




Introduction

This website is built to illustrate some of my thoughts on the possible areas for improvements after browsing through a couple of current last-mile deliveries mobile apps. It serves as a platform to validate my ideas + for brainstorming as well. These ideas and possible problems certainly require proper validations through detailed research and analysis.

The website mainly illustrates how technology can be used to decide the fastest and most feasible transport mode (only van/5.5tons & bicycle are available on the website), with suggestions for alternatives. For example, if bicycles are able to deliver shipments faster than vans during certain hours due to heavy traffic, the website can suggest to split the huge shipments (if possible) into N number of smaller parts that are feasible for bicycles. It is certainly not always feasible, depending on the type of shipments - an idea that could possibly trigger some other related innovations.



LAST-MILE DELIVERIES



Current:

Customers choose their service options based on estimations/own measurements of shipments' dimensions + weights, and then wait for the drivers to arrive.

#Possible Problem1:
Inaccurate estimations/own measurements of shipments' dimensions + weights. It leads to delays.


#Possible Problem2:
The fastest and most feasible service option is not always chosen due to inaccurate/lack of information.


#Possible Problem3:
Other feasible alternatives are sometimes left unexplored.

Can be IMPROVED?

- (1) Technology to allow customers to measure/obtain the shipments' dimensions + weights more accurately. (Not shown in the high-level concept illustration. Could possibly be achieved via phone camera & APIs to some of the furniture companies?)
- (2) Let technology decides which is the fastest and most feasible transport mode (service option) based on:
 - (a) Shipments' dimensions + weights
 - (b) Delivery duration (affected by transport mode and traffic)
- (3) Let technology suggests alternatives?

High-level Concept illustration





Map interface showing a delivery route in Hong Kong. The map displays various locations including Mong Kok, Kowloon Bay, and the Central Library. A sidebar on the left contains input fields for volume (CM³: 64000), weight (KG: 22), and origin/destination (Mong Kok, Hong Kong to Lan Kwai Fong, Hong Kong). It includes a 'Find my transport mode!' button and a 'Clear' button. Below the map, it shows 'FOUND! Duration=17 mins, Distance=9.7 km' and icons for a van and a bicycle. A checkbox 'Possible to split into 3 separate shipment(s)?' is also present.

Shipment	<=64000 CM^3	<=10 KG	Possible Transport Mode	Van/5.5 tons	Bicycle	Result
	✓	✓		✓	✓	System chooses the transport mode with the shortest delivery duration, based on Google Maps API data. *Comparison can only be done if bicycle data is available. Bicycle data is not widely available for every city.
	✓	✗		✓	✗	System chooses Van/5.5 tons with suggestions provided.
	✗	✓		✓	✗	System chooses Van/5.5 tons with suggestions provided.
	✗	✗		✓	✗	System chooses Van/5.5 tons with suggestions provided.

Shipment cannot be delivered with bicycle:

Dimension of shipment(s) in CM³
65000

Weight of shipment(s) in KG
4

Amsterdam, Netherlands

Rijksmuseum, Museumstraat, Amsterdam, Netherl...

Find my transport mode! Clear

FOUND! Duration=15 mins, Distance=2.7 km

Possible to split into 2 separate shipment(s)?

Map data ©2016 Google Terms of Use Report a map error

Shipment can be delivered with both van/5.5 tons or bicycle. Bicycle is chosen as it is able to deliver shipment within the shortest duration:

