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Hawai'i Sense-of-Place Primer

A Common Perspective for Hawai'i's Airports

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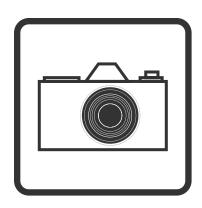
A Common Perspective for Hawai'i's Airports

Other Resources by SustainableDOT-A

Program Profile

Sustainable High-Performance Guidelines

Cultural Appropriateness Guidelines

SustainableHNL Elements Baseline

MADE IN HAWAI'I · 2011

Created in partnership between the Department of Transportation-Airports Division and the KYA Sustainability Studio.

STATE OF HAWAI‘I
2011
version 1.0

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PURPOSE

The *Hawai'i Sense-of-Place Primer* is an informational document that presents a "common perspective" for SustainableDOT-A (sDOT-A). The purpose is to facilitate collaboration between decision makers and project teams while ensuring the appropriate integration of place-based considerations at the Honolulu International Airport (HNL). The information presented in this document is general and supplements the protocols established in the *Sustainable High Performance Guidelines* (SHPG), *Cultural Appropriateness Guidelines* (CAG), and subsequent guidelines and strategic plans as they develop. The intent of this document is not to prescribe solutions, but rather to provide a common perspective from which creative, environmentally responsible, and culturally appropriate solutions can emerge as Hawai'i's Airports become more sustainable.

What is a common perspective?

A "common perspective" is a **shared understanding** that provides context from which decision-makers may perceive, categorize, measure, and/or codify the intents behind experiential and educational aspects of the problem solving process—especially when they relate to place-sensitive considerations, such as *Hawai'i sense-of-place* and *sustainability*. These types of considerations often concern sensitive relationships between Hawai'i's diverse community, culture, ecosystems, and built-environments. Interpretations of these relationships are often, complex, and inclusive of many factors, both tangible and intangible; varying perspectives often present barriers in the collaborative process. Therefore, acknowledging and maintaining **common perspective** is necessary when facilitating decision-making, creative collaboration, and other communication within or between project teams.

Establishing a common perspective is a gesture of acknowledgement and respect for the diversity of values and worldviews a project team brings into the decision-making process.

ESTABLISHING A COMMON PERSPECTIVE

Through a common perspective, teams may efficiently overcome the barriers that arise from misunderstandings when discussing issues related to sustainability and *sense-of-place*. Establishing a common perspective for sDOT-A required the creation of a "Design Lens"—a conceptual framework focusing on the following:

Identify an overarching goal and prospective audience:
  » What is our common goal?
  » Who is the potential audience achieving this goal will impact?

Identify an understanding for "sense-of-place":
  » What is our understanding of sustainability?
  » What is our understanding of Hawai'i heritage?
  » How do our personal perspectives and worldviews influence this understanding?
  » What do we mean by *sense*?
  » What do we mean by *place*?
  » Why is *sense-of-place* important for Hawai'i?

Identify the guiding principles and themes that provide a framework for collaboration:
  » What is the common essence that bind these themes to form a cohesive whole?
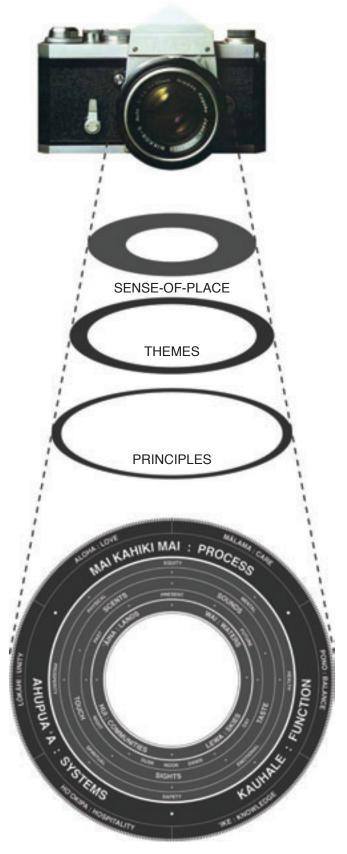 » What are appropriate guiding themes?

