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## EFGS 2022 Conference

### *Towards standardised geospatial statistics*

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**TITLE:** Assessing the performance of urban public transport using population grid data

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#### **ABSTRACT:**

A recent analysis by the REGIO-GIS team assesses the performance of (urban) public transport by comparing accessibility and proximity of residential population. To ensure the comparability of the results among cities the analysis uses the common grid-based concept of urban centres. For every populated place in an urban centre we answer the question to what extent people that are living within a certain radius can be reached within a certain travel time, by means of public transport and/or by means of a short walk. To grasp the variability of accessibility and performance within the urban centre we use a high-resolution representation of the population distribution: population figures are estimated by 200 x 200 m grid cell. The available transport timetable data allowed an analysis covering almost 200 cities in the EU.

The results show the potential of a set of relatively simple indicators to describe the characteristics and performance of the public transport networks in a wide variety of cities.

Due to data availability constraints the current analysis combines authoritative sources with voluntary geographic information and modelled geospatial data.

Results can be improved and extended by using emerging authoritative data like standardised machine-readable timetable data, up-to-date and complete routable road network data and address-based official population figures. Consequently, successful future developments depend on the enhanced implementation of several GSGF principles and recommendations, such as a clear definition of roles and organisations involved in data production, point-based reference data, cooperation between thematic communities at European level, the use of common and additional grid cell sizes, the use and promotion of standards and of adequate disclosure control methods.

**KEYWORDS:** public transport access; grid population grid; voluntary geographic information; geospatial data modelling; GSGF

## REFERENCES

[https://ec.europa.eu/regional\\_policy/sources/docgener/work/Assessing\\_performance\\_of\\_urban\\_public\\_transport\\_using\\_grid\\_data.pdf](https://ec.europa.eu/regional_policy/sources/docgener/work/Assessing_performance_of_urban_public_transport_using_grid_data.pdf)

[https://ec.europa.eu/regional\\_policy/mapapps/public\\_transport/city\\_acc\\_grid.html](https://ec.europa.eu/regional_policy/mapapps/public_transport/city_acc_grid.html)