Mechanical Ventilator

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"Entrepreneurs are our real heroes."

Can we have an introduction to your product?

It is a low cost ventilator. It can be afforded by any clinics in villages, or the government hospitals and short dispensaries. Being a low cost product, it is easily available to the mass public. Immediate attention and services can be provided to the critical patients hence saving their precious lives.

How did you start your project and what was the first step?

Ours is a need-based product since there is a tremendous demand for this type of ventilator in the market.
The first step is the literature review, i.e., understanding how other universities and industries are manufacturing products like this.

Did you make any major mistakes? (If yes) How did you overcome it? What is a mistake most people make?
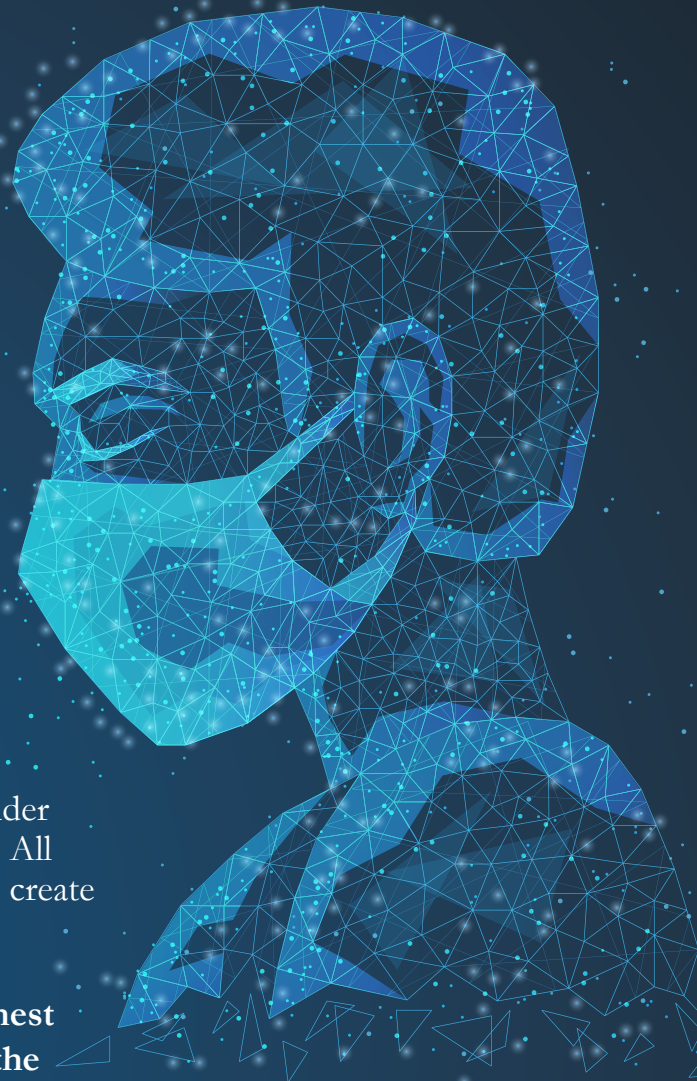
At first, we thought of developing a microcontroller-based type ventilator. Not only did we succeed, but also we achieved eighty percent of the work planned, but integration became a problem for us later on. Depending on the patient and his requirements, we have to determine the correct volume of oxygen and air which needs to be supplied.

Then we aimed for a mechanical ventilator which went very well.

The mistake most people make is that they do not make themselves aware of the available resources. Due to the unavailability of resources, neither can they work on the preliminary plan nor modify their existing plans. Therefore the designs for one's products should be flexible to accommodate any variations in the future.

While thinking about an idea, it is always good to consider multiple ideas to compare the feasibility and advantages. All ideas cannot succeed, but following these steps, one can create the best product or multiple products.

What was the toughest part? Also, what is the toughest part of such projects in general, the marketing, the implementation or simply getting started?

The execution was a complex problem. We were able to create the mechanical drawings quite easily, but we faced difficulty in manufacturing and assembling the mechanical parts due to the lockdown. Therefore, we ended up using most of the available resources.

Do you plan to use your product or provide it to the general public, in the future? There are rumours that you plan to partner with NGOs and distribute your product for free?

Yes, we have published various brochures. We are also trying to collaborate with the IIC. Furthermore, it will be available to the public as soon as the license is approved.
Government funding is available for innovators and entrepreneurs. It involves the submission of your innovation, based on which funds are approved by the government.
But with the funding we manufacture and supply the product to beneficiaries. These beneficiaries can either be found through NGOs or state administration or any other means.

What would have been the biggest challenge if there was no lockdown?

In that case manufacturing could have been easier and assembly could have been possible in house. We usually have man-power in abundance on campus. Nevertheless, the integration of a micro-controlled ventilator would still be a significant challenge.We are still facing this challenge.

How should we decide which project is ideal? Should we choose something we are good at or something we want to do? Should we focus on making a difference in our world or following our passion?

Always follow your passion. Always give your best to the startup idea that aligns with your passion. But, before development, always try to have complete awareness about the market environment and understand your consumers and their expectations from the product. Always be open-minded to accept new ideas and modify your products to meet the market requirements.

Any advice for young people or beginners? Especially undergraduates who have an idea, but don't know how to implement it.

Always crane out for new ideas to be an entrepreneur. Entrepreneurship should be preferred over jobs since jobs are similar to an immediate answer to solve your problems, but being successful as an entrepreneur takes time. Nevertheless, in the end, it will be fruitful since you will be working in your field.

Be Courageous and always follow your idea to emerge as a successful innovator. Being an entrepreneur requires a lot of skills, such as technical and management skills. When compared to movie stars or job holders, entrepreneurs are more successful.
Entrepreneurs help the society grow. They are the real heroes of this society.