



DESIGN CONSIDERATIONS FOR RIDE-SHARING AND TAXI MOBILE APPS

DESIGN WHITEPAPER

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INTRODUCTION

Since the inception of ride-sharing and taxi mobile apps, the taxi industry has changed considerably. Apps like Uber, GrabTaxi, Hailo and even taxi companies' own booking apps are so convenient that they have essentially replaced the traditional waving action for flagging down a taxi.

Due to the success of these apps, a wave of similar apps is coming in to take a share of the market. Just in "tiny red dot" Singapore alone, 2 more companies (Karhoo and ConnexTaxi) are slated to roll out their variations of the ride-sharing and taxi apps in 2016. Services and pricing offered by the companies of these apps are eventually going to converge to a certain standard as competition gets stiffer.

If companies want to keep their customer base or attract new customers, it all boils down to the user experience (UX) of their apps. After all, companies with higher satisfaction are proven to be more successful.





User wearing Tobii Pro Glasses 2 while booking a taxi.

CONDUCTING THE PILOT STUDY

Curious about the current competition in the industry, Objective Experience Singapore conducted a pilot study evaluating the UX of the two most popular ride-sharing and taxi mobile apps in Singapore — Uber and GrabTaxi. Utilising our expertise in eye-tracking technology, we conducted the study using the Tobii Pro Glasses 2, which is ideal for observing how users interact with the mobile apps in real life, instead of artificial lab environments. Tobii Pro Glasses 2 shows exactly what a person is looking at in real time, while they move freely in any environment. This gives researchers the unique ability to analyse and accurately report how eye-movement profile (such as fixation and saccades) vary across different tasks, while capturing the most natural viewing behaviour easily and efficiently.

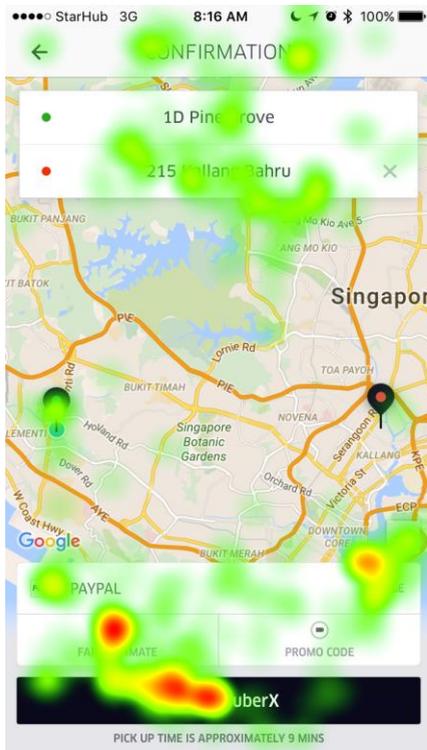
Users (with no prior experience with the apps) made bookings for a ride service using either Uber or GrabTaxi, and then proceeded to complete the journey whilst wearing the light-weight Tobii Pro Glasses 2. Our researchers then, with the help of the videos recorded by the Tobii Pro Glasses 2, conducted a retrospective think-aloud (RTA) interview to uncover qualitative insights into users' experience while they were using the apps to complement the objective eye-tracking data collected.

So what did we uncover?

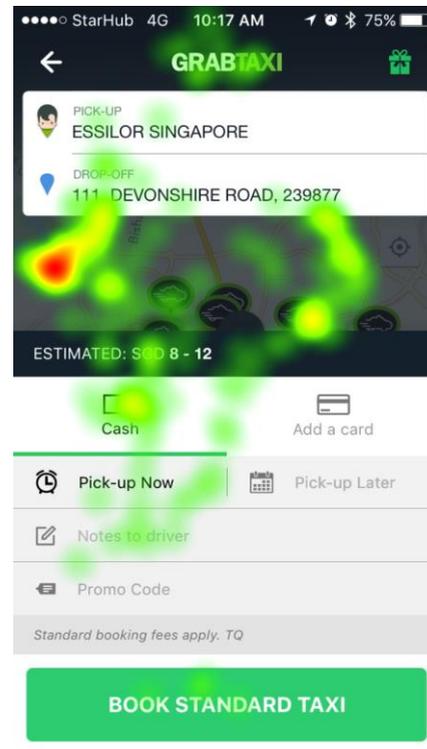
USERS PREFER CLEAN USER INTERFACE (UI)

On average, users were able to complete their booking quicker with Uber than GrabTaxi. An Uber booking requires fewer steps (3 steps only), and seamlessly transitions from the first screen to the next.

