



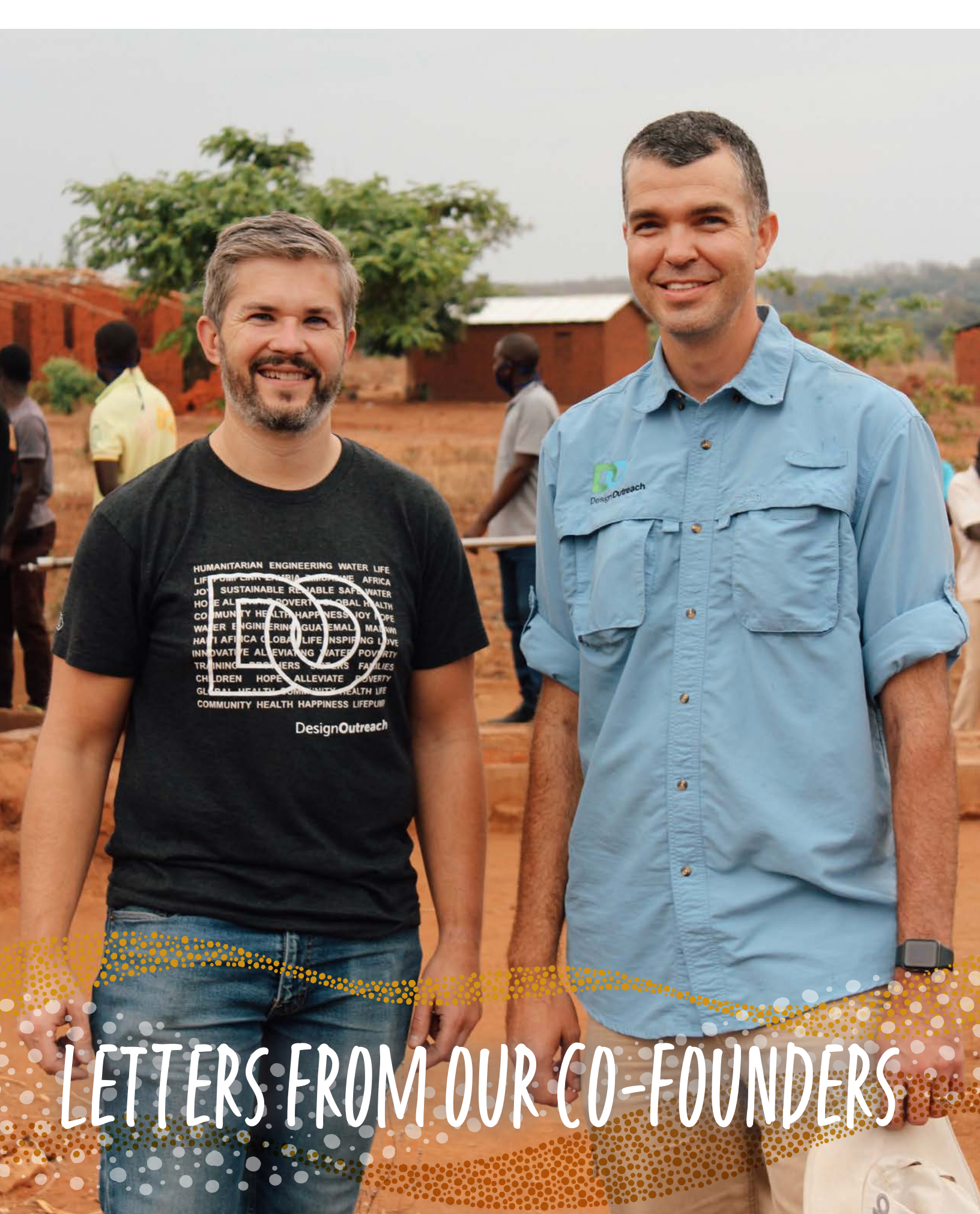
DesignOutreach

# ALLEVIATING GLOBAL POVERTY

THROUGH  
LIFE-SUSTAINING  
TECHNOLOGY

2021 ANNUAL REPORT





# LETTERS FROM OUR CO-FOUNDERS

## DEAR PARTNERS,

In 2021, Design Outreach (DO) didn't transform any lives, provide safe water, or invent anything on our own. But God did—and he used you!

