

ESTABLISHMENT OF A PROCESS FOR THE PROCESSING OF GEOSPATIAL LAYERS OF THE ROAD NETWORK GEOS-2022

Calculating the duration and length of the journey on the road network for daily commuting to workplace or educational institution and calculation of accessibility to green areas

The project aimed to prepare a methodology for calculating the duration and length of the journey on the road network for daily commuting to workplace or educational institution (point-to-point) and calculation of accessibility to green areas (point-to-polygon) and to provide an automated and reliable process for processing large amounts of data, to calculate distances and journey times quickly.

The data for the development of the methodology was provided by the Statistical Office of the Republic of Slovenia. Publicly available data from the Register of Spatial Units and national topographic data managed by the Surveying and Mapping Authority of the Republic of Slovenia were also used.

The test calculation of distances and travel times for the working population of Slovenia was carried out for the entire territory of the country. A more detailed analysis showed that the algorithms meaningfully take into account the fastest route according to the time of day and adjust the travel time accordingly according to the traffic load.

A test calculation of the distances and duration of the journey for persons involved in education was made for the entire territory of the country for kindergartens, primary schools, secondary schools, and colleges. A comparison of walking and driving time between the residence and the educational institution was made.

A test calculation of accessibility to green areas was made for selected settlement. As part of the calculation, we tested various options for determining the perimeter of the green area.