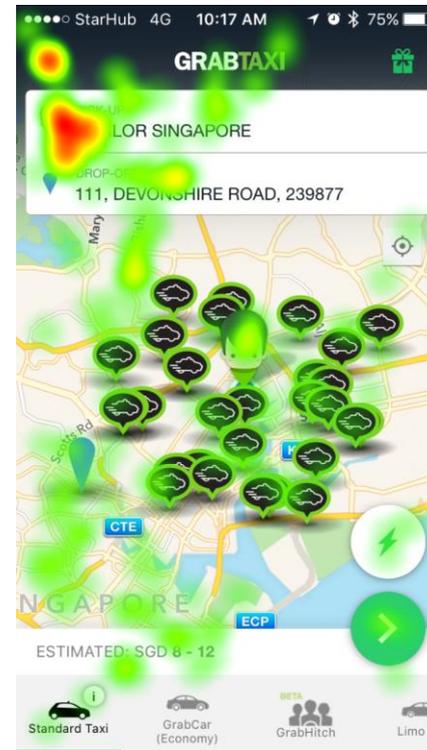
The simple and consistent UI meant no surprises, making for a more pleasant user experience.



Uber: One-page booking confirmation



GrabTaxi: Two-page booking confirmation



Eye-tracking heat map data showed users navigated Uber's page (left) more smoothly from top to bottom. Comparatively, users looked all over GrabTaxi's pages (right) with no clear gaze pattern.

USERS PREFER CLEAN USER INTERFACE (UI) cont.

Eye-tracking heat map data showed users navigated Uber's booking confirmation page more smoothly from top to bottom. There were few elements on the page that required the user's attention, and were arranged strategically to guide the user to book. This was evident in the main points of fixation: 1) the user's pick-up point; 2) the user's drop-off point; 3) method of payment; 4) estimated fare; 5) "Request uberX" button. Users were not distracted from making a booking by other elements on the page (e.g. the map), and fixated on the "Request uberX" button the most, which was the most important element on the page as this confirmed the booking.

Comparatively, GrabTaxi's eye-tracking heat map for its two-page confirmation showed users looking all over the screen with no clear gaze pattern. The main objective of the page was to get users to confirm a booking, but they did not fixate a lot on the "Book Taxi" buttons. Instead, the fixations showed users were distracted by the map showing all the taxis nearby. One user commented during the RTA interview that she expected the '>' button to confirm her booking, but it brought her to the next page instead. Deterred by the additional options (i.e. payment options, pick-up time, notes to driver, etc.) she went back to the first page and used the 'flash' button to make her booking. Overall, users

said that they found GrabTaxi's two options to book a taxi on the first page confusing — this finding is elaborated in the next point.

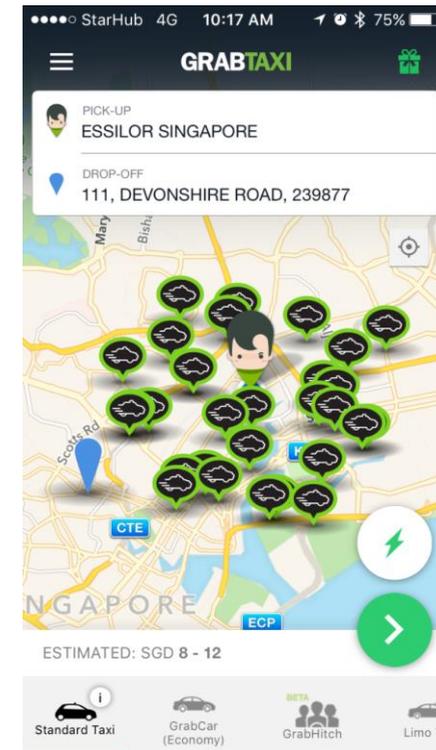
As Uber illustrates, cleaner and simpler UIs that are visually cohesive and removed of unnecessary distractive elements allow users to focus better on the task at hand. Keep in mind that there is one primary goal these two apps are trying to achieve: getting the user to book a driver effortlessly and quickly. Distractions or confusion that slow down or prevent a user from making a booking can lead to frustration and potential abandonment of the app.

