HAWAIʻI TECHNOLOGY DEVELOPMENT CORPORATION

Kapaʻa Advanced Manufacturing Pilot Facility

Executive Summary

Introduction to case

We are coming to you today with a pilot project proposal for the Kapa‘a Industrial ocean tech advanced manufacturing (AM) site. As a reminder, HTDC has a mandate to support AM and recently passed a bill that mandates a focus on ocean technologies. We believe this project sits at the intersection of both mandates.

Key Facts and Figures

Located in Kailua, Kapa‘a Industrial Park is a privately owned, move-in-ready light manufacturing facility that could serve as an initial home for Hawai‘i’s emerging ocean technology sector. The facility includes: **4 leasable units with ~7,200 sq. ft. of floor space and ~2,200 sq. ft. mezzanine office space** The total cost of leasing the space over **three years is $1.2M**. The space would be subleased to a changing mix of approximately four local ocean technology companies while also serving as a pilot for broader ecosystem-building efforts.

Companies

Potential companies supported include:

HOPS Hawaii Ocean Power Solutions · PACIFIC IMPACT ZONE · MAKAI OCEAN ENGINEERING · HNEI Hawai‘i Natural Energy Institute University of Hawai‘i at Mānoa · WAIHOME · Hohonu

Strategic Purpose

- Test demand for a co-located ocean innovation space
- Learn how to operate and program a shared innovation facility
- Build the supporting services companies need to scale locally
- Develop a long-term pathway toward a permanent ocean innovation hub on state-owned waterfront land

Recommendation

1) Approve our request to unlock $1.2M to pursue the Kapa‘a project
2) Continue to surface additional concerns from the board that we should continue to diligence, as guided by our decision making framework

Content

1. Introductions
2. The Situation
3. The Business Model
4. The Financial Model
5. Risks and Mitigation
6. The Impact

Introductions

01

Introductions

HTDC Team

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Executive Director

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Consultants

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Fmr Co-Founder at Hub Coworking, UH, IEDC Fellow

Interested Kapa‘a Pilot Project Tenants

Richard Argall
Technical Director at Makai Ocean Eng.

Dr. Nic Ulm
Founder and CEO at HOPS, UH Alum

Joshua Baghdady
Director of Solutions at Pacific Impact Zone

Noah Pentelovitch
Head of Hardware at Hohonu

James Roberts
Founder and CEO at WaiHome

Patrick Cross
Hawai‘i Natural Energy Institute (HNEI)

Sam Young
Founder and CEO at Voltage Vessels

The Situation

02

Despite manufacturing being an essential component of any location's GDP, Hawaii has never had a significant manufacturing industry due to limited land, geographic isolation, and high energy costs

America has long relied on manufacturing as an economic and innovation development tool.

Currently, the U.S. manufacturing sector contributes **$2.65T to the U.S. economy** and accounts for **10.3%** of the nation's GDP.

Manufacturing employs nearly **13M American workers**

As of 2012, manufacturing was responsible for **roughly two-thirds, or roughly $208 billion,** of all U.S. business R&D spending

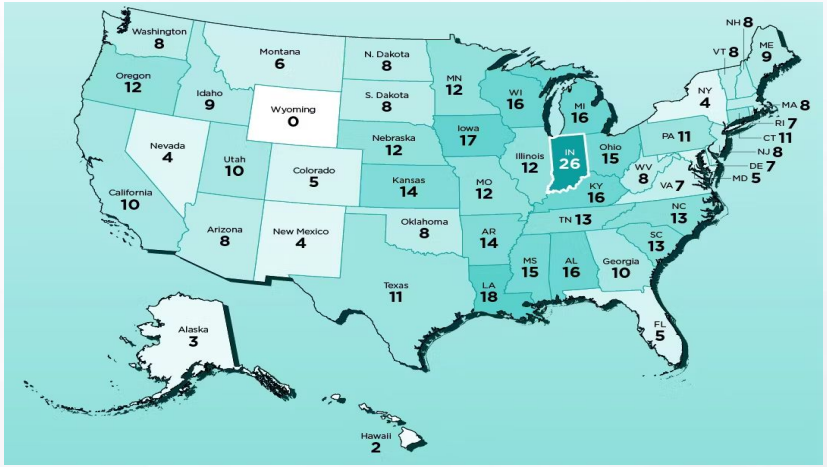
"Manufacturing has long been the yardstick by which greatness is assessed in measuring a nation's economic prowess."

Hawaii has historically had too many barriers to pursue mfg.

Hawaii has the **5th most expensive cost of land**, **most expensive cost of energy**, and limited supply chain access due to geographic isolation, all factors which are essential to growing a manufacturing sector.

As a result, Hawaii's manufacturing as a percentage of total GDP is the lowest in the country at 2% vs. 10.3% nationally

Hawaii's relies on imports for over **90 percent** of its consumer goods, building materials, and petroleum products,



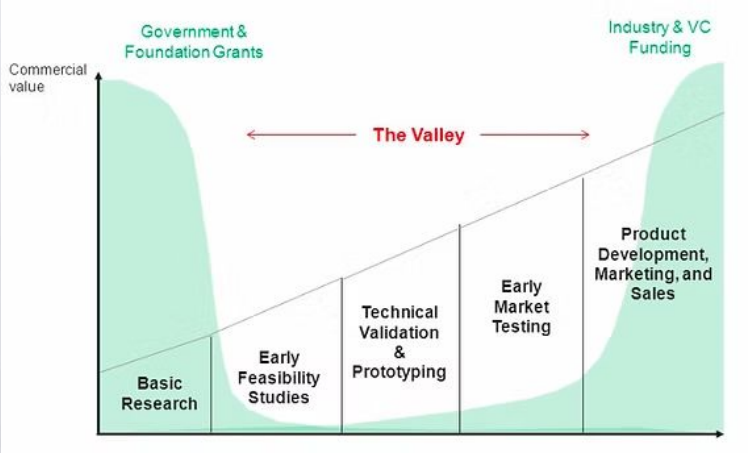
Source: Northeast Indiana Regional Partnership

Source: UH, Deloitte, Department of Commerce, Economic Policy Institute, Brookings Institute, Zippia, Institute for Energy Research

This makes it hard to start and scale business in Hawaii, especially for startups and small businesses. High costs and lack of infrastructure cause local startups to often fail or leave

Manufacturing is essential for the growth of startups – especially hardware or product based companies

The valley of death, in the startup world, is the phase where a company has commenced operations but is yet to make any money. **90% of hardware startups fail in the "Valley of Death"** This can be for many reasons including struggling to build an MVP, difficulty piloting, navigating supply chain, etc.



Without any manufacturing capability, startups in Hawaii are either being lost to the Valley of Death, or they are relocating to the Mainland

- **Stage 1 | Local Innovation Begins:** A UH research team develops a promising ocean sensor technology.
- **Stage 2 | Need to Prototype & Scale:** The startup needs prototyping equipment, testing facilities, and pilot manufacturing capabilities.
- **Stage 3 | Infrastructure Gap:** The company struggles to find affordable local space to build, test, and manufacture hardware.
- **Stage 4A | Relocation to the Mainland:** The startup moves manufacturing to Texas or California, where infrastructure already exists. Over time, the company relocates entirely.
- **Stage 4B | Valley of Death:** Companies that try to stay in Hawai'i often cannot scale due to limited manufacturing infrastructure and eventually fail before commercialization.

