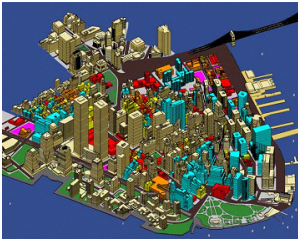
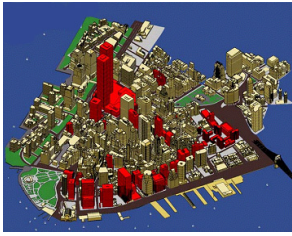
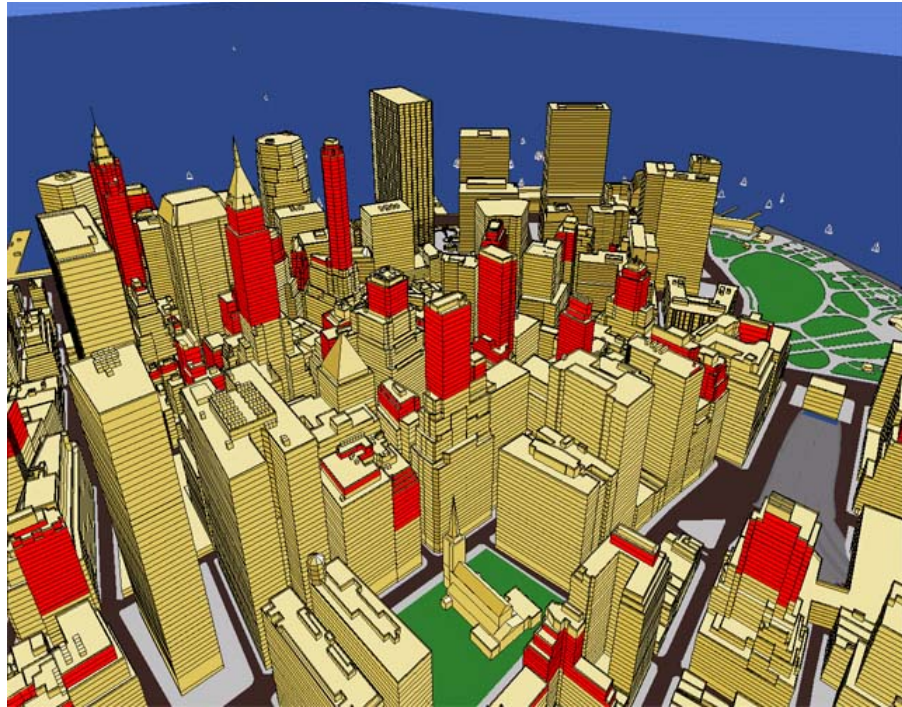


3D Geographic Information Systems

New York, New York



The 3D Model can be queried for many analytical purposes, and is currently being used by the Department of City Planning in its post 9/11 recovery efforts.



Client:

J.M. Kaplan Fund

Co-Project Directors:

Michael Kwartler

Richard Kaplan

Completed:

1992

Through a grant from the Kaplan Foundation, the ESC developed a 3D Geographic Information System to examine the adaptive-reuse potential for large amounts of vacant spaces in older office buildings that were no longer suitable for office uses (approximately 25 million square feet).

For this project, the ESC pioneered the development of 3D Geographic Information Systems (GIS), by spatially referencing an Oracle database to a floor-by-floor 3D model of every building in Lower Manhattan. This enabled the ESC to capture, query and visualize data in a way that traditional land-use and zoning maps fail to do. The model is linked to statistical information on zoning, census, infrastructure, building construction, building age, total floor area, floor sizes, number of independent elevator banks, historic preservation, and vacancy rates. The image above illustrates pre-war office space that is primarily vacant, floor by floor above 150 feet from the street, which makes these spaces suitable for adaptive reuse as housing. The value of the model is threefold: 1.) it was possible to understand the probability of adaptive reuse in an area and whether it achieved a critical mass for services and subway stations to be opened in the evening; 2.) it identified the potential to reuse the older skyscrapers by matching potential uses with the physical characteristics of a building; and 3.) it visualized the implications of policies and decisions on all of Lower Manhattan.

The ESC is now active in post-9/11 efforts, providing the 3D model to various groups including New York/New Visions and the NYC Dept. of City Planning.