Users stay focused better when using a clean and simple UI because they can complete their task with no disruptions.

TWO VISUALLY OBVIOUS CALL-TO-ACTION (CTA) BUTTONS SERVING SIMILAR FUNCTIONS IS CONFUSING

Let's take a closer look at the GrabTaxi booking screen on the left. After inputting the pick-up and drop-off locations, other than the massive number of taxi icons on the screen, there are 2 obvious CTA buttons. Having multiple CTA buttons are common and might even be necessary if their functions are important.

On the GrabTaxi app however, they serve roughly similar functions — letting you proceed to confirm the booking for a ride service. The only difference lies in that the 'flash' button enables you to choose to book either a taxi or a private car service, while the '>' button is the generic button that lets you proceed to book the ride service you have chosen (see the bottom bar on the app). The problem with the 'flash' button is that its function is not immediately obvious (i.e. what does this symbol mean?), and once users realised what it does, they get confused as to how its function differs from the '>' button. One of our users mentioned that she got so frustrated trying to figure out the differences that she did not want to use the app anymore.

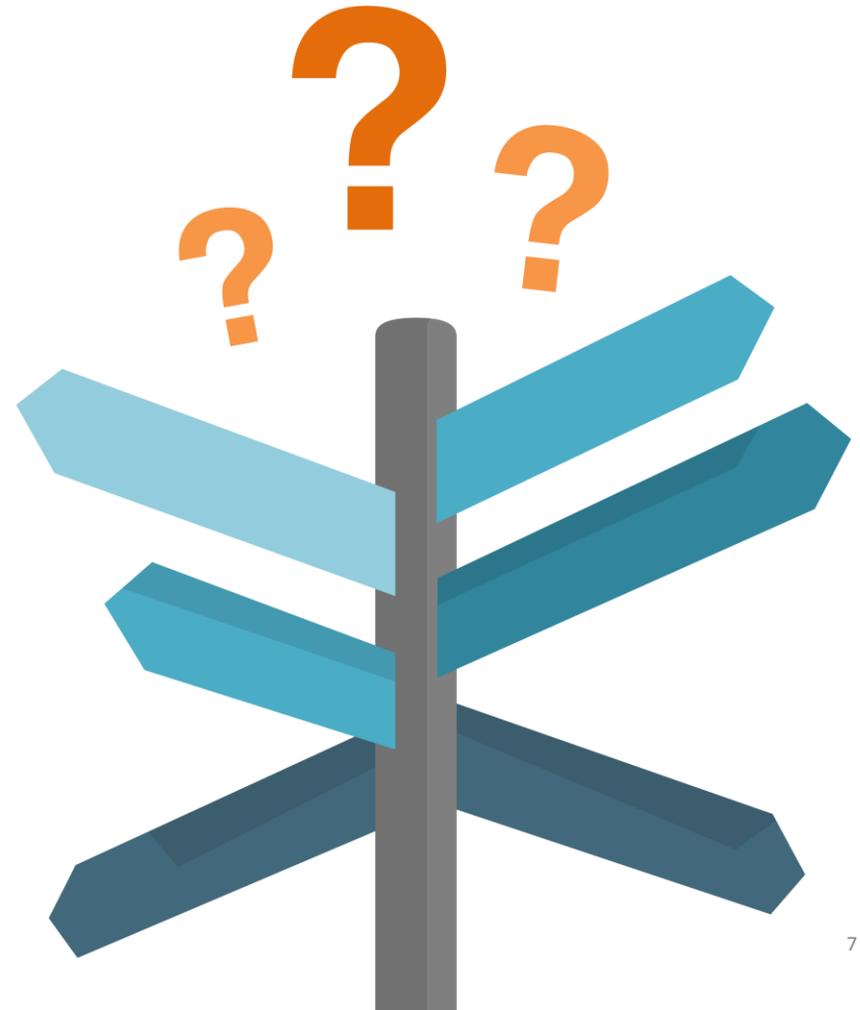


Having two similar CTA buttons to book (white 'flash' and green '>' buttons) on GrabTaxi's page confused users.

TWO VISUALLY OBVIOUS CALL-TO-ACTION (CTA) BUTTONS SERVING SIMILAR FUNCTIONS IS CONFUSING cont.

In behavioural psychology, there is a concept termed the “tyranny of choice” in which people feel increasingly demotivated when presented with an increasing amount of choices. It works on the principle that if the effort needed to distinguish sensibly between options outweighs the benefit these extra options gives us, choosing becomes stressful. In addition, there is a natural tendency for people to worry that they might choose an option that they will regret afterwards.

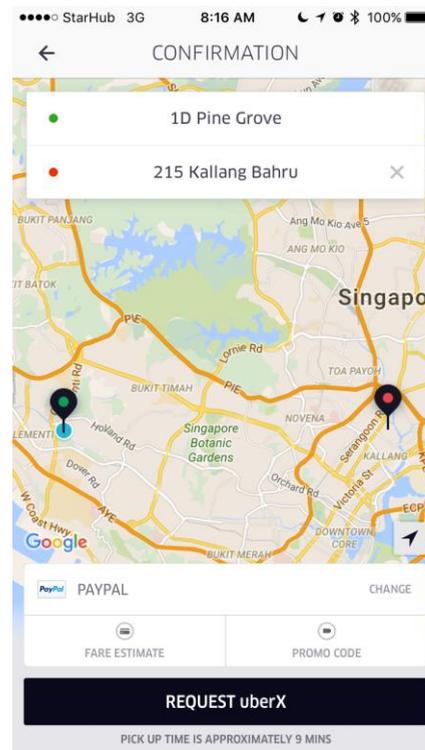
Call-to-action buttons work best when they offer clear indications on what their functions are and there is no overlap in functions in relation to surrounding call-to-action buttons (if any).



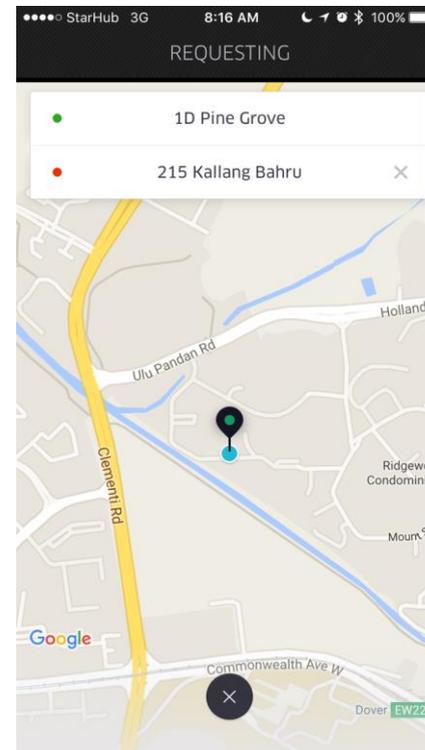
UNIFORMITY IN DESIGN: PLEASING TO THE EYES OR FLAWED UX?

The Uber app is more uniform in the way it is designed, whereas GrabTaxi is uniform when necessary, but differentiates its screens to guide users easier. Let us compare the user flow for both apps from booking confirmation (screens 1), to requesting for a driver (screens 2), to driver assigned (screens 3).

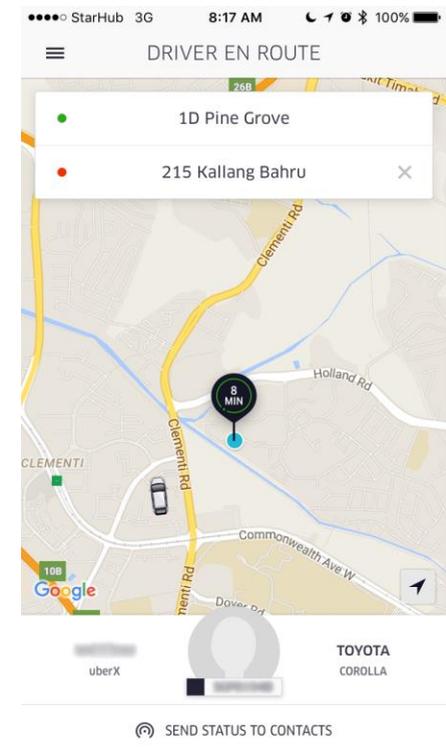
When asked to compare Uber and GrabTaxi, users pointed out that they were not aware of what was happening on the Uber app after they had booked their driver. The screens had transitioned from “Confirmation” to “Requesting” to “Driver En Route” so seamlessly (and quickly) with subtle changes in the design of one screen to the next that there was no obvious indication (e.g. a pop-up notification) to the users that their booking was successful or that their driver had been assigned.



Uber: Screen 1



Uber: Screen 2

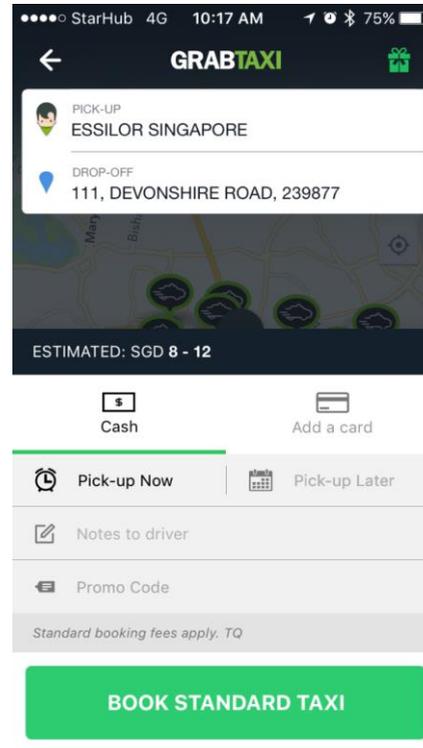


Uber: Screen 3

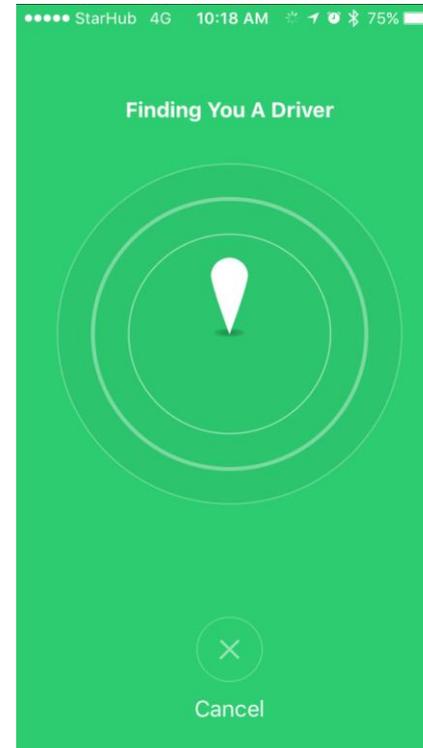
Users were unaware of what was happening on the Uber app after booking their driver because the screens had transitioned so seamlessly and quickly with subtle changes in screen design.

UNIFORMITY IN DESIGN: PLEASING TO THE EYES OR FLAWED UX? cont.

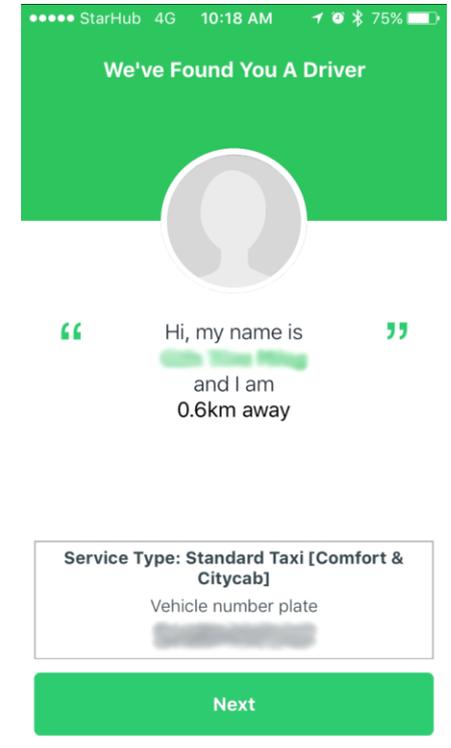
On the other hand, users liked that the GrabTaxi's app's screens are differentiated from "Confirmation" to "Finding a driver" to "Found a driver". They found it more reassuring that the app was working as they could clearly see the screen change from one stage to the next during this process. Also, "need-to-know" information was placed in the centre of the screen.



