**Design Thinking - Assignment 1**

**Project Plan:**

1. **Point of View Madlib:** The user needs a solution to the parking problem because she feels it can save her a lot of time.
2. **Point of view Madlib:** The user needs a solution to the overcrowded train network because she finds it hard to use it during peak hours.

**Research notes and insights:**

**Secondary Research Notes:**

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|  | **Source:** | **Insights:** |
| **1** | **Parking app**  [**https://vulcanpost.com/465722/app-parking-lots-prediction-singapore/**](https://vulcanpost.com/465722/app-parking-lots-prediction-singapore/)  The app is the first product developed by Singapore’s Intelligent Transport Systems Lab, which was jointly created by the government’s Institute for Infocomm Research, the Technical University of Munich and German car parts manufacturer Continental.  https://govinsider.asia/smart-gov/singapore-transport-lab-develops-smart-parking-app/ | “The Park&Go @SG app” was developed with the help of the Housing & Development Board (HDB) as well as the Land Transport Authority (LTA), the app will include a database of carparks in residential areas.  Continental Automotive Singapore an international automotive supplier and technology company — launched this mobile app that helps drivers locate carparks and navigate to them. |
| **2** | Android Train app - [Planner Xtra](https://play.google.com/store/apps/details?id=nl.ns.android.activity&hl=en) -- from Dutch [national train operator NS](http://en.wikipedia.org/wiki/Nederlandse_Spoorwegen) (Nederlandse Spoorwegen, the principal passenger railway operator in Netherlands) <http://www.wired.co.uk/article/train-crowds-app> | Train app lets customers see how busy carriages are before boardingLets passengers know how crowded trains they plan to catch are, updated in realtime. |
| **3** | **Parking Sensors – PARKER app**  **http://www.govtech.com/transportation/5-Mobile-Parking-Apps-to-Help-Cities-Ease-Traffic-Congestion.html**  **http://www.theparkerapp.com/** | Parker is a mobile app that takes the guesswork out of parking with a space locator, voice navigation and timed notifications to prevent tickets. The app accomplishes all this by partnering with cities to install **RF sensors** beneath parking spaces, a mechanism that detects the status of open or closed spaces. |
| **4** | **Beat the Traffic – mobile app**  **https://en.wikipedia.org/wiki/Beat\_the\_Traffic** | A mobile app that constantly monitors traffic with real-time updates.  Features include:   * Color-coded traffic map showing areas of congestion * Personalized routes, enabling a one-click access to most driven routes’ traffic conditions * Live traffic cameras * Text or mail notifications informing about delays on preferred routes * Incidents reports |

**Brainstorming(draft):**

There is nothing like getting stuck in a long line of traffic, or waiting for hours to park your car, or unable to get a standing space in an overcrowded train, at the start of your day, especially when you have places to be and appointments to keep. One 2011 [IBM](http://www.forbes.com/companies/ibm) **IBM -0.20%**study found that 30 percent of a city’s traffic is attributable to people hunting for parking — with a third of New York City drivers reporting they search for 20 minutes on average. It is an everyday problem that needs to be addressed on a high priority basis.

There are multiple ways we can address these problems. For the parking problem, we can use the aid of smart phone mobile apps to give real-time updates to the commuter about the status of available parking lots. We can accomplish this by putting sensors beneath the parking spaces to detect the status of an open or a closed parking slot. We can create an integrated parking network system, with the aid of Government and private corporations, in assisting and delivering to the needs of the commuters.

Reaching a destination can also be interlinked when trying to solve the parking space problem. This is caused by the traffic congestion that a commuter has to face in their everyday life. One of the best ways to solve this is to provide prior information to the commuter about the traffic congestion on a certain route. This can be accomplished with the use of mobile apps that constantly update and monitor traffic routes.

And if the commuter wants to use another kind of transportation, like trains, it is essential to provide information about the level of congestion before boarding the train.

Creating such simple, user-friendly mobile applications will open up many new possibilities and transform how we live and work, making sustainable living more accessible than ever.