

My Team and I (total 3) created a business idea called FarmUp which was based on vertical farming which is a field that has gained a lot of popularity and holds a lot of potential. We participated in the Diamond Challenge entrepreneurship competition where we received a lot of praise from the judges for our idea. We took forward the idea and got approval from various housing societies to implement our vertical farming set up in their societies whenever ready. We also had a meeting with an investor where we devised plans for the future and how we can make this a reality.

Om Swami Aanand Co-operative Housing Society Ltd.

(Registration No. MUM/WGN/HSG/TC/9335/2015-16/2015)

F.P. No. 148 of TPS IV of Mahim Division, Opp. Vitthal Mandir,
D.L. Vaidya Road, Dadar (W), Mumbai - 400028.

Date: 22/9/2022

To,

Dear, Mst. Aahan A Karnavat
Flat No 901, Om swami Aanand CHS Ltd
D.L.Vaidya Road, Dadar West
Mumbai.400028

Ref: Your proposal of Vertical Farming in our Society

Om Swami Aanand CHS Ltd has received your proposal regarding vertical farming. We are very much interested in your farming project and would definitely find good benefits to our society and overall positive impacts towards the eco system.

The Committee approves your project ideas and looking forward in implementing it in our society. We would be interested to see your project model installed whenever it ready.