"I have seen, at different times, the smoke of a thousand villages—villages whose people are without Christ, without God, and without hope in the world." These are words written by a Scottish missionary nearly 200 years ago, and they remain true today. We feel that our purpose is to help reach such communities living in extreme poverty.

There are several stories of impact from 2021 that fuel our passion, but one in particular stands out in my mind. I remember revisiting Zolomondo, the first community in Malawi to receive a LifePump. Since its installation in 2013—for nearly nine years—this LifePump has never experienced a day without water. During our visit, we asked children 8 years old and under to pose for a picture, and it hit me that some of those kids might not have been there if it weren't for LifePump.

In 2021, we reached 51 communities like Zolomondo in Malawi, Zambia, Zimbabwe, Kenya, Haiti, and Guatemala with new LifePumps. We also reached thousands of people with life-saving face masks, soap, handwashing stations, Bibles, and hygiene training. Our Gospel partners used these supplies to attract crowds, often 500 people or more, who got to hear the good news of Jesus.

But none of this would have been possible without God using each of us in his plan. We are so thankful that we get to partner with you, and my prayer is that you enjoy reading how God has used an incredible network of individuals united under one common purpose and passion: to reach vulnerable communities with appropriate technology and the hope of the Gospel.

Thank you for your partnership.

**Greg Bixler, Ph.D., P.E.**  
Co-founder, Chief Executive Officer

## DEAR FRIENDS,

As I think about 2021, one impactful day in November stands out in my memory. We visited a village in Malawi called Mkanda where we had the opportunity to install a LifePump, provide COVID-19 prevention and hygiene training, and join with a local ministry as they shared the Gospel. I can still hear the celebration of the community as they erupted in song and dance the moment water began to flow freely, knowing that they no longer had to walk long distances to gather contaminated drinking water. The joy was contagious, and we all joined the party.

As I watched the people of Mkanda rejoice, my heart was filled with gratitude for the ways God has brought together thousands of individuals around the world with one unified purpose and passion: to see marginalized and low-income communities transformed physically, economically, and spiritually.

I thought of our incredible volunteers and industry partners who have generously committed thousands of hours of pro bono services to ensure LifePump is the best and longest-lasting hand pump in the world. I thought of so many of you who partner with DO through prayer and financial support, giving generously to champion LifePump campaigns. Each one of these roles is critical to making the whole ministry of Design Outreach work.

2021 was a breakthrough year for DO. We asked our team and board of directors to dream and pray big about our organizational goals, and we saw miraculous growth in our team, programs, and impact in many communities just like Mkanda. We praise God for your faithful support and generosity that have allowed us to achieve so much together. We are truly grateful and honored by your partnership!

God bless,

**Abe Wright**  
Co-founder, Chief Technology Officer



# THE VISION OF DESIGN OUTREACH

*is to see marginalized and low-income communities transformed physically, economically, and spiritually.*

We make that vision come to life by developing innovative technologies that improve the lives of those living in poverty.

We do it through technology.  
We do it through innovation.  
We do it through the love of Jesus.  
We do it through YOU.

**Thank you for making 2021 our most impactful year yet.**



# 2021 GLOBAL IMPACT AT A GLANCE

In 2021, we witnessed God move mightily to inspire people all over the world with a common passion and purpose: to see marginalized and low-income communities transformed physically, economically, and spiritually. Our global family of supporters and partners grew exponentially—and so did our impact.

Because of the support of thousands of passionate people, Design Outreach has provided safe water through LifePump to 142,600 people in 208 communities representing 10 countries around the world.<sup>1</sup> In 2021, we continued to move toward our God-sized goal of safe water for all, and we are thankful for everyone who has joined us on this journey.



## WHY WATER MATTERS

- 2.2 billion people lack safely managed drinking water services, and of those, 785 million lack even a basic drinking water service.
- Women and girls are disproportionately affected, often spending 4 to 6 hours a day collecting water.
- Up to 1/3 of the water points in Sub-Saharan Africa are out of service at any given time.
- 297,000 children under the age of 5 could be saved each year if provided with safe water and sanitation services.
- Many hand pumps break down after 6 months of use, with an average repair time of one month—if they are repaired at all.
- Lack of access to safe, reliable water impacts every aspect of community life—from health to education to economic opportunity to individual wellbeing.

