

Statistical Commission**Fiftieth session**

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Intelligent System for Production of Road and Maritime Transport Statistics

The "Intelligent System for Production of Road and Maritime Transport Statistics Using Large Data Volumes for Shaping the National Transport Policy" Project, is carried out under the Strategic Research and Development Program "Social and Economic Development of Poland in the Conditions of Globalizing Markets" GOSPOSTRATEG.

The main goal of the project is to **upgrade the system of road and maritime transport statistics** by using Big Data, implementing new products and creating conditions for conducting functioning analyses and transport system management for modern planning and shaping of the country's transport policy. For the project, Big Data from sensors – the Automatic Ship Identification System (AIS) and the Electronic Toll Collection System (viaTOLL), will be implemented.

For the purpose of processing a **large amount of incoming data in a short time** (stream processing), Big Data solutions will be used, which allow for the data to be processed in a parallel and independent manner, scaling the solutions depending on the needs. In addition, information from statistical surveys in maritime and road transport will be used. These data will be used for statistical work, analysis of measurement results, as well as the development of technological standards necessary for the effective use of these sets to analyse the planning of transport system development under the conditions of digitization. Mechanisms will also be developed to enable quick analysis of the data downloaded in real-time from sensors in combination with historical data and data from statistical research.

The results of implementing the system will include the modernization of statistics production through the use of **new technological solutions**, as well as the **creation of new products**, such as:

- Models (and methodology), in terms of intensity, estimation of transport performance and emission of pollutants in road and maritime transport,
- An IT system for collecting, processing and analysing road and maritime data,
- New statistics on traffic volume, transport performance, amount of pollution emitted by road and maritime transport, which are necessary to shape and monitor transport policy at the national, regional and local level,
- Intelligent filling of forms on Statistics Poland's Reporting Portal, using methods and rules of automatic value imputation, which will reduce the burden on respondents.

All products shared with recipients of this project will be adapted to mobile devices.

The use of **Big Data**, obtained in real time and together with data already collected by public statistics will contribute to:

- Choosing the most effective transport investments,
- Evaluation of the communication system,
- Availability of data at the local level,
- Performing analyses of the functioning and management of transport systems,
- Providing high quality data in a short time,
- Reduction of research costs thanks to the use of non-statistical sources,
- Obtaining new knowledge of trends in the field of maritime and road transport statistics thanks to the correlation of many data sources.

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