Wishing you all success in your future endeavors

Thanking you,

Regards

For, Om Swami Aanand CHS LTD

A.G. Damle

Chairman

Mr Atul G. Damle



Ajay B Adivarekar
Secretary

Mr Ajay B Adivarekar

FarmUp

Aahan Karnavat | Dersh Savla | Megh Dedhia

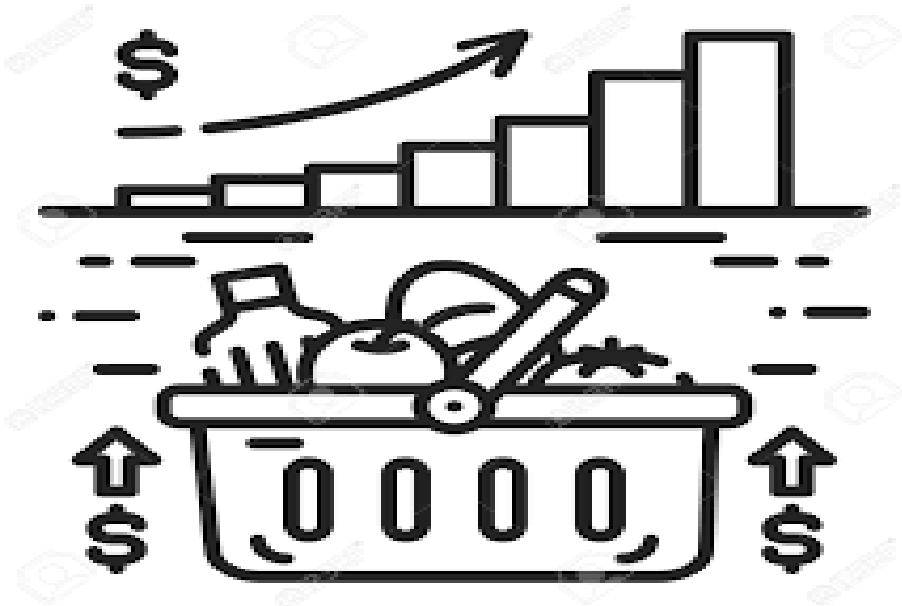
Concept ID - 6596

FarmUp
RE-IMAGINE FARMING

Problems



FarmUp
RE-IMAGINE FARMING



Our Solutions

FarmUp
RE-IMAGINE FARMING



Customized vertical farming set up



Organic Fruits and vegetables

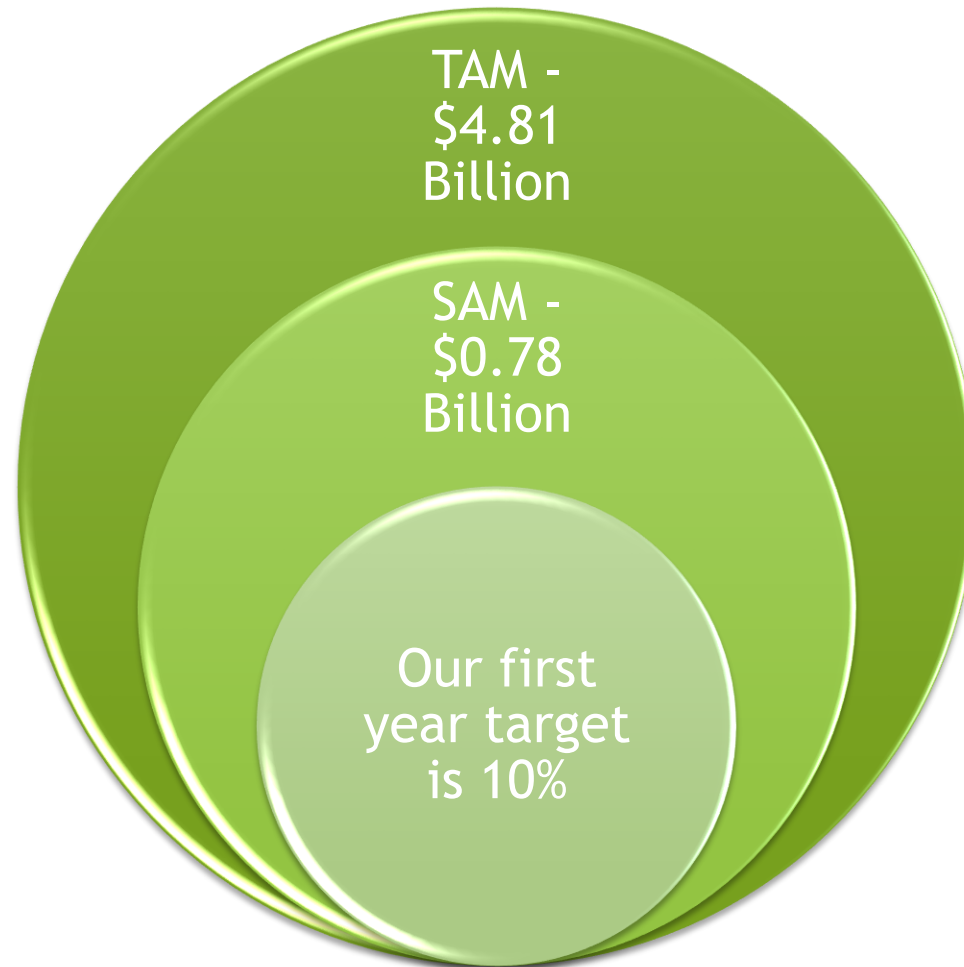
All year round no disruption supply chain