USING THE PRIMER

The information presented in this Primer highlights the common perspective behind sDOT-A and the process through which the Design Lens for this perspective has been created. Decision-makers—which include all project teams (design, construction, operations, and maintenance personnel)—are free to explore appropriate design concepts and solutions within the conceptual parameters set forth in this document.

This document should be referenced as an ancillary resource to the Sustainable High Performance Guidelines, Cultural Appropriateness Guidelines, and subsequent guidelines and strategic plans when incorporating place-sensitive considerations at the airport level. This Primer is scalable and applicable throughout the hierarchy of the decision-making process, as a way to "check and balance" the intents and conceptual parameters behind the technical and experiential aspects of a design.

FRAMING A PERSPECTIVE

Similar to a camera lens, a Design Lens is a conceptual tool—a looking device—that frames a common perspective. The metaphor of a camera and lens is used to communicate the process of seeing with a specific focus; just like a camera, the Design Lens provides a framework within which decision-makers can "zoom in" and focus on various aspects of a project, as they may concern place-sensitive considerations like environmental responsibility and cultural appropriateness. Through such a framework, project teams can express the individuality of their specific project, yet remain cohesive with other projects within the airport system because the conceptual process and intents behind various projects will connect through this common perspective and Design Lens.

The Design Lens promotes a three-dimensional rather than two-dimensional approach toward incorporating *Hawaiʻi sense-of-place* within a building design, construction, maintenance, and operation. A multi-dimensional approach offers project teams an opportunity to explore a rich variety of meanings for a building that parallel the richness of Hawaiʻi's community and environment, while expanding beyond typical, sometimes cliché, expressions. For instance, exploring dynamic references to the wind, rain, stars, and ecosystem through building orientation, structure, and materiality (multi-dimensional) versus choosing only tiki torches and decals of plumerias to represent Hawaiʻi. The Design Lens described throughout helps project teams successfully contribute to sDOT-A's commitment to pursue unique, inspirational, and forward thinking expressions of *Hawaiʻi sense-of-place* in a way that blends sustainability and Hawaiʻi heritage together.

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COMMON PERSPECTIVE:

Establishing a common perspective is a gesture
of acknowledgement and respect for the
diversity of values and worldviews a project team
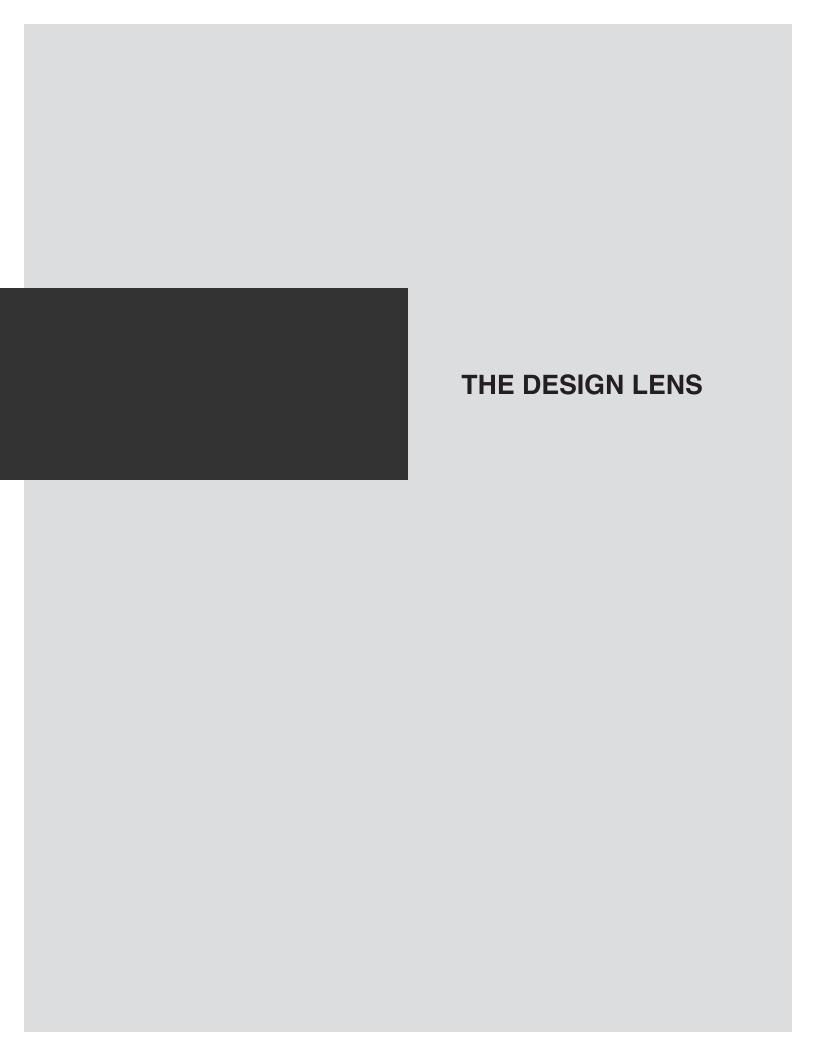brings into the decision-making process.

