

## Trend of Next Generation Startups

We studied student entrepreneurs from prestigious universities in Singapore.

What does the younger generation in Asia aim for? This time, keywords are "Food Efficiency", "P2P-oriented logistics", and "Bottom of Pyramid (BoP) Products".

### Fastbee

NTU(Nanyang Technological University)



#### Singapore Hawker center

A hawker center or cooked food center is an open-air complex in Singapore, housing many stalls that sell a variety of inexpensive food with a good variety of high quality and sanitary food. They are typically found in city centers, near public housing estates or transport hubs (such as bus interchanges or train stations).

#### Crowded Lunch hour's problem

Due to busy office crowd at business parks, it has become difficult for hawkers to serve all the customers with minimum waiting time.

#### Solution: Fastbee's Bulk Delivery Model

Fastbee, a Singapore local food delivery startup has solved this problem by its innovative delivery model. Fastbee.sg was founded by Khoo Kar Kiat, a student of Nanyang Technological University, in early 2017. Fastbee is established with the goal of bringing a wide range of good meal options to the busy office crowd working in major business parks



in Singapore. Through a bulk delivery concept, Fastbee brings different menus to customers daily without imposing any minimum order amounts or delivery charges. Fastbee has one of the highest customer retention rates in the market.

### How Fastbee solution works?

Customers order food in advance on the website before 10.45am each day, and orders are placed with the hawkers through their mobile phones. Hawkers start preparing the food before the lunch crowd comes in, and Fastbee drivers pick up the orders by 11.20am before delivering them to the self-collection kiosks by noon. Users enter their mobile codes to pick the orders from the kiosks.

### Differentiation

What are sources of their competitiveness to protect their own business from followers?

**Safe Hawker Food:** Fastbee only orders from hawkers licensed by the National Environment Agency. To maintain hygiene, the machines are cleaned daily.

**Concentrate on high density areas:** Most of the hawker dishes cost SGD4 to 7 (USD3 to 5), which include a 10 to 30 percent cut for delivery. Because of the small profit margins, keeping operation costs low is vital for these services to survive. Therefore Fastbee concentrates only on specific high density areas. Its vending machines are located in office hubs such as in the West: CleanTech One, Science Park (which has two locations) and Mediapolis (open only to Mediacorp employees).

**Batch Delivery:** Fastbee tries to reduce the manpower through a batch-based model, where orders from various hawker stalls are consolidated and delivered to fixed locations and at regulated times - unlike previous services that deliver to customers' doorsteps at any time of the day.

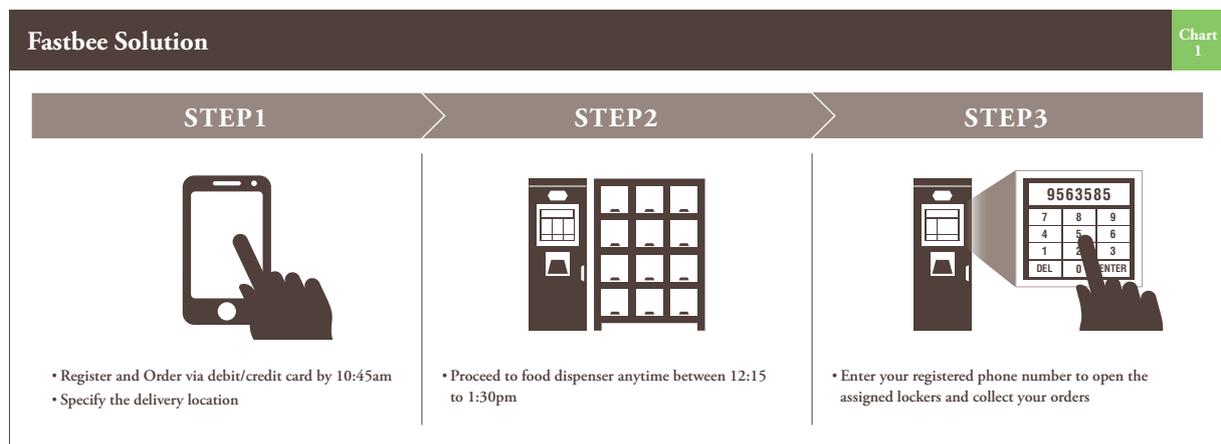
Fastbee is filling a gap in the food delivery sector that is dominated by companies like foodpanda, Deliveroo and UberEats that mainly offer food from restaurants.

