

## **3D City Model**

While the world we live in is 3 Dimensional in nature, Planning and development activities encompassing Urban Governance, City Infrastructure upgrades, etc. are still being carried out on 2D Maps. To meet the demands of cities in the 21st Century, it is imperative that Urban Governments are able to visualize their cities in 3D for getting comprehensive 360 views, undertake simulations and conduct detailed analysis on the data, etc. all of which is inefficient and close to impossible on archaic 2D maps.

To overcome this, major developed cities in the world have adopted City Centric Digital Twins. These provide unsurpassed assistance in improving critical city focused activities such as emergency and disaster management, citizen engagement, simulation and planning, zoning and development. They have the potential to assist planners in reaching local climate resilience, economic development and housing goals.

Leveraging this international best practices, Genesys International, an advance geospatial surveying and mapping company based in Mumbai has stepped in to assist in providing officials of G South Ward with their very own Digital Twin. Genesys is at the forefront of the Indian Geospatial Industry in acquiring state of the art Surveying Technologies and executing international grade geospatial projects and solutions.

### **Technology Used:**

A State-of-the-art aerial platform with a specialized high-resolution payload was flown to capture Worli in all its High-Definition 3D glory. In parallel, Mobile Street Imagery Vehicles were deployed that captured street level infrastructure and roads of the entire ward. This Aerial Data coupled with 360 High-Definition Street View Imagery was then fused to create a True-to-Life Geospatial Map resulting in a comprehensive 3D Digital Twin.

### **Envisaged Benefits:**

1. Detection of encroachment/illegal settlements over space & time
2. Detect illegal buildings/structures by comparing 3Dcity model with Property tax database
3. As built evaluation of buildings with OC records (Total Plot area, Height, FSI, Floors)
4. Detect pilferages in Property tax
5. Enrich property tax computation with 3D buildings

6. Effective Development Planning using 3D city model
7. Effective O&M for major infrastructure projects using 3D models
8. Disaster Management Planning & Operations using 3D city models, Contours & DEM
9. 3D City model can be provided as service to other state, central govt & private companies