

# TECH DRIVEN INNOVATION

WEDNESDAY 24/01/2024

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## SUMMARY

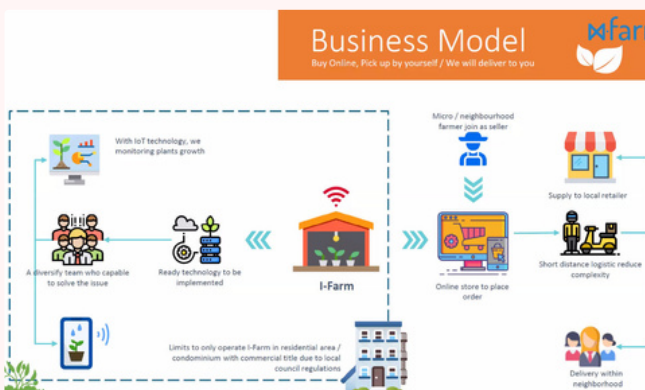
DUE TO THE SHORTAGE OF FRESH VEGETABLES AND WEAKNESSES IN THE FOOD SUPPLY CHAIN DURING MCO COVID-19 PANDEMIC, A SOLUTION IS PROPOSED BY I-FARM.

### "FRESH PRODUCTS E-COMMERCE MARKETPLACE WITH IN-HOUSE VERTICAL FARMING TECHNOLOGY"

IT WAS DESIGNED TO MAKE IT EASY FOR THE CUSTOMER TO PLACE AN ORDER THROUGH THE ONLINE STORE AND ALSO PROVIDE SHORT-DISTANCE DELIVERY OR SELF-PICKUP. ALL VEGETABLES ARE FRESH ON THE RACKS AND HARVESTED UPON ORDER, AND THEY ALSO PROVIDE VARIOUS CHOICES OF FRESH VEGETABLES TO LOCAL COMMUNITIES WITHIN THEIR COVERAGE AREA THROUGH VERTICAL HYDROPONIC FARMING SYSTEM. MACHINE LEARNING OPTIMIZES GROWING CONDITIONS. MARKET RESEARCH SHOWED DEMAND FOR LOCALLY GROWN ORGANIC PRODUCE.

I-FARM IS UNAFFECTED BY ADVERSE WEATHER CONDITIONS AS IT IS A FULLY ENCLOSED AND CLIMATE-CONTROLLED ENVIRONMENT, AND IT IS A TRANSPARENT GROWING ENVIRONMENT THAT CAN BE MONITORED BY THE PUBLIC, THUS MAKING IT A RELIABLE FOOD SOURCE. BESIDES, IT ALSO HAS HIGHER PRODUCTIVITY AS VERTICAL FARMS CAN YIELD MORE CROPS THAN TRADITIONAL AGRICULTURAL FARMS.

FURTHERMORE, I-FARM AIMS TO EXPAND ACROSS MALAYSIA IN PARTNERSHIP WITH LOCAL FARMERS. THEY COLLABORATED WITH CREST & PASARAN KH. THROUGH THIS COLLABORATION, THEY OBTAIN 3 FARMING RACKS AS SPONSORSHIP FROM CRESTENABLING FURTHER EXPANSION OF THEIR FRESH, LOCAL VEGETABLE DELIVERY.



## THE TECHNOLOGIES AND ISSUES

- I-FARM USES VERTICAL HYDROPONIC FARMING SYSTEMS INSTALLED IN RESIDENTIAL AREAS TO PROVIDE FRESH VEGETABLES TO LOCAL COMMUNITIES.
- THE SYSTEMS ALLOW RESIDENTS TO ORDER AND HARVEST VEGETABLES GROWN LOCALLY.
- MACHINE LEARNING ALGORITHMS HELP OPTIMIZE THE GROWING CONDITIONS IN THE HYDROPONIC RACKS.
- I-FARM AIMS TO ADDRESS ISSUES WITH THE FOOD SUPPLY CHAIN HIGHLIGHTED BY THE COVID-19 PANDEMIC.

- LOCALLY GROWN ORGANIC PRODUCE IS OF INTEREST TO MANY CONSUMERS BASED ON I-FARM'S MARKET RESEARCH.
- I-FARM PARTNERS WITH LOCAL FARMERS AS IT AIMS TO EXPAND ITS HYDROPONIC FARMING RACKS ACROSS MALAYSIA.
- THE BUSINESS FOCUSES ON OPTIMIZING VEGETABLE GROWTH, BUT IS RESEARCHING EXPANDING TO OTHER CROPS.
- THERE WERE PAST OPPORTUNITIES TO EXPAND I-FARM TO SINGAPORE THAT SEAN DECLINED TO FOCUS ON GROWTH IN MALAYSIA.

IN SUMMARY, THE TECHNOLOGIES AND ISSUES ARE LOCALLY-BASED HYDROPONIC FARMING, MACHINE LEARNING FOR OPTIMIZATION, FOOD SUPPLY CHAIN CHALLENGES, AND PARTNERSHIPS WITH LOCAL FARMERS TO PROVIDE FRESH ORGANIC PRODUCE.

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## REFLECTION

WHAT IS THE MOTIVATION/ INSIGHTS/INFORMATION DID YOU GAIN FROM THIS TALK AND HOW THE INNOVATION HELPS HUMAN LIFE IN PARTICULAR ASPECT?

