

North Dakota Geospatial Future State

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“Geospatial technology is a catch-all term for the range of modern tools that enable mapping and spatial analysis. These include established technologies like GIS, GPS, GNSS and remote sensing, as well as the new wave of digital technologies that acquire, consume and process location-based data. Given that between 60 and 80% of all data contains a spatial element, the extent of geospatial technology is vast.” – Geospatial Strategy Essentials for Managers, by Matthew Lewin, Esri Canada

At the heart of Geographic Information Systems and geospatial technology is data. This science includes the collection, creation, manipulation, design, analysis, modeling, storage, management, display, and visualization. Most data have a relationship with time and space. As we know, most learn visually, presenting and communicating this information is key to our understanding and making good decisions made from data.

Future State Vision

We will efficiently and effectively leverage our geospatial data and system to make a single source of truth for improved decision making and driving innovation within and between the agencies of the State of North Dakota.

We will accomplish this by: 1) providing guidance and direction to state agencies on the value of geospatial data solutions for business functions and decision making, 2) train and utilize technical staff to further the knowledge and capabilities of GIS and data visualization, 3) expand the geospatial enterprise solutions to state agencies and their customers, 4) foster an environment for the collaboration of knowledge and expertise to serve geospatial data capabilities/needs, and 5) leverage enterprise architecture for the sharing and distribution of authoritative state geospatial data for North Dakota.

Guiding Principle

Remove barriers to adoption of geospatial technology and data so that geospatial technologies and data become an integral part of State business processes through high performing services that efficiently deliver geospatial data and services to citizens and users of geospatial technology.

Value Proposition

Reduced barriers to geospatial technology and geospatial data provide state agencies the opportunity for greater collaboration with other agencies, for more efficient data-driven decisions, and for improved delivery of services to other levels of government and to the citizens of North Dakota.

Easy access to curated, centralized, authoritative data provides an opportunity for the business community to be more cost-effective in planning, implementing, and providing services to their customers in North Dakota, resulting in enhanced economic development and management of the state’s resources.

Citizens have high expectations to more easily access, utilize, and view authoritative data.

Major Goals

1. The GIS Hub is platform- and storage-agnostic, providing a cost-effective means of making geospatial ubiquitous within state agencies.
2. A “hub and spoke” federated model consisting of the GIS Hub and state agency geospatial systems where the GIS Hub is the centralized “hub” portion and state agencies with specific business needs are the “spokes” connected to the GIS Hub.
3. A cost-effective data storage infrastructure and management model that is capable of 1) hosting GIS Hub and state agency data, 2) utilizing on-premise, cloud, and hybrid solutions, and 3) providing high performance online, nearline, and offline capabilities.
4. A single interface to the federated model is used by State business system and geospatial and non-geospatial users for 1) discovery, access, and utilization of single-source authoritative GIS Hub and state agency geospatial data and applications, and 2) effectively conveying geospatial information that enables users to visualize, analyze and interpret geographic data for data-driven decision making.
5. Implement the use of geospatial data and technology in key agencies that do not yet do so for the purpose of data-driven decision making and communication to the public.