Our lack of manufacturing infrastructure is one of the reasons Hawaii is ranked 48th in the country for ease of doing business

Source: Plug and Play, WalletHub

AM, which integrates new and novel technologies into traditional manufacturing thus making it more efficient, creates an opportunity for Hawaii to manufacture locally at a small scale

AM integrates machinery with digital and cloud-based technologies and is adopted across numerous industries including aerospace, automotive, pharmaceuticals, agtech, and more.

AM techniques include:

- **Additive Manufacturing and Computer Numerical Control (CNC):** 3D printing and the ability to automatically create custom parts and designs from materials like metal, plastic, wood, glass, and composite.
- **Advanced Robotics & Collaborative Robots (Cobots)** Includes autonomous mobile robots (AMRs) for material handling and cobots that safely work alongside humans, boosting flexibility and throughput.
- **Advanced Materials:** Introduce new functionalities and improved properties, while adding value to existing products to enable resource conservation, low-impact materials, cleaner production, efficient distribution, green use and maintenance, re-use, re-manufacture, disassembly, recycling and safe disposal.

EXAMPLES

Tesla: robotic assembly lines for autonomous vehicles.

Boeing: 3D printing specific airplane parts.

Volvo Atlas: computer vision that spots defects up to 40% more effectively than manual inspections.

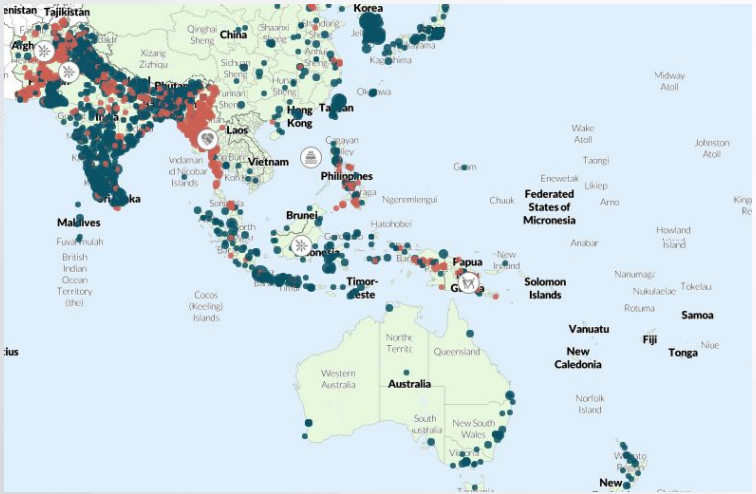
AM provides an exciting opportunity for Hawai‘i because new technologies, automation, and advanced materials are making manufacturing far less dependent on large-scale, low-cost production—**creating a more realistic pathway for Hawai‘i to competitively produce high-value, specialized products**

Source: The Welding Institute, Goodwin University, QAD, D4M

Why now: Looking nationally, there is a huge growth in AM across the United States, with desire to grow AM capabilities in Hawaii and the Pacific in the case of a Pacific conflict

Skirmishes in the South China Sea are rising with strong indication for US China conflict by 2030.

"Chinese aggressive military actions toward the self-governing island have increased by 300 percent."



Map of conflicts in APAC region in Nov of 2025. Source: ACLED

The federal government has indicated strong desire to grow US AM capabilities due to these conflicts

In the past few years, AM has grown incredibly **growing 3x faster** than traditional manufacturing in the U.S.

Part of this growth can be attributed to **significant government incentives** through the:

- Infrastructure Investment and Jobs Act (Bipartisan Infrastructure Law)
- Creating Helpful Incentives to Produce Semiconductors and Science Act
- Inflation Reduction Act (IRA)
- America's Maritime Action Plan (MAP)

The US military has explicitly stated the desire to invest in AM capabilities in Hawai'i.

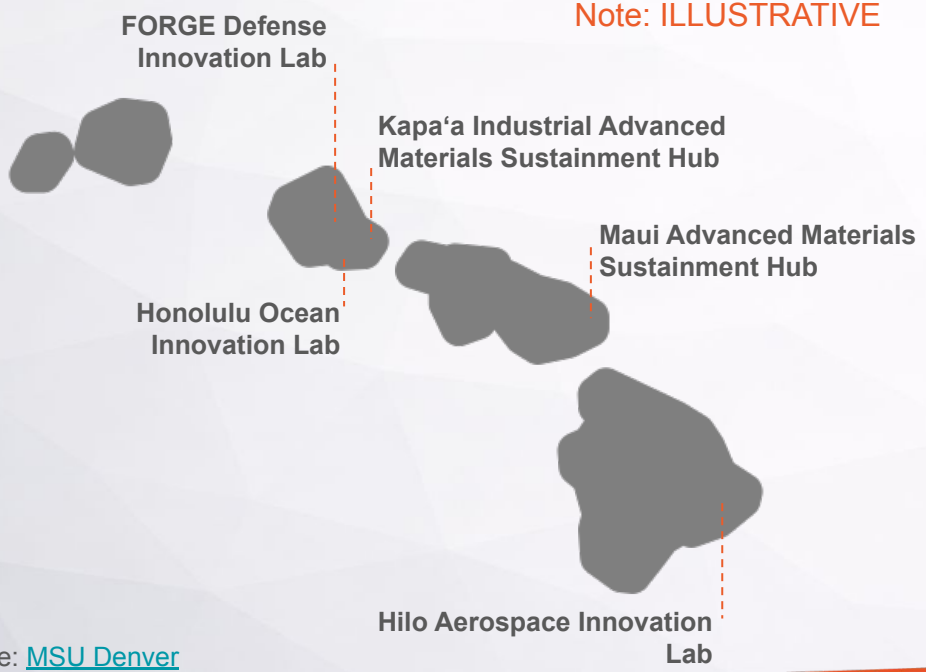
"[INDOPACOM does] not want to be wholly reliant upon things from (the continental U.S.) or from our allies overseas"

Sources: Deloitte, US Naval Institute News

This is an opportunity for Hawaii to create a larger local AM economy, reduce growth barriers for local companies, and create high wage jobs

We envision a dispersed, nodal advanced manufacturing ecosystem across the state that can support local demand, especially of hardware technologies in our focus sectors (ocean, space, energy, and health)

Note: ILLUSTRATIVE



Source: MSU Denver

This ecosystem would strengthen Hawaii’s economic resilience, enable competitive hardware industries, and create high-wage jobs.

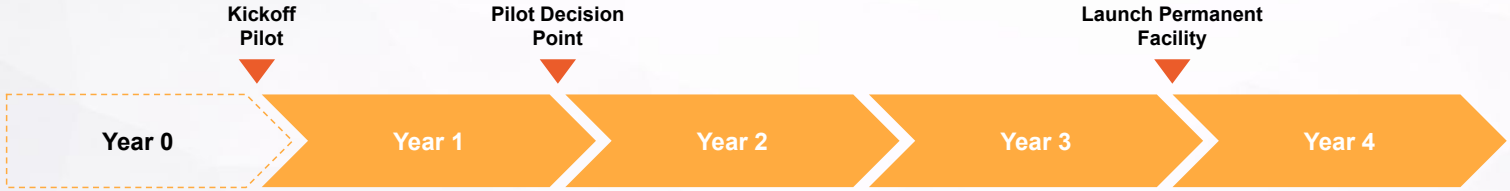
Primary Benefits

- Create high-wage technical and engineering jobs
  - **$50K** average for high school degree
  - **$70K** avg for associate
  - **$90K** avg for bachelors
- Help startups survive the “valley of death” between prototyping and scalable production
- Enable Hawai‘i to develop more high-value exports

Secondary Benefits

- Increase local production capacity and reduce dependence on imported goods
- Strengthen the resilience and self-sufficiency of Hawai‘i’s economy over the long term

The path to this future is attainable and Kapa‘a Pilot is a strong starting point



