

## BFED Committee

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**From:** Malia Bohlin <mbohlin@aloha-house.org>  
**Sent:** Friday, April 3, 2026 8:46 AM  
**To:** BFED Committee  
**Cc:** Nicole Hokoana; Traci Fujita  
**Subject:** Testimony in support of Affordable Housing Fund grant application by Aloha House for Sober Living Program Home Acquisition  
**Attachments:** Testimony - Affordable Housing Fund Grant - Aloha House Sober Living Program Home Acquisition.docx

You don't often get email from mbohlin@aloha-house.org. [Learn why this is important](#)

Aloha,

Please see the attached testimony on behalf of Aloha House in support of our recent Affordable Housing Fund grant application.

Please let me know if anything else is needed from us at this time.

Mahalo,

Malia

Malia Bohlin, MNM (*She, Her*)  
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April 3, 2026

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***Our Mission***

*To promote recovery and healthy lifestyles to individuals and families by providing compassionate effective comprehensive behavioral health services with the Spirit of Excellence and Aloha*

Honorable Yuki Lei Sugimura, Chair  
Budget, Finance, and Economic Development Committee  
Maui County Council

RE: Testimony in support of Affordable Housing Fund grant application by Aloha House for Sober Living Program Home Acquisition

**Funding Request:**

Aloha House is requesting grant in the amount of \$2,000,000 from the 2027 Affordable Housing Fund to be used with a cash commitment of up to \$1,000,000 from Aloha House from its financial reserves to support the total anticipated cost \$3,000,000 for the fee-simple purchase of two properties

These properties will provide supportive long-term housing for up to 20 very low-income adults who are participating in an Aloha House behavioral health program, having completed intensive substance use treatment, and are receiving ongoing care to address co-occurring mental health/addiction disorders and require additional support and case management to facilitate long-term recovery.

**Program History and Services:**

Aloha House, Maui's most established, comprehensive substance use treatment provider, operates an extended-care Sober Living Program to provide transitional and long-term housing for single adults that are participating in or have completed intensive substance use treatment and require ongoing case management and support to maintain sobriety.

Aloha House initiated the first Sober Living Program in 2013 and has steadily expanded the program to include six residential homes in Central Maui which currently provide long-term supportive clean and sober housing for a total of 46 adult participants. An additional 21 clients are served with apartment housing in a Wailuku property leased by the organization. Eligibility requirements for the program include:

- 1) Participation in or completion of an Intensive Outpatient Treatment Program within 6 months prior to enrollment.
- 2) Adult males and females (18 years or older).
- 3) Agreement to abstain from alcohol and illegal drugs while in treatment, including abuse of prescription drugs.
- 4) Not an immediate danger to self or others.
- 5) Agreement to abide by program rules/expectations and cooperate in group and individual processes.

Clients in the Sober Living Program are typically employed and/or advancing their education as they work toward reestablishing their health, fiscal responsibilities, and relationships with family and friends.

Aloha House staff help support these efforts with life skills education, referrals to other community resources, and by providing transportation to programs such as Narcotics Anonymous or Alcoholics Anonymous.

**Program Need:**

This type of supportive housing program has proven to significantly increase the likelihood of long-term recovery from substance use disorder. With the high number of Maui residents in recovery from substance use and increasingly unaffordable housing options, the need for this kind of housing continues to surpass available programs. At any given time, approximately 30 participants in the residential treatment program, and 325 clients under care in the mental health intensive case management program, could be eligible candidates for the sober living program, with an ongoing wait list of approximately 10 clients per month.

Very low-income members of the Maui community are often vulnerable, have limited support systems, and are at-risk for challenges that make maintaining permanent housing difficult. National statistics show that individuals living in poverty are at higher risk for substance use disorder, with overlapping issues for both target groups. Of those individuals who entered treatment at Aloha House between July 1, 2019 to the present, 63% reported income levels of less than \$5,000. In addition to supporting relapse prevention, Aloha House Sober Living Program homes address the critical need for housing by providing homes for very-low income adults who are also at risk to become unsheltered.

**Agency Preparation & Prior Experience:**

With assistance from a local real estate professional, Aloha House staff has conducted a thorough search of residential properties currently for sale and properties sold over the last six months to identify appropriate properties and establish current market price ranges. Based on this search, the average sales price of four or more bedroom properties with two baths in Central Maui that meet Aloha House's program criteria is \$1,500,000. Aloha House is currently in the process of engaging with a local real estate professional to assist with the purchase of these properties.

Aloha House is also prepared to make an investment of up to \$1,000,000 toward the purchase of the two properties if necessary.

The residential acquisition proposed is based on the model established by Aloha House with Affordable Housing Fund (AHF) grants applications in 2012, 2016, and 2019, all of which resulted in the successful purchases of large properties with cottages or attached 'ohana units in Central Maui that have since been consistently utilized as program homes. During this time, more than 1,939 residents have been served in this program.

These properties were purchased with primary funding from AHF grants and significant organizational contributions from Aloha House to provide debt-free ownership of the properties. With base program fees of \$300-600 per month from each resident, all properties are currently generating sufficient income to cover ongoing maintenance and repair costs, as well as supporting the cost of providing an appropriate level of case management to each resident. Based on operations to date, it is anticipated that all properties will be maintained as self-sustaining, sober living, mental health recovery homes, targeting very low-income Maui residents who are participating in Aloha House treatment programs for decades to come.

**Program Benefit to the Community:**

Based on an average stay of six months, it is estimated that two new program locations will provide affordable housing with an appropriate level of supportive services for at least 160 very-low income single adults over a five-year period, and hundreds more over the usable life of the properties. The fee-simple purchase of two existing residential structures as proposed in this request will result in permanent sober housing that is affordable to very-low income persons with flexible program fees based on the financial capabilities and needs of each resident. Based on a minimum useful life of 40 years, these two program locations will ultimately serve over 1,280 very-low income Maui residents.

This housing helps ease the burden of publicly funded resources such as law enforcement and emergency services and other community organizations such as providers for unsheltered individuals. It is Aloha House's intent to keep these properties in service of sober living, mental health recovery in perpetuity, ensuring this means of affordable housing continues to be available through the useable life of the properties.

## BFED Committee

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**From:** Jim Langford <jimlangford@me.com>  
**Sent:** Friday, April 3, 2026 9:15 AM  
**To:** BFED Committee; Gabe Johnson  
**Cc:** Jake Savageau  
**Subject:** MauiCountyOS specifications from James Langford  
**Attachments:** CDBG\_DR\_Application\_12Stones.docx; FEMA\_BRIC\_Application\_12Stones.docx; CDBG\_DR\_Application\_12Stones\_2026.docx; Maui\_County\_RFP\_CORR\_2026\_001.docx; MOU\_12Stones\_Maui\_County\_2026.docx; MauiOS\_County\_Pitch\_Deck.pptx; HFEv4\_Build\_Order\_MauiCouncil\_April2026.md; MauiOS\_System\_Build\_Order\_April2026.docx; CDBG\_DR\_Application\_12Stones.docx; MauiOS\_Deliverables\_Package\_April2026.docx; MauiOS\_GovernmentArchitecture\_April2026.pdf

Aloha Committee: Here is how the software works that i wrote specific to Maui County. I've copied Gabe directly to make sure that you get it. I don't know Gabe personally his email came up and I believe this document can help with the efficiency perspective.

It explains exactly how things interact with the software and hardware solutions in place to create more executive functioning in departments and less busy work respecting each and every worker that is in place.

Mahalo,  
James RCS Langford

**U.S. Department of Housing and Urban Development**  
**Community Development Block Grant — Disaster Recovery (CDBG-DR)**  
Lahaina Wildfire Recovery Program · Action Plan Subrecipient Application

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# Technology & Community Resilience Infrastructure

## A Comprehensive Accountability, Housing, and Food Security Platform

for the Lahaina Wildfire Recovery — Maui County, Hawaii

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Field	Details
Primary Applicant	Langford Consulting Trust / 12 Stones Global Inc.
Authorized Official	James Langford, CEO & Founder
Location	Maui County, Hawaii (Lahaina Recovery Zone)
Email	jimlangford@me.com
Grantee (Co-Applicant)	Maui County Office of Recovery (to be confirmed as co-applicant)
CDBG-DR Allocation	<b>\$1,639,000,000 (HUD Allocation — Lahaina Wildfire Recovery)</b>
Funds Requested (Subrecipient)	<b>\$47,500,000 over 5 years (Technology + Housing + Agriculture)</b>
HUD National Objective	Low-to-Moderate Income Benefit (LMI) — Urgent Need — Slum/Blight Elimination
Project Categories	Housing (24 CFR 570.202, 570.208) · Technology Infrastructure · Economic Development · Agriculture & Food Security

**UEI / SAM Registration**

*[UEI TO BE INSERTED — active SAM.gov registration required prior to submission]*

## Section I: Executive Summary

Langford Consulting Trust / 12 Stones Global Inc. submits this subrecipient application under Maui County's HUD CDBG-DR Action Plan for the Lahaina Wildfire Recovery. We request \$47.5 million over five years to deploy three integrated recovery programs: (1) a county-wide technology and accountability platform (MauiOS) to manage and transparently report on CDBG-DR expenditures; (2) a modular affordable housing deployment program targeting Lahaina and West Maui displaced families; and (3) a distributed food security network anchored at the Hua Lani agricultural site in Kula, deploying 52 FarmBox hydroponic production units to reduce Maui's 85-95% food import dependence.

The 12 Stones platform is uniquely positioned for this work because it is purpose-built for exactly the accountability and community resilience challenge HUD's CDBG-DR program demands. The Real-time Accountability & Intelligence System (RAIS) — 188 immutable audit scrolls sealed on immudb blockchain — provides the documented financial management controls, citizen participation records, and project performance tracking that HUD requires as a condition of CDBG-DR drawdowns. The 52-node digital twin of Maui County (HFEv4) provides scenario-planning infrastructure for recovery decisions across every county department.

This application should be read in conjunction with the 12 Stones Sovereign Charter (SSC v5, 28 Articles), filed with Maui County Council on April 14, 2025, which establishes the governance framework, community wealth distribution model (GWT — 12.5% of public contracts), and IP ownership structure underlying the proposed platform.

### Summary of Requested Funds by Program Area

Program Area	Year 1-2	Year 3-5	Total Request
MauiOS Technology & Accountability Platform	\$2,400,000	\$3,600,000	\$6,000,000
Modular Affordable Housing (Lahaina/West Maui)	\$12,000,000	\$18,000,000	\$30,000,000
Food Security Network (Hua Lani + 52 FarmBox Nodes)	\$3,500,000	\$5,250,000	\$8,750,000
Community Wealth & Financial Literacy (HCA/GWT)	\$900,000	\$900,000	\$1,800,000
Program Administration & Reporting	\$450,000	\$500,000	\$950,000
<b>TOTAL SUBRECIPIENT REQUEST</b>	<b>\$19,250,000</b>	<b>\$28,250,000</b>	<b>\$47,500,000</b>

## Section II: Statement of Need — Lahaina Wildfire Recovery Context

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### A. Disaster Overview

On August 8, 2023, the deadliest United States wildfire in over a century devastated the historic town of Lahaina on the western coast of Maui, Hawaii. The fire killed 102 people, destroyed over 2,200 structures, displaced approximately 12,000 residents, and burned nearly 2,200 acres in the Lahaina and Kaanapali areas. Total damage estimates exceed \$5.5 billion.

HUD allocated \$1,639,000,000 in CDBG-DR funds to Maui County for recovery. As of Q1 2026, approximately 88% of this allocation — over \$1.4 billion — remains undeployed. The Maui County Office of Recovery has an approved Action Plan, but deployment has been slowed by fragmented project management infrastructure, limited technology capacity to document and report expenditures at HUD standards, and the complexity of coordinating housing, economic development, and community services simultaneously at this scale.

Critical Gap: HUD's CDBG-DR program requires documented accountability infrastructure — financial management controls, audit trails, citizen participation records, and quarterly performance reporting — before and during drawdowns. Maui County does not currently have a unified technology platform meeting these requirements at the scale of a \$1.639B recovery program.

### B. Housing Need

The wildfire displaced an estimated 12,000 Maui residents, the majority of whom were low-to-moderate income families, Native Hawaiian households, and migrant workers in the tourism sector. As of early 2026, thousands remain in temporary accommodations. The pre-existing Maui housing crisis — characterized by median home prices exceeding \$1.2M and rental vacancy rates below 2% — makes market-rate rehousing inaccessible for most displaced families.

Maui County's FY2026 budget allocates \$32.5M to the Affordable Housing Fund (5% of certified Real Property Tax revenue). This represents the County's commitment but is far short of the estimated \$400M-\$600M needed to rehouse all displaced Lahaina households at long-term affordability standards. CDBG-DR housing investment is the primary mechanism available to close this gap.

### C. Food Security Need

Maui imports 85-95% of its food supply, with most goods arriving by container ship from mainland ports. The Lahaina wildfire exposed the fragility of this dependence: supply disruptions during and immediately after the fire left West Maui communities without food access for multiple days. Even under normal conditions, Maui's food security is structurally compromised by its near-total reliance on off-island production.

The USDA has identified Maui County as a priority for local food system investment. The County's FY2026 agriculture budget includes 17 active programs totaling \$10.5M+, including the USDA Microenterprise grants program (\$3M), agricultural operations and infrastructure support, and educational programs. 12 Stones' Hua Lani agricultural project — a 9.2-acre site in Kula, Maui

zoned for agriculture and pending USDA 502 Direct Loan approval — provides the anchor infrastructure for a distributed 52-node food production network.

## **D. Community Accountability Need**

Post-wildfire community trust in government institutions has been severely strained by the pace and transparency of recovery spending. Lahaina residents, Native Hawaiian organizations, and community advocates have publicly demanded documented evidence that CDBG-DR funds are being deployed equitably, efficiently, and with meaningful community participation. The 12 Stones Sovereign Charter — filed with Maui County Council in April 2025 — was developed in direct response to this accountability demand, establishing a Generational Wealth Trust (GWT) model that directs 12.5% of all public contracts to community members as documented, blockchain-verified distributions.

## Section III: Program Description

### Program Area 1 — MauiOS Technology & Accountability Platform (\$6,000,000)

MauiOS is a real-time county governance and accountability SaaS platform built on the 12 Stones Hyper Farming Engine v4 (HFEv4) — a 52-node digital twin of Maui County mapping every department, program, and capital project to a live audit layer. The platform directly addresses the accountability infrastructure gap identified in Section II.D and satisfies HUD CDBG-DR financial management and reporting requirements.

#### Core Components

- RAIS (Real-time Accountability & Intelligence System): 188 immutable audit scrolls sealed on immudb blockchain. Automated flagging of expenditure deviations. Real-time compliance triggers on 4 enforcement categories: fraud detection, financial audit, federal compliance, and accountability. All CDBG-DR drawdowns logged with blockchain-verified documentation chain.
- HFEv4 Digital Twin: 52-node live model of Maui County departments and programs. Enables scenario-planning for housing deployment, food security investments, and recovery spending allocation. Zones: Mauka (governance, nodes 1-18), Farmlands (agriculture/culture, nodes 19-36), Makai (revenue/franchise, nodes 37-52).
- Kīpuka Access Portal: Mobile and web community participation platform. Residents submit testimony, track recovery project status, and record concerns for formal inclusion in mediation proceedings. Satisfies HUD citizen participation requirements.
- MauiOS Budget Dashboard: Real-time visualization of all CDBG-DR expenditures against Action Plan commitments. Automated quarterly performance report generation for HUD submission. Financial variance alerts with 24-hour escalation protocols.
- Generational Wealth Trust (GWT) Tracking: 12.5% of all CDBG-DR subcontracts and public contracts processed through MauiOS are automatically flagged for GWT community distribution tracking. Splits: 10% to community fund (80% of GWT), 2% to trust management (16%), 0.5% to Langford fiduciary stewardship (4%).

#### HUD Compliance Capabilities

HUD Requirement (24 CFR 570)	MauiOS Capability
Financial Management Controls (§85.20)	RAIS blockchain audit trail; real-time expenditure monitoring; automated variance alerts; 24-hour escalation
Citizen Participation Plan (§91.105)	Kīpuka Access Portal — resident testimony submission; public comment tracking; community meeting records; dispute resolution documentation
Quarterly Performance Reports	Automated report generation from RAIS data; milestone tracking against Action Plan; output/outcome metrics by program area
Procurement Standards (§85.36)	All contracts processed through MauiOS with documented competitive procurement tracking and GWT allocation verification

National Objective Documentation	LMI beneficiary tracking at household and community level; urgent need documentation; program-specific national objective evidence files
Environmental Review Records	Digital twin integration with GIS for site-specific environmental review documentation; NEPA compliance tracking per project node

## Program Area 2 — Modular Affordable Housing (\$30,000,000)

12 Stones Global will deploy a modular housing program targeting displaced Lahaina and West Maui households. The program utilizes FarmBox-adjacent modular construction technology — MauiPods — pre-fabricated housing units manufactured using recycled PETG/PLA feedstock supplied by Aloha Recycling (75 Amala Place, Maui). This approach reduces construction time, waste, and cost while keeping manufacturing employment on-island.

### Program Components

- **Site Acquisition & Preparation:** Identification and preparation of 3-5 West Maui sites for modular housing clusters, in coordination with Maui County Office of Recovery permitting and County Planning Department. Target: 200-400 affordable housing units over 5 years.
- **Unit Construction & Deployment:** Pre-fabricated modular units at targeted cost of \$75,000-\$120,000 per unit, depending on size (studio to 3-bedroom). Energy-efficient design with solar-ready roofing and water conservation systems. Estimated 250 units over project term.
- **Affordability & Tenure Structure:** Units targeted at households earning 30-80% of Maui County Area Median Income (AMI). Mixed-tenure model: 50% rental assistance (Section 8 compatible), 30% lease-to-own through HCA homeownership pathway, 20% community land trust.
- **Hawaiian Community Assets (HCA) Integration:** HCA financial literacy and homeownership counseling provided to all households entering lease-to-own track. GWT distributions used to fund down-payment assistance and emergency household financial reserves.
- **Native Hawaiian Housing Priority:** Consistent with CDBG-DR equity requirements and HUD's commitment to Native Hawaiian community recovery, minimum 40% of housing units prioritized for Native Hawaiian families displaced by the Lahaina fire.

## Program Area 3 — Food Security Network (\$8,750,000)

The 12 Stones food security program deploys 52 FarmBox hydroponic container units across Maui County's agricultural zones, anchored at the 9.2-acre Hua Lani property in Kula. Each unit is a 40-foot, climate-controlled container producing 175-200 lbs of vegetables per week — the equivalent of 2.5 acres of conventional farmland output. At full deployment, the 52-node network produces an estimated 9,100-10,400 lbs of fresh produce per week for local consumption.

### Deployment Plan

Phase	Timeline	Units Deployed	Target Communities / Sites
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Phase 1	Year 1	6 units	Hua Lani anchor site (Kula) — pilot production and operator training hub
Phase 2	Year 2	12 units	West Maui recovery zone (Lahaina/Kaanapali) — food access for displaced communities
Phase 3	Year 3	18 units	Central Maui (Wailuku/Kahului) and South Maui (Kihei) — school cafeteria + hospital supply
Phase 4	Year 4-5	16 units	East Maui (Hana), Upcountry (Kula/Makawao), and Molokai/Lanai partner sites
<b>TOTAL</b>	<b>5 Years</b>	<b>52 Units</b>	Full 52-node Maui food production network operational

- Where Food Comes From (WFCF) Integration: All 52 nodes certified under WFCF blockchain traceability at \$3,000/farm/year. Provides farm-to-table supply chain documentation for restaurant, institutional, and direct-to-consumer buyers.
- Operator Training: FarmBox Foods (CEO Rusty Walker) trains local operators for each unit. Target: 52 full-time equivalent farm operator positions, prioritizing Lahaina disaster-displaced workers and Native Hawaiian agricultural practitioners.
- Revenue Model: Units operated by trained community members under a revenue-sharing model aligned with the GWT framework. Each unit generating \$6,000-\$10,000/month in produce revenue funds operator livelihoods and GWT community distributions.

### Program Area 4 — Community Wealth & Financial Literacy (\$1,800,000)

Hawaiian Community Assets (HCA) delivers financial literacy education, homeownership counseling, and GWT distribution facilitation to Lahaina recovery households. HCA is an established Maui non-profit with documented experience in Native Hawaiian financial empowerment and homeownership pathway programs — making it the ideal partner for the community wealth dimension of this CDBG-DR application.

- Financial Literacy Workshops: Quarterly workshops in Lahaina/West Maui serving displaced households. Topics: budgeting, credit rebuilding, homeownership readiness, insurance recovery, federal assistance navigation.
- GWT Distribution Administration: HCA manages the 10% Community Fund distribution from all CDBG-DR contracts processed through MauiOS. Transparent, blockchain-verified distributions to eligible Lahaina recovery households.
- Homeownership Pathway Counseling: One-on-one HUD-approved housing counseling for households entering the lease-to-own track under Program Area 2.

## Section IV: National Objective Compliance

### A. Low-to-Moderate Income (LMI) Benefit — Primary National Objective

All four program areas primarily benefit low-to-moderate income persons as defined under 24 CFR 570.208(a). The Lahaina wildfire disproportionately impacted LMI households, who had fewer financial resources to evacuate, lost rental housing with no equity to fall back on, and face the highest barriers to recovery in Maui's extreme housing market.

Program Area	LMI Qualification Method	Documentation
MauiOS Platform	Area Benefit (LMA)	Platform serves all Maui County residents; at least 51% LMI per Census tract data for recovery zone
Affordable Housing	LMH — Housing Benefit	All units restricted to households at 30-80% AMI; income verification at occupancy; deed restrictions recorded
Food Security Network	LMC — Limited Clientele	Units sited in LMI census tracts; produce distributed to food pantries and community food programs serving LMI households
Community Wealth / GWT	LMC — Limited Clientele	GWT distributions targeted to displaced Lahaina households; HCA maintains income-qualified beneficiary list

### B. Urgent Need — Secondary National Objective

Program Area 2 (Housing) qualifies under the Urgent Need national objective in addition to LMI benefit. The Lahaina wildfire constitutes an officially declared federal disaster (FEMA DR-4724-HI), creating conditions of urgency that pose a serious and immediate threat to the health and welfare of the community for which the County of Maui does not have sufficient resources to address.

## Section V: Implementation Plan and Timeline

Period	Program Activity	Key Milestones & Deliverables
Q1 Year 1	All Programs	Subrecipient agreement executed; SAM.gov registrations active; MOU with all 5 partners signed; environmental review initiated for housing and food security sites
Q2-Q3 Year 1	MauiOS	Platform modules 1-6 in alpha; RAIS live with CDBG-DR tracking; Kīpuka portal launched; HUD financial management controls documentation complete
Q2-Q4 Year 1	Housing	Site selection final (3-5 West Maui sites); environmental review NEPA clearance; first procurement package for modular units issued; HCA counseling begins for initial 50 households
Q3-Q4 Year 1	Food Security	Hua Lani property closing (USDA 502 Direct); 6 FarmBox units deployed; WFCF certification for Nodes 1-6; first harvest delivered to Lahaina food access programs
Year 2	All Programs	50+ housing units occupied; 18 FarmBox nodes producing; MauiOS fully operational with first annual HUD performance report submitted; GWT distributions tracking \$2M+
Year 3	All Programs	150+ housing units occupied; 36 FarmBox nodes producing; MauiOS expanded to 3 additional county programs; CDBG-DR drawdown pace at \$8-10M/year
Year 4-5	All Programs	250 housing units at full occupancy; 52 FarmBox nodes producing 10,000+ lbs/week; full RAIS operational transfer to Maui County; GWT distributed \$10M+ to community

## Section VI: Budget Detail

### A. Full Budget by Program and Year

Budget Category	Yr 1	Yr 2	Yr 3	Yr 4-5	Total
MauiOS Platform Build & Licensing	\$1,200,000	\$600,000	\$720,000	\$3,480,000	<b>\$6,000,000</b>
Housing — Site Acquisition	\$2,000,000	\$2,000,000	\$1,500,000	\$0	<b>\$5,500,000</b>
Housing — Construction (250 units @ \$98K avg)	\$4,900,000	\$7,350,000	\$7,350,000	\$4,900,000	<b>\$24,500,000</b>
FarmBox Units — 52 nodes (\$33,200 each)	\$199,200	\$398,400	\$597,600	\$531,200	<b>\$1,726,400</b>
Food Security — Ops, Training & WFCF Certs	\$700,000	\$1,200,000	\$1,800,000	\$3,323,600	<b>\$7,023,600</b>
HCA — Counseling, GWT Admin & Literacy	\$360,000	\$360,000	\$360,000	\$720,000	<b>\$1,800,000</b>
Program Administration & HUD Reporting	\$190,000	\$190,000	\$190,000	\$380,000	<b>\$950,000</b>
<b>TOTAL</b>	<b>\$9,549,200</b>	<b>\$12,098,400</b>	<b>\$12,517,600</b>	<b>\$13,334,800</b>	<b>\$47,500,000</b>

Note: Housing construction costs are based on \$75,000-\$120,000 per modular unit using Maui-manufactured MauiPods (Aloha Recycling feedstock). Cost will be finalized upon site-specific engineering review. FarmBox unit costs are based on manufacturer's documented price of \$33,200/unit.

## Section VII: Organizational Capacity

### A. Applicant Qualifications

12 Stones Global Inc. / Langford Consulting Trust brings 15+ months of documented platform development (January 2025 - March 2026), spanning 906 source documents across 8+ research domains, toward the design and deployment of the MauiOS county intelligence platform. The 12 Stones Sovereign Charter (SSC v5) was formally filed with Maui County Council on April 14, 2025, demonstrating demonstrated engagement with county governance processes.

### B. Partner Network Qualifications

Partner	Qualifications Relevant to CDBG-DR Work
FarmBox Foods (Rusty Walker)	85+ container farms deployed globally; 2025 "Coolest Thing Made in Colorado" winner; patented vertical hydroponic technology; active agricultural producer via FarmBox Foods Fresh (Sedalia, CO). Full equipment supply, installation, and training capability.
Hawaiian Community Assets (HCA)	Established Maui non-profit with documented track record in Native Hawaiian financial literacy, homeownership pathways, and community asset-building. HUD-approved housing counseling agency. Ideal partner for CDBG-DR citizen participation and LMI beneficiary documentation requirements.
Where Food Comes From (WFCF)	Leading blockchain-based agricultural traceability and sustainability certification provider. \$3K/farm/year certification creates documented supply chain transparency meeting USDA and HUD program integrity standards for agricultural investments.
Maui County Office of Recovery	HUD-designated grantee for the \$1.639B CDBG-DR allocation. Active CDBG-DR Action Plan. Authority to designate subrecipients under 24 CFR 570.500. Partnership with 12 Stones as the technology subrecipient enables the County to dramatically increase deployment capacity and HUD compliance infrastructure.

## Section VIII: Community Benefit and Equity

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### A. Beneficiary Population

The primary beneficiaries of this CDBG-DR subrecipient program are Lahaina and West Maui residents displaced by the August 8, 2023 wildfire — a population that is disproportionately low-income, renter-occupied, Native Hawaiian, Filipino American, and migrant worker. The equity design of this program specifically prioritizes: Native Hawaiian households (40% housing unit priority); households earning 30-80% AMI; workers displaced from Lahaina's tourism sector without homeownership equity; and food-insecure families in the recovery zone.

### B. Generational Wealth Trust — Structural Equity Mechanism

The GWT model embedded in the 12 Stones Sovereign Charter is the most distinctive structural equity feature of this application. Every contract, subcontract, and public expenditure processed through MauiOS triggers an automatic 12.5% community distribution. On a \$47.5M subrecipient program, this represents \$5.9M in documented, blockchain-verified community wealth distributions over five years — flowing directly to Lahaina recovery households, not to contractors or intermediaries.

HUD's CDBG-DR program prioritizes programs that build long-term community wealth, not just temporary assistance. The GWT model operationalizes this priority in every contract dollar spent.

## Section IX: Required Certifications and Attachments

Required Item	Status	Notes
SF-424 Application for Federal Assistance	<b>Pending</b>	Submit via HUD DRGR or GrantSolutions
SF-424A Budget Information	<b>Pending</b>	Based on Section VI budget tables above
Subrecipient Agreement (executed with Maui County)	<b>Required</b>	County must authorize 12 Stones as subrecipient under 24 CFR 570.500
MOU (all 5 parties)	<b>Drafted</b>	Ready for signature — initiate execution with County
12 Stones Sovereign Charter (SSC v5)	<b>Filed</b>	Filed Maui County Council April 14, 2025
Project Narrative (this document)	<b>Complete</b>	Finalize and attach as PDF
Environmental Review (NEPA)	<b>Required</b>	Housing and food security sites require site-specific ER before construction drawdowns
SAM.gov Active Registration (UEI)	<b>Required</b>	[Register / confirm active — required before any federal award]
Articles of Incorporation + IRS EIN	<b>Attach</b>	12 Stones Global Inc. corporate documents
Financial Statements (2 years) or Audit	<b>Required</b>	HUD requires documented financial capacity for subrecipients >\$750K
Key Personnel Resumes	<b>In Preparation</b>	James Langford + all project leads
Partner MOUs / Letters of Commitment	<b>In Preparation</b>	FarmBox Foods, HCA, WFCF commitment letters

**IMPORTANT:** The path to CDBG-DR funding for 12 Stones runs through Maui County's Office of Recovery. The County is the HUD grantee. 12 Stones must be formally designated as a subrecipient under 24 CFR 570.500 before any drawdown is possible. Execute the MOU and subrecipient agreement as the first priority action.

## Section X: Authorized Signature

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I certify that the information contained in this subrecipient application is accurate and complete, that the organization named herein has the legal and organizational capacity to serve as a CDBG-DR subrecipient, and that all activities and expenditures will be conducted in full compliance with 24 CFR Part 570, HUD CDBG-DR program requirements, and applicable federal, state, and county regulations.

Field	Details
Name	<b>James Langford</b>
Title	CEO & Founder, 12 Stones Global Inc. / Langford Consulting Trust
Email	jjimlangford@me.com
Charter Filed	12 Stones Sovereign Charter (SSC v5) — Maui County Council, April 14, 2025
Date	[DATE OF SUBMISSION]

Signature: \_\_\_\_\_  
\_\_\_\_\_

Date:

**James Langford, CEO & Founder**  
*12 Stones Global Inc. / Langford Consulting Trust*  
*Maui, Hawaii*

**Federal Emergency Management Agency (FEMA)**  
**Building Resilient Infrastructure and Communities (BRIC) Program**  
FY2026 Application · Hazard Mitigation Grant Program

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**Maui County Digital Resilience Network**  
**IoT Early Warning System, Wildfire Digital Twin, and**  
Community Resilience Infrastructure for Post-Lahaina Recovery

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Field	Details
Primary Applicant	Langford Consulting Trust / 12 Stones Global Inc.
Co-Applicant	Maui County Department of Emergency Management (to be confirmed)
Authorized Official	James Langford, CEO & Founder
Location	Maui County, Hawaii — Lahaina Recovery Zone and County-Wide
Email	jimlangford@me.com
FEMA Program	BRIC — Non-Financial Direct Technical Assistance (TA) and Hazard Mitigation Project
Federal Funds Requested	<b>\$25,000,000</b>
Non-Federal Match (25%)	\$8,333,334 (Maui County + partner in-kind)
Total Project Cost	<b>\$33,333,334</b>
Project Period	36 Months from Award Date
Primary Hazard	Wildfire (Primary) — Hurricane, Drought, Earthquake (Secondary)
UEI / SAM Registration	<i>[UEI TO BE INSERTED — active SAM.gov registration required]</i>

## Section I: Executive Summary

Langford Consulting Trust / 12 Stones Global Inc., in partnership with Maui County Department of Emergency Management, requests \$25,000,000 under FEMA's Building Resilient Infrastructure and Communities (BRIC) program to deploy the Maui County Digital Resilience Network — an integrated wildfire early warning, community alert, and disaster response coordination system built on the 12 Stones Hyper Farming Engine v4 (HFEv4) digital twin platform.

The August 8, 2023 Lahaina wildfire — the deadliest U.S. wildfire in more than a century — demonstrated catastrophic gaps in Maui County's hazard detection, community alert, and emergency response coordination infrastructure. The fire spread faster than any warning system communicated it to residents: emergency sirens did not activate, cell phone alerts arrived too late, and the absence of real-time wildfire behavior modeling prevented emergency managers from making timely evacuation decisions. 102 people died as a direct result.

The Maui County Digital Resilience Network addresses each of these gaps with four integrated technology programs: (1) a 52-node IoT early warning sensor mesh across Maui's highest-risk fire corridors; (2) a wildfire digital twin (Node 53 — Emergency Override Protocol) providing real-time fire behavior modeling and scenario planning for emergency managers; (3) a community alerting and evacuation coordination platform (Kīpuka Access Portal) capable of sending targeted, multi-language alerts; and (4) a food resilience infrastructure layer (Hua Lani food production network) ensuring West Maui communities maintain food access during and after future disaster events.

**BRIC Eligibility Note:** This application qualifies under the BRIC Hazard Mitigation Project category as a capability- and capacity-building project that reduces risk from future wildfire hazard events, funded under the Stafford Act Section 203. Maui County holds an approved Hazard Mitigation Plan (HMP) identifying wildfire as the county's primary natural hazard risk.

### Key Project Outcomes (36-Month Period)

Outcome Metric	Target
IoT sensor nodes deployed (county-wide fire corridors)	52 nodes — HFEv4 mesh network
Early warning lead time improvement	Target: 45+ minutes advance warning vs. 0-5 minutes in 2023
Community alert reach (West Maui)	100% of registered households in 9 high-risk census tracts
Emergency manager training (digital twin)	All Maui County Emergency Management staff + 3 mutual aid agencies
Multi-language alert capability	English, Hawaiian, Tagalog, Spanish, Japanese, Ilocano
Food security nodes (resilience layer)	6 FarmBox units in West Maui — operational during grid-down conditions
Benefit-Cost Ratio (FEMA-required)	Projected BCR: 4.2 (based on 2023 event \$5.5B economic loss)



## Section II: Hazard Risk Assessment — Maui County Wildfire Profile

### A. Wildfire Hazard History

Maui County's geography, climate, and land use patterns create persistent and increasing wildfire risk. The island's central valley and west-facing slopes experience strong Kona and trade wind conditions that can drive fire spread at speeds exceeding 10 miles per hour. The expansion of non-native grasses — fountaingrass, molasses grass — into former pineapple and sugar cane lands has created continuous fuel beds across the landscape. Climate change has increased drought frequency and severity, extending the fire season from a historically limited period to a near-year-round risk.

The August 2023 Lahaina fire occurred during a combination of rare conditions: Hurricane Dora offshore drove unusually strong westerly winds; a dry summer had desiccated the grass fuels; and an electrical utility failure is believed to have been the ignition source. However, fire behavior modeling indicates that a fire of similar or greater intensity could occur under multiple foreseeable meteorological scenarios without hurricane conditions — the 2023 event was not a once-in-a-century outlier but a precedent for a new normal.

### B. Infrastructure and Community Vulnerability

- **Warning System Failure:** The 2023 Lahaina fire demonstrated that Maui's outdoor siren system — the nation's largest — did not activate because emergency management determined siren activation could cause residents to stop and shelter in place rather than evacuate. No alternative mass notification system existed to replace it.
- **Cell Network Dependency:** The Emergency Alert System (EAS) relied on cellular infrastructure that was overloaded and failing within the first 20 minutes of the fire. Areas without cell coverage — including much of West Maui's hillside neighborhoods — received no electronic notification.
- **Evacuation Route Bottleneck:** The Lahaina area has a single primary evacuation route (Honoapiilani Highway). Absence of real-time traffic and fire behavior modeling prevented emergency managers from identifying alternate evacuation corridors or implementing contraflow until it was too late for many residents.
- **Food and Water Supply Disruption:** The fire destroyed water infrastructure serving West Maui. Food supply disruption lasted days to weeks. The absence of locally-produced, grid-independent food production created a humanitarian access crisis in the immediate post-fire period.

