Uni-Transporter Finder4U: Enhancing Trusted Transportation Services by Harnessing the Universities and Network-of-Mosques (NoM) Capabilities

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Abstract— **This project is made for Universities' students in Malaysia to do their transporter business. This Uni-Transporter Finder4U can provide them to gain more customer especially student who live in campus. This project is being done in peninsular of Malaysia. This project use universities and mosques as centre of network for this system. A part of that, people of masjid can volunteer their selves to become a transporter. This project is also made to help poor people and the needy that need any transportation services. In addition the donor can donate their money to help the poor people to get into transporter. With this transporter finder application, people can easy to get transportation service anywhere with the cheap price, trusted driver and comfortable services.**

Index Terms— **Transporter, poor people, network of mosque, volunteer, trusted platform, BMC, VPC.**

I. INTRODUCTION

Uni-Transporter Finder4U is an on-demand transportation service which provide the platform for university students in Malaysia to find the transporter when they are in needs at any desired time. The users of this product can simply tap their smartphone and have a taxi arrive at their specific location at a minimum possible time. It also provide the convenient to the passengers to choose a specific destination with the lowest price using this mobile application. Besides that, this mobile application provides options and varieties in the transportation service. It also able to manage a network of drivers through this mobile application so that every drivers get an even number of passengers every day. Uni-Transporter Finder4U offers the most convenient, inexpensive and trusted taxi service. All of the drivers registered with this mobile application are professional drivers. On the other, any university students can use this platform for them to generate some side incomes and make new acquaintances with other fellow students. This product is the right platform for those students who love to drive where they can earn money while pursuing their hobby in a flexible working schedule.

II. PROJECT BACKGROUND

Nowadays, the demand of public transportations among Malaysian university students is exceptionally high especially in international universities because most foreign students do not own personal vehicles. However, the rate of public transport does not meet their satisfaction and to travel with them takes significantly more time. Public buses only arrive at certain times of the day and taxi can sometimes be hard to find. Furthermore, the taxi rates can sometime be unreasonably expensive and are unaffordable for some students.

In an article of Malay Mail (2016), it was reported that a taxi driver refused to switch on his fare meter, and then charging RM800 for the ride from the KLCC to the National Mosque. This shows that taxi drivers are not always to be trusted and it causes a sense of insecurity whenever riding the taxi.

In today's era of technology, applications such as Uber and Grab provides an efficient way for transportation services. However, these applications were developed by foreign and non-Muslim countries. The founders of Uber and Grab are Travis Kalanick and Garrett Camp from California, U.S., and Anthony Tan and Tan Hooi Ling from Singapore respectively. Because of this, Malaysian taxi operators had staged a protest in Langkawi on April 10 against the entry of Uber and GrabCar services, as reported in an article of Malay Mail (2015). It is mentioned that "Saad claimed Uber and Grabcar services is a foreign agenda brought in to threaten the taxi services operating in harmony in Langkawi all this while."

III. PROBLEM STATEMENT

Currently, the public transportation service are commonly used by the student in the university. A lot of student used this public transportation service to go anywhere they want. However they need to compete with other passengers which make their waiting time increase. If the passenger missed the public transport, they need to wait for another public transport.

Moreover, public transport such as buses have a limited range of destination. The passengers need to change to another bus in order to reach their destination. It will make the passenger waste their time. In addition, taxi services is the most expensive service among other public transportation service. They can reach their destination easily but the cost is high.

IV. METHODOLOGY

For developing this business case, the company used i-Innovate method to come up with a brand new idea for the new business of the company. Before discussing the innovation of a new business, an activity to search for opportunities and insight about customer's needs and problems. This activity can be done by having a literature review about the existing business, benchmarking and reviewing the current Megatrends. In addition, Four Lenses of Innovation (Gibson, 2015) approach is being used by the company to challenge the current business model of taxi service and solve the customers' problems. Besides that, the company has developed the current business model canvas (BMC) for a better and clear view of the current business situation (Osterwalder and Pigneur, 2010).

Apart from that, defining problem process is done by discovering the problem and pain that the customers are suffer currently. This process is conducted iteratively in order to understand the problem comprehensively and ensure that the process is worth solving. Developing customer profile is one of the method used in this process.