The HNL Design Lens highlights the following:

A:
GENERAL GOAL AND AUDIENCE

B:
UNDERSTANDING SENSE-OF-PLACE

C:
GUIDING PRINCIPLES

D:
GUIDING THEMES

THE DESIGN LENS

The following chapters explore the Design Lens. The Design Lens provides project teams with a conceptual looking device that frames a common perspective. The outer ring represents the goal and prospective audience (A). The second circle represents the guiding principles that provide a framework of values that inform the intents behind design decisions (B). The grouping of inner circles names the components that inform one's *sense-of-place* (C). The innermost circle references guiding themes that provide teams with design inspiration (D). All design concepts explored by project teams should be in accord with the protocols set forth in the Sustainable High-Performance Guidelines and Cultural Appropriateness Guidelines.

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A

GENERAL GOAL
& AUDIENCE

There is great demand for built-environments that protect Hawai'i's ecosystems, honors Hawaiian and local cultures, and perpetuates a strong connection to what makes Hawai'i unique...

Over the past several decades, rapid urban development in Hawai'i has degraded the environment and introduced a widespread experience of placeless-ness among residents and visitors—a declining sense of community and uniquen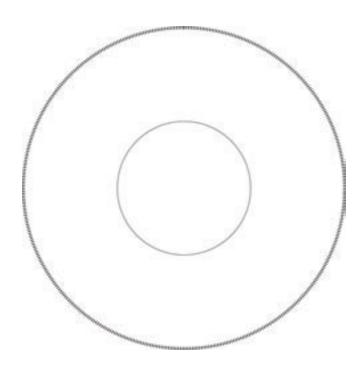ess. Now more than ever before, there is great demand for built-environments that protect Hawai'i's ecosystems, honors Hawaiian and local cultures, and perpetuates a strong connection to what makes Hawai'i a unique place—the community, geography, and wildlife.

Hawai'i's airports are the gateways to the islands. They are the first and last impression of those arriving and departing. Therefore, decision-makers have the responsibility—*the kuleana*—to contribute to the overall visual and functional integrity of the airport in a way that promotes sustainability, fosters cultural appropriateness, and serves as a model that other agencies and private developers can follow.

WHAT IS THE OVERARCHING GOAL?

As a testament to the relationships between Hawai'i's unique communities and beautiful environment, the overarching goal for all decision-makers is to ensure that the Hawai'i airports are programmatically and functionally responsive, while promoting environmental responsibility and enhancing the educational, meaningful, appropriate *sense-of-place* experience for building users. In doing so, decision makers at HNL can contribute to securing a vibrant future for Hawai'i by cherishing and honoring Hawai'i's past and present.

WHO IS THE TARGET AUDIENCE?

The following list of potential audience may be impacted through achieving the overarching goal. Because the Hawai'i's airport are highly visible facilities, the audience may be larger and more diverse than normally expected for other projects.

