



# KRIHS Policy Brief

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## Assessment of Arterial Road Function for Efficient Reform of Road Management System: Centered on Utilization of Satellite Navigation Data

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1> The functions of Korean roads are classified by class. Recent inconsistencies between road class and function are causing difficulties in efficient road management.

–Case studies include municipality-managed regional roads functioning as national arterial roads or national highways managed by the central government being unable to function as arterial roads.

2> The UK's Strategic Road Network was readjusted based on the degree to which roads function as arteries, and emphasis went to investment in key roads to improve national competitiveness.

3> Through an assessment of arterial functions, switching from the present system of road class-based management to one stressing management based on road function needs consideration.

4> To allow comprehensive assessment of arterial functions, indexes other than those of traffic volume need development; options could include creation of indexes based on satellite navigation data considering distance traveled and the degree of inter-regional connectivity of each road.

5> Empirical analyses show that assessment is feasible for arterial functions outside the scope of conventional traffic volume such as distance traveled and the degree of inter-regional connectivity of each road.



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## Policy proposals

- ① Define road functions required of arterial roads managed by the central government, reflect these definitions in the Comprehensive National Road Network Plan to lay the foundation for reform of the road management system
- ② Apply big data to the development of indexes for assessment of arterial functions; development of advanced assessment indexes through development and testing of rational assessment indexes
- ③ Assess arterial road functions on a nationwide scale to adjust sections where road class and function are mismatched; select roads providing arterial functions required of national arterial roads for use as basic data in reforming the road management system