



*To Grow In The Shortest Time*

For	
Company	UrbanGrow Farms Sdn. Bhd.
Proposed Topic	Highly Productive Indoor Farm – Challenges and Solutions
Date	August 2021
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# FOUNDER

## **Cheik Yee Chiew**

### *FOUNDER*

Entrepreneur who started one of the very first vertical farm in Malaysia since 2017. Passionate about expanding access to great produce we can trust.

Graduated from The University of Western Australia with a Bachelor Degree of Computer Science and Management, and a Master Degree of Management Science majoring in Computer Data Management.

Joined Vector International (Australia) in 1991 as a Project Engineer and subsequently relocated to Malaysia in 1996 to manage Vector International (Malaysia) which was a subsidiary of Vector International Australia.

Vector International is a company specialising in System Control and Data Acquisition (SCADA). It has implemented thousands of projects worldwide and some of the major accomplishments are Hong Kong MTR Octopus Card System, Coca Cola Amatil Factory Automation, Yale Campus Wide Energy Management System, NASA, Boeing, BMW, BHP Minerals SCADA System, Singapore MTR Network CCTV System and Bangkok City Flood Management System. Cheik is personally involved in the Hong Kong MTR, Coca Cola, BHP, Singapore MTR and Bangkok City Flood Management System from design to the implementation stage.

Utilising his years of knowledge in automation, Cheik is one of the key person that developed the core sensing and automation of UrbanGrow farming management system (Urbanio) which forms the basis which connects to Urbanio which uses the data for Automation as well as feeding into his AI Engine to help to improve the growth and increases the yield of our produce.



# ABOUT US



UrbanGrow is an agriculture technology ('AgTech') company launched in 2017. We build and run indoor farms that produce 100 times more vegetables than traditional outdoor farms, all connected by our technology infrastructure.

By locating in cities, we reduce logistic costs and shorten the supply-chain to provide our customers access to fresh and clean produce all year-round.



## ABOUT US



2017 - It started as a test farm with research and development of various types of leafy greens, microgreens and roots. The farm was 1,500sf.

2018 - Commercialised production a 7,000sf facility. The facility is now self-sustaining and has established its reputation as a quality, healthy and consistent producer.

2020 - Embarked on a third facility totalling 45,000sf. This will be the largest indoor farm facility in Malaysia and possibly South East Asia. The new facility will increase the mix of fresh produce for Klang Valley.





# ABOUT US



UrbanGrow produce are free of herbicides and pesticides. They are naturally organic since they are hydroponically grown. Ministry of Agriculture and Food Industries awarded the Company Malaysia Good Agriculture Practice (MyGAP) since 2017.

We use technology extensively. Where possible, Internet Of Things (IOT) has been deployed in our production process especially in the day-to-day operations of the farm. This enables us to attain consistency in the final product.

We collaborate with our business clients to understand their needs intimately. The collaboration is an economic advantage for both parties, maximising resources thereby enhancing shareholder value.