General Public
» Community at large (local / global)

Passengers
» Tourists (national / international)
» residents (leaving / returning)

Government
» Legislators
» State/City departments and agencies
» Other cities

DOT-A (Hawai'i Airport System)
» Managers
» Maintenance
» Airside / Landside operations

Tenants
» Air carriers
» Ground support
» Concessionaires

B

UNDERSTANDING SENSE-OF-PLACE

As the respected George Kanahele described, "In the Hawaiian mind, a sense-of-place was inseparably linked with self-identity and self-esteem."

WHAT DOES SENSE-OF-PLACE MEAN?

While a singular definition may be impossible to identify, a general understanding of the phrase *sense-of-place* references the shared relationships between communities, cultures, and environments, both tangible and intangible.

In Hawaiian culture, *sense-of-place* is often expressed as a lifestyle rooted in familial relationships to the land and all its features. This provides the very basis for one's identity. Many Hawaiians have an adept *sense-of-place*, communicated through intergenerational knowledge and eloquent place names given to each geographic location. This is exemplified in the nuanced awareness (sense) of the subtle differences existing between each landscape, rain, wind, scent, and aspect of community that make each locale (place) unique.

Throughout Hawai'i's history, *sense-of-place* has also become a common consideration for environmentally-responsive architecture and urban design. Notable examples are cited to Charles W. Dickey and Vladimir Ossipoff, whose work embraced the gentle nature of Hawai'i's landscapes and climate; their buildings were sensitive to sunlight, wind, rain, and blurred the distinction between indoor and outdoor space. Although these buildings were often "modern" in architectural language, they enhanced the experience of a person's attachment to their surrounding site and environment.

The distinct *sense-of-place* many people experience in Hawai'i attracts people from around the world and instills pride within the community. This fosters community solidarity and a sensation of love and attachment for the island archipelago, its people, and wildlife. Fostering a *sense-of-place* bears great significance for Hawai'i airports, as a gateway to each island community.

WHAT DO WE MEAN BY SUSTAINABILITY?

The conceptual basis for DOT-A projects center around sustainability and Hawai'i's unique heritage, which together inform a *Hawai'i sense-of-place*. To facilitate communication amongst project teams, the use of the phrase *sense-of-place* throughout the DOT-A will automatically reference both sustainability and Hawai'i's heritage.

The meaning of the term "sustainability" is varied and ranges from broad concepts to specific rating systems. For some, it may mean reducing current energy consumption, while for others, it means maintaining market shares to keep a company or agency current and economically viable. Generally, sustainability takes into consideration balancing the integral components that affect the environment we live in: society, economy, and ecology, also referred to as the "triple bottom line." At the broadest level, sustainability is a call for people to cultivate an awareness of how they affect the wellbeing of their surroundings and act responsibly toward securing a healthy future for all life.

As stated by sDOT-A, sustainability is about "preserving our natural resources so future generations can experience the qualities that make Hawai'i unique." This understanding draws from the Airports Council International-North America (ACI-NA) refined understanding of sustainability through the triple bottom line and "EONS" model, which seeks to balance:

- » **E**conomic Viability
- » **O**perational Efficiency
- » **N**atural Resource Conservation
- » **S**ocial Responsibility

The EONS model for airport sustainability allows various operational aspects specific to the business of an airport to become inclusive of the general public's broader meaning of sustainability. These aspects include among many things: airport infrastructure, information technology and fleet management, operations, maintenance, component renewal, and life-cycle costs. Sustainability offers an opportunity for the DOT-A to leverage design, construction, operations, and maintenance dollars through proven business practices that pay benefits to the customers, employees, industry, and local and global community.

WHAT DO WE MEAN BY HERITAGE?

The meaning of the term "heritage," generally refers to a legacy inherited from past generations. Specifically, a community's heritage is composed of various artifacts from the past that can be both tangible—e.g., architecture, science, technology, historic places, monuments, and natural landscapes—and intangible—e.g., shared knowledge, beliefs, values, customs, traditions, attitudes, behaviors, practices, language, artistic expression. These artifacts culminate to shape the culture of the respective community and their associated worldviews.