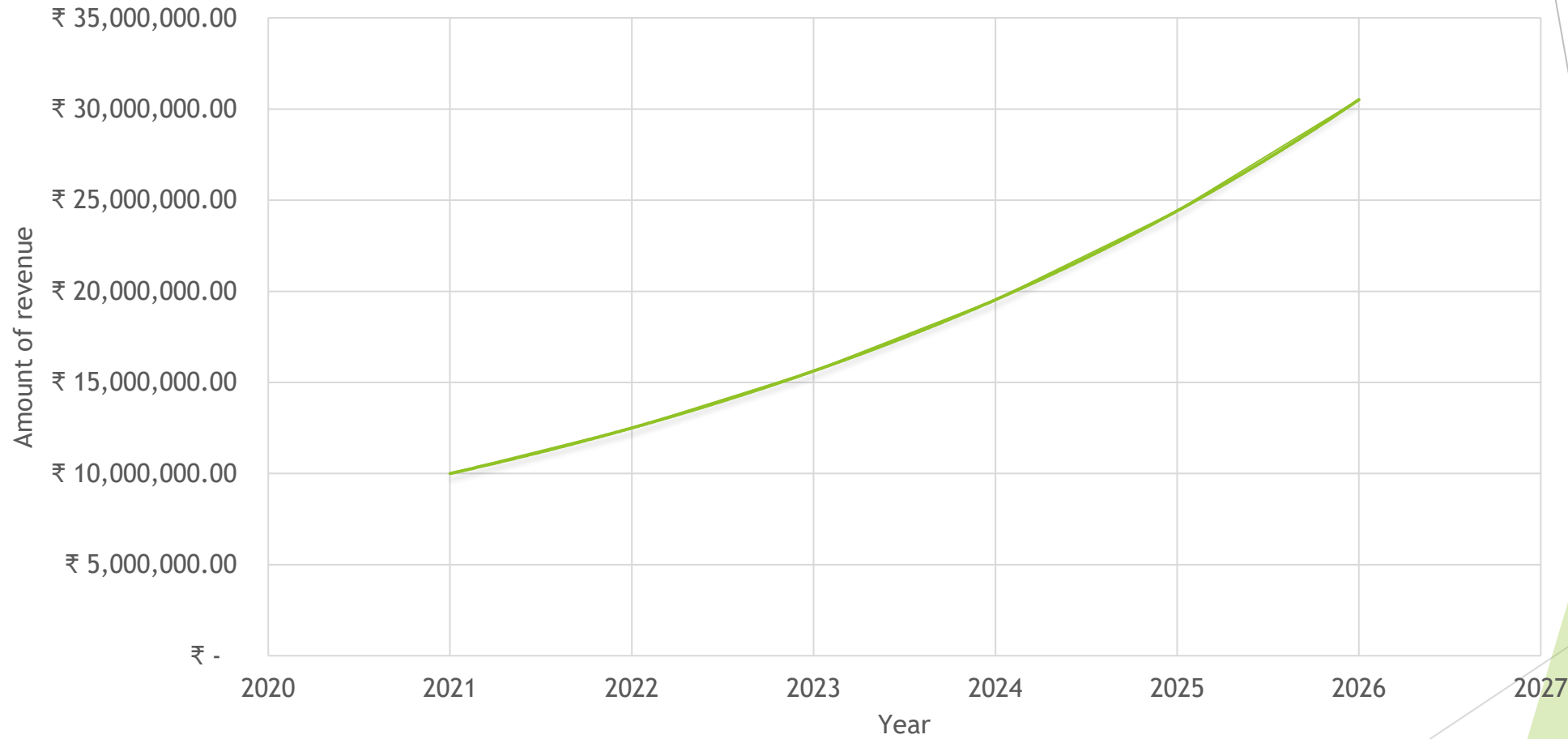
USP



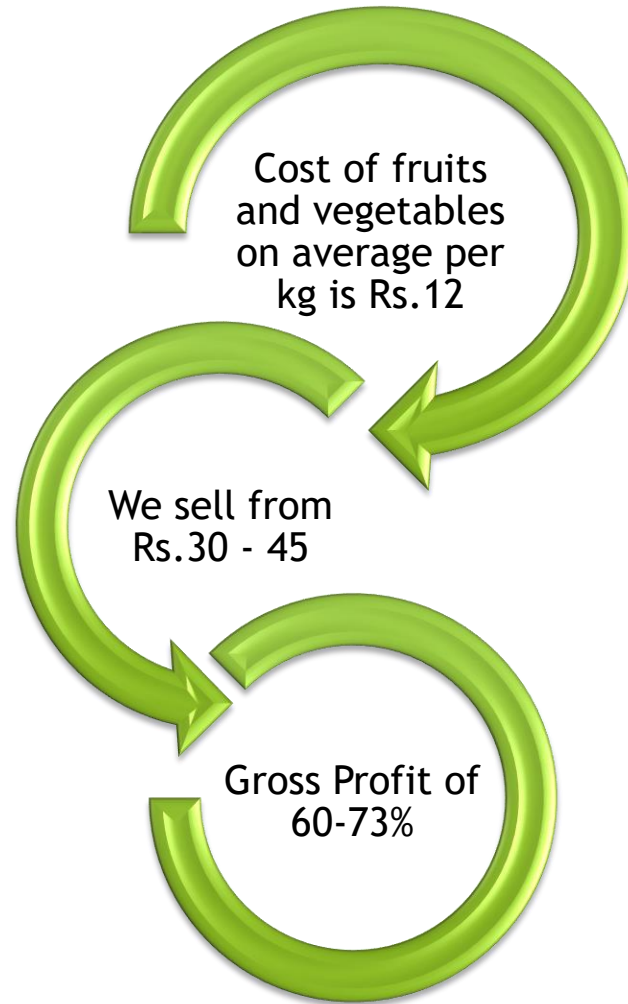
Market Details



Forecasted Revenue

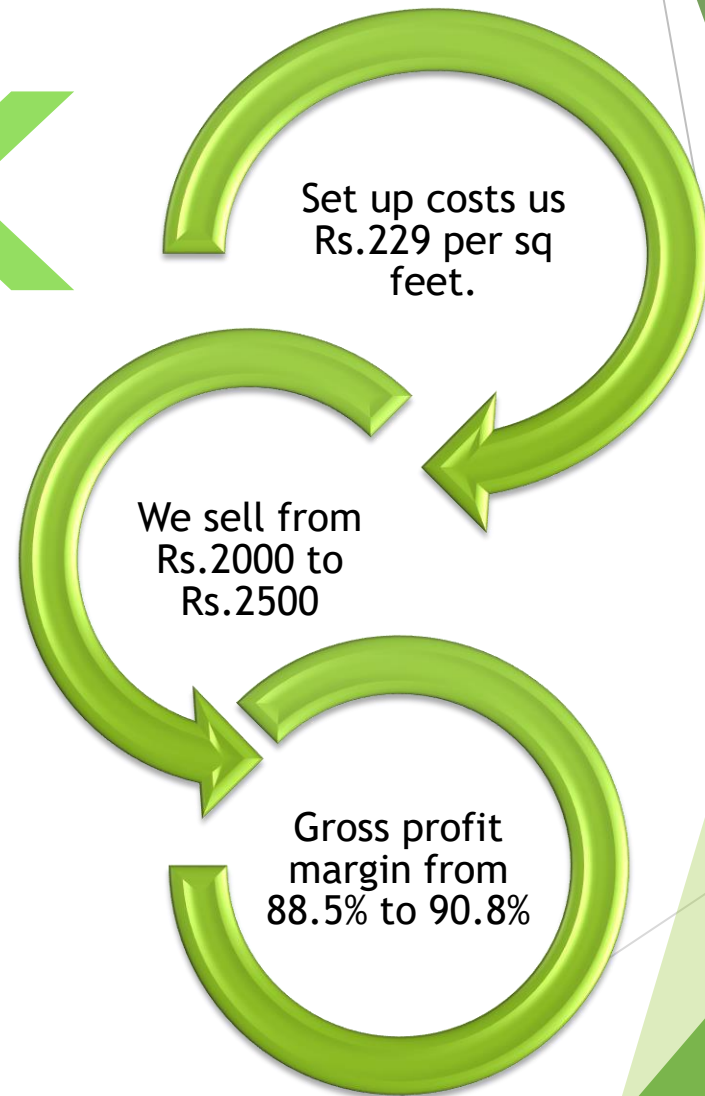


Costings

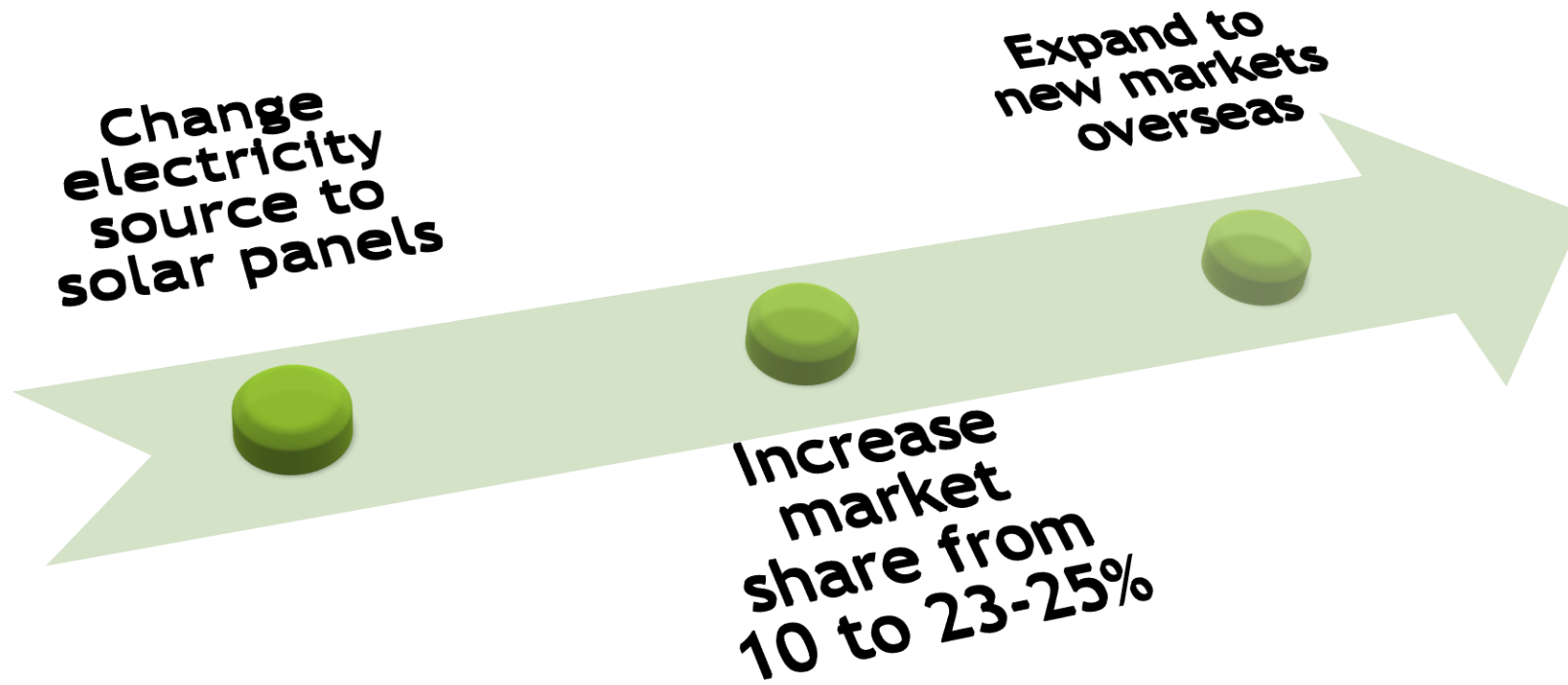


Fruits and Vegetables

Customized vertical farm set up



Future



Thank you!



FarmUp – Reimagine Farming

When you think about farming, what is the first thing that comes up in your mind? Farmers working hard under the sun, right? This is the thing of the past. Vertical farming is the new age technology which revolutionizes the way crops are grown! Vertical farming in its true essence means growing crops vertically in controlled conditions instead of growing them on large farms. This new solution is the right way forward. Vertical farming is the practice of growing crops in vertically stacked layers. It often incorporates controlled-environment agriculture, which aims to optimize plant growth, and soilless farming techniques such as hydroponics, aquaponics, and aeroponics. Our company focuses on hydroponics mainly and a bit on aeroponics.

How Is Hydroponics Done?

Hydroponics is the cultivation of plants without using soil. Hydroponic flowers, herbs, and vegetables are planted in inert growing media and supplied with nutrient-rich solutions, oxygen, and water. This system fosters rapid growth, stronger yields, and superior quality. When a plant is grown in soil, its roots are perpetually searching for the necessary nutrition to support the plant. If a plant's root system is exposed directly to water and nutrition, the plant does not have to exert any energy in sustaining itself. The energy the roots would have expended acquiring food and water can be redirected into the plant's maturation. As a result, leaf growth flourishes as does the blooming of fruits and flowers. Hydroponic systems work by allowing minute control over environmental conditions like temperature and pH balance and maximized exposure to nutrients and water.