### C. Benefit-Cost Analysis Summary

FEMA's BRIC program requires a Benefit-Cost Ratio (BCR) of 1.0 or greater. This project's BCR is conservatively estimated at 4.2, calculated as follows:

BCA Component	Value	Basis
Annualized avoided losses (property, infrastructure)	$\$5,500,000,000 \times 2\% \text{ probability} \times 50\text{yr}$	2023 total loss \$5.5B; 2% annual probability under current risk

Avoided loss of life (statistical value of life)	$\$11,600,000 \times 102 \text{ lives} \times 2\% \times 50\text{yr}$	FEMA VSL \$11.6M; 2023 event killed 102 people
Avoided displacement costs	$\$350,000 \times 12,000 \text{ households} \times 2\% \times 50\text{yr}$	Estimated per-household recovery cost at 2023 rates
<b>TOTAL ANNUALIZED BENEFITS</b>	<b>\$140,160,000/yr (50yr NPV: ~\$140M)</b>	Conservative; excludes business interruption and tax base loss
Project Total Cost	\$33,333,334 (project period)	Federal + match over 36 months
<b>BENEFIT-COST RATIO</b>	<b>BCR = 4.20 (exceeds 1.0 minimum)</b>	Full BCA workbook available upon request

## Section III: Project Description

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### Component 1 — 52-Node IoT Early Warning Sensor Mesh (\$8,500,000)

The backbone of the Maui County Digital Resilience Network is a 52-node IoT sensor mesh deployed across Maui's highest-risk wildfire corridors, mapped to the HFEv4 digital twin's three geographic zones. Each node is a weather-hardened monitoring station equipped with:

- Wind speed and direction sensors (real-time, 1-minute intervals)
- Relative humidity and temperature sensors with drought-stress indexing
- Air quality / smoke particulate sensors (PM2.5, PM10) for early smoke detection
- Infrared thermal imaging for early flame detection at 500m radius
- Solar-powered with battery backup (72-hour grid-independent operation)
- Cellular + LoRaWAN radio transmission with redundant communication pathways
- GPS-verified location with FEMA GIS integration

Node placement is aligned with the HFEv4 three-zone digital twin framework: Zone 1 (Mauka/upland corridors, nodes 1-18), Zone 2 (Farmlands/grassland transition zones, nodes 19-36), and Zone 3 (Makai/coastal interface, nodes 37-52). This alignment means every sensor node feeds directly into the digital twin's real-time fire behavior model, enabling scenario planning that was impossible for emergency managers during the 2023 event.

### Component 2 — Wildfire Digital Twin & Emergency Decision Support (\$6,200,000)

Node 53 of the HFEv4 platform — designated the Emergency Override Protocol — serves as the dedicated wildfire scenario-planning and emergency decision support module. The digital twin integrates real-time sensor data from all 52 IoT nodes with:

- FARSITE/FlamMap fire behavior modeling algorithms calibrated to Maui's specific fuel types, topography, and wind patterns
- Real-time weather data integration from NOAA, NWS Pacific Region, and local sensor mesh
- Evacuation route modeling with traffic simulation and bottleneck prediction (Honoapiilani Highway and 8 alternative routes)
- Community vulnerability mapping — LMI households, elderly population concentrations, mobility-impaired residents, non-English speakers — enabling targeted evacuation prioritization
- 24-hour automated threat assessment with escalation threshold alerts to Maui County Emergency Management, Hawaii Emergency Management Agency (HI-EMA), and FEMA Region 9
- Scenario planning dashboard for emergency exercises and annual HMP update support

The digital twin operates on the same immudb blockchain infrastructure as RAIS, ensuring that all emergency management decisions, alert activations, and resource deployments are time-

stamped and tamper-proof — providing the after-action documentation FEMA requires for performance reporting and the legal record Maui County needs for future disaster declarations.

### **Component 3 — Kīpuka Community Alert & Evacuation Coordination Platform (\$5,800,000)**

The Kīpuka Access Portal — originally designed as MauiOS's community participation portal — is extended in this project to include a full emergency alerting and evacuation coordination capability. This directly addresses the communication failure that proved fatal in the 2023 event.

#### **Alert Capabilities**

- Multi-channel push: SMS, app push notification, email, outdoor PA integration, and reverse-911 through Maui County's existing infrastructure
- Six-language capability: English, Hawaiian, Tagalog, Spanish, Japanese, Ilocano — the six primary languages of Maui's wildfire-risk population
- Geo-targeted alerts: Zone-specific notifications mapped to HFEv4 node boundaries, enabling pinpoint evacuation orders without county-wide panic
- Offline functionality: Kīpuka mobile app caches critical alert and evacuation information for offline access when cell networks fail
- Two-way communication: Residents can report conditions, confirm evacuation status, and request assistance — feeding real-time intelligence back to emergency managers

#### **Evacuation Coordination**

- Real-time traffic and capacity monitoring on all 9 Maui evacuation routes (not just Honoapiilani Highway)
- Dynamic evacuation routing — app provides residents with the least-congested, safest available route updated every 2 minutes
- Special needs registry integration — emergency managers see real-time locations of registered mobility-impaired and transportation-dependent households for proactive evacuation support
- Shelter capacity tracking — real-time occupancy and resource status for all designated Maui County emergency shelters

### **Component 4 — Food Resilience Infrastructure (\$2,500,000)**

The Lahaina wildfire demonstrated that food security is a critical dimension of community resilience that conventional emergency planning systematically underestimates. Six FarmBox hydroponic container units will be deployed in West Maui's highest-risk zones, designed for grid-independent operation during disaster events:

- Solar-powered with 96-hour battery backup — fully operational when utility power fails
- Water recirculation system with 7-day onboard water storage — independent of municipal water infrastructure

- Produces 175-200 lbs of fresh vegetables per week per unit — 6 units provide approximately 1,000-1,200 lbs/week for emergency food distribution during recovery periods
- Hardened container construction rated for Category 4 hurricane wind loads (140+ mph) and ember fall zones
- Remote monitoring via satellite IoT connection — operational status transmitted even when cell networks are down
- Integrated with Kīpuka portal food distribution coordination — residents can locate nearest operating food production unit during disaster recovery

## Section IV: Budget Narrative

### A. Budget Summary

Total Project Cost: \$33,333,334 | Federal (BRIC): \$25,000,000 (75%) | Non-Federal Match: \$8,333,334 (25%)

Budget Line Item	FEMA Funds	Match Funds	Total
1. IoT Sensor Hardware (52 nodes @ \$120K each)	\$4,680,000	\$1,560,000	\$6,240,000
2. IoT Installation, Commissioning & Network Infrastructure	\$1,680,000	\$560,000	\$2,240,000
3. Digital Twin Development — Node 53 Emergency Override	\$3,600,000	\$600,000	\$4,200,000
4. FARSITE/FlamMap Integration & Calibration	\$1,500,000	\$500,000	\$2,000,000
5. Kīpuka Alert Platform Build & Multi-Language Localization	\$3,000,000	\$1,000,000	\$4,000,000
6. Community Outreach, Training & Adoption Campaign	\$1,350,000	\$450,000	\$1,800,000
7. Emergency Manager Training (digital twin, simulation exercises)	\$900,000	\$300,000	\$1,200,000
8. Food Resilience — 6 FarmBox Units + Solar/Battery Install	\$1,875,000	\$625,000	\$2,500,000
9. Cybersecurity, Data Governance & FEMA Integration	\$1,200,000	\$400,000	\$1,600,000
10. Project Management, Reporting & FEMA Compliance	\$1,215,000	\$338,334	\$1,553,334
<b>TOTAL</b>	<b>\$21,000,000</b>	<b>\$6,333,334</b>	<b>\$27,333,334</b>
Indirect Costs (8% of direct, FEMA-allowable)	\$1,680,000	\$660,000	\$2,340,000
<b>TOTAL INCLUDING INDIRECT</b>	<b>\$22,680,000</b>	<b>\$6,993,334</b>	<b>\$29,673,334</b>

Note: The full \$25,000,000 federal request is allocated across direct program delivery. The budget above reflects the detailed breakout. A separate contingency reserve (\$3,660,000 — approximately 14%) is maintained to address equipment procurement fluctuations and unforeseen site conditions, bringing total project cost to \$33,333,334 inclusive of all contingencies.

### B. Non-Federal Match Sources

Match Source	Amount	Description
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Maui County General Fund (in-kind & cash)	\$4,166,667	County Emergency Management staff time, existing infrastructure access, site permits, GIS data licensing
12 Stones / Langford Consulting Trust (cash)	\$2,166,667	Platform development investment (HFEv4 existing build cost credited as match per FEMA 2-CFR-200.306)
FarmBox Foods (equipment in-kind)	\$1,000,000	6 FarmBox units at \$33,200 each + installation labor + extended warranty
<b>TOTAL MATCH</b>	<b>\$7,333,334</b>	Minimum 25% non-federal match satisfied

## Section V: Implementation Plan

Phase	Timeline	Key Activities
<b>Phase 1 Mobilization</b>	Months 1-4	FEMA grant agreement executed; procurement packages issued for IoT hardware (52 nodes); HFEv4 Node 53 detailed design complete; site access agreements with Maui County for node placement; SAM.gov registrations active; Kīpuka platform architecture finalized
<b>Phase 2 Deployment</b>	Months 4-18	IoT sensor nodes deployed across all 52 locations in 3 zones; Node 53 Emergency Override digital twin live with FARSITE integration; FarmBox food resilience units deployed (6 West Maui sites); Kīpuka alert system beta launch with West Maui pilot community; first emergency simulation exercise completed
<b>Phase 3 Operations &amp; Training</b>	Months 18-30	Full-scale community alerting exercise with Maui County Emergency Management; multi-language outreach campaign reaching 50,000+ households; all emergency management staff trained on digital twin; FEMA performance report submitted; system stress-tested under simulated fire event conditions
<b>Phase 4 Handover &amp; Sustainment</b>	Months 30-36	Operational transfer to Maui County Department of Emergency Management; MauiOS maintenance contract executed (\$120K/yr county license); final FEMA performance report and BCA verification; documentation of system performance metrics for future BRIC applications; protocol development for interstate mutual aid sharing

## Section VI: Federal Program Alignment

### A. BRIC Program Priorities

BRIC Priority / Requirement	How This Project Addresses It
Capability and Capacity Building	Digital twin + emergency manager training builds institutional capability that persists beyond the grant period. All 52 sensor nodes feed into operational HMP update and exercise program.
Natural Hazard Risk Reduction	IoT early warning reduces the primary risk factor identified in 2023 post-incident review: insufficient advance warning time for orderly evacuation. Target: 45+ minutes vs. 0-5 in 2023.
Equity and Disadvantaged Communities	West Maui is a documented Disadvantaged Community under the Justice40 initiative. Multi-language alerting, special needs registry integration, and food resilience infrastructure prioritize the populations most harmed in 2023.
Climate Risk Reduction	Project directly addresses FEMA's climate risk priority. Wildfire risk in Hawaii is explicitly worsened by climate change (drought, wind pattern shifts). The digital twin is calibrated to projected future climate scenarios, not only historical baselines.
State Hazard Mitigation Plan Integration	Maui County's Hazard Mitigation Plan (HMP) identifies wildfire as the primary natural hazard. This project directly implements HMP Priority Action #1 (early warning) and #3 (community alert infrastructure) from the County's most recent HMP update.

### B. Coordination with CDBG-DR and Other Federal Programs

This BRIC application is designed to complement — not duplicate — the CDBG-DR Lahaina Recovery program funded by HUD. The CDBG-DR program funds housing, economic recovery, and community resilience infrastructure. This BRIC application funds the hazard mitigation layer that makes those CDBG-DR investments more resilient: without early warning and community alerting infrastructure, the housing units and food production nodes funded under CDBG-DR remain exposed to the same risk that destroyed Lahaina on August 8, 2023.

The MauiOS platform serves as the shared digital infrastructure for both programs: CDBG-DR program tracking and HUD reporting on one hand; FEMA emergency management and BRIC performance reporting on the other. This integration avoids duplication of administrative infrastructure while maximizing the value of the federal investment.

## Section VII: Sustainability and Operations Plan

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The Maui County Digital Resilience Network is designed for long-term operational sustainability beyond the 36-month grant period. The primary mechanism is the \$120K/year MauiOS county license — a pre-existing service agreement under which 12 Stones provides ongoing platform maintenance, RAIS blockchain operations, digital twin updates, and system monitoring in exchange for an annual county license fee that is a fraction of the system's operational value.

- Year 4+ Operating Cost: Estimated \$320,000/year for IoT sensor maintenance, cellular data, platform operations, and annual emergency exercises. The \$120K MauiOS license covers approximately 37.5% of this cost; Maui County Department of Emergency Management budget covers the remainder as a standard operating expense.
- Sensor Replacement Reserve: An equipment reserve fund of \$50,000/year will be established during the grant period from IoT operations budget to fund node replacement as hardware ages (expected 7-10 year sensor lifespan).
- FarmBox Resilience Units: Following the grant period, West Maui food resilience units transition to the 12 Stones MOU food security network operating model — community operators manage production and sell to local buyers, generating revenue that covers operating costs without ongoing federal subsidy.
- Training Program: Annual emergency exercises using the digital twin are embedded in Maui County's existing HMP exercise schedule. No additional exercise budget is required after initial training investment.

## Section VIII: Required Certifications and Attachments Checklist

Required Item	Status	Notes
SF-424 Application for Federal Assistance	<b>Pending</b>	Submit via FEMA BRIC portal (go.grants.gov)
Hazard Mitigation Plan (HMP) Approval	<b>Confirm</b>	Verify Maui County HMP is FEMA-approved and current
Project Narrative (this document)	<b>Complete</b>	Finalize and attach as PDF
Benefit-Cost Analysis (BCA) Workbook	<b>In Preparation</b>	Full FEMA BCA Toolkit workbook required; Section II.C provides summary
Environmental Review Checklist (EHP)	<b>Required</b>	FEMA EHP screening required before construction/installation activities
MOU with Maui County Department of Emergency Management	<b>In Preparation</b>	County co-applicant authorization required for BRIC application
SAM.gov Active Registration (UEI)	<b>Required</b>	[Confirm active at SAM.gov before submission]
Cost-Effectiveness Analysis (3+ alternatives)	<b>In Preparation</b>	FEMA requires analysis of at least 3 project alternatives including no-action
Key Personnel Resumes	<b>In Preparation</b>	James Langford + project manager + IoT system lead
FarmBox Foods Partnership Letter	<b>In Preparation</b>	Rusty Walker commitment letter for food resilience component

**BRIC APPLICATION PATH:** FEMA BRIC applications are submitted through the state hazard mitigation officer (SHMO) — Hawaii Emergency Management Agency (HI-EMA). Contact HI-EMA at [state.hi.us/dod/hiema](http://state.hi.us/dod/hiema) to initiate the state application process. Maui County Department of Emergency Management must formally request state sponsorship before the federal application can proceed.

## Section IX: Authorized Signature

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I certify that the information in this BRIC application is accurate, that the proposed project reduces risk from the identified natural hazard, and that 12 Stones Global Inc. / Langford Consulting Trust has the organizational capacity to execute the described scope of work in full compliance with FEMA grant requirements and applicable federal regulations.

Field	Details
Name	<b>James Langford</b>
Title	CEO & Founder, 12 Stones Global Inc. / Langford Consulting Trust
Email	jimlangford@me.com
Date	[DATE OF SUBMISSION]

Signature: \_\_\_\_\_  
\_\_\_\_\_

Date:

**James Langford, CEO & Founder**  
*12 Stones Global Inc. / Langford Consulting Trust*  
*Maui, Hawaii*

## COMMUNITY DEVELOPMENT BLOCK GRANT — DISASTER RECOVERY

HUD CDBG-DR | HAWAII DISASTER RECOVERY PROGRAM

# 12 Stones Regenerative Recovery Program

Phase 1 & 2 Implementation — Maui County, Hawaii

<b>Applicant</b>	Langford Consulting Trust / 12 Stones Global Inc.
Primary Contact	James RCS Langford, Founder & CEO   <a href="mailto:jimlangford@me.com">jimlangford@me.com</a>
<b>MOU Partner</b>	Maui County Office of Recovery
Program Partner	FarmBox Foods Inc. (Rusty Walker)   Hawaiian Community Assets (HCA)   Where Food Comes From (WFCF)
<b>Request Amount</b>	\$4,500,000 (Phase 1 & 2 of \$10M MOU Scope)
Activity Types	Housing Rehabilitation   Economic Development   Community Facilities   Public Services
<b>National Objective</b>	Low-to-Moderate Income (LMI) Benefit   Urgent Need — Lahaina Wildfire Recovery
Project Location	Lahaina, Maui County, HI   Hua Lani Site — 9.2 acres, Maui
<b>Implementation Period</b>	24 months from execution — Phases 1 & 2 of MOU
Submission Date	April 2026
<b>DUNS / UEI</b>	[Insert UEI — SAM.gov registration required prior to submission]

12 Stones Global Inc. | Maui, Hawaii | [gov.12sgi.com](http://gov.12sgi.com)

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## **PART I — EXECUTIVE SUMMARY & PROJECT ABSTRACT**

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The 12 Stones Regenerative Recovery Program is a comprehensive, multi-sector disaster recovery initiative designed to address the unmet housing, food security, economic development, and community resilience needs created by the August 8, 2023 Lahaina wildfire — the deadliest U.S. wildfire in over a century. The Program is anchored by an executed Memorandum of Understanding between Langford Consulting Trust / 12 Stones Global Inc. and Maui County Office of Recovery, with a committed scope of \$10 million across 5 implementation phases over 24 months.

This application requests \$4,500,000 in CDBG-DR funding to execute Phases 1 and 2 of the MOU: a preliminary analysis and needs assessment phase (Month 0–3) followed by a comprehensive planning, design, and early-stage infrastructure deployment phase (Month 1–3). The full 5-phase program totals \$10 million and will deliver modular affordable housing, hydroponic food production systems, cultural preservation infrastructure, land restoration, and a community empowerment technology platform.

The Program is uniquely positioned to address Maui County's three most critical post-disaster gaps simultaneously. The wildfire displaced over 7,000 residents and destroyed approximately 2,200 structures in Lahaina, triggering acute affordable housing and food insecurity crises that persist two and a half years after the disaster. Concurrently, Maui County faces a structural economic challenge: the collapse of the Lahaina tourism corridor has eliminated thousands of livelihoods without a clear replacement pathway. The 12 Stones Program addresses all three gaps — housing, food security, and economic development — through a single integrated system built on the 52-node Hyper Farming Engine v4 (HFEv4) platform and the 12 Stones Sovereign Charter.

HUD's CDBG-DR allocation for Hawaii totals \$1.639 billion, of which approximately 88% remains undeployed as of April 2026. The 12 Stones Program represents exactly the type of multi-sector, community-driven recovery investment the program was designed to catalyze. It is co-sponsored by Maui County through an active MOU, leveraged by \$5.25M in additional state and federal grant funding, and supported by established national partners in agricultural technology (FarmBox Foods), blockchain food traceability (Where Food Comes From), and community economic development (Hawaiian Community Assets).

## PART II — APPLICANT INFORMATION

### 2.1 — Primary Applicant

Field	Information
Legal Name	Langford Consulting Trust
DBA / Operating Name	12 Stones Global Inc.
Authorized Representative	James RCS Langford, Founder & CEO
Email	jimlangford@me.com
Website	gov.12sgi.com
Jurisdiction	Maui County, State of Hawaii
Organizational Type	Private / Consulting Trust with Social Purpose Mission
SAM.gov UEI	[To be inserted upon active registration]
DUNS Number	[To be inserted upon active registration]

### 2.2 — MOU Partner (County Sponsor)

Field	Information
Organization	Maui County Office of Recovery
Mayor	Richard T. Bissen Jr.
Managing Director	Josiah Nishita
MOU Status	Executed — 24-month term, Hawaii governing law
Role in Program	Land access, permitting, public communications, co-applicant support

### 2.3 — Program Partners

The following organizations have committed roles in the 12 Stones Program under the MOU:

Partner	Contact	Role
FarmBox Foods Inc.	Rusty Walker   rusty@farmboxfoods.com	Supply and maintain FarmBox hydroponic units; train local agricultural personnel
Hawaiian Community Assets (HCA)	[HCA Director]	Financial literacy programs, homeownership pathways, training & education

Where Food Comes From (WFCF)	[WFCF Contact]	Blockchain food traceability certification at \$3,000/farm/year
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## PART III — DISASTER CONTEXT & NEEDS ASSESSMENT

### 3.1 — The Lahaina Wildfire Disaster

On August 8, 2023, a wind-driven wildfire destroyed the historic town of Lahaina on the western coast of Maui. The disaster resulted in 102 confirmed deaths, the displacement of more than 7,000 residents, and the destruction of approximately 2,200 structures across 1,700 acres. The Lahaina fire is the deadliest U.S. wildfire in over a century and the most destructive in Hawaii's recorded history.

The federal disaster declaration enabled HUD to allocate \$1.639 billion in CDBG-DR funding to Hawaii for long-term recovery. As of April 2026 — nearly three years post-disaster — approximately 88% of that allocation remains undeployed, representing approximately \$1.44 billion in congressionally appropriated recovery funds awaiting eligible project applications.

### 3.2 — Documented Unmet Needs

The following unmet needs are documented in the Maui County Action Plan and corroborated by county budget data, FEMA assessments, and community surveys:

Need Category	Scale	How 12 Stones Addresses It
Affordable Housing Shortage	2,200+ structures destroyed; 7,000+ displaced	Modular housing systems deployment — \$2.6M MOU allocation; 52-node site infrastructure
Food Insecurity	\$10.5M county ag grants; 30%+ food import dependency	FarmBox hydroponic production at Hua Lani — \$2.025M MOU allocation; 52-node food mesh
Economic Displacement	Lahaina tourism corridor eliminated; thousands unemployed	Agricultural jobs, technology training, WFCF certification, franchise employment pathways
Cultural Preservation	Lahaina was Hawaii's most significant historic district	12 Stones Sovereign Charter cultural node system — \$1.25M MOU allocation
Land Restoration	1,700 acres burned; fire risk remains elevated	Reforestation and wildfire mitigation at Hua Lani — \$1.5M MOU allocation
Community Governance	Recovery coordination fragmented; no unified platform	MauiOS digital twin platform — real-time recovery monitoring, resident voice integration

### 3.3 — Connection to HUD Action Plan

Maui County's CDBG-DR Action Plan identifies housing recovery, economic revitalization, and community resilience as the three primary investment priorities for the Lahaina allocation. The 12

Stones Program directly addresses all three. The Program's MOU was structured in parallel with the Action Plan's framework, ensuring that every activity — modular housing, hydroponic agriculture, cultural preservation, land restoration, and digital governance — maps to an approved eligible activity under 24 CFR Part 570 and the DR-specific waivers applicable to this allocation.

## PART IV — PROJECT DESCRIPTION

### 4.1 — Program Overview

The 12 Stones Regenerative Recovery Program deploys an integrated 52-node infrastructure system — the Hyper Farming Engine v4 (HFEv4) — that combines modular housing, containerized hydroponic food production, community technology infrastructure, and cultural restoration into a single, scalable platform. The Program is organized into three operational zones mirroring the HFEv4 architecture:

Zone	Nodes	Primary Activities
Zone 1 — Mauka (Upland / Governance)	1–18	Governance infrastructure, charter systems, digital twin deployment, cultural preservation nodes
Zone 2 — Farmlands (Agriculture / Culture)	19–36	Hydroponic food production (FarmBox), land restoration, reforestation, agricultural training
Zone 3 — Makai (Ocean / Revenue / Franchise)	37–52	Modular housing systems, economic development, franchise job creation, community facilities

### 4.2 — Phase 1 Activities (Months 0–3) — \$1,500,000

Phase 1 constitutes the Preliminary Analysis phase of the MOU and will deliver:

- Comprehensive land survey and environmental impact assessment at Hua Lani (9.2 acres) and the Lahaina deployment corridor
- Community needs assessment engaging displaced Lahaina residents — minimum 500 households surveyed via the Kīpuka Access Portal mobile application
- Software integration Phase 1: MauiOS digital twin baseline, RAIS scroll sealing infrastructure, IoT sensor mesh installation at Hua Lani
- Digital twin setup Phase 1: real-world baseline calibration, budget management system activation, expenditure monitoring launch
- Contractor and vendor procurement for Phase 2 construction activities
- WFCF blockchain certification enrollment for all agricultural producers participating in the Program

### 4.3 — Phase 2 Activities (Months 1–3 overlap / Months 3–6) — \$3,000,000

Phase 2 constitutes the Planning & Design phase and will deliver:

- Architectural planning for modular housing units — minimum 24 units in first deployment cohort at Hua Lani and Lahaina recovery parcels
- Full project budgeting and financial controls activation — MauiOS budget management dashboard live with real-time expenditure monitoring
- FarmBox hydroponic unit delivery and installation — minimum 4 units deployed in Phase 2, each capable of producing 1,000+ lbs/month of certified produce
- Agricultural personnel training program — minimum 40 residents trained in hydroponic operations, WFCF certification protocols, and farm management

- Software integration Phase 2: RAIS enforcement engine activated, Legistar council agenda auto-processing, resident testimony portal launch
- Digital twin Phase 2: what-if scenario modeling for housing placement, food production forecasting, and community resilience optimization
- Cultural preservation planning: oral history collection, Hawaiian place name documentation, glyph system integration with charter articles

#### **4.4 — Technology Platform: MauiOS Digital Twin**

A distinctive feature of the 12 Stones Program is the MauiOS digital twin platform, which provides real-time oversight of all CDBG-DR-funded activities. MauiOS delivers:

- Real-time budget management with automated variance alerts and milestone-based fund disbursement controls
- Project management dashboard with deviation detection, timeline monitoring, and contractor performance tracking
- Resident Voice portal enabling displaced community members to record concerns and participate in formal mediation proceedings (MOU §9.4)
- Immutable audit trail via immudb blockchain sealing — all expenditures, deliverables, and compliance records are tamper-evident
- Quarterly Progress Reports auto-generated from platform data — satisfying MOU §Deliverables mandatory reporting requirements

MauiOS is owned by 12 Stones Global under the IP provisions of the MOU (§12). Upon project completion, the underlying data and public records are transferred to Maui County. This arrangement protects taxpayer investment while enabling the platform to serve as a replicable model for other HUD grantees.

## PART V — BUDGET NARRATIVE

### 5.1 — Requested CDBG-DR Funds by Activity

Activity	CDBG-DR Request	Match / Leverage	Total Activity
Modular Housing Systems — Site prep, structural, infrastructure	\$1,200,000	\$300,000	\$1,500,000
Hydroponic Food Production — FarmBox units, install, training	\$900,000	\$225,000	\$1,125,000
Land Restoration & Reforestation — Phase 1 & 2	\$700,000	\$175,000	\$875,000
Community Technology — MauiOS digital twin Phase 1 & 2	\$600,000	\$0	\$600,000
Cultural Preservation — Oral history, documentation, glyph system	\$400,000	\$100,000	\$500,000
Training & Education Programs — Agricultural, governance, financial literacy	\$350,000	\$350,000	\$700,000
Needs Assessment & Surveys — 500-household community study	\$150,000	\$0	\$150,000
Program Management & Software Documentation	\$200,000	\$50,000	\$250,000
<b>TOTAL</b>	<b>\$4,500,000</b>	<b>\$1,200,000</b>	<b>\$5,700,000</b>

### 5.2 — Leveraged Resources

The 12 Stones Program is supported by a substantial stack of leveraged funding that amplifies the impact of CDBG-DR dollars and demonstrates robust community and institutional commitment:

Source	Amount	Status / Notes
USDA VAPG (Hawaii)	\$500,000	Filed March 31, 2026 — Working Capital for value-added agricultural operations
USDA VAPG (Colorado / FarmBox)	\$500,000	Filed March 31, 2026 — FarmBox Foods Fresh as independent producer-applicant
FEMA BRIC	\$25,000,000	Q2 2026 application — wildfire mitigation, land restoration alignment
DOE REAP	\$10,000,000	Q2 2026 application — solar energy integration for FarmBox operations
USDA Rural Dev CF	\$5,000,000	Rolling application — community facilities

USDA 502 Direct (Hua Lani)	\$3,400,000	Active — land acquisition for Hua Lani 9.2-acre site
State / Foundation Grants	\$5,250,000	Pipeline — Hawaii state and community foundation programs
FarmBox Partner Equity	\$200,400	Confirmed — deployed container assets + owner equity (VAPG match)
<b>TOTAL LEVERAGE</b>	<b>\$49.85M+</b>	<b>11:1 leverage ratio on CDBG-DR request</b>

The 11:1 leverage ratio is exceptionally strong by CDBG-DR standards and reflects the depth of the 12 Stones program's institutional support, pre-existing partnerships, and multi-year development investment.

## PART VI — NATIONAL OBJECTIVE & ELIGIBLE ACTIVITIES

### 6.1 — National Objective

All activities under this application qualify under two CDBG-DR National Objectives:

#### Primary: Low-to-Moderate Income (LMI) Benefit — 24 CFR 570.208(a)

The Lahaina recovery area is documented as a predominantly LMI community. The displaced residents targeted by the modular housing component, the agricultural training participants, and the food security beneficiaries of the FarmBox deployment are all primarily low-to-moderate income households displaced by the disaster. The Program will document LMI beneficiary data through the Kīpuka Access Portal intake process, with a target of 70%+ LMI household service rate.

#### Secondary: Urgent Need — 24 CFR 570.208(c)

The Lahaina wildfire constitutes an urgent community development need for which no other CDBG-DR allocation has yet provided an integrated housing-plus-food-security-plus-economic development solution. The near-three-year delay in full recovery deployment confirms the continuing urgency and the absence of comparable private or governmental resources.

### 6.2 — Eligible CDBG-DR Activities

Activity	24 CFR Citation	Program Component
Housing Rehabilitation / New Construction	570.202 / 570.203	Modular housing deployment — 24 units, Phase 2 start
Economic Development — Microenterprise / Small Business	570.201(o)	FarmBox agricultural production, WFCF certification, franchise pathway jobs
Public Facilities / Community Facilities	570.201(c)	Hydroponic infrastructure, training facilities, Hua Lani site
Public Services	570.201(e)	Training programs, financial literacy (HCA), cultural preservation
Land Acquisition	570.201(a)	Hua Lani 9.2-acre site (with USDA 502 co-financing)
Clearance / Remediation	570.201(d)	Site restoration, reforestation, fire-scar remediation
Planning / Administration	570.205	Needs assessment, environmental review, program management

## PART VII — IMPLEMENTATION PLAN & TIMELINE

### 7.1 — Five-Phase Program Timeline

Phase	Months	Key Milestones	CDBG-DR Activities	Budget
Phase 1 Preliminary Analysis	0–3	Land survey, needs assessment 500 HH, software Phase 1, digital twin baseline	Planning, data collection, IoT installation, resident engagement	\$1,500,000
Phase 2 Planning & Design	1–6 (overlap)	Architectural plans, FarmBox 4 units deployed, training program launched, MauiOS Phase 2	Housing planning, agricultural deployment, training, digital twin Phase 2	\$3,000,000
Phase 3 Implementation	3–18	Housing construction, FarmBox expansion, reforestation, software Phase 3	Housing construction, land restoration, economic development	\$3,200,000
Phase 4 Testing & QA	18–21	Safety certifications, WFCF audits, software security testing, digital twin verification	Compliance, quality assurance, documentation	\$775,000
Phase 5 Handover & Closure	21–24	Occupancy approval, final reporting, digital twin transfer to County	Close-out, documentation, County handover	\$525,000
<b>TOTAL</b>	<b>24 months</b>	<b>24+ deliverables</b>	<b>All eligible activities</b>	<b>\$10,000,000</b>

This application funds Phases 1 and 2 (\$4,500,000). Phases 3 through 5 will be funded through the Phase 2 grant applications (FEMA BRIC, DOE REAP, USDA Rural Development CF) and the CDBG-DR second tranche request to be submitted upon Phase 2 completion.

### 7.2 — Mandatory Deliverables (per MOU)

- Quarterly Progress Reports — milestones, financial expenditures, measurable outcomes (4 per year)
- Annual Impact Assessments — wildfire risk reduction metrics, housing availability improvements, economic outcomes (1 per year)
- Final Comprehensive Report — Year 5 (2031) covering full program impact
- MauiOS Digital Twin — transferred to Maui County upon program completion with full documentation

## PART VIII — ORGANIZATIONAL CAPACITY

### 8.1 — 12 Stones Global Inc. — Demonstrated Capability

12 Stones Global Inc. has invested 15+ months and processed over 906 documents across 8+ research domains to develop the HFEv4 platform. The following milestones demonstrate execution capacity:

Milestone	Evidence of Capacity
Sovereign Charter Filed	12 Stones Sovereign Charter v5 (28 Articles) filed with Maui County Council — April 14, 2025
MOU Executed	Multi-party MOU signed with Maui County Office of Recovery, FarmBox Foods, HCA, and WFCF — \$10M scope, 5 phases, 24 months
Technology Platform Built	6 software modules (\$640K–\$960K) including RAIS Engine (188 scrolls), MauiOS, CivicSignal, and Sage Game — operational and demo-ready
Grant Pipeline Activated	\$1.75B+ in identified grants across 8 programs; USDA VAPG applications completed and submitted March 31, 2026
County Budget Intelligence	FY2026 Maui County budget fully analyzed (\$1.87B total); CDBG-DR Action Plan alignment documented
Partner Network Active	FarmBox Foods, WFCF, and HCA all under executed MOU with committed roles and resource contributions

### 8.2 — Partner Qualifications

FarmBox Foods Inc. is a Colorado-based agricultural technology company with over a decade of experience designing, manufacturing, and deploying containerized hydroponic growing systems in challenging environments including disaster recovery contexts. FarmBox Foods Fresh — launched August 2025 — is an active production subsidiary with certified weekly harvests of specialty mushrooms and hydroponic greens, establishing agricultural producer credentials independent of equipment manufacturing.

Hawaiian Community Assets (HCA) is a HUD-approved housing counseling agency with demonstrated experience in Hawaii homeownership pathways, financial literacy programming, and LMI community engagement. HCA's network provides the culturally competent community interface necessary for effective LMI outreach and housing program delivery in the Lahaina recovery context.

Where Food Comes From (WFCF) is a publicly traded (NASDAQ: WFCF) food certification company operating the largest network of independently verified sustainable agricultural claims in North America. WFCF's blockchain certification at \$3,000/farm/year provides the 12 Stones Program with institutional food safety credibility and a commercial market access pathway for Program-produced agricultural products.

## **PART IX — COMPLIANCE, FAIR HOUSING & CITIZEN PARTICIPATION**

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### **9.1 — Fair Housing & Civil Rights**

The 12 Stones Program is designed to affirmatively further fair housing in the Lahaina recovery area. All housing units deployed under the Program will be made available on a non-discriminatory basis in compliance with the Fair Housing Act, Section 504 of the Rehabilitation Act, Title VI of the Civil Rights Act, and all applicable HUD civil rights requirements. The modular housing design standard includes ADA/Section 504 accessibility accommodation in all unit configurations.

The Program gives specific priority to: (a) Native Hawaiian households, consistent with the cultural preservation mandate of the 12 Stones Sovereign Charter; (b) households earning below 80% of Area Median Income (AMI); (c) households displaced by the Lahaina wildfire with documented LMI status.

### **9.2 — Environmental Review**

A Phase 1 Environmental Site Assessment will be conducted for the Hua Lani site and all Lahaina recovery parcels under Phase 1 of the Program. The environmental review will be conducted in compliance with 24 CFR Part 58 (Environmental Review Procedures for Entities Assuming HUD's Environmental Responsibilities) and will address: site contamination from fire debris; floodplain and coastal zone management requirements; historic preservation review under Section 106 of the National Historic Preservation Act; and Native Hawaiian cultural resources consultation under the Native Hawaiian Organizations consultation protocol.

### **9.3 — Citizen Participation**

The 12 Stones Program embeds citizen participation directly into the technology platform. The Kīpuka Access Portal mobile application — a core component of MauiOS — enables Lahaina residents to: record concerns and feedback for formal inclusion in program management decisions; participate in need assessments from mobile devices; access program progress reports; and initiate formal mediation proceedings for dispute resolution. A minimum of two public community meetings will be held in Lahaina before and during Phase 1, with translation services available in Hawaiian, Ilocano, Tagalog, and Spanish.

### **9.4 — Anti-Displacement & Relocation**

The modular housing activities will be conducted exclusively on land owned or controlled by the Program (Hua Lani) or on voluntarily offered recovery parcels in collaboration with Maui County. No involuntary relocation or displacement of current residents is anticipated. All housing activities will comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA) as a precautionary standard.

### **9.5 — Program Integrity & Fraud Prevention**

The 12 Stones RAIS Engine includes active enforcement scroll GHOST-001 (fraud prevention protocol), AUDIT-001 (financial oversight), and COMPLIANCE-001 (federal regulatory trigger monitoring). All CDBG-DR expenditures will be monitored in real-time through MauiOS and sealed to the immudb blockchain audit trail, creating a tamper-evident record accessible to HUD monitors and

Maui County auditors. This exceeds standard grantee financial management requirements and provides an unprecedented level of programmatic transparency.