### Value Proposition

Office workers who have used the service say fastbee adds variety and makes it easy for them to get quality cooked food without having to stand in queue. It saves them a lot of time. The menu is refreshed every day with competitive price. Everything is cashless. Also, there is no minimum order charge and delivery fees are as low as SGD1.50 (USD1.1).

Hawkers can sell more by reaching more people through Fastbee without any logistics or delivery people. As most of the orders come during off-peak hours, it is easy for hawkers to pack the food before the start of lunch hour. Not only has hawkers take home income increased by up to 30 percent, it is a contingency plan to get some business during rainy and hazy days and secure some corporate orders.

When asked about the future of Fastbee, CEO of Fastbee Mr Kiat says "Food delivery is a Launchpad to become future logistics service provider by increasing the smart dispensers across Singapore".



## Implication - Future Food Delivery in other countries like Japan

Currently in Japan, it is common that companies possess own assets for delivery. For example, restaurants use their own bike and drivers to deliver food to customers. In addition, food delivery companies use their own assets to collect food from restaurants and deliver to customers. Current business model is inefficient due to empty return mileage and not scalable due to capital constraints.

Due to above inefficiencies, in near future the delivery requests will be crowdsourced through an open platform. As shown in the below chart the "along-the-way crowd" is used as a deliveryman to deliver to customer. This model has almost zero mileage for food delivery only. Any player can join the platform like normal people, 3PL players etc. In addition, we think this business model is easily scalable because the platform players have no own major logistic assets.

CrossTrack

NTU(Nanyang Technological University)



## Delivery company without own deliveryman

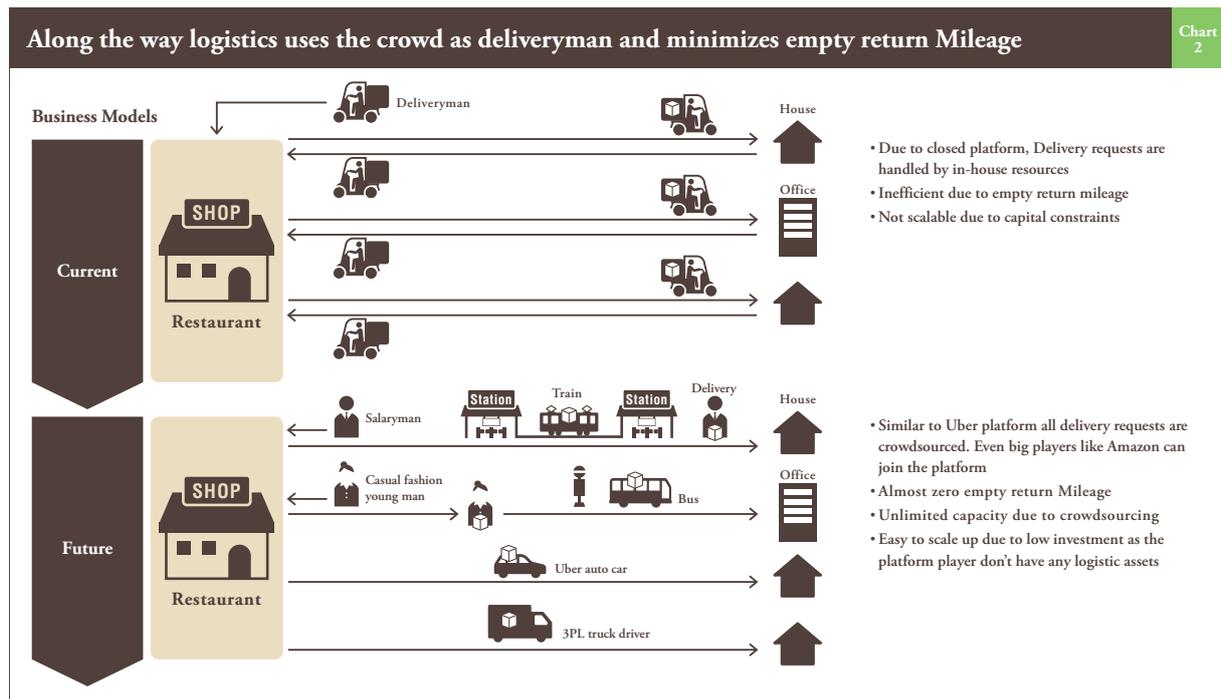
### What is CrossTrack.sg?