Next, the company has to come up with the solution for the problem faced by the customers. The theoretical and virtual prototypes of multiple solution dimensions is developed and an iterative action is done on each solution. In this process, the value map and the strategy canvas of the product are being created. According to W. Chan Kim and Renée Mauborgne (2005), the strategy canvas is defined as "a central diagnostic tool and an action framework for building a compelling blue ocean strategy".

Last but not least, the company established a new business model that is the result of the method taken before. The tools used in this stage are the enhanced version from the initial version. It includes the enhanced environment map, business model canvas, value proposition canvas (Osterwalder, et al., 2014) and strategy canvas.

V. LITERATURE REVIEW

1) Uber
Uber is an on-demand car service and ridesharing application, developed by Uber Technologies, Inc. Users can request for a transport using the app by stating the destination. The application will identify the users' location and a driver will arrive after a while. The application provides information on the driver's picture, vehicle details, and users can track their arrival on the map. Payment can be made by credit card, cash, Android Pay, PayPal, and more. After the ride, users are also able to rate the driver and provide feedback to help improving the service experience. Uber also provide receipt by email.

Uber has a base fee of RM0.95, increased by RM0.25 per min and RM0.60 per KM travelled. In the case of booking cancellation, a fee of RM5.00 will be charged. During peak hours Uber practises price surging. This happens when many people are trying to request a ride at the same time and the fares surge for a typical duration of a few minutes.

2) Grab
Grab is another on-demand transports service application, developed by Grab Holdings. Grab has many sub-applications for different kinds of transports such as GrabTaxi, GrabCar, GrabBike, GrabExpress, and GrabHitch. Grab invests heavily in safety training for drivers, offline driver screenings, safety features like personal accident insurance coverage, and safety education and partnerships with the government. Grab allows booking payments by cash and credit card. Similarly, Grab also provides an email receipt immediately after the ride.

GrabCar has a base fee of RM1.00, increased by RM1.30 per KM travelled but there is no cost per min nor cancellation fee. Hence, there will be no price increment when there is traffic jam due to the price rate only dependant on the distance.

VI. MEGA TRENDS REVIEW

(Please refer to figure 8 and 9 in the Appendix)
Based on the Megatrends ("Mega Trends in Malaysia," 2015), in term of connectivity and convergence trends in Malaysia, it is expected that the number of customers who use this service will increase as the coverage of wireless connection continue to grow. According to Frost and Sullivan, the percentage of Internet connectivity in Malaysia from 1988 to 2005 is covered less than 50% of the population. From 2006 to 2012, the Internet serve 42% of population in Malaysia and is targeted to cover 90% by 2025. The number of mobile apps economy is also expected to rise which will cause a greater competition from other competitors in the future. Based on the report done by Frost and Sullivan, in 2013 there are about 139 million app downloads by the users in Malaysia and the number will continue to increase to around 660 million app downloads in 2025. Besides that, it also stated that there are almost 16 million smartphones in the market with a nearly 8 apps per device. It is expected to rise to approximately 55 million smartphones with about 12 apps per device by the year 2025.

VII. INITIAL CONCEPTUAL BUSINESS MODEL

(Please refer to figure 4 in the Appendix)
IIUM Online is a group page of student of International Islamic University Malaysia in a Facebook. This page let students to post any advertisement or product they sold in there. It is an opportunity for drivers to make a partnership with this admin of this group to promote the transporter business. Every business models carry out several key activities as a part of the missions. Key activities should run effectively and efficiently so that the organisation can last for several period of time without having major problems and conflicts. Uni-Transporter Finder4U main activities is doing transporter services. This service mainly transport passenger to the destination within Kuala Lumpur and Selangor area only. The key resources for Uni-Transporter Finder4U are drivers and promoters. Drivers are the main key resources for this business. The drivers can be the university student who has a driving license. Promoters is the one who promote the service through social media. It is believed that the value proposition offered by this business will attract many students of local universities to use this transporter service. One of the values is Taxi on demand. Passenger can get the taxi everywhere at any time. The service is available at any time. In addition, by using this service, it is cheaper and faster than any of taxi or public transport. The type of relationship involved in this platform is social media and direct interaction with customer. Every interaction will be conducted on the social media. This social media will provide any of transporter number to be called. Therefore this business

required the passenger to call the transporter in order to use the service. The primary customer for this business is the student, specifically the university student and the outsider who are willingly to take the transporter from respective university. Before constructing the business, some preparations are needed to be done to handle the costs that are going to be faced such as sales and marketing. The main revenue model for this transporter service is price per destination. The price differ to which far the destination to be reached.