Hydroponics operates under a very simple principle: provide plants exactly what they need when they need it. Hydroponics administer nutrient solutions tailored to the needs of the particular plant being grown. They allow you to control exactly how much light the plants receive and for how long. pH levels can be monitored and adjusted. In a highly customized and controlled environment, plant growth accelerates. By controlling the environment of the plant, many risk factors are reduced. Plants grown in gardens and fields are introduced to a host of variables that negatively impact their health and growth.

Fungus in the soil can spread diseases to plants. Wildlife like rabbits can plunder ripening vegetables from your garden. Pests like locusts can descend on crops and obliterate them in an afternoon. Hydroponic systems end the unpredictability of growing plants outdoors and in the earth. Without the mechanical resistance of the soil, seedlings can mature much faster. By eliminating pesticides, hydroponics produce much healthier and high-quality fruits and vegetables. Without obstacles, plants are free to grow vigorously and rapidly.

Customers With Problem

One of our major customers who will buy our products are online grocery delivering platforms like BigBasket, Groffers etc. The problem they face is of having a yearly and timely supply chain. Due to various reasons especially weather, these platforms do not get enough supply of the required items meaning unsatisfied customers to deal with. This problem also exists with supermarkets, smaller local grocery stores and vegetable vendors. Another of our customers are NGOs or government agencies helping the rural and poor sectors. They help solve different social issues and one of the big problems which is global hunger crisis. Another of our customers are all people who want healthy and organic food which is of high quality and lower price. This is the largest of our customer base.

Problem solved

To cater to the first problem, we completely vanquish the most important concern related to farming: dependency on weather. Through vertical farming we eliminate the weather factor which is very crucial because in India over 5 million hectares of crop was damaged in 2021 due to bad weather. We ensure yearly and regular supply of fruits and vegetables because we have completely removed the dependency on weather. We dictate the weather conditions and have full control over our crops. We have created an inexhaustible supply chain to online platforms, supermarkets and local stores and vendors.

This means they will not have to go through any trouble in ensuring they have their stocks ready because we ensure it. Creating such a powerful and well-equipped supply chain is really difficult especially in such an active market which has regular needs of supplies. 1 out of 7 people sleep hungry daily. This pain to mankind is something which we cannot even think about so we had to come up with a solution for that. To solve the hunger issues problem, we do it simply by being highly efficient and productive.

Vertical farming produces 240 times more yield than traditional farming using very less land. This way we can produce crops in mass and sell them to the NGOs or Government agencies at a very low price which allows them to reach maximum people and solve this major issue on the human race. We won't make any profits on them and just sell it at the cost price. NGOs or government agencies can also set up vertical farms, by buying them customized from us, there at a low price so that in water scarce regions vertical farms which use 95% less water will be effective. The third problem we solve is of our largest customer base. Everybody wants healthy and organic food. Our fruits and vegetables are fresh, hygienic, healthy and organic. Like a cherry in the cake, they are also cheap.

Due to the fact that all of our food is vertically farmed in controlled and very clean conditions, we can provide our customers with exactly what they want. Parents want the best food for their kids, older people want healthy and clean food due to age, parents usually have a busy

lifestyle and would also prefer more organic food daily because their diet may always not be healthy. Due to different lifestyles and reasons everybody wants to eat healthy food. We have no pesticides used at all. So the food is completely organic. We give value for money to the customers. This is an important aspect to ensure customer loyalty. This was we provide customers with healthy and organic food at a low price meaning they are extremely satisfied!

Our Products and Services

FarmUp provides a variety of products and services to customers. Firstly, we provide them with fruits and vegetables mainly leafy greens and other daily usage vegetables or fruits. They can buy this directly through our website. The consumers will get a variety of items there. Our other customers like supermarkets, online food delivery platforms etc. can buy it by contacting our sales staff and explaining their order to them or buy going onto the website and being redirected to a different part of the website specifically for them. Our second service which differentiates us from all is that we provide customized vertical farming solution to people at their buildings, societies or offices. They contact us by booking an appointment and a specialized employee goes to their location and understands the location well and takes down any specific needs of our customers. Then the farm is set up according to their needs. As we know that not all of our customers will be well aware of vertical farming, we have an annual subscription system where we will send specialized employees to take care of their farms on regular basis.

