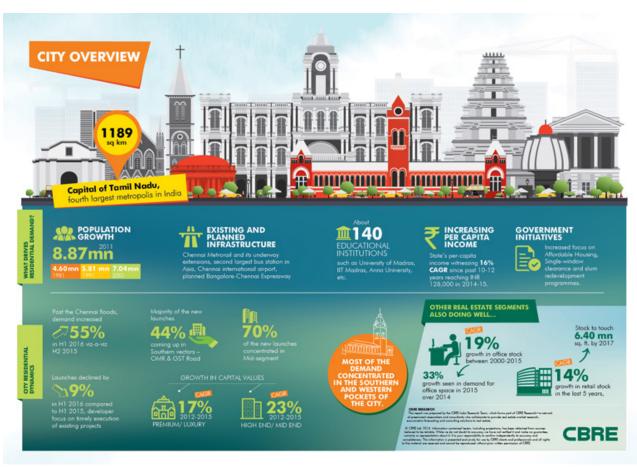
CLIENT: VOQUE CONSTRUCTIONS

Site Selection Study for Residential Development Project in Chennai, India

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(Picture Courtesy: CBRE)

1. INTRODUCTION

VOQUE CONSTRUCTIONS is one of Asia's largest real estate companies. Headquartered and listed in Singapore, it is an owner and manager of a global portfolio comprising integrated developments, shopping malls, lodging, offices, homes, real estate investment trusts (REITs) and funds. Present across more than 60 cities in over 10 countries, the Group focuses on Singapore and China as core markets while it continues to expand in markets such as Indonesia and Vietnam.

Voque is determined to foray into the Indian market and are considering in developing a multistory apartment project in Chennai. Chennai is the fourth largest metropolitan city of India. It is both the commercial and cultural capital city of the south-eastern state of Tamil Nadu. The city is developing rapidly and has become a fast-growing city in India. Currently there are many major industries in the field like automobile, Hardware manufacture, technology, health and education. It is ranked as a second major exporter of IT and is also well-known as the automobile capital of India.

Since this is Voque's first project in the country, and being unfamiliar with the local market of Chennai city, they have reached out to me to perform a study to:

- 1. Identify neighborhoods in the city which have a low density of residences, as they consider these areas as ideal for their projects. Further classify these neighborhoods on the
- 2. Classify these neighborhoods based on the average price per square feet (Price PSQFT) into:
 - Low Budget Market
 - Premium Market
 - Luxury Market
- 3. Provide a list of the inventory of residential apartments currently available for sale in these neighborhoods and include their features such as:
 - Price
 - Floor Size
 - No. of Bedrooms
 - No. of Bathrooms
 - Furnishing Status (Unfurnished/Semi Furnished/Furnished)
 - Property Condition (Resale or New Property)

2. DATA

Data used in this report was collected primarily from two sources – a leading Indian online real estate property listing website (Magicbricks) and a location data platform (Foursquare)

1. Inventory of Apartment Listings from https://www.magicbricks.com

The Magicbricks website gave us all the relevant information on the apartments that are currently for sale in Chennai. Data was scraped using Python libraries to extract the following information:

- Neighbourhood This included all the localities in the Chennai Metropolitan area broadly classified into Chennai North, Chennai South, Chennai West and Chennai Central.
- Neighbourhood Coordinates Latitude and Longitude of each neighborhood
- Listing Information Price, Floor Size, No of Bedrooms and Bathrooms, Furnishing Status, Property Condition and Developer Information (where applicable)
- **Price per square feet (Price PSQFT)** This Price per square feet was not directly available and was indirectly computed using the Price and Floor Size details from the Listing Information.

2. Residential Density of Neighborhoods from https://foursquare.com

Foursquare Places API's were leveraged through their Developer Platform to download Neighbourhood Attributes. For each neighborhood, the density of occurrence of the following attributes were obtained:

- Arts & Entertainment
- College & University
- Event
- Food
- Nightlife Spot
- Outdoors & Recreation
- Professional & Other Places
- Residence
- Shop & Service
- Travel & Transport