This are the price range for initial transporter business. Please refer to figure 1 and 2 in the appendix.

Interview/Survey; Analysis and Finding
Based on the initial conceptual business model, the researcher conduct a survey with some of the transporters and customers about the transporter services. The researcher finds 30 people to be surveyed. The researcher conduct 15 people as the drivers and 15 people as the passenger to participate with the survey. Below are the questionnaire with number of people say 'yes' and 'no' from driver and customer perspective.

DRIVER PERSPECTIVE

Questionnaire	Yes	No
Do you feel any difficulties on getting customer nowadays?	5	10
Do you think people know about your transporter service?	10	5
Do you get at least 1 customer per day?	8	7
Do your customer satisfy with your service provided?	15	0
Do you involve with the customer relationship?	6	9
Do you consider this transporter business can generate you more side-income than other job?	15	0
Do you think this transporter should be done to the poor people and the needy?	15	0

CUSTOMER PERSPECTIVE

Questionnaire	Yes	No
Do you feel any difficulties on finding transporter nowadays?	4	11
Do you like the transporter services provided in the university?	14	1
Do you think the price of the transporter service is reasonable?	6	9
Do you satisfy with the service provided?	15	0
Do you think this transporter service should make a service for poor people?	15	0
Do you know any information about transporter before?	3	12
Do you think that the transporter should involve with the network of masjid? So the people of masjid can volunteer to become a transporter.	13	2

Based on the questionnaire and feedback from the target user, researcher had come out with enhanced conceptual business model from the initial conceptual business model.

VIII. ENHANCED CONCEPTUAL BUSINESS MODEL
(Please refer to figure 5 in the Appendix)
A) Key Partners
i. University
It is very important to get the agreement from the administration of each university first before constructing and implementing this new product so that the business is approved and supported by the management of the university.
ii. Drivers
Drivers are very important because they are the one who will ensure this service to run smoothly. These drivers also should have their own in order to facilitate them to this transporter service.
iii. Mosque committee members
The committee members of mosques near the university will recommend those people in needs with the kind-hearted donor. They also give some suggestion to the people which drivers is available within mosques area (Dahlan, 2016).

B) Key Activities
The key activities of Uni-Transporter Finder4U is to provide a transporter service to university students. In order for the company to run this service, it is important for the company to hire the right drivers for this service. Besides that, the company also involve in executing the product development and management.

C) Key Resources
The key resources for Uni-Transporter Finder4U are drivers, programmers and developers. The drivers are the main key resources for this business. The drivers can be the university students who has a driving license and passion to drive for other people. Programmers and developers are the one who will be responsible to build and maintain the product. They are very important to the business to make sure the service can run smoothly on mobile application. Moreover, the technological platform for this service also is one of the business key resources.

D) Value Proposition
The value proposition that can be offered by this business is taxi on demand. Every passengers can request for the service at any time and places. The passengers can make a phone a call directly to the drivers to get transporter service. This business also can provide the passengers with the details of the drivers who are available at that particular time and places. This is to ensure there is no miscommunication between the drivers and the passengers. The drivers also can generate some side income will doing this service. On the other hand, Uni-Transporter Finder4U provide the cheaper and faster service than taxi and other public transport. The condition of the cars used for this service is comfortable and conducive for people to ride. The drivers registered with the company also can be trusted as they need to go through many level of inspection in order to stay in this company. Figure 6 and 7 show the Value Proposition Canvas for driver segment

and customer segment. Please refer this figure in the Appendix.

E) Customer Relationship

The customer relationship between drivers and passengers can be established through the social media of the product, direct interaction between drivers and passengers and the feedback system of the product. It is important for the company to have a good public relation skill with drivers and passengers on social media in order to attract more customers to use the company's product which will give more profit to the company in the future. The customers also can interact directly with the person in charge at the selected mosque nearby the university.

