**Objective**: To replicate an open source DIY oxygen concentrator made by Oxikit. Made it locally.

**Why**: Oxygen therapy helps in more than 75% patients to recover. There is a tremendous shortage of oxygen. It will become more difficult in small towns and villages. We believe demand for such equipment will continue to be there for a long time.

**Why Oxikit**: Our research shows that they have best performance. It is open source design and easy to manufacture.

https://oxikit.com/
https://shieldmission.com/pages/oxikit

**Vigyan Ashram**: We have well-equipped Fab Lab for digital fabrication that the students use to learn fabrication. We have done work for oxygen concentrator
http://vadic.vigyanashram.blog/2019/03/10/multi-drive-oxygen-enrichment-unit-oeu/
We have the needed arduino programming and fabrication skills. We should be able to fabricate it.

Vigyan ashram is part of M19 group of Fab labs in India led by Maker Asylum in India. We have jointly worked on providing Face shields during the first wave of pandemic. For the Oxygen concentrator also we will be using locally available components and collaborating locally so that design can be scaled up to manufacture in all fab labs in India.

**Timeline**: Since we are in need of the solution urgently. We wish to adopt the proven design and therefore selected Oxykit.

**Proposal**:

i) Vigyan Ashram wants to source oxt kit components from the US.vendor costing $800 or INR 60000 (break up given below)

ii) We will build another unit from locally available material.

iii) Imported unit will be a reference unit for us. This unit will be provided to needy patients in Pabal village with the help of local PHC/Doctor.

iv) We are planning to make the first unit in 15 days time.

If successful, we will train other labs and fabricators to replicate the units.

**Funding**:

i) We already have gathered local components to fabricate it locally. But for the reference and for the purpose of benchmarking some critical parts, we wish to purchase a few components from the Oxi kit vendor in the USA.

https://oxikit.com/collections/all-products/oxikit-parts

We wish to purchase following parts: (See attached screen shot)

a) Oxi kit build bundle - without compressor - $399

b) Zeolite 10 pound 13X - $60
Plus courier shipping charges : $336.81
Total : $795.81

ii) It seems the Govt of India has waived customs duty for the oxygen manufacturing unit. Hence we may not need custom duty.

iii) We will raise funds for the second unit from practical material cost and local donors.

iv) If we succeed in building a functional unit, it can be built in a faction of the cost of a working unit from the same vendor which is $2499.

**Risk:**

i) We will not be able to replicate the product. - Still the investment will not go waste. Since we will be giving it to a local doctor.

ii) Oxygen demand will be met by industry and no more intervention required. - This will be good news. Still we will learn a lot as a training institute in responding to crises and in turn train our students.