	Year 0	Year 1	Year 2	Year 3	Year 4
Infrastructure	• Understand current landscape • Scout potential pilot opportunities	• Kickoff sector-aligned pilot, validate demand • Scout spots for facility on state land	• IF pilot is showing strong traction, move forward with building permanent large scale facility		• Large scale, permanent facility is ready to launch

Programmatic Supports	• Understand current pain points and draft potential supports	• Launch initial programmatic supports with companies at pilot facility	• Based on demand, scale or expand programmatic supports for example by including…
			  ○ Shared IP framework
			  ○ Monthly trainings and mentor sessions
			  ○ Shared storage and bulk procurement
					• Programmatic supports are moved into permanently facility and scaled beyond initial pilot companies

Expected Impacts		• Companies are able to prototype and test their products, showing proof of concept	• Companies gain traction and perform pilot tests • Companies gain efficiencies through co-location and support services from HTDC • Companies start to scale, requiring more workforce		• Companies are ready to produce at a larger scale in permanent facility • Success of pilot attracts other companies towards permanent location

Advanced manufacturing can be used across all of our focus verticals and has shown decent growth across all

	Health	Space	Ocean	Energy
Example Use Case	Biomanufacturing pharmaceuticals, vaccines, and biologics	Precision machining of satellite components	3D-printing custom parts for research vessels and underwater infrastructure	Fabricating solar panels and wind turbine parts
AM Job Growth Since 2019	**6.4% AM job growth** in surgical and medical instrument manufacturing	**22.3% AM job growth** in guided missile and space vehicle manufacturing	**8.9% AM job growth** in ship building and repair	**37.5% AM job growth** in battery manufacturing

Source: Camoin Associates

However, based on current momentum locally, we believe an **ocean technology** focused AM hub is hawaii's strongest and most immediate starting point

As a reminder, last summer we identified ocean technology as a focus sector because of its economic potential and Hawaii's clear strategic advantages in the sector

The blue economy is a **3.25T industry** globally, and is growing at a **3% rate annually,** contributes **3-4% of total GDP**

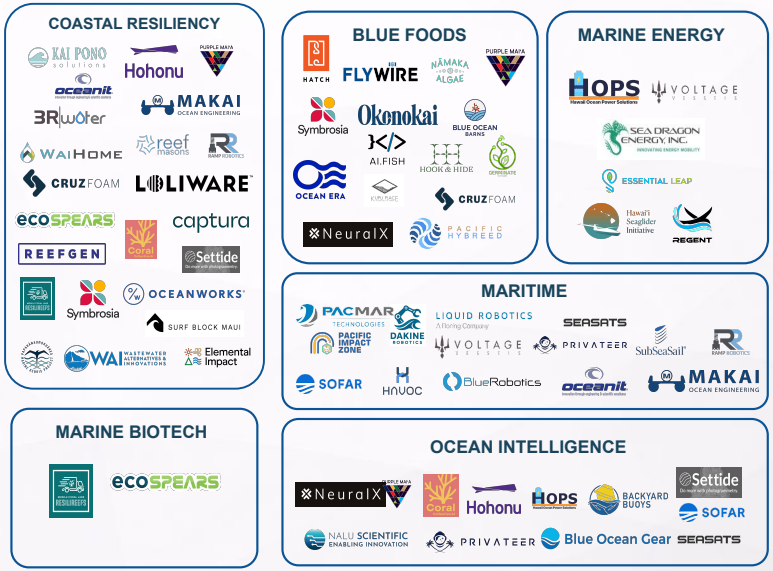
Hawaii consistently outperforms global blue economy stats

- The **blue economy** makes up **8% of Hawaii's local economy**, showing strong agglomeration
- Marine businesses have **grown by 23%** in the last decade
- **Average wages** for those working in the blue economy locally have **grown by 41%**
- Hawai'i stewards resources in the **second largest US EEZ**
- **Marine education** is one of the few disciplines that UH and HPU ranks **top ten in the country**

The blue economy is one of the few sectors that shows indications for Hawaii to have lasting competitive advantages at a national and global level

Source: NOAA 2024 Marine Economy Report

As we mapped the ecosystem, we saw a robust innovation pipeline and set of startups



**Some organizations are overlapping in areas.

Since identifying ocean technology as a focus sector, we've seen significant momentum across various flywheel components–more than any other focus sector

Infrastructure
Building out an Ocean Tech Manufacturing and Piloting Hub

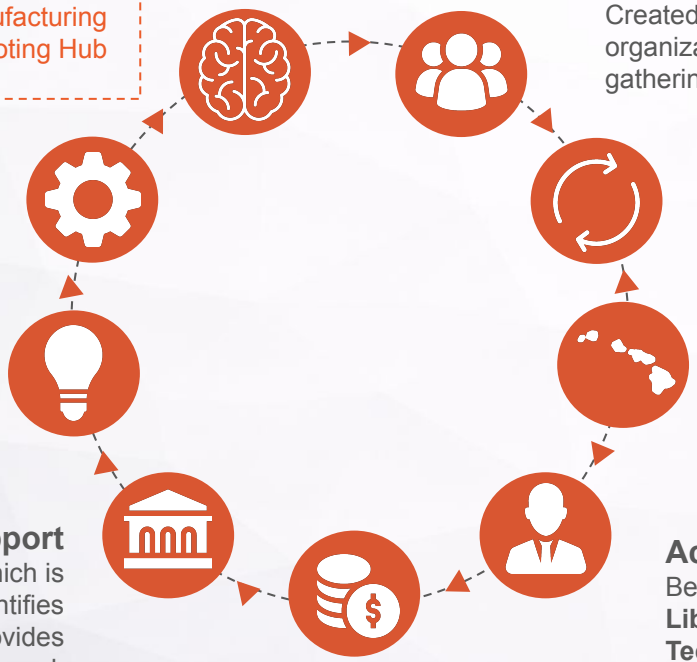
Community
Created our **ocean innovation hui** – a **40+** organization coalition of local ocean tech stakeholders, gathering monthly since October 2025

Native Hawaiian Values and Regenerative Wealth
Co-created a **vision** for the future of Hawaii's ocean tech economy alongside our ocean tech stakeholders based on **sustainability, regenerative wealth, and Native Hawaiian values**

Access to Capital
Began conversations with venture firms, **Mare Liberum and Builders Vision, Schmidt Marine Technology Partners** to increase venture investing locally

Government Policy Support
Wrote and advocated for **SB2907**, which is now in its final stages. The bill identifies Hawaii as an ocean **cluster** and provides **governance** for our work

Innovation Pipeline
Began an initial partnership with the **Port of San Diego** to share dealflow, with one local company setting up a pilot opportunity



During an initial SWOT analysis of the sector, ocean tech ecosystem members explicitly indicated the need for a manufacturing and piloting hub

Strengths

- Great infrastructure via NELHA
- State and federal programs, funding mechanisms, and supportive legislation
- A deep cultural foundation rooted in aloha ʻāina, voyaging traditions, and a strong sense of place
- Hawaii's unique geography—deep ocean access, year-round sun, and pristine coastal waters

Weaknesses

- Fragmented, rigid, and overly cautious legislation and permitting processes
- Limited availability of risk-tolerant investors, unstable grant funding
- Hawaii's high operating and living costs
- Negative stigmas and weak global positioning

Opportunities

- Clear vision, stronger collaboration, and better branding of our current assets
- State-funded deployments, FOAK (first-of-a-kind) project de-risking, and streamlined permitting
- State-backed funds, sovereign wealth initiatives, and physical innovation hubs.