ACCESS TO SAFE WATER CHANGES EVERYTHING.\*

\*Sources available upon request.

Design Outreach installed 51 LifePumps in Zimbabwe, Malawi, Zambia, Haiti, Guatemala, and Kenya.

REACHING MORE THAN  
**47,000 PEOPLE**  
WITH SAFE DRINKING WATER.

DESIGN OUTREACH  
MANUFACTURED AN ADDITIONAL

**70 LIFE PUMPS**

with shipments to Guatemala, Haiti, Kenya, Malawi, and Zimbabwe.

111 LifePumps were monitored by our remote-monitoring technology LifePumpLink.

THESE PUMPS WERE USED FOR A TOTAL OF

**129,167 HOURS,**

AVERAGING ABOUT 5 HOURS PER DAY.



From these 111 pumps,  
COMMUNITY MEMBERS PUMPED

**19,375,100 GALLONS**  
OF WATER.<sup>2</sup>

We provided COVID/hygiene training and handwashing stations to

**80 COMMUNITIES**

AND DISTRIBUTED APPROXIMATELY 40,000 MASKS AND BARS OF SOAP TO FAMILIES IN NEED.

WE REACHED APPROXIMATELY

**60,000 PEOPLE**  
THROUGH  
**GOSPEL OUTREACH**  
EVENTS AND DISTRIBUTED 1,500 BIBLES.

**42 LIFE TAPS**

WERE SHIPPED TO HAITI, some of which were used by Samaritan's Purse to provide emergency water in the aftermath of the August 7.2 magnitude earthquake.

WE REGISTERED AS AN OFFICIAL NONGOVERNMENTAL ORGANIZATION (NGO) in Zambia and began setting up our

**SECOND INTERNATIONAL FIELD OFFICE,**

which will enable us to build a supply chain and respond to community and partner needs in Zambia and surrounding areas.

We partnered with a local organization to help us  
ESTABLISH AN IN-COUNTRY

**SUPPLY CHAIN IN KENYA,**

ensuring that spare parts and resources are available for nearby LifePump communities.

WE HIRED 7 NEW LOCAL FIELD STAFF MEMBERS

in Malawi and Zambia to help implement our in-country programs and expand our impact.

OUR FIELD PARTNER INSTALLED

**7 LIFE PUMPS**

IN GUATEMALA, which were our first installations in Central America.





# BRINGING NEW TECHNOLOGIES TO LIFE

Behind the scenes, Design Outreach engineers are designing and developing breakthrough innovations that provide the resources communities need to thrive.

While our international team and implementing partners were busy in 2021 installing LifePumps, training local technicians on pump maintenance, providing COVID prevention and hygiene education, and sharing the hope of the Gospel in remote communities, the Design Outreach Research & Development team was dreaming up new ways to improve the lives of those living in poverty.

## LifePump™

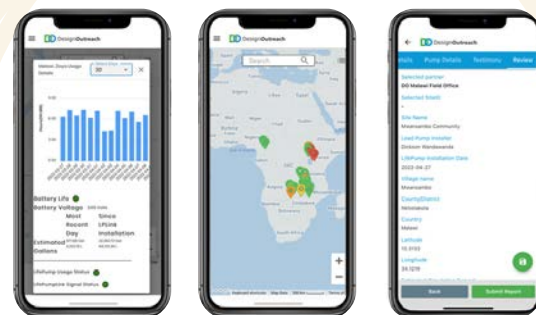
Because of our commitment to sustainability, we are constantly testing our products and finding ways to improve them. In 2021, our team partnered with some of the world's leading gearbox design experts to develop the Gen4 gearbox, a critical LifePump part. This new design will improve durability and manufacturability while simplifying field maintenance. Thanks to LifePumpLink, we are also generating solid evidence showing that LifePump provides 95% uptime—proof that LifePump truly is changing the status quo.

## LifePumpLink™

Our remote monitoring technology helps ensure that LifePump communities never experience a day without water. In 2021, we developed and launched our LifePumpLink online dashboard and mobile app, which provides field staff and partners with real-time pump usage data and actionable alerts right on their mobile devices. Future software iterations will include a maintenance module to further optimize LifePump preventative maintenance programs.

