



Updated January 18, 2021

## **Design Outreach**

### **Principal Engineer, R&D**

#### Organization:

It has been stated that 90% of the world's products are designed for 10% of the world's population. Billions of lives have been changed by technological advancement, but billions are still left behind in areas such as access to clean water, sanitation, and basic healthcare solutions. If today's engineers have the capacity to create self-driving cars, then why not create solutions that alleviate global poverty?

The needs are massive and urgent. For instance, as of 2021, nearly 1 out of every 8 people in the world lacked access to clean water, resulting in women and children making daily long and often dangerous journeys to collect water that will make them sick. However, we have seen firsthand the transformation that happens in communities where DO's hand pump solution, the LifePump, has been operating for years without failures. We have hope that appropriate and reliable technology solutions are within reach that may break the cycle of poverty and provide bridges to share the Gospel.

We are a team of R&D professionals developing technology that makes a lasting difference in people's physical, economical, and spiritual wellbeing. We do this by engineering products that are appropriate for the context and community's needs and by providing a high level of quality in all our products.

#### Position:

Design Outreach is growing rapidly and poised to tackle more major problems facing people in developing countries. In order to help facilitate this growth, the position of Principal Engineer has been created. Reporting to the Chief Technology Officer (CTO), the Principal Engineer will focus on leading the development of innovative appropriate technologies across the R&D divisions of WASH (Water, Sanitation, Hygiene), Global Health, and Agriculture. The Principal Engineer position is a full-time permanent position with benefits and requires support raising.

#### Key Responsibilities:

- Apply intensive and diversified knowledge of engineering principles and practices in the development of new technology.
- On-going learning of best practices in creating appropriate technologies, focusing on human centered design, supply chain development, and long-term sustainability.
- Partner with engineering volunteer teams across industry, academia, and/or church communities to develop new appropriate technologies.
- Lead and manage a team of engineers, designers, and interns.
- Estimate project resource needs and schedules.
- Serve as a subject matter expert (SME) in technical design reviews.

- Work with suppliers to launch new technology and ensure appropriate process monitoring is established to maintain quality.
- Implement human centered design principles as a framework for new product development.
- Design and implement engineering test methods, both experimental and analytical, to verify that product performance meets requirements.
- Review technical content for accuracy such as drawings, models, engineering analyses, test reports that are developed by internal and external resources such as volunteer teams and suppliers.
- Collaborate with CTO in developing intellectual property.
- Collaborate with DO's Field Programs department to field test and implement technologies.
- Professionally represent Design Outreach while interfacing with various volunteer groups, suppliers, NGO partners and missionaries.
- Support-raise launch and annual funds, maintain consistent and appropriate contact with ministry partners.
- Maintain healthy work-life balance.

#### Requirements:

- Understands and supports the mission of a Christ-centered organization dedicated to sharing the Gospel by word and deed.
- Passion and agreement with Design Outreach's vision and mission.
- Uphold Design Outreach's core values of excellence, faith, collaboration, and compassion.
- Kingdom and abundance minded when working with ministry partners.
- Strategic planning and oversight of engineering projects including developing, managing, and finalizing scope, budget, timeline, MOUs, etc.
- Strong communication (writing, oral and presentation) and interpersonal skills.
- Self-motivated and detail oriented.
- Excellent verbal, grammar, computer, and Word/Excel/PowerPoint skills.
- Ability to provide presentations to coworkers and volunteers.
- Intermediate to advanced skills in CAD and statistical analysis
- High capacity to multi-task, work independently, manage volunteers, and problem solve.
- Ability to commit an average of 8 hours per day 5 days per week (40 hours total per week), with availability in evenings and weekends to support special events, accommodate volunteer/donor schedules, and ensure deadlines are achieved.
- Works from office in Columbus, Ohio with ability to travel domestically and internationally to meet with staff and/or partners. International travel will be limited to approximately 1 trip per year.
- Ability to work in a team-based collaborative environment.

#### Required Education and Experience:

- BS degree in an applicable (mechanical, electrical, or biomedical) engineering field; MS a plus.
- Must have a minimum of ten (10) years of hands-on experience in related engineering field with technical leadership experience.

#### Timeline:

- Position start date is negotiable, and interviews will be ongoing until position is filled.