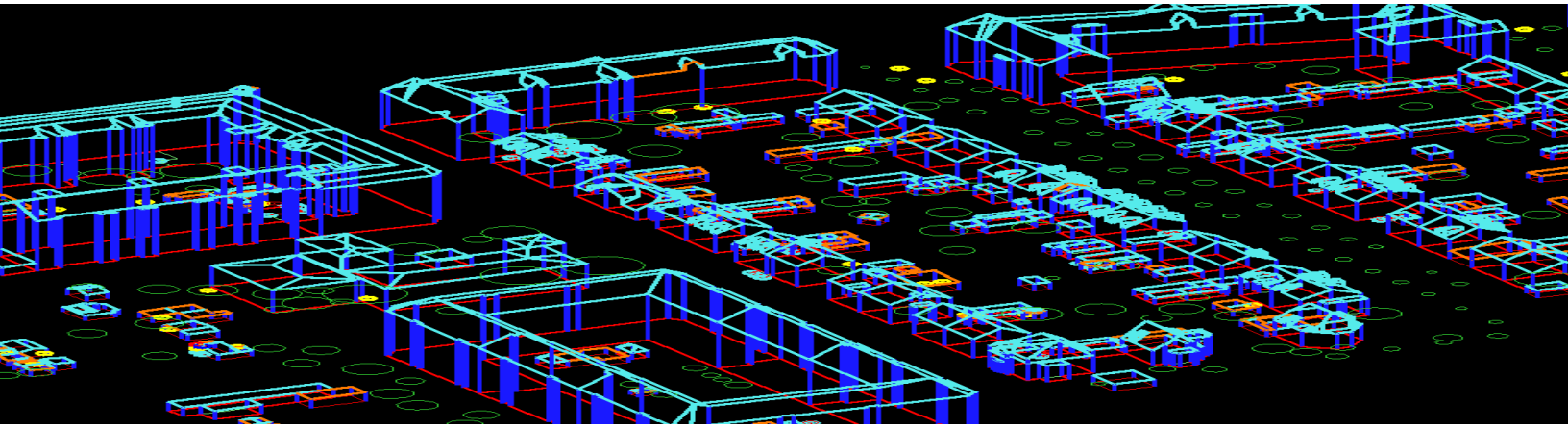

Futuristic City Management with 3D City Model

The Department of Information Technology & Communication of a state in India undertook an initiative to develop a city's baseline data in 3D GIS environment to help city departments work in unison. City baseline data is a fundamental component for functioning of various departments who work independently. The developed solution was required to enable various state line departments to create, visualize, simulate, plan and execute large scale infrastructure development planning, transportation planning, cadastral and land planning, town planning, modeling and impact assessments in a complete 3D Geospatial environment. The key requirement was the ability of that data to show real-time changes and create simulation and realistic visualizations.

Genesys, an expert in enterprise GIS, deployed multiple geospatial survey and mapping technologies and platforms such as Aerial, Mobile, Static, etc. to develop a robust 3D model. These services captured the content through a host of sensors either mounted on aircraft, or mobile vehicle or back pack. State-of-the-art sensors such as Leica City Mapper, Pegasus-2, Pegasus Back pack and Riegl ZeddiHD were used to capture LiDAR and optical data.

After undergoing intensive data processing the 3D data captured via LiDAR and Optical sensors was used to create 3D mesh, 3-dimensional base map as well as 3D Land Use Land Cover Map. Further application of this data resulted in creation of 3D City Models with level of details (LOD) 0, 1, 2, 2.5, 3, 4 and 5. Creation of such a robust 3D city model at LOD 5 is a first of its kind in the country.

Key benefits:

- Offered insight to urban planners on impact of new construction on scenic aesthetic of the city
- Platform for virtual city design model that can be worked and reworked to derive the best possible solutions
- Seamless decision-making based on virtualization of the urban environment facilitates