GrabTaxi: Screen 1



GrabTaxi: Screen 2



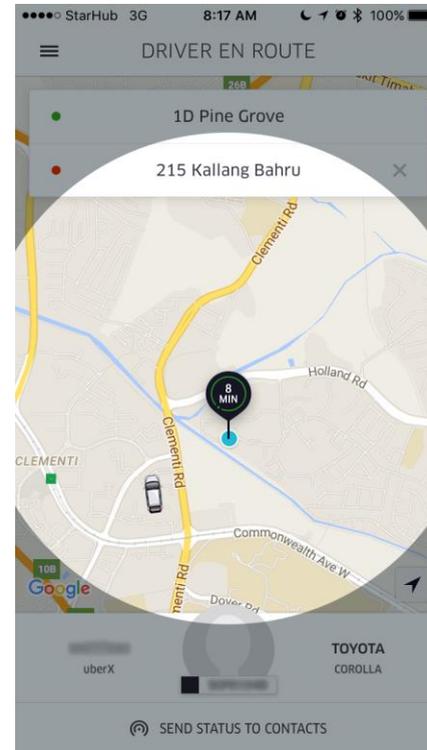
GrabTaxi: Screen 3

GrabTaxi's app's screens are differentiated, and this reassured users that the app was working as they could clearly see the screens change.

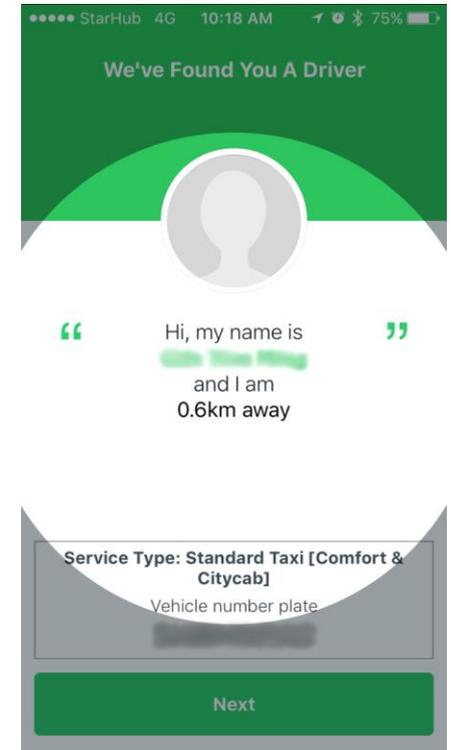
UNIFORMITY IN DESIGN: PLEASING TO THE EYES OR FLAWED UX? cont.

Overall, the findings showed that GrabTaxi's differentiated screens held the users' attention more during this process than Uber's app. They were more aware of what was happening in the GrabTaxi app and were able to recall this process with more clarity during the RTA interview. With Uber, users mostly remained focused on the large map that occupies the centre of the screen, and did not notice when the stages changed (at the top), or when the driver's information appeared (at the bottom).

Sometimes it doesn't hurt to state the obvious and make designs a little more engaging, especially when the screens do not require any user interaction. Users also tend to focus more in the centre of the screen and will be more likely to pay attention to notifications in this area.



Uber: Screen 3



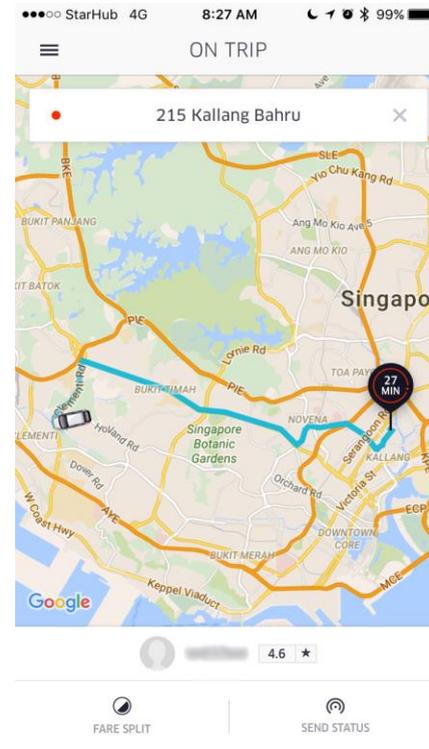
GrabTaxi: Screen 3

With GrabTaxi (right), users were more aware when information changed as it is placed in the centre of the screen. With Uber (left), users focused on the map in the centre and were less likely to notice when information changed at the top or bottom of the screen.

