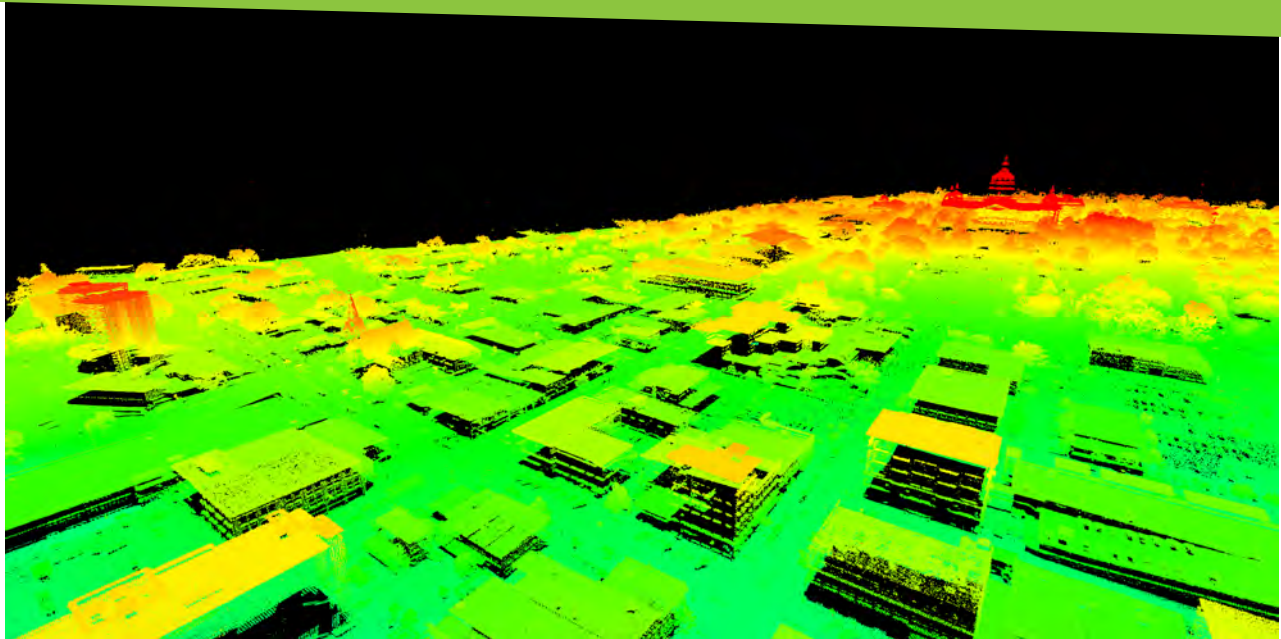




Reduction of Lidar Costs

Enables Clients to Obtain Higher Point Density,
Greater Performance Case Study: Des Moines, Iowa