Elements that could be considered significant to the heritage of Hawai'i's community include, amongst many, the following:

- » Language—e.g., Hawaiian, Pidgin,
  and other languages...
- » Imagery—e.g., landforms, landmarks,
  flora & fauna, color...
- » History, Ritual, Tradition—e.g., stories, song,
  chant, dance, attire, music, sites, events.

"Like a tree, a culture is forever growing new branches, foliage, and roots. No culture is ever static and can be preserved like a stuffed gorilla in a museum." --Albert Wendt
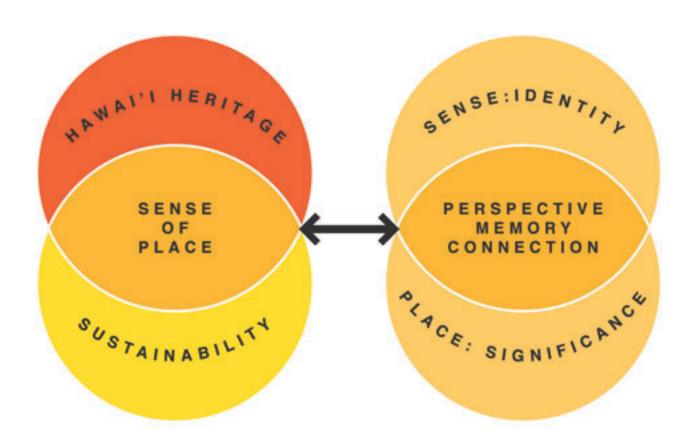
The strong emphasis on heritage should not instill a sense of rigidity. Heritage should invite creativity and innovation in an appropriate manner.

PERSPECTIVE, MEMORY, CONNECTION

For a more specific understanding of *sense-of-place* the phrase can be better understood when grouped into the following three components:

- » **identity (sense)**
- » **significance (place)**
- » **perspective, memory, and connection**.

"Sense" refers to the beginning of **identity**, marked by the sensory perceptions (sight, sound, smell, touch, or taste) that makes one aware of their surroundings, whether physical, emotional, mental, or spiritual. "Place" then bears **significance** to one's identity and refers to the relationship between an individual and their surroundings, such as the lands ('āina), waters (wai), skies (lewa), and other communities (hui) and their related heritage. Thus, one's *sense-of-place* bears significance to their identity and influences one's **perspective, memory, and connection** to their location. In Hawai'i, this perspective is often expressed through particular "statements of being," which cultivate the relationships between people and their surroundings. These include: ho'okipa (hospitality), pono (balance), 'ike (knowledge), lōkahi (respect), mālama (care/honor), and aloha (love).

HAWAI'I HERITAGE

SENSE OF PLACE

SUSTAINABILITY

SENSE: IDENTITY

PERSPECTIVE MEMORY CONNECTION

PLACE: SIGNIFICANCE

[SENSE]	X	[PLACE]	=	PERSPECTIVE MEMORY CONNECTION

[SENSE]

• Quality
equity, health, saftey, prosperity

• Time
Past, present, future, night, day

• Being
physical, emotional, mental, spriritual

• Sensory
sight, sound, smell, touch, taste

• Ambiance
color, shadow, texture, pattern

[PLACE]

• Land ('āina)
mountain, lowland, shore

• Water (wai)
rain, stream, spring, ocean

• Sky (lewa)
wind, sun, moon, stars

• Communities
people, wildlife, spirits
(tradition, customs, language, chants, songs, dance, histories, foods)

PERSPECTIVE MEMORY CONNECTION

• Aloha (love)

• Hoʻokipa (hospitality)

• Manaʻoʻiʻo (respect)

• Lōkāhi (unity)

• Pono (balance)

• Mālama (care)

• ʻIke (knowledge)

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C

GUIDING PRINCIPLES

Guiding principles frame crucial questions decision makers ask themselves when evaluating the integrity of their design.

ALOHA "LOVE"
» How does the design reinforce community?
» Will the design instill pride within DOT-A Audience?

HOʻOKIPA "HOSPITALITY"
» Is the design inviting?
» Will the design be memorable?
» Does the design encourage humanity and nature to coexist?

MANAʻOʻIʻO "RESPECT"
» Does the design respect the communities and environment?
» Is the design culturally appropriate?
» Does the design honor relationships between spirit and matter?