Threats

- Increasing global competition from better-funded innovation hubs and blue economy regions
- Community resistance if growth is perceived as extractive or misaligned with local values
- Rising infrastructure, energy, and supply chain costs impacting competitiveness

Source: These findings were from our 2025 Ecosystem Conference series where we had about 30 ocean tech stakeholders provide us feedback on the state of the ecosystem

This completely aligns with national and international models–an advanced manufacturing development and piloting facility is integral for ocean tech growth.

Ocean tech hubs have been built across the US and around the world to support ocean tech ecosystems. This is because…

- Physical clustering is a proven economic development model
- Allows companies to share knowledge, costs, and infrastructure
- Provides high-visibility into the ocean tech economy
- Ocean tech is hardware heavy sector that requires *rapid flexible prototyping and testing*
- We see these examples in LA, Washington, New Zealand, Canada, Rhode Island, and more.

Though these hubs may vary slightly, they typically include the same set of core components

- Advanced manufacturing innovation lab
- Waterfront pilot testing facility
- Coworking and meeting space
- Center for education and engagement
- Ocean-specific accelerator/incubator programming

This is the ocean-specific north star we are aiming for. In 5 years, we want to create a permanent ocean tech hub at the Port of Honolulu

Pictured: Initial renderings of Washington Maritime Blue's new ocean tech hub

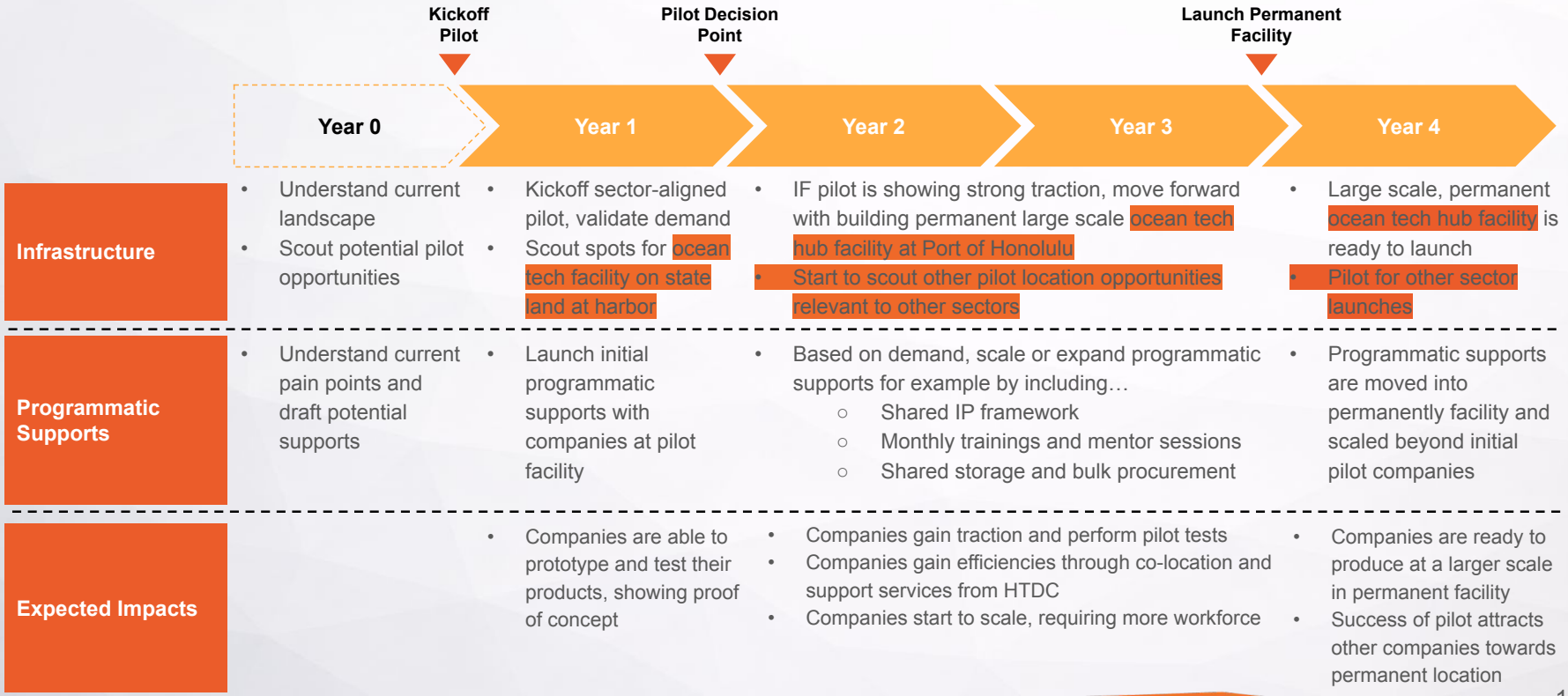
Pictured: New Zealand's "Blue House" ocean cluster hub

Pictured: Los Angeles' Alta Sea blue economy ocean tech hub

Since then, strategic conversations have led to validated demand. Numerous ocean tech stakeholders have indicated ***immediate*** need for an AM innovation lab

Hub Type	What Is It	Current Capabilities	Potential Users	Validated Demand
Innovation Lab	Develop and prototype new hardware and materials	FORGE on Schofield Barracks, one-off shops	UH Manoa, DOD, Min Plastics, Normal Labs, Kamanu Composites, Makai Ocean Engineering, PACMAR, Hohonu, Ti2 Designs, Wai Home	Numerous companies have indicated immediate demand
Sustainment Hub	Repair, fabricate, and maintain operational systems	FORGE on Schofield Barracks	DOD, Servco, Hawaiian Airlines, HECO/Hawaii Gas, Matson/Young Bros, Hitachi, Voltage Vessels, state and local government	None
Industrial Hub	Produce components and systems at scale	NA	DOD, Voltage Vessels, Hospitals	None
Certification & Testing Hub	Validate materials, systems, and products for safe use	NA	DOD, Hospitals, Utilities	None

Kapa‘a sits at an ideal strategic intersection–it allows us to push forward growth for our ocean tech economy while also serving as a starting point for an AM ecosystem



The Business Model

03

We are asking for your vote to approve the Kapa‘a Pilot Project

The Opportunity

Located in Kailua, Kapa‘a Industrial Park is a privately owned, move-in-ready light manufacturing facility that could serve as an initial home for Hawai‘i’s emerging ocean technology sector.
The facility includes:

- 4 leasable units
- ~7,200 sq. ft. of floor space
- ~2,200 sq. ft. mezzanine office space

The Proposed Pilot

We propose leasing approximately 9,500 sq. ft. over 3 years at a total cost of $1.2M. The space would be subleased to four local ocean technology companies while also serving as a pilot for broader ecosystem-building efforts, including:

- Shared prototyping/manufacturing space
- Entrepreneur support programming
- Industry collaboration and networking
- Technical assistance and commercialization support

Strategic Purpose

This pilot would allow us to:

- Test demand for a co-located ocean innovation space
- Learn how to operate and program a shared innovation facility
- Build the supporting services companies need to scale locally
- Develop a long-term pathway toward a permanent ocean innovation hub on state-owned waterfront land

The Ask

Authorization to spend up to $1.2M over 3 years to launch the Kapa‘a Advanced Manufacturing pilot project.

