

# LiDAR-derived analytics

It all starts with quality data. High resolution LiDAR data provides opportunities to perform complex analysis and modeling, resulting in meaningful information that can be utilized to solve real-world problems.

Utah AGRC's 8-pulse/m<sup>2</sup> LiDAR dataset, collected by WSI, can create numerous applications, which benefit a highly diverse group of departments and industries.



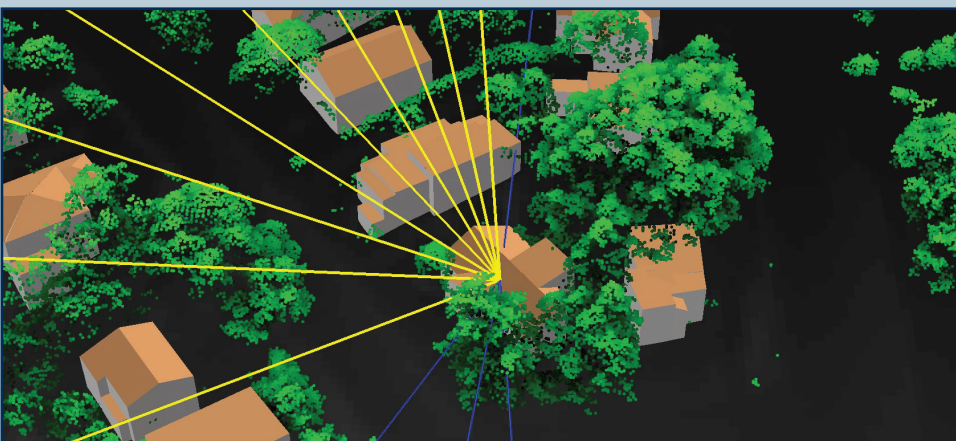
## Building Footprints

Infrastructure data such as building footprints and road delineation are derived from 3D analysis of LiDAR data.



## 1-foot Contours

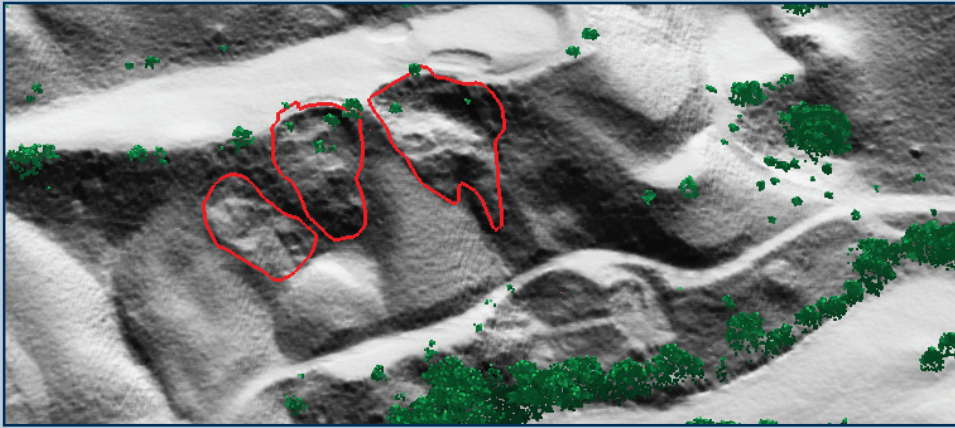
Utilizing the high-resolution ground model, elevation contour data is generated with precision reaching 1-foot intervals.



## Solar Potential, Panel Suitability

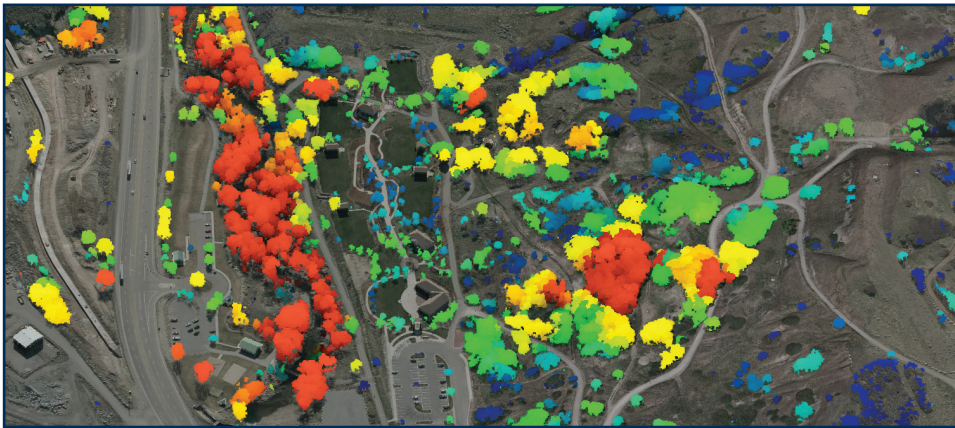
Analysis of buildings isolates individual rooftop planes. Solar potential analysis performed on each rooftop plane determines the suitability for solar panel placement.





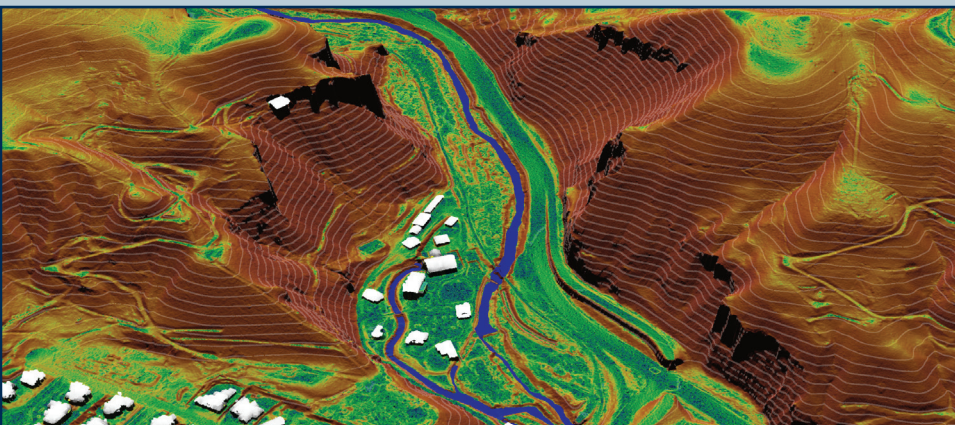
## Landslide Detection & Characterization

Semi-automated landslide detection methodology utilizes multiple geomorphology metrics in order to identify failed terrain.



## Vegetation Metrics

Attributes such as tree height, canopy cover, stem density, and individual tree delineation are derived from LiDAR. Analysis of these attributes are useful for forest stratification and carbon/biomass calculation.



## Hydrology Modeling

LiDAR-derived hydrological applications include: stream delineation, inundation simulation, and flow modeling.

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