

Geographic Information System and Atomized Transportation Modes

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Transportation is a spatial activity. The geographic Information System (GIS) is the process of capturing, managing, analyzing, and presenting spatial data. GIS techniques are essential to the study of various aspects of transportation. In this entry, the state of knowledge regarding atomized transportation modes is presented. Atomized transportation modes are defined as transportation modes which deal with low passenger numbers.

Keywords: GIS ; spatial analysis ; active transportation ; micromobility ; cars

The spatial aspect of transportation is crucial, as mobility is governed by space. Transportation modes encompass a spectrum that ranges from atomization—transportation modes that deal with the smallest load unit (e.g., single or a few passengers)—to massification—transportation modes that deal with the largest load unit (e.g., carry large number of passengers) ^[1].

Recently, the ubiquity of GPS-enabled devices (e.g, GPS tracking systems, smart phones, and wearables) have advanced and diversified their applications by allowing high-resolution data to be acquired. This has introduced the Big Data era, where datasets are created in higher velocity, volume, and variety (3 Vs) ^[2]. Spatial data is no exception. The process of capturing, managing, analyzing, and presenting spatial data, known as a Geographic Information System (GIS), offers a powerful tool for the advancement of the transportation field.

References

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