Kapa‘a is one of few move-in ready light-manufacturing facilities available on Oahu

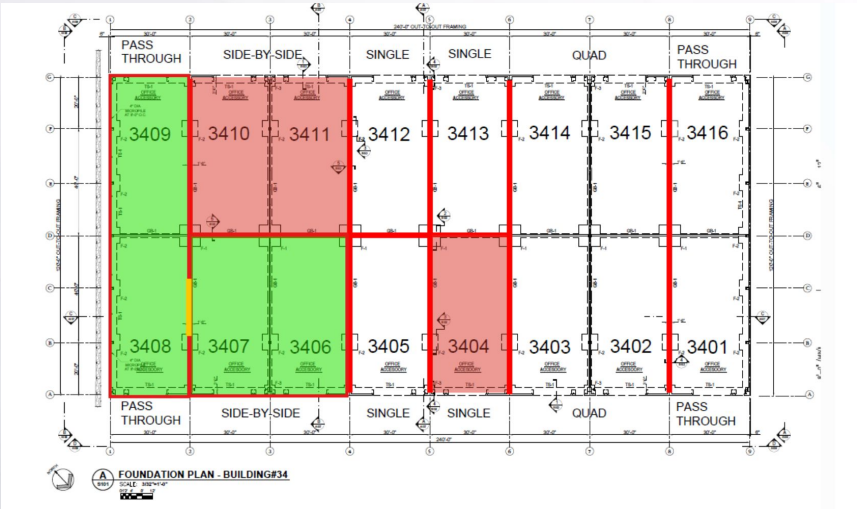
When looking for facilities we considered the following criteria

- Ability to do light manufacturing
- Move-in readiness
- Ability to co-locate companies

****Other state-owned facilities were considered but none were seen as the right fit. Please reference the appendix for more information.****

We are looking to start with four units for this initial pilot project

Specs of Kapa‘a building and units



Unit Types

- Pass Through
- Side by Side
- Single
- Quad

Key

- Red = rented out
- White = still available
- Green = our targets

Our Units

We are leasing:

- One Pass Through (Units 3409, 3408)
- One Side by Side (Units 3407, 3406)
- 12 reserved parking stalls

Landlord is installing a double door between 3408 and 3407

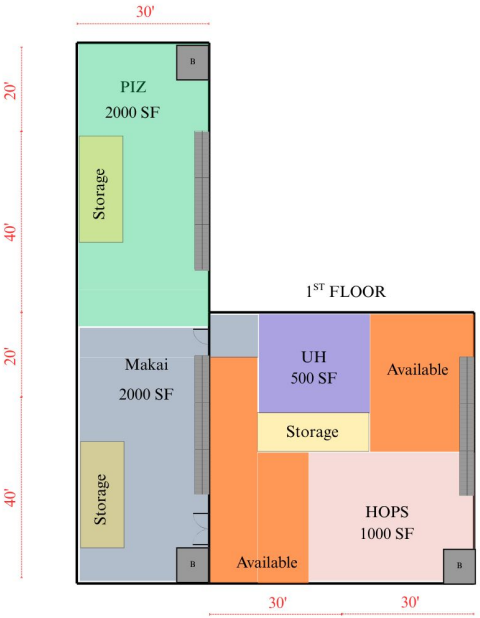
We chose this setup because it allows us to have flexibility in how manufacturing moves through each space while maintaining separation between each half to isolate clean work (e.g., assembly) from more messy work (e.g., sanding and printing)

We've drafted this initial layout for year 1 based on the needs of the companies, leaving some space to flexibly meet company demands

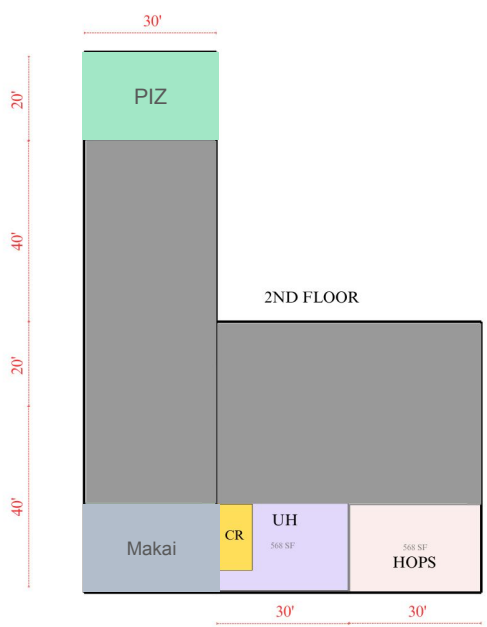
Thesis behind our initial set up

- Within the first year, we want minimal complexity to make sure implementation is high quality
  - No sharing of equipment, initially
  - Some shared storage
- ~1000 sqft of space for model flexibility to allows us to be reactive to demands of the companies and how to best utilize the space. Possible outcomes can include:
  - Shared equipment and collaborative flex space
  - Shared vertical storage
  - Shared assembly space

1st floor manufacturing space



2nd floor office space

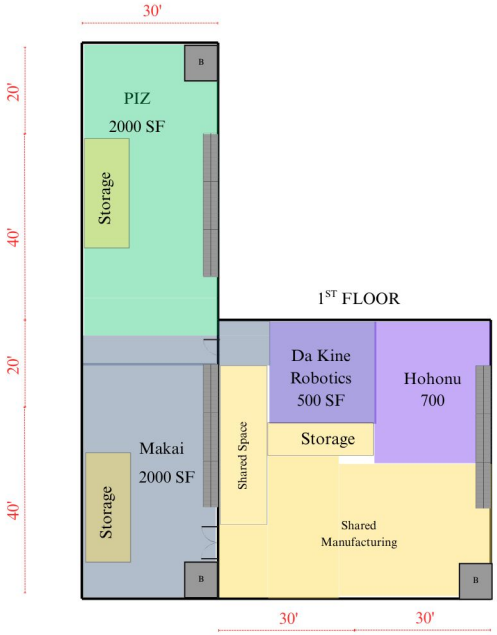


In the following years, we plan for some shared manufacturing space and an evolving set of tenants

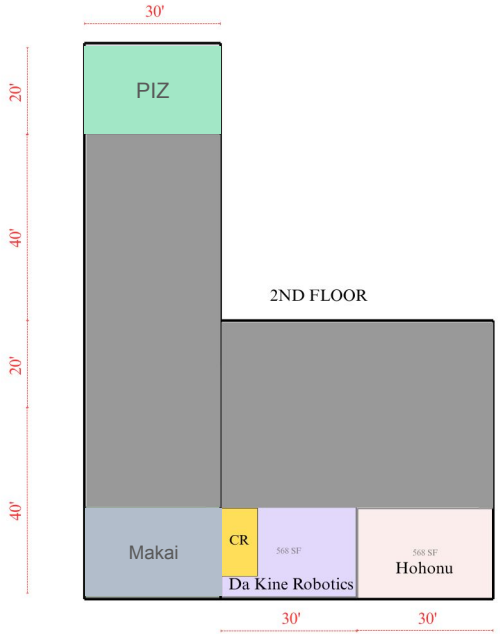
Thesis behind shared manufacturing space

- Per the board's recommendation, we would explore the potential of shared manufacturing space in years 2 and 3.
- There are a few costs to consider with a shared space
  - Initial CAPEX to acquire equipment
  - Full-time machinist to monitor and upkeep equipment
- We will spend Year 1 determining the ideal business model and complexity of this shared space
- For now, we are assuming this shared space will have minimal CAPEX and OPEX costs and will just be desks for people to use for assembly work

1st floor manufacturing space (YR 3)



2nd floor office space (YR 3)



Shared Manufacturing

Details

Things to Consider/Next Steps

We have 6 priority organizations who have shared interest in using the space that match our sector focus, space requirements, and desired lease lengths

MAKAI OCEAN ENGINEERING

www.makai.com

Founded In: 1973
Employees: 50
Customers/Partners: U.S. Navy, DARPA, U.S. Dept. of Energy, Shell Energy, telecom cable companies, UH

