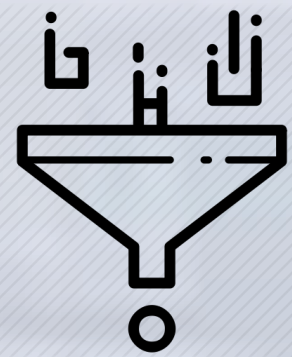# THE BRIDGE TO A NEW ANG MO KIO

Issues and Motivation

Ang Mo Kio is the 8th most populated planning area in the entire city state. This project would resort to the re-evaluation of current developments in Ang Mo Kio, taking into consideration the future needs of Ang Mo Kio residents. Ultimately, we want to create more inclusive, sustainable, and green neighborhoods with community spaces and amenities for all to enjoy.

As the population has been declining throughout the past few years, the population of the elderly grows while the young age group population shrinks. Due to this, the amount of needs in the facilities for these age groups changes. Hence, the objective of this project is to find out the optimal location and quantities of these facilities to build.

Data Collection and Cleaning

The bulk of our data was obtained from data.gov.sg and mytransport.sg where we obtained Comma Separated Values files, shape files and Keyhole Markup Language files
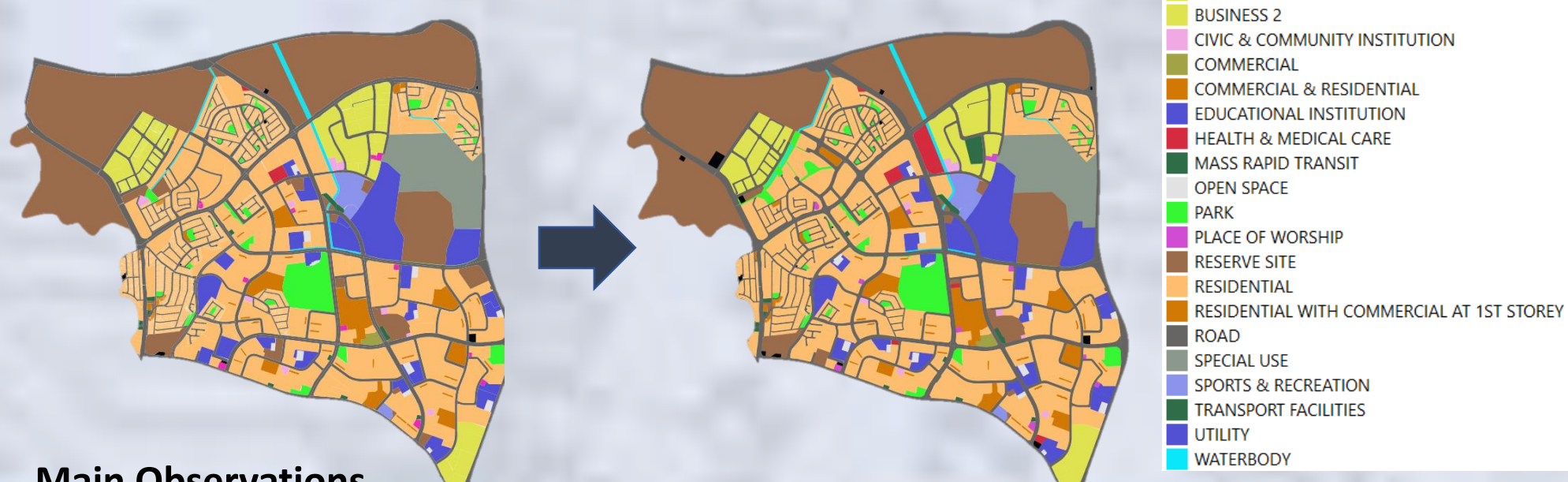
Excel

tableau

- Change Detection Analysis
- GIS Modelling
- Network Analysis
- Land Suitability Analysis

Population Projections

Overall Population

- Projected trends till 2024
- Implications to our project: Change in volumes and location of facilities to cater to changing population needs

Declining trend of current and projected population

Declining current and projected young population

Rising current and projected elderly population

Young Age Group

Elderly Population

- **Recommendation:**
  - Lesser need for child care centres
  - Downsize existing ones
  - Merge existing childcare facilities

- To determine use of land based on establishment of urban amenities

- **Recommendation:**
  - Greater need for elderly care centres
  - Construct more elderly care centres/facilities