CrossTrack an UBER for logistics is a crowd-based courier service platform that connects senders with reliable couriers using Artificial Intelligence (AI). It is founded in 2013 by Kay Ong. CrossTrack is revolutionizing the way delivery is done - doing it "Along-the-way".

### Problem – Unmet small delivery needs and unstable pricing

CrossTrack was born out of the struggle many businesses faced during procuring reliable and urgent delivery services. Delivery arrangement for urgent or same day delivery was incredibly cumbersome for senders as many logistics companies do not have detailed information on the web.

Unmet small delivery needs: Small delivery requests are not handled by large logistics companies due to scale. So, such requests are typically handled by 'freelancer' (or concierge service) companies,





which usually result in the lack of reliability and heavily inflated pricing. Due to this, many large corporations prefer not to rely on these freelance services, especially when handling important and confidential documents. In addition, current platforms don't provide tracking receipts from the courier companies they use, making it difficult to keep track of where their parcels are throughout the delivery process.

**Unstable Pricing:** Existing logistics companies don't show hidden costs on their platforms such as toll and parking charges. As economies of scale are hard to work, the monetary value itself becomes expensive.

### CrossTrack Solution

CrossTrack decided to tackle the above problems by creating an ecosystem for "Along-the-way" delivery.

Singapore is a small but busy city. Someone is always travelling from one place to another. The unique purpose of CrossTrack is to bring together two sides; couriers and senders. Both the sender and the courier can achieve that goal with a smartphone. Couriers such as 3PL, freelance and even public people all around Singapore are recruited to have an island-wide coverage.