## autoLifePump™

This LifePump upgrade allows a solar-powered electric motor to be added to LifePump to provide a higher flow rate to meet increased demands. In 2021, the autoLifePump team simplified the design and completed continuous endurance testing to ensure the technology's reliability and longevity. They are currently getting it ready for field testing in Florida, where the climate is similar to where it will be used in the field. Once it's ready for deployment, autoLifePump will provide growing communities with double the water for a fraction of the cost of other water systems.



## LifeLatrine™

Recognizing the need for sustainable, affordable latrines as a vital step in alleviating poverty, Design Outreach has assembled a team of experts to develop a latrine pit liner and floor slab that are safe, reliable, reusable, and affordable for a single family. In 2021, the LifeLatrine team developed 30 design concepts, simulated some of the concepts at DO's R&D laboratory in Sunbury, Ohio, and selected two designs for field testing in Malawi. Three prototypes are ready to be shipped to the Malawi Field Office to be tested in rural communities where sanitary and reliable latrines are needed.



## LifeTap™

Many under-resourced communities rely on community tap stands to distribute water from sources such as solar pumping systems or springs. When the valves used to dispense water from these systems leak, break, or are left open, water is wasted and can become contaminated. LifeTap is a self-closing valve designed to withstand harsh environments and heavy use while saving the precious water communities rely on to survive. In the aftermath of the 7.2-magnitude earthquake that devastated Haiti in August 2021, Christian humanitarian aid organization Samaritan's Purse responded with trailer-mounted water treatment systems equipped with DO's LifeTaps to quickly provide emergency water supply for communities in need.



For more information on DO's technologies, use this QR code or visit [tech.doutreach.org](https://tech.doutreach.org).

## GLOBAL HEALTH

Addressing the needs of healthcare in developing countries is essential for healthy and thriving communities.

In 2021, we kicked off our work in global health by hiring a biomedical project engineer and welcoming our first Global Health Fellow. This new team began researching the most pressing challenges facing the global health sector to identify which types of products are needed most.

In 2021, DO also partnered with Karanda Mission Hospital in Zimbabwe to find a sustainable solution to replace single-use oxygen humidifier bottles. DO investigated new design solutions, but ultimately was able to identify and source humidifier bottles made of more robust materials that can be sterilized and reused.

# CONNECTING PEOPLE WITH A COMMON PURPOSE & PASSION

## WE CANNOT BREAK THE CYCLE OF POVERTY ALONE.

At Design Outreach, we believe each person has a unique set of God-given talents and resources that are intended for good. We collaborate with individuals and organizations like you who care deeply about lifting people out of poverty to implement sustainable projects with generational impact. The strong force of our volunteers, partners, staff, and local communities all working together is what makes our technologies a life-sustaining reality for thousands around the world. In 2021, we saw tremendous growth in our global network of people who believe in our mission, and the result was greater impact than ever before.



## PARTNERS

**18 in-country implementing partners** help ensure our projects are sustainable.

**13 industry partners** enable us to develop and manufacture new appropriate technologies.



## FINANCIAL SUPPORTERS

**3,157 supporters** have given since 2013, representing **44 states** and **8 countries** and contributing **\$6,884,519**.



## STAFF

For our team, this is Kingdom work—not just a job, but a calling.

**Nearly one-third of our team are support raisers** who fundraise for their salaries and benefits.

**12 staff members** work out of our international headquarters in Gahanna, Ohio.

**9 staff members** work out of the Malawi Field Office (MFO) in Lilongwe, Malawi.

**1 staff member** works at our newly established Zambia Field Office.



## VOLUNTEERS

**Volunteers** contributed **6,048 hours of pro bono work**, equating to **\$739,184 in donated services** for research, design, engineering, and project management in 2021.

**5 experts** joined our **Fellows Program**, established in 2021. This group of highly experienced professionals in areas such as product development and mechanical design commit 15-30 hours weekly to help lead our product development efforts and mentor the Design Outreach team.



## COMMUNITY MEMBERS

**We work alongside local communities** to help ensure they have the resources they need to thrive. Every single person impacted by this ministry is created in the image of God and has a story to tell. Turn the page to learn how your passion for alleviating global poverty is empowering people like Emelesiya and Teleza to achieve their dreams and reach their full potential.