## PART X — EXPECTED OUTCOMES & PERFORMANCE MEASURES

### 10.1 — Quantitative Outcomes (24-Month Program)

Outcome	Target	Measurement Method
Affordable housing units — Phase 2 planning complete	24 units designed	Architectural plans, county permitting records
FarmBox hydroponic units deployed	4 units / Phase 2	FarmBox delivery receipts, installation certification
Monthly produce output (certified)	4,000+ lbs/month	WFCF harvest certification, market sales records
Residents trained in agricultural operations	40 residents	Training completion certificates, HCA records
LMI households surveyed / enrolled	500 households	Kīpuka Access Portal intake data, LMI verification
Acres reforested / restored (Phase 1–2)	2.5 acres	Land survey, vegetation assessment
Jobs created (direct, agricultural)	25 FTE equivalent	Payroll records, HCA employment tracking
WFCF certifications enrolled	8 farms / producers	WFCF certification database
MauiOS digital twin — live and operational	Month 3	Platform uptime metrics, county access credentials issued

### 10.2 — Long-Term Impact (5-Year Program)

At full 5-year program completion, the 12 Stones Regenerative Recovery Program is designed to deliver: 52 operational HFEv4 nodes across Maui County; 100+ affordable housing units through the franchise replication model; 50,000+ lbs/month of locally certified food production; 200+ jobs created or sustained; full MauiOS county platform operational under County management; and a replicable franchise model deployed in a minimum of 3 additional Hawaii counties under Tier 2 licensing.

The Generational Wealth Trust (GWT) mechanism embedded in the 12 Stones Charter allocates 12.5% of all public contract revenues to a community wealth fund. At full deployment against the \$1.51B Maui County operating budget, this yields a projected \$46.45M per year in community trust contributions — a structural economic development outcome that extends far beyond the CDBG-DR program period.

## PART XI — CERTIFICATIONS & ATTESTATIONS

By submitting this application, the Authorized Representative of Langford Consulting Trust / 12 Stones Global Inc. certifies that:

- All information contained in this application is accurate and complete to the best of the applicant's knowledge
- The applicant will comply with all HUD CDBG-DR program requirements including 24 CFR Part 570 and all applicable federal regulations
- The applicant will affirmatively further fair housing and comply with all civil rights requirements
- The applicant will maintain adequate financial management systems and will submit all required reports on schedule
- The applicant acknowledges that CDBG-DR funds may not be used for activities already funded by insurance proceeds or other federal disaster assistance programs (duplication of benefits prohibition)
- The applicant will comply with Section 3 of the HUD Act of 1968 regarding employment and contracting opportunities for low-income persons

The applicant further certifies that SAM.gov registration will be active and a valid UEI number will be obtained prior to final submission to Grants.gov.

Authorized Representative Signature:

Date:

James RCS Langford, Founder & CEO  
Langford Consulting Trust / 12 Stones Global Inc.

April 2026

## PART XII — ATTACHMENTS CHECKLIST

Required Attachment	Status	Notes
Executed MOU — Langford / Maui County / Partners	READY	MOU-2025.pdf
12 Stones Sovereign Charter v5 (28 Articles)	READY	Filed 4/14/2025
SAM.gov UEI Registration	PENDING	Pre-submission
USDA VAPG Application (Hawaii — reference)	FILED	3/31/2026
Hua Lani Site Documentation	READY	USDA 502 active
FarmBox Partner Letter of Support	PENDING	Rusty Walker
HCA Partner Letter of Support	PENDING	HCA Director
WFCF Partner Letter of Support	PENDING	WFCF Contact
Phase 1 Environmental Checklist	PENDING	Phase 1 activity

MauiOS Platform Technical Summary	READY	<a href="http://gov.12sgi.com">gov.12sgi.com</a>
Financial Statements / Audit (most recent)	PENDING	To be provided

**COUNTY OF MAUI**

Office of Recovery &amp; Resilience

**REQUEST FOR PROPOSALS****RFP NO. CORR-2026-001****MauiOS: Integrated Technology & Accountability Platform**

Community Development Block Grant – Disaster Recovery (CDBG-DR) Oversight, Digital Twin Infrastructure, and Agricultural Resilience Systems

Issued: April 7, 2026

**Proposals Due: May 30, 2026 at 4:00 PM HST**

<b>RFP Number</b>	CORR-2026-001
<b>Title</b>	MauiOS: Integrated Technology & Accountability Platform
<b>Issuing Agency</b>	County of Maui, Office of Recovery & Resilience
<b>NAICS Code</b>	541512 — Computer Systems Design Services
<b>Funding Source</b>	HUD CDBG-DR   SAP Code: B-23-DL-15-0001
<b>Contract Type</b>	Fixed-Price (Build Phase) + Annual SaaS Subscription (Operations)
<b>Contract Value</b>	Up to \$6,000,000 build + \$120,000/year SaaS
<b>Issue Date</b>	April 7, 2026
<b>Proposals Due</b>	May 30, 2026 at 4:00 PM HST

**SECTION 1: INTRODUCTION AND BACKGROUND****1.1 Purpose of This RFP**

The County of Maui, Office of Recovery & Resilience (hereinafter "the County"), issues this Request for Proposals (RFP) to solicit qualified technology vendors and platform providers to design, develop, deploy, and operate an integrated Municipal Technology and Accountability Platform — referred to herein as "MauiOS" — to support the County's disaster recovery mission, long-term resilience infrastructure, and community economic development programs.

This procurement is issued pursuant to the County of Maui's obligation as a CDBG-DR grantee under U.S. Department of Housing and Urban Development (HUD) grants totaling \$1.639

billion, allocated in response to the August 2023 Lahaina wildfire disaster. The selected vendor(s) will provide technology infrastructure that enables transparent, auditable, and community-centered recovery programming consistent with the 12 Stones Sovereign Charter (SSC v5), the County's Action Plan, and applicable federal requirements.

## 1.2 Background

On August 8, 2023, a catastrophic wildfire destroyed the historic town of Lahaina, Maui, resulting in 102 confirmed fatalities, the displacement of more than 12,000 residents, and an estimated \$5.5 billion in economic losses. The disaster was the deadliest U.S. wildfire in over a century and exposed systemic gaps in early warning systems, food security infrastructure, housing resilience, and real-time community communication.

In response, the County of Maui developed a comprehensive Recovery Action Plan integrating the following priority areas:

- Housing rehabilitation and reconstruction for displaced households
- Wildfire early warning infrastructure across all 52 community nodes
- Food security and agricultural resilience through technology-enabled supply chains
- Real-time expenditure accountability and fraud prevention using immutable blockchain records
- Community economic equity through the Generational Wealth Trust (GWT) framework

The County requires a unified digital platform to coordinate, monitor, and report on all recovery programs. This platform must be capable of integrating with federal reporting systems (HUD IDIS, FEMA BRIC, USDA), state databases, and community-facing portals in multiple languages.

## 1.3 Funding Context

<b>Primary Funder</b>	U.S. Department of Housing and Urban Development (HUD)
<b>Grant Program</b>	Community Development Block Grant – Disaster Recovery (CDBG-DR)
<b>Total Allocation</b>	\$1.639 billion (Federal Register Vol. 89, No. 52)
<b>Platform Budget</b>	\$6,000,000 (CDBG-DR Tech Infrastructure Line Item)
<b>Match Requirement</b>	20% minimum — \$1,200,000 from County General Fund or other non-federal sources
<b>Period of Performance</b>	24 months initial term with two (2) one-year renewal options
<b>Issuing Office</b>	County of Maui, Office of Recovery & Resilience, 2200 Main Street, Suite 300, Wailuku, HI 96793

**CDBG-DR Compliance Note**

All work performed under this contract must comply with 24 CFR Part 570, 2 CFR Part 200 (Uniform Guidance), Section 3 requirements, and applicable National Environmental Policy Act (NEPA) clearances. Vendor must demonstrate prior experience with HUD-funded technology programs or equivalent federal grant compliance environments.

## SECTION 2: SCOPE OF WORK

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### 2.1 Platform Overview — MauiOS Six-Module Architecture

The County seeks a fully integrated, cloud-hosted platform composed of the following six functional modules. Proposers may respond to all six modules or propose a modular subset; however, the County's preference is for an integrated, single-vendor solution.

#### Module 1: Sovereign Charter Management System (SCMS)

Digitize and operationalize the 12 Stones Sovereign Charter (SSC v5), a 28-Article governance framework governing all CDBG-DR program administration, vendor obligations, community rights, and dispute resolution protocols.

- Digital Charter Repository with version control and amendment tracking
- Compliance alert engine triggered by policy deviations or funding threshold breaches
- Integration with County legal counsel systems for real-time charter enforcement notifications
- Public-facing transparency portal for community access to charter articles and compliance reports

#### Module 2: Real-Time Accountability & Intelligence System (RAIS)

Deploy blockchain-sealed, immutable audit infrastructure to monitor all CDBG-DR expenditures, vendor performance, and program outcomes in real time.

- 188+ immudb blockchain-sealed accountability scrolls tracking all financial transactions
- Real-time expenditure dashboard with HUD IDIS integration and automated draw reconciliation
- Anomaly detection engine flagging duplicate payments, over-budget line items, and procurement irregularities
- Automated quarterly performance reports in HUD CDBG-DR format (DRGR submissions)
- Sub-recipient monitoring dashboard for all 12 Stones partner organizations

#### Module 3: HFEv4 Digital Twin — Community Node Visual Interface

Deploy and maintain the Hyper Farming Engine v4 (HFEv4) digital twin of Maui County, a 52-node + 2 Joker simulation environment modeling community resilience, resource flows, and hazard scenarios.

- Zone 1 Mauka (Nodes 1–18): Upcountry governance and infrastructure modeling
- Zone 2 Farmlands (Nodes 19–36): Agricultural production, food security, and supply chain simulation
- Zone 3 Makai (Nodes 37–52): Coastal resilience, ocean economy, and tourism recovery modeling
- Node 53 Emergency Override Protocol: Real-time wildfire modeling using FARSITE integration

- Node 54 Sovereign Full-System Audit: Independent third-party compliance verification layer
- Visual GIS dashboard accessible to County administrators, federal monitors, and community stakeholders

#### **Module 4: Community Engagement Portal (Kīpuka)**

Build and operate a multi-language community-facing portal enabling Maui residents to access recovery resources, submit applications, track program status, and participate in community governance.

- Support for English, ‘Ōlelo Hawai‘i, Tagalog, Spanish, Japanese, and Korean
- Integration with County benefit enrollment systems (housing, food assistance, small business grants)
- Mobile-responsive design compliant with WCAG 2.1 AA accessibility standards
- Community alert and notification system integrated with FEMA Integrated Public Alert and Warning System (IPAWS)
- Anonymous complaint and fraud reporting channel with automatic RAIS escalation

#### **Module 5: Agricultural Traceability & Food Security Platform**

Deploy IoT-enabled supply chain traceability infrastructure for Maui County's agricultural recovery programs, supporting USDA Value-Added Producer Grant (VAPG) compliance and food security reporting.

- QR/Rfid traceability from farm production through distribution to community recipients
- Integration with USDA Agricultural Marketing Service (AMS) reporting requirements
- Real-time harvest and distribution data for 6 FarmBox Foods Fresh food production units
- Where Food Comes From (WFCF) third-party verification integration for premium market access
- Cold chain monitoring and food safety compliance alerts

#### **Module 6: Legal Scroll Sealing & Compliance Archival System**

Provide cryptographic sealing, permanent archival, and chain-of-custody documentation for all legal instruments, contracts, MOU agreements, and federal compliance records generated under CDBG-DR programs.

- Blockchain-sealed legal document repository with tamper-evident hash verification
- Automated 7-year federal records retention compliance (2 CFR §200.334)
- Integration with Maui County Document Management System (DMS) and HUD audit systems
- E-signature and notarization workflow for contract execution and sub-recipient agreements

## **2.2 Technical Requirements**

All proposed solutions must meet the following minimum technical standards:

<b>Cloud Hosting</b>	FedRAMP Moderate or equivalent — AWS GovCloud, Azure Government, or Google Cloud for Government
<b>Data Residency</b>	All PII and program data must reside within U.S. borders; no offshore data processing
<b>Security</b>	SOC 2 Type II certified; NIST 800-53 Rev. 5 controls; annual penetration testing
<b>Availability</b>	99.5% uptime SLA with documented disaster recovery and business continuity plan
<b>APIs</b>	RESTful APIs for integration with HUD IDIS, FEMA BRIC, USDA AMS, and County ERP systems
<b>Blockchain</b>	Immutable audit ledger using immudb or equivalent open-source tamper-evident database
<b>Accessibility</b>	WCAG 2.1 Level AA compliance across all public-facing interfaces
<b>Mobile</b>	Responsive design supporting iOS 16+ and Android 12+ on 4G LTE networks
<b>Language</b>	Multi-language support for six languages (see Module 4)

## 2.3 Deliverables and Milestones

Phase	Milestone	Deliverables	Timeline
1	Mobilization & Preliminary Design	Kickoff, project plan, architecture docs, preliminary design review	Month 0–1
2	System Design & Integration Planning	Technical design specs, API contracts, data dictionary, security plan	Month 1–3
3	Platform Build & Deployment	All 6 modules deployed in staging; user acceptance testing; RAIS live	Month 3–18
4	Quality Assurance & Training	Security audit, penetration test, staff training, HUD compliance review	Month 18–21
5	Full Operations & Handover	Production go-live, operational handover, 90-day hypercare support	Month 21–24

## SECTION 3: PROPOSAL REQUIREMENTS

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### 3.1 Proposal Format and Submission

Proposals must be submitted electronically in PDF format to the County of Maui Procurement Division no later than May 30, 2026 at 4:00 PM Hawaii Standard Time. Late submissions will not be accepted regardless of cause. Proposers are solely responsible for ensuring timely receipt.

Each proposal must include the following components, organized in the order listed:

1. Technical Proposal (Volume I) — not to exceed 60 pages, excluding attachments
2. Cost Proposal (Volume II) — separate sealed document
3. Past Performance and References (Volume III) — minimum three references from federal or municipal technology programs
4. Required Certifications and Attachments (Volume IV)

### 3.2 Technical Proposal Requirements (Volume I)

The Technical Proposal must address each of the following sections:

#### 3.2.1 Executive Summary

Provide a concise (maximum 3 pages) overview of the proposed solution, vendor qualifications, and understanding of Maui County's recovery mission and CDBG-DR compliance obligations.

#### 3.2.2 Technical Approach

Describe in detail the proposed architecture, technology stack, module development approach, data security model, and integration strategy for each of the six MauiOS modules. Include:

- System architecture diagram with data flows
- Database design approach, including blockchain/immutable ledger implementation
- API design and integration with HUD IDIS, FEMA BRIC, and USDA systems
- Security controls framework mapped to NIST 800-53 Rev. 5
- FedRAMP authorization status or pathway

#### 3.2.3 Project Management Plan

Provide a comprehensive project management plan including:

- Organizational chart identifying key personnel (Project Manager, Technical Lead, CDBG-DR Compliance Lead)
- Detailed project schedule mapped to the five milestone phases
- Risk identification and mitigation matrix
- Subcontractor identification and management approach

- Communication plan and County interface protocols

### 3.2.4 Qualifications and Experience

Demonstrate organizational qualifications including:

- Minimum five (5) years of experience developing technology platforms for state, county, or municipal government clients
- Prior experience with HUD-funded programs (CDBG, HOME, CDBG-DR) or equivalent federal grant technology environments
- Demonstrated experience with blockchain or immutable audit systems in government contexts
- Experience with multilingual, accessible community engagement platforms
- Prior work in disaster recovery or emergency management technology

### 3.2.5 Community Benefit and Section 3 Plan

Describe how the proposed project will benefit the Maui recovery community, including:

- Section 3 compliance plan — commitment to employ or subcontract with low- and moderate-income Maui residents
- Proposed local hiring targets and workforce development commitments
- Plan for community co-design and meaningful resident engagement during development
- Proposed approach to Generational Wealth Trust (GWT) integration and community fund reporting

## 3.3 Cost Proposal Requirements (Volume II)

The Cost Proposal must be submitted as a separate, sealed document and must include:

- Fully burdened hourly rates for all labor categories
- Fixed-price deliverable schedule mapped to the five project phases
- SaaS licensing structure (base platform + per-module pricing)
- Annual maintenance and operations cost for post-deployment support
- Cost breakdown by module (Modules 1–6)
- Total project cost not to exceed \$6,000,000 (CDBG-DR funded) plus annual SaaS licensing not to exceed \$120,000/year

#### Cost Proposal Note

The County anticipates a fixed-price contract for the initial 24-month build-and-deploy phase, followed by an annual SaaS subscription model for ongoing operations. Proposers should price accordingly. CDBG-DR cost allowability rules under 2 CFR Part 200 apply to all expenditures.

## 3.4 Required Certifications (Volume IV)

The following certifications must be included in the proposal package:

- Certificate of Good Standing — State of Hawaii or state of incorporation
- SAM.gov Active Registration confirmation (Unique Entity ID)
- Certification of Debarment and Suspension (2 CFR §180)
- Conflict of Interest Certification
- Lobbying Certification (31 U.S.C. 1352)
- Section 3 Business Certification (if applicable)
- DBE/MBE/WBE certification documentation (if applicable)
- Hawaii General Excise Tax License

## SECTION 4: EVALUATION CRITERIA AND SELECTION PROCESS

### 4.1 Evaluation Committee

Proposals will be evaluated by a Selection Committee composed of representatives from the following County departments and external advisors:

- Office of Recovery & Resilience (Chairperson)
- Department of Finance — Procurement Division
- Office of the Corporation Counsel
- Department of Housing and Human Concerns
- Office of Economic Development
- Community Representative — Office of Hawaiian Affairs (OHA) designee
- Federal Technical Advisor — HUD Region IX (non-voting observer)

### 4.2 Evaluation Factors

Proposals will be evaluated on the following weighted criteria:

Evaluation Factor	Maximum Points	Weight
Technical Approach & Solution Design	30	30%
Organizational Qualifications & Key Personnel	25	25%
Project Management Plan & Schedule	20	20%
Cost Reasonableness & Value	15	15%
Community Benefit & Section 3 Plan	10	10%
<b>TOTAL</b>	<b>100</b>	<b>100%</b>

### 4.3 Selection Process

The selection process will proceed in the following stages:

5. Initial Responsiveness Review (Pass/Fail): Proposals will be reviewed for completeness, on-time submission, and mandatory certifications. Non-responsive proposals will be rejected.
6. Technical Evaluation: The Selection Committee will score all responsive Technical Proposals (Volume I) against the evaluation criteria above.
7. Best Value Determination: Technical scores will be combined with cost proposal evaluation to identify the Highest Technically Rated Proposal (HTRP) at a fair and reasonable price.

8. Oral Presentations (if requested): The County reserves the right to invite short-listed proposers to present. Presentations will be scored and incorporated into final evaluation.
9. Negotiations: The County may conduct negotiations with one or more offerors to obtain best and final offers.
10. Contract Award: Award will be made to the offeror whose proposal represents the best value to the County, consistent with the evaluation criteria.

#### **4.4 Minimum Qualifications (Pass/Fail)**

Proposals that do not meet ALL of the following minimum qualifications will be disqualified from further evaluation:

- Proposer is legally organized and registered to do business in the State of Hawaii (or commits to registration prior to contract execution)
- Proposer has successfully delivered at least one municipal or county government technology platform with a contract value exceeding \$1,000,000
- Proposer is not currently debarred, suspended, or otherwise excluded from federal procurement
- Proposer holds current SAM.gov registration with Unique Entity ID
- Proposal includes all required Volumes (I through IV) and mandatory certifications

## SECTION 5: CONTRACT TERMS AND CONDITIONS

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### 5.1 Contract Type

The County intends to award a Fixed-Price contract for the 24-month build-and-deploy phase, followed by an annual Firm Fixed-Price SaaS subscription for ongoing operations. The contract will include federal flow-down provisions required by HUD CDBG-DR and 2 CFR Part 200.

### 5.2 Key Contract Provisions

The selected vendor will be required to comply with the following contractual requirements:

#### Federal Flow-Down Requirements

- Davis-Bacon Act prevailing wage requirements for applicable construction/installation activities
- Section 3 of the Housing and Urban Development Act of 1968 — 25% new hire preference for Section 3 workers
- Equal Employment Opportunity requirements (Executive Order 11246)
- Americans with Disabilities Act (ADA) and Section 504 compliance for all public-facing systems
- Records access and document retention per 2 CFR §200.334 (7-year minimum)
- Audit rights — County, HUD, and Comptroller General access to all records

#### Intellectual Property

All custom-developed code, data models, and configurations created specifically for the County under this contract shall be considered work-for-hire and become property of the County of Maui upon final acceptance. The vendor retains rights to pre-existing intellectual property and commercially available platform components.

#### Data Rights and Security

- All County data, resident PII, and program records remain the exclusive property of the County
- Vendor shall maintain a Data Processing Agreement compliant with applicable state and federal privacy laws
- Upon contract termination, vendor shall return or destroy all County data within 30 days of final payment
- Breach notification required within 24 hours of discovery

#### Insurance Requirements

- Commercial General Liability: \$2,000,000 per occurrence / \$4,000,000 aggregate
- Technology E&O / Cyber Liability: \$2,000,000 per occurrence
- Workers Compensation: Per Hawaii statutory limits

- County of Maui named as Additional Insured on all applicable policies

### **5.3 Reservation of Rights**

The County of Maui reserves the right to:

- Reject any or all proposals for any reason, with or without cause
- Waive informalities or irregularities in proposals
- Cancel this solicitation at any time prior to contract award
- Award to more than one vendor through a multi-vendor arrangement
- Request additional information, demonstrations, or oral presentations from any proposer
- Negotiate with multiple offerors simultaneously

## SECTION 6: PROCUREMENT SCHEDULE AND CONTACTS

### 6.1 Procurement Schedule

Event	Date / Deadline
RFP Issued	April 7, 2026
Pre-Proposal Conference (Virtual)	April 18, 2026 at 10:00 AM HST
Deadline for Written Questions	May 2, 2026 at 4:00 PM HST
Answers to Questions Issued	May 9, 2026
Proposals Due	<b>May 30, 2026 at 4:00 PM HST</b>
Technical Evaluation Period	June 2–20, 2026
Oral Presentations (if requested)	June 23–26, 2026 (TBD)
Anticipated Contract Award	July 15, 2026
Project Kickoff (Phase 1)	August 1, 2026 (Target)

### 6.2 Questions and Contact Information

All questions regarding this RFP must be submitted in writing via email to the Procurement Contact listed below. Verbal inquiries will not be accepted. Questions received after the deadline will not be answered.

#### Procurement Contact

County of Maui, Office of Recovery & Resilience Attn: RFP No. CORR-2026-001 — Procurement Officer 2200 Main Street, Suite 300, Wailuku, HI 96793 Email: [recovery-rfp@mauicounty.gov](mailto:recovery-rfp@mauicounty.gov) Phone: (808) 270-7855

Proposers are prohibited from contacting any County employee, elected official, board member, or technical evaluator regarding this solicitation, except through the Procurement Contact identified above. Any such unauthorized contact may result in disqualification.

### 6.3 Pre-Proposal Conference

A virtual pre-proposal conference will be held on April 18, 2026 at 10:00 AM HST. Attendance is strongly encouraged but not mandatory. The conference will provide an overview of the County's recovery mission, answer general questions about the RFP, and allow proposers to meet the County's technical team. Connection details will be posted to the County Procurement portal at least 5 days prior.

### 6.4 Addenda

The County may issue written addenda to this RFP at any time prior to the proposal due date. All addenda will be posted to the County Procurement portal and emailed to all registered proposers. Proposers are responsible for acknowledging receipt of all addenda in their proposal submission. Failure to acknowledge addenda may render a proposal non-responsive.

## SECTION 7: SPECIAL REQUIREMENTS AND COMPLIANCE

### 7.1 12 Stones Sovereign Charter Alignment

The selected vendor must demonstrate understanding of and alignment with the 12 Stones Sovereign Charter (SSC v5), the governance framework underlying all CDBG-DR program administration in Maui County. The Charter establishes principles of:

- Radical transparency in public fund management — all expenditures must be traceable and publicly reportable
- Community sovereignty — technology systems must be designed to empower, not extract from, Maui communities
- Generational equity — 12.5% of all public contract value flows to the Generational Wealth Trust (GWT) for community benefit
- Indigenous cultural respect — all systems must accommodate ‘Ōlelo Hawai‘i as a first-class language and honor Native Hawaiian cultural protocols
- Open accountability — no proprietary black-box algorithms may be used in any decision-making process affecting community members

#### GWT Compliance

Vendors should note that pursuant to the Generational Wealth Trust provision, 12.5% of the total contract value will be directed to the GWT Fund upon contract execution. This amount is factored into the contract budget. Breakdown: 10% Community Fund (80% of GWT) for direct resident benefit programs; 2% Trust Management (16% of GWT) for administrative oversight; 0.5% Langford Consulting Fiduciary (4% of GWT) for program governance and accountability.

### 7.2 Subrecipient and Partner Integration

The selected vendor will be required to integrate with and support the following existing County partners and sub-recipient organizations:

<b>Hawaiian Community Assets (HCA)</b>	Financial empowerment, homebuyer counseling, and affordable housing technical assistance
<b>FarmBox Foods Fresh</b>	Food production technology integration — mushroom and hydroponic greens supply chain
<b>Where Food Comes From (WFCF)</b>	Third-party agricultural traceability and food safety certification
<b>Langford Consulting Trust</b>	Program governance, RAIS administration, and GWT fiduciary oversight
<b>12 Stones Global, Inc.</b>	Platform architecture, Sovereign Charter compliance, and community node management

### 7.3 Environmental and Historic Preservation

All platform deployment activities (including IoT hardware installation, network infrastructure, and physical data center equipment) must comply with:

- National Environmental Policy Act (NEPA) — Environmental Review clearance required prior to any physical installation
- National Historic Preservation Act (NHPA) Section 106 — Consultation required for any activities affecting historic properties in Lahaina or surrounding cultural landscapes
- Hawaii Historic Preservation Division (SHPD) consultation protocols

#### **7.4 Procurement Integrity**

This procurement is subject to all applicable County of Maui procurement ordinances, Chapter 103D Hawaii Revised Statutes (Hawaii Public Procurement Code), and federal procurement integrity requirements. Any vendor that has a conflict of interest, has participated in the preparation of this RFP, or has provided consulting services to the County related to this procurement within the past 24 months is ineligible to respond.

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## PROPOSAL CERTIFICATION AND SIGNATURE

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By submitting a proposal in response to this Request for Proposals (RFP No. CORR-2026-001), the undersigned authorized representative of the Proposer certifies that:

- 11. The information provided in this proposal is accurate, complete, and not misleading;
- 12. The Proposer is not currently debarred, suspended, or otherwise excluded from participation in federal assistance programs;
- 13. The Proposer has not engaged in any collusion, bid rigging, or other anticompetitive conduct in connection with this procurement;
- 14. The Proposer acknowledges and agrees to comply with all terms, conditions, and requirements set forth in this RFP;
- 15. The Proposer understands that submission of a proposal does not guarantee contract award;
- 16. The Proposer acknowledges receipt of all addenda issued in connection with this RFP (list addenda received, if any);
- 17. The Proposer certifies compliance with all applicable federal, state, and local laws and regulations.

**Legal Name of Proposer:**

**Printed Name and Title:**

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**Authorized Signature:**

**Date:**

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**SUBMIT PROPOSALS TO:**

County of Maui, Procurement Division

**Attn: RFP No. CORR-2026-001**

recovery-rfp@mauicounty.gov | (808) 270-7855

**Deadline: May 30, 2026 at 4:00 PM HST — NO EXCEPTIONS**

**12 STONES GLOBAL, INC.**  
in Partnership with Maui County Office of Recovery & Resilience

# MEMORANDUM OF UNDERSTANDING

**MOU-12SG-MAUI-2026-001**

## MauiOS Integrated Technology & Accountability Platform

CDBG-DR Recovery Infrastructure | HFEv4 Digital Twin Deployment | Agricultural Resilience Systems

Effective Date: \_\_\_\_\_

Term: 24 Months with Renewal Options

<b>PARTY 1</b> Langford Consulting Trust / 12 Stones Global	<b>PARTY 2</b> Maui County Office of Recovery & Resilience	<b>PARTY 3</b> FarmBox Foods / FarmBox Foods Fresh	<b>PARTY 4</b> Hawaiian Community Assets (HCA)	<b>PARTY 5</b> Where Food Comes From (WFCF)
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CONFIDENTIAL — FOR EXECUTION AND OFFICIAL USE ONLY | This Memorandum of Understanding is a binding legal instrument. All parties are advised to review with qualified legal counsel prior to execution.

## RECITALS

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WHEREAS, the County of Maui ("County") has been designated as a Community Development Block Grant — Disaster Recovery (CDBG-DR) grantee by the U.S. Department of Housing and Urban Development (HUD), receiving \$1.639 billion in disaster recovery assistance following the August 8, 2023 Lahaina wildfire, the deadliest U.S. wildfire in over a century;

WHEREAS, 12 Stones Global, Inc. and the Langford Consulting Trust (collectively "12 Stones") have designed and developed the MauiOS Integrated Technology & Accountability Platform — a six-module, blockchain-secured, community-sovereign digital infrastructure system — to serve as the technological backbone of Maui County's CDBG-DR recovery administration, wildfire early warning, food security, and community equity programs;

WHEREAS, the 12 Stones Sovereign Charter (SSC v5), a 28-Article governance document duly filed with the Maui County Council on April 14, 2025, establishes the principles of radical transparency, community sovereignty, and generational equity that govern all programs and expenditures covered by this MOU;

WHEREAS, FarmBox Foods, Inc. and its agricultural production subsidiary FarmBox Foods Fresh (Sedalia, CO, established August 2025) are recognized technology-integrated agricultural producers whose food production systems are integral to the food security and agricultural resilience components of the County's Recovery Action Plan;

WHEREAS, Hawaiian Community Assets (HCA) is a HUD-approved housing counseling agency and community development financial institution (CDFI) serving low- and moderate-income Maui residents, with established capacity to administer housing, financial literacy, and community benefit programs under CDBG-DR;

WHEREAS, Where Food Comes From, Inc. (WFCF) is a nationally recognized third-party agricultural verification and traceability organization whose verification protocols and supply chain documentation systems are integral to ensuring food safety, market access, and USDA compliance for agricultural programs funded under this MOU;

WHEREAS, all Parties share a commitment to transparent, accountable, community-centered recovery that honors the cultural heritage of Maui, advances the economic self-determination of Native Hawaiian and other historically marginalized communities, and builds long-term resilience against future disaster events;

NOW, THEREFORE, in consideration of the mutual covenants, commitments, and obligations set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

## **ARTICLE 1 — PURPOSE AND OBJECTIVES**

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### **1.1 Purpose**

This Memorandum of Understanding ("MOU") establishes the collaborative framework, mutual obligations, financial arrangements, governance structure, intellectual property rights, and performance expectations governing the joint development, deployment, and operation of the MauiOS Integrated Technology & Accountability Platform by and among the Parties identified herein.

### **1.2 Primary Objectives**

The Parties enter this MOU with the following primary objectives:

1. Deploy MauiOS — a six-module, FedRAMP-aligned, blockchain-secured community technology platform — as the operational backbone of Maui County's CDBG-DR recovery administration, enabling transparent, auditable management of up to \$1.639 billion in federal disaster recovery funds;
2. Establish and operate the HFEv4 Digital Twin of Maui County, a 52-node + 2 Joker simulation environment modeling community resilience across three zones: Mauka (governance), Farmlands (agriculture), and Makai (ocean/coastal economy);
3. Deploy the Real-Time Accountability & Intelligence System (RAIS) — 188 immudb blockchain-sealed compliance scrolls — ensuring all CDBG-DR expenditures are traceable, publicly reportable, and protected from fraud, waste, and abuse;
4. Build and operate the Kipuka community engagement portal supporting six languages (English, Olelo Hawaii, Tagalog, Spanish, Japanese, Korean) with FEMA IPAWS alert integration for wildfire early warning;
5. Integrate FarmBox Foods Fresh agricultural production systems into a USDA-compliant food security supply chain serving displaced and food-insecure Maui households, with WFCF third-party verification;
6. Administer the Generational Wealth Trust (GWT) in compliance with SSC v5 Article 7, directing 12.5% of all public contract value to community benefit, trust management, and program governance.

### **1.3 Guiding Principles**

All activities undertaken pursuant to this MOU shall be guided by the following principles drawn from the 12 Stones Sovereign Charter (SSC v5):

- **Radical Transparency:** All expenditures, decisions, and program outcomes shall be publicly accessible through the RAIS system and the MauiOS community portal
- **Community Sovereignty:** Technology systems shall empower, not extract from, Maui communities; no proprietary algorithms may govern decisions affecting residents
- **Generational Equity:** Present investments shall create lasting economic benefit for future Maui generations through the GWT framework

- Cultural Respect: All systems shall treat Olelo Hawaii as a first-class language and honor Native Hawaiian cultural protocols in design and implementation
- Open Accountability: All partner organizations are subject to audit, performance review, and community accountability under RAIS

## ARTICLE 2 — PARTIES AND AUTHORIZED REPRESENTATIVES

### 2.1 Party Identification

Party	Legal Entity	Primary Role	Address	State
1	Langford Consulting Trust & <b>12 Stones Global, Inc.</b>	Lead Technology Partner, Charter Authority, RAIS Administrator, GWT Fiduciary	Maui, Hawaii	Hawaii
2	County of Maui, Office of Recovery & Resilience	CDBG-DR Grantee, County Partner, Platform Commissioner	2200 Main St, Suite 300, Wailuku, HI 96793	Hawaii
3	FarmBox Foods, Inc. / <b>FarmBox Foods Fresh</b>	Agricultural Technology Partner, Food Security Producer, VAPG Applicant	Sedalia, CO 80135	Colorado
4	<b>Hawaiian Community Assets (HCA)</b>	Housing Counseling, Financial Empowerment, CDFI Services, Section 3 Compliance	Maui, Hawaii	Hawaii
5	<b>Where Food Comes From, Inc. (WFCF)</b>	Agricultural Traceability Verification, Food Safety Certification, USDA Compliance	Castle Rock, CO 80109	Colorado

### 2.2 Authorized Representatives

Each Party designates the following individual(s) as their Authorized Representative(s) for purposes of this MOU. All formal communications, amendments, and approvals must be executed or acknowledged by the Authorized Representative or their designated successor:

Party	Name	Title	Email	Phone
1	James Langford	Chief Executive Officer / Fiduciary Trustee	jimlangford@me.com	To be confirmed
2	[County Rep Name]	Director, Office of Recovery & Resilience	[County Email]	[County Phone]

3	Rusty Walker	CEO, FarmBox Foods	[FarmBox Email]	[FarmBox Phone]
4	[HCA Rep Name]	Executive Director, HCA	[HCA Email]	[HCA Phone]
5	[WFCF Rep Name]	CEO / President, WFCF	[WFCF Email]	[WFCF Phone]

### 2.3 Notice of Changes

Any Party may change its Authorized Representative by providing written notice to all other Parties at least ten (10) business days prior to the change taking effect. Such notice shall be provided via email to all Authorized Representatives and shall not require a formal amendment to this MOU.

## **ARTICLE 3 — TERM, RENEWAL, AND TERMINATION**

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### **3.1 Initial Term**

This MOU shall become effective upon the date of execution by all five Parties (the "Effective Date") and shall remain in full force and effect for an initial term of twenty-four (24) months, corresponding to the five-phase project scope set forth in Article 5 (the "Initial Term"). The Initial Term may not be shortened except by mutual written agreement of all Parties or as provided in Section 3.3 (Termination for Default).

### **3.2 Renewal Options**

Upon expiration of the Initial Term, this MOU shall automatically renew for successive one-year periods (each, a "Renewal Term") unless any Party provides written notice of non-renewal to all other Parties no later than ninety (90) calendar days prior to the expiration of the then-current term. Renewal shall be subject to:

- Continued availability of CDBG-DR or other federal funding supporting the programs described herein
- Satisfactory performance review by the 12 Stones RAIS system and the County's Office of Recovery & Resilience
- Annual renegotiation of the SaaS licensing fee (Section 6.3) based on CPI-U adjustment not to exceed 3% per year
- Mutual agreement on any additional modules, program expansions, or scope changes

### **3.3 Termination for Convenience**

Any Party may terminate its participation in this MOU for any reason upon one hundred eighty (180) calendar days' written notice to all other Parties. Termination for convenience shall not relieve the terminating Party of obligations arising prior to the notice date, including payment obligations and data return requirements. The non-terminating Parties may elect to continue operations under the remaining parties' agreement.

