



Technology-Driven Urban Planning

An urban development body was tasked with acquisition and development of 386 sq. km. of new land. To develop an effective planning strategy, they felt the need for workplace transformation. A shift to GIS-based digital environment was brought into action. GIS-based planning requires accurate spatial data collection about land use, contours, DEM/DSM and other statistical data. Basis this, the client envisioned a model solution providing latest ground information integrated with legacy data that required digitization of hard cadastral maps into the geospatial platform.

Genesys, with its in-house geospatial expertise enabled this model solution with technology. Remote sensing, LiDAR augmented with 360-degree Panoramic Imagery were some of the multiple data acquisition technologies deployed by Genesys. Primary data acquisition was done using Mobile LiDAR System (MLS) and Terrestrial LiDAR System (TLS). HRSI and LiDAR data was geo-referenced to GCP. Integrated Cadastral Maps, High Resolution Satellite Imagery and LiDAR Point Cloud Data successfully mapped land parcel boundaries with +/- 5 cm accuracy. Creating the existing land use map strengthened by ground truthing and supported by terrain elevation data models (DEM/DSM) enabled better analysis for developing the zoning maps for urban development.

Key benefits:

- Accurate photorealistic visual presentation of spatial data enabling easy & quick analysis
- Efficient data processing & quality-check mechanisms imparted operational excellence
- Integration of various data sets reduced overall planning time in significantly.