### • ADRIANA MUNIRAH

I ACKNOWLEDGE THAT I-FARM INITIATIVE ADDRESSES REAL-WORLD CHALLENGES, LEVERAGES TECHNOLOGY FOR EFFICIENCY WITHIN THE AGRICULTURAL SECTOR. THEY ALSO SUCCESS TO REDUCE FOOD WASTAGE BECAUSE THEY ONLY PRODUCE THERE ARE ONLY MARKET DEMAND. THE INNOVATION HAS POSITIVE IMPLICATION FOR HUMAN LIFE BY ENSURING A MORE RELIABLE ACCESSIBLE AND ALWAYS SUPPLY FRESH VEGETABLES, SO PEOPLE CAN ALWAYS GET NEW AND PESTICIDE-FREE VEGETABLES WHENEVER THEY WANT.

### • LEO MIN XUE

I LEARNED ABOUT HOW THE FARM WORKS, FROM THE WAYS THEY FARM THE VEGETABLES UP UNTIL HOW THEY CREATE AN ONLINE WEBSITE FOR CUSTOMERS TO PLACE ORDERS AND MAKE SURE THAT THEIR CUSTOMERS HAVE FRESH VEGETABLES.

THIS INNOVATION TRULY HELPS PEOPLE, ESPECIALLY HOUSEWIVES, EASILY GAIN ACCESS TO FRESH AND ORGANIC VEGETABLES, EVEN DURING PANDEMICS. PEOPLE CAN PLACE AN ORDER ON THE ONLINE STORE AND HAVE IT DELIVERED TO THEIR DOORSTEP, OR THEY CAN PICK IT UP THEMSELVES.

### • NIK BALQIS

THE I-FARM MODEL PROVIDES AN INNOVATIVE SOLUTION FOR PROVIDING FRESH ORGANIC PRODUCE TO COMMUNITIES BY UTILIZING VERTICAL HYDROPONIC FARMING SYSTEMS DEPLOYED LOCALLY. I FOUND IT INSPIRING TO LEARN HOW THEY TOOK THE CHALLENGES OF THE PANDEMIC AS MOTIVATION TO FIND A NEW WAY TO LEVERAGE TECHNOLOGY TO IMPROVE FOOD SECURITY. THE I-FARM MODEL ALLOWS CONSUMERS TO HAVE A DEEPER CONNECTION WITH THE SOURCE OF THEIR FOOD. I LEARNED HOW HYDROPONICS AND MACHINE LEARNING CAN BE USED TO IMPROVE FRESH FOOD ACCESS IN INNOVATIVE WAYS. I GAINED VALUABLE PERSPECTIVE ON THE IMPORTANCE OF LOCAL FOOD SYSTEMS.

### • BHARATH RAJ

I APPRECIATE THE COMMENDABLE I-FARM INITIATIVE FOR TACKLING GENUINE AGRICULTURAL CHALLENGES THROUGH THE EFFECTIVE INTEGRATION OF TECHNOLOGY. EXPLORING THE INTRICACIES OF THEIR FARMING METHODS AND THE CREATION OF AN ONLINE PLATFORM FOR CUSTOMER ORDERS HAS PROVIDED VALUABLE INSIGHTS INTO THE HOLISTIC FUNCTIONING OF THE I-FARM MODEL. A NOTEWORTHY ACCOMPLISHMENT LIES IN THEIR ABILITY TO REDUCE FOOD WASTAGE BY ADOPTING A DEMAND-DRIVEN APPROACH, ENSURING PRODUCTION ALIGNS WITH MARKET REQUIREMENTS. THIS INNOVATION IS ESPECIALLY ADVANTAGEOUS FOR INDIVIDUALS SUCH AS HOMEMAKERS, OFFERING CONVENIENT ACCESS TO ORGANIC VEGETABLES, EVEN DURING PANDEMICS.

### • MUHAMMAD KHAIRUL HAKIMI

I RECOGNIZE THE I-FARM INITIATIVE AS A COMMENDABLE EFFORT ADDRESSING REAL-WORLD CHALLENGES IN AGRICULTURE BY EFFICIENTLY INTEGRATING TECHNOLOGY. UNDERSTANDING THE COMPLEXITY OF THEIR FARMING PRACTICES AND THE DEVELOPMENT OF AN ONLINE PLATFORM FOR CUSTOMER ORDERS HAS ENLIGHTENED ME ON THE COMPREHENSIVE WORKINGS OF THE I-FARM MODEL. ONE NOTABLE ACHIEVEMENT IS THEIR SUCCESS IN MINIMIZING FOOD WASTAGE THROUGH A DEMAND-DRIVEN APPROACH, ENSURING PRODUCTION ALIGNS WITH MARKET NEEDS. THIS INNOVATION IS ALSO BENEFICIAL, PARTICULARLY FOR INDIVIDUALS LIKE HOUSEWIVES, ENABLING EASY ACCESS TO ORGANIC VEGETABLES, EVEN AMID PANDEMICS.

### • BALQIS NABILAH

THE ADVENT OF THE I-FARM MODEL DURING THE COVID-19 PANDEMIC, WHICH HAS SIGNIFICANTLY SIMPLIFIED OUR DAILY LIVES, HAS MOTIVATED ME TO PERCEIVE LIFE'S CHALLENGES AS CHANCES FOR PERSONAL ENHANCEMENT. THE VERTICAL HYDROPONIC FARMING METHOD USED BY I-FARM'S VEGETABLES, ALONG WITH CONTROLLED ENVIRONMENT AGRICULTURE (CEA) AND INTERNET OF THINGS (IOT) SYSTEMS, HELPS TO MINIMIZE WATER AND WASTE USAGE. ADDITIONALLY, I-FARM OFFERS A PLATFORM THAT ALLOWS CLIENTS TO KEEP AN EYE ON THE GROWING CONDITIONS AND PURCHASE CROPS THROUGH THEIR ONLINE STORE. THIS WOULD PROVIDE CLIENTS WITH A CONSISTENT AND FRESH SUPPLY OF FOOD WHILE ALSO SAVING TIME ON GROCERY SHOPPING.

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