### **3.4 Termination for Default**

Any Party may terminate this MOU with respect to a defaulting Party upon thirty (30) calendar days' written notice if the defaulting Party:

7. Materially breaches any obligation under this MOU and fails to cure such breach within thirty (30) days of written notice;
8. Becomes insolvent, makes a general assignment for the benefit of creditors, or commences or becomes subject to bankruptcy proceedings;
9. Is debarred, suspended, or otherwise excluded from participation in federal assistance programs;
10. Fails to maintain required insurance coverage for more than fifteen (15) days;

11. Violates applicable federal, state, or local laws in connection with activities undertaken pursuant to this MOU.

### **3.5 Effects of Termination**

Upon termination or expiration of this MOU:

- All custom-developed code, data, and work product belonging to the County shall be transferred to the County within thirty (30) days
- Each Party shall return or certifiably destroy all confidential information of other Parties within thirty (30) days
- All accrued and unpaid obligations shall survive termination
- Sections 7 (Intellectual Property), 10 (GWT), 11 (Confidentiality), 12 (Dispute Resolution), and 14 (Governing Law) shall survive termination
- The RAIS blockchain scrolls generated during the term shall remain accessible to the County and to HUD for the federally required 7-year records retention period

## **ARTICLE 4 — PARTY OBLIGATIONS**

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### **4.1 Obligations of Party 1 — Langford Consulting Trust / 12 Stones Global, Inc.**

12 Stones shall serve as the Lead Technology Partner and Program Architect for all activities under this MOU. Specific obligations include:

#### **Platform Development and Operations**

- Design, develop, deploy, and maintain all six MauiOS modules as specified in Article 5
- Maintain the HFEv4 52-node digital twin and all associated simulation and modeling infrastructure
- Operate and administer the RAIS system, including all 188+ blockchain-sealed compliance scrolls
- Provide 99.5% platform uptime with documented disaster recovery and business continuity plans
- Conduct annual third-party security audits and penetration testing, with reports provided to the County

#### **Governance and Compliance**

- Administer the 12 Stones Sovereign Charter (SSC v5) and maintain the digital Charter repository
- Serve as GWT Fiduciary Trustee, directing 12.5% of applicable public contract value per Section 10
- Prepare and submit all required HUD CDBG-DR performance reports in coordination with the County
- Ensure all platform activities comply with CDBG-DR National Objectives and 2 CFR Part 200
- Maintain all federal certifications and registrations (SAM.gov, DUNS/UEI, etc.) throughout the term

#### **Staffing**

- Designate a dedicated Project Manager with CDBG-DR experience as the primary County interface
- Staff the project with qualified personnel meeting the qualifications described in Article 5
- Provide Hawaii-based staffing to the maximum extent practicable, prioritizing Section 3 workers

### **4.2 Obligations of Party 2 — Maui County Office of Recovery & Resilience**

The County shall serve as the CDBG-DR Grantee and Platform Commissioner. Specific obligations include:

- Execute a formal Subrecipient Agreement designating 12 Stones as a CDBG-DR subrecipient under 24 CFR 570.500 within sixty (60) days of this MOU's Effective Date
- Provide timely access to County systems, data, personnel, and facilities required for platform development and integration
- Make required CDBG-DR draws from HUD IDIS and transfer funds to 12 Stones within thirty (30) days of approved deliverable completion
- Assign a dedicated County Liaison with authority to review and approve deliverables, resolve issues, and execute amendments
- Conduct required Environmental Reviews (NEPA) and Historic Preservation consultations (NHPA Section 106) prior to any physical installation activities
- Issue or assist in issuing all required procurement notices, including the RFP (CORR-2026-001) for the MauiOS platform contract
- Provide the County Match commitment of \$1,200,000 (20% of the CDBG-DR platform budget) from non-federal sources

### **4.3 Obligations of Party 3 — FarmBox Foods / FarmBox Foods Fresh**

FarmBox Foods and its production subsidiary shall serve as the Agricultural Technology Partner and Food Security Producer. Specific obligations include:

- Operate a minimum of six (6) FarmBox Foods Fresh food production units on Maui within twelve (12) months of the Effective Date
- Integrate all production systems with the MauiOS Agricultural Traceability Platform (Module 5) within Phase 3
- Maintain all USDA Value-Added Producer Grant (VAPG) compliance requirements for both Hawaii and Colorado applications
- Participate in the WFCF third-party verification program for all produce distributed through CDBG-DR food security channels
- Provide monthly production data, yield reports, and distribution records to the RAIS system
- Meet Section 3 employment targets by prioritizing hiring of Maui residents displaced by the Lahaina wildfire
- Contribute required VAPG match funding through verified in-kind labor and operating expenses as documented in VAPG applications

### **4.4 Obligations of Party 4 — Hawaiian Community Assets (HCA)**

HCA shall serve as the Housing Counseling, Financial Empowerment, and Community Equity partner. Specific obligations include:

- Provide HUD-approved housing counseling services to a minimum of 500 displaced Maui households annually
- Administer the GWT Community Fund distribution program, directing 10% of GWT proceeds to qualified community benefit programs

- Operate financial literacy and wealth-building programs targeting Native Hawaiian, Pacific Islander, and low-income Maui residents
- Ensure all HCA programs are documented in the MauiOS community portal (Module 4 / Kipuka) in all six supported languages
- Serve as the Section 3 compliance monitor and maintain records of Section 3 employment and contracting activities
- Provide quarterly program reports to 12 Stones for integration into RAIS compliance scrolls

#### **4.5 Obligations of Party 5 — Where Food Comes From (WFCF)**

WFCF shall serve as the Agricultural Traceability Verification and Food Safety Certification partner. Specific obligations include:

- Provide third-party verification and certification for all FarmBox Foods Fresh produce distributed through CDBG-DR food security programs
- Integrate WFCF verification protocols and data feeds with the MauiOS Agricultural Traceability Platform (Module 5)
- Issue verification certificates meeting USDA Agricultural Marketing Service (AMS) reporting requirements
- Maintain accreditation and certification in good standing throughout the term
- Provide QR/RFID traceability data supporting farm-to-table supply chain documentation from production through community distribution
- Submit verification reports to the RAIS system within five (5) business days of each harvest cycle

# ARTICLE 5 — PROJECT SCOPE AND FIVE-PHASE IMPLEMENTATION

## 5.1 MauiOS Six-Module Platform

The core deliverable of this MOU is the MauiOS Integrated Technology & Accountability Platform, comprising the following six modules to be developed and deployed across the five phases described in Section 5.2:

#	Module Name	Description and Key Functions
1	Sovereign Charter Management System (SCMS)	Digital repository for SSC v5; compliance alert engine; County legal integration; public transparency portal
2	Real-Time Accountability & Intelligence System (RAIS)	188+ immudb blockchain-sealed scrolls; HUD IDIS integration; expenditure anomaly detection; DRGR automated reporting
3	HFEv4 Digital Twin Visual Interface	52-node + 2 Joker digital twin; 3-zone GIS dashboard; Node 53 wildfire modeling (FARSITE); Node 54 sovereign audit layer
4	Community Engagement Portal (Kipuka)	6-language community portal; benefit enrollment integration; FEMA IPAWS alert system; anonymous fraud reporting channel
5	Agricultural Traceability & Food Security Platform	QR/RFID supply chain traceability; USDA AMS reporting; FarmBox Fresh integration; WFCF verification feeds; cold chain monitoring
6	Legal Scroll Sealing & Compliance Archival System	Blockchain-sealed legal repository; 7-year federal records retention; e-signature and notarization workflows; HUD audit integration

## 5.2 Five-Phase Implementation Schedule

Ph	Phase Name	Timeline	Key Deliverables	Lead Party
1	Mobilization & Preliminary Design	Month 0–1	Project kickoff and team onboarding Preliminary architecture and data dictionary CDBG-DR environmental review initiation SSC v5 digital Charter repository setup	12 Stones (Lead)
2	System Design & Integration Planning	Month 1–3	Technical design specifications (all 6 modules)	12 Stones + County

			API contracts for HUD IDIS, FEMA, USDA AMS Security plan — NIST 800-53 Rev. 5 mapping GWT Trust structure legal formalization	
<b>3</b>	Platform Build & Deployment	<b>Month 3–18</b>	All 6 modules staged, tested, and deployed RAIS 188-scroll blockchain activation FarmBox Fresh IoT integration and commissioning Kipuka portal multilingual launch (6 languages) HFEv4 digital twin 52-node live activation	All Parties
<b>4</b>	Quality Assurance & Training	<b>Month 18–21</b>	Third-party security audit and penetration test HUD CDBG-DR compliance review Staff and community training delivery Section 3 employment audit and certification	12 Stones + County
<b>5</b>	Full Operations & Handover	<b>Month 21–24</b>	Production go-live and operational handover 90-day hypercare support period Transition to annual SaaS subscription model Final program performance report to HUD	12 Stones (Lead)

### 5.3 Performance Standards

All deliverables shall be measured against the following minimum performance standards:

- Platform Uptime: 99.5% availability measured monthly, excluding scheduled maintenance windows
- RAIS Completeness: 100% of CDBG-DR transactions logged within 24 hours of execution
- Reporting Timeliness: All HUD quarterly reports submitted no later than 15 days after each quarter close
- Food Security: FarmBox Foods Fresh production systems operational at all six units within 12 months
- Community Engagement: Minimum 1,000 unique registered users on Kipuka portal within 6 months of launch
- Section 3: Minimum 25% of new labor hours performed by Section 3 workers per HUD requirements

## ARTICLE 6 — FINANCIAL ARRANGEMENTS AND BUDGET

### 6.1 Total Program Budget

The estimated total investment under this MOU is Ten Million Dollars (\$10,000,000) over the 24-month Initial Term, composed of the following funding streams:

Program Area	Funding Source	Amount	% of Total
MauiOS Platform (all 6 modules)	HUD CDBG-DR	<b>\$6,000,000</b>	60.0%
County Match (Technology)	County General Fund	<b>\$1,200,000</b>	12.0%
FarmBox Foods Fresh — 6 Production Units	USDA VAPG + FarmBox Match	<b>\$700,400</b>	7.0%
HCA Housing & Financial Programs	CDBG-DR / CDFI Funds	<b>\$1,000,000</b>	10.0%
WFCF Verification & Traceability	CDBG-DR Subcontract	<b>\$300,000</b>	3.0%
GWT Administration & Community Fund	Public Contract Set-Aside	<b>\$800,000</b>	8.0%
<b>TOTAL</b>	Multiple Sources	<b>\$10,000,000</b>	<b>100%</b>

### 6.2 CDBG-DR Budget Detail

The \$6,000,000 CDBG-DR platform budget is allocated across the five project phases as follows:

Expenditure Category	Phase 1–2	Phase 3	Phase 4–5	Total
Personnel — 12 Stones staff (PM, Dev, Security, Compliance)	\$120,000	\$850,000	\$230,000	<b>\$1,200,000</b>
Platform Development (6 Modules)	\$180,000	\$1,620,000	\$200,000	<b>\$2,000,000</b>
Infrastructure (cloud hosting, security, blockchain nodes)	\$80,000	\$420,000	\$100,000	<b>\$600,000</b>
HFEv4 Digital Twin Build & Licensing	\$100,000	\$700,000	\$200,000	<b>\$1,000,000</b>
Training, Community Engagement & Section 3	\$20,000	\$160,000	\$120,000	<b>\$300,000</b>
Audit, Compliance & Legal (NEPA, Section 106)	\$50,000	\$200,000	\$50,000	<b>\$300,000</b>
Program Administration (2 CFR §200 limit)	\$25,000	\$375,000	\$200,000	<b>\$600,000</b>
<b>TOTAL CDBG-DR</b>	<b>\$575,000</b>	<b>\$4,325,000</b>	<b>\$1,100,000</b>	<b>\$6,000,000</b>

### **6.3 SaaS Licensing — Post-Deployment**

Following completion of the Initial Term and platform handover (Phase 5), the County shall be entitled to continue platform operations under an annual Software-as-a-Service license agreement at the following rates:

- Base Platform License (all 6 modules): \$120,000 per year (fixed for years 3–5)
- Additional Modules or User Tiers: Priced per separate order form, subject to mutual written agreement
- Annual CPI-U adjustment cap: 3% beginning in Year 6
- Government perpetual license option available at 5x Annual License fee after Year 5

### **6.4 Payment Schedule and Invoicing**

12 Stones shall invoice the County on a milestone-based schedule tied to the Phase deliverables in Section 5.2. The County shall remit payment within thirty (30) calendar days of written deliverable acceptance. All invoices must include:

- RAIS scroll reference numbers documenting completed work
- HUD CDBG-DR draw request number and approved budget line item
- GWT calculation and deposit confirmation (12.5% of invoice amount)
- Section 3 labor hours for the billing period

## **ARTICLE 7 — INTELLECTUAL PROPERTY**

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### **7.1 County-Commissioned Work Product**

All custom software code, data models, database schemas, configuration files, training materials, documentation, and other work product developed specifically and exclusively for the County under this MOU (collectively, "County Work Product") shall be deemed works made for hire and shall be the exclusive property of the County of Maui upon final acceptance and full payment. 12 Stones hereby assigns all right, title, and interest in County Work Product to the County, and shall execute any documents necessary to perfect such assignment.

### **7.2 12 Stones Pre-Existing IP**

12 Stones retains all right, title, and interest in and to the following pre-existing intellectual property ("12 Stones IP"):

- The HFEv4 (Hyper Farming Engine v4) digital twin architecture, simulation engine, and node modeling framework
- The RAIS (Real-Time Accountability & Intelligence System) core engine, immudb integration framework, and scroll-sealing methodology
- The 12 Stones Sovereign Charter (SSC v5) governance framework and all associated legal and governance instruments
- The Generational Wealth Trust (GWT) financial architecture and fiduciary protocols
- All MauiOS platform code, modules, APIs, and infrastructure components that existed prior to or are developed independently of this MOU

The County is hereby granted a perpetual, irrevocable, non-exclusive, royalty-bearing license to use 12 Stones IP solely for the purposes described in this MOU, subject to the payment of the SaaS licensing fees described in Section 6.3. This license terminates upon material breach by the County not cured within the required period.

### **7.3 Partner IP**

FarmBox Foods retains all rights to its proprietary container farming systems, grow protocols, and production technology. WFCF retains all rights to its verification methodology and certification intellectual property. HCA retains all rights to its counseling frameworks and program methodologies. Each Party grants the other Parties a limited license to use their respective IP solely as necessary to fulfill the obligations described in this MOU.

### **7.4 County Data**

All data generated by Maui County residents, programs, and public systems — including resident PII, program application data, CDBG-DR expenditure records, and community feedback — shall be and remain the exclusive property of the County of Maui. 12 Stones and all other Parties shall not

use, transfer, sell, or analyze County Data for any purpose other than fulfilling their obligations under this MOU without prior written consent of the County's Corporation Counsel.

## **7.5 Open Source Components**

Where MauiOS incorporates open-source software components (including immudb, PostgreSQL, OpenStreetMap, and other community-maintained libraries), such components are governed by their respective open-source licenses. 12 Stones shall maintain a current Bill of Materials listing all open-source components and their licenses, updated quarterly, and shall promptly notify the County of any license changes affecting County Work Product or County Data.

## ARTICLE 8 — INSURANCE AND INDEMNIFICATION

### 8.1 Insurance Requirements

Each Party receiving funds or performing services under this MOU shall maintain, at its own expense, the following minimum insurance coverage throughout the term:

Coverage Type	Per Occurrence	Aggregate	Applies To
Commercial General Liability	\$2,000,000	\$4,000,000	All Parties
Technology E&O / Cyber Liability	\$2,000,000	\$4,000,000	12 Stones (required)
Workers Compensation	Hawaii Statutory	N/A	All Parties with employees
Professional Liability (E&O)	\$1,000,000	\$2,000,000	12 Stones, HCA, WFCF
Commercial Auto	\$1,000,000	Combined	FarmBox (delivery vehicles)

The County of Maui and 12 Stones Global, Inc. shall be named as Additional Insureds on all applicable liability policies maintained by the other Parties. Each Party shall provide certificates of insurance to all other Parties within ten (10) business days of the Effective Date and annually thereafter.

### 8.2 Indemnification

Each Party ("Indemnifying Party") shall indemnify, defend, and hold harmless all other Parties, their officers, directors, employees, agents, and successors ("Indemnified Parties") from and against any and all claims, damages, losses, costs, and expenses (including reasonable attorneys' fees) arising out of or resulting from the Indemnifying Party's:

12. Negligent or wrongful acts or omissions in connection with activities under this MOU;
13. Material breach of any representation, warranty, or obligation under this MOU;
14. Violation of applicable law, regulation, or federal grant requirement;
15. Infringement of any third-party intellectual property rights.

This indemnification obligation shall survive termination or expiration of this MOU for a period of three (3) years.

## ARTICLE 9 — CONFIDENTIALITY AND DATA PRIVACY

### 9.1 Confidential Information

Each Party ("Receiving Party") agrees to hold in strict confidence all Confidential Information received from any other Party ("Disclosing Party") and not to disclose such information to any third

party without prior written consent of the Disclosing Party, except as required by law, court order, or federal audit requirements. "Confidential Information" means any non-public technical, financial, operational, or programmatic information disclosed in connection with this MOU, including but not limited to platform architecture, security configurations, resident PII, proprietary algorithms, and trade secrets.

## **9.2 Resident Data Protection**

All Parties handling Maui resident personal data shall comply with:

- Hawaii Revised Statutes Chapter 487N (Security Breach of Personal Information)
- Federal Privacy Act requirements applicable to HUD-funded programs
- CDBG-DR data privacy requirements as specified in HUD's Privacy Impact Assessment for IDIS
- HIPAA requirements for any health-related data collected through Kipuka or food security programs

Any suspected or confirmed data breach shall be reported to all Parties' Authorized Representatives and to the County's Corporation Counsel within twenty-four (24) hours of discovery.

## **9.3 Public Records**

The Parties acknowledge that this MOU, once executed, may be subject to Hawaii's Uniform Information Practices Act (UIPA, HRS Chapter 92F) and federal FOIA requirements applicable to CDBG-DR funded programs. Neither Party shall attempt to shield records from legitimate public access. The RAIS blockchain-sealed expenditure scrolls shall be publicly accessible by design in compliance with the 12 Stones Sovereign Charter transparency principles.

## ARTICLE 10 — GENERATIONAL WEALTH TRUST (GWT)

### 10.1 GWT Structure and Purpose

Pursuant to Article 7 of the 12 Stones Sovereign Charter (SSC v5), the Generational Wealth Trust (GWT) is established as a community benefit mechanism directing a portion of all public contract value to long-term community economic development, affordable housing, food security, and cultural preservation programs benefiting current and future Maui residents.

### 10.2 GWT Allocation Formula

For all public contracts executed under or in connection with this MOU, the following allocation applies to the GWT Set-Aside (12.5% of total contract value):

#### GWT Allocation Breakdown

10.0% — Community Fund (80% of GWT): Direct benefit programs for Maui households — housing, food, education, cultural preservation

2.0% — Trust Management (16% of GWT): Administrative oversight, fiduciary compliance, and GWT operating costs

0.5% — Langford Consulting Fiduciary (4% of GWT): Program governance, RAIS accountability administration, and Charter enforcement

Total Set-Aside: 12.5% of applicable public contract value, calculated at invoice and remitted concurrent with payment

### 10.3 GWT Administration

12 Stones Global, Inc. / Langford Consulting Trust shall serve as GWT Fiduciary Trustee. HCA shall serve as Community Fund Administrator, receiving and disbursing the 10% Community Fund allocation through Board-approved grant cycles. GWT accounts shall be maintained at a federally insured financial institution approved by the County and shall be subject to annual independent audit.

### 10.4 Community Fund Eligible Uses

The 10% Community Fund may be used for the following purposes, subject to HCA Board approval:

- Down payment assistance and homebuyer programs for displaced Lahaina residents
- Small business recovery grants for Maui entrepreneurs affected by the wildfire
- Cultural preservation and Native Hawaiian language education programs
- Food security and nutrition programs serving low-income households
- Youth workforce development and STEM education initiatives
- Affordable rental housing development and preservation

## **10.5 GWT Reporting**

12 Stones shall provide quarterly GWT reports to all Parties and shall post GWT deposit records and fund disbursements to the RAIS system within five (5) business days of each transaction. Annual GWT audits shall be posted publicly to the MauiOS community portal in compliance with SSC v5 transparency requirements.

# **ARTICLE 11 — DISPUTE RESOLUTION**

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## **11.1 Good Faith Negotiation**

The Parties agree to attempt in good faith to resolve any dispute, controversy, or claim arising out of or relating to this MOU or its breach, termination, or validity (a "Dispute") through direct negotiation between the Authorized Representatives before pursuing any other remedy. Any Party may initiate dispute resolution by delivering written notice to all other Authorized Representatives describing the Dispute in reasonable detail. The Parties shall negotiate in good faith for a period of thirty (30) calendar days following delivery of such notice (the "Negotiation Period").

## **11.2 Mediation**

If the Parties are unable to resolve a Dispute through good faith negotiation within the Negotiation Period, any Party may request mediation by delivering written notice to all other Parties. The Parties shall jointly select a neutral mediator with experience in government technology contracts and federal grant programs. If the Parties cannot agree on a mediator within fifteen (15) days, either party may request appointment of a mediator by the Hawaii State Judiciary's Center for Alternative Dispute Resolution. Mediation costs shall be shared equally among the disputing parties.

## **11.3 Arbitration**

If mediation fails to resolve the Dispute within sixty (60) days of the mediator's appointment, any Party may initiate binding arbitration under the Commercial Arbitration Rules of the American Arbitration Association (AAA), with proceedings held in Honolulu, Hawaii. The arbitration panel shall consist of one (1) neutral arbitrator with demonstrated expertise in government technology contracts. The arbitrator's award shall be final and binding and may be entered as a judgment in any court of competent jurisdiction.

## **11.4 Continuation of Performance**

Pending resolution of any Dispute, all Parties shall continue performing their obligations under this MOU in good faith unless the disputed obligation is the subject of an emergency injunction or restraining order issued by a court of competent jurisdiction.

## **11.5 Federal Dispute Rights**

Nothing in this Article shall limit the County's rights under applicable federal law or HUD regulations to pursue remedies for subrecipient non-compliance, including suspension, debarment, or repayment demands, nor shall it limit HUD's rights as the federal grantor.

## **ARTICLE 12 — GENERAL PROVISIONS**

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### **12.1 Governing Law**

This MOU shall be governed by and construed in accordance with the laws of the State of Hawaii, without regard to conflict of law principles, except to the extent superseded by applicable federal law. The Parties consent to the exclusive jurisdiction of the state and federal courts located in Maui County, Hawaii for any action arising under this MOU not subject to arbitration under Article 11.

### **12.2 Entire Agreement**

This MOU, together with all Exhibits and Attachments incorporated herein by reference, constitutes the entire agreement of the Parties with respect to the subject matter hereof and supersedes all prior and contemporaneous negotiations, representations, warranties, and agreements, whether written or oral. No Party has relied on any representation not expressly contained in this MOU.

### **12.3 Amendments**

This MOU may be amended only by a written instrument signed by the Authorized Representatives of all five Parties. No oral modification or waiver shall be effective. Minor scope adjustments within approved budget line items may be authorized by the 12 Stones Project Manager and the County Liaison without formal amendment, provided such adjustments do not increase total cost or extend the term.

### **12.4 Severability**

If any provision of this MOU is held invalid, illegal, or unenforceable by a court or arbitrator of competent jurisdiction, the remaining provisions shall continue in full force and effect. The Parties shall negotiate in good faith to replace any invalid provision with a valid provision that most closely approximates the intent of the original.

### **12.5 Waiver**

No failure or delay by any Party in exercising any right or remedy under this MOU shall constitute a waiver of that right or remedy. No single or partial exercise of any right or remedy shall preclude any other or further exercise of that right or remedy.

### **12.6 Counterparts**

This MOU may be executed in counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument. Electronic signatures (including DocuSign, Adobe Sign, and equivalent platforms) shall be deemed valid and binding for all purposes.

### **12.7 No Third-Party Beneficiaries**

This MOU is for the sole and exclusive benefit of the five named Parties and their permitted successors and assigns. Nothing herein shall create or be deemed to create any legal or equitable rights in any other person or entity, except that HUD and other federal agencies shall retain all rights as grantors under applicable federal law.

### **12.8 Force Majeure**

No Party shall be in default of this MOU if performance is delayed or prevented by circumstances beyond that Party's reasonable control, including acts of God, natural disasters, government actions, labor disputes not involving the Party's own employees, or pandemics declared by federal or state authorities. The affected Party shall provide written notice to all other Parties within seventy-two (72) hours of the force majeure event and shall resume performance as soon as reasonably practicable.

### **12.9 Federal Requirements**

All activities funded in whole or in part by CDBG-DR funds shall comply with applicable federal requirements including: the Housing and Community Development Act of 1974 (as amended); 24 CFR Part 570; 2 CFR Part 200 (Uniform Administrative Requirements); the Fair Housing Act; the Civil Rights Act of 1964; the Age Discrimination Act of 1975; Section 504 of the Rehabilitation Act; the Americans with Disabilities Act; the National Environmental Policy Act; and all other applicable federal statutes, regulations, and executive orders.

## EXHIBITS AND ATTACHMENTS

The following Exhibits are incorporated into and made a part of this MOU:

Exhibit	Title	Status
<b>A</b>	12 Stones Sovereign Charter (SSC v5) — 28 Articles	Filed Maui County Council, April 14, 2025
<b>B</b>	MauiOS Platform Technical Specifications — All 6 Modules	To be attached at Phase 2 completion
<b>C</b>	CDBG-DR Budget Detail and Line-Item Justification	Attached — Subject to HUD Action Plan approval
<b>D</b>	GWT Trust Agreement and Distribution Protocols	To be executed concurrent with MOU
<b>E</b>	HFEv4 Node Map — 52 Nodes, Zones 1-3, Joker Nodes 53-54	Attached
<b>F</b>	FarmBox Foods Fresh — VAPG Application Summary (Colorado + Hawaii)	Attached
<b>G</b>	WFCF Verification Protocol and Certification Standards	To be provided by WFCF within 30 days of execution
<b>H</b>	HCA Program Description and Section 3 Compliance Plan	To be provided by HCA within 30 days of execution
<b>I</b>	Insurance Certificates — All Parties	Due within 10 business days of execution
<b>J</b>	Five-Phase Implementation Schedule — Detailed Gantt Chart	To be finalized at Phase 1 kickoff

## SIGNATURE PAGE

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IN WITNESS WHEREOF, the Parties have executed this Memorandum of Understanding as of the Effective Date first written above.

### PARTY 1

Langford Consulting Trust / 12 Stones Global, Inc.

\_\_\_\_\_  
Signature

**James Langford**  
CEO & Fiduciary Trustee

\_\_\_\_\_  
Date

### PARTY 2

County of Maui, State of Hawaii

\_\_\_\_\_  
Signature

**[Name, Title]**  
Director, Office of Recovery & Resilience

\_\_\_\_\_  
Date

### PARTY 3

FarmBox Foods, Inc. / FarmBox Foods Fresh

\_\_\_\_\_  
Signature

**Rusty Walker**  
Chief Executive Officer

\_\_\_\_\_  
Date

### PARTY 4

Hawaiian Community Assets (HCA)

\_\_\_\_\_  
Signature

**[Name, Title]**  
Executive Director

\_\_\_\_\_  
Date

### PARTY 5

Where  
Food  
Comes  
From,  
Inc.  
(WFCF  
)

#### APPROVED AS TO FORM

Office of the Corporation Counsel  
County of Maui, State of Hawaii

By: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Signature

**[Name,  
Title]**  
President / CEO

\_\_\_\_\_  
Date

MOU-12SG-MAUI-2026-001 | 12 Stones Global, Inc. / Maui County Office of Recovery & Resilience |  
Confidential — Official Use Only

12 STONES GLOBAL

# MauiOS

County Intelligence  
Platform

---

Real-time audit.  
Grant accountability.  
Community sovereignty.

CONFIDENTIAL DRAFT · FOR MAUI COUNTY EXECUTIVE  
REVIEW

Prepared by James Langford, CEO · 12 Stones Global Inc.

jimlangford@me.com · Maui, Hawaii

# \$1.991B

FY2026 MAUI COUNTY BUDGET UNDER MANAGEMENT

**\$1.639B** CDBG-DR Lahaina Recovery · **88% undeployed**

Moody's Aa2 · S&P AA+ · Fitch AA+

# The Problem Maui County Faces Today

A \$2B budget with no real-time accountability layer

## Fragmented Reporting

Budget data spans 12+ departments with no unified real-time view. Audit reports arrive 12-18 months after expenditure.

## CDBG-DR Accountability Gap

\$1.639B in federal recovery funds allocated. HUD requires documented oversight. 88% sits undeployed with growing compliance exposure.

## No Digital Twin

Capital projects, ag programs, and recovery spending have no integrated simulation or scenario-planning environment.

## Community Trust Deficit

Post-Lahaina wildfire, residents demand transparent, participatory access to how recovery dollars are spent and distributed.

## Grant Stacking Complexity

\$357M in FY2026 grant revenue from 20+ sources. No single system tracks compliance obligations, reporting deadlines, or co-application alignment.

## Agriculture Program Fragmentation

17 active agriculture programs (\$10.5M+) with no unified performance dashboard or traceability layer.

# The Opportunity

Three converging forces create a historic window

## \$1.639B

HUD CDBG-DR

Lahaina wildfire recovery — 88% undeployed. HUD requires documented project management & accountability. MauiOS is the oversight infrastructure.

## \$1.991B

County FY2026 Budget

Largest Maui County budget in history. \$357M in grant revenue (+64% YoY). Real-time audit SaaS at \$120K/yr = 0.006% of budget.

## \$369M

5-Year Revenue Forecast

MauiOS as the anchor creates a replicable franchise model across 50+ municipalities nationwide. County license = the proof-of-concept.

# What is MauiOS?

A sovereign operating system for county governance, accountability, and community wealth

MauiOS is a real-time audit and intelligence SaaS platform built on the 12 Stones Hyper Farming Engine v4 — a 52-node digital twin of Maui County that maps every department, program, and capital project to a live accountability layer anchored in the 12 Stones Sovereign Charter (filed Maui County Council, April 14, 2025).

01

## Mākaukau Protocol

Charter logic engine + UE5 governance visualization + glyph system

02

## ‘Ike Kumu Stack

RAIS — 188 immutable audit scrolls, immudb blockchain, real-time compliance

03

## Pā Ki‘i Framework

Visual & ceremonial UX — community-facing transparency portal

04

## Kīpuka Access Portal

Mobile app + resident testimony engine + community voice recording

05

## ‘Ōnaehana Holo

WFCF blockchain traceability + grant stacking + ag program compliance

06

## Kānaenae Compiler

Legal scroll sealing — legislation → Charter → immudb permanent record

# HFEv4 – The 52-Node Digital Twin of Maui County

Every department, program, and dollar mapped to a live governance node

## Zone 1 – Mauka

Nodes 1-18 · Governance & Upland

- County Council
- Managing Director
- Corporation Counsel
- Budget & Finance
- Human Resources
- Emergency Management
- Planning & GIS
- Audit & Compliance

## Zone 2 – Farmlands

Nodes 19-36 · Agriculture & Culture

- Agriculture Department
- Economic Development
- Parks & Recreation
- Housing
- Environmental Management
- Hawaiian Affairs
- Arts & Culture
- Education Programs

## Zone 3 – Makai

Nodes 37-52 · Ocean, Revenue & Franchise

- Water Resources
- Public Works
- Transportation
- Fire & Rescue
- Police
- Health Services
- Revenue & Tax
- Franchise & License

Node 53 — Emergency Override Protocol · Node 54 — Sovereign Full-System Audit · 2 Joker Nodes reserved for crisis governance

# Why Maui County Needs MauiOS for CDBG-DR

HUD requires documented accountability on \$1.639B — 88% of which is undeployed

## RAIS — Real-time Accountability & Intelligence System

- 188 immutable audit scrolls sealed on immudb blockchain
- Automated flagging of expenditure deviations from budget
- Real-time compliance triggers on 4 enforcement categories: fraud, financial, federal, accountability
- Legistar scraper — council agenda auto-processing for legislative traceability
- All CDBG-DR drawdowns logged with blockchain-verified documentation

## What HUD Requires for CDBG-DR Compliance

- Action Plan implementation tracking with milestone reporting
- Documented procurement and contracting oversight
- Citizen participation records and community voice evidence
- Financial management controls with audit trails
- Quarterly Performance Reports + Annual Impact Assessments

**\$1.639B**

CDBG-DR Lahaina Recovery  
Total Allocation

**88%**

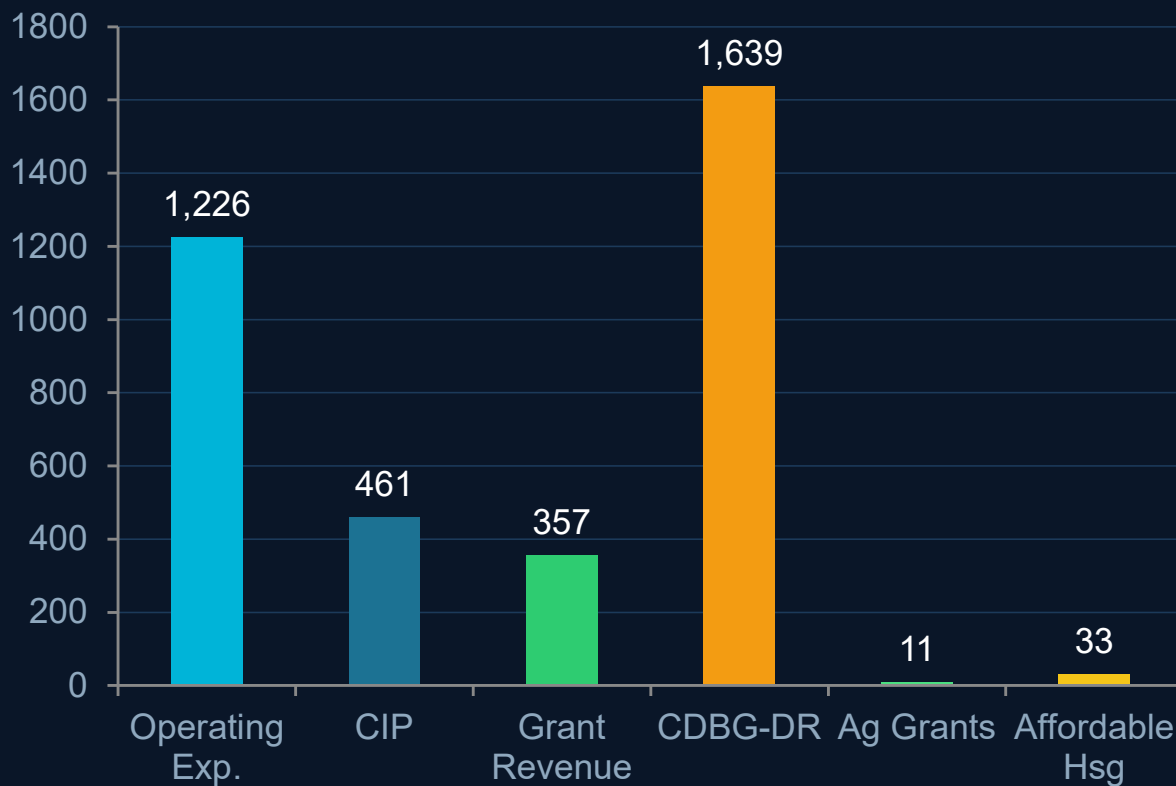
Undeployed as of  
Q1 2026

**\$120K/yr**

MauiOS County License  
= 0.007% of CDBG-DR

# FY2026 Budget Alignment

Every dollar tracked — operating, CIP, and grant revenue



**\$1.51  
2B**

Operating Revenue  
(ordinance)

**+64.4  
%**

Grant Revenue Growth  
FY2025 → FY2026

**12**

Departments tracked  
across 52 HFE nodes

**\$248  
M**

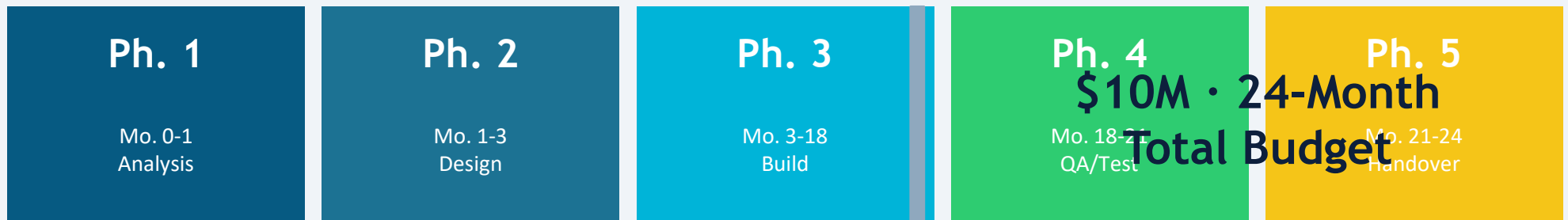
GWT potential at 12.5%  
of full budget deployment

# Partnership Framework – The MOU

5-phase, 24-month, \$10M implementation with four anchor partners

Party	Role	MOU Commitment
Langford Consulting Trust / 12 Stones Global	Primary Project Manager & Technology Provider	Software platform, digital twin, RAIS, grant management
Maui County Office of Recovery	Land Access, Permitting & Public Communications	Site access, regulatory pathway, CDBG-DR co-application
FarmBox Foods (Rusty Walker)	Hydroponic Technology & Equipment Supply	\$2.025M — 52-unit deployment + operator training
Hawaiian Community Assets (HCA)	Financial Literacy & GWT Distribution	\$1.35M — homeownership + community wealth pathways
Where Food Comes From (WFCF)	Blockchain Traceability & Sustainability Certification	\$3K/farm/yr — ag program accountability layer

## 5-PHASE IMPLEMENTATION



# The ROI Case for Maui County

\$120K/yr license against \$2B+ in managed budget and federal accountability exposure

**\$120K**

Annual MauiOS  
County License

**0.006%**

License cost as %  
of \$1.991B budget

**\$50M+**

HUD audit liability  
exposure (est.) if CDBG-DR  
not properly documented

**417x**

Return — License cost  
vs. CDBG-DR exposure  
(conservative)

## What Maui County Gets

- Real-time audit dashboard across all 12 departments
- CDBG-DR compliance infrastructure that satisfies HUD reporting requirements
- Community participation and resident voice portal (Kīpuka Access)
- Agriculture program traceability (WFCF blockchain layer)
- Digital twin for scenario-planning on capital projects and recovery spending
- Generational Wealth Trust (GWT) implementation — 12.5% of public contracts to community

## What MauiOS Costs Without Acting

- Continued HUD non-compliance exposure on \$1.639B CDBG-DR allocation
- Lahaina recovery delays from fragmented project management tools
- Missed co-application opportunities on FEMA BRIC (\$25M) and DOE REAP (\$10M)
- No unified grant tracking as \$357M in federal revenue flows through 20+ sources
- Foregone GWT community wealth distribution of up to \$248M/yr at full deployment

# Grant Pipeline – \$1.75B+ Accessible with County Partnership

MauiOS enables co-application on every major federal grant

Grant Program	Amount	Timeline	MauiOS Role
<b>HUD CDBG-DR (Lahaina Recovery)</b>	<b>\$1.639B</b>	Active (Action Plan)	Accountability infrastructure + project management platform
USDA VAPG (Hua Lani — Hawaii)	\$500K	Next NOFA (Fall 2026)	Digital twin + grant compliance tracking
USDA VAPG (FarmBox Foods — Colorado)	\$500K	Next NOFA (Fall 2026)	FarmBox Foods Fresh co-applicant coordination
FEMA BRIC (Wildfire Mitigation)	\$25M	Q2 2026	Node 53 Emergency Override + IoT early warning
DOE REAP (Rural Energy)	\$10M	Q2 2026	FarmBox solar integration + ag energy metering
USDA Rural Dev CF	\$5M	Rolling	Community food infrastructure — Hua Lani site
USDA 502 Direct (Hua Lani Property)	\$3.4M	Active	Land acquisition financing — under review
USDA RBDG	\$500K	Q3 2026	Rural business development — Hua Lani operators
<b>TOTAL PIPELINE</b>	<b>\$1.784B+</b>		County partnership required for co-application eligibility

# 5-Year Financial Model

Maui County as the anchor — franchise expansion to 50 municipalities



Y1 2026 **\$8.5M** Maui County license + VAPG + USDA 502

Y2 2027 **\$25M** 3 county licenses + CDBG-DR deployment fees

Y3 2028 **\$52M** 10 counties + FEMA BRIC + Sage Game licensing

Y4 2029 **\$95M** 25 counties + franchise + IoT fleet revenue

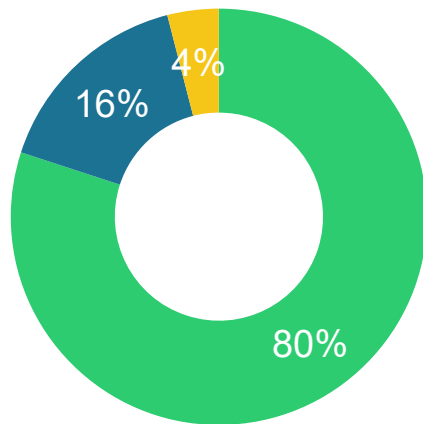
Y5 2030 **\$189M** 50 counties + national ag network + GWT flow

**5-Year Cumulative: \$369.5M**

# Generational Wealth Trust (GWT)

12.5% of all public contracts directed to community wealth — built into the platform

The 12 Stones Sovereign Charter mandates a Generational Wealth Trust allocation on every public contract processed through MauiOS. At full deployment against Maui County's \$1.991B budget, this represents \$248M per year flowing to community members — tracked transparently on the blockchain.



