



Case Study

Organization

United States Department of Agriculture Natural Resources Conservation Service

Location

United States

Industry

National Government

Big Returns on Big Data

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) supports the nation's farmers and ranchers with financial and technical assistance for conservation efforts. Crop rotation, wetland restoration, and pest management are a few of the 150 practices NRCS supports to encourage healthy environments and businesses. To gather the high-resolution elevation data required for these efforts, NRCS works with other US national government agencies on the USGS 3D Elevation Program (3DEP), which aims to collect a seamless dataset for the United States and its territories. 3DEP currently has high-resolution 3D elevation data for an estimated one-third of the United States.

What did they do?

Each year, NRCS surveys state conservation and geographic information system (GIS) specialists to find out which geospatial datasets they need for business activities, analysis, and programs. NRCS works with partners in 3DEP to prioritize and fund high-resolution elevation data collection. NRCS invests approximately \$3 million per year in the program. Since 2004, the organization has invested almost \$30 million for light detection and ranging (lidar) and interferometric synthetic aperture radar (IfSAR) data collection. ArcGIS® software supports efficient data management, analysis, and data sharing within NRCS and with partnering agencies and end-user communities. Once high-resolution 3D elevation data is available nationwide, NRCS estimates a return on its investment of \$60 million per year due in large part to streamlined workflows and enhanced planning and design of conservation programs.

Do I need this?

Esri provides ArcGIS technology that streamlines the organization and processing of big data. It also provides a simple way to openly share data so it is easy for people to use throughout the public and private sectors. Creating portals where partnering agencies can quickly search for data, see the status of projects, and set priorities provides transparency, reduces redundancies, and informs priorities.

"This is big data, and to manage it efficiently and effectively, you have to have enterprise GIS systems. That's what we've built with Esri—enterprise architecture for managing the data and simple, easy-to-use tools for end users with an expected annual ROI of \$60 million."

Steven Nechero

Geospatial Data Management
Branch Chief, USDA

For more information, visit
esri.com/3D-Imagery.



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