LŌKĀHI "UNITY"
» Does the design respond to the surrounding?
» Does the design foster collaboration among stakeholders?
» Does the design recognize the interdependence between components?

PONO "BALANCE"
» Will the design promote sustainability?
» Does the design blend technical and experiential considerations?
» Does the design focus on whole systems and not just part of systems?

MĀLAMA "CARE"
» Does the design inspire others to care about the environment?
» Does the design inspire others to care about Hawaiʻi's unique culture?
» Does the design consider the well-being of future generations?

ʻIKE "KNOWLEDGE"
» What does the design teach others about sustainable responsibility?
» What does the design teach about Hawaiʻi's heritage?
» Does the design consider nature as a model?

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D

GUIDING THEMES

"Mai kahiki mai" means
"from distant lands."

MAI KAHIKI MAI

Mai kahiki mai is a powerful concept related to the heritage of polynesian voyaging. The saying acknowledges the rich history of Hawaiian wayfinding—a process of navigation where voyagers find direction without the aid of western navigational instruments such as a compass, sextant, or clock. Instead, wayfinding employs an intuitive sense of direction informed by an acute awareness of one's surroundings, such as the relationships between the sun, stars, moon, wind, ocean swells, seabirds, travel speed and the canoe and crew themselves. Hawaiian navigation provides an intimate spiritual, physical, emotional, and mental sense of experience with one's environment.

The concept of *mai kahiki mai* represents a crucial aspect of the Hawaiian worldview, where one acknowledges the future in reference to the past, which stands before them. As the Polynesian Voyaging Society expresses, voyaging is important to Hawaiian culture because it "broadens knowledge and reveals the connections and interdependency among peoples and places of the Pacific…and provides the inspiration, metaphor, and process...to understand our traditions and shed light on

how the ancient people survived on islands with limited resources, and guide decisions about the future of Hawai'i."

sDOT-A EXPRESSION:
PROCESS + PERSPECTIVE

The concept of *mai kahiki mai* provides guidance for the relationships between process and movement throughout the airport and a perspective that honors the past while also looking toward the future.

A "kauhale" generally refers to a dwelling compound consisting of a group of functional structures (hale).

KAUHALE

A traditional kauhale formerly consisted of a common house (hale noa), men's house (hale mua), women's house (hale pe'a/papa), storage house (hale papa'a), tapa making house (hale kuku), and a canoe shed (halau wa'a). The word kauhale is also used to describe a grouping of individual compounds since there was traditionally no concept of "village" or "hamlet" in Hawaiian.

Traditionally, kauhale were scattered in relation to surrounding resources and environmental conditions. The structure of each hale was typically made of exposed wood members lashed together and secured atop a platform of stones, which often extended beyond the front of the house to provide a lanai (porch). A hale was generally without explicitly defined walls, but rather a continuous roof-like surface thatched with pili grass, pandanus leaf, sugar cane, or ti leaves depending on available nearby materials. Access into the hale was often through a waist-high door opening sometimes adorned by additional thatching of ama'u or hapu'u fern leaves. Although kauhale structures were fully thatched and designed to keep the weather out of buildings, the scattered organization between structures afforded a strong indoor-outdoor sensibility as the circulation between structures were exposed to the exterior elements.

sDOT-A EXPRESSION:
ORGANIZATION + FUNCTION

The concept of kauhale provides guidance for the organization and construction of buildings and groups of buildings in Hawai'i. Because the kauhale references both individual and grouped compounds, the concept is scalable and applicable to a variety of scenarios from whole building programs to individual projects within a building program.

