## Chapter 1: Proposal

### Title

Visual Analysis of Urban Vitality Recovery in Hong Kong

### Group

Group 7 Members:

Wang Yilin

Yi Heng

Yu Ruoxi

Zhong Hao

Zhou Xingjian

### Objectives

1. Measure vitality via three key indicators: office vacancy rates, public transportation ridership, and retail sales.
2. Use visualization tools to compare this year’s activity to pre-COVID levels in 2019.
3. Find key factors that positively or negatively influence the recovery rate for Hong Kong, and give next steps suggestions for the government.

### Datasets

The datasets we use are divided into four categories:

- Office vacancy rates related datasets:

Datasource: [差饷物业估价署 - 物业市场统计资料 (rvd.gov.hk)](https://www.rvd.gov.hk/sc/publications/property_market_statistics.html)

- Public transportation ridership related datasets:

Datasource: [交通运输资料月报 (CSV) - 第二组 : 公共交通统计数字 - 表 2.3 - 港铁及专营巴士的乘客人次(英文) | DATA.GOV.HK](https://data.gov.hk/sc-data/dataset/hk-td-tis_17-monthly-traffic-and-transport-digest-csv/resource/c6851a11-07ae-4943-a1ef-c1ea22d0462e)

- Retail sales related datasets:

Datasource: [C&SD : Dataset X020 : Dataset on Monthly Survey of Retail Sales [Discontinued product] (censtatd.gov.hk)](https://www.censtatd.gov.hk/en/EIndexbySubject.html?scode=530&pcode=X1080003" \l "section1)

- Factors that affect the urban vitality recovery:

Datasource: [C&SD : Table 210-06101 : Statistics on labour force, employment, unemployment and underemployment (censtatd.gov.hk)](https://www.censtatd.gov.hk/en/web_table.html?id=210-06101&full_series=1&download_csv=1)

### Methodology

1. Tableau
2. Python Plotting and Graph Libraries

### Work Plan (**Gantt Chart)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Oct**  **8-15** | **Oct**  **16-23** | **Oct**  **24-31** | **Nov**  **1-8** | **Nov**  **9-16** | **Nov**  **17-24** | **Nov**  **25-30** |
| Data Preparation | X | X |  |  |  |  |  |
| Analysis of Office Vacancy Rates |  | X | X | X |  |  |  |
| Analysis of Public Transportation Ridership |  | X | X | X |  |  |  |
| Analysis of Retail Sales |  | X | X | X |  |  |  |
| Find out associations between the recovery rate and various factors |  |  | X | X | X |  |  |
| Finalize the demo |  |  |  |  | X | X |  |
| Finish the report |  |  |  |  | X | X | X |