



Overture Maps Foundation: Submission to OGC Call for Contributions on the Future of National Spatial Data Infrastructure

Theme: Data & Technology

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Introduction

Overture Maps Foundation is pleased to submit this response to the Open Geospatial Consortium's Call for Contributions (CFC) on the future of Spatial Data Infrastructure (SDI). As a coalition dedicated to building reliable, open map data for the world, we propose that the future of national spatial data infrastructure must be grounded in open, collaborative frameworks that enable broad data sharing, interoperability, and sustainability.

Our submission highlights how Overture's open base layers, supported by the Global Entity Reference System (GERS), provide a foundational platform to advance the vision outlined by the FGDC and OGC for a next-generation SDI. This model leverages contributions from government and private sector participants alike, integrates seamlessly with cloud-native geospatial tools, and offers a scalable, stable framework for associating spatial data across thematic domains.

Open Base Layers as Shared Infrastructure

At the core of Overture's mission is the creation and maintenance of high-quality, open map data layers that represent key spatial themes: buildings, transportation networks, administrative boundaries, land cover, land use, and points of interest. These base layers are foundational to nearly all geospatial applications, including those used across federal, state, and local government. Additional themes can also be added as the needs develop.

Open data provides an ideal mechanism for supporting a federated SDI model. Governments at all levels can contribute authoritative data, while private industry contributes scale and innovation. Jointly maintained and openly licensed, these base layers reduce duplication of effort and allow for coordinated data quality improvement. Overture's approach, as described in our recent blog post ("[Making Open Data Part of a National Data Infrastructure](#)"), supports this vision through governance mechanisms, schema harmonization, and active integration with public contributors.

The Power of Stable, Shared Identifiers: Global Entity Reference System (GERS)

To fully realize the benefits of interoperability, Overture has introduced the Global Entity Reference System (GERS). GERS provides stable, unique, and open identifiers for geographic features in the map—such as buildings, road segments, and administrative areas. These identifiers serve as a common framework to link disparate datasets to shared real-world entities.

By enabling rapid and accurate conflation of diverse spatial data sources, GERS addresses a long-standing challenge in spatial data management. For example, environmental data, census information, infrastructure records, and commercial location data can all be associated to a shared base map via GERS, enhancing interoperability, data reuse, and analytical power.

As NSDI evolves to incorporate dynamic and distributed data sources, stable identifiers like GERS become essential infrastructure to maintain coherence across the ecosystem.

Industry Support and Institutional Backing

Overture Maps Foundation is supported by a broad coalition of leading technology companies and public stakeholders, including Amazon, Esri, Microsoft, Meta, TomTom and Uber, as well as public entities like the U.S. National Geospatial-Intelligence Agency (NGA). This coalition demonstrates both market validation and long-term sustainability.

With contributors that span the technology and mapping sectors, Overture ensures that its datasets are maintained at global scale and aligned with the needs of both public and private sector users. Further, Overture benefits from the unique contributions and advantages of all these sectors. This level of collaboration and resourcing represents a significant opportunity to align national spatial data efforts with an actively maintained, industry-supported open map infrastructure.

Compatibility with Cloud-Native Geospatial Systems

Overture is built on cloud-native geospatial technologies, including GeoParquet for tabular spatial data and other formats optimized for scalable processing and distribution. As outlined in our blog post ("[Why We Chose GeoParquet](#)"), these technologies eliminate the silos and legacy dependencies that hamper traditional GIS workflows.

This approach ensures compatibility with modern cloud-native SDI initiatives, positioning Overture as a ready partner for national efforts that are moving toward distributed architectures, real-time data streaming, and on-demand geospatial analytics.

Conclusion

Overture Maps Foundation offers a working model for the next generation of SDI—open, interoperable, cloud-native, and sustained by public-private collaboration. We encourage OGC and its partners to consider the incorporation of Overture's open base layers and the Global Entity Reference System into the future architecture of National Spatial Data Infrastructure. These resources provide a path forward that is not only technically robust but organizationally inclusive and sustainable.

We welcome the opportunity to collaborate with OGC, FGDC, and other stakeholders in shaping a future where spatial data is open, authoritative, and universally accessible.

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