Ocean tech and engineering firm providing world-leading submarine cable software, marine renewable energy systems, OTEC, subsea R&D - 3D printing and machining

PACIFIC IMPACT ZONE

pacificimpactzone.com

Founded In: 2021
Employees: 25
Customers/Partners: > 300 customers within INDOPACOM and small defense biz

Supporting the creation of a pivotal hub for defense innovation by bridging the gap between industry and national security needs in the Indo-Pacific region

HNEI
Hawai'i Natural Energy Institute
University of Hawai'i at Mānoa

www.hnei.hawaii.edu

Founded In: 2009
Employees: 20
Customers/Partners: U.S. Dept of Energy, NAVFAC, National Lab of the Rockies, Makai Ocean Engineering, HOPS

Advancing marine renewable energy research and innovation for Hawai'i and across the Pacific Island region

These organizations vary from smaller startups, to nonprofit organizations, to university research groups and larger corporations

WaiHome

www.waihome.com

Founded In: 2021
Employees: 4
Customers/Partners: North Shore Community Board, Big Island Green Realtors

Providing alternative aboveground wastewater technology solutions to help communities in Hawai‘i with cesspool upgrades (in Hawai‘i’s law, all cesspools must be converted by 2050)

Hohonu

www.hohonu.io

Founded In: 2019
Employees: 25
Customers/Partners: 70 including City of Boston, Florida Dept. of Transportation, Lee County, NOAA, UH, KUA, Purple Mai‘a

Delivering real-time water level data to help flood decision-makers plan, respond, and build resilience for their communities

HOPS
Hawaii Ocean Power Solutions

www.hawaiioceanpowersolutions.com

Founded In: 2021
Employees: 6
Customers/Partners: Blue Ocean Mariculture, U.S. Dept. of Energy U.S. Navy, NOAA, PacIOOS, UH, Purple Mai‘a

Providing wave-powered data gathering buoys with underwater vehicle capabilities to power offshore operations

These companies share common advanced manufacturing needs, which creates opportunities for shared space, shared equipment, and improving operations

	Sq Ft	3D Printing	CNC Machining/ Fabrication	QA/QC Testing	Industrial Power Use	Additional Activities
MAKAI OCEAN ENGINEERING	2000 sq ft	✓	✓	✓	✓	Sandblasting, compressed air infrastructure
PACIFIC IMPACT ZONE	2000 sq ft	✓	✓	✓	✓	Enterprise prototyping, biomanufacturing, materials processing
HNEI Hawai'i Natural Energy Institute University of Hawai'i at Mānoa	500 sq ft		✓	✓	✓	Laser cutting, welding
WAIHOME	500 sq ft		✓	✓	✓	Laser engraving, water jet or plasma cutting
Hohonu	900 sq ft	✓		✓		Laser cutting, metal finishing, vacuum casting, ventilation
HOPS Hawaii Ocean Power Solutions	1000 sq ft	✓	✓	✓	✓	Specific electrical equipment setup

Based on this initial group, around 58% of our rental square footage would be occupied by low-risk tenants, 42% would be occupied by med/high risk tenants

	Sq Ft	Lease Duration	Move-In Timeline	Rent Exposure**	Total Risk
MAKAI OCEAN ENGINEERING	2000 sq ft	3+ Years	1-3 Months	29%	Low
PACIFIC IMPACT ZONE	2000 sq ft	3+ Years	1-3 Months	29%	Low
HNEI Hawai'i Natural Energy Institute University of Hawai'i at Mānoa	500 sq ft	1-3 Years	1-3 Months	7%	Med
WAIHOME	500 sq ft	1-3 Years	12 Months	7%	Med/High
Hohonu	900 sq ft	1-3 Years	12 Months	14%	Med
HOPS Hawaii Ocean Power Solutions	1000 sq ft	1-3 Years	1-3 Months	14%	Med/High

** Rent exposure is tenant sq ft divided by total sq ft occupied by all tenants

With this in mind, we've negotiated a lease and sublease that allows us to mitigate financial and legal risks while increasing community impact

Negotiated Lease Terms with Kapa'a

General Terms

- 3 year lease, 4% annual increase
- 1 month free rent
- $26,000 + GET
- Security Deposit + 1st month rent

Exit Options

- Option for a 3 year renewal
- If terminating before lease end, 6 month notice + 6 month penalty

Negotiated Sublease Terms with Tenants

General Terms

- 1 year lease, 4% annual increase
- Opportunity to renew yearly
  - 6 months notice for renewal or departure
- $3 psf
  - Option to choose a mix of rent and equity/revenue
- Security Deposit + 1st month rent

Risk Mitigation

- Personal guarantee in case of inability to deliver on rent
- HTDC listed as additional insured

Other/Misc.

- Community Engagement

Financial Model

04

Across all scenarios, the Kapa‘a project’s success will be shaped by tenant stability, occupancy, total funding support, and property management costs

	Conservative	Base	Optimistic
Occupancy Condition	Anchor** Tenants Exit at Lease End; High Risk Tenants Move After Yr 1 Unable to Find New Tenants	Anchor** Tenants Stay for 3 Years; High Risk Tenants Stay for 1 Year; New Tenants Move In	All Tenants Stay for Full 3 Years; More Tenant Demand than Available Space
Occupancy (3 yr avg)	67%	87%	94%
Buildout Cost	$90,000	$77,500	$70,000
Addt’l Buildout Investment	$20,000	$7,500	$0
Property Management Fee	15%	10%	5%
Utility Costs	$250/month	$250/month	$200/month
Parking Revenue	$450/month for 6 stalls	$675/month for 9 stalls	$900/month for 12 stalls
Govt. Grant Funding (e.g. MEP, DOE, DOW)	$50,000	$100,000	$1,600,000
Other Matched Funding	$0	$400,000	$1,300,000

** Anchor tenants are the low risk tenants (e.g., Makai Ocean Engineering)

We expect the Kapa‘a project to provide a profit to HTDC of ~$176K. However, in our most conservative scenario, we see a potential loss of ~$518K

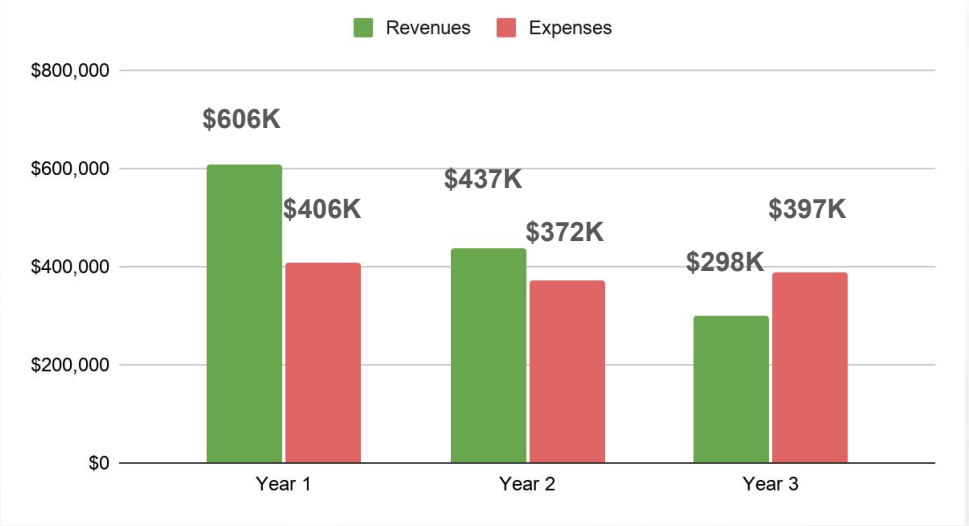
	Conservative	Base	Optimistic
Revenues			
- Manufacturing Space	$470,510	$616,852	$675,589
- Office Space	$129,365	$195,751	$224,650
- Parking Revenue	$15,300	$23,625	$32,400
- Fee for Service (Programming)	$0	$6,000	$12,000
- DOW/TA Federal Grants	$0	$300,000	$1,000,000
- NIST MEP	$50,000	$100,000	$300,000
- Private Grants	$0	$100,000	$300,000
Total Revenues	**$665,175**	**$1,342,229**	**$2,544,639**
Expenses			
- Lease	$992,606	$992,606	$992,606
- Utilities	$9,000	$9,000	$7,200
- Property Mgmt	$92,276	$83,623	$46,632
- Fee for Services	$0	$3,000	$6,000
- Buildout Costs	$90,000	$77,500	$70,000
Total Expenses	**$1,183,882**	**$1,165,729**	**$1,122,438**
Net Profit/Loss	**($518,707)**	**$176,500**	**$1,422,201**