# BRINGING BIG DREAMS TO LIFE

How Two Women Entrepreneurs Are Building a Brighter Future in Mkanda, Malawi



**Emelesiya Mofati of Mkanda, Malawi** has a sweet smile and timid personality. But she also has a sense of humor. The gate around her home—a luxury in her community—is stamped with the words “Beware of Dog” in menacing black letters. But when you visit her home, you realize that her warning is for two tiny harmless puppies.

At 23, Emelesiya is not only a mother but a small business owner. Attached to her home is her small shop where she sells soap, salt, matches, medicine, batteries, cookies, candies, body lotion, and cooking oil. Owning her own business has been her dream, and it became reality in January 2022, just two months after her community received a LifePump—a gift that would change Emelesiya’s life and the life of her neighbors forever.

Set on a hill and surrounded by fields of corn, Mkanda is home to more than 800 people. While the village is only eight and a half miles from Malawi’s capital city of Lilongwe, the 160 families who call Mkanda home know what it’s like to survive without clean water.



But on November 15, 2021, Design Outreach arrived in Mkanda to install a LifePump, provide COVID prevention training, and share the hope of the Gospel. After retrofitting the community’s old borehole with a LifePump, cool, fresh water from 138 feet underground began to flow. The people of Mkanda would never have to dig holes for water again.

With LifePump, Emelesiya has the water she needs to take care of her family, keep them healthy, and care for her new lemon, avocado, and pear trees she planted after the LifePump was installed. She also has the time and energy she needs to run a successful business—and dream of the future. “I wish for my business to grow so I can help other people in the community, not my family alone,” she says. “I would like to help others with startup capital so they can start their own businesses as well.”

But Emelesiya’s dreams do not end there.

*“Though I currently have a small business, I would like to start a bigger business so I can help my husband provide for our family,” she says. “This is my hope for the future.”*

*Continued on next page >*

After their old pump broke down, the people of Mkanda began to dig pits in a nearby field until they found water. Tragically, one of the pits was so deep that a small child drowned in it. As a result, they began digging shallower pits. When one dried up, they would dig another and another until each family had the water they needed to survive. The small amount of water they could find was contaminated, causing frequent bouts of vomiting and diarrhea.



## BRINGING BIG DREAMS TO LIFE, CONTINUED

Like Emelesiya, Teleza Lemani is a mother and business owner in Mkanda. Teleza owns a tearoom where she serves tea and bread. While she has operated her tearoom since 1996, it has not always been easy.

“The coming of Design Outreach has really helped my tearoom business, because where I was getting water was far from my tearoom,” she says. “And often when I arrived at the place where I used to get water, there wasn’t any. My business mostly depends on water. It wasn’t easy for my business; it wasn’t easy for me. And it wasn’t easy for my customers, because the water that I was getting was contaminated, which was exposing my clients to diseases. But now, I’m able to get clean water from LifePump, and also it doesn’t take me long to fetch water. So, with LifePump, my business will be running smoothly.”

With nearby access to safe water to help make her tearoom more successful, Teleza is hopeful for the future. Because she doesn’t have to fear a pump failure or downtime with no water, she dreams of growing her business and perhaps even opening a grocery store one day.

“I am so grateful and happy for what you have done for my community and other communities around us,” she says. “Thank you.”