F) Channels

The social media of the product will be the platform for the customers to interact with as the product's social media provide the information of the drivers that is registered with the company. Any news, update or promotion will be posted in these social media. The customers also can use the company's mobile application to use the transporter service provided by the company. In addition, there are some selected mosques nearby the university that will provide the transporter service. The company also use the network of mosques of attract more customers and help those people in need (Dahlan, et al., 2016).

G) Customer Segment

i. Passengers

The primary customer for this product is the student, specifically the university student and the outsider who are willingly to use the transporters from respective university.

ii. Drivers

Aside from student is the drivers. The company must be able to attract the drivers with a licensed to become part of the product. The bigger the number of drivers, the smoother the transporter service will be provided to the passenger. These drivers can be further divided into two categories which are paid drivers, who want to generate side income from this service and volunteer drivers, who would like to help those people in need.

iii. People in need

This customer segment has become a part of the company corporate social responsibility to help them to ride the car from one destination to another destination for free.

iv. Donor

The donors are the one of customers who will donate some money to the company to help the needy people.

H) Cost Structure

In order to run this business smoothly, the company must make some preparation that are needed to be done to handle the operation cost of the product. Sales and marketing is one of the cost that need to be managed in the right manner. The cost of developing and maintaining the platform for this business also must be put into the company's consideration as it will determine the survival of this product. Besides that, the company must take care of the cost to pay the salaries of every employees in the company.

I) Revenue Stream

The main revenue model for this transporter service is pay per ride. The price that need to be paid by the passengers is based on the distance from one destination to another destination. The route used by the drivers of this service is the shortest route which will meet the demand of the passengers. In addition, this service provide spaces for the advertisement companies to advertise their products or services. This service also receive some donation from other parties in order to help the needy people.

Product Key Feature

Uni-Transporter Finder4U provides the user interface that is user friendly in mobile phone and computer. It also offers the customers with a good user experience where they can find the available transporters at any particular time easily. The customers would be able to book the transporter instantly by calling the phone number that appears with the list of available transporters.

Strategy Canvas Description

Uni-Transporter Finder4U is able to produce a differentiated strategy than the competitors where they have improve some major items that have been benchmarked as important in the taxi industry in general. As a result, the company can reduce the cost of the service and the price offered to the customers. Besides that, the company will create a new strategy which will increase the value of the product in the future like rating system, advertising and cashless payment method. Please refer to figure 3 in the appendix.

CONCLUSION AND FUTURE WORK

Uni-Transporter Finder4U is an on-demand transportation service for Malaysian university students to overcome the problem faced by them in finding transportation to outside of campus. Users are able to book for transportation from their campus to their desired destinations at an affordable price for students. Uni-Transporter Finder4U uses a dynamic pricing, hence traffics and other unforeseen circumstances will not increase the price rate. The drivers themselves are students from their campus that owns their own transport that are looking for side incomes or looking for new acquaintances. Last but not least, with all of the well-prepared business model, the company is looking forward to develop a business plan for Uni-Transporter Finder4U in Malaysia.