Changes in Ang Mo Kio

Ang Mo Kio Land Use 2008

Ang Mo Kio Land Use 2014

Legend:
- BUSINESS 1
- BUSINESS 2
- CIVIC & COMMUNITY INSTITUTION
- COMMERCIAL
- COMMERCIAL & RESIDENTIAL
- EDUCATIONAL INSTITUTION
- HEALTH & MEDICAL CARE
- MASS RAPID TRANSIT
- OPEN SPACE
- PARK
- PLACE OF WORSHIP
- RESERVE SITE
- RESIDENTIAL
- RESIDENTIAL WITH COMMERCIAL AT 1ST STOREY
- ROAD
- SPECIAL USE
- SPORTS & RECREATION
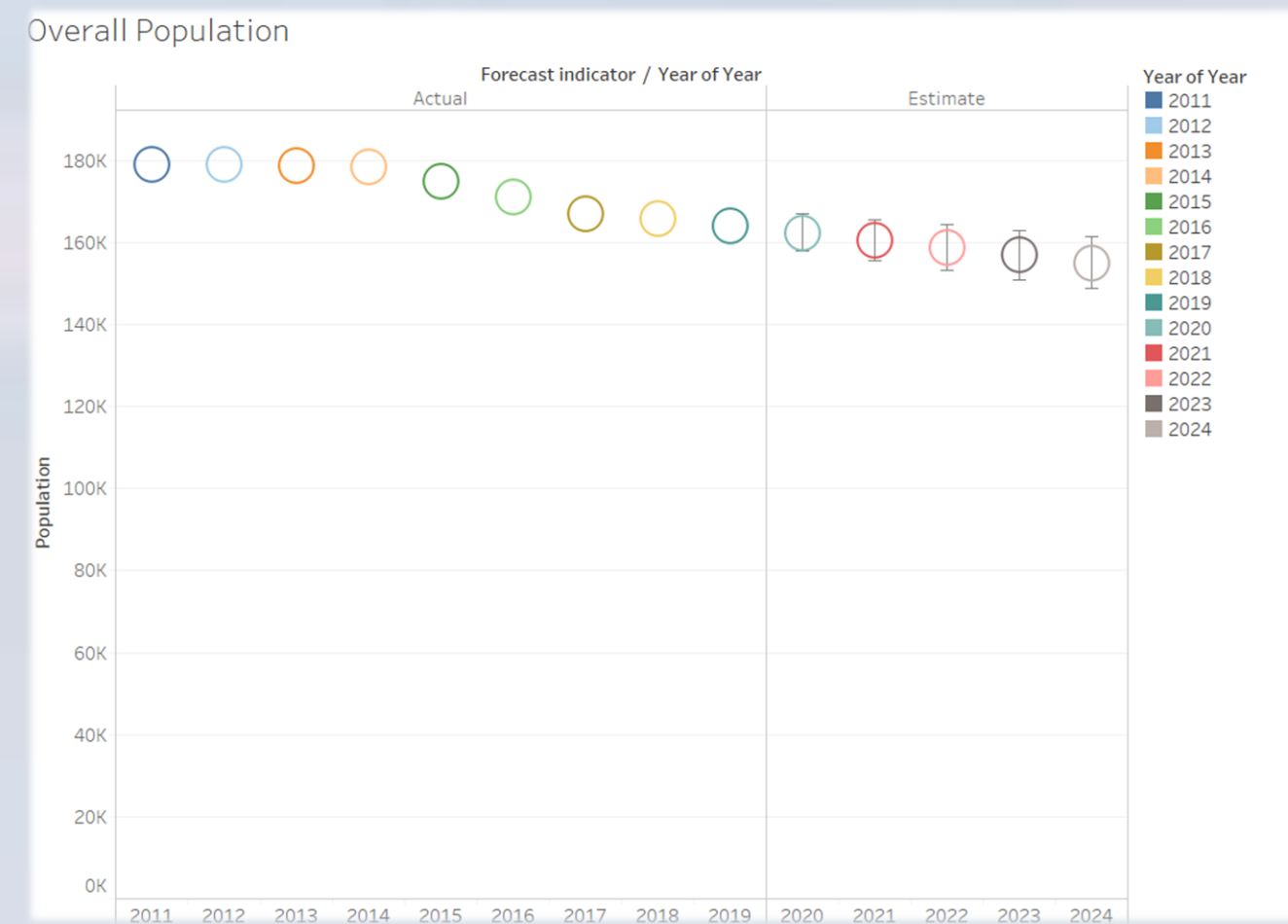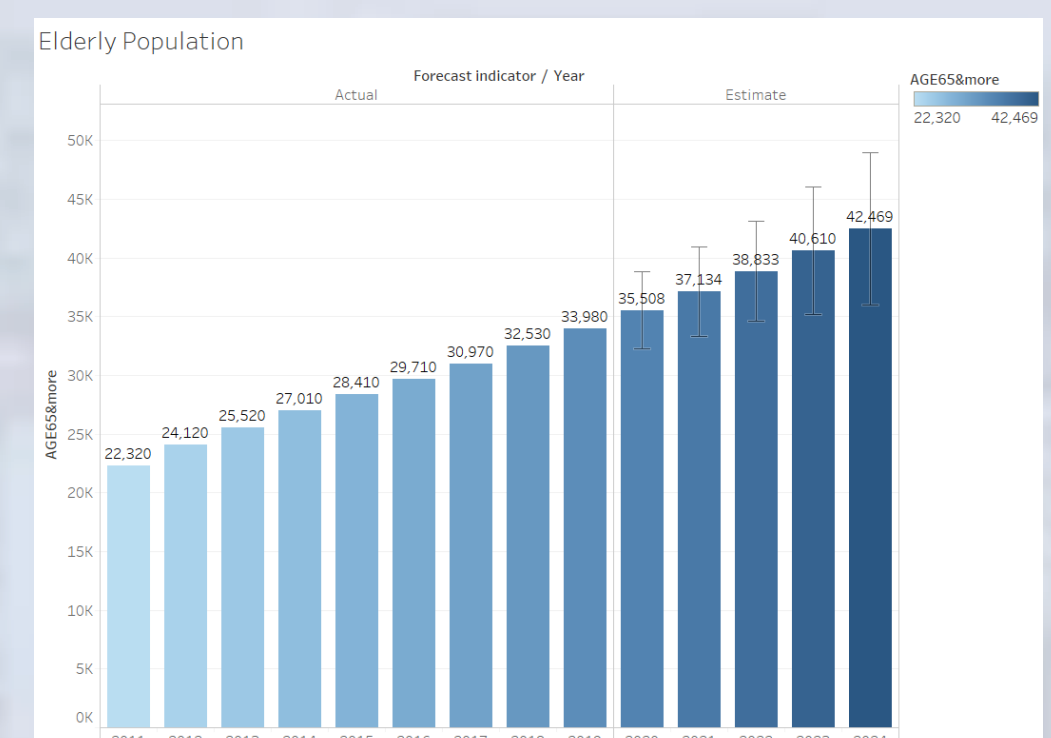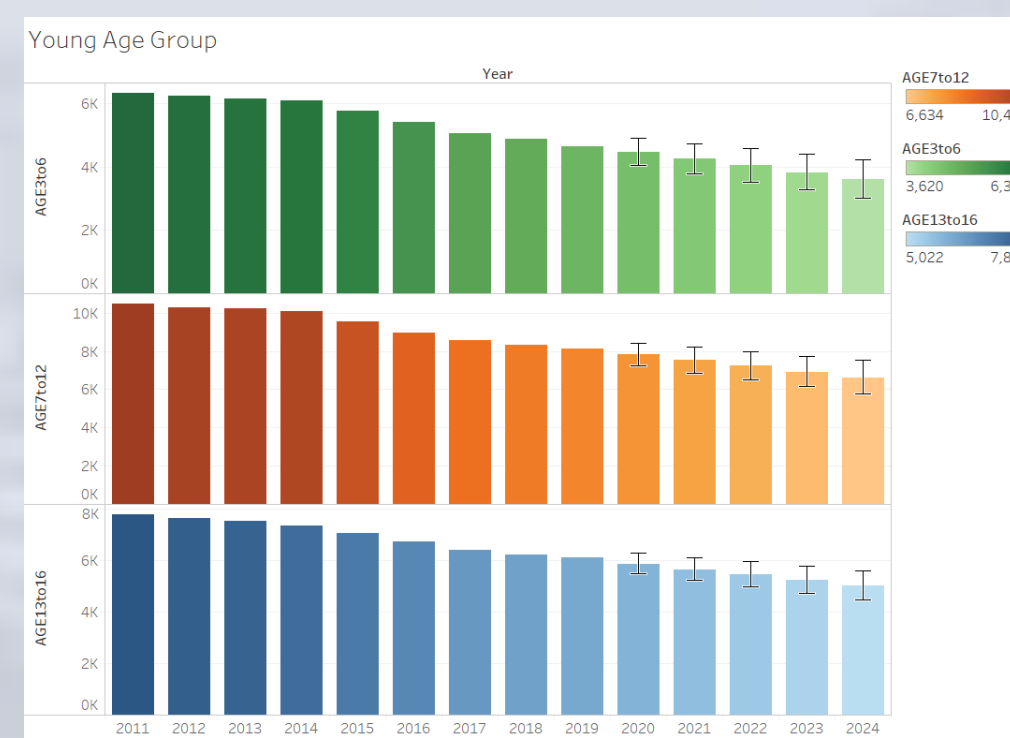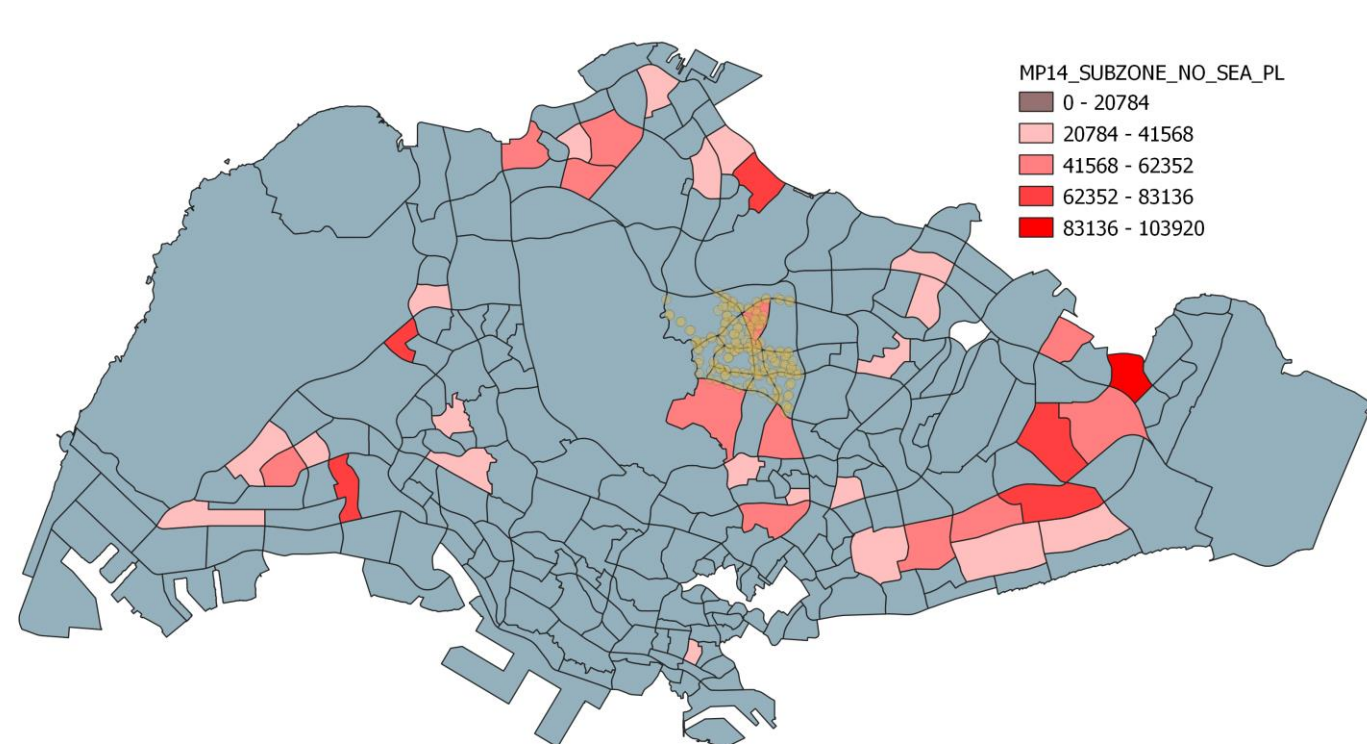- TRANSPORT FACILITIES
- UTILITY
- WATERBODY