### Crowd-sourcing platform

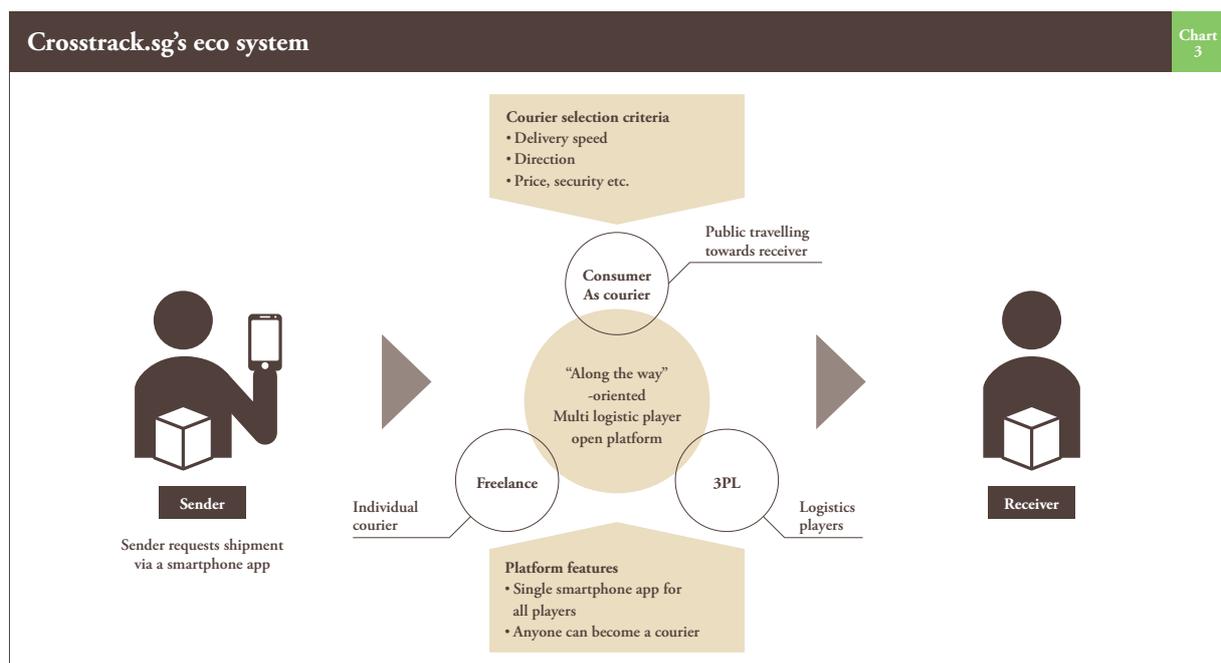
What their customers can do through smartphone applications is not just delivery orders. People can also apply from the smartphone for the work of the delivery person. While confirming credibility through interviews, it is possible to adapt general consumers as delivery employees through a sufficiently simple recruitment process of consumers' perspective. With the convenient and flexible courier workforce, CrossTrack is able to fulfil local individual or business delivery needs.

### Target Customers

Crosstrack.sg target customers are Individuals senders, blog shops, and small businesses senders.

Value proposition for senders is to track deliveries any time anywhere and easy delivery management both on mobile app and web.

Value proposition for couriers is additional Income by providing delivery jobs " Along-the-way ". Also, underprivileged families can earn extra money and improve their financial situation.





**Future Scenario**

In Japan the online shopping is becoming popular due to free delivery fee like Amazon prime membership. Due to increasing deliveries, logistics companies are facing labor shortage and are competing to hire labor with higher pay. As a result, the logistics costs going north. We feel this approach is only short-term planning.

The logistic companies should concentrate more on long term. Labor shortage should be taken as an opportunity and try to come up with automated solution with minor or no involvement of labor like using drone, crowd sourcing delivery requests to public, autonomous cars, etc.

As per our thinking, the future delivery scenario (but not limited to) will be as follows where the delivery is handled by drones, “Along-the-way” crowd using public or own transportation, autonomous cars, 3PL players and end with manual delivery.

We think the future logistics players will not have own assets. The logistics business will be driven by shared economy where anyone can be part of the delivery chain.

**FreeWind**



NTU(Nanyang Technological University)  
NUS(National University of Singapore)