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APPENDIX

Figure 1: Initial Conceptual Framework/Biz Model Transporter Pricing

Figure 2: Initial Conceptual Framework/Biz Model Transporter pricing for women
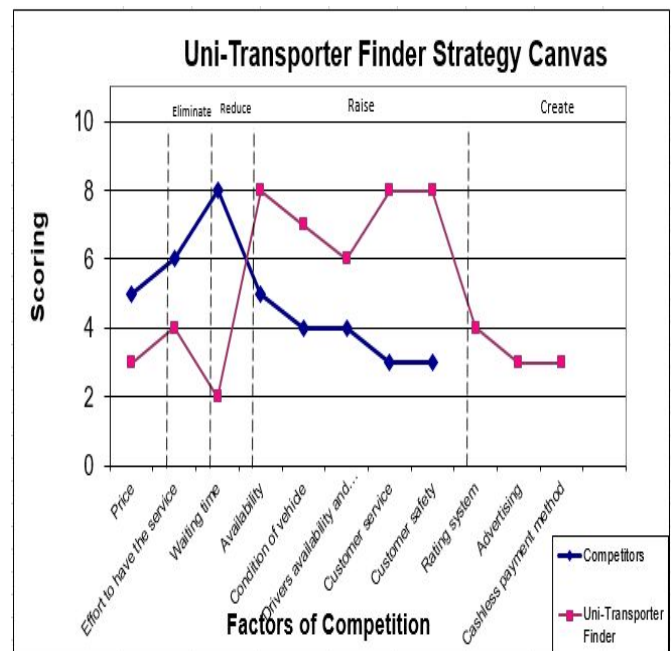
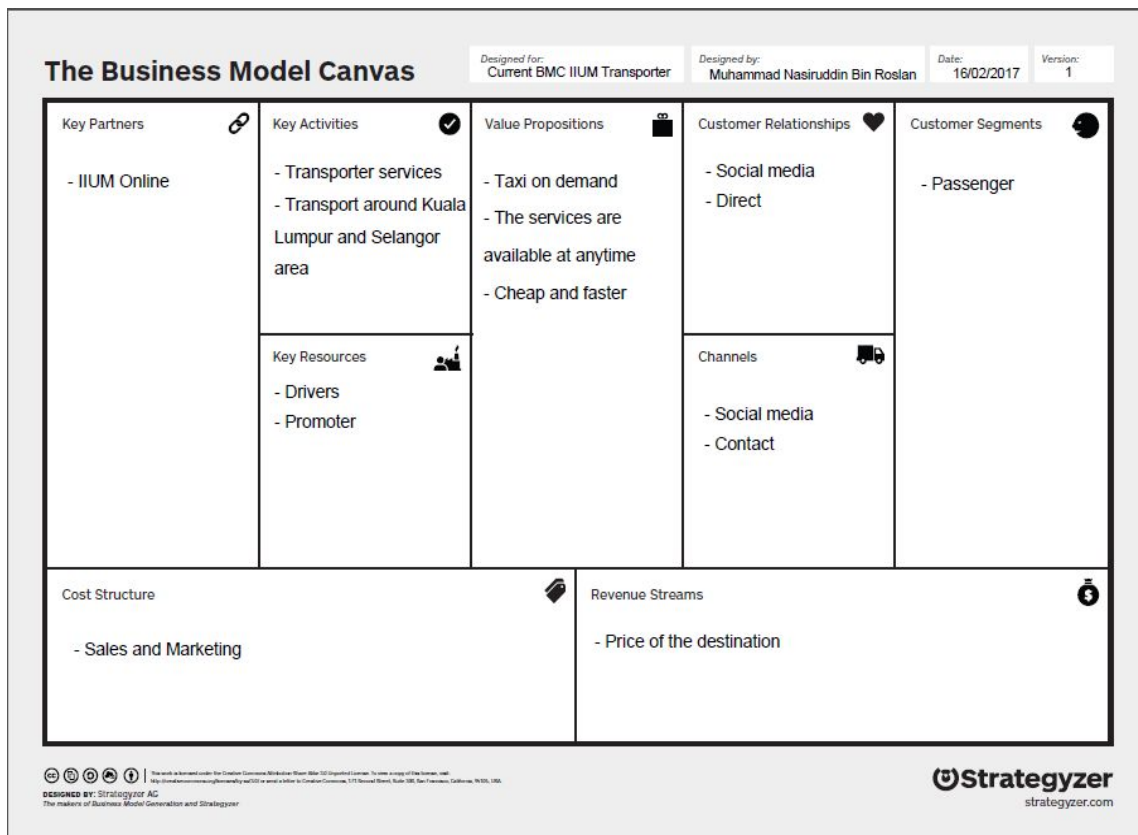Figure 3:   Uni –Transporter Finder4U Strategy Canvas
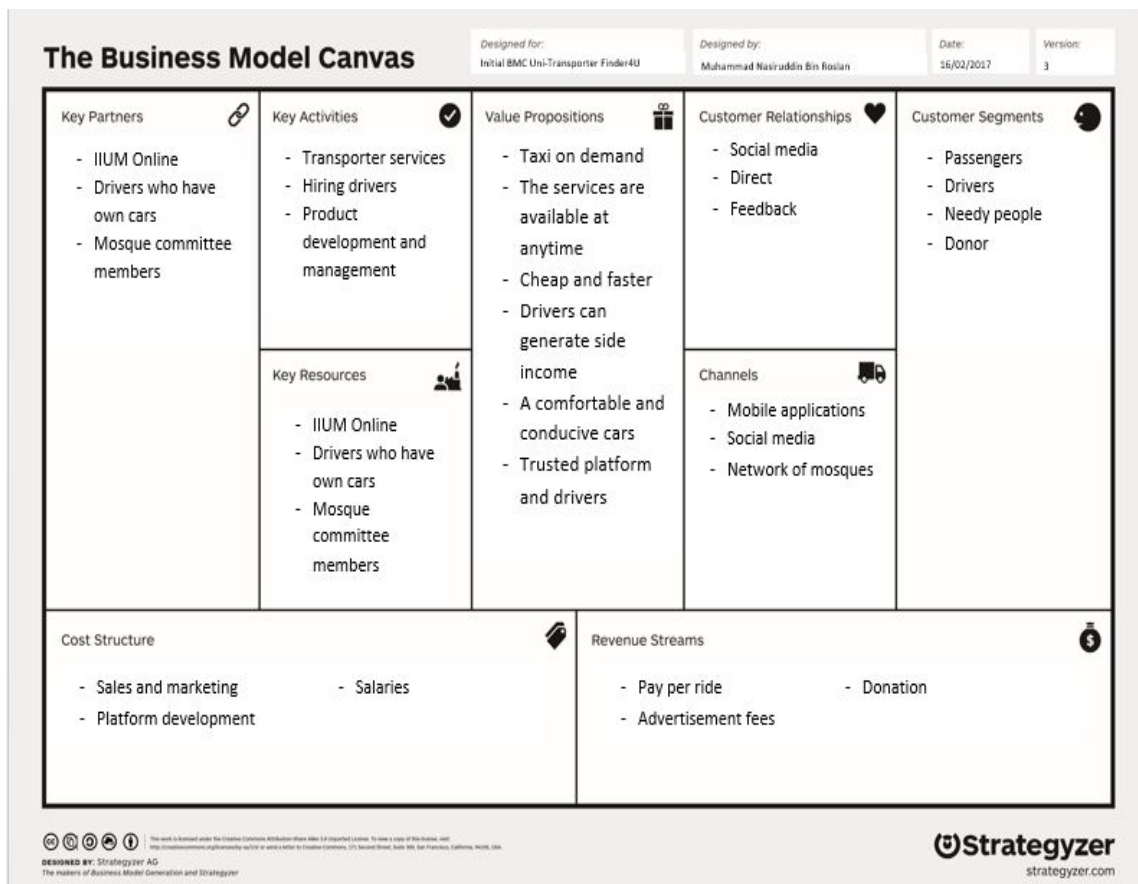
Figure 4: Initial Conceptual Framework/Biz Model