# REACHING PEOPLE WITH ETERNAL HOPE

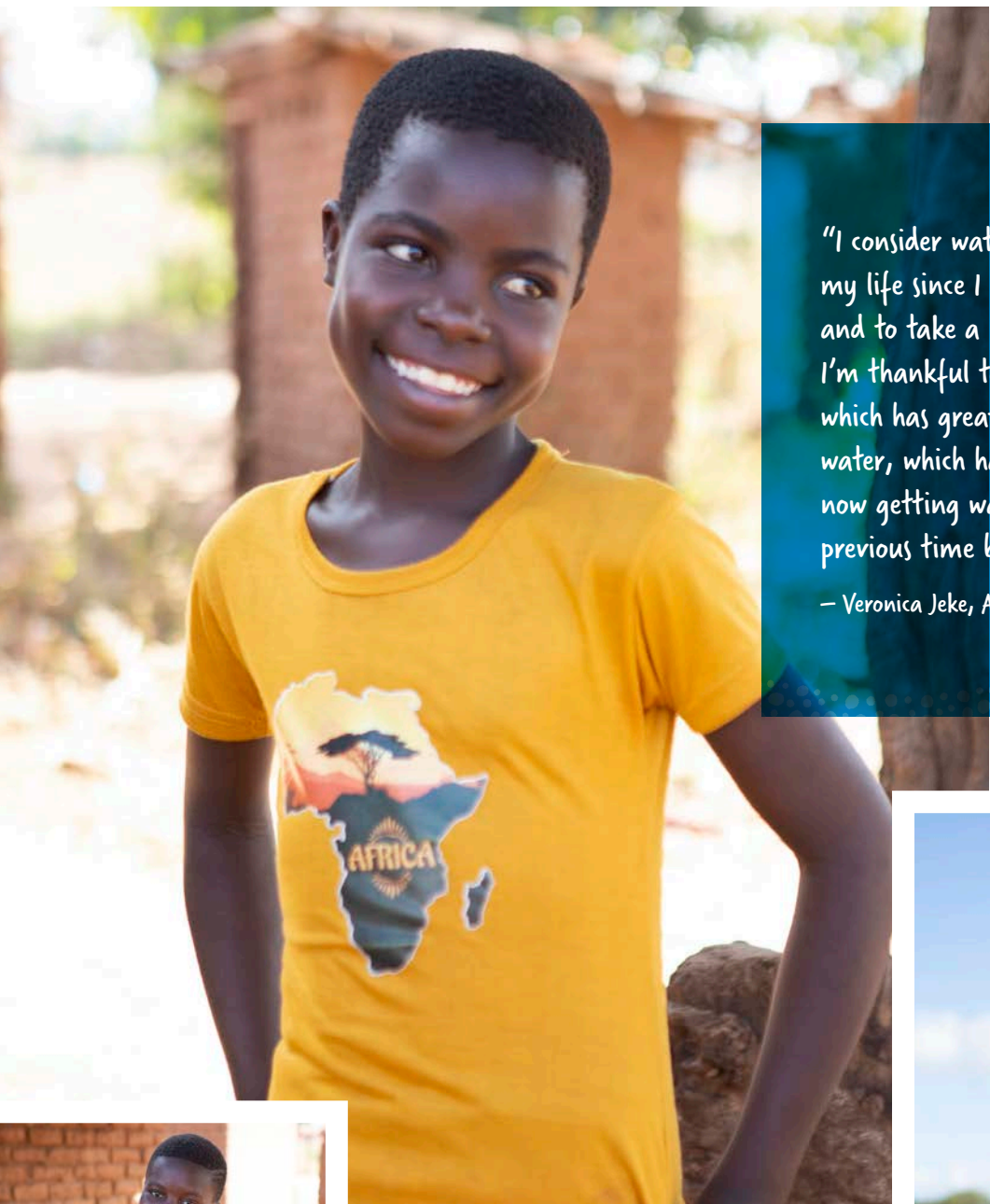
At Design Outreach, we desire to show God’s love by providing technologies that empower people to break the cycle of poverty. But we don’t stop there. We partner with local pastors to share the message of the Gospel in communities where we serve. In many cases, we host Gospel outreach events in conjunction with our COVID prevention and hygiene training program, where we regularly draw crowds of 500 people or more.

Through these programs, we offer face masks, soap, handwashing stations, and hygiene training to provide communities with practical resources to meet their basic needs while also sharing the good news that Jesus has come to make all things new. The pastors and Gospel partners we collaborate with also help connect people with local churches to ensure their discipleship journey continues. With each visit, we distribute 10–20 Bibles in Chichewa as well as other Christian literature as it is available.

We know that the Gospel changes lives, and sometimes we get to witness the transformation. On a visit to Mtenje, Malawi, in December 2021, Factual Paulos was one of the recipients of a Bible. Joyfully, he shared his testimony of giving his life to Christ the previous year when a LifePump was installed in his community and a local preacher shared God’s word. He has two young children, and because of Christ, he has stopped drinking alcohol and now is using the money to feed his children.

