



Job Description: R&D Director

Company: EarthEnable Rwanda

Reports to: Chief Technical Officer

Location: Rwanda (with in-country and international travel)

Compensation: RWF 4,000,000 to 5,000,000 Monthly Gross

Relocation support available for candidates outside Rwanda.

Who We Are

At EarthEnable, we believe that our clients deserve our very best, that work should be fun, and that the best ideas could come from any part of the company. We celebrate each other's wins, learn from our setbacks, and are deeply proud of the impact we make every day. A healthy home is about more than avoiding disease - it's about dignity and pride in the place our customers most treasure: their homes. Being a part of EarthEnable means more than building housing products, it means building an organization and building a better future for rural families.

What We Do

EarthEnable is transforming the way people live, by making homes healthier for families across rural Rwanda, Uganda, and Kenya. Today, ~80% of Rwandans live in homes with dirt floors which are dusty, unsanitary, and fertile breeding grounds for parasites and germs. While replacing a dirt floor with concrete has significant health benefits (e.g. reducing diarrhea by 50% and parasitic infections by 80%), concrete is unaffordable for many who need it, and is also responsible for 8% of global carbon emissions.

EarthEnable addresses this pressing and ubiquitous problem by selling high-quality, earthen housing products like our flagship floor that is 80% cheaper than concrete with 90% less embedded energy. Earthen floors, plasters, and blocks are composed of natural materials (gravel, clay, sand, and laterite) and sealed with a proprietary drying oil that makes them waterproof, strong, and polished. In our first decade of operations, EarthEnable has installed ~60,000 products for over 300,000 individuals and created livelihoods for over 1,300 people. See our new product - a full house - [here!](#)



About the Role

This is a rare opportunity to lead one of the most ambitious applied R&D programs in sustainable housing in Africa.

We are seeking an R&D Director to drive breakthrough innovations for rural families, making their homes more durable, healthy, and beautiful. After years of building a foundation of impact, we are ready to scale. In this role, you will improve existing products and design new sustainable housing solutions, transforming homes and lives. With over 600 teammates ready to distribute new products, your work will have immediate, tangible impact.

As a key member of the Senior Management Team, you will serve as the in-house expert and leader on research. You will define and drive the R&D agenda, prioritize high-impact ideas, and collaborate with the senior team to scale successful solutions across the region.

The responsibilities of this role will include, but certainly not be limited to:

Identify Key R&D Needs

- Identify key product and research needs through meeting with clients in the field for feedback, inspecting our products in use, understanding the biggest construction challenges from masons, and talking with the Senior Management Team. Use this data to identify product failures and product components or attributes that need improvement, and priorities for new products to be designed.
- Understand what drives perceived value in clients, in order to prioritize various initiatives in the R&D pipeline
- Initial priority areas include
 - Materials innovation (e.g. stabilization methods, cement alternatives such as Oxara, developing ways to analyse local clays and sands to reduce use of trucks for material delivery)
 - Construction speed and scalability of earthen floors (e.g. reducing drying time, automation of floor construction) - our current construction process takes one month.



- o Managing moisture in low cost ways (e.g. rain resilience of plaster, or methods of preventing capillary rise that are cheaper than a DPM)
- o Reducing cost/construction time of structural or architectural housing elements through innovation or mass production (e.g. rammed earth foundations, poured earth floors/foundations, CSEBs)
- o New product development (e.g. bamboo roof sheets, lime plaster)

Develop External Partnerships

- Manage and recruit new members to a technical advisory board to advise and support research agenda development
- Establish and manage partnerships with universities, labs, and industry experts (e.g., partnerships with universities and corporate bio-resin and flooring labs for research we cannot do-in-house) to outsource aspects of our R&D
- Engage with global standards bodies (e.g. writing and contributing research to an ASTM standard for an earthen floor which we can use as a base standard for new countries we expand to)
- Closely manage external partnerships to ensure steady progress, lead innovations to get field tested, and provide feedback on their success or failure

Execute Against R&D Agenda

- Lead, coach, and develop a team of ~10 engineers and scientists across Rwanda, Uganda and Kenya
- Build team capabilities in experimental design, data analysis, and product development
- Recruit additional talent as needed
- Create research protocols, and ensure rigorous execution and analysis
- Track and push forward multiple research projects simultaneously
- Develop research and design agenda by weighing priorities and considering criteria such as: potential for impact, cost-benefit, and likelihood of success
- Research existing options that we could learn from or adopt that would solve our clients' problems
- Allocate resources from the R&D budget towards this pipeline of research and design projects
- Create a decision trees to present to management that indicate next steps based on broad outcomes of every project



Communicate Across Internal Company

- Communicate findings and tradeoffs effectively to CEO and management team to make decisions about where to invest next (e.g. at specific forks in the road)
- Communicate research agenda to full company and get feedback when appropriate
- Share insights and progress across the organization

Transition Learnings to Implementation or Additional Research

- Transition unsuccessful experiments to a new research arm or document reasons for failure
- Work closely with construction and quality teams to implement successful innovations
- Ensure smooth transition from R&D to field deployment
- Publish findings that may be helpful or relevant to the scientific community

Qualifications

- 5-10 years work experience, preferably having led an R&D / design department or an R&D/design team
- Master's degree in material science, structural engineering, earthen construction, or a related field (PhD preferred)
- Ability to be creative, strategic, analytical, and think outside the box to solve problems
- Humble and patient team-player who loves to coach and develop junior teammates
- Excellent attention to detail, commitment to excellence, and outstanding work ethic
- Flexible and adaptable to changing environments; thrives in a bootstrapped culture
- Optimistic attitude, entrepreneurial spirit, curiosity to learn new things
- Ability to work on a variety of tasks at the same time, and keep track of a variety of workstreams
- Sense of humor and enjoys a good pun



Apply online: <https://forms.gle/BiqsSqc368Ui3NWV9>

Note that relocation benefits may be available for applicants based outside of Rwanda.