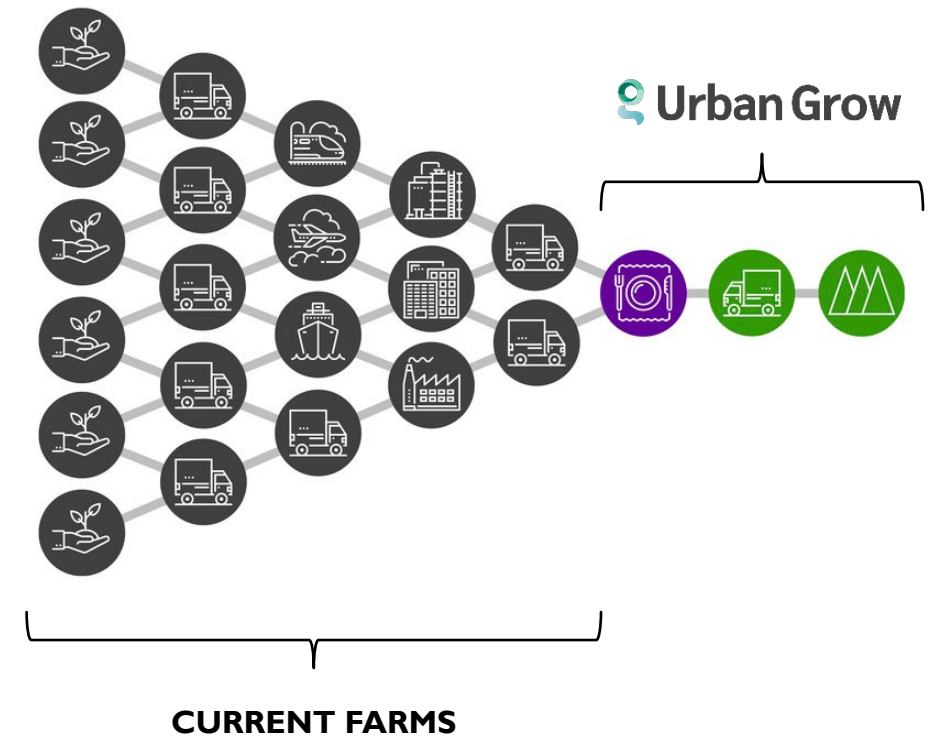


# OUR PRODUCTION

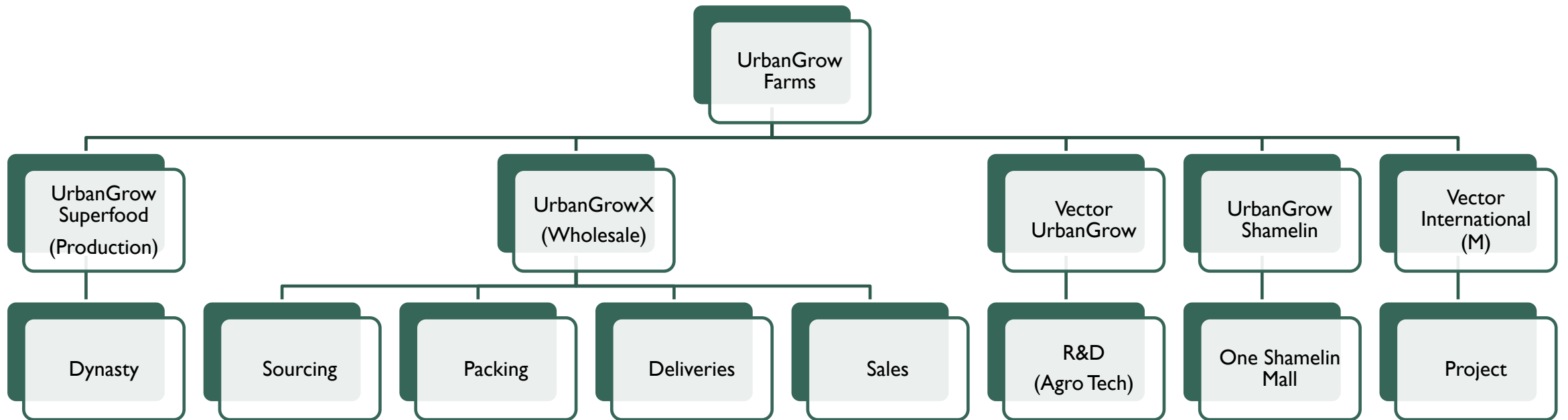
	2018	2019	2020 - 2022
Growth	3,000kg/year	14tonnes/year	230tonnes/year
Farm Space	1,800 sqft	7,000 sqft	45,000 sqft
Customers	Consumers	Restaurants	Restaurants, Wholesalers, Hotels & Hospitals
Products	20 mix varieties	Curly Kale	Curly Kale, Spinach, Arugula, Romaine, Mix Salad

# BUSINESS MODEL

- Shorter supply chains with lower intermediary costs.
- Location
  - Proximity to customers
  - Large low cost property
  - Industrial tariff for electricity
- Technology
  - Manage administration of nutrients, water and energy
  - Optimise growth cycle using minimal resources
  - To create consistent production
  - Customized vegetable based on taste and size



