic had created. The new virtual program partnered kids and teenagers with adult mentors in the church, setting up regular meetings, programs and check-ins. "We wanted to, as mentors and leaders, help build the church of tomorrow through mentorship," she explains.

The program was a success, and the following year Josalynn sought to turn it into a free summer day camp program. Through fundraising, community involvement and a grant, she overcame several challenges and put together a sixweek experience for over 30 kids. The program was based on her own unique Bible-based curriculum, which included an emphasis on spiritual mentoring and provided interactive lessons, presentations and trips for the attendees.

In the fall of 2021, Josalynn decided to pursue an online Master of Divinity at the Seventh-day

Adventist Theological Seminary at Andrews University with a concentration in Youth and Young Adult Ministry. At the same time, over the following year, she continued to run the growing camp program, even in the face of financial struggles. She saw God's presence more times than she could count through small miracles and donations in times of need. Many times, community members and parents stepped in to help with activities, outings and creative endeavors. "God really pushed us to make it last summer," she affirms.

As she considered her next steps, Josalynn found out about the Pitch Competition through her program at Andrews. It offered the opportunity to expand and share about her ministry but required her to visit campus in-person to present. After praying about the opportunity, she took a leap of faith and drove two back-to-back 12-hour road trips to and from Michigan for the semifinals and finals. "When I presented originally, I was very nervous," she recalls. "But then I became more comfortable because I was presenting and talking about my kids. That gave me confidence. I was just telling people why I love my kids and what makes them so great."

Her mission to help her kids earned the "Youth Discipleship Mission" first place in the Pitch Competition. The news shocked and inspired Josalynn, who plans to use the award money to fund future camp sessions, as well as strengthen the program's documentation. She hopes to turn the ministry into a nonprofit organization and eventually obtain her own building so that she can run a year-round program for the kids. "It's been a very great, very rewarding experience," she enthuses. "I wholeheartedly enjoy what I do."



plastic containers to their full capacity and, in doing so, reduces waste. A refillery promotes sustainability, is an affordable alternative for consumers, and could be accessible to both the campus and community members.

FEATURE

For their commitment to making community-specific change, the project was awarded fourth place in the Pitch Competition and received a Social Innovation Award. "It's about practicing a sustainable lifestyle for everyone—the environment, the animals and the people," the team explains. "We believe innovation has to be sustainable, and a sustainable change always involves a change in someone's life. We are excited to make such a change by creating a place where people can experience a low-waste lifestyle!"

The team's future goals include opening the Refillery at Andrews in the fall and allowing students to gain exposure to the system. They also plan to provide seasonal incentives and create an aesthetic space that is clean and eco-friendly in design. In order to familiarize people with the process, part of their marketing strategy includes incorporating feedback they received from an online community survey. The project will eventually be turned into a nonprofit that focuses on benefiting students and spreading environmental awareness.

"As Christians, we believe we are called to be caretakers of the earth and to help those in need," they affirm. "Our goal is to reflect those ideals as we find solutions for students and community members alike to make a difference in the world, one bottle at a time."

Isabella Koh is a University Communication student writer at Andrews University.

"Refill to Reduce" was the motto of student innovators Gloria Oh, Ariana Coast and Sarah Wolf
as they entered the Pitch Competition. The team
members, who all served as officers of Biophilia,
the Biology club at Andrews, had utilized their
positions as student leaders to promote an appreciation for nature and its inhabitants. Sharing
a commitment to sustainability, the group set
out to address a major issue that they identified
not only on the Andrews University campus but
also in the larger community.

"In the U.S. alone, over 550 million shampoo bottles are used per year," the team relates. "Despite this, the national average for recycling those plastics is only 3–5 percent. Michigan's recycling rate is less than half the national average." In addition to these statistics, they also realized that a lack of access to affordable care items on campus, especially for those without cars, made sustainability even more difficult. "The combination of Michigan's low recycling rate and the limited accessibility/affordability of basic necessities like soap and detergent for students without cars creates a real problem."

Their solution to that problem was to create an on-campus refillery. They elaborate, "A refillery is a place in the community where you bring your own bottles or borrow empty containers on-site and fill them up with your basic necessities. In this model, you only pay for the product of your choice within your container and not the bottle." The simple system allows customers to reuse