Vibrant Planet's Land Tender: Collaborative Planning for Land Resilience and Wildfire Mitigation Projects

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Planning a land resilience or wildfire mitigation project can take between two and ten years, according to Vibrant Planet. “Half of that time is spent finding and normalizing data, the other half creating plausible management scenarios that default to the most acres treated at the lowest cost rather than scenarios proven to

build forest and community resilience."

Meanwhile, wildfires won't wait.

Vibrant Planet envisioned a planning and monitoring tool that would utilize industry-standard data sets, foster collaboration between stakeholders, and allow them to respond more expediently to rapidly-changing conditions.

Vibrant Planet partnered with Presence to build Land Tender, a cloud-based app for collaborative land management and wildfire risk mitigation. Land Tender enables NGOs, government agencies, tribal governments, local fire districts, and other conservation managers to visualize, predict, and monitor how different fire prevention and forest health projects will play out—in months rather than years.

Predictions Based on the Best Data

A predictive tool is only as good as its data. Land Tender integrates a large GIS dataset on top of LIDAR, allowing it to scale from local collaborations to nationwide forest plans. The predictions generated by Land Tender are pulled from FORSYS, the US Forest service's official algorithm for generating treatment plans. Using this data, Land Tender is able to make predictions in ten categories:

air quality, carbon sequestration, water reliability, social well-being, fire-adapted community, fire dynamics, forest resilience, biodiversity conservation, wetland integrity, and economic diversity.

UI Is Accessible to Non-technical Users

Working with large and complex data sets necessitates greater care in designing an intuitive interface. Getting started with Land Tender is as easy as setting priorities, entering the budget and designating the area to be evaluated by dragging a circle around a map. Collaboration is built in, with shared scenarios showing up on the dashboard with the rest of their saved scenarios.

Upon setting the budget and priorities, the map area selected is immediately color-coded to reflect ROI. Land Tender will suggest how the chosen forest plan will play out over the next thirty years. Pillar effects are charted, so they can see where turning points and feedback loops come into play over time. Effects on each priority are given a predicted percentage increase/decrease. For example, a proposed plan might lead to a 25% decrease in air quality, but a 12% increase in water reliability over ten years. This simple UI allows for easy interpretation of complex data. Users adjust the data to test various scenarios and track changes with continuous updates.

Agile and Adaptive

Land Tender can reprioritize as changes in the forest happen. The algorithm will parse the data differently depending on the set goals---and the limitations of their budget. Stakeholders can customize their maps with custom data, such as the locations of sensitive species' habitats or local historical landmarks.

Not every community has access to GIS or the budget and staff to spend years analyzing forest data before taking action. As Vibrant Planet states, "Land Tender democratizes the process by giving equal access to sophisticated analysis." Now Tribal nations, rural fire districts, nonprofits, and even homeowners can suggest and collaborate on forest management plans as easily as larger agencies.

Building Trust

In addition to the direct effects of better forest management, another benefit of Land Tender is that its predictive power can be used to increase funding for environmental conservation. "Land Tender visually clarifies the tradeoffs . . . building trust between members of collaboratives as they are able to see the similarities and differences of their land management objectives more clearly," Vibrant Planet points out. By showing the side-by-side comparison between projections at higher and lower budgets, managers can

base funding requests on tangible data.

Projections that once took years now can be developed in months. In California alone, wildfires in 2020 cost the state $63 billion in public health, $10 billion in property damage, and trillions of dollars in ecosystem services. The state spent $2.1 billion dollars in 2020 suppressing these fires. As better predictions cut years out of planning, even a small decrease to these figures would be of enormous value. And that's just one of many ways Land Tender can make predictions. Land Tender also has potential to improve air quality, biodiversity, wetland integrity, and carbon sequestration..

To learn more about Land Tender, view the video here. Are you ready to chat about what Presence can build for you? Let's talk.

Let's talk about how digital products can move your business forward.