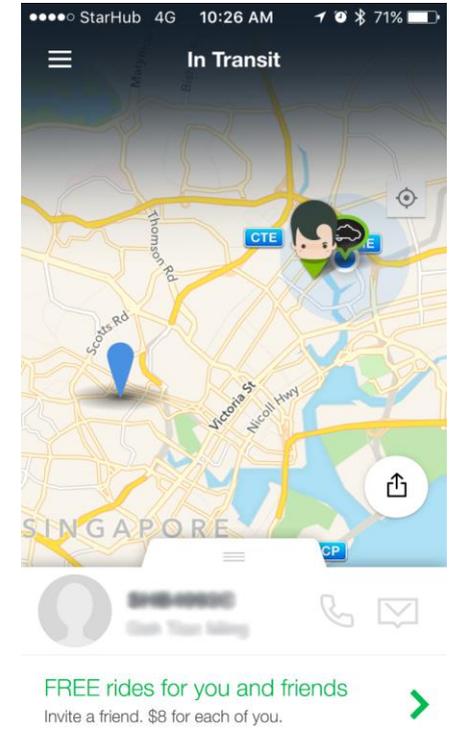
USERS JUST WANT 3 PIECES OF INFORMATION DURING THE RIDE JOURNEY

When users are already on the ride, more often than not they are not looking at the app anymore. But we noticed that they would give it a glance from time to time, especially for the Uber app but not so much for the GrabTaxi app.

In the RTA interview afterwards, we discovered that users were only interested in 3 pieces of information during the journey — current position, the route to the destination and the estimated time to arrival. They cite the main reasons they would look at the app during the journey were to keep track of their location and check whether the driver is indeed heading in the right direction.