Our base case demonstrates that the Kapa‘a project is risk calculated and will likely profit ~$176K

We made the following general assumptions for our base case scenario, in line with the LOIs submitted by companies

- Average of 87% occupancy across all three years
- 13% amount of general vacancy
- Minimal CAPEX/OPEX for shared space (primarily desks for working rather than shared machinery)
- Expected turnover 1-2 med/high risk companies over 3 years
- Total one-off buildout cost of $77.5k
- Grant revenue of $500,000
  - NIST MEP $100,000
  - Private Grants $100,000
  - Federal Grants $300,000
- Property management fees 10% of income (based on current negotiated rate with Colliers)

In our base scenario, HTDC is expected to make a profit of $176K across three years from the Kapa‘a project



To provide more context, here is how we expect things to flow in the base case scenario

Year 1

Income: $606K

We are at 88% occupancy with
- PIZ
- Makai Engineering
- HOPS
- UH

We lose one month of rent because buildout takes longer than expected.

Expense: $406K

- $77,500 build out
- $27,225 monthly lease

Net Profit: $200K

Year 2

Income: $437K

We are at 87% occupancy with
- PIZ
- Makai Engineering
- WaiHome
- Hohonu
- Shared Manufacturing Space*

Expense: $372K

- $28,314 monthly lease

Net Profit: $65K

Year 3

Income: $298K

We are at 87% occupancy with
- PIZ
- Makai Engineering
- Hohonu
- Dakine Robotics
- Shared Manufacturing Space*

Expense: $397K

- $29,447 monthly lease

Net Profit: ($88K)

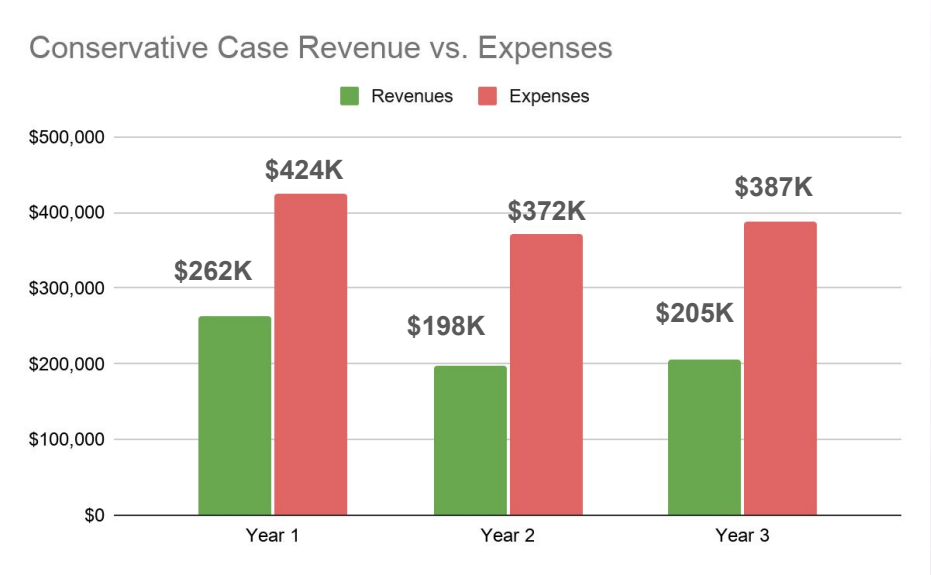
We believe our base case scenario remains conservative, as it assumes each company commits only to the minimum lease term within the range they indicated. HOPS, WaiHome, and University of Hawai‘i have all expressed interest in remaining at the facility for longer than one year.

Our conservative case has the Kapa‘a Pilot Project losing ($518,707)

We made the following general assumptions for our conservative case scenario, in line with the LOIs submitted

- Average of 51% occupancy across all three years
- 49% amount of general vacancy
- Minimal CAPEX/OPEX for shared space (primarily desks for working rather than shared machinery)
- Expected turnover all med/high risk companies leave after 1 year
    - No new tenants are found
- Total one-off buildout cost of $90k
- Grant revenue of $50K from NIST MEP 1 year only
- Clashes amongst tenants lead to higher property management fees 15% of income, which include cost of additional management time from HTDC team

In our conservative scenario, HTDC is expected to lose $518K across three years from the project, and will do a lease buyout in year 1 instead



To provide more context, here is how we expect things to flow in the conservative case scenario

Year 1

Income: $262K

We are at 81% occupancy with

- PIZ
- Makai Engineering
- HOPS
- UH

We lose two months of rent because buildout takes longer than expected.

Expense: $424K

- $90,000 build out
- $27,225 monthly lease

Net Profit: ($162K)

Year 2

Income: $198K

We drop to 60% occupancy with

- PIZ
- Makai Engineering

High risk tenants leave after a year. We are unable to find tenants who want to move in

Expense: $372K

- $28,314 monthly lease

Net Profit: ($174K)

Year 3

Income: $205K

We remain at 60% occupancy with

- PIZ
- Makai Engineering

We are unable to find tenants who want to move in

Expense: $387K

- $29,447 monthly lease

Net Profit: ($182K)

Decision Point: In this scenario, total expected losses are significant. At the end of Year 1, we would need to decide whether it is prudent to break the lease and pay the penalty, or figure out how to fill the space with alternative tenants who might not be an ideal fit.

Conservative Case Year 1 Decision Point [Option 1]: We approach board for mitigating total losses by executing early lease termination

The factors that would lead to this decision are the following

- Occupancy rate is hovering around 70% and there is no clear demand for the space.
- No additional companies in the pipeline waiting for space.
- HTDC does not want to sublet the entire or part of the space
- HTDC believes there is little to no chance to win any grants, and all revenues will not grow

HTDC can take the following steps to mitigate costs and losses

- Give 6 month notice to landlord and incur the monthly loss on net revenues until month 18
- Pay penalty for early termination (6 months of rent)
- Walk away from all sunk costs

Costs of Early Termination Decision at Month 12

- $90,000 build out
- $169,885; 6 month penalty
- $249,557; 18 months of net losses
- **Total: $509,442**

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Expected Cost of 36 months

- **Total: $518,707**

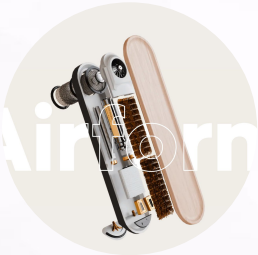
Conservative Case Year 1 Decision Point [Option 2]: We consider these three other organizations in the pipeline who are also interested in the space.

