# TECH-DRIVEN INNOVATION: UNLEASHING THE POWER OF EMERGING TECHNOLOGIES FOR BUSINESS GROWTH IN URBAN FARMING SOLUTION (I-FARM)

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## Summary of talk

Dr. Seah Choon Sen is the designated speaker for the talks about I-Farm. In summary, I-Farm is the technology that helps residents buy vegetables more conveniently through an e-commerce marketplace. This technology is focused on solving the problem of the shortage of vegetables due to Movement Control Order (MCO) because of COVID-19. The majority of people were affected by this problem. For consumers, they need to obey the rule of social distancing and wait in long queues to buy groceries in the market. Furthermore, traders have difficulty carrying heavy crates of vegetables themselves. Citizens also should normalize self-control and crowd-avoiding at any place even after MCO is lifted. The I-Farm will solve the problem which is to make sure that the groceries are easy to order and can be delivered within a short distance. It also ensures the radical transparency of the vegetable growing process and the freshness of vegetables.

The I-Farm involves a diversified team with high capabilities and IoT technology to monitor plant growth. The vegetables that are completely grown will be sold in online stores. People then can buy online and delivered by short-distance logistics. The local retailer also can be a supplier of the vegetables.

Therefore, I-Farm indeed has an impact on the environment, society, and economics. The plants will not rely on the weather, reducing energy consumption and being environmentally friendly in terms of the environment. For social, it will be easier to achieve food security, reliable food sources, sustainable food supply, and reduction of food wastage. Economics also will effect which is sustainable consumption and production patterns, resilient infrastructure, and higher productivity of farms.

All in all, I-Farm will provide a variety choices of fresh vegetables in a wide coverage area, easy to order and sell through their platform as well as real-time information with IoT solutions and cloud services.

## Technologies and Issues

I-Farm is a fresh advancement in the farming sector that focuses on urban farming, in which they use Internet of Things (IoT) to monitor the growth of the plants and machine learning (ML) to help identify what are the factors and variables that are suitable for the period of cultivating the plants or which environment is suitable for specific species of plants to grow.

Besides, the implementation of machine learning helps to reduce the life cycle of the plants. For example, the duration for a plant to grow might be for 2 months, but implementation of machine learning technology helps to reduce it to 1.5 months.

The talk addressed the challenges associated with the large-scale cultivation of edible plants, emphasizing the complexities both financially and technically. It also highlighted the difficulties individuals face in accessing fresh vegetables due to limited availability or the need to travel long distances, shedding light on the importance of addressing these issues for improved food accessibility.

NUR ARISHA BINTI AMYRUL NAIM A23CS0154

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MUHAMMAD HILMI HIJAZI BIN JAMAL A23CS0303

ABDALLAH MOHAMED MAHMOUD A23CS0003

## REFLECTION

### Abdallah Mohamed Mahmoud A23CS0003

The talk improved my tech knowledge, I-Farm tackles wait times, aids online veg shopping, and monitors plant growth with smart IoT. It benefits the economy, communities, and environment by supporting local farmer, ensuring food security, and saving energy. This shows tech, when used well, can make a big difference in our lives.

## REFLECTION

### MUHAMMAD HILMI HIJAZI BIN JAMAL A23CS0303

What I learned from this talk is that IoT can be used to improve an agriculture business. The technology can help in producing more high quality and fresh crops for people. It can also saves a lot of times for both customers and farmers. Besides that, it can provide good impact in terms of social, environment and economy. Thus, technology can help humanity in improving their life. It is all up to us to apply the technology in our daily life.

## REFLECTION

### MUHAMMAD NAZMI BIN MOHD SAIFULIZAM A23CS0135

After the talk, I got to improve my knowledge of how technology may be useful in a variety of situations. I-Farm tackles problems like long queues and social distancing, which are specifically during COVID-19, in addition to streamlining the online vegetable purchasing procedure. There is the use of smart IoT technology in monitoring very interesting plant growth. Furthermore, I-Farm has a positive impact on the economy, communities, and environment. It helps local farmers and promotes food security and energy saving. This experience emphasized to me that technology when thoughtfully applied, has the potential to make a significant difference in various aspects of our lives.

## REFLECTION

### NUR ARISHA BINTI AMYRUL NAIM A23CS0154

From the talk, I learned that being a business owner means we must be knowledgeable to earn the best outcome. Urban farming is not a new idea in the industry, but I-Farm incorporates technologies such as IoT and machine learning to help finding the best resources and methods so they can increase their revenue and cater to consumer's demand. This is a prime example of how technology helps us in various aspects in our life, especially in terms of business. Thus, as a computer science student, I must learn how to use this ability and knowledge of technology to be able to contribute in the society.

## REFLECTION

### LOKE PEI EN A23CS0242

This talk taught me that Incorporating IoT technology and eCommerce into I-Farm operations has significantly enhanced efficiency. Precision agriculture, facilitated by IoT sensors, optimizes irrigation and improves crop management. Integrating an eCommerce platform expands market reach, enabling direct sales and secure transactions. With data analytics and IoT aid, transparent supply chains are ensured, ultimately boosting overall productivity and enhancing customer satisfaction in the I-Farm venture.

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