MAI KAHIKI MAI : PROCESS
AHUPUA'A : SYSTEMS
KAUHALE : FUNCTION

An ahupua'a generally refers to a continuous area of land extending from the ocean to the mountains and up into the sky.
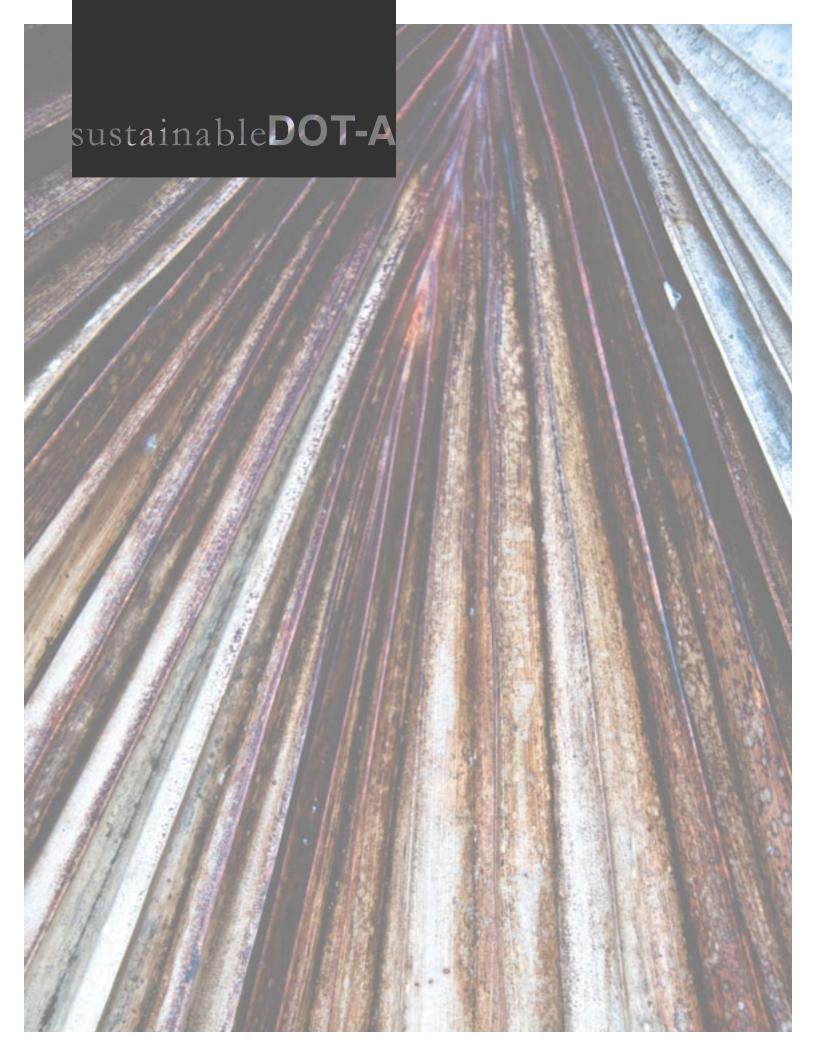
AHUPUA'A

An ahupua'a was a form of place-based leadership, resource management, and land classification, which included other larger land areas, such as moku or 'okana, and smaller areas, such as 'ili and mo'o. The name ahupua'a comes from the alter (ahu) of stones often adorned by an image of a pig's (pua'a) head that marked the boundary of each land area. These boundaries represented political jurisdictions of a strong food-based economy that corresponded with mountain ridges, streams, and watersheds. Ahupua'a varied in size according to available fresh water resources.

An ahupua'a enabled Hawaiians to live in cooperation and self-reliance, effectively and responsibly utilizing the resources of each locale. Resources were organized through an integrated network of fishponds (loko i'a), terraced flooded taro-fields (lo'i), and dry land areas that were planted with food crops (mala), designed in coordination with the local ecosystem to ensure success and prosperity. Prior to the development of the ahupua'a, Hawaiians employed forms of slash-and-burn agriculture that destroyed large portions of lowland forests prior to western arrival in 1778AD, indicated by charcoal particulates found in the soil between 800AD and 1200AD. However, with the development of fishponds and taro fields in 1100AD, Hawaiians were able to avert the degradation of their environment; after 1200AD, evidence of invasive agriculture nearly vanished. An

ahupua'a exemplifies the sophisticated knowledge and place-based innovation that enabled Hawaiians to co-exist with an ecosystem and assist, rather than destroy, its cycles of renewal.

sDOT-A EXPRESSION:
SYSTEMS + LIFESTYLE

The concept of the ahupua'a provides guidance for the way a building functions as an integrated systems and sustainable high performance.

