

U.S. National Spatial Data Infrastructure

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What is the U.S. National Spatial Data Infrastructure?

Enabling a Framework for Data Discovery



Provides a framework of polices, standards, procedures, data and technology to support the effective coordination and sharing of spatial information among a community of stakeholders.





Findable, Accessible, Interoperable,

3D National Topography Model (3DNTM)

Integrates high-resolution elevation and hydrography datasets to model the Nation's topography in 3D.

Based on known user requirements and benefits, and specifications and standards.

Created an operational infrastructure to ensure efficient contracting and processing and delivery.

Built on government and industry partnerships.



Enables new and emerging applications as water-related applications move from the neighborhood to the street-level in accuracy and multiple vintages enable change detection.

Provides foundational data to national critical initiatives: including flood risk management, drought management, hazards response and mitigation, infrastructure management, climate change science, and more.

Provides universal sharing of water information as the geospatial foundation for the Internet of Water.

Landsat Next

Designed to provide more frequent and finer-resolution science-quality earth observation data of the changing surface of the Earth, complementing commercial and international datasets.

Based on user requirements.

- 3 smaller satellites, combined 6-day revisit time supporting more frequent coverage of changing processes such crop growth and coastal change and hazards.
- "Super-spectral" with 15 new bands supporting water use/quality, soil conservation, and mineral mapping.
- Improved **spatial resolution** (from 30 to 10 meters) for finer targets of farm fields, inland lakes, and streams.



Landsat (7, 8, and 9) is the most widely used land remote sensing data source within U.S. Federal civil agencies and contributes substantial economic benefits to the U.S. economy (~\$2 billion/ year)

10 million unique Landsat scenes available in the 50-year archive



What can the NSDI enable?

Access to Information



The Path Forward



Challenges:

Data

Delivery

Technology

Effectiveness

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Foundational



Thank you

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