Main Observations
- Increase in Health & Medical Care
- Increase in Transport Facilities
- Increase in Utility Facilities
- Increase in Parks

Main Observations
- Decrease in Reserve Sites
- Decrease in Educational institution
- Decrease in residential areas but increase in commercial + residential sites

Transport Volumes (Bus)

Bus Volumes (July)

MP14_SUBZONE_NO_SEA_PL
- 0 - 20784
- 20784 - 41568
- 41568 - 62352
- 62352 - 83136
- 83136 - 103920

Transport Patterns Analysis
- Joined subzone layer to bus travelling volumes layer
- Within Ang Mo Kio (area with bus stop points) we can identify a particular subzone with exceptionally high bus travelling volumes (Yio Chu Kang)
- To determine the volumes of bus trips per subzone and determine how many people are actually travelling in and out of Ang Mo Kio by bus.

Approach & Techniques

Using Land Suitability Analysis:
- Selection of layers involved
- Clean the data (select the type involved for each layer)
- Raster layers - compute proximity for layers
- Standardization
- AHP
- Assign weights to each layer attribute and find the suitable land lot(s)

Using Change Detection Analysis:
- Using masterplan 2008 and 2014, clipped land-use data for both time periods
- **Union** function to combine the 2 periods to visualize changes in land-use.
- **Group Stats** was used to classify and calculate the total area of land-use for each category

FUTURE WORKS

Ang Mo Kio TOWN COUNCIL

The Ang Mo Kio Town Council would be directly involved in the construction of facilities for the residents

Collaboration to expand this project

Land Transport Authority
We Keep Your World Moving

Cycling/Walking Tracks

To better improve on transport systems and make woodlands a better place to work reducing reliance on cars by building more dedicated transport systems

AMK HUB
It's all about you

Ang Mo Kio can cater its strategy for creating to elderly care centres, encouraging more to stay active