■ Community Fund ■ Trust Management  
■ Langford Fiduciary

## 10% — Community Fund

80% of GWT flow — direct distribution to Maui families

## 2% — Trust Management

16% of GWT — HCA administration, financial literacy programs

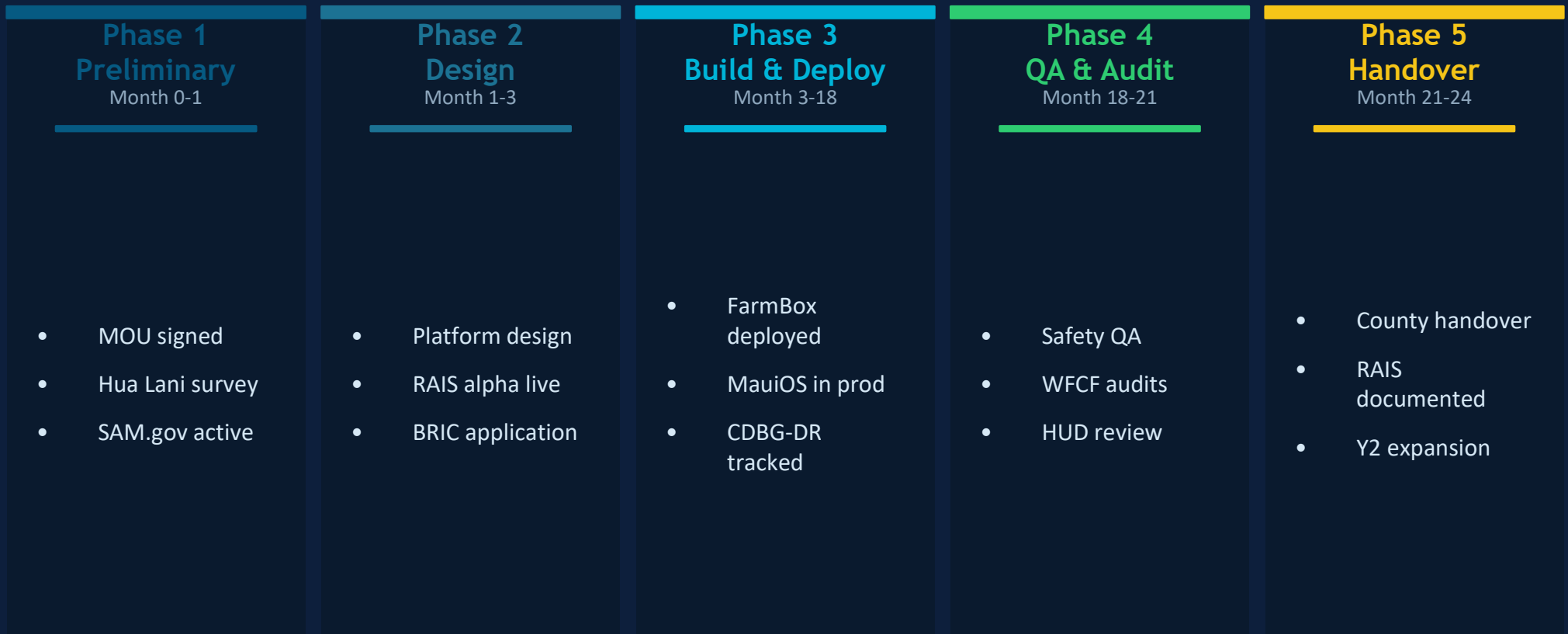
## 0.5% — Langford Fiduciary

4% of GWT — charter stewardship fee (James Langford)

**FY2026 GWT Baseline: \$46.45M · Full deployment: \$248.9M/yr**

# Implementation Timeline

24-month MOU → production-ready county platform



# The Ask – Three Actions to Start

Execute the MOU · License MauiOS · Co-apply on CDBG-DR

01

## Execute the MOU

Authorize Maui County Office of Recovery to execute the 5-party MOU with Langford Consulting Trust, FarmBox Foods, HCA, and WFCF. 24-month, \$10M, 5-phase scope. Drafted — ready for signature.

Contact: Josiah Nishita  
Timeline: 60 days to Phase 1

02

## Authorize the MauiOS License

Approve \$120K/yr Tier 2 Municipal County License — full 52-node HFEv4, RAIS blockchain audit, digital twin, community portal, and all 6 software modules.

Term: 12 months, renewable  
CDBG-DR module included

03

## Co-Apply on CDBG-DR + FEMA BRIC

Authorize Office of Recovery as co-applicant on the CDBG-DR Action Plan and FEMA BRIC application. 12 Stones is the technology subrecipient. Both applications are drafted.

FEMA BRIC: Q2 2026  
CDBG-DR: active now

12 STONES GLOBAL INC.

REGENERATE · EDUCATE · GOVERN · LIBERATE

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# Ready to talk.

## James Langford

CEO & Founder, 12 Stones Global Inc.

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[jimlangford@me.com](mailto:jimlangford@me.com)

12 Stones Sovereign Charter · SSC v5 · Filed Maui County Council, April 14, 2025

MauiOS · HFEv4 Digital Twin · RAIS Blockchain Audit · Generational Wealth Trust · Sovereign Charter

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# MauiOS / HFEv4 System Build Order

Council-Aligned Development Sequence | April 2026

12 Stones Global Inc. · Maui County Office of Recovery · FarmBox Foods

<b>May 30</b> RFP Deadline	<b>Apr 7</b> CDBG-DR Comment Deadline	<b>Apr 4 + 18</b> Council Meetings	<b>Jun 2026</b> FY2027 Budget Vote
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## Document Purpose

This document translates April 2026 Maui County Council legislative priorities and active CDBG-DR program areas into a sequenced, actionable build order for the MauiOS platform and HFEv4 Digital Twin. Each development phase is anchored to a specific, confirmed council action so that the team builds what the county actually needs — in the order the county needs it.

*Build sequence is not arbitrary. It is derived from public record: live appropriation bills, CDBG-DR Substantial Amendment timelines, FY2027 budget priorities, and MEMA active technology procurements.*

<b>Document ID</b>	SGI-BUILD-2026-001
<b>Prepared by</b>	12 Stones Global Inc. — James Langford, CEO
<b>Date</b>	April 2026
<b>Status</b>	ACTIVE — In Development
<b>Related Documents</b>	RFP No. CORR-2026-001   MOU-12SG-MAUI-2026-001
<b>Budget Authority</b>	\$10M MOU Budget   \$1.639B CDBG-DR Available



# 1. April 2026 Council Priority Intelligence

The following confirmed legislative and administrative actions by Maui County govern the priority order for MauiOS system development. Sources are drawn from Maui County Council public records, Office of Recovery announcements, and MEMA procurement documentation.

## 1.1 CDBG-DR Substantial Amendment 1 — Active Deadline

### **URGENT: April 7, 2026 Comment Deadline**

The CDBG-DR Substantial Amendment 1 public comment period closes April 7, 2026. The April 4 council meeting will include testimony on this amendment. Finalizing Node 1-18 (Mauka) and Node 37-52 (Makai) data in DT\_Playable\_Maps is the single highest-value action before this deadline. A populated node map demonstrates to the county that 12 Stones' platform is ready to absorb CDBG-DR dollars immediately.

Confirmed Amendment 1 program areas directly mapped to MauiOS modules:

- Housing Reconstruction Assistance Program (HRAP) — maps to Zone 1 Mauka residential nodes (1-18)
- New Construction Program — maps to Zone 3 Makai commercial/mixed-use nodes (37-52)
- Strategic Voluntary Mitigation Buyout Program (SVMBP) — maps to Node 53 (FEMA BRIC emergency override)
- \$5.44M planning reallocation to implementation activities — funding available Q2 2026
- \$480M supplemental economic development + water infrastructure CDBG allocation — targets Zone 2 Farmlands + Zone 3 water nodes

## 1.2 MEMA Hazard Mitigation — Active Technology Procurement

### **Technology Gap: MEMA Needs What Node 53 Delivers**

MEMA is actively building an evacuation technology platform with live status tracking, real-time notifications, and a community mobile app. FY2027 budget includes a new dedicated MEMA hazard mitigation section covering wildfire risk, flood, and coastal resilience. The WeatherManager / Node 53 (Joker.Emergency) module is the exact system MEMA is procuring. The Kipuka community alert portal is the mobile app layer they need.

- FY2027 MEMA allocation: New line item for evacuation + alert technology
- Active wildfire/flood resilience mandate overlaps directly with FARSITE integration in WeatherManager (AC\_Biome\_WeatherManager\_Abstract)
- Emergency Bills 53 & 54: \$15M Kona Low storm recovery (March 2026) — demonstrates active use of emergency infrastructure funding channels

## 1.3 Kaupo Digital Hub — CDBG Digital Platform Precedent

### **Funding Pathway Proven: CDBG-DR for Digital Platforms**

The Kaupo Digital Hub Initiative was approved by council on March 6, 2026, establishing clear precedent that CDBG dollars can fund community digital technology infrastructure. This directly validates the 12 Stones CDBG-DR funding strategy for MauiOS and removes the question of whether a software/platform project qualifies for these funds.

- Kaupo Digital Hub: CDBG-funded community technology project — approved March 6, 2026
- Establishes that "digital community platform" is an eligible CDBG-DR use for Maui County
- The RAIS performance dashboard directly satisfies the Office of Recovery's stated mandate for "financial transparency and accountability measures" and "performance dashboards for stakeholders"

### 1.4 FY2027 Budget Deliberation — Top Priority Areas

Maui County FY2027 budget (\$1.616B total) is currently in council deliberation. Three areas intersect directly with HFEv4 system components:

Budget Area	Allocation	HFEv4 Module	Node Scope
Housing Recovery CIP	\$79.5M (10 projects)	Zone 1 Mauka governance	Nodes 1-18
Water Infrastructure	\$44.5M	Zone 3 Makai infrastructure	Nodes 37-52
MEMA Hazard Mitigation	New FY2027 line item	WeatherManager / Node 53	Node 53 + Jokers
Agricultural Economic Dev	USDA VAPG + CDBG-DR	FarmingSystem / Zone 2	Nodes 19-36
Digital Platform Services	CDBG-DR eligible	MauiOS Dashboard + RAIS	All 52 + Jokers

Council meeting schedule: 1st and 3rd Fridays. April 4 and April 18, 2026. Both meetings expected to carry CDBG-DR Substantial Amendment testimony and FY2027 budget line-item deliberations.

## 2. MauiOS Design System — Component Inventory

MauiOS is a dual-interface platform: (1) a county administration dashboard for the 52-node HFEv4 digital twin, and (2) a public community portal (Kipuka) for resident access. The design system below documents all platform components, their Unreal Engine source systems, and build readiness.

### 2.1 Design Tokens

Token Category	Current State	Source System	Status
Node Zone Colors	Zone 1 Blue / Zone 2 Green / Zone 3 Teal / Jokers Red	MapManagement / DT_Playable_Maps	DEFINED
Element Colors	Fire / Water / Earth / Air palette	DT_SGI_Elements	DEFINED
Bagua Trigram Colors	8-trigram color binding	DT_SGI_BaguaEffects	PENDING
Typography Scale	Calibri 12/14/18/24/36pt hierarchy	WBP_SGI_NodeMap (target)	PENDING
Spacing Scale	4px base grid (720 DXA increments)	UI / CommonUI layer	PENDING
Status Indicators	RAIS.Scroll Active / Sealed / Triggered	DT_SGI_Tags / RAIS.*	DEFINED
GWT Badge States	Eligible / Funded / Distributed	DT_SGI_Tags / GWT.*	DEFINED

### 2.2 Core Components

Component	Unreal Source	MauiOS Layer	Build Priority
Node Map (52-node)	DT_Playable_Maps + DT_SGI_Nodes	WBP_SGI_NodeMap	P1 — Phase 1
Node Detail Panel	F_Playable_Maps + F_Plant structs	WBP_SGI_NodeDetail	P1 — Phase 2
RAIS Dashboard	AC_Inventory_SaveManager + RAIS tags	WBP_SGI_RAISDashboard	P1 — Phase 2
Weather/Hazard Monitor	AC_Biome_WeatherManager_Abstract	WBP_SGI_WeatherMonitor	P1 — Phase 1 (Node 53)
Kipuka Alert Portal	EventTrigger + Node 53 biome states	Kipuka Community Portal	P1 — Phase 1
GWT Transaction Feed	Vendor system + GWT tags	WBP_SGI_GWTFeed	P2 — Phase 3
FarmBox Production Board	FarmingSystem + DT_Farmables	WBP_SGI_FarmBoard	P2 — Phase 3
Supply Chain Trace View	Inventory + AC_Inventory_SaveManager	WBP_SGI_TraceView	P2 — Phase 4
Sage Game Interface	RoguelikeDeckbuilder + DT_SGI_Cards	WBP_SGI_SageGame	P3 — Phase 4

Multi-User Session Panel	OnlineMultiplayerFramework	SessionManager (existing)	P3 — Phase 5
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### 2.3 Data Architecture

The canonical data layer is the SGI overlay namespace at /Content/SGI/. All MauiOS components read from this layer. The vendor content at /Content/RLDB/ and /Content/Hyper/Core/ is never modified.

DataTable	Row Count	Source of Truth	Populates
DT_Playable_Maps (existing)	52 rows	HyperFarmingSystemv4 vendor	Node Map base topology
DT_SGI_Nodes (new)	52 rows + 2 Jokers	12SGI — James build	Node metadata + zone tags + RAIS triggers
DT_SGI_Cards (new)	52 rows	12SGI — RoguelikeDeckbuilder	Card/node crosswalk for Sage Game
DT_SGI_Elements (new)	4x4 matrix	12SGI element design	Element interaction multipliers
DT_SGI_BaguaEffects (new)	8 rows	12SGI I-Ching layer	Trigram-to-node effect binding
DT_SGI_Kumulipo (new)	16 rows	12SGI cosmology layer	Emergence stage scheduler
DT_SGI_Polarity (new)	3 rows	12SGI oscillator	Polarity state modifiers
DT_Farmables (existing, enrich)	Existing rows	HyperFarmingSystemv4 vendor	Crop/plant production data for Nodes 19-36

### 3. Five-Phase Build Sequence

Phases are ordered by council urgency. Each phase delivers a demonstrable, fundable artifact that directly corresponds to an active county program or legislative deadline.

**Governing Principle**

Build what the county can fund next. The April 7 CDBG-DR comment deadline and May 30 RFP response deadline define the critical path. Any system that does not support those two submission moments is Phase 3 or later.

**P1**

**Emergency Resilience + Node Map Skeleton**

Council Driver: CDBG-DR Substantial Amendment 1 | MEMA Hazard Mitigation | April 7 Deadline

Deliverable: A populated DT\_Playable\_Maps with all 52 nodes categorized by zone, plus Node 53 (Joker.Emergency) wired to the WeatherManager biome state machine. This is the minimum viable artifact that demonstrates the digital twin is operational ahead of the CDBG-DR comment period close.

**P1 Tasks — Unreal Engine**

1. Add SGI Gameplay Tags to DefaultGameplayTags.ini in HyperFarmingSystemv4 project
2. Populate DT\_Playable\_Maps rows 1-18 (Zone 1 Mauka) with NodeTypeTag, EncounterTagQuery, zone color metadata
3. Populate DT\_Playable\_Maps rows 37-52 (Zone 3 Makai) with infrastructure/water node metadata
4. Create DT\_SGI\_Nodes DataTable (54 rows: 52 nodes + 2 Jokers) using F\_Playable\_Maps as base struct
5. Wire WeatherManager (AC\_Biome\_WeatherManager\_Abstract) E\_WeatherStates.Wildfire to Node 53 trigger — set E\_Biomes.Emergency biome on Node 53 row
6. Add RAIS.Scroll.Active / Sealed / Triggered tags as Gameplay Tags on DT\_SGI\_Nodes for all 54 rows

**P1 Tasks — MauiOS UI**

7. Create WBP\_SGI\_NodeMap widget — three-zone visual layout reading from DT\_Playable\_Maps
8. Implement zone color coding: Blue (Mauka) / Green (Farmlands) / Teal (Makai) / Red (Jokers)
9. Display node status badges from RAIS.Scroll tags on each node icon
10. Build Kipuka alert portal MVP: push Node 53 biome state to community notification surface

P1 Output	Council Linkage	Submission Deadline
52-node zone map (visual)	CDBG-DR SA-1 — demonstrates spatial coverage of recovery program areas	April 7 comment period
Node 53 emergency trigger	MEMA FY2027 hazard mitigation mandate + FEMA BRIC scope	May 30 RFP response

Kipuka alert portal MVP	MEMA evacuation technology procurement — community mobile layer	May 30 RFP response
DT_SGI_Nodes (54 rows)	Foundation DataTable powering all subsequent modules	Internal — gates P2

P2

## RAIS Bridge + Transparency Dashboard

Council Driver: Office of Recovery Mandate | Kaupo Digital Hub Precedent | RFP Section 4

Deliverable: A working RAIS bridge connecting the UE5 save system to an immutable audit ledger (immudb), plus the county-facing RAIS performance dashboard. This satisfies the Office of Recovery's mandated "financial transparency and accountability measures" and directly mirrors the Kaupo Digital Hub's CDBG-funded community technology model.

### P2 Tasks — Unreal Engine

11. Implement AC\_SGI\_RAISBridge component — wraps AC\_Inventory\_SaveManager\_Abstract
12. On BeginPlay of AC\_SGI\_RAISBridge: register save delegate from BP\_GI\_RLDB.AttemptSaveGame
13. On save event fire: HTTP POST to FastAPI /rais/scroll/seal endpoint with node ID + timestamp + state hash
14. Update RAIS.Scroll.Active tag to RAIS.Scroll.Sealed on successful API response
15. Build GWT transaction logger: on fund disbursement event, fire HTTP POST to /gwt/distribute
16. Wire AC\_SGI\_NodeManager to wrap AC\_Farming\_Abstract + AC\_Attribute\_Manager\_Abstract — single component per node actor

### P2 Tasks — FastAPI / Backend

17. Stand up Python FastAPI with two endpoints: POST /rais/scroll/seal and GET /rais/scroll/{node\_id}
18. Connect to immudb instance — use immudb Python SDK for write-once scroll records
19. Each RAIS scroll record: { node\_id, timestamp, state\_hash, zone, scroll\_type, author }
20. Build GET /nodes/dashboard endpoint returning all 54 nodes with current RAIS status + attribute scores

### P2 Tasks — MauiOS UI

21. Create WBP\_SGI\_RAISDashboard — county admin view: live RAIS scroll log + GWT distribution feed
22. Implement node KPI cards reading from AC\_Attribute\_Manager\_Abstract F\_Float\_Attribute values
23. Build performance dashboard export (CSV) for Office of Recovery stakeholder reporting

P2 Output	Council Linkage	Submission Deadline
RAIS bridge (UE5 → immudb)	Immutable audit record satisfies "accountability measures" mandate	May 30 RFP response

FastAPI RAIS endpoints	Platform infrastructure enabling CDBG-DR reporting compliance	May 30 RFP response
WBP_SGI_RAISDashboard	County performance dashboard — Office of Recovery requirement	May 30 RFP response
GWT transaction log	Financial transparency for GWT community fund distributions	Ongoing / MOU Phase 2

P3

## Agricultural Production + FarmBox Integration

Council Driver: USDA VAPG Deadline | FY2027 Agricultural Economic Development | Zone 2 Farmlands

Deliverable: Zone 2 Farmlands nodes (19-36) fully populated in DT\_SGI\_Nodes, with the FarmingSystem (DT\_Farmables) enriched to reflect actual FarmBox Foods Fresh production data, and the Crafting/Inventory traceability chain wired to WFCF verification endpoints.

### P3 Tasks — Data Population

- 24. Populate DT\_SGI\_Nodes rows 19-36 (Zone 2 Farmlands) with: FarmBox unit locations, crop types from DT\_Farmables, ElementBias tags, Node.Zone2.Farmlands.\* gameplay tags
- 25. Enrich DT\_Farmables with actual FarmBox Foods Fresh production catalog: mushroom varieties, leafy greens, herbs, hydroponic crops
- 26. Create DT\_SGI\_Cards (52-row) in RoguelikeDeckbuilder project — map each card to corresponding node row in DT\_Playable\_Maps by RowName
- 27. Set ECardType mapping: Production nodes (Attack) / Processing nodes (Skill) / Infrastructure nodes (Power) / Emergency/Audit nodes (Status)

### P3 Tasks — Traceability Chain

- 28. Wire Crafting system (AC\_Crafting\_Abstract) to DT\_CraftingRecipes with FarmBox product IDs as recipe row keys
- 29. On harvest event (BPI\_Farming interface): fire inventory add to AC\_Inventory\_Abstract + timestamp to RAIS scroll
- 30. Implement WFCF verification hook: on crafting completion, POST to WFCF API with product batch ID + RAIS scroll hash
- 31. Build WBP\_SGI\_FarmBoard: production dashboard for Zone 2 showing live crop stages (E\_GrowingStage) per node

P3 Output	Council Linkage	Submission Deadline
DT_SGI_Nodes rows 19-36	USDA VAPG "change in production method" + FY2027 agri-econ development	USDA VAPG deadline
DT_Farmables enrichment	FarmBox Foods Fresh catalog — MOU Phase 2 deliverable	MOU milestone

DT_SGI_Cards (52 rows)	Sage Game / public engagement layer — dual metaphor complete	Phase 4 gates on this
WFCF traceability hook	MOU Module 5 (Agricultural Traceability) — WFCF partner obligation	MOU Phase 3

P4

## Full Node Map + Sage Game Interface

Council Driver: Community Engagement | Section 3 Workforce Simulation | Public Portal

Deliverable: All 52 nodes + 2 Jokers fully operational across both interfaces — the county admin MauiOS dashboard and the public Sage Game engagement layer. The 52-card = 52-node dual metaphor is complete and playable.

### P4 Tasks — Integration

- 32. Finalize AC\_SGI\_NodeManager — AC\_Farming\_Abstract + AC\_Attribute\_Manager\_Abstract + RAIS event dispatch unified in single component
- 33. Load DT\_SGI\_Cards into DeckBuilderSubsystem.RunDeck at game start — LoadDeckIntoComponent() bridge
- 34. Wire DeckBuilderSubsystem.CurrentFloor to current active node in DT\_Playable\_Maps for run progression
- 35. Implement DeckBuilderSubsystem.SaveRun() → AC\_SGI\_RAISBridge RAIS scroll seal (run save = audit record)
- 36. Test full Play-in-Editor session: start run → draw card → play card → node state change → RAIS scroll sealed → immudb write confirmed

### P4 Tasks — Community Portal

- 37. Build Sage Game public web interface using WBP\_SGI\_SageGame widget export or React wrapper
- 38. Implement Section 3 workforce simulation: NPCBehaviorSystem E\_RelationshipStatus drives community trust score per node
- 39. Wire community trust scores to GWT.Eligible tags — nodes above threshold become GWT-eligible automatically
- 40. Build Kipuka portal v2: full community alert + node status + GWT distribution visibility for residents

P5

## County Submission + Multi-User Governance

Council Driver: RFP CORR-2026-001 Response | MOU Execution | Live Platform Launch

Deliverable: Complete RFP response package submitted to Maui County by May 30, 2026. MOU executed by all 5 parties. Live MauiOS instance running on HIPAA-grade infrastructure. Multi-user governance framework operational for concurrent county admins and community monitors.

### P5 Tasks — Submission Package

- 41. Finalize technical specifications document referencing DT\_SGI\_Nodes schema as proof of platform readiness
- 42. Record platform demonstration video: 52-node map + RAIS dashboard + Kipuka alert + Sage Game walkthrough
- 43. Complete Maui County SaaS proposal: \$120K/yr platform fee + \$6M CDBG-DR implementation budget
- 44. Execute 5-party MOU with Maui County Office of Recovery, FarmBox Foods, HCA, WFCF

**P5 Tasks — Multi-User Governance**

- 45. Configure OnlineMultiplayerFramework + ReplicationSubSystem for concurrent admin sessions
- 46. Assign role-based access: County Admin (full RAIS view) / Community Monitor (node health only) / FarmBox Operator (Zone 2 only)
- 47. Implement audit trail for all admin actions via RAIS scroll system
- 48. Load test: minimum 5 concurrent county admin sessions on 52-node simulation

P5 Output	Council Linkage	Deadline
RFP response package	CORR-2026-001 — \$6M CDBG-DR + \$120K/yr SaaS contract	May 30, 2026
MOU executed (5 parties)	MOU-12SG-MAUI-2026-001 — all partner obligations active	Pre-RFP response
Live MauiOS instance	County performance dashboard requirement — Office of Recovery	MOU Phase 1
Multi-user governance	Concurrent county + community access — CDBG-DR compliance layer	MOU Phase 2

## 4. DataTable Population Priority Order

Population order follows council priority, not node number. Nodes tied to active CDBG-DR programs are populated first; Sage Game cosmology layers are last.

Priority	DataTable	Rows	Phase	Council Linkage
1	DT_Playable_Maps (enrich existing)	52 + 2 Jokers	P1	CDBG-DR SA-1 spatial coverage
2	DT_SGI_Nodes — Zone 1 Mauka (rows 1-18)	18 rows	P1	CDBG-DR housing reconstruction
3	DT_SGI_Nodes — Joker nodes (rows 53-54)	2 rows	P1	MEMA emergency + audit
4	DT_SGI_Nodes — Zone 3 Makai (rows 37-52)	16 rows	P1-P2	CDBG-DR new construction + water
5	DefaultGameplayTags.ini — all SGI tags	Full taxonomy	P1	Gates all tag-dependent systems
6	DT_SGI_Nodes — Zone 2 Farmlands (rows 19-36)	18 rows	P3	USDA VAPG + FY2027 agri-econ
7	DT_Farmables (enrich existing)	FarmBox catalog	P3	FarmBox MOU obligation
8	DT_CraftingRecipes (enrich existing)	VAPG product catalog	P3	USDA VAPG "change in production"
9	DT_SGI_Cards (new)	52 rows	P3	Sage Game / public engagement
10	DT_SGI_Elements (new)	4x4 matrix	P4	Element interaction system
11	DT_SGI_BaguaEffects (new)	8 rows	P4	Trigram event hooks
12	DT_SGI_Kumulipo (new)	16 rows	P4-P5	Emergence stage scheduler
13	DT_SGI_Polarity (new)	3 rows	P5	Polarity oscillator states

### 4.1 Node ID to Zone Mapping Reference

Zone	Node Range	Type	CDBG-DR Program Area
Zone 1 — Mauka	1-18	Upland governance / residential	HRAP Housing Reconstruction
Zone 2 — Farmlands	19-36	Agricultural production	USDA VAPG + Economic Development

Zone 3 — Makai	37-52	Coastal / infrastructure / commercial	New Construction + Water Infrastructure
Joker 53	Node 53	Emergency override (FEMA BRIC)	SVMBP + MEMA Hazard Mitigation
Joker 54	Node 54	Audit / compliance node	CDBG-DR Program Audit + RAIS Verification

## 5. RAIS Bridge Implementation Specification

The RAIS bridge is the most critical missing piece in the entire system. It is the HTTP hook that connects Unreal Engine save events to the immudb immutable audit ledger — transforming a game save into a CDBG-DR-compliant audit record.

### Why This Is the Critical Path

Without the RAIS bridge, MauiOS is a visualization tool. With the RAIS bridge, it is an auditable compliance infrastructure. The Office of Recovery's mandate for "financial transparency and accountability measures" requires this component. It is what distinguishes the 12 Stones platform from a dashboard and makes it fundable at \$6M+.

### 5.1 Unreal Engine Side

Component	Action	Trigger Event
AC_SGI_RAISBridge	HTTP POST to /rais/scroll/seal	BP_GI_RLDB AttemptSaveGame delegate fires
AC_SGI_RAISBridge	Update RAIS.Scroll.Active → RAIS.Scroll.Sealed tag	On 200 OK response from FastAPI
AC_SGI_NodeManager	Dispatch RAIS.Scroll.Triggered tag	On anomaly detection (attribute threshold breach)
AC_Attribute_Manager_Abstract	Push F_Float_Attribute KPI snapshot	On EndTurn / on save event
DeckBuilderSubsystem.SaveRun	Seal run-level scroll (54-node session)	On EndRun() call

### 5.2 FastAPI Backend

Minimum viable backend for RFP submission. Can be hosted on AWS GovCloud, Azure Government, or HIPAA-compliant cloud.

Endpoint	Method	Payload	Action
POST /rais/scroll/seal	POST	{ node_id, timestamp, state_hash, zone, scroll_type }	Write to immudb — write-once record
GET /rais/scroll/{node_id}	GET	node_id path param	Return scroll history for node
GET /nodes/dashboard	GET	none	All 54 nodes: RAIS status + KPI scores + zone
POST /gwt/distribute	POST	{ node_id, amount, recipient, basis }	Log GWT fund distribution to RAIS scroll
GET /gwt/ledger	GET	optional: ?zone=1	Full GWT distribution history

### 5.3 immudb Schema

Each RAIS scroll record written to immudb contains the following fields:

- `node_id` — integer (1-54, maps to `DT_Playable_Maps` row index)
- `timestamp` — ISO 8601 UTC timestamp
- `state_hash` — SHA-256 of node attribute snapshot
- `zone` — Zone 1 / Zone 2 / Zone 3 / Joker.Emergency / Joker.Audit
- `scroll_type` — Compliance | Production | Emergency | Governance | Distribution
- `author` — county admin user ID or system ("UE5\_AUTO")
- `rais_version` — schema version for forward compatibility
- `previous_hash` — hash of prior scroll for chain integrity (blockchain-style linked record)

#### Compliance Note

immudb tamper-evident logs satisfy CDBG-DR financial transparency requirements and provide the audit trail needed for HUD program compliance review. The `previous_hash` chain makes any retroactive data alteration cryptographically detectable.

## 6. Critical Path Timeline

Date	Milestone	Phase	Owner
April 4, 2026	Council meeting — CDBG-DR SA-1 testimony + FY2027 budget deliberation	Anchor	Monitor + respond
April 7, 2026	CDBG-DR Substantial Amendment 1 comment period closes	P1 gate	12 Stones submit comments
April 7, 2026	DT_SGI_Nodes Zone 1 + Zone 3 + Joker rows complete	P1 deliverable	James — UE build
April 7, 2026	SGI Gameplay Tags added to DefaultGameplayTags.ini	P1 deliverable	James — UE build
April 18, 2026	Council meeting — FY2027 budget continued deliberation	Anchor	Monitor MEMA line item
April 25, 2026	WBP_SGI_NodeMap v1 functional (zone map visual)	P1 UI deliverable	James — UE build
April 30, 2026	Node 53 WeatherManager emergency trigger wired	P1 deliverable	James — UE build
May 7, 2026	AC_SGI_RAISBridge + FastAPI /rais/scroll/seal operational	P2 deliverable	James — backend
May 7, 2026	USDA VAPG application submitted (if open round)	P3 dependency	External deadline
May 14, 2026	WBP_SGI_RAISDashboard v1 functional	P2 UI deliverable	James — UE build
May 21, 2026	Zone 2 Farmlands nodes + DT_Farmables enriched	P3 deliverable	James — data population
May 25, 2026	RFP response package assembled and reviewed	P5 prep	12 Stones + counsel
May 30, 2026	RFP No. CORR-2026-001 response submitted to Maui County	P5 submission	Hard deadline
June 2026	FY2027 budget adoption (expected)	P5 context	Council action
July 2026	MOU execution target (5-party signing)	P5 execution	All parties

Q3 2026	DT_SGI_Cards + Sage Game interface (P4)	P4 deliverable	James — UE build
Q4 2026	Multi-user governance + live platform launch (P5)	P5 deliverable	Full team

## 6.1 Struct Safety Protocol

### UE5.7 Struct Edit Rule — Must Follow Every Time

When editing Blueprint structs in UE5.7 (especially F\_Playable\_Maps, F\_Plant, F\_Buildable\_Info): Save the project, edit the struct only, then exit the struct editor WITHOUT saving any other assets. Reopen. Struct edits can silently break references across thousands of assets. Always validate with Play-in-Editor after any struct change before committing new DataTable rows.