**Cooling and Ventilation solution to create a better living environment for people living in slums**

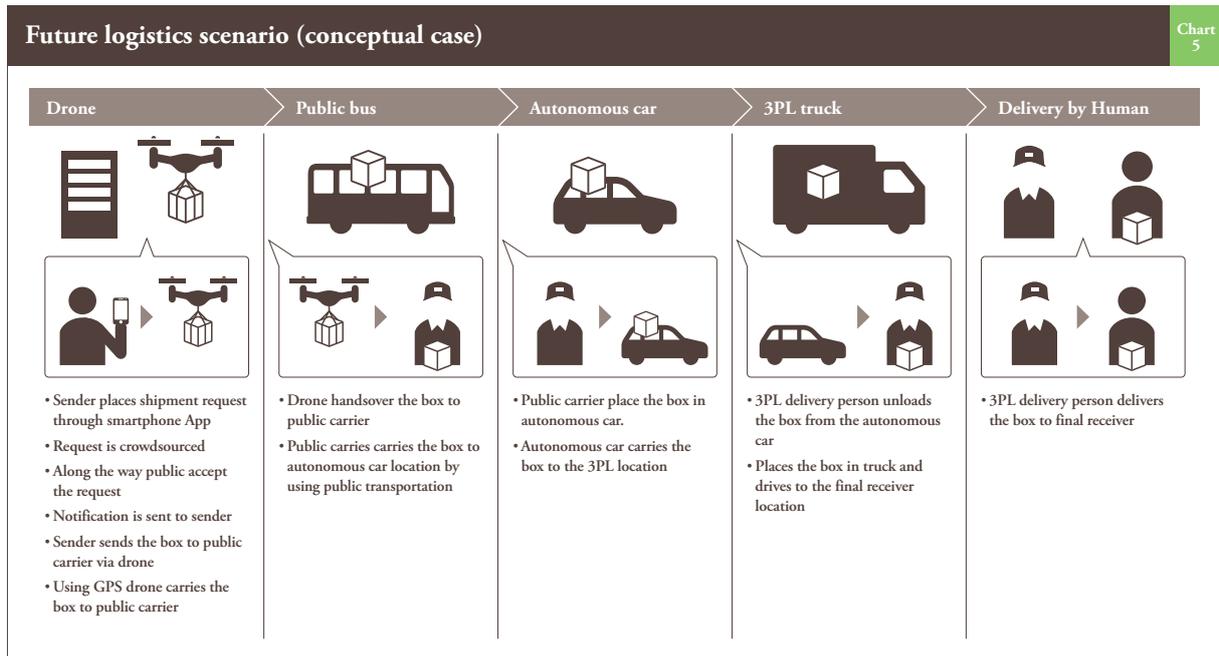
**What is FreeWind?**

FreeWind is a startup founded by final year undergraduates of Nanyang Technological University and National University of Singapore in Singapore in 2017. They have created a ventilation and cooling solution run partly by solar power. Their cooling solution has won “People’s choice award” in “IKEA Young Designer Award 2017” and also the finalist in “What Design Can Do Climate Action Challenge” a global competition and acceleration program.

**Lack of essential fresh air is endangering the life of people living in slums**

It is ideal to have clean and fresh air. But this is not often the case for people living in slums. Poorly ventilated houses can be detrimental to health. Indoor air pollution and bad ventilation can result in health problems like headaches, allergies, asthma, rashes and sinusitis, problems that can be avoided with the installation of a good ventilation system.

In many slums, women often burn wood to cook inside their houses. As a result, women and children are exposed to toxic gases and soot. Several studies



show that indoor pollution has a relationship with occurrences of stillbirth, miscarriage, low birth weight and eczema. Respiratory infections are the most important causes of death in children under the age of five living in slums. In addition, heat waves make it a very uncomfortable environment to live in.

### FreeWind Solution

To solve these social problems, FreeWind has come up with an innovative cooling and ventilation device called “FreeWind”.

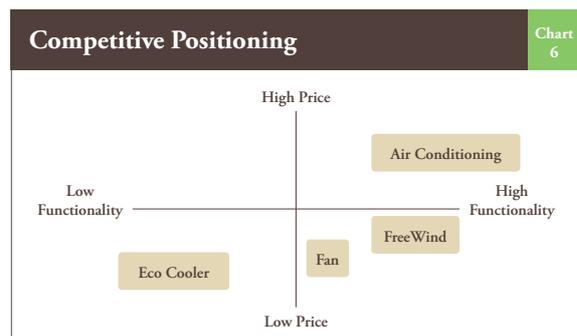
According to the founder Ms. Cassandra, Mr. Cheng Yu and Mr. Darren, the device provides cooling by;

- Effectively modifying the air circulation within a housing unit
- Influencing both the input and output of air in the system
- Recycling heat energy extracted from cooling process of the air.