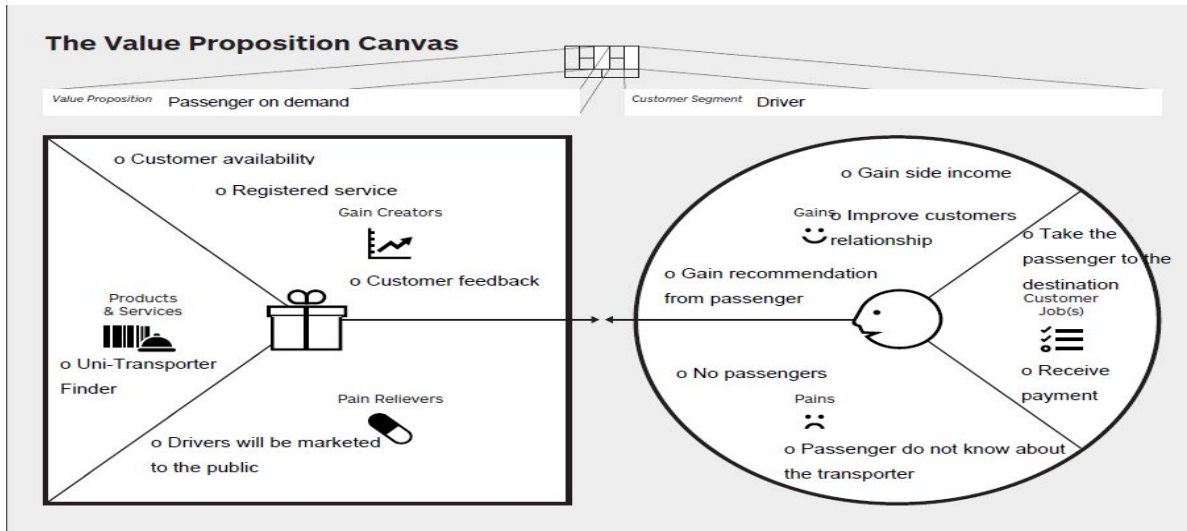Figure 5: Enhanced Conceptual Framework/Biz Model