In 2021, Design Outreach and our partners hosted 80 Gospel outreach events where we distributed 40,000 bars of soap, 40,000 masks, 80 handwashing stations, and 1,500 Bibles, impacting an estimated 60,000 people. *Thank you for helping us reach these precious individuals with eternal hope.*





"I consider water as the most important thing in my life since I use it to drink, to wash my uniform, and to take a bath so that I should be neat. I'm thankful to Design outreach for this borehole which has greatly helped our village to have safe water, which has helped us to not feel sick. We are now getting water continuously, compared to the previous time before LifePump."

— Veronica Jeke, Age 11

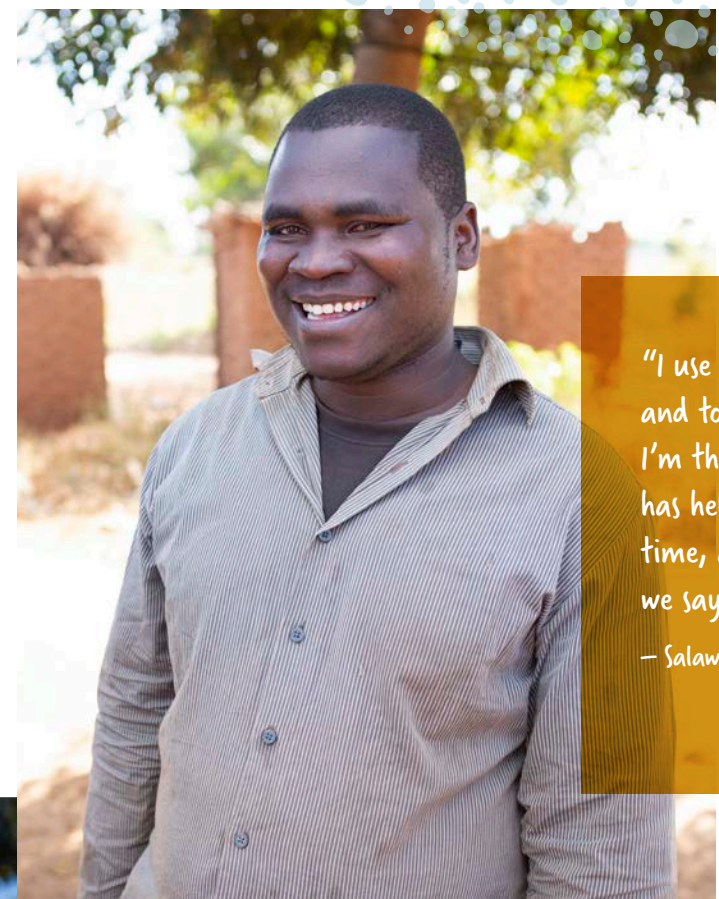


"I use LifePump water to drink, to take a bath, to wash my clothes. Now, I'm healthier than before because I'm using this safe water. This is different than the situation we had before this. Previously, before LifePump, when I used to drink water, I would vomit, and I even started experiencing diarrhea."

— Adilesi Jason, Age 14

"I get a bath using water from our LifePump when I go to school. Before, I was going to school without taking a bath, because there was not enough water."

— Victoria Mike, Age 12



"I use water to drink, to water my flower garden, for washing, and to give to my animals [pigs, chickens, goats] to drink. I'm thanking Design outreach for providing the borehole which has helped our kids reach into their respective schools at the right time, and I thank Design outreach for providing life to us, because we say that water is life. Madzi ndi moyo."

— Salawira William, Village Development Committee Chairperson, Age 30

"I used to spend more than three hours fetching water, but since the installation of LifePump, I get water in a short period of time. Now, I'm having enough time to do some household chores like washing dishes and taking a bath. I'm using water from LifePump to cook my food, wash my clothes, and drink."

— Nakilini Chauta, Homemaker, Age 53



"What makes me happy is the development that is coming in my community. I am looking forward to more development coming because of LifePump. We are thankful for bringing us LifePump. Now the community is happy because we are drinking clean water."

— Benisoni Masina, Village Head Chief, Age 42



"I use water to cook, drink, and bathe. My health is better—no diarrhea now."

— Cecilia Shimedu, Age 14





CATALYST CAMPAIGN

# MOVING THE WORLD TOWARD SAFE WATER FOR ALL

Our bold goal over the next three years is to reach half a million people with life-saving water and the love of Jesus.