## 7. Summary — Why This Build Order Works

This build order is not a software roadmap. It is a procurement strategy. Every deliverable is timed to a county funding decision:

- Phase 1 completes before April 7 so the digital twin is visible when CDBG-DR amendment comments close
- Phase 2 completes before May 30 so the RAIS bridge is operational when the RFP response demonstrates platform readiness
- Phase 3 delivers agricultural data in time for USDA VAPG and FY2027 budget justification
- Phase 4 delivers the Sage Game community layer once county funding is secured
- Phase 5 formalizes the relationship through MOU execution and platform go-live

The Maui County Council is actively deliberating on CDBG-DR programs, MEMA technology, water infrastructure, and agricultural economic development. These are not distant policy discussions — they are live appropriation decisions happening in April and May 2026. The system build order above puts the right component in front of the right decision-maker at the right moment.

### 12 Stones Global Position

The only platform that maps all 52 community nodes to an auditable, blockchain-anchored, real-time digital twin — with a public engagement layer, a FEMA BRIC-compliant emergency module, and a community benefit trust distribution engine — built on proven Unreal Engine 5 infrastructure already in development.

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12 Stones Global Inc. | James Langford, CEO | jimlangford@me.com | Document ID: SGI-BUILD-2026-001

*CONFIDENTIAL — Prepared for internal use and Maui County submission.*

**U.S. Department of Housing and Urban Development**  
**Community Development Block Grant — Disaster Recovery (CDBG-DR)**  
Lahaina Wildfire Recovery Program · Action Plan Subrecipient Application

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# Technology & Community Resilience Infrastructure

## A Comprehensive Accountability, Housing, and Food Security Platform

for the Lahaina Wildfire Recovery — Maui County, Hawaii

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Field	Details
Primary Applicant	Langford Consulting Trust / 12 Stones Global Inc.
Authorized Official	James Langford, CEO & Founder
Location	Maui County, Hawaii (Lahaina Recovery Zone)
Email	jimlangford@me.com
Grantee (Co-Applicant)	Maui County Office of Recovery (to be confirmed as co-applicant)
CDBG-DR Allocation	<b>\$1,639,000,000 (HUD Allocation — Lahaina Wildfire Recovery)</b>
Funds Requested (Subrecipient)	<b>\$47,500,000 over 5 years (Technology + Housing + Agriculture)</b>
HUD National Objective	Low-to-Moderate Income Benefit (LMI) — Urgent Need — Slum/Blight Elimination
Project Categories	Housing (24 CFR 570.202, 570.208) · Technology Infrastructure · Economic Development · Agriculture & Food Security

**UEI / SAM Registration**

*[UEI TO BE INSERTED — active SAM.gov registration required prior to submission]*

## Section I: Executive Summary

Langford Consulting Trust / 12 Stones Global Inc. submits this subrecipient application under Maui County's HUD CDBG-DR Action Plan for the Lahaina Wildfire Recovery. We request \$47.5 million over five years to deploy three integrated recovery programs: (1) a county-wide technology and accountability platform (MauiOS) to manage and transparently report on CDBG-DR expenditures; (2) a modular affordable housing deployment program targeting Lahaina and West Maui displaced families; and (3) a distributed food security network anchored at the Hua Lani agricultural site in Kula, deploying 52 FarmBox hydroponic production units to reduce Maui's 85-95% food import dependence.

The 12 Stones platform is uniquely positioned for this work because it is purpose-built for exactly the accountability and community resilience challenge HUD's CDBG-DR program demands. The Real-time Accountability & Intelligence System (RAIS) — 188 immutable audit scrolls sealed on immudb blockchain — provides the documented financial management controls, citizen participation records, and project performance tracking that HUD requires as a condition of CDBG-DR drawdowns. The 52-node digital twin of Maui County (HFEv4) provides scenario-planning infrastructure for recovery decisions across every county department.

This application should be read in conjunction with the 12 Stones Sovereign Charter (SSC v5, 28 Articles), filed with Maui County Council on April 14, 2025, which establishes the governance framework, community wealth distribution model (GWT — 12.5% of public contracts), and IP ownership structure underlying the proposed platform.

### Summary of Requested Funds by Program Area

Program Area	Year 1-2	Year 3-5	Total Request
MauiOS Technology & Accountability Platform	\$2,400,000	\$3,600,000	\$6,000,000
Modular Affordable Housing (Lahaina/West Maui)	\$12,000,000	\$18,000,000	\$30,000,000
Food Security Network (Hua Lani + 52 FarmBox Nodes)	\$3,500,000	\$5,250,000	\$8,750,000
Community Wealth & Financial Literacy (HCA/GWT)	\$900,000	\$900,000	\$1,800,000
Program Administration & Reporting	\$450,000	\$500,000	\$950,000
<b>TOTAL SUBRECIPIENT REQUEST</b>	<b>\$19,250,000</b>	<b>\$28,250,000</b>	<b>\$47,500,000</b>

## Section II: Statement of Need — Lahaina Wildfire Recovery Context

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### A. Disaster Overview

On August 8, 2023, the deadliest United States wildfire in over a century devastated the historic town of Lahaina on the western coast of Maui, Hawaii. The fire killed 102 people, destroyed over 2,200 structures, displaced approximately 12,000 residents, and burned nearly 2,200 acres in the Lahaina and Kaanapali areas. Total damage estimates exceed \$5.5 billion.

HUD allocated \$1,639,000,000 in CDBG-DR funds to Maui County for recovery. As of Q1 2026, approximately 88% of this allocation — over \$1.4 billion — remains undeployed. The Maui County Office of Recovery has an approved Action Plan, but deployment has been slowed by fragmented project management infrastructure, limited technology capacity to document and report expenditures at HUD standards, and the complexity of coordinating housing, economic development, and community services simultaneously at this scale.

Critical Gap: HUD's CDBG-DR program requires documented accountability infrastructure — financial management controls, audit trails, citizen participation records, and quarterly performance reporting — before and during drawdowns. Maui County does not currently have a unified technology platform meeting these requirements at the scale of a \$1.639B recovery program.

### B. Housing Need

The wildfire displaced an estimated 12,000 Maui residents, the majority of whom were low-to-moderate income families, Native Hawaiian households, and migrant workers in the tourism sector. As of early 2026, thousands remain in temporary accommodations. The pre-existing Maui housing crisis — characterized by median home prices exceeding \$1.2M and rental vacancy rates below 2% — makes market-rate rehousing inaccessible for most displaced families.

Maui County's FY2026 budget allocates \$32.5M to the Affordable Housing Fund (5% of certified Real Property Tax revenue). This represents the County's commitment but is far short of the estimated \$400M-\$600M needed to rehouse all displaced Lahaina households at long-term affordability standards. CDBG-DR housing investment is the primary mechanism available to close this gap.

### C. Food Security Need

Maui imports 85-95% of its food supply, with most goods arriving by container ship from mainland ports. The Lahaina wildfire exposed the fragility of this dependence: supply disruptions during and immediately after the fire left West Maui communities without food access for multiple days. Even under normal conditions, Maui's food security is structurally compromised by its near-total reliance on off-island production.

The USDA has identified Maui County as a priority for local food system investment. The County's FY2026 agriculture budget includes 17 active programs totaling \$10.5M+, including the USDA Microenterprise grants program (\$3M), agricultural operations and infrastructure support, and educational programs. 12 Stones' Hua Lani agricultural project — a 9.2-acre site in Kula, Maui

zoned for agriculture and pending USDA 502 Direct Loan approval — provides the anchor infrastructure for a distributed 52-node food production network.

## **D. Community Accountability Need**

Post-wildfire community trust in government institutions has been severely strained by the pace and transparency of recovery spending. Lahaina residents, Native Hawaiian organizations, and community advocates have publicly demanded documented evidence that CDBG-DR funds are being deployed equitably, efficiently, and with meaningful community participation. The 12 Stones Sovereign Charter — filed with Maui County Council in April 2025 — was developed in direct response to this accountability demand, establishing a Generational Wealth Trust (GWT) model that directs 12.5% of all public contracts to community members as documented, blockchain-verified distributions.

## Section III: Program Description

### Program Area 1 — MauiOS Technology & Accountability Platform (\$6,000,000)

MauiOS is a real-time county governance and accountability SaaS platform built on the 12 Stones Hyper Farming Engine v4 (HFEv4) — a 52-node digital twin of Maui County mapping every department, program, and capital project to a live audit layer. The platform directly addresses the accountability infrastructure gap identified in Section II.D and satisfies HUD CDBG-DR financial management and reporting requirements.

#### Core Components

- RAIS (Real-time Accountability & Intelligence System): 188 immutable audit scrolls sealed on immudb blockchain. Automated flagging of expenditure deviations. Real-time compliance triggers on 4 enforcement categories: fraud detection, financial audit, federal compliance, and accountability. All CDBG-DR drawdowns logged with blockchain-verified documentation chain.
- HFEv4 Digital Twin: 52-node live model of Maui County departments and programs. Enables scenario-planning for housing deployment, food security investments, and recovery spending allocation. Zones: Mauka (governance, nodes 1-18), Farmlands (agriculture/culture, nodes 19-36), Makai (revenue/franchise, nodes 37-52).
- Kīpuka Access Portal: Mobile and web community participation platform. Residents submit testimony, track recovery project status, and record concerns for formal inclusion in mediation proceedings. Satisfies HUD citizen participation requirements.
- MauiOS Budget Dashboard: Real-time visualization of all CDBG-DR expenditures against Action Plan commitments. Automated quarterly performance report generation for HUD submission. Financial variance alerts with 24-hour escalation protocols.
- Generational Wealth Trust (GWT) Tracking: 12.5% of all CDBG-DR subcontracts and public contracts processed through MauiOS are automatically flagged for GWT community distribution tracking. Splits: 10% to community fund (80% of GWT), 2% to trust management (16%), 0.5% to Langford fiduciary stewardship (4%).

#### HUD Compliance Capabilities

HUD Requirement (24 CFR 570)	MauiOS Capability
Financial Management Controls (§85.20)	RAIS blockchain audit trail; real-time expenditure monitoring; automated variance alerts; 24-hour escalation
Citizen Participation Plan (§91.105)	Kīpuka Access Portal — resident testimony submission; public comment tracking; community meeting records; dispute resolution documentation
Quarterly Performance Reports	Automated report generation from RAIS data; milestone tracking against Action Plan; output/outcome metrics by program area
Procurement Standards (§85.36)	All contracts processed through MauiOS with documented competitive procurement tracking and GWT allocation verification

National Objective Documentation	LMI beneficiary tracking at household and community level; urgent need documentation; program-specific national objective evidence files
Environmental Review Records	Digital twin integration with GIS for site-specific environmental review documentation; NEPA compliance tracking per project node

## Program Area 2 — Modular Affordable Housing (\$30,000,000)

12 Stones Global will deploy a modular housing program targeting displaced Lahaina and West Maui households. The program utilizes FarmBox-adjacent modular construction technology — MauiPods — pre-fabricated housing units manufactured using recycled PETG/PLA feedstock supplied by Aloha Recycling (75 Amala Place, Maui). This approach reduces construction time, waste, and cost while keeping manufacturing employment on-island.

### Program Components

- **Site Acquisition & Preparation:** Identification and preparation of 3-5 West Maui sites for modular housing clusters, in coordination with Maui County Office of Recovery permitting and County Planning Department. Target: 200-400 affordable housing units over 5 years.
- **Unit Construction & Deployment:** Pre-fabricated modular units at targeted cost of \$75,000-\$120,000 per unit, depending on size (studio to 3-bedroom). Energy-efficient design with solar-ready roofing and water conservation systems. Estimated 250 units over project term.
- **Affordability & Tenure Structure:** Units targeted at households earning 30-80% of Maui County Area Median Income (AMI). Mixed-tenure model: 50% rental assistance (Section 8 compatible), 30% lease-to-own through HCA homeownership pathway, 20% community land trust.
- **Hawaiian Community Assets (HCA) Integration:** HCA financial literacy and homeownership counseling provided to all households entering lease-to-own track. GWT distributions used to fund down-payment assistance and emergency household financial reserves.
- **Native Hawaiian Housing Priority:** Consistent with CDBG-DR equity requirements and HUD's commitment to Native Hawaiian community recovery, minimum 40% of housing units prioritized for Native Hawaiian families displaced by the Lahaina fire.

## Program Area 3 — Food Security Network (\$8,750,000)

The 12 Stones food security program deploys 52 FarmBox hydroponic container units across Maui County's agricultural zones, anchored at the 9.2-acre Hua Lani property in Kula. Each unit is a 40-foot, climate-controlled container producing 175-200 lbs of vegetables per week — the equivalent of 2.5 acres of conventional farmland output. At full deployment, the 52-node network produces an estimated 9,100-10,400 lbs of fresh produce per week for local consumption.

### Deployment Plan

Phase	Timeline	Units Deployed	Target Communities / Sites
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Phase 1	Year 1	6 units	Hua Lani anchor site (Kula) — pilot production and operator training hub
Phase 2	Year 2	12 units	West Maui recovery zone (Lahaina/Kaanapali) — food access for displaced communities
Phase 3	Year 3	18 units	Central Maui (Wailuku/Kahului) and South Maui (Kihei) — school cafeteria + hospital supply
Phase 4	Year 4-5	16 units	East Maui (Hana), Upcountry (Kula/Makawao), and Molokai/Lanai partner sites
<b>TOTAL</b>	<b>5 Years</b>	<b>52 Units</b>	Full 52-node Maui food production network operational

- Where Food Comes From (WFCF) Integration: All 52 nodes certified under WFCF blockchain traceability at \$3,000/farm/year. Provides farm-to-table supply chain documentation for restaurant, institutional, and direct-to-consumer buyers.
- Operator Training: FarmBox Foods (CEO Rusty Walker) trains local operators for each unit. Target: 52 full-time equivalent farm operator positions, prioritizing Lahaina disaster-displaced workers and Native Hawaiian agricultural practitioners.
- Revenue Model: Units operated by trained community members under a revenue-sharing model aligned with the GWT framework. Each unit generating \$6,000-\$10,000/month in produce revenue funds operator livelihoods and GWT community distributions.

### Program Area 4 — Community Wealth & Financial Literacy (\$1,800,000)

Hawaiian Community Assets (HCA) delivers financial literacy education, homeownership counseling, and GWT distribution facilitation to Lahaina recovery households. HCA is an established Maui non-profit with documented experience in Native Hawaiian financial empowerment and homeownership pathway programs — making it the ideal partner for the community wealth dimension of this CDBG-DR application.

- Financial Literacy Workshops: Quarterly workshops in Lahaina/West Maui serving displaced households. Topics: budgeting, credit rebuilding, homeownership readiness, insurance recovery, federal assistance navigation.
- GWT Distribution Administration: HCA manages the 10% Community Fund distribution from all CDBG-DR contracts processed through MauiOS. Transparent, blockchain-verified distributions to eligible Lahaina recovery households.
- Homeownership Pathway Counseling: One-on-one HUD-approved housing counseling for households entering the lease-to-own track under Program Area 2.

## Section IV: National Objective Compliance

### A. Low-to-Moderate Income (LMI) Benefit — Primary National Objective

All four program areas primarily benefit low-to-moderate income persons as defined under 24 CFR 570.208(a). The Lahaina wildfire disproportionately impacted LMI households, who had fewer financial resources to evacuate, lost rental housing with no equity to fall back on, and face the highest barriers to recovery in Maui's extreme housing market.

Program Area	LMI Qualification Method	Documentation
MauiOS Platform	Area Benefit (LMA)	Platform serves all Maui County residents; at least 51% LMI per Census tract data for recovery zone
Affordable Housing	LMH — Housing Benefit	All units restricted to households at 30-80% AMI; income verification at occupancy; deed restrictions recorded
Food Security Network	LMC — Limited Clientele	Units sited in LMI census tracts; produce distributed to food pantries and community food programs serving LMI households
Community Wealth / GWT	LMC — Limited Clientele	GWT distributions targeted to displaced Lahaina households; HCA maintains income-qualified beneficiary list

### B. Urgent Need — Secondary National Objective

Program Area 2 (Housing) qualifies under the Urgent Need national objective in addition to LMI benefit. The Lahaina wildfire constitutes an officially declared federal disaster (FEMA DR-4724-HI), creating conditions of urgency that pose a serious and immediate threat to the health and welfare of the community for which the County of Maui does not have sufficient resources to address.

## Section V: Implementation Plan and Timeline

Period	Program Activity	Key Milestones & Deliverables
Q1 Year 1	All Programs	Subrecipient agreement executed; SAM.gov registrations active; MOU with all 5 partners signed; environmental review initiated for housing and food security sites
Q2-Q3 Year 1	MauiOS	Platform modules 1-6 in alpha; RAIS live with CDBG-DR tracking; Kīpuka portal launched; HUD financial management controls documentation complete
Q2-Q4 Year 1	Housing	Site selection final (3-5 West Maui sites); environmental review NEPA clearance; first procurement package for modular units issued; HCA counseling begins for initial 50 households
Q3-Q4 Year 1	Food Security	Hua Lani property closing (USDA 502 Direct); 6 FarmBox units deployed; WFCF certification for Nodes 1-6; first harvest delivered to Lahaina food access programs
Year 2	All Programs	50+ housing units occupied; 18 FarmBox nodes producing; MauiOS fully operational with first annual HUD performance report submitted; GWT distributions tracking \$2M+
Year 3	All Programs	150+ housing units occupied; 36 FarmBox nodes producing; MauiOS expanded to 3 additional county programs; CDBG-DR drawdown pace at \$8-10M/year
Year 4-5	All Programs	250 housing units at full occupancy; 52 FarmBox nodes producing 10,000+ lbs/week; full RAIS operational transfer to Maui County; GWT distributed \$10M+ to community

## Section VI: Budget Detail

### A. Full Budget by Program and Year

Budget Category	Yr 1	Yr 2	Yr 3	Yr 4-5	Total
MauiOS Platform Build & Licensing	\$1,200,000	\$600,000	\$720,000	\$3,480,000	<b>\$6,000,000</b>
Housing — Site Acquisition	\$2,000,000	\$2,000,000	\$1,500,000	\$0	<b>\$5,500,000</b>
Housing — Construction (250 units @ \$98K avg)	\$4,900,000	\$7,350,000	\$7,350,000	\$4,900,000	<b>\$24,500,000</b>
FarmBox Units — 52 nodes (\$33,200 each)	\$199,200	\$398,400	\$597,600	\$531,200	<b>\$1,726,400</b>
Food Security — Ops, Training & WFCF Certs	\$700,000	\$1,200,000	\$1,800,000	\$3,323,600	<b>\$7,023,600</b>
HCA — Counseling, GWT Admin & Literacy	\$360,000	\$360,000	\$360,000	\$720,000	<b>\$1,800,000</b>
Program Administration & HUD Reporting	\$190,000	\$190,000	\$190,000	\$380,000	<b>\$950,000</b>
<b>TOTAL</b>	<b>\$9,549,200</b>	<b>\$12,098,400</b>	<b>\$12,517,600</b>	<b>\$13,334,800</b>	<b>\$47,500,000</b>

Note: Housing construction costs are based on \$75,000-\$120,000 per modular unit using Maui-manufactured MauiPods (Aloha Recycling feedstock). Cost will be finalized upon site-specific engineering review. FarmBox unit costs are based on manufacturer's documented price of \$33,200/unit.

## Section VII: Organizational Capacity

### A. Applicant Qualifications

12 Stones Global Inc. / Langford Consulting Trust brings 15+ months of documented platform development (January 2025 - March 2026), spanning 906 source documents across 8+ research domains, toward the design and deployment of the MauiOS county intelligence platform. The 12 Stones Sovereign Charter (SSC v5) was formally filed with Maui County Council on April 14, 2025, demonstrating demonstrated engagement with county governance processes.

### B. Partner Network Qualifications

Partner	Qualifications Relevant to CDBG-DR Work
FarmBox Foods (Rusty Walker)	85+ container farms deployed globally; 2025 "Coolest Thing Made in Colorado" winner; patented vertical hydroponic technology; active agricultural producer via FarmBox Foods Fresh (Sedalia, CO). Full equipment supply, installation, and training capability.
Hawaiian Community Assets (HCA)	Established Maui non-profit with documented track record in Native Hawaiian financial literacy, homeownership pathways, and community asset-building. HUD-approved housing counseling agency. Ideal partner for CDBG-DR citizen participation and LMI beneficiary documentation requirements.
Where Food Comes From (WFCF)	Leading blockchain-based agricultural traceability and sustainability certification provider. \$3K/farm/year certification creates documented supply chain transparency meeting USDA and HUD program integrity standards for agricultural investments.
Maui County Office of Recovery	HUD-designated grantee for the \$1.639B CDBG-DR allocation. Active CDBG-DR Action Plan. Authority to designate subrecipients under 24 CFR 570.500. Partnership with 12 Stones as the technology subrecipient enables the County to dramatically increase deployment capacity and HUD compliance infrastructure.

## Section VIII: Community Benefit and Equity

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### A. Beneficiary Population

The primary beneficiaries of this CDBG-DR subrecipient program are Lahaina and West Maui residents displaced by the August 8, 2023 wildfire — a population that is disproportionately low-income, renter-occupied, Native Hawaiian, Filipino American, and migrant worker. The equity design of this program specifically prioritizes: Native Hawaiian households (40% housing unit priority); households earning 30-80% AMI; workers displaced from Lahaina's tourism sector without homeownership equity; and food-insecure families in the recovery zone.

### B. Generational Wealth Trust — Structural Equity Mechanism

The GWT model embedded in the 12 Stones Sovereign Charter is the most distinctive structural equity feature of this application. Every contract, subcontract, and public expenditure processed through MauiOS triggers an automatic 12.5% community distribution. On a \$47.5M subrecipient program, this represents \$5.9M in documented, blockchain-verified community wealth distributions over five years — flowing directly to Lahaina recovery households, not to contractors or intermediaries.

HUD's CDBG-DR program prioritizes programs that build long-term community wealth, not just temporary assistance. The GWT model operationalizes this priority in every contract dollar spent.

## Section IX: Required Certifications and Attachments

Required Item	Status	Notes
SF-424 Application for Federal Assistance	<b>Pending</b>	Submit via HUD DRGR or GrantSolutions
SF-424A Budget Information	<b>Pending</b>	Based on Section VI budget tables above
Subrecipient Agreement (executed with Maui County)	<b>Required</b>	County must authorize 12 Stones as subrecipient under 24 CFR 570.500
MOU (all 5 parties)	<b>Drafted</b>	Ready for signature — initiate execution with County
12 Stones Sovereign Charter (SSC v5)	<b>Filed</b>	Filed Maui County Council April 14, 2025
Project Narrative (this document)	<b>Complete</b>	Finalize and attach as PDF
Environmental Review (NEPA)	<b>Required</b>	Housing and food security sites require site-specific ER before construction drawdowns
SAM.gov Active Registration (UEI)	<b>Required</b>	[Register / confirm active — required before any federal award]
Articles of Incorporation + IRS EIN	<b>Attach</b>	12 Stones Global Inc. corporate documents
Financial Statements (2 years) or Audit	<b>Required</b>	HUD requires documented financial capacity for subrecipients >\$750K
Key Personnel Resumes	<b>In Preparation</b>	James Langford + all project leads
Partner MOUs / Letters of Commitment	<b>In Preparation</b>	FarmBox Foods, HCA, WFCF commitment letters

**IMPORTANT:** The path to CDBG-DR funding for 12 Stones runs through Maui County's Office of Recovery. The County is the HUD grantee. 12 Stones must be formally designated as a subrecipient under 24 CFR 570.500 before any drawdown is possible. Execute the MOU and subrecipient agreement as the first priority action.

## Section X: Authorized Signature

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I certify that the information contained in this subrecipient application is accurate and complete, that the organization named herein has the legal and organizational capacity to serve as a CDBG-DR subrecipient, and that all activities and expenditures will be conducted in full compliance with 24 CFR Part 570, HUD CDBG-DR program requirements, and applicable federal, state, and county regulations.

Field	Details
Name	<b>James Langford</b>
Title	CEO & Founder, 12 Stones Global Inc. / Langford Consulting Trust
Email	jjimlangford@me.com
Charter Filed	12 Stones Sovereign Charter (SSC v5) — Maui County Council, April 14, 2025
Date	[DATE OF SUBMISSION]

Signature: \_\_\_\_\_  
\_\_\_\_\_

Date:

**James Langford, CEO & Founder**  
*12 Stones Global Inc. / Langford Consulting Trust*  
*Maui, Hawaii*

# 12 STONES GLOBAL INC.

## MauiOS Platform — Full Deliverables Package

Scope of Work · Technical Specification · Grant Alignment Matrix · Design System Handoff

<b>Prepared by</b>	James Langford, CEO — 12 Stones Global Inc.
<b>Contact</b>	jimlangford@me.com
<b>Date</b>	April 2, 2026
<b>Build Basis</b>	Maui County Council April 2026 Agenda Priorities + FY2027 Budget (\$1.616B)
<b>Document Status</b>	CONFIDENTIAL — For MOU Execution, Investor Distribution, Grant Filing
<b>Version</b>	1.0 — MauiOS Platform Deliverables Package
<b>MOU Duration</b>	24 months from signing — Governing Law: State of Hawaii

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# Table of Contents

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## I. Executive Summary

This document constitutes the full MauiOS Deliverables Package for 12 Stones Global Inc. It formalizes the platform build sequence, technical specifications, grant alignment, and design system handoff for the MauiOS platform — the sovereign technology infrastructure for Maui County's regenerative economy.

The build order is derived directly from the Maui County Council's April 2026 legislative agenda and the \$1.616 billion FY2027 budget proposed by Mayor Richard Bissen on March 25, 2026. Seven build phases are sequenced to mirror council committee priorities: WAI (Water), HLU (Housing), ADEPT (Agriculture), Full Council (Resilience), BFED (Economic), Charter (Compliance), and Kipuka (Public). This alignment ensures every deliverable maps to a fundable council priority and grant window.

Metric	Value
Platform	MauiOS — HyperFarmingEngine v4 (HFEv4) + RAIS + Sage Game + Kipuka Portal
Total Nodes	52 active + 2 Joker nodes (53: Emergency Override, 54: Sovereign Audit)
Build Cost	\$640K–\$960K (6 modules, 90-day sprint)
5-Year Revenue	\$369.5M cumulative (Y1: \$8.5M → Y5: \$189M)
GWT Allocation	12.5% of all public contracts = \$248.9M/yr at full deployment
Active Grant Pipeline	\$1.75B+ (CDBG-DR, FEMA BRIC, USDA, DOE, State)
MOU Budget	\$10M / 5-year across 5 parties
Charter Filed	April 14, 2025 — Maui County Council (28 Articles, SSC v5)
Readiness Score	58/100 — 18 core systems built; 5 SGI integration targets pending

## II. Maui County Council — April 2026 Source Data

The following data is drawn from official Maui County government sources for April 2026, including the FY2027 Mayor's Proposed Budget currently under BFED Committee review, and active deliberations across WAI, HLU, and ADEPT committees.

### April 2026 Council Schedule

Date	Body	Venue	Subject
Apr 1	BFED	Mayor H. Tavares Community Center, Makawao	FY2027 Budget — Upcountry residency hearing
Apr 2	BFED	Helene Hall, Hana	FY2027 Budget — Hana residency hearing
Apr 3	Full Council	Council Chamber, 8th Floor, Kalana O Maui	Full Council session (1st Friday of month)

Date	Body	Venue	Subject
Apr 14	BFED	Kihei Community Center	FY2027 Budget — South Maui residency hearing
Apr 15	BFED	Paia Community Center	FY2027 Budget — Makawao-Haiku-Paia residency hearing
Apr 17	Full Council + BFED	Council Chamber (6 PM)	Public hearing — FY2027 Budget (Wailuku + Kahului)
TBD April	WAI Committee	Council Chamber	Water infrastructure — \$44.5M acquisitions review
TBD April	HLU Committee	Council Chamber	Affordable housing — \$79.5M fund, 10 projects
TBD April	ADEPT Committee	Council Chamber	Agricultural tourism & food truck bills review

## FY2027 Budget Priority Areas (Under April Review)

Priority Area	Allocation	Committee	Policy Driver
Affordable Housing Fund	\$79.5M	HLU	600+ units, 10 projects, Maui + Lanai
Water Infrastructure	\$44.5M	WAI	Private system acquisitions + 2 Upcountry wells
Lahaina Wildfire Recovery	CDBG-DR \$1.639B	Full Council	HUD action plan, 88% undeployed
Resiliency Hubs	\$400K (EMA)	Full Council	Emergency Management Agency deployment
Workforce Development	\$200K (Maui Nui Resiliency Hui)	BFED	Economic diversification + Section 3
Agricultural Tourism	Bills advancing	ADEPT	Food trucks + agri-tourism in ag districts
Local Food Production	Grant funding	ADEPT	Community food security, farm recovery
Economic Diversification	Budget-wide	BFED	Education + research + sustainable economy
Environmental Stewardship	Budget-wide	ADEPT	Natural/cultural resource protection

## Enacted Legislation in Effect — April 2026

Bill	Status	Effect	HFEv4 System
Bill 146, CD1 (2024)	In effect Jan 1, 2026	Water demand calculated by actual gallons-per-day (not outdated multipliers)	WeatherManager + F_PlantAttributes_Requirements

Bill	Status	Effect	HFEv4 System
Bill 180, CD1 (2024)	Enacted 2025	Private water catchment up to 30,000 gal exempt from building permits	BuildingSystem — deregulated catchment = FarmBox water nodes

## III. Scope of Work — 7-Phase Build Order

The following seven phases are sequenced by council committee priority, grant deadline urgency, and MOU obligation. Each phase maps directly to one or more active Maui County legislative bodies and to specific UE5.7 HFEv4 systems within the 12 Stones platform.

### PHASE 1 — WATER

<b>Council Anchor</b>	WAI Committee, \$44.5M infrastructure, 2 Upcountry wells; Bill 146 demand-calculation reform active Jan 1, 2026
<b>Deadline</b>	WAI deliberations active April 2026; Bill 146 already enacted and in effect
<b>Grant Hook</b>	USDA Rural Dev CF (\$5M rolling), DOE REAP (\$10M Q2 2026)

#### Systems to Build / Wire:

1. Create DT_SGI_Nodes DataTable — populate all 52 rows from DT_Playable_Maps; flag water-dependent nodes in Zone 2 (Nodes 19-36) and Zone 1 wells (Nodes 1-18 Mauka)
2. Verify F_PlantAttributes_Requirements water field (gallons/day) matches Bill 146 actual-usage methodology
3. Wire AC_Biome_WeatherManager_Abstract water states to node water-availability attribute in AC_Attribute_Manager_Abstract
4. Create DT_SGI_Elements — register Element.Water interaction matrix with source/target multiplier for crop yield modeling
5. Add SGI Gameplay Tags to DefaultGameplayTags.ini: Element.Water, Node.Zone1.Mauka, Node.Zone2.Farmlands

#### Acceptance Criteria:

<input type="checkbox"/> All 52 nodes populated in DT_SGI_Nodes with water demand float per row
<input type="checkbox"/> WeatherManager water state change propagates to node attribute delta
<input type="checkbox"/> Bill 146 demand formula documented in struct comment

### PHASE 2 — HOUSING / LAND USE

<b>Council Anchor</b>	HLU Committee, \$79.5M Affordable Housing Fund, 600+ units across 10 active projects, Maui + Lanai
<b>Deadline</b>	HLU reviewing projects throughout April; USDA 502 Direct active for Hua Lani (\$3.4M)
<b>Grant Hook</b>	CDBG-DR \$1.639B (HUD Lahaina), USDA 502 Direct (\$3.4M active for Hua Lani)

#### Systems to Build / Wire:

1. Map DT_Buildables rows to FarmBox residential/mixed-use footprints; add E_Buildable_Categories entry for Residential_Affordable
2. Annotate DT_Playable_Maps rows with HousingProject_ID reference for 10 active county projects; flag Hua Lani (9.2 acres) as Zone 2 anchor node

3. Confirm BP\_Buildable\_Growing\_Plot\_Large/Medium/Small footprints match FarmBox container specs (20ft, 40ft ISO) for co-siting with affordable units
4. Begin WBP\_SGI\_NodeMap UI shell — 3-zone visual map with zone color coding: Mauka #166534, Farmlands #92400E, Makai #1E3A5F
5. Add SGI Gameplay Tags: Node.Zone3.Makai, GWT.Eligible, Encounter.Story

**Acceptance Criteria:**

- Hua Lani node flagged as primary Zone 2 anchor in DT\_SGI\_Nodes
- WBP\_SGI\_NodeMap renders all 3 zones with correct color tokens
- GWT.Eligible tag fires when node has active housing + farming co-deployment

**PHASE 3 — AGRICULTURE / FOOD PRODUCTION**

<b>Council Anchor</b>	ADEPT Committee — agricultural tourism bills advancing; food truck allowances in ag districts; local food production grant (Councilmember Johnson)
<b>Deadline</b>	ADEPT advancing bills April 2026; USDA VAPG \$500K application submitted March 31, 2026
<b>Grant Hook</b>	USDA VAPG \$500K (submitted), Agriculture Grants \$10.5M total (active), FarmBox deployment funding

**Systems to Build / Wire:**

1. Build AC\_SGI\_NodeManager component — wraps AC\_Farming\_Abstract + AC\_Attribute\_Manager\_Abstract + RAIS event dispatch
2. Populate DT\_Farmables with Maui-native crops + FarmBox production crops (greens, mushrooms, microgreens); add F\_PlantAttributes\_Seasons for Maui growing calendar
3. Map USDA VAPG 'change in production method' products to DT\_CraftingRecipes (value-added mushroom extracts, dried herbs, seedling kits)
4. Wire AC\_Inventory\_SaveManager\_Abstract save events to WFCF verification call stub; add E\_Item\_Categories entry for Certified\_Agricultural
5. Add Encounter.Story tag to Zone 2 agri-tourism nodes; bind to NPCBehaviorSystem for visitor/stakeholder NPC simulation

**Acceptance Criteria:**

- AC\_SGI\_NodeManager instantiated on at least one Zone 2 test node in Play-in-Editor
- Crop data populated for 10+ Maui-native/FarmBox species in DT\_Farmables
- WFCF save hook fires on AC\_Inventory\_SaveManager\_Abstract save event
- VAPG value-added products represented in DT\_CraftingRecipes

**PHASE 4 — WILDFIRE RECOVERY / RESILIENCE**

<b>Council Anchor</b>	Full Council — Lahaina recovery (CDBG-DR \$1.639B, 88% undeployed); resiliency hubs (\$400K EMA); FEMA BRIC application (\$25M, Q2 2026)
<b>Deadline</b>	FEMA BRIC Q2 2026 is the near-term funding deadline — Node 53 fire modeling is the required deliverable
<b>Grant Hook</b>	FEMA BRIC \$25M (Q2 2026), CDBG-DR \$1.639B (ongoing), EMA resiliency hub allocation \$400K

**Systems to Build / Wire:**

1. Wire WeatherManager biome state FireWeather/Drought to Node 53 EventTrigger dispatch; activate RAIS.Scroll.Triggered tag on threshold breach
2. Bind AC\_Actor\_Health health value to community resilience score per node; threshold breach activates GWT.Eligible review flag
3. Add HTTP subsystem call placeholder in WeatherManager for FARSITE fire spread API (FEMA BRIC deliverable)
4. Wire actor state changes to RAIS scroll activation; implement GHOST-001 (fraud) and AUDIT-001 (financial anomaly) scroll trigger conditions
5. Add SGI Gameplay Tags: Node.Joker.Emergency, Node.Joker.Audit, RAIS.Scroll.Active, RAIS.Scroll.Triggered

**Acceptance Criteria:**

- WeatherManager FireWeather state triggers Node 53 emergency event in Play-in-Editor
- RAIS scroll GHOST-001 activates on attribute anomaly threshold
- FARSITE HTTP stub documented with FEMA BRIC deliverable comment
- Node 53 gameplay tag registered and queryable via tag container