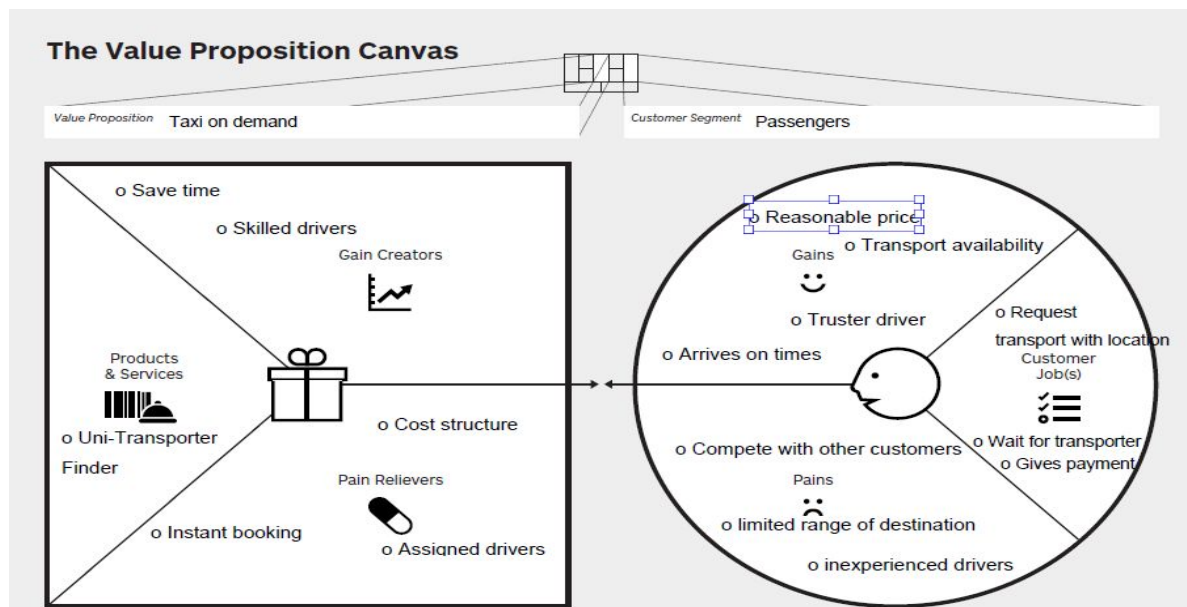Figure 6:   Value Proposition Design (Driver
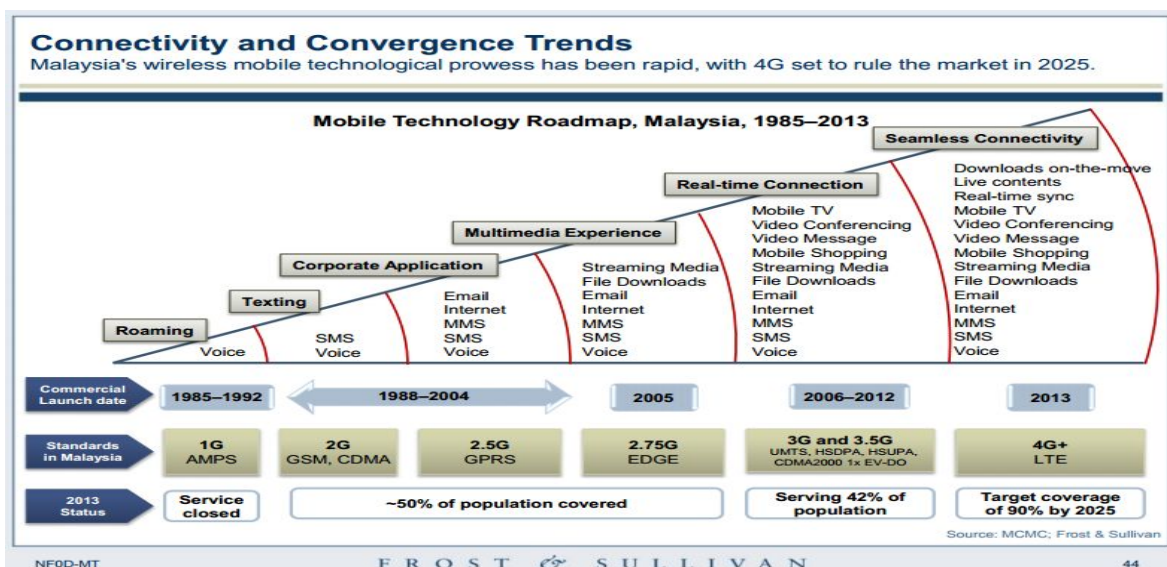

