

Bios of Winners of 2023 IRC Challenge Titled “Innovative Packaging for Last-Mile Medical-Supply Delivery”

SAMUEL KARURU (Ghana)



Samuel Karuru is a passionate engineer currently pursuing a masters in Mechatronics Engineering under the prestigious double degree program of ETH Zurich and Ashesi University. He is an expert in using computational methods for design of electro-mechanical systems. www.linkedin.com/in/samuel-kamunyu

1. What is your current occupation?

Mechatronics Master’s student in final year

2. What is your educational background?

MSc. Mechatronics Engineering (2022 to 2024)

ETH Zurich

Ashesi University

BSc. Mechanical Engineering

Jomo Kenyatta University of Agricultural and Technology (2013 to 2018)

3. How did you learn about the Challenge?

I learnt about this challenge by chance as I was browsing through the engineering for change website. This is also how I also got to learn about Wazoku.

4. What motivated you to respond to the Challenge? Why did you want to help the IRC with this particular problem?

I was instantly captivated by the idea of making my little contribution for greater good. I also couldn't also overlook how well the challenge aligned with my field of Mechanical Engineering.

5. *Approximately how much time did you invest in creating your response to this Challenge? Please use hours, days, weeks, as appropriate.*

We invested about 4 weeks in creating our response. We held meetings during every weekend (approximately 2.5 hours in each session) due to our difference in location. During the week we worked individually and discussed our findings during our meetings.

6. *How did you feel when you found out that you were a winner?*

I just couldn't believe what I was seeing. I read the email embarrassingly many times before finally forwarding it to Reginah. I am still buzzing with excitement.

My Experience

Learning about the challenge, I had never been so convinced that I should get something done. Initially, the process of crafting the response was quite intense as there were many good ideas that did not fit into some of the goals. Feasibility was also a challenge as we tried to liaise with some suppliers/manufacturers to ensure that it can be implemented easily. It was very rewarding when we settled on our final idea and even did some paper models to visualize the final product. The evaluation process was a long nail-biting experience. Learning about the win was just incredible, which is something I am still recovering from honestly.

REGINA ONYANGO (Rwanda)



Reginah Onyango has a background in Mechanical Engineering and is currently working in one of the largest electric bikes manufacturing companies both in design and in vehicle production management. She is a certified CAD engineer and trainer by Autodesk, highly skilled in CNC technologies and is a Project Management Professional (PMP) certified by

the Project Management Institute (PMI). <https://www.linkedin.com/in/reginah-onyango-47482aa3/>

1. What is your current occupation

I currently work as Vehicle production Manager at Ampersand Rwanda Limited based in Kigali, Rwanda and Nairobi, Kenya.

2. What is your educational background?

I did BSc. Mechanical Engineering at Kenyatta University (2013 to 2018)

3. How did you learn about the Challenge?

My challenge partner Samuel shared the link to this challenge with me to review and see if it is something we can consider working on since we have successfully worked well together on a number of projects in the past.

4. What motivated you to respond to the Challenge? Why did you want to help the IRC with this particular problem?

Growing up, I lived in a small, remote village with limited access to many amenities, including healthcare services. I could relate to this approach, and I wanted to do my small part to ensure safe delivery of medical supplies to whoever is in need of them in good condition.

5. Approximately how much time did you invest in creating your response to this Challenge? Please use hours, days, weeks, as appropriate

We finished the challenge in around 4 weeks, using the weekends primarily to assess our own weekly accomplishments. I worked on the challenge for roughly 1 hour every evening after work.

6. How did you feel when you found out that you were a winner?

Even though I was very confident in our design, I was not expecting a win. The excitement was truly overwhelming.

Could you please write a short quote summarizing your Challenge experience - from learning about it, writing it, to evaluation and your Challenge win? This has no limit on words, but the IRC/Wazoku may use pieces in different places.

After learning about the challenge, I just knew we had to get it right. We brainstormed a lot and came up with various concepts and materials to consider before settling on the selected material, which informed our final design.

It was very fulfilling to have a design that we both had a lot of confidence in after putting in many hours and the result was a confirmation that we actually got it right. We are eagerly anticipating new challenges and opportunities from Wazoku and its partners.