# OPERATIONAL STRUCTURE





# AREAS OF CONCERN IN SETTING UP INDOOR PLANT FACTORY

- There are 3 major pillars to address in an Indoor Plant Factory
  - Cost
    - Capital Cost
    - Operation Cost
  - Fund Raising
    - Return on Investment
    - Difficult to Raise Funds
  - Marketing

# CAPITAL COST

- Site preparation
  - Renovation
  - Air Conditioning System and Ducting
- System
  - Air Management System
  - Lighting Control System
  - Planting System
  - Nutrient Balancing System (Auto Doser)

# ADDRESSING CAPITAL COST

- Minimise Renovation
- Lighting Control System
- Auto Doser System

# OPERATIONAL COST

- Fixed Cost

- Rental
- Labor

- Variable Cost

- Utilities
  - Electricity
  - Water
- Nutrient
- Seeding Consumables

**RETURN ON INVESTMENT COST**

# ADDRESSING OPERATIONAL COST

- Electricity
  - Smarter Lighting Control
- Water
  - Recycling Water
- Labour
  - Automation
- Consumables
  - Nutrient
  - Seeding Consumables

**RETURN ON INVESTMENT COST**

# FUND RAISING

- Issues
  - High Capital
  - High Operational Cost
  - Low Return on Investment
  - Long Payback Period
  - No differentiation with normal farm products
  - Very limited Funds Manager Interested



# MARKETING

- Competing with Traditional Farming Produce
  - Too many layers from Farm to Table
    - Approximately 7 layers
  - Traditional Farm cost is a lot lower but this is getting closer
    - Fertiliser going up
    - Weather getting bad
    - Labour getting more expensive
    - Land getting expensive

# URBANGROWX

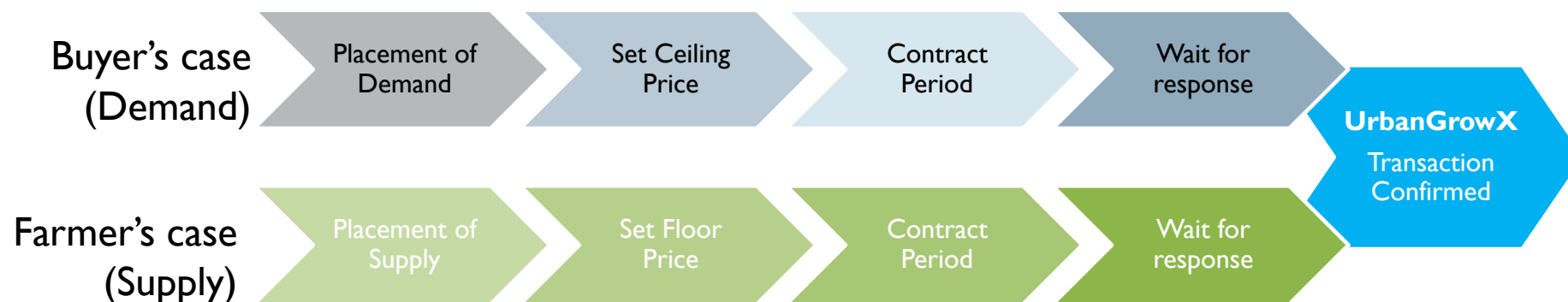
The value chain of fresh produce from farm to table in Malaysia is a complicated one. Suffice to say, the process is populated with multiple layers of agents, brokers and wholesalers, suppressing the price for the producer while inflating it for the consumer.

As a result, we created UrbanGrowX. Our primary objective was to develop an avenue for ourselves. And the system is being adopted by other producers and clients.



# URBANGROWX

- UrbanGrowX (UGX) is our own proprietary online marketplace. The intention is to bring producers and consumers closer in terms of pricing while reducing opacity in the part of the value chain operated by agents, brokers and wholesalers, hence keeping cost down.
- Producers and consumer will submit their selling and buying price. Where there is a match, a transaction is consummated.
- The marketplace not only enable producers and consumers to transact on spot but will also allow consumers to arrange for future delivery.





**"TO GROW IN THE SHORTEST TIME  
WHILE USING LESS ENERGY"**