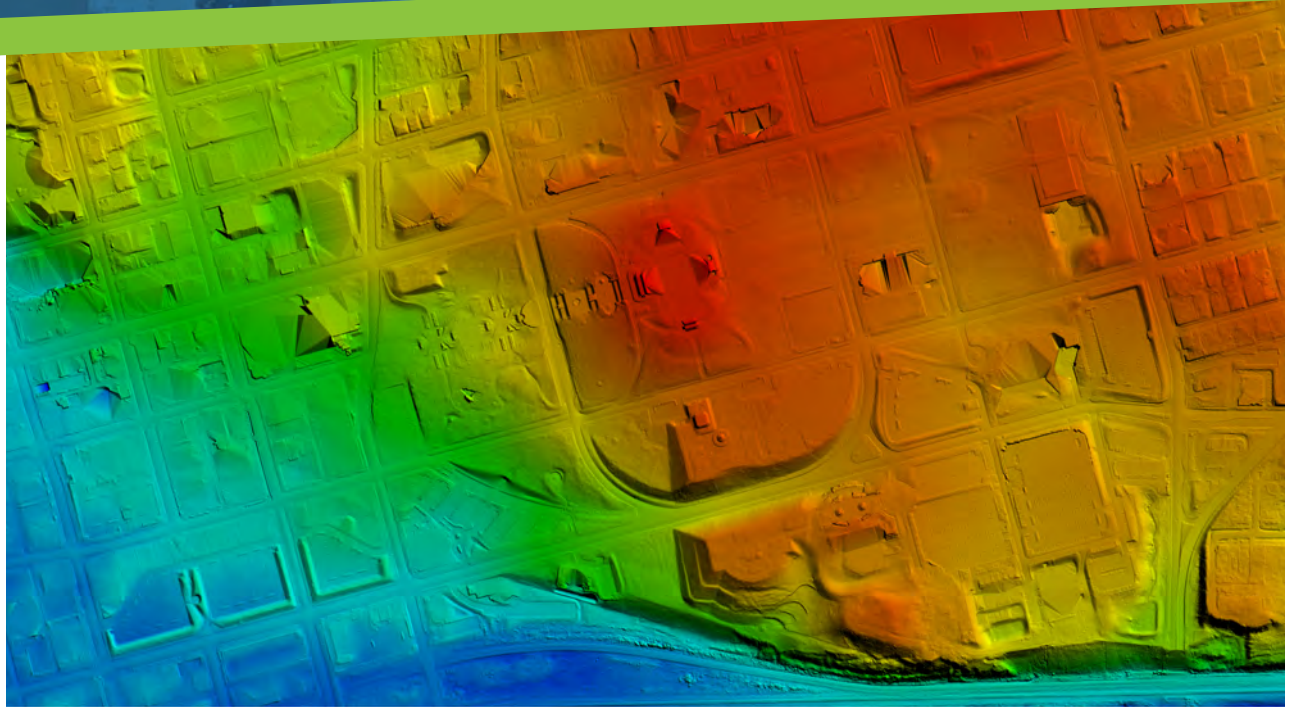
Surdex has numerous government entity clients each year—many of them repeat clients—but as technology has evolved, we have fulfilled requests for increasingly sophisticated datasets. Higher resolution imagery and higher point density lidar derivatives offer increased functionality and greater utility than their predecessors, and the cost of higher resolution data has dropped with the advancements in technology. As a result, clients are able to upgrade to higher quality, more useful data while staying within their budget.

Lidar point cloud in Des Moines, with the State Capitol in the background

In the past many municipalities and counties sought 12" and/or 6" Ground Sample Distance (GSD) imagery, whereas nowadays they tend to opt for 6" and/or 3" GSD imagery. Some clients have sought simple elevation datasets such as Digital Elevation Models (DEMs) for waterflow modeling, often derived from QL2 lidar data (4 points per square meter, or ppsm, among other specifications). More recently, a greater number of local government entities have requested higher density lidar data for 3D models of their jurisdictions, which enable more detailed and accurate planning.

Reduction of Lidar Costs Enables Clients to Obtain Higher Point Density, Greater Performance

Case Study: Des Moines, Iowa



In December of 2019, the City of Des Moines, Iowa, contracted with Surdex for QL1 lidar data (8 ppsm, among other specifications). Their intent is to use this data for a 3D model of a 7-square-mile area in downtown Des Moines. To ensure our data would meet their needs, Surdex presented a pilot area dataset before providing final deliverables for the project area. Once we received approval of the pilot area, we provided the following datasets for the entire project area:

- Lidar point cloud (8 ppsm)
- Hydro-flattened bare-earth DEM
- 2-foot contours (Esri geodatabase format)
- Intensity image

Digital Elevation Model in Des Moines

Cities and government entities can use similar 3D models for a variety of urban planning and management tasks, ranging from utility monitoring to park development and countless other possibilities in between. In this case, the City of Des Moines will use the 3D model they will develop from Surdex's data for monitoring the city skyline to maintain the historic look and feel while allowing progress and development in the downtown area. With the continuing evolution of technology providing greater data functionality at increasingly affordable costs, more clients will be executing similar projects and benefitting from these advanced datasets.



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