Uber



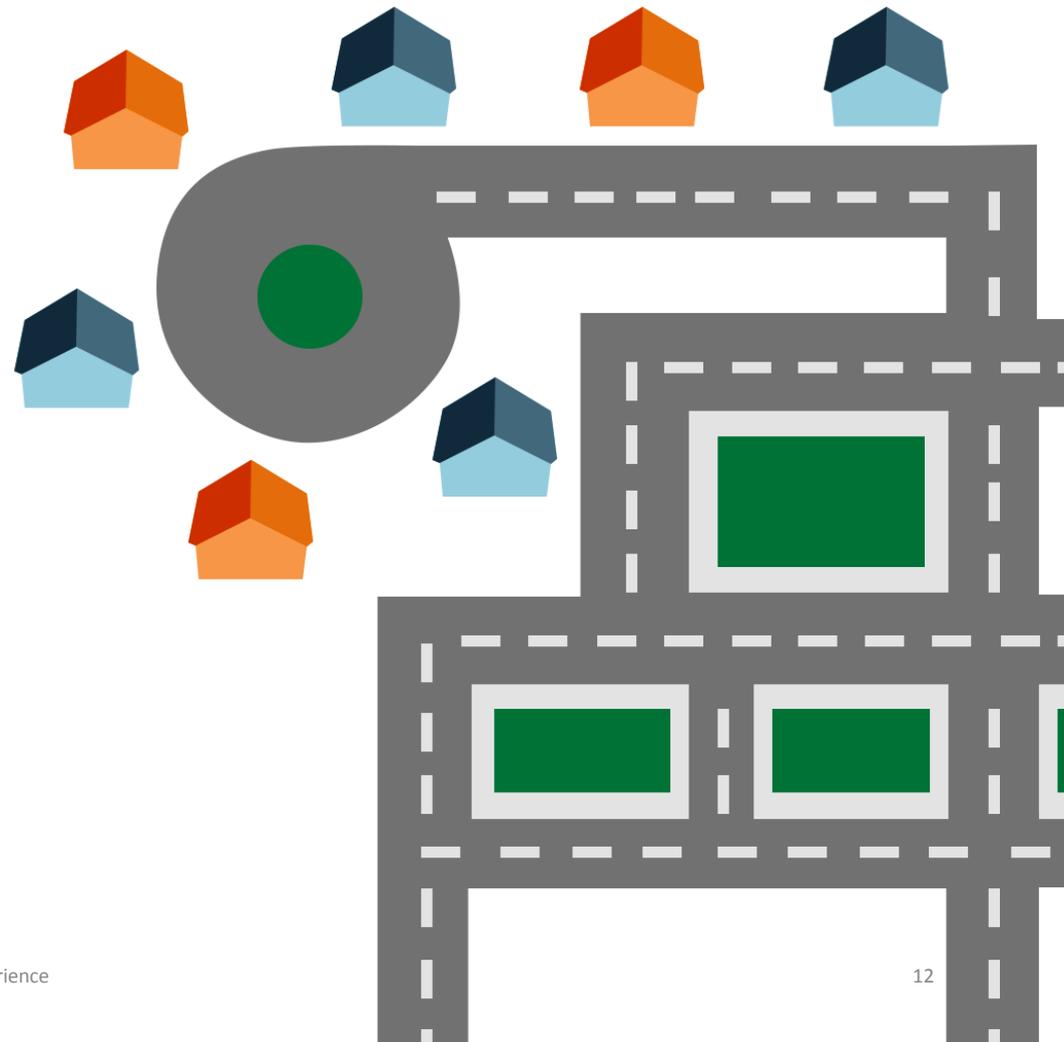
GrabTaxi

Uber (left) was more successful than GrabTaxi (right) in providing the 3 key pieces of information users needed during the ride journey: current position, route to destination and estimated time to arrival.

USERS JUST WANT 3 PIECES OF INFORMATION DURING THE RIDE JOURNEY cont.

Uber did well in this area by providing just these 3 pieces of information on the map during the journey. GrabTaxi, however, only showed the current position and the destination position which users did not find very useful. In fact, GrabTaxi has 3 icons (a head, a blue dot, and a taxi) all indicating current position, but were not synchronised, probably because the GPS information were input from different sources and not successfully integrated into the app. This only made users very confused.

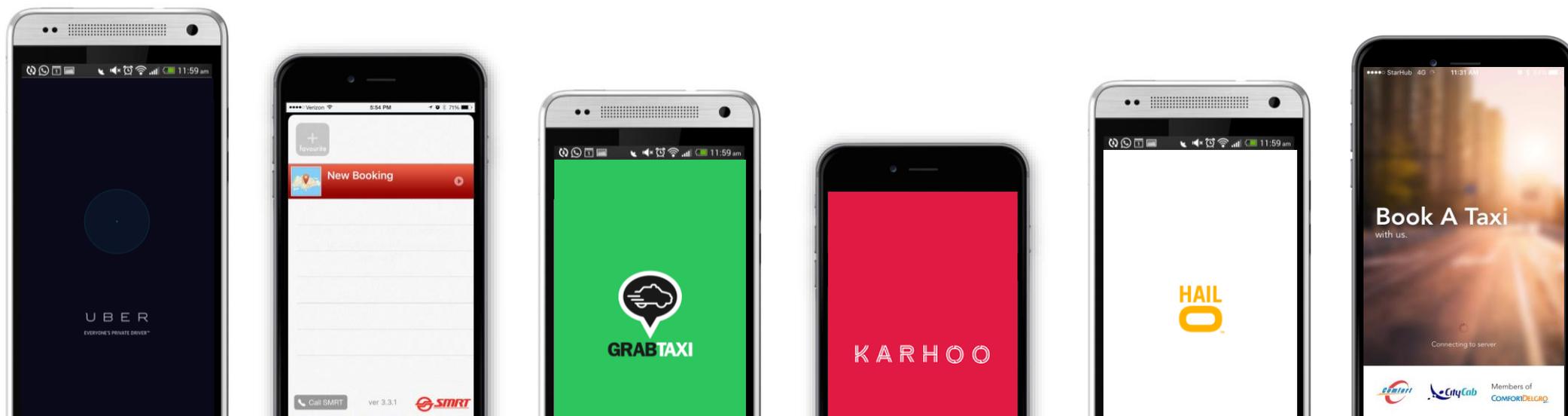
Successful mobile apps leverage on customer journeys to understand what users need at different touchpoints to create a genuinely positive experience for the users. Empathising with your customers is the only way that would keep your customers coming back.



CONCLUSION

Both Uber and GrabTaxi have their fair share of good design and design flaws. With the increasing number of ride-sharing and taxi mobile apps around, Uber and GrabTaxi need to evaluate and test their design frequently in relations to the local population in order to gain market share. This is especially important for Uber, given that they started out on the other side of the globe, and it will be no doubt that GrabTaxi will continue to leverage on their familiarity with the local population to maintain its position as the market leader in Southeast Asia. Ultimately, understanding your users is the key to successful design.

Want to understand your customers better? Please contact Objective Experience for more information on eye tracking and customer experience research for digital media.





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