



HACC 2023 Challenge: Lahaina Digital Twin

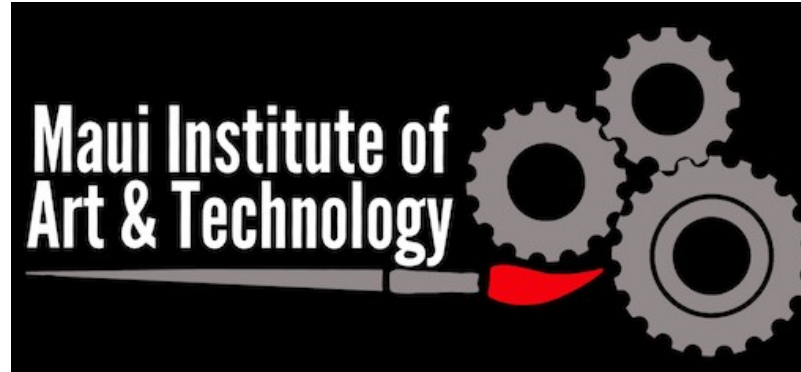
*Enable Participatory Planning Response to
Wildfire Destruction of Lahaina*

Introduction: Envision Lahaina

- Ho'omau – Persevere, Persist, Work Together
- Lahaina's Global influence
- “We’re going to rebuild the way the people of Maui want to build.” President Biden (8/21/23):



Who: Maui Institute of Art and Technology LLC



Independent technologist, married to an artist, developing projects that blend the arts with 21st century technologies.

Jerry Isdale - Principled Engineer (jerry@mioat.com)

Lorayne Lipps - Director of Arts (lorayne@mioat.com)

Today we are concerned Maui residents seeking to help our community

The Problem

- Lahaina Devastated by Fires of 8Aug
- Housing Crisis Exacerbated
- Loss of Front Street Businesses
- Environmental Mismanagement
- Slow Traditional Planning

Left unchecked, Maui's nonnative grasses turned into wildfire fuel

Wildfire experts in Hawaii warned for years that overgrown grasses put communities like Lahaina at extreme risk for wildfire destruction, but officials struggled to fund projects and introduce policies that have been used elsewhere in the country.



The New York Times



Evacuees live nomadic life after Maui wildfire as housing shortage intensifies and tourists return

How Invasive Plants Caused the Maui Fires to Rage

A sweeping series of plantation closures in Hawaii allowed highly flammable nonnative grasses to spread on idled lands, providing the fuel for huge blazes.



Our Solution: Envision Lahaina

Engage Public and Government with blend of Web & In-Person Activities

- On-line Space to discuss and co-create design scenarios
- Real-World Participatory Activities



Envision Lahaina Web 1: Civic Discussion

- Moderated Content
- WikiSurvey
- Discussion Forums

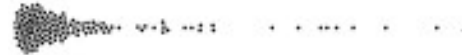


536 people voted 443 people grouped 29,719 votes were cast 314 statements were submitted 5 MCs

How divisive was the conversation?

Statements (here as little circles) to the left were voted on the same way—either everyone agreed or everyone disagreed. Statements to the right were divisive—participants were split between agreement and disagreement.

How to use this: Hover to see the statement text. Start on the far right to find out what the most divisive statement was.



STATEMENT	OVERALL 181	A 70
28 I feel that despite the stated goals of DOE and city hall that white families are being advantaged in the policy decisions.	46% 34% 19% (147)	81% 4% 14% (49)
9 I feel some children are more privileged than my child in his/her school.	49% 37% 12% (153)	77% 13% 9% (53)
24 Schools must teach BLM/systemic racism harms in ways to promote dignity/respect /sensitivity to challenges all kids face: LGBT, immigration, & sex.	79% 12% 7% (158)	93% 1% 5% (58)
31 Single parent homes need to be included in the discussion and decision making process around remote learning.	87% 5% 7% (149)	98% 0% 1% (52)
16 I believe that NYC schools should teach about the damage of white supremacy.	77% 14% 8% (154)	90% 3% 5% (55)

Envisioning Lahaina, Maui

The historic Lahaina town, Maui Hawaii USA was destroyed by wildfire August 8, 2023. It was the economic and cultural center of Maui County. We are now faced with the highly controversial task of rebuilding it.

