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TECH-DRIVEN INNOVATION: UNLEASHING THE POWER OF EMERGING TECHNOLOGIES FOR BUSINESS GROWTH WITH I-FARM



SPEAKER



DR SEAH CHOON SEN

Dr. Seah Choon Sen obtained his Doctorate in Information Technology from UTHM and has a keen interest in technology. Prior to joining UTAR, he ran his own tech company. Currently, he serves as an Assistant Professor at UTAR. His research interest and experience encompass Data Science, Digital Entrepreneurship, Financial technology, Precision Farming & Information System. He is also an accredited trainer with HRD Corp, an ecosystem builder with MaGIC, a Meta Certified Community Manager, an alumni of Microsoft Learn Student Ambassador, and the Vice President of Huawei Malaysia Seeds for the Future Alumni. In his spare time, he acted as a mentor for the startup community both on and off campus.

SUMMARY

The talk highlights Dr. Sean Sand's expertise in urban farming, digital entrepreneurship, and data science. The 2020 pandemic fresh vegetable shortage is addressed by iFarm, a precision farming solution. It addresses issues and offers answers, focusing on IoT integration and data analytics for effective farming. We examine the idea of vertical farming racks, their advantages, their business plan, and their social impact. In addition to discussing vegetable production, company performance, and iFarm's future expansion plans, the discussion highlights how crucial it is to transform ideas into successful businesses. Finally, the business plans partnerships and growth while utilising hydroponic farming.

PROPOSED SOLUTION

Fresh products from one's own home region can be ordered and supplied locally through an e-commerce platform that has been developed. Set the entire vertical farming plant workshop in easy reach of sight in every residential area, integrating all available technologies so that people can both choose and observe the vegetable-growing process in action. Kulim Kedah is currently residence to this integrated farm. Simplifies the ordering process by allowing orders to be placed from nearby supermarkets as well as from farther away. Because of the transparency of the growing process, which allows you to observe how the plant is developing, when vegetables are harvested, they are taken straight from the rack, preserving their freshness.



ISSUES

1. Fresh Vegetable Shortage During the COVID-19 Pandemic:

- Addressing the shortage and increased prices of fresh vegetables during the COVID-19 pandemic.
- iFarm aims to provide a steady supply of fresh produce to residents to mitigate these challenges.

2. Difficulty in Accessing Fresh Vegetables:

- Highlighting the challenges people faced in accessing fresh vegetables, especially in areas with oversupply.
- Vertical farming racks aim to solve this issue by bringing farming closer to residential communities.

3. Environmental Impact and Sustainability:

- Emphasizes the environmental impact of traditional farming practices and transportation.
- iFarm's solutions, including vertical farming, aim to reduce carbon footprint and promote sustainable consumption-based production.

4. Customer Segmentation and Preferences:

- Identifying customer segments and preferences through market segmentation.
- Understanding the income, behavior, and interests of customers to tailor the offerings and meet their needs effectively.

5. Technology for Business Optimization:

- Leveraging technology not only for farming but also for optimizing business operations.
- The use of machine learning, IoT, and online platforms contributes to efficient production, reduced costs, and enhanced customer experiences.



REFLECTION

AMELIA ADLINA BINTI AZRUL A23CS0047



I am truly inspired by Dr. Sean Sand's iFarm talk. Incorporating modern technologies like machine learning and the Internet of Things with creative usage of vertical farming racks seemed like a considerate way to address pandemic-related issues. iFarm shown its ability to tackle practical problems by prioritising client involvement, offering affordable prices, and pursuing sustainable growth. In retrospect, I believe that the dedication to establishing a local brand in Malaysia and giving sustainability first priority is a positive move for both community well-being and agriculture. The solution known as iFarm is very astounding since it symbolises innovation with a purpose.

MUHAMMAD AMIRUN IRFAN BIN SAMSUL SHAH A23CS0121



Through the talk, I understand that it emphasizes the need for resilient solutions which highlighted iFarm and vertical farming racks in responses to the pandemic. These innovations not only address fresh vegetable shortages but also promote sustainable agriculture and reduce environmental impact through data-driven precision farming. Customer-centric approaches, like online platforms, enhance accessibility, while empowering residents and fostering community involvement. Overall, these innovations contribute to ensuring food security by providing a reliable supply of fresh produce, marking a significant step toward a more sustainable and resilient future.

ATHIRAH SYAFIQAH BINTI MOHD RAZALI A23CS0163



The presentation emphasized the company's unwavering dedication to freshness, achieved through on-demand harvesting and a user-friendly platform facilitated by the Internet of Things (IoT). Catering to quality-conscious urban consumers, the market strategy relies on big data analysis to prioritize flexibility and ensure prompt delivery on the same day. This strategic approach is bolstered by extensive global vegetable consumption data and a thorough survey. The successful introduction of "ONLINE PASAR" during the Movement Control Order showcased the company's resilience, establishing it as a promising contender in the rapidly evolving realms of fresh produce and internet industries.

TAN ZHAO HONG A23CS0188



From this talk, the most unforgettable information that I gain from this talk is about Digital Entrepreneurship and Data Science. Dr. Seah's expertise in digital entrepreneurship and data science highlights the role of technology in transforming traditional farming. This is not only improves efficiency but also introduces innovative solutions to agricultural challenges. iFarm's focus on IoT integration and data analytics also showcases a commitment to precision farming. This approach enhances the efficiency of agricultural practices, optimizing resource use and contributing to sustainable production.

ANGELA LEE SU ING A23CS0047



Dr. Seah Choon Sen's i-Farm presentation really caught my attention with its smart blend of urban farming and technology. The idea of bringing fresh veggies to people's doorsteps, especially in the face of pandemic-related shortages, is not just practical but also forward-thinking. The use of IoT and data analytics in the farming process ensure efficiency and freshness. i-Farm helps human life in convenience and accessibility. i-Farm brings fresh vegetables directly to people's doorsteps, eliminating the need to travel to distant markets. This convenience is particularly beneficial for individuals with busy schedules, mobility challenges, or those living in areas with limited access to fresh produce.

TECHNOLOGIES USED

1. iFarm - Precision Farming Solution:

- Utilizes data science and IoT technology for precision farming.
- Aims to streamline the growing process and ensure a consistent supply of fresh vegetables.
- Enables residents to conveniently receive fresh produce at their doorsteps.

2. Vertical Farming Racks:

- Introduces a novel solution to the difficulty of accessing fresh vegetables.
- Implements vertical farming racks in residential areas, offering residents the opportunity to farm and choose their own vegetables.
- Integrates IoT machines to monitor and simplify the growing process.

3. Data Analytics and IoT Integration:

- Addresses challenges during the pandemic by bridging the gap between supply and demand.
- Efficient farming practices enabled through the integration of data analytics and IoT technology.
- Ensures transparency in the growing process, allowing residents to monitor plants.

4. Machine Learning for Environmental Factors:

- Implements machine learning to identify suitable environmental factors for specific vegetables.
- Reduces growing time and enhances the overall efficiency of the farming process.