

## **Finalist Summaries:**

### **Team 120:**

The housing crisis is one of the most serious and urgent socio-economic problems in Hong Kong. The average waiting time for public housing is 5 years and more than 200,000 citizens are living in subdivided flats. Adding on that, Bloomberg Insights report forecasts that there will be a 66000 units shortfall in public housing by 2030, reflecting the desperate need for policy reforms.

The housing problem can be explained by the law of demand and supply: Limited supply of residential units with a continuously increasing demand leads to unaffordable prices. Although the government has formulated long-term policies to increase the supply of housing, we believe measures with immediate impact must be implemented to address the pressing needs of residents who are currently living in subdivided flats or cage houses. Therefore, we proposed a solution that creates an influx of 170,000 transitional housing units in a 9-year period. This is done by placing modular buildings, mainly container houses, on brownfield sites, scattered idle government land and idle coastal area.

Compared to traditional construction methods, modular construction methods are cheaper and faster. Container houses can be placed dispersedly at low cost, making it especially suitable for development projects with small sites. In contrast, traditional public estate projects require at least 0.5 hectare/5000 m<sup>2</sup> of land. Consequently, the scattered ownership of brownfields made it difficult for the government to retrieve enough land for development. With reference to the Planning Department's Brownfield site study and report from the Lands Department, we estimated that there are more than 846 hectares of land with favourable conditions for our development plans. These sites are mainly owned by the government, while the adjacent environment is not polluted by industrial activities. Furthermore, these locations have convenient transportation and sufficient surrounding facilities.

Another highlight of our proposal is the on-sea modular social housing. Such architectural design is prevalent in overseas regions with a lot of coastal areas (e.g., Netherlands). Without the problem of change of land use, the on-sea houses can provide residents with a longer lease period. We identified several inner harbour areas with the characteristics of low tidal range, distant from water traffic and convenient transportation. Examples include Tai Miu Wan, Tai Mei Tuk and Sha Kiu Tau. All in all, the on-land and on-sea modular houses can create 170,000 housing units in a 9-years period.

Finally, we evaluated the impact of our policy by a multi-regression analysis. We begin by extracting macroeconomics data from the Bloomberg terminal. Then, we conducted a correlation analysis followed by a principal component analysis to avoid multicollinearity. After that, we collected predicted data from trusted sources to foresee how the price will change if our policy creates an influx of housing supply. The model showed that the housing affordability index will be reduced by 20% throughout 2021-30 with our policy.

In conclusion, our recommendations can be carried out swiftly to lower the housing affordability index and provide low-income families with an alternate place to live. Yet, a single policy might not be adequate in the long run. Therefore, we believe multiple aggressive market interventions must be carried out to alleviate the crisis. The housing problem has plunged Hong Kong for decades and it is time for a change.