ENVIRONMENTAL INTELLIGENCE FOR FOREST MANAGEMENT

TEREN™

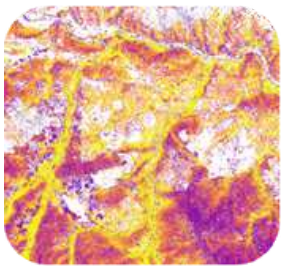
Data. Insights. Intelligence. For forest planners and managers, data science and digital twins are the new necessities for effective, defensible land management decisions.

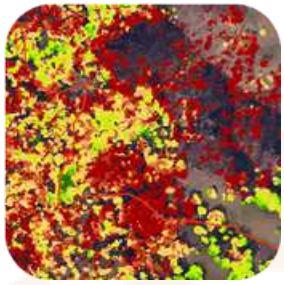
Enter Teren.

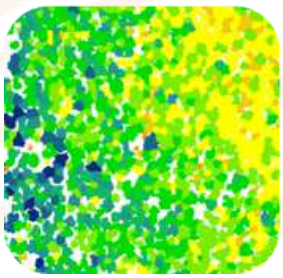
Teren harmonizes LiDAR data with contextual datasets to create and analyze dynamic digital twins of the natural and human worlds.

The beauty is in the details:

Teren's suite of actionable forest management data products serve as a single source of truth for objective, confident land stewardship decisions.







FOREST INVENTORY, COMPOSITION & STRUCTURE

Category	Data Products	Description
Primary Stand Structure Indices	Single Tree Locations, Canopy Height and Base Height, Basal Area / DBH, Crown Diameter, Quadratic Mean Diameter, Tree Density	Measure and attribute fundamental forest biometrics pertinent to silviculture, forest ecology, and wildlife habitat mapping.
Wood Volume and Mass	Cubic Volume, Merchantable Volume, Aboveground Biomass	Estimate tree economic value and carbon storage in living and dead stems.
Foliage 3D Structure	Horizontal and Vertical Spatial Variability Indices, Leaf Area Index	Map wildfire and ladder fuels. Model habitat structure for wildlife studies. Characterize canopy, midstory, and understory cover and conditions.
Forest Health and Composition	Tree Mortality, Species Attribution and Composition	Monitor current and projected losses due to pests and disease. Refine stand structure indices.
Change Detection and Stand Age	Age by Years Since Disturbance and/or Spectral Image Classification	Map stand age for habitat classification and productivity (volume or mass increment since disturbance).
Scale	Data products can be produced for individual trees, as summary statistics for individual stands, and/or as gridded data products.	
Calibration and Validation	Calibrate and validate remotely sensed forest structure and condition datasets using existing field data (FIA, CSE, or client's plot data); design and execute effective, spatially balanced field data collections and protocols.	

The beauty is in (more) details:

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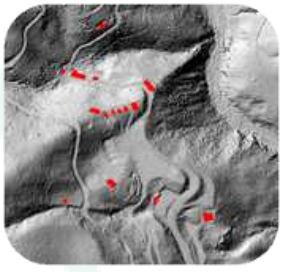

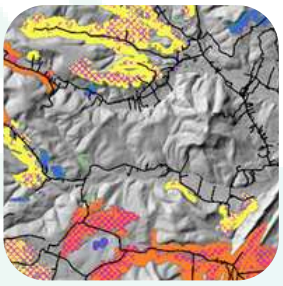

LAND MANAGEMENT

Category	Data Products	Description
Hydrology	Elevation-Derived Hydrography, Problematic Hydrology, Flood Modeling, Pollutant Flowpaths, Climate-Enhanced Topographic Wetness Index	Derive hydrography and model scenario-based hydrologic conditions (volume, velocity, depth) and pollutant and sediment flowpaths. Model climate-informed topographic moisture states foundational to ecosystem conditions.
Terrain	Topography, Geohazards, Landslide Potential	Derive elevation, aspect, slope, and curvature. Identify and rank geohazards by risk exposure. Model probability of mass land movement.
Human Infrastructure	Structures, Roads and Trails, Cultural Resources	Map structures, roads, trails, social trails, cultural resource sites, and other human infrastructure.
Wildfire	Wildfire Potential, Post-Wildfire Impacts	Model wildfire potential and post-wildfire impacts to human and natural values at risk.
Wildlife	Habitat Quality, Habitat Patches, Habitat Connectivity	Define unique habitat patches and assess habitat quality based on vegetation structure, cover, and type. Map corridors between unique habitat patches.
Wood Products Operations	Optimal Staging and Harvesting Zones	Identify optimal staging and operation zones that minimize environmental impacts and maximize operational efficiency.

Harmonized data. Happier Forests. Healthier Economy.

Learn more about how Teren's products harness technology for a robust forest ecosystem and economy.

Request a Demo

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