Welcome to a new kind of conversation - vote on other people's statements.



Jerry Isdale wrote:

5 remaining

Part of Front Street Lahaina should be redeveloped as a memorial for the losses of Aug8 2023 fires.

☒ Agree

☐ Disagree

Pass / Unsure

Are your perspectives or experiences missing from the conversation? If so, add them in the box below.

What makes a good statement?

- Stand alone idea
- Raise new perspectives, experiences or issues
- Clear & concise (limited to 140 characters)

Please remember, statements are displayed randomly and you are not replying directly to other participants' statements.



Share your perspective...

Submit

Opinion Groups

The visualization will appear once 7 participants have begun voting



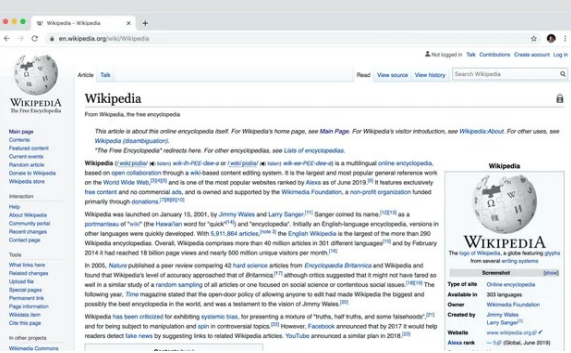
Figure 1. Pol.is Survey Results.

Envision Lahaina Web 2: Design Scenarios

Wiki Pages

Collaboration Tools

Modeling & Simulation



Sentient Hubs Applications News & Posts Team Contact Legal



Radical Collaboration...

Combining Unlimited Constellations of Data, Models & Platforms.

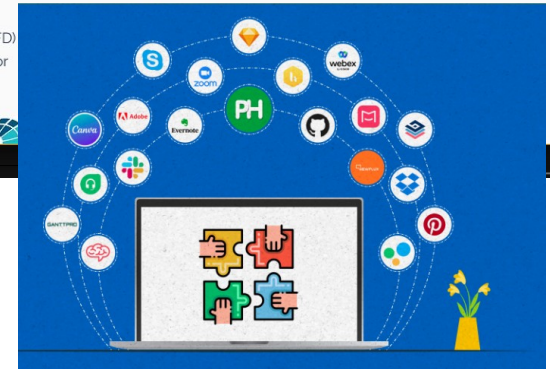
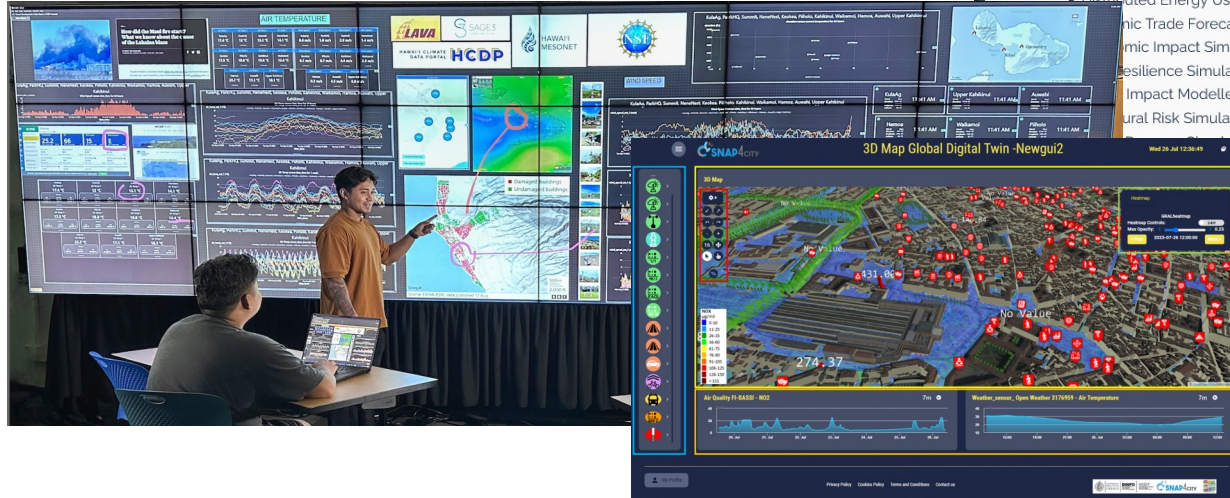
Access a growing library of modular applications and ESG service providers.