USP

Why we are better than the others? Nobody in India offers building of customized vertical farms for commercial purpose suited to their needs. But we do that. We will set up a vertical farm in your society, building or office customized to your location and needs. This way our customers can get close to this foreign technology. Having something so sophisticated easily accessible to you is a wonderful thing. It is also not a concern for our customers to be well versed on how to control the equipments because through subscription basis they will get highly trained professionals at their disposal.

However, customers can also be directly involved by learning few things and operating and taking full advantage of the system at their disposal. We have the first-movers advantage and we can very well capitalize on this. In India there is a steady increase in the demand for organic food and with standard of living on the rise people fancy having some growth in their backyard. We provide the same experience on a bigger and better scale. We also boast having a year-round stable supply chain which is very rare especially in such an active market. This all year supply chain means our customers can rely on us more than their existing suppliers.

Underlying Economics

We earn through 2 revenue models. One is by having a profit margin on the fruits and vegetables we sell. Second source of revenue is from the customized vertical farming set up. We earn a profit on each set up and through the subscription model we will earn profits from there too.

Specifics:

- I. The cost on average per kg for the fruits and vegetables is Rs.12. We will be selling them at around Rs.30 – Rs.45. This means we will have a gross profit margin of around 60% to 73%. Market rates in India begin from Rs.50 on average.
- II. For the customized set up the cost for us is around Rs. 229 per square feet. We will be charging from around Rs.2000 – Rs.2500 per square feet to our customers. This is a gross profit margin of around 88.5% to 90.8%.

These values clearly highlight how affordable and flexible our prices and margins respectively are. We can easily adopt different pricing strategies like competitive pricing if we feel a new competitor is trying to take away market share. This allows us to have a competitive advantage.

Customer Contact and Our Progress

We have conducted surveys to get to know our customers better. The results are very promising. 81.5% customers want a vertical farming set up at their places. With more than 82.1% of the people not knowing much about vertical farming it is evident that people will purchase our subscription package. This allows us to move forward with confidence because we know customers are interested in this product. Customers have also requested us specific plants which they would want us to sell. We have the land ready and our set up over the land is also almost ready. We have contacted many people and we expect many orders to come in the near future.

Market Information

TAM – The TAM for this space is \$4.81 Billion. The market for vertical farming is very huge and is expected to grow rapidly every year. There is a lot potential here and with low competition it can be dominated. This market is at the global level.

SAM – Our SAM focusses in India only and is valued at \$0.78 Billion. This is also a huge market and with extremely less competition it provides us with a lot of opportunities.

SOM – We project to have 10% market share in the first year of operation itself. The market share will only rise in the future as we will increase our marketing and widen our customer base.

Future

FarmUp has unparalleled potential and growth opportunity. Over the next 5 years:

- I. We plan to change the energy source to use solar panels. Solar panels will ensure we use more of renewable energy sources meaning we reduce our costs. This means we are more efficient and reduce costs. Solar panels also ensure we reduce dependency on existing fossil fuel systems and we reduce pollution.
- II. We plan to increase our market share from 10% to 23%-25% and firmly establish ourselves as market leaders and trend setters. A higher market share will allow us to expand our existing products to cover more and provide maximum options to our customers.
- III. We want to begin operating in foreign markets and increase our sales there. We plan to move into countries like USA, Singapore, South Korea, UK, Germany, France. These are the countries where vertical farming is popular and in demand.

Our Team

Our team consists of 3 people: Aahan, Dersh and Megh. All 3 of us were in the same school since childhood. We have been friends for around 16 years now. All of us have a lot of interest in business and economics. Aahan specializes in the business part, Dersh in economics and Megh in accounts. Together, we are a well-knit unit and make a really strong team. We always wanted to start a business of our own and FarmUp was the perfect way we could have. It has become our soul and we have ever since been working hard to make it a success. We know it will be a brand that will create a lasting impact!