At Design Outreach, we believe every person on the planet should have access to safe water. With the development of LifePump, we have made great strides in improving water access around the world through sustainable, long-lasting technology.

**But we aren't stopping there.**

Because of the generous support of all those who helped fund our Malawi Field Office, we now have the resources and bandwidth we need to impact more lives than ever before.

**OVER THE NEXT THREE YEARS, OUR GOAL** is to install an additional 750 LifePumps in Malawi and Zambia as part of our newly launched Catalyst Campaign, bringing our total installations to 1,000 LifePumps and reaching 500,000 people with safe water and the hope of the Gospel.

Access to clean water impacts every aspect of community life—from health to education to economic growth. With a reliable water source in their communities, women and children no longer have to spend hours gathering unsafe water that will likely make them sick. They can go to school, grow gardens, and enjoy life in new ways. Safe, reliable water is a catalyst for changed lives and thriving communities.

Our vision is that these 1,000 LifePumps will also act as a catalyst for widespread change in hand pump policy and practice. With the right technologies implemented in the right ways, clean water has the power to transform entire nations.

As we work together to move the world toward safe water for all, we are seeking God's wisdom and growing our team's capacity to use humanitarian engineering to tackle many more of the most pressing issues facing people in developing countries. Our global network of staff, volunteers, partners, and supporters is continually expanding to help us fulfill our mission of alleviating global poverty through life-sustaining technology.

We are thankful for every single person who shares our purpose and passion, and we cannot wait to see how God uses each of us to accomplish his reconciling work in the world.

THANK YOU FOR JOINING US ON THE JOURNEY!

For more information about the Catalyst Campaign, visit [doutreach.org/catalyst](https://doutreach.org/catalyst).



# FINANCIAL IMPACT



Design Outreach expanded its capacity in 2021 with revenues increasing more than 40% over 2020. As always, the largest investment of these resources (74%) is directed toward mission-oriented activities, including Research & Development (R&D), Appropriate Technologies, and Capacity Building, which encompasses ministry programs.

The ministry of Design Outreach is made possible through the generosity of our many volunteers who donate pro bono labor and expertise. This is particularly true in R&D, where much of our engineering work is provided free of charge. This financial summary accounts for these volunteer hours and shows the incredible role they play in DO's ministry.

In addition, the Design Outreach engineering staff raises money to fund their vital roles within the organization. Those revenues are identified as Support Raising.

Stewardship and Leadership & Administration costs continue to be closely managed to ensure that resources are invested wisely. Stewardship represents about 15% of annual expenses; Leadership & Administration costs represent roughly 10%.

We hope you are encouraged to see how your gifts are being invested to provide under-resourced communities with the technologies they need to thrive. **We thank God for your passion and partnership that make our ministry possible.**

## REVENUES

Donations for Programs <i>(Field Programs, R&amp;D)</i>	\$1,132,608
Volunteer Hours/Gifts in Kind <i>(GIK)</i>	\$742,569
General Operating Support	\$484,525
Support Raising	\$449,854
Appropriate Technology Sales <i>(LifePump, LifePumpLink, LifeTap)</i>	\$201,087
<b>Total Revenues 2021</b>	<b>\$3,010,643</b>

## EXPENSES

Research & Development	\$996,224
Capacity Building <i>(Advocacy, Training, Supply Chain Development)</i>	\$520,917
Appropriate Technologies	\$482,214
Stewardship <i>(Fundraising, Communications, Donation Processing)</i>	\$419,530
Leadership & Administration	\$285,039
<b>Total Expenses 2021</b>	<b>\$2,703,924</b>



## 2021 BOARD OF DIRECTORS

**Dean Jessup**  
Board Chairman

**Greg Bixler, Ph.D., P.E.**  
CEO & Co-founder

**Abe Wright**  
CTO & Co-founder

**Bradley Bryant, CPA**  
Plante Moran

**Mary Kate Castor**  
Community Volunteer

**Rocky Felice**  
RainMakers Talent

**Chris Lightfoot**  
National Christian Foundation Ohio

**Michelle Lockwood**  
Messiah College

**David Martin, Esq.**  
Bailey Cavalieri LLC

**Mary Mungai**  
Divine Home Health Care, LLC

**J. Kelly Williamson**  
AquaShield, Inc.