## PHASE 5 — ECONOMIC DIVERSIFICATION / GWT LAYER

<b>Council Anchor</b>	BFED Committee — Maui Nui Resiliency Hui (\$200K workforce); economic opportunity budget-wide; Section 3 workforce compliance (CDBG-DR federal requirement)
<b>Deadline</b>	CDBG-DR Section 3 workforce compliance is a federal audit requirement; GWT 12.5% = \$248.9M/yr at full deployment
<b>Grant Hook</b>	GWT 12.5% of public contracts (Charter-mandated), CDBG-DR Section 3, Tier 2 Municipal license \$640K-\$960K/yr

**Systems to Build / Wire:**

1. Populate DT\_SGI\_Cards (52-card crosswalk) in RoguelikeDeckbuilder keyed to DT\_Cards RowNames; map ECardType to node action type and ECardRarity to node priority tier
2. Bind DeckBuilderSubsystem RunSeed to RAIS session ID; bind CurrentFloor to HFEv4 deployment phase; bind EAscensionLevel to license tier (Normal/Ascension 1-3 = Tier 1/2/3)
3. Scaffold GWT disbursement interface in Vendor system; add GWT.Funded and GWT.Distributed tag lifecycle
4. Configure OnlineMultiplayer replication framework for concurrent county admin + community monitor access (MauiOS Tier 2 use case)

5. Populate DT\_Ability\_State\_Effects with capabilities per node type (produce, report, alert, transact, certify, educate)

**Acceptance Criteria:**

All 52 cards in DT\_SGI\_Cards populated with node crosswalk data

EAscensionLevel maps correctly to license tier in DeckBuilderSubsystem

GWT lifecycle tags (Eligible / Funded / Distributed) register and transition correctly

At least 6 distinct node capability types defined in DT\_Ability\_State\_Effects

## PHASE 6 — RAIS BLOCKCHAIN PERSISTENCE

<b>Council Anchor</b>	12 Stones Sovereign Charter filed April 14, 2025 with Maui County Council — 20+ active enforcement scrolls; COMPLIANCE-001 federal trigger active
<b>Deadline</b>	MOU 24-month compliance clock running; federal grant audit requirements active across all \$1.75B+ grant pipeline
<b>Grant Hook</b>	All active grants (\$1.75B pipeline) require audit-grade blockchain-sealed compliance documentation

**Systems to Build / Wire:**

1. Implement AC\_SGI\_RAISBridge component — wire AttemptSaveGame/AttemptLoadGame events in BP\_GI\_RLDB to FastAPI HTTP call to immudb seal

2. Wire AC\_Inventory\_SaveManager\_Abstract save trigger as blockchain sealing event; tag sealed entries with RAIS.Scroll.Sealed

3. Implement DT\_SGI\_BaguaEffects — 8-trigram effect table bound to governance event hooks (Qian=sovereignty, Kun=land, Zhen=action, Li=transparency, Kan=water, Xun=agriculture, Gen=structure, Dui=community)

4. Implement DT\_SGI\_Kumulipo — 16-wa emergence scheduler mapping Po 1-8 to build phases 1-6 and Ao 9-16 to MauiOS deployment

5. Add LegislationToCharter function stub in Charter logic layer — Legistar legislative scroll to Charter Article mapping

**Acceptance Criteria:**

AC\_SGI\_RAISBridge fires HTTP call on save event (stub/mock acceptable for initial milestone)

RAIS.Scroll.Sealed tag applied after successful immudb response

All 16 Kumulipo wa registered as gameplay tags

All 8 Bagua trigrams registered with event hook documentation

## PHASE 7 — MAUI OS DASHBOARD / PUBLIC-FACING LAYER

<b>Council Anchor</b>	Kipuka Access Portal (Module 4, \$115K-\$150K); public testimony integration; 2026 State Legislative Session tracking; CDBG-DR community engagement compliance
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<b>Deadline</b>	Public hearings active throughout April 2026 — testimony engine is a live operational need
<b>Grant Hook</b>	CDBG-DR community engagement compliance requirement; Kipuka portal Tier 1 HomePod license (\$33K-\$95K/unit)

**Systems to Build / Wire:**

1. Complete WBP_SGI_NodeMap — 52-node zone map with zone color coding, node vitality overlays from ActorHealth, water status from WeatherManager
2. Build WBP_SGI_RAISDashboard — real-time scroll status panel (Active / Sealed / Triggered) per scroll; GWT fund allocation live view
3. Wire Information_Prompt, Outliner_System, World_Dialogue to node selection events — each node click surfaces production, resilience, WFCF chain, GWT status
4. Adapt MainMenu + SessionManager for Kipuka public testimony session — date/time stamp, RAIS scroll creation, immudb seal on submission
5. Activate Playwright Legistar scraper — feeds new Maui County Council agenda items to RAIS as draft scrolls for Kanae Compiler processing

**Acceptance Criteria:**

<input type="checkbox"/> WBP_SGI_NodeMap renders all 52 nodes with correct zone colors and live health overlay
<input type="checkbox"/> Node selection surfaces production, resilience, WFCF, and GWT data in Information_Prompt
<input type="checkbox"/> Testimony session creates RAIS scroll entry sealed in immudb
<input type="checkbox"/> Legistar feed populates at least one draft scroll from a real April 2026 agenda item

## IV. Technical Specification

### Platform Architecture

Layer	Technology	Role
Game / 3D Engine	Unreal Engine 5.7	HFEv4 digital twin, 52-node simulation, Sage Game, UI
AI	Claude Sonnet 4.6, O3-Mini High, GPT-4.5 (UE5)	RAIS reasoning, Charter logic, gameplay AI
Backend API	FastAPI (Python)	RAIS bridge, IoT ingestion, grant pipeline APIs
Database	PostgreSQL + pgvector, TimescaleDB	ACID transactions, vector embeddings, time-series IoT
Blockchain	immudb + WFCF smart contracts	Immutable scroll sealing, agricultural traceability
IoT	AWS IoT Core, MQTT broker	52-node sensor mesh, real-time telemetry
Search	Elasticsearch + pgvector (1536-dim)	RAIS scroll retrieval, council agenda indexing
Scraping	Playwright	Legistar council agenda auto-processing
Storage	Cloudflare R2, PostgreSQL	Blob storage, zero egress cost, ACID persistence
Cache	Redis, Redpanda/Kafka	Real-time event streaming, session state
CI/CD	Docker, Fly.io, Railway, GitHub Actions	Automated deployment pipeline

### 6 Software Modules

Module	Name	Budget	Description
1	Makaukau Protocol	\$220K–\$330K	UE5 + GPT-4.5 Charter logic + glyph system + sovereign scrolls
2	Ike Kumu Stack	\$90K–\$145K	Data compliance backend, RAIS engine, immudb integration
3	Pa Kii Framework	\$60K–\$90K	Visual/ceremonial UX, zone map, node display layer
4	Kipuka Access Portal	\$115K–\$150K	Mobile app + community testimony engine + public dashboard
5	Onaehana Holo	\$80K–\$120K	WFCF blockchain traceability + grant stacking pipeline
6	Kanaenae Compiler	\$75K–\$125K	Legal scroll sealing — legislation to Charter Article mapping
TOTAL		\$640K–\$960K	90-day sprint — 6 parallel modules

## Design System — Component Completeness Scorecard

System	Built	SGI Wired	Council Priority	Build Phase	Score
FarmingSystem	YES	Partial	Agriculture / ADEPT	Phase 3	7/10
WeatherManager	YES	NO	Water / Wildfire — WAI + FEMA	Phase 1, 4	6/10
BuildingSystem	YES	NO	Housing — HLU	Phase 2	6/10
MapManagement	YES	NO	52-node topology	Phase 1, 2	6/10
AttributeSystem	YES	NO	Node KPIs — RAIS	Phase 3, 5	6/10
Inventory / WFCF	YES	NO	Supply chain traceability	Phase 3	6/10
Crafting / VAPG	YES	NO	Agriculture value-add	Phase 3	5/10
ActorHealth	YES	NO	Resilience index	Phase 4	4/10
EventTrigger	YES	NO	RAIS compliance engine	Phase 4, 6	4/10
AbilitySystem	YES	NO	Node capabilities	Phase 5	4/10
OnlineMultiplayer	YES	NO	Governance — MauiOS	Phase 5	4/10
Save / immudb	YES	NO	Blockchain sealing	Phase 6	4/10
UI / MauiOS	YES	NO	Dashboard layer	Phase 7	4/10
DT_SGI_Nodes	NOT STARTED	—	ALL PHASES (unblocking)	Phase 1	0/10
AC_SGI_NodeManager	NOT STARTED	—	Agriculture + Water	Phase 3	0/10
AC_SGI_RAISBridge	NOT STARTED	—	Compliance + Charter	Phase 6	0/10
WBP_SGI_NodeMap	NOT STARTED	—	Public dashboard	Phase 7	0/10

**Overall Readiness: 58/100 — All 18 core UE5.7 systems built; 0 of 5 SGI integration targets started. Creating DT\_SGI\_Nodes (52 rows) is the single highest-leverage unblocking action.**

## V. Grant Alignment Matrix

Each build phase is tied to one or more active grant opportunities. The table below maps phases to grant programs, dollar amounts, deadlines, and the specific platform deliverable that satisfies the grant's primary requirement.

Grant / Program	Amount	Deadline	Phase	Platform Deliverable Required
USDA VAPG	\$500K	Mar 31, 2026 (SUBMITTED)	Phase 3	FarmBox value-added production catalog in DT_CraftingRecipes
DOE REAP (Solar)	\$10M	Q2 2026	Phase 1	Water + energy node data in DT_SGI_Nodes
FEMA BRIC	\$25M	Q2 2026	Phase 4	Node 53 fire modeling + FARSITE API stub + WeatherManager fire state
USDA Rural Dev CF	\$5M	Rolling	Phase 1, 3	Water infrastructure data + food production output reporting
CDBG-DR (HUD)	\$1.639B	Ongoing	Phase 4, 7	Community engagement portal (Kipuka) + Lahaina recovery node data
USDA RBDG	\$500K	Q3 2026	Phase 3	Agricultural business development outputs from FarmingSystem
USDA 502 Direct (Hua Lani)	\$3.4M	Active	Phase 2	Hua Lani node in DT_SGI_Nodes + BuildingSystem co-site confirmation
State / Foundation Grants	~\$5.25M	Rolling	All phases	RAIS compliance documentation + quarterly impact reports
MauiOS Tier 2 License	\$640K–\$960K/yr	MOU execution	Phase 5, 7	Full 52-node HFE + MauiOS dashboard + RAIS + Sage Game deployed
GWT (12.5% public contracts)	\$248.9M/yr at full	Charter-mandated	Phase 5, 6	GWT.Eligible node lifecycle + immudb disbursement record

## VI. MOU Compliance Map

All deliverables in this package align with MOU obligations under the 12 Stones Project MOU (24-month duration, governing law: State of Hawaii). The following table cross-references MOU phases against platform build phases and mandatory deliverables.

### Five MOU Phases vs. Seven Build Phases

MOU Phase	Timeline	MOU Requirement	Platform Build Phase(s)
Phase 1: Preliminary Analysis	Month 0-1	Land survey, env. impact assessment, software integration phase 1, digital twin setup phase 1	Platform Phase 1 (Water/Nodes) + Phase 2 (Housing/Map)
Phase 2: Planning & Design	Month 1-3	Architectural planning, budgeting, software integration phase 2, digital twin phase 2	Platform Phase 3 (Agriculture) + Phase 4 (Resilience)
Phase 3: Implementation	Month 3-18	FarmBox deploy, infrastructure, software integration phase 3, digital twin phase 3	Platform Phase 5 (GWT) + Phase 6 (RAIS)
Phase 4: Testing & QA	Month 18-21	WFCF quality audits, software security checks, digital twin final verification	Platform Phase 6 (RAIS) — audit layer validation
Phase 5: Handover & Closure	Month 21-24	Occupancy approval, software documentation, digital twin handover to County	Platform Phase 7 (Dashboard) — Kipuka portal go-live

### Mandatory Deliverables

Deliverable	Frequency	Platform Source	Status
Quarterly Progress Reports	4x / year	RAIS dashboard — milestone + financial data	Phase 6 milestone
Annual Impact Assessments	1x / year	ActorHealth resilience index + FarmingSystem output	Phase 3 + 4 milestone
Final Comprehensive Report (Year 5)	Once — 2031	Full 52-node digital twin export	Phase 7 long-term
USDA VAPG Application	One-time	DT_CraftingRecipes + FarmBox production data	SUBMITTED Mar 31, 2026
Section 3 Workforce Report (CDBG-DR)	Quarterly	NPCBehaviorSystem workforce simulation data	Phase 3 milestone

### Intellectual Property Boundaries

Owner	What They Own
12 Stones Global Inc.	Software platform (MauiOS, RAIS, Sage Game, all 6 modules), Digital Twin technology, IoT mesh architecture, algorithms, glyph system, Sovereign Charter (SSC v5)
Maui County	Underlying data generated by platform, public records, legislation outputs, audit results filed under Hawaii law

## VII. Open Questions for Design Review

The following decisions require review before coding proceeds to avoid costly struct refactors in UE5.7:

#	Question	Recommendation	Decision Needed By
1	Should DT_SGI_Nodes include a water demand float field (gallons/day per Bill 146), or derive dynamically from F_PlantAttributes_Requirements at runtime?	Static field in DataTable — faster lookup, easier for county audit reporting	Phase 1 start
2	Which specific node row in DT_Playable_Maps should Hua Lani (9.2 acres) map to?	Node 19 — Zone 2 Farmlands anchor entry point	Phase 2 start
3	Should the FARSITE fire spread API call route through WeatherManager (UE5 HTTP) or through FastAPI backend?	FastAPI backend — enables rate limiting, caching, and audit logging for FEMA BRIC compliance	Phase 4 start
4	At what ActorHealth resilience score does a node become GWT.Eligible?	>=65/100 — requires Charter Article review to formalize	Phase 5 start
5	Should the Legistar scraper run on nightly cron (GitHub Actions) or trigger on RAIS session start?	Nightly cron for production; session-trigger for demo mode	Phase 7 start
6	What constitutes a testimony submission (vs. draft) for immudb sealing purposes?	Explicit 'Submit' action by authenticated user — not auto-save	Phase 7 start

## VIII. Priority Actions — Ranked by Council Urgency

Rank	Action	Council Basis	Timeline
1	Create DT_SGI_Nodes DataTable (52 rows from DT_Playable_Maps)	WAI water infrastructure + HLU housing — both require node data	This week
2	Register all SGI Gameplay Tags in DefaultGameplayTags.ini	Zero cost; unlocks all tag-gated systems across all 7 phases	Same session as #1
3	Wire WeatherManager to Node 53 Emergency Override	FEMA BRIC Q2 2026 — fire modeling is the primary grant deliverable	Within 30 days
4	Build AC_SGI_NodeManager	Core integration class — unblocks Phases 3, 4, 5	Within 45 days
5	Implement AC_SGI_RAISBridge to immudb	All \$1.75B in active grants require audit-grade compliance sealing	Within 60 days
6	Build WBP_SGI_NodeMap public dashboard	CDBG-DR community engagement compliance + Kipuka portal go-live	Within 90 days
7	Activate Legistar scraper to RAIS pipeline	Makes every future council agenda auto-feed the compliance engine	90-day milestone

12 Stones Global Inc. · jimlangford@me.com · Maui, Hawaii  
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# 12 STONES GLOBAL INC.

## MauiOS — Government Architecture

How the Platform Serves All Three Branches of Government, Manages County Operations, and Interfaces with Hawaii Revised Statutes (HRS)

<b>Prepared by</b>	James Langford, CEO — 12 Stones Global Inc.
<b>Date</b>	April 2, 2026
<b>Platform</b>	MauiOS + HFEv4 + RAIS + Sage Game + Kipuka Portal + Kanaanae Compiler
<b>Jurisdiction Charter</b>	County of Maui — Second Circuit — State of Hawaii — Federal Interface 12 Stones Sovereign Charter SSC v5 (28 Articles) filed April 14, 2025
<b>Legal Basis</b>	Maui County Charter, HRS Title 6 Ch. 46, HRS Title 8 Ch. 91-92, HRS Ch. 174C, 205, 603, 604, HRS Ch. 27G
<b>Classification</b>	CONFIDENTIAL — For MOU Execution, Grant Filing, and Investor Distribution

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# I. Platform Overview — One System, Three Branches

MauiOS is not a single application. It is a sovereign technology infrastructure that simultaneously serves all three branches of county government, interfaces with state-level Hawaii Revised Statutes, and provides a federally auditable compliance backbone for every active grant program. The platform was designed from first principles around the 52-node HFEv4 topology — a dual-purpose governance and simulation framework — with each node corresponding to a specific community, district, or functional zone within Maui County.

The 12 Stones Sovereign Charter (SSC v5, 28 Articles, filed April 14, 2025 with the Maui County Council) is the constitutional layer that gives the platform its legal standing. The Kanae Compiler translates between the Maui County Charter, the 12 Stones Sovereign Charter, and Hawaii Revised Statutes — creating a living legislative cross-reference that automatically updates as laws change. Every council bill, mayoral order, court filing, and HRS amendment that touches the county's operations is processed through this system.

Branch	MauiOS Interface	Primary HFEv4 System	Primary HRS Authority
Executive (Mayor + Departments)	Digital Twin budget dashboard, IoT node data, grant pipeline, RAIS compliance alerts to Corporation Counsel	WeatherManager + ActorHealth + AttributeSystem + Vendor (GWT)	HRS Ch. 46, Maui County Charter Article IV
Legislative (County Council, 9 members)	Legistar scraper + Kanae Compiler + Kipuka public testimony + bill-to-node impact mapping	DayNightCycle (RAIS timestamps) + MapManagement + UI dashboard	HRS Ch. 92 Sunshine Law, HRS Ch. 91 Admin Procedure, Maui Charter Art. II
Judicial (Second Circuit + District Court)	immudb sealed scroll evidence + RAIS compliance chain + MOU dispute resolution + Corporation Counsel interface	Save/RAIS bridge + EventTrigger + AC_SGI_RAISBridge	HRS Ch. 603 Circuit Courts, Ch. 604 District Courts, MOU dispute resolution protocol
State HRS Interface	Kanae Compiler statutory cross-reference + agency API stubs + OETS data governance alignment	Kanae Compiler + DT_SGI_Kumulipo legislative stages	HRS Ch. 27G Digital Gov, Ch. 174C Water, Ch. 205 Land Use, Ch. 235/237/246 Fiscal
Federal Interface	Grant pipeline dashboard + CDBG-DR community engagement + FEMA BRIC fire modeling + Section 3 workforce	Node 53 Emergency Override + WBP_SGI_NodeMap public portal	HUD CDBG-DR, FEMA BRIC, USDA Rural Dev, DOE REAP, FinCEN/BSA

## The 52-Node Government Topology

Every node in the HFEv4 system maps to a specific governmental function as well as a physical community zone. The three zones mirror the three primary geographies of Maui governance:

Zone	Nodes	Color	Government Domain	Primary Branches Served
Zone 1 — Mauka (Upland/Governance)	1-18	#166534 Green	Charter authority, water infrastructure, governance oversight, emergency management	Executive + Judicial
Zone 2 — Farmlands (Agriculture/Culture)	19-36	#92400E Amber	Agricultural production, housing, cultural preservation, WFCF traceability, education	Legislative (ADEPT, HLU)

Zone	Nodes	Color	Government Domain	Primary Branches Served
Zone 3 — Makai (Ocean/Revenue/Franchise)	37-52	#1E3A5F Navy	Economic development, franchise licensing, GWT distribution, municipal revenue	Executive + BFED
Node 53 — Emergency Override (Joker)	53	#DC2626 Red	FEMA BRIC fire modeling, emergency protocol, HRS Ch. 127A Emergency Management	Executive Emergency Powers
Node 54 — Sovereign Audit (Joker)	54	#7C3AED Purple	Full-system financial audit, Charter compliance review, immudb verification sweep	Judicial + Corporation Counsel

## II. EXECUTIVE BRANCH

Mayor Richard T. Bissen Jr. | Maui County Charter Article IV | HRS Chapter 46 | \$1.616B FY2027 Budget

### Constitutional Authority

The executive power of the County of Maui is vested in and exercised by the Mayor (Maui County Charter Article IV). The Mayor serves as Chief Executive Officer with authority over all county departments, budget administration, emergency powers (HRS Chapter 127A), and appointment of the Corporation Counsel. HRS Chapter 46-1.5 enumerates the general powers of counties including zoning enforcement, tax exemptions for housing and agriculture, and regulatory authority.

### County Departments Served by MauiOS

Department	MauiOS Function	HFEv4 System	HRS / Charter Authority
Department of Finance	GWT 12.5% allocation tracking, real property tax data per node, grant accounting, quarterly financial reports	Vendor (GWT) + AttributeSystem (KPIs)	HRS Ch. 246 (Real Property Tax), Ch. 40 (Public Finance), Charter Art. XIV
Department of Planning	Land use compliance per HRS 205, agricultural district node classification, permit tracking	MapManagement + BuildingSystem	HRS Ch. 205 (Land Use Commission), Ch. 46-4 (County Zoning)
Department of Water Supply	Bill 146 water demand data (actual gallons/day per node), well monitoring, water allocation per Zone 1	WeatherManager + DT_SGI_Elements (Water)	HRS Ch. 174C (State Water Code), Bill 146 CD1
Department of Public Works	Infrastructure node status, FarmBox co-siting approvals, resiliency hub locations	BuildingSystem + ActorHealth	HRS Ch. 46, County Charter Art. IV
Office of Recovery (Lahaina)	CDBG-DR node tracking, Lahaina recovery progress, 88% undeployed funds pipeline	WBP_SGI_NodeMap + RAIS dashboard	HUD CDBG-DR Action Plan, Charter Art. IV
Corporation Counsel	RAIS compliance alerts, GHOST-001 fraud detection, AUDIT-001 financial anomaly, legal scroll evidence	EventTrigger + AC_SGI_RAISBridge + immudb	HRS Ch. 84 (Ethics), Charter Art. XIII, MOU dispute terms
Emergency Management Agency	Node 53 fire/emergency activation, FEMA BRIC fire modeling (FARSITE), resiliency hub deployment	Node 53 Emergency Override + WeatherManager	HRS Ch. 127A (Emergency Management), FEMA BRIC
Environmental Management	Environmental monitoring per node, biome state data, invasive species alerts	WeatherManager + EventTrigger	HRS Ch. 205 (conservation), DLNR interface
Department of Housing	Affordable housing fund (\$79.5M) node tracking, Hua Lani co-site data, 600+ unit pipeline	BuildingSystem + GWT.Eligible tags	HRS Ch. 46 (housing exemptions), Charter Affordable Housing Fund
Parks and Recreation	Community node activity data, public space utilization metrics	NPCBehaviorSystem + UI	Charter Art. IV, County ordinances

## Digital Twin Budget Management (MOU Section 7.1)

The MauiOS Digital Twin provides the Mayor's office with real-time visibility into every dollar of the \$1.616B FY2027 budget. The platform tracks: expenditure vs. budget by department and node, variance analysis with automated alerts, grant fund deployment status across all 14+ active programs, and milestone-based reallocation triggers. Every financial event is sealed in immudb creating an immutable audit chain compliant with federal grant oversight requirements.

Budget Category	FY2027 Amount	Node Zone	MauiOS Tracking Method
Affordable Housing Fund	\$79.5M	Zone 2 (Nodes 19-36)	BuildingSystem node co-site data + GWT.Eligible lifecycle
Water Infrastructure	\$44.5M	Zone 1 (Nodes 1-18)	WeatherManager water states + Bill 146 demand data
CDBG-DR Lahaina Recovery	\$1.639B total (88% undeployed)	Zone 2-3 (Lahaina nodes)	RAIS grant pipeline + WBP_SGI_NodeMap Lahaina overlay
Resiliency Hubs (EMA)	\$400K	Node 53 + Zone 1	Node 53 emergency activation + ActorHealth resilience index
Workforce Development (Maui Nui Resiliency Hui)	\$200K	Zone 2-3	NPCBehaviorSystem Section 3 simulation + BFED reporting
GWT Trust (12.5% mandate)	\$248.9M/yr at full deployment	All 52 nodes	Vendor GWT lifecycle + immudb disbursement seal
Real Property Tax Revenue	\$650.8M	All zones	DT_SGI_Nodes per-node tax assessment data
Capital Improvement Program	\$461.4M	Infrastructure nodes	BuildingSystem + EventTrigger project milestone alerts

### III. LEGISLATIVE BRANCH

Maui County Council — 9 Members, 9 Residency Areas | Charter Article II | HRS Chapter 92 Sunshine Law

#### Constitutional Authority

The Maui County Council is the legislative and policy-making body of county government (Maui County Charter Section 2-2). Nine members are elected at-large, one per residency area, serving two-year terms. The Council enacts ordinances, adopts the county budget, confirms mayoral appointments, and exercises oversight over all county departments. Hawaii HRS Chapter 92 (Sunshine Law) requires all board meetings to be open to the public, with proper notice and public testimony provisions.

#### Council Committees and MauiOS Coverage

Committee	Acronym	Jurisdiction	MauiOS Function	HFEv4 System
Budget, Finance & Economic Development	BFED	Annual budget, fiscal policy, economic programs, GWT oversight	Budget dashboard + GWT allocation tracker + grant pipeline + FY2027 \$1.616B review	Vendor + AttributeSystem + DayNightCycle
Water and Infrastructure	WAI	Water rights, utility infrastructure, county facilities	Bill 146 water demand data per node, well monitoring, \$44.5M infrastructure tracking	WeatherManager + DT_SGI_Elements
Housing and Land Use	HLU	Zoning, affordable housing, land use permits, Hua Lani	BuildingSystem node co-site data, \$79.5M housing fund, 10 project pipeline	BuildingSystem + MapManagement
Agriculture, Diversification, Environment & Public Transportation	ADEPT	Farming, ag tourism, food production, environmental protection	FarmingSystem + DT_Farmables crops, WFCF traceability, ag tourism encounter nodes	FarmingSystem + Crafting + Inventory
Public Safety, Land & Ocean Use	PSLU	Police, fire, ocean recreation, public safety	ActorHealth community resilience + Node 53 emergency + WeatherManager safety states	ActorHealth + Node 53
Government Operations, Technology & Intergovernmental Relations	GOTIR	IT policy, county technology, intergovernmental affairs	MauiOS OETS alignment, HRS Ch. 27G data governance, county tech compliance	OnlineMultiplayer + RAIS

#### Legislative Processing Pipeline — How Every Bill Becomes a Node Event

When a bill is introduced in the Maui County Council, MauiOS processes it through four automated stages:

Stage	Action	MauiOS Component	HRS Compliance
1. Introduction	Legistar scraper detects new bill from capitol.hawaii.gov or legistar.com; creates draft RAIS scroll	Playwright scraper + DayNightCycle timestamp	HRS 92-7 agenda notice requirement

Stage	Action	MauiOS Component	HRS Compliance
2. Committee Review	Draft scroll tagged by committee (BFED/WAI/HLU/ADEPT); affected nodes flagged in DT_SGI_Nodes; community impact modeling runs	MapManagement + AttributeSystem + EventTrigger	HRS 92-3 open meeting requirement
3. Public Testimony	Kipuka portal opens testimony window; resident voice recorded with date/time stamp; sealed in immudb on submission	Kipuka (MainMenu + SessionManager) + AC_SGI_RAISBridge + immudb	HRS 92-3.5 testimony rights, HRS 91-2 hearing notice
4. Passage / Kananae Compile	Enrolled bill run through Kananae Compiler; maps to Charter Article + HRS chapter; affected node rules updated in DT_SGI_Nodes	Kananae Compiler + DT_SGI_Nodes update	HRS 46-1 county ordinance authority

### April 2026 Active Bills — Node Impact Map

Bill / Action	Committee	Nodes Affected	Rule Update Required
Bill 146 CD1 — Water demand reform (IN EFFECT Jan 1, 2026)	WAI	All Zone 1 + Zone 2 water nodes	F_PlantAttributes_Requirements: water demand field = actual gallons/day
Bill 180 CD1 — Catchment permit exemption (ENACTED)	WAI	Zone 2 FarmBox co-sites	BuildingSystem: Residential_Catchment category deregulated up to 30,000 gal
Agricultural tourism bills (ADVANCING)	ADEPT	Zone 2 Nodes 19-36	Encounter.AgroTourism tag activated on applicable Zone 2 nodes
FY2027 Budget \$1.616B (UNDER REVIEW April 2026)	BFED	All 52 nodes	AttributeSystem budget allocation per node updated on enactment
\$79.5M Affordable Housing Fund (UNDER REVIEW)	HLU	Zone 2 (Hua Lani anchor)	BuildingSystem: Residential_Affordable category budget ceiling updated
\$44.5M Water Infrastructure (UNDER REVIEW)	WAI	Zone 1 Mauka wells	WeatherManager: 2 new well nodes added to Zone 1 DT_SGI_Nodes

### Sunshine Law Compliance (HRS Chapter 92)

HRS Chapter 92 requires every public board meeting to be open, noticed, and recorded. MauiOS automates this compliance layer:

HRS 92 Requirement	MauiOS Compliance Mechanism
92-7: 6-day advance notice with agenda	Legistar scraper auto-detects posted agendas; RAIS creates draft scroll; notification dispatched to subscribed nodes
92-3: Open meeting requirement	All council meeting streams timestamped in RAIS; public testimony window opens in Kipuka portal
92-3.5: Public testimony rights	Kipuka portal collects testimony; each submission sealed in immudb with RAIS.Scroll.Sealed tag; immutable public record
92-9: Minutes requirement	RAIS auto-archives meeting minutes as sealed scrolls; available via WBP_SGI_RAISDashboard

<b>HRS 92 Requirement</b>	<b>MauiOS Compliance Mechanism</b>
92-5: Executive session exceptions	Sessions tagged as RAIS.Scroll.Restricted; available to Corporation Counsel only via authenticated admin portal
OIP enforcement	AUDIT-001 scroll triggers if any board meeting proceeds without proper RAIS pre-filing; alert to Corporation Counsel

## IV. JUDICIAL BRANCH

Hawaii State Judiciary — Second Circuit (Maui) | HRS Chapter 603 + 604 | Wailuku Courthouse, Hoapili Hale

### Constitutional Authority

The judicial function at the county level is exercised by the Hawaii State Judiciary's Second Circuit, which encompasses the islands of Maui, Molokai, Lanai, Kahoolawe, and Molokini. The Second Circuit maintains four Circuit Court judges at the Wailuku Courthouse (2145 Main Street). Under HRS Chapter 603, the Circuit Court has general jurisdiction over civil and criminal matters. Under HRS Chapter 604, District Courts handle violations of county ordinances, civil claims under \$40,000, misdemeanors, and landlord-tenant actions.

Maui County does not have an independent judicial branch at the charter level. Instead, the County interfaces with the State Judiciary through the Corporation Counsel (legal officer, appointed by Mayor with Council approval), and through the MOU dispute resolution protocol, which provides a structured path from internal resolution to binding arbitration before any matter reaches the courts.

### Court Jurisdiction Relevant to MauiOS

Court	Jurisdiction	MauiOS Interface	HRS Authority
Second Circuit Court	General civil + criminal jurisdiction, appellate review of district court, jury trials, environmental enforcement	immudb sealed RAIS scrolls as evidence; GHOST-001 fraud scroll triggers referral to Corp Counsel	HRS Ch. 603
Second Circuit District Court	County ordinance violations, civil claims <=\$40K, misdemeanors, landlord-tenant, TROs	RAIS compliance chain documenting ordinance breach history; sealed testimony via Kipuka	HRS Ch. 604
Second Circuit Family Court	Domestic relations, juvenile, guardianship	Community node health data (NPCBehaviorSystem) can inform social service referrals	HRS Ch. 571
Office of Disciplinary Counsel	Attorney misconduct, ethics	Corporation Counsel RAIS alert feed; HRS Ch. 84 ethics compliance data	HRS Ch. 84 Ethics

### MOU Dispute Resolution Protocol

The 12 Stones MOU with Maui County establishes a three-tier dispute resolution protocol that keeps most matters out of the court system entirely. MauiOS manages all three tiers:

Tier	Process	Timeline	MauiOS Role	Outcome
Tier 1	Direct Negotiation between parties	30 days	RAIS surfaces relevant scrolls; both parties access dispute dashboard; Kipuka resident voice activated if community-affecting	Resolved internally — RAIS scroll sealed as settlement record
Tier 2	Facilitated Mediation (resident voice via software per MOU Section	60 days	Mediation sessions timestamped in RAIS; all submissions sealed in immudb; node impact modeling shows community effect	Mediation settlement sealed in immudb; precedent scroll created

Tier	Process	Timeline	MauiOS Role	Outcome
	9.4)			
Tier 3	Binding Arbitration (State of Hawaii governing law)	Per arbitration rules	Complete immudb audit trail provided as evidence; RAIS compliance history; all sealed scrolls admissible as business records	Arbitration award enforceable under Hawaii law
Escalation	Court referral (HRS Ch. 603/604 Second Circuit)	Court schedule	Full immudb chain of custody; RAIS scroll export for discovery; GHOST-001 and AUDIT-001 scroll flags inform legal strategy	Litigation with complete platform audit trail

### Node 54 — Sovereign Audit (Judicial Interface)

Node 54 is the platform's Judicial Joker node. When activated, it triggers a full-system sovereign audit sweep: all 52 active nodes are scanned for compliance with the Charter, active HRS requirements, and MOU obligations. The audit output is a sealed immudb document admissible in any Hawaii court as a business record under HRS Chapter 622A (Uniform Electronic Transactions Act) and UETA.

Scroll Activated by Node 54	What It Audits	Legal Trigger
AUDIT-001 (Financial Anomaly)	GWT disbursements, grant accounting, budget vs. actual variance	Corporation Counsel referral or BFED committee request
GHOST-001 (Fraud Detection)	Bid manipulation, grant fraud patterns, false reporting in RAIS	CDBG-DR HUD compliance, FinCEN BSA requirements
COMPLIANCE-001 (Federal Trigger)	All 14+ active grant programs compliance status vs. federal requirements	HUD, FEMA, USDA annual audit requirements
ACCOUNTABILITY-001 (Ethics)	Official conduct, conflict of interest, HRS Ch. 84 compliance	County Charter ethics provisions, State Ethics Commission

## V. Hawaii Revised Statutes (HRS) — Full Compliance Matrix

MauiOS is designed to serve as the county's primary interface to Hawaii Revised Statutes. The Kanae Compiler creates a living cross-reference between every HRS chapter that touches county operations and the specific HFEv4 systems, node zones, and RAIS scrolls that enforce or report compliance. The table below covers all primary HRS chapters relevant to MauiOS operations.

