Commercial banking sector is a very crucial sector in any economy for it has a direct touch on the economy. Efficiency in the sector is therefore for the benefit of not only the banks but also of the entire economy of the particular country. In Kenya, the sector has been characterized by stiff competition. Consequently, most players are striving to achieve competitive edge above their competitors. Technology has been used successfully as a means of enhancing efficiency and giving the user an edge ahead of their competitors. The study therefore seeks to find out the influential factors in the successful adoption of Geographic Information System (GIS) technology by the commercial banks in Kenya as means of achieving both technical and economic efficiency. Data was collected from 75% of licensed commercial banks in Nairobi as a statistical representative of the whole country's banking sector. This is because over 90% of the banks in Kenya have their head quarters in Nairobi. The study used simple random sampling technique and the data was collected through self-administered questionnaires. In addition, secondary sources of data were used. Collected data was subjected to both qualitative and quantitative analysis. Frequencies, percentages, and cross-tabulations were used to analyse data with the aid of SPSS computer package.