Note: These organizations have been deprioritized from our first batch of tenants due to fit considerations — such as limited sector alignment, larger space requirements than currently available, high risk, or the need for highly specialized facility conditions. However, they remain strong backup tenant candidates should any of the initial tenants choose not to renew.

www.voltagematerials.com

Advanced composite materials and distributed manufacturing company developing basalt reinforced thermoplastic materials

Founded In: 2020
Employees: 6
Customers/Partners: $1M expected, DOW and DOW contractors
Manufacturing Needs: Basalt production, 3D Printing
Risk Level: MED



www.airform.space

Creating one of the most advanced and cost-effective residential and commercial heat-pumps in America

Founded In: 2022
Employees: 20
Customers/Partners: 100 Pre-Purchased
Manufacturing Needs: Fabrication, Assembling
Risk Level: MED

DAKINE ROBOTICS

dakinerobotics.com

Autonomous AUV ship/boat hull cleaning technologies

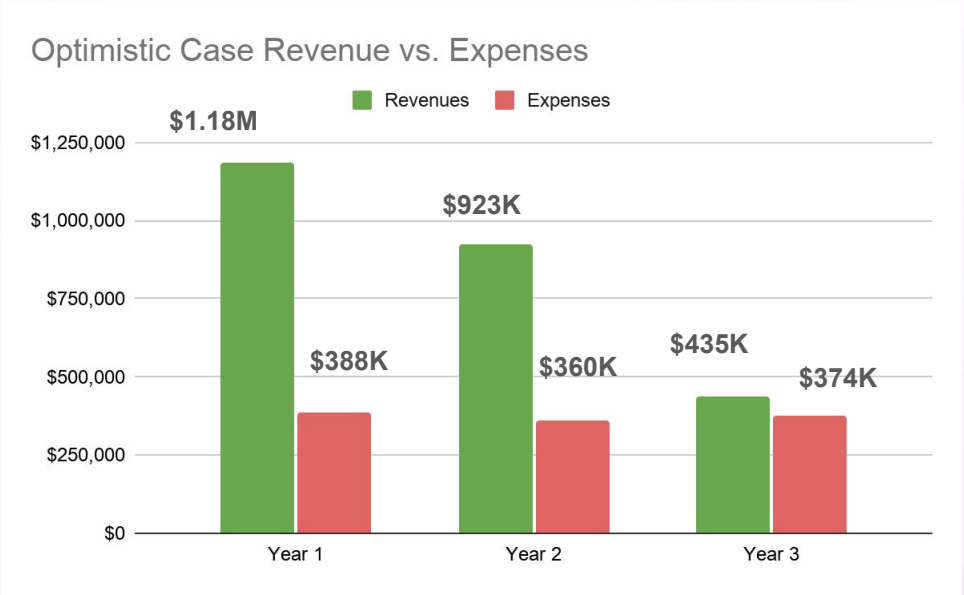
Founded In: 2025
Employees: 3
Customers/Partners: None
Manufacturing Needs: Assembling
Risk Level: HIGH

Our optimistic case assumes Kapa‘a Pilot Project will generate a profit of $1,420,000

We made the following general assumptions for our optimistic case scenario, in line with the LOIs

- Average of 94% occupancy across all three years
- 6% amount of general vacancy
- Minimal CAPEX/OPEX for shared space (primarily desks for working rather than shared machinery)
- No turnover of any companies for three years
- Total one-off buildout cost of $70k
- Grant revenue of $1.6M
  - NIST MEP $300K, $100K per year
  - Federal Grants $1M
  - Private Grants $300K
- Property management fees 5% of income covered by HTDC team(no third party property management)

In our optimistic scenario, HTDC is expected to make a profit of $1.42M across three years from the Kapa‘a project



To provide more context, here is how we expect things to flow in the optimistic scenario

Year 1

Income: $1.18M

We are at 88% occupancy with
- PIZ
- Makai Engineering
- HOPS
- UH

No rent is lose due to timing issues

Expense: $388K

- $70,000 build out
- $27,225 monthly lease

Net Profit: $796K

Year 2

Income: $923K

We reach 97% occupancy with
- PIZ
- Makai Engineering
- HOPS
- UH
- Shared Manufacturing Space

Expense: $360K

- $28,314 monthly lease

Net Profit: $563K

Year 3

Income: $435K

We are at 97% occupancy with
- PIZ
- Makai Engineering
- HOPS
- UH
- Shared Manufacturing Space

Expense: $374K

- $29,447 monthly lease

Net Profit: $61K

Decision Point: In this scenario, we would have more tenant demand than available space. At end of Year 1, we'd need to consider whether or not to lease additional space.

Risks

05

HTDC's most significant risks regarding the Kapa'a pilot project center around

Risk Type	Risk Description	Risk Level
Market	Tenants decide not to continue their lease portion past one year	
Market	Limited to no demand for space from tech companies	
Financial & Market	Tenants need to break their lease (esp. anchor tenants)	
Financial & Market	Unexpectedly loses liquidity and needs to break the lease	
Financial	Unable to secure expected grant funding	
Financial	Fee-for-Service revenue doesn't materialize	
Financial	Delay in rent income	
Financial	Increase of property management costs	
Financial & Legal	Liability issues with tenants or landlord	
Financial & Operational	Delay in buildout or additional buildout needed	
Operational	Tenants not meeting their minimum LOI requirements (compliance, reporting, engagement)	

Source: xx

However, we've identified clear mitigation strategies in response to these risks, and feel confident in our ability to execute the project regardless

Risk	Mitigation Strategy
Tenants are unable/unwilling to continue their lease portion past one year; Tenants break their lease	Have a waitlist of at least 2-3 companies ready to move in with any vacancies, and if necessary, be prepared with 1-2 companies that aren't tech relevant to fill space. Use the 1-year decision point to determine whether ROI of project is still worth it
HTDC unexpectedly loses liquidity and needs to break the lease	Negotiate a lease-break clause that limits financial liability to at most 12 months of rent.
HTDC is unable to secure expected grant funding	Pursue other grants that are mission aligned with Kapa'a AM Project. Use the 1-year decision point to determine whether ROI of project is still worth it
Fee-for-service revenue doesn't materialize	Work with tenants to provide high-value services
Delay in rent income	Immediately after lease is signed, work quickly to onboard tenants that are move-in ready
In	
Liability issues with tenants or landlords (e.g., tenants get injured while on site)	Clause in sublease that lists HTDC as additional insured in all subleases
Buildout takes longer than expected and additional build out required	Explore excess state inventory, ensure any purchase is absolutely necessary
Higher than expected property management costs	Curate the initial tenant mix to limit overhead and coordination

Impacts

06

We're maximizing win-win opportunities for HTDC, these startups, and Hawaii's overarching economy.

Benefits to HTDC

- Annual impact data survey
- Increased AM awareness with annual Kapa'a Industrial Park event
- Learning on how to operate a shared manufacturing space
- Working group to co-design future facility at Honolulu Harbor

If applicable

- Equity share of companies
- Co-develop an internship/co-op model

Benefits to Companies

- No long term lease
- Quick and valuable access to light manufacturing location
- Ability to co-locate alongside other companies, potentially share machinery, knowledge, etc.
- Option to expand footprint as needed

Benefits to Hawaii's Economy

- First-ever outside the fence, corporate-facing infrastructure for advanced manufacturing in Hawaii
- Pilot example of advanced manufacturing capabilities across the Pacific region
- Help develop a workforce pipeline for advanced manufacturing companies
- Create work opportunities in cutting edge tech

Mahalo.