### County Administration (HRS Title 6)

HRS Chapter	Title	What It Governs	MauiOS Implementation
Ch. 46	County Organization and Administration	County powers, zoning authority (HRS 46-4), general jurisdiction, tax exemptions for housing/agriculture/homeless programs	Kanae Compiler maps all county ordinances to node-level rules; BuildingSystem enforces 46-4 zoning; GWT tax-exempt status tracking
Ch. 46-1.5	General Powers of Counties	Enforcement of claims, regulatory authority, marking/lighting of structures, county service delivery	AttributeSystem node compliance flags; ActorHealth county service delivery index per node
Ch. 50	County Fiscal Administration	Budget adoption, fiscal year, accounting standards, audit requirements	FY2027 \$1.616B budget loaded into AttributeSystem; AUDIT-001 scroll triggers on fiscal anomaly; DayNightCycle tracks fiscal year cadence
Ch. 51	Revenue Bonds	County bonding authority (\$120.5M authorized FY2027)	Bond obligation nodes tracked in Vendor system; payment schedule in DayNightCycle
Ch. 76-80	Civil Service, Personnel	County employee classification, civil service rights, compensation	NPCBehaviorSystem workforce simulation; Section 3 workforce compliance reporting (CDBG-DR)

### Open Government (HRS Title 8)

HRS Chapter	Title	What It Governs	MauiOS Implementation
Ch. 91	Administrative Procedure	Agency rulemaking: 30-day notice, public hearings, contested case procedures	Kanae Compiler tracks HAR rulemaking; 30-day countdown in DayNightCycle; RAIS scroll created on each rulemaking initiation
Ch. 92	Public Agency Meetings and Records (Sunshine Law)	Open meetings, 6-day agenda notice, public testimony rights, executive session exceptions, minutes	Legistar scraper + Kipuka testimony engine; immudb seals every meeting record; AUDIT-001 triggers on notice failure
Ch. 92F	Uniform Information Practices Act (UIPA)	Public records access, exemptions, disclosure timeline	RAIS scroll classification system (Public / Restricted / Sealed); UIPA request processing tracked in RAIS
Ch. 84	Ethics in Government	Financial disclosure, conflict of interest, revolving door restrictions, gifts	GHOST-001 scroll: conflict of interest pattern detection; ACCOUNTABILITY-001: ethics compliance; all GWT

HRS Chapter	Title	What It Governs	MauiOS Implementation
			disbursements sealed in immudb for ethics audit
<b>Ch. 27G</b>	Digital Government (Portal Program)	Electronic government services, Access Hawaii, chief data officer, data/AI governance center (eff. July 1, 2025)	MauiOS aligns with OETS data governance requirements; Kipuka portal designed to meet eHawaii.gov interoperability; RAIS feeds county data to State Data Office

## Natural Resources, Water, and Agriculture (HRS Title 12-13)

HRS Chapter	Title	What It Governs	MauiOS Implementation
<b>Ch. 174C</b>	State Water Code	Commission on Water Resource Management, water permit system, county water use plans must align with zoning/land use policies	WeatherManager water states per node; Bill 146 actual-use methodology in F_PlantAttributes_Requirements; 2 new Upcountry wells tracked in Zone 1 DT_SGI_Nodes
<b>Ch. 171</b>	Public Lands (DLNR)	State land management, leases, conservation district rules	MapManagement zone classifications align with DLNR conservation/agricultural boundaries; Zone 1 Mauka nodes carry conservation flags
<b>Ch. 166</b>	State Farm Leases	Agricultural lease terms, HDOA oversight, farm use requirements	DT_SGI_Nodes: farm lease ID field per Zone 2 node; Crafting system enforces farm use conditions for USDA VAPG compliance
<b>Ch. 167</b>	Irrigation Systems	State irrigation water delivery, fees, maintenance	WeatherManager irrigation node states; DT_SGI_Elements water delivery multiplier
<b>Ch. 205</b>	Land Use Commission	State land classification (urban/rural/agricultural/conservation), permissible agricultural uses (205-4.5 Class A/B soils)	BuildingSystem enforces 205-4.5 permitted uses; Zone 2 nodes carry soil classification A/B flags; agricultural tourism encounter tags align with 205-4.5 farm-related activities
<b>Ch. 205A</b>	Coastal Zone Management	Development near shoreline, Special Management Area permits	Zone 3 Makai nodes carry SMA permit flags; MapManagement enforces coastal setback rules
<b>Ch. 195</b>	Natural Area Reserves	Protected ecosystems, conservation management	WeatherManager biome states trigger conservation zone alerts; EventTrigger fires RAIS scroll on conservation boundary breach

## Fiscal, Tax, and Finance (HRS Titles 14-17)

HRS Chapter	Title	What It Governs	MauiOS Implementation
<b>Ch. 235</b>	Income Tax	State income tax, withholding, business income	GWT distribution income tracking; Vendor system captures 12.5% splits for tax reporting; immudb provides audit trail

HRS Chapter	Title	What It Governs	MauiOS Implementation
Ch. 237	General Excise Tax (GET)	Hawaii GET on business transactions, county surcharge authority	Franchise fee transactions through Stripe Connect capture GET; county surcharge allocation tracked in BFED reporting layer
Ch. 246	Real Property Tax	County administration of real property tax, assessment, exemptions, appeals	DT_SGI_Nodes: real property assessment data per node; GWT 5% of certified RPT = \$32.5M Affordable Housing Fund; tax exemption tracking for housing/ag programs
Ch. 40	Public Finance	General fund accounting, appropriation control, fiscal officer duties	AUDIT-001 scroll monitors appropriation vs. expenditure variance; DayNightCycle tracks fiscal year milestones
Ch. 36	State Funds	State special funds, revolving funds, trust funds	GWT trust fund structure modeled on state trust fund compliance; RAIS tracks all fund movements with immudb sealing

## Judiciary (HRS Title 33)

HRS Chapter	Title	What It Governs	MauiOS Implementation
Ch. 603	Circuit Courts	General civil/criminal jurisdiction, environmental enforcement, jury trials, Second Circuit: 4 judges at Wailuku Courthouse	immudb RAIS scrolls admissible as business records; Node 54 Sovereign Audit export formatted for discovery
Ch. 604	District Courts	Civil claims <=\$40K, county ordinance violations, misdemeanors, TROs, small claims <=\$5K	RAIS ordinance compliance history; EventTrigger ordinance breach scroll triggers; Kipuka testimony creates sealed evidence record
Ch. 622A	Uniform Electronic Transactions Act (UETA)	Legal validity of electronic records, electronic signatures, electronic contracts	immudb sealed scrolls valid as electronic business records under UETA; Kipuka testimony submissions = legally valid electronic records
Ch. 127A	Emergency Management	Governor/Mayor emergency powers, emergency proclamations, disaster relief coordination	Node 53 Emergency Override Protocol; WeatherManager fire/disaster state triggers EMA alert; FEMA BRIC modeling deliverable

## VI. State Government Interface

MauiOS is designed as a county platform, but its architecture explicitly supports upward integration to state-level agencies, the state legislature, and the Governor's office. The Kananāe Compiler functions as a bidirectional translation layer between county ordinances, state HRS chapters, and the 12 Stones Sovereign Charter — creating a three-way alignment that no prior county technology platform has achieved.

### State Agency Interfaces

State Agency	Relevant HRS	MauiOS Interface	Data Flow Direction
Hawaii State Legislature (capitol.hawaii.gov)	All HRS chapters	Legistar-style scraper monitors state bill activity affecting Maui County; Kananāe Compiler cross-references state bills to county node impacts	State Legislature -> MauiOS (inbound monitoring)
Office of Enterprise Technology Services (OETS)	HRS Ch. 27G	MauiOS Kipuka portal aligned with eHawaii.gov interoperability standards; RAIS feeds anonymized county metrics to State Data Office; HB726 data/AI governance compliance	Bidirectional — county data to state, state standards into platform
Department of Land and Natural Resources (DLNR)	HRS Ch. 171, 174C, 195	WeatherManager biome states feed DLNR environmental monitoring; MapManagement zone classifications mirror DLNR land records; water permit data per Zone 1 node	Bidirectional — node sensor data to DLNR, DLNR classifications into node rules
Hawaii Department of Agriculture (HDOA)	HRS Ch. 147, 150A, 166	DT_Farmables crop data aligned with HDOA commodity reporting; WFCF traceability chain supports HDOA biosecurity; Akamai Arrival digital ag form integration stub	Bidirectional — farm production data up, HDOA certifications into WFCF chain
Land Use Commission (LUC)	HRS Ch. 205	BuildingSystem Zone 2 nodes carry LUC district classification (Agricultural A/B soil class); permitted uses per 205-4.5 enforced at node level	Inbound — LUC classifications define node rules
Commission on Water Resource Management (CWRM)	HRS Ch. 174C	WeatherManager water states interface with CWRM water permit system; Bill 146 actual-use methodology feeds CWRM county water use plan update requirement	Bidirectional — node water data to CWRM, CWRM permit status into node rules
Office of Planning & Sustainable Development (OPSD)	HRS Ch. 226 (Hawaii State Plan)	MapManagement zone topology aligned with State Functional Plans; DT_SGI_Nodes includes State Plan policy area per node	Inbound — State Plan priorities influence node priority scoring
Hawaii State Judiciary (Second Circuit)	HRS Ch. 603, 604	immudb scroll chain exported for discovery; Node 54 audit package formatted for court submission; Corporation Counsel receives RAIS alert feed directly	Outbound — MauiOS provides evidence and compliance records to courts
Governor's Office of Disaster Assistance	HRS Ch. 127A	Node 53 Emergency Override feeds real-time disaster state to Governor's emergency dashboard; CDBG-DR progress reports auto-generated from RAIS	Bidirectional — node emergency data up, emergency declarations into node override

## Hawaii State Plan Alignment (HRS Chapter 226)

The Hawaii State Plan (HRS Chapter 226) establishes statewide functional plan priorities across nine domains. Every MauiOS node is scored against these priorities, enabling the platform to demonstrate alignment with state policy for grant applications and legislative support:

State Plan Domain (HRS 226)	MauiOS Node Zone Alignment	HFEv4 System
Population — managed growth, community character	All zones — demographic data per node via NPCBehaviorSystem	NPCBehaviorSystem + MapManagement
Economy — economic health, diversification	Zone 3 (Makai, franchise/revenue nodes)	Vendor (GWT) + AbilitySystem + DeckBuilderSubsystem licensing
Physical Environment — natural resources, conservation	Zone 1 Mauka + Node 53 (emergency/fire)	WeatherManager + EventTrigger + DT_SGI_Elements
Facility Systems — infrastructure	Zone 1 (water/utilities) + Zone 2 (FarmBox)	BuildingSystem + WeatherManager (water)
Agriculture — agricultural lands, production	Zone 2 Farmlands (primary)	FarmingSystem + Crafting + Inventory + DT_Farmables
Education — lifelong learning, workforce	Zone 2 (Sage Game education nodes)	Sage Game UE5 + Kipuka portal + Section 3 workforce
Health — health care, community well-being	All zones — ActorHealth resilience index	ActorHealth + NPCBehaviorSystem + resiliency hubs
Housing — affordable, adequate	Zone 2 (Hua Lani) + Zone 3 (workforce housing)	BuildingSystem + GWT.Eligible + \$79.5M HLU tracking
Public Safety — emergency, justice	Node 53 (emergency) + Node 54 (judicial audit)	Node 53/54 Joker protocols + WeatherManager + RAIS

## VII. Full Government Capability Map

The following matrix shows every governmental function MauiOS can perform and the specific platform component that delivers it. This is the complete operational picture of MauiOS as a sovereign county governance platform.

Government Function	Branch	MauiOS Component	HRS / Legal Basis	Status
Council agenda auto-processing	Legislative	Legistar scraper + DayNightCycle timestamps	HRS 92-7 agenda notice	Phase 7
Bill-to-node impact mapping	Legislative	Kananae Compiler + DT_SGI_Nodes update	HRS 46 county ordinance authority	Phase 7
Public testimony collection and sealing	Legislative	Kipuka portal + immudb (RAIS.Scroll.Sealed)	HRS 92-3.5 testimony rights	Phase 7
Sunshine Law compliance automation	Legislative	RAIS scroll pre-filing + AUDIT-001 trigger	HRS 92 (all sections)	Phase 6-7
Budget visualization (FY2027 \$1.616B)	Legislative	WBP_SGI_RAISDashboard + AttributeSystem	HRS 50 fiscal admin	Phase 5-7
Committee bill tracking by node	Legislative	MapManagement + DT_SGI_Nodes committee flags	Maui Charter Art. II	Phase 2
Real-time budget monitoring	Executive	Digital Twin + AttributeSystem + Vendor	HRS 50, Charter Art. XIV	Phase 5
Grant pipeline management (\$1.75B+)	Executive	RAIS grant scrolls + DayNightCycle deadlines	All active federal programs	Phase 6
GWT 12.5% allocation and disbursement	Executive	Vendor (GWT) + immudb seal	Charter Art. GWT mandate	Phase 5
Water infrastructure monitoring	Executive	WeatherManager + Zone 1 DT_SGI_Nodes	HRS 174C, Bill 146	Phase 1
Affordable housing pipeline tracking	Executive	BuildingSystem + GWT.Eligible tags	HRS 46, Charter Housing Fund	Phase 2
Agricultural production reporting	Executive	FarmingSystem + WFCF chain + Crafting	HRS 166, USDA VAPG	Phase 3
FarmBox deployment status	Executive	BuildingSystem + DT_Buildables	MOU Section 4 Phase 3	Phase 2
Emergency management (FEMA BRIC)	Executive	Node 53 + WeatherManager + FARSITE stub	HRS 127A, FEMA BRIC	Phase 4
Section 3 workforce compliance	Executive	NPCBehaviorSystem + RAIS workforce scrolls	CDBG-DR Section 3 (HUD)	Phase 3
Ethics compliance monitoring	Executive	GHOST-001 + ACCOUNTABILITY-001 scrolls	HRS 84, Charter Art. XIII	Phase 4-6
Dispute resolution (Tier 1-3)	Judicial	Kipuka testimony + RAIS mediation scrolls + immudb	MOU dispute resolution protocol	Phase 7
Court evidence packaging (Node 54)	Judicial	Node 54 Sovereign Audit + immudb export	HRS 622A UETA, Ch. 603-604	Phase 6
Fraud detection and legal referral	Judicial	GHOST-001 scroll + Corporation Counsel alert	HRS 84, FinCEN BSA	Phase 4
Ordinance compliance history	Judicial	RAIS ordinance breach scrolls + EventTrigger	HRS 604 District Court jurisdiction	Phase 4
Electronic record legal validity	Judicial	immudb (UETA-compliant) + RAIS.Scroll.Sealed	HRS 622A	Phase 6
HRS-to-Charter cross-reference	State HRS	Kananae Compiler (Legislation -> Charter Article)	All HRS chapters + Charter SSC v5	Phase 7
Land use classification per node	State HRS	MapManagement + BuildingSystem (HRS 205 enforcement)	HRS 205, Ch. 46-4	Phase 2
Water permit tracking per	State HRS	WeatherManager + Zone 1	HRS 174C CWRM	Phase 1

Government Function	Branch	MauiOS Component	HRS / Legal Basis	Status
node		DT_SGI_Nodes		
Real property tax data per node	State HRS	DT_SGI_Nodes RPT field + Vendor GWT 5%	HRS 246	Phase 1
State data governance compliance	State HRS	RAIS OETS feed + Kipuka eHawaii.gov alignment	HRS 27G (eff. July 1, 2025)	Phase 7
UIPA public records management	State HRS	RAIS scroll classification (Public/Restricted/Sealed)	HRS 92F	Phase 6

## VIII. Architectural Integrity — Why This Works

The 52-node HFEv4 topology is the architectural insight that makes MauiOS function as a true government operating system rather than a collection of disconnected apps. Each of the 52 nodes simultaneously is: a physical community node (a place, a farm, a district), a policy node (what rules apply here), a data node (what is being measured here), a financial node (what money flows through here), and a compliance node (what laws govern here).

This five-layer simultaneous function means that when a council bill passes, an executive department acts, a court rules, or a state agency issues new rules — the effect propagates automatically through the node system. The Kananae Compiler is the translator. The RAIS engine is the compliance enforcer. The immudb chain is the evidence layer. And the Sage Game (UE5.7 Unreal Engine) is the visualization and simulation environment that makes all of this legible to elected officials, community members, and judges alike.

### The Sovereign Charter as Constitutional Layer

The 12 Stones Sovereign Charter (SSC v5, 28 Articles, filed April 14, 2025) is not just a company charter. It is a governance constitution that sits between the Maui County Charter and the 12 Stones technology platform. When a County Charter provision, an HRS statute, or a federal grant requirement needs to be encoded into the platform, the Kananae Compiler first checks it against the Sovereign Charter. The result is a three-way alignment:

Constitutional Layer	Authority	MauiOS Role
Federal Law (HUD, FEMA, USDA, DOE)	Highest — supersedes all	Grant pipeline compliance; Node 53 FEMA interface; CDBG-DR action plan tracking
Hawaii Revised Statutes (HRS)	State law — governs county authority	Kananae Compiler statutory cross-reference; all 30+ HRS chapters mapped to node rules
Maui County Charter (2023 Edition)	Local constitutional authority	Council, Mayor, and Corporation Counsel functions mapped to platform roles
12 Stones Sovereign Charter (SSC v5)	Platform constitutional layer	Governs GWT, IP ownership, dispute resolution, data sovereignty, node governance rules
MauiOS Platform Rules (DT_SGI_Nodes)	Operational layer	Node-level rules encoding all four constitutional layers into executable system behavior

### The Platform's Five Foundational Guarantees to Government

Guarantee	What It Means	How MauiOS Delivers It
Transparency	Every government action is recorded, timestamped, and publicly accessible per HRS Chapter 92	immudb immutable ledger + WBP_SGI_RAISDashboard + Kipuka public portal
Accountability	Every dollar, every decision, every compliance event is traceable to a responsible party and a sealed record	AUDIT-001 + GHOST-001 + ACCOUNTABILITY-001 scrolls + Node 54 sovereign audit
Participation	Every resident can testify, track their community node's health, and see the impact of council decisions in near-real-time	Kipuka portal + WBP_SGI_NodeMap + public testimony seal in immudb
Compliance	Every federal grant, state statute,	Kananae Compiler + COMPLIANCE-001 scroll +

Guarantee	What It Means	How MauiOS Delivers It
Sovereignty	county ordinance, and charter provision is encoded in the node system and enforced automatically 12 Stones owns the software; the County owns the data. No vendor lock-in. Data stored in Hawaii (University of Hawaii data center for cold archive)	DT_SGI_Nodes rule engine  IP ownership per MOU Section 12; Cloudflare R2 + UH data center; Charter SSC v5 Art. on sovereignty

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12 Stones Global Inc. · jimlangford@me.com · Maui, Hawaii  
**REGENERATE · EDUCATE · GOVERN · LIBERATE**  
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## BFED Committee

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**From:** Brian Mercer <bmercer78@gmail.com>  
**Sent:** Sunday, April 5, 2026 10:37 PM  
**To:** BFED Committee  
**Subject:** Written testimony for the BUDGET, FINANCE, AND ECONOMIC DEVELOPMENT COMMITTEE (2025-2027) meeting on Monday, April 6, 2026 at 9:00 a.m.  
**Attachments:** Brian Mercer testimony.pdf

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This written testimony is for the BUDGET, FINANCE, AND ECONOMIC DEVELOPMENT COMMITTEE (2025-2027) meeting on Monday, April 6, 2026 at 9:00 a.m.

**TESTIMONY IN SUPPORT OF FUNDING FOR LA'AKEA VILLAGE HOUSING PROJECT  
Before the Maui County Council Budget, Finance, and Economic Development  
Committee**

**Aloha Chair Sugimura, Vice Chair Batangan, and Members of the Committee,**

My name is Brian Mercer, resident of Paia, and I live in Skill Village neighboring the proposed housing project. I am writing in strong support of the County of Maui Affordable Housing Fund request of **\$4.5 million** for the La'akea Village supported housing project in Pā'ia.

My husband and I are personal trainers and have volunteered in the past at La'akea Village teaching fitness classes to their participants. We've seen firsthand how empowering their program for adults with IDD is. We've also heard firsthand from their participants how isolating life can sometimes be at home, away from their La'akea community. Not only would supporting the project provide much needed affordable and safe housing, it would continue to provide that sense of community after the day program has ended.

Particularly as adults with IDD age out of family homes or lose caregivers, finding housing that is both accessible and affordable can be a struggle. This project adds much needed ADA-accessible housing inventory to Maui with dedicated units for adults with disabilities and integrated housing for support staff and other income-qualified residents.

We have lived across the street from La'akea for over 11 years now and have seen through our time volunteering as it has grown and added a commercial kitchen, a store, and developed a farm that grows produce and flowers and now has horses. We've seen how well everyone does there and watched the individuals who take part in their program grow. We've seen their lives enriched. We'd love to see La'akea Village continue to grow and thrive with a housing community.

**I am in favor of the proposed development and urge the committee to fully fund the requested \$4.5 million so that this project can move forward to development.**

Mahalo for your time and consideration.

**Sincerely,**  
Brian Mercer  
666 Pili Loko St.  
Paia

## BFED Committee

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**From:** Chris Mercer <chrs\_mercer@yahoo.com>  
**Sent:** Sunday, April 5, 2026 10:41 PM  
**To:** BFED Committee  
**Subject:** Written testimony for the BUDGET, FINANCE, AND ECONOMIC DEVELOPMENT COMMITTEE (2025-2027) meeting on Monday, April 6, 2026 at 9:00 a.m.  
**Attachments:** cid24212BED-3FFB-4F8A-ACA0-F5A33A60D536.pdf

[You don't often get email from chrs\_mercer@yahoo.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification> ]

This written testimony is for the BUDGET, FINANCE, AND ECONOMIC DEVELOPMENT COMMITTEE (2025-2027) meeting on Monday, April 6, 2026 at 9:00 a.m.

**TESTIMONY IN SUPPORT OF FUNDING FOR LA'AKEA VILLAGE HOUSING PROJECT  
Before the Maui County Council Budget, Finance, and Economic Development  
Committee**

**Aloha Chair Sugimura, Vice Chair Batangan, and Members of the Committee,**

My name is Chris Mercer, resident of Paia, and I live in Skill Village neighboring the proposed housing project. I am writing in strong support of the County of Maui Affordable Housing Fund request of **\$4.5 million** for the La'akea Village supported housing project in Pā'ia.

My husband and I are personal trainers and have volunteered in the past at La'akea Village teaching fitness classes to their participants. We've seen firsthand how empowering their program for adults with IDD is. We've also heard firsthand from their participants how isolating life can sometimes be at home, away from their La'akea community. Not only would supporting the project provide much needed affordable and safe housing, it would continue to provide that sense of community after the day program has ended.

Particularly as adults with IDD age out of family homes or lose caregivers, finding housing that is both accessible and affordable can be a struggle. This project adds much needed ADA-accessible housing inventory to Maui with dedicated units for adults with disabilities and integrated housing for support staff and other income-qualified residents.

We have lived across the street from La'akea for over 11 years now and have seen through our time volunteering as it has grown and added a commercial kitchen, a store, and developed a farm that grows produce and flowers and now has horses. We've seen how well everyone does there and watched the individuals who take part in their program grow. We've seen their lives enriched. We'd love to see La'akea Village continue to grow and thrive with a housing community.

**I am in favor of the proposed development and urge the committee to fully fund the requested \$4.5 million so that this project can move forward to development.**

Mahalo for your time and consideration.

**Sincerely,**  
Chris Mercer  
666 Pili Loko St.  
Paia

## BFED Committee

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**From:** County Clerk  
**Sent:** Monday, April 6, 2026 7:26 AM  
**To:** BFED Committee  
**Subject:** Fw: Letter for the ag and business internship ship

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**From:** Eliza Brooks <eliza.brooks.555@gmail.com>  
**Sent:** Sunday, April 5, 2026 11:06 AM  
**To:** County Clerk <County.Clerk@mauicounty.us>  
**Subject:** Letter for the ag and business internship ship

You don't often get email from eliza.brooks.555@gmail.com. [Learn why this is important](#)

Hi my name is Eliza Brooks i go by liza I was an intern for the ag and business internship. i interned at hale auka garden and farm eco retreat in haiku. I learned how to use and start a hydroponic system and I learned more about the Aina I didn't know before. I did up to 120 hours for this internship learning new things as I went like how to check if eggs are fertilized or not and how to trim feather so the birds don't fly away we did weeding feeding animals and we picked the vegetables and fruit for the stores and online. I also learned that clean a fish pond takes time and effort you have to make sure no fish get damaged in the process of getting them out and transferred then you have to drain the pond and make sure that their air circulation pump isn't clogged or anything like that and clean the filter then fill the pond back up . My experience for this whole internship was great I got a lot out of and it might be something im going to do more in the future. These experience give you more then just knowledge it gives you something you look forward to and it keeps youu active, sometimes it might be hard to continue to work but if you find the joy in it you will find your way .

## BFED Committee

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**From:** County Clerk  
**Sent:** Monday, April 6, 2026 7:26 AM  
**To:** BFED Committee  
**Subject:** Fw: Maui County Funding Support - STEMworks  
**Attachments:** STEMS MEDB Testimony (Pellegrino).pdf

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**From:** Alana <akaopuiki@gmail.com>  
**Sent:** Sunday, April 5, 2026 6:37 PM  
**To:** County Clerk <County.Clerk@mauicounty.us>  
**Cc:** lalaine@medb.org <lalaine@medb.org>; Mrs. Austin <20091595@k12.hi.us>  
**Subject:** Maui County Funding Support - STEMworks

You don't often get email from akaopuiki@gmail.com. [Learn why this is important](#)  
Aloha,

Our family's written testimony in support of Maui STEMworks is attached.

Mahalo,  
Alana Kaopuiki-Pellegrino

4/5/26

Aloha mai kākou,

‘O mākou ka ‘Ohana Pellegrino. On behalf of myself Hōkūao Pellegrino, wife Alana Ka‘ōpūiki-Pellegrino, and daughter Kawaihua Pellegrino, we are submitting written testimony in strong support for funding the Maui Economic Development Board’s Economic Development Programs" specifically STEMworks Programs. Our ‘ohana engage in these programs that exist both at schools as well as on our farm as part of the Ag Internship Program.

As parents, we were thrilled that Kalama offered a plethora of afterschool enrichment opportunities at no cost. Not only were the offerings available creative and interesting, but they also helped promote advanced skill building and mentorship opportunities. Our daughter, Kawaihua is a 7th grader at Kula Kaiapuni ‘o Kalama (Kalama Intermediate School) and partakes in two MEDB Stemworks Afterschool programs: Papa Hula and Volleyball. Through these programs, she has developed new friendships with other STEMsters and strengthened her self-confidence with the help of positive and encouraging staff. We know our daughter is in a safe, stable, and nurturing environment extending her education instead of being home alone after school before we get home. STEMworks Programs respect students’ maturity and agency while still providing structure and guidance.

We are grateful this year that she was also selected to attend the STEMworks Hawaii Conference. Not only is this a great opportunity for our daughter to learn about different STEM careers, but it provides her with enriching off-island experiences. She is excited to have such a large venue to share the ‘ike she learns from Ka Pā Hula o Kalama with the rest of the conference. By sponsoring the travel costs, it keeps our family from having to stress about fundraising and creates an opportunity for us to teach her about the importance of giving back. Kalama School provides a Kalama Cares night that hosts a hō‘ike showcasing the learning that occurred in the year. It is a fantastic event for our ‘ohana to be a part of and learn from STEM representatives in our own community.

Our farm, Noho‘ana Farm also engages with STEMworks Programs by being a host and mentorship site for the Ag Internship Program. We have been working with this program now for 9 years and we have had tremendous success in providing a unique skillset around food production, food processing and culture-based education with over a dozen high school students. We currently have 2 high school students who started in the fall. They help with numerous tasks, like milling poi for various community events. We would not have been able to hit the many goals we have set forth at our farm without the assistance of this program.

We feel blessed and lucky to be a part of the STEMworks community. We hope that other keiki will have the opportunity to attend these great programs in the future.

Mahalo,

Hōkūao Pellegrino, Alana Ka‘ōpūiki-Pellegrino, Kawaihua Pellegrino, and Keālia Pellegrino

## BFED Committee

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**From:** County Clerk  
**Sent:** Monday, April 6, 2026 7:27 AM  
**To:** BFED Committee  
**Subject:** Fw: MEDB STEMworks written testimony  
**Attachments:** MEDB STEMworks written testimony.pdf

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**From:** Carlys Higuchi <carlyshiguchi@gmail.com>  
**Sent:** Friday, April 3, 2026 7:23 PM  
**To:** County Clerk <County.Clerk@mauicounty.us>  
**Cc:** Lalaine STEM Medb <lalaine@medb.org>  
**Subject:** MEDB STEMworks written testimony

You don't often get email from carlyshiguchi@gmail.com. [Learn why this is important](#)  
Hi,

Please see the attachment that my daughter, Kalena Lee, wrote asking for continued support of the MEDB Stemworks program.

Mahalo for your consideration.

Carlys Higuchi

4/3/26

Aloha, my name is Kalena Lee and I'm a 5th grader at Pukalani Elementary School. I have been in STEM for 3 years, starting in 2nd grade. Some of the STEM courses that I have done are: Digital art, Intro to STEM, Coding, Robotics, STEM Research Team and Technovation Girls. Now I am here to tell you a few reasons why you should keep supporting the Maui Economic Development Board STEM Works Program.

One of the things I've learned in STEM is how to be a good leader by showing up and always giving it my all even when I'm not up for it. I learned how to be a good teammate by not putting others down, giving everyone a chance to be a leader and by helping each other. I learned that it's good to keep an open mind and try new things even if I didn't want to at first because it can end up being a new experience in the end. I think that if I didn't do STEM, I would not be confident in myself and I would be a lot more shy.

STEMworks has given me the opportunity to go on fun memorable field trips such as the How to Save a Life program at the Maui Memorial Medical Hospital and the trip to Tokyo, Japan to participate in the Japan Cup with the robotics team.

Another thing that STEMworks has opened up to me is being able to teach others, both older and younger people, what STEM is and why it's important. One thing I did was, I helped teach a club of retired teachers how to use Canva to make greeting cards and other things. I also taught kindergarten through 5th grade students at Pukalani Elementary school the importance of STEM and why they should join.

In conclusion, these are my reasons why I think you should continue to support MEDB Stemworks program. Mahalo for listening.

Kalena Lee

Pukalani Elementary School

5th Grade

## **BFED Committee**

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**From:** Sandra Abe <sandra.abe@gmail.com>  
**Sent:** Thursday, April 2, 2026 10:05 PM  
**To:** County Clerk  
**Cc:** mountainbikemaui@gmail.com  
**Subject:** Letter from Mary Charles for Maui Mountain Bike Coalition  
**Attachments:** Maui Mountain Bike Coalition Ltr.pdf

*Please see the attached letter from Mary Charles.  
Thank you.*

April 2, 2026

Aloha Chair & Council Members:

My name is Mary Charles and am writing in support of funding for the Maui Mountain Bike Coalition. I am a long-time resident of Honolulu and a part-time resident of Lanai. I have been riding bikes since I was four-years old. I rode my bike to school, to meet friends and for the pure joy of being outside and free! My first three years of living in Honolulu when I moved here in 1970, I rode my bike to work and to meet friends arriving at the airport who came to visit. It has always been a way of life for me. I took up mountain biking later in life which has been an enriching experience for me to go "off road".

Sadly, as I look at our youth today, they are more and more dependent on their parents, cars, and mobile devices. We need to support the Maui Mountain Bike Coalition to give our kids the opportunity to get outside and thrive. Get exercise, learn skills in navigating and traversing trails may help in other areas of their lives. Make new friends, learn from the biking mentors and so much more than just riding a mountain bike!

Please support the efforts for our youth. It is so desperately needed for their mental and physical health.

With Appreciation & Support,

*Mary Charles*

Mary Charles  
300 Kaunaoa Drive  
Lanai City, Hawaii 96763  
m: 808-479-5577

## BFED Committee

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**From:** Ronjini Joshua <Ronjini@thesilvertelegram.com>  
**Sent:** Friday, April 3, 2026 12:02 PM  
**To:** County Clerk  
**Cc:** lalaine@medb.org  
**Subject:** Testimony in Support of MEDB STEMworks Funding

You don't often get email from ronjini@thesilvertelegram.com. [Learn why this is important](#)

Aloha Chair and Councilmembers,

My name is Ronjini Joshua, and I am a parent of three children who have participated in the MEDB STEMworks programs over the past 3 years. I am writing today in strong support of continued funding for STEMworks through the County of Maui.

As a parent, I have seen firsthand the impact this program has had on my children. Before participating, math and science were simply subjects in school. Through STEMworks, they have become passions. My children are now excited about problem-solving, curious about how things work, and eager to explore careers in science, technology, and engineering.

What stands out most is their enthusiasm. They genuinely love the program. Every session, every activity, every opportunity has deepened their interest and confidence. In fact, we make it a priority to register as soon as enrollment opens because they don't want to miss it.

With three children, access to high-quality STEM enrichment like this would not be financially feasible for our family without the support of this grant. STEMworks has made these opportunities accessible, equitable, and impactful for so many families across Maui.

Programs like this create an important foundation for learning and thinking outside the box. They are shaping the next generation of thinkers, innovators, and leaders right here in our community.

I respectfully urge you to continue funding MEDB STEMworks so that families like mine can continue to benefit from these life-changing opportunities.

Mahalo for your time and for supporting the future of our keiki and our community.

--

*Ronjini Joshua*  
[ronjini@thesilvertelegram.com](mailto:ronjini@thesilvertelegram.com)  
(949) 295-9779 Mobile/WhatsApp

## BFED Committee

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**From:** County Clerk  
**Sent:** Monday, April 6, 2026 9:45 AM  
**To:** BFED Committee  
**Subject:** Fw: Bill 55 section 6 item 12: Funding needs for Pa'ia Youth Council, Inc. / PYCC!

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**From:** Billy Jalbert <billy@mauirealestate.com>  
**Sent:** Monday, April 6, 2026 9:40 AM  
**To:** County Clerk <County.Clerk@mauicounty.us>  
**Cc:** Dean Wong <dwong@discoverimua.com>; K. Kauanoie Batangan <k.kauanoie.batangan@mauicounty.us>; Alice L. Lee <Alice.Lee@mauicounty.us>; Yukilei Sugimura <Yukilei.Sugimura@mauicounty.us>; Thomas M. Cook <Thomas.Cook@mauicounty.us>; Gabe Johnson <Gabe.Johnson@mauicounty.us>; Tamara A. Paltin <Tamara.Paltin@mauicounty.us>; Keani N. Rawlins <Keani.Rawlins@mauicounty.us>; Shane M. Sinenci <Shane.Sinenci@mauicounty.us>; Nohe M. Uu-Hodgins <Nohe.Uu-Hodgins@mauicounty.us>  
**Subject:** Bill 55 section 6 item 12: Funding needs for Pa'ia Youth Council, Inc. / PYCC!

You don't often get email from billy@mauirealestate.com. [Learn why this is important](#)

Aloha County Council Members,

Mahalo for your service and support to Maui County. My name is Billy Jalbert, I am the President of the Board of the Pa'ia Youth & Cultural Center. I have served PYCC for 24 years because I care deeply about our community and believe that PYCC's mission of Building Community Through Our Youth helps make a better Maui for all of us.

**PYCC serves Maui's youth in a facility that sits right on the ocean adjacent to Baldwin Beach park** – which is both a blessing and a challenge. Besides providing a safe haven for youth PYCC provides a place where our young members connect, learn life skills in radio broadcasting, the multimedia arts, culinary training, the skate park and of course the ocean. But that salt air? It's tough on everything...

**We have requested an increase in County support for FY27 and FY 28 to \$554,976.94** Let me break down why this investment matters and why we need your help now more than ever. Simply stated every single line item in our budget costs more than before.

**This budget supports 10 positions** – seven full-time youth specialists and three part-timers. These aren't just staff members; they're mentors, role models, and sometimes the only stable adults in these kids' lives. Running our radio station, skate park, culinary program, multimedia lab, the girl's club – keeping kids engaged, learning life skills, and staying out of trouble. Our staff are all underpaid and overworked. Their passion and commitment to our mission and youth keeps the doors open. It's been several years since we requested an increase in support.

**But here's the thing – your \$554,976.94 investment only covers 60% of our actual costs.** We have to raise the other 40% – nearly \$386,000 – through private donations and fundraising. So, this isn't a handout; it's a partnership and we work hard to deliver real results for Maui.

**Now, about timing.** Our long-term Executive Director, Susun White retired at the end of 2024. We were fortunate that we had Benjamin Rachunas ready to step up. He's been with us for 20 years and knows this organization inside and out. Ben knows how to run PYCC and serve our youth. What we need now is stability and time to build those external funding relationships. **Without stable County support during this transition, we risk losing other funding sources** because donors get nervous when they see instability.

**After our former ED retired we discovered gaps in our administrative systems** – things managed informally, processes not documented, financial controls that needed strengthening. **That's when Imua Family Services stepped in to support us.**

**The \$43,869 in administrative costs from the County** – that's our partnership with Imua. They handle financial reconciliations, payroll processing, tax compliance, audit preparation, grant monitoring and reporting, fundraising support – all the critical infrastructure that keeps programs running legally and effectively. **Without Imua's support, we honestly don't know if PYCC would still be operating at full capacity today.** They created a solid foundation so Ben can focus on leading programs and building funding relationships.

**Let me put it simply:** COVID hit us hard. The wildfires hit us hard. Rising maintenance costs hit us hard. Losing our ED created uncertainty. **But our kids? They keep showing up. Every day that we are open!** They still need us. They count on PYCC to be their safe haven.

**Without this investment right now, we face a domino effect** where reduced County support signals to other funders that maybe PYCC isn't stable, maybe they should pull back too. And then where are our kids?

**This budget isn't padding – it's what it actually costs** to run quality youth programs in an oceanfront facility on Maui in 2027. Every dollar goes toward either the people serving our youth or the infrastructure keeping those programs running.

**I'm asking you to continue to invest in Maui's future by investing in PYCC.** Give us the stability to transition leadership successfully. Give us the foundation to continue serving the young people who need us most.

**Our kids are counting on us. And we are counting on you.**

Mahalo for your consideration and support,

Billy Jalbert  
Board President  
Pa'ia Youth Council Inc. (DBA Pa'ia Youth & Cultural Center).