Ms. Cassandra says “The device can potentially reduce the room temperature by 8 degrees Celsius. Reduction of temperatures in a confined space can prevent a hot and stuffy environment, making it more comfortable”.

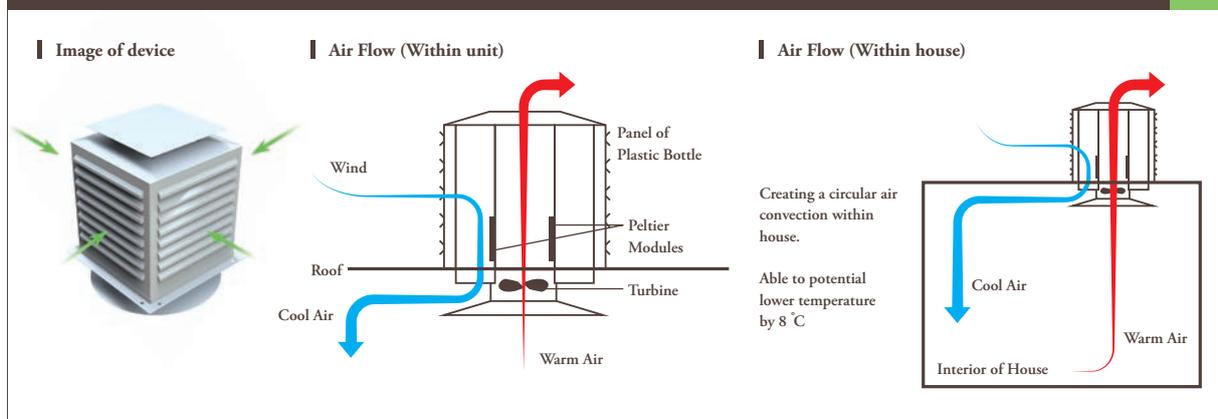
Cassandra believes FreeWind will be a better alternative to existing solutions in the market like air-conditioning and fans due to the following differentiation;

- Low fixed cost currently in the stage of prototyping, with a target of 40 USD per unit
- Low Variable cost (air filter of about 8usd every 6 month)
- Low maintenance than air conditioning units.
- Potentially cooling the temperature by 8 degree Celsius in an environment of 38 degrees,
- Compared to fans which don't do cooling, fans only do perceived cooling by circulating air indoors
- Can reduce indoor air pollution preventing many illnesses and diseases, bringing down AQI (air quality index) from and above 500 (Severe) to 50 (good).



## Revolutionary device for cooling and ventilation

Chart  
7



As per Ms. Cassandra, The founders are testing the solution through CFD simulations and prototype testing within NTU. After that they are planning to test in two housing units in Dharavi, Mumbai which is one of the biggest slums in Asia. After successive trials in Dharavi, the founders are planning to mass manufacture the device.

FreeWind is assisted by NTUitive, with guidance and support from the school of Mechanical and Aerospace Engineering, IKEA Foundation, What Design Can Do and is currently in contact with United Nations Development Programme to establish the next stage of development - product validation and testing.

To increase the social impact further, FreeWind is actively looking for partners. They want to create social impact through uplifting lives via their living environment, and eventually build a sustainable business ecosystem in the slums.

The products/services made by Japanese companies are not targeting this Bottom of pyramid customers.

Certainly, the income of the BOP layer is low, but it can be said to be an attractive market considering its population and future income increase. Japanese companies with so much technology and financial power should introspect why their products/ services are not targeting these BOP customers. The reason is Japan has not faced such problems until now even though Japan has faced most of the problems currently being faced by developing and poor countries. So Japanese companies should first proactively understand the social problems being faced by BOP and create solutions to solve those problems. To know the social problems, one option is tie up with college startups like FreeWind by providing capital, technology etc. This will allow Japanese companies not only to gain ideas for future business models, but also to improve the brand image of society.

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