Figure 7: Value Proposition Design (Passenger)

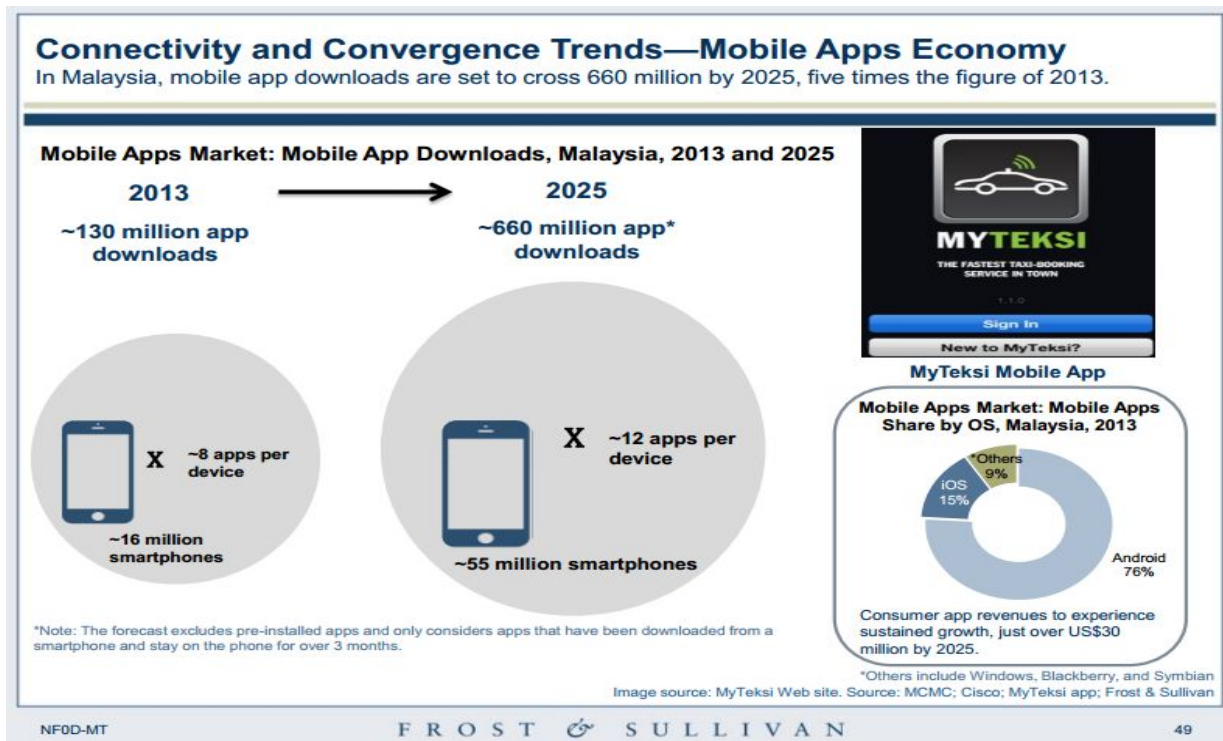Figure 8: Connectivity and Convergence Trends in Megatrends in Malaysia 2015 by Frost and Sullivan

Figure 9: Mobile Apps Economy in Megatrends in Malaysia 2015 by Frost and Sullivan