Run multiple scenario models (eg: Excel, Machine Learning, Physics) separately, or daisy-chained, via Sentient Hubs collaborative Software as a Service (SaaS) Platform. Link in-house models to a growing list of 3rd Party and open-source models and ESG consulting services.

- Air Quality Tool (SOx, NOx, Odsours)
- Capital Allocation Optimiser
- Bushfire Modeller
- Carbon Footprint Predictor
- Climate Scenario Modeller
- Coastal Erosion Modeller
- COVID Impact Modelling
- Distributed Energy Use Simulator

- Land Use Modeller
- Long Supply-Chain Simulator
- National Energy Simulator
- Nuclear Fuel Cycle Simulator
- Ocean Current Simulator
- Ocean Plastic/Debris Tracker
- Operations Performance Optimiser
- Scope 3 Emission Forecasting Tool
- Sediment Transport Simulator
- Solar Radiation (PV) Forecasting Tool
- Traffic Congestion Simulator
- Water Balance Simulator

Sentient-hubs.com



Envision Lahaina: Real World Activities

For reference, Not part of Challenge

- Working Groups
- Presentation Meetings
- Design Charrettes
- Kiosks
- Projection Spaces



ASK

Seeking Teams to Prototype Envision Lahaina



Ask: Why Join this Challenge

Impact: Directly Shape Lahaina

Innovation: Merge Digital & Real-world Planning

Legacy: Redefine Community-driven Urban Planning



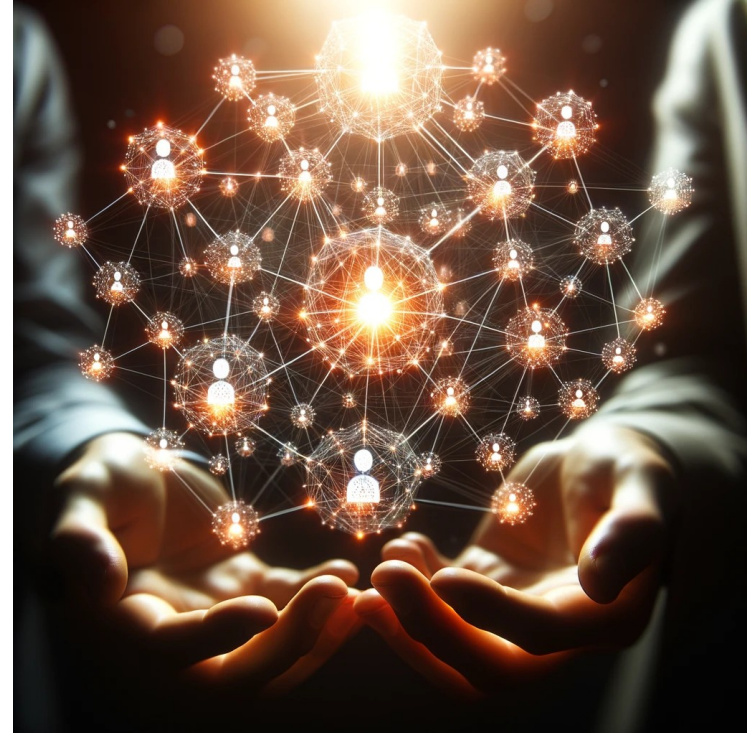
Ask: What We Need

- "Tech Visionaries: Web & UX/UI Experts"
- "Creative Visionaries: Visual Design"
- "Strategists: Facilitate Charrette Activities"
- "Collaborative Thinkers: Understand Participatory Planning"



Conclusion

- Setting the Gold Standard for Community Planning
- More than a Platform: Our Shared Future
- Make Every Voice Count in Lahaina
- Join Us and Let's Create History!



Backup Slides

- Will provide links on various tech and data sources