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TOOLBOX:
FROM PERSPECTIVE TO CONTENT

Once a project team identifies a common perspective, the Design Lens can be utilized to explore a variety of ways to express *Hawaiʻi sense-of-place*. The following section describes some general recommendations on how the Design Lens can be used to transform conceptual considerations of *sense-of-place* into actual design content. The following strategies are outlined:

INTEGRATED PROJECT APPROACH
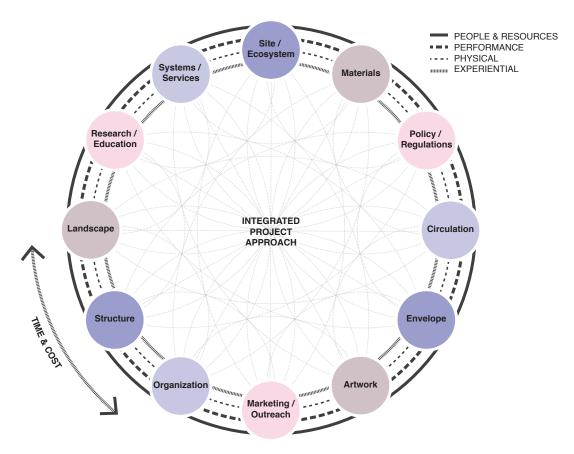
INTEGRATED PROJECT TEAM

KEY QUESTIONS

TRANSLATING CONCEPTS INTO CONTENT

ECO-CHARRETTE

SUPPLEMENTARY INFORMATION
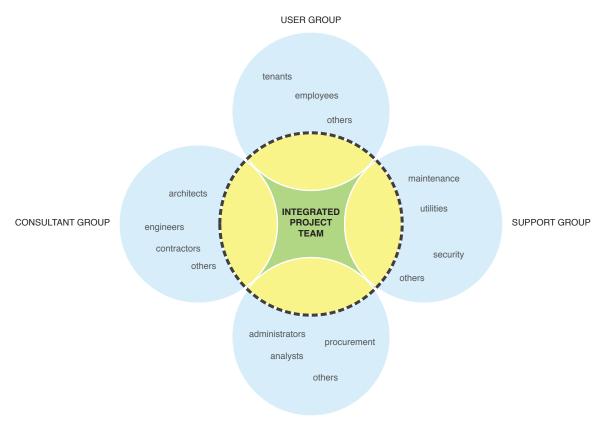
INTEGRATED PROJECT APPROACH

Sustainability, when used as the foundation yields an *integrated project approach*. An integrated project approach considers how various aspects of a building, program, or process perform together, which is necessary to produce a cohesive *sense-of-place*. As such, there is a large emphasis on the synergies that occur between multidisciplinary groups of information inherent in any project approach. These aspects, which may include the following, will vary from project to project:

- » Site & Ecosystem; Envelope; Structure
- » Systems/Services; Organization; Circulation
- » Materials; Landscape; Artwork
- » Research & Education; Policy & Regulations; Marketing & Outreach

In the ideal integrated project, each aspect is approached holistically, yet is flexible enough to adapt with changes overtime. Through sustainability, an integrated project is effective in resource consumption, adaptive, regenerative over the life cycle of the project, respective of culture, and imbued with meaning. This is best achieved when sustainability is used to incorporate the following considerations across all aspects at all levels of a project:

- » People & Resources
- » Performance
- » Physical
- » Experiential
- » Time & Cost

INTEGRATED PROJECT TEAM

Sustainability, when used as the basis for team collaboration yields an *integrated project team*. An integrated project team refers to a group dynamic where stakeholders, technology, and business practices become linked through collaboration to harnesses the skills and insights of all participants of the project team, necessary to create an appropriate *sense-of-place*. This facilitates an open exchange of information between disciplines, while avoiding decisions that occur in isolation. In doing so, an integrated project team fosters more open perspectives, thus expanding the possibilities for creative ideas and solutions that benefit all aspects of the project.

An integrated project team is generally formed during the first eco-charrette