# National Spatial Data Infrastructure in Georgia: From Policy to an Operational Geoportal

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**SUMMARY**

Establishment of the National Spatial Data Infrastructure (NSDI) represents a central component of Georgia's digital governance transformation and geospatial data modernization agenda. The formal adoption of the Law on the National Spatial Data Infrastructure by the Parliament of Georgia on November 16, 2023, marked a significant milestone in institutionalizing a unified national framework for spatial data management. Entering into force on December 5, 2023, the law designates the National Agency of Public Registry (NAPR) as the national NSDI coordinator, responsible for supporting implementation and ensuring compliance with legislative and policy frameworks.

This paper examines the evolution, governance model, and operationalization of NSDI in Georgia, highlighting its role as a coordinated national system integrating policies, institutions, technologies, standards, and stakeholders to enable data-driven decision-making. NSDI functions as a network-based virtual infrastructure that integrates spatial datasets, metadata, and interoperable network services supported by legal frameworks, inter-agency agreements, and international standards, including alignment with the EU INSPIRE directive.

Paper analyzes the operational implementation of NSDI through the National Geoportal, which serves as a unified national access point for harmonized geospatial data and services. The Geoportal integrates spatial datasets, metadata documentation, analytical and visualization tools, and interoperability mechanisms, enabling access and data sharing among public institutions, municipalities, academia, private sector stakeholders, civil society, and citizens. Socio-economic impact assessments indicate substantial economic benefits, estimating a net present value of approximately USD 30 million derived from partial implementation of identified NSDI use cases, while also supporting land tenure security, EU integration objectives, and investment attractiveness

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in sectors such as agriculture.

Finally, the paper explores future development opportunities, including the integration of artificial intelligence for automated data quality control, enhanced interoperability, and user-centric service delivery. The findings position Georgia as a developing case study of how coordinated spatial data governance, supported by legislative frameworks and digital infrastructure, can strengthen public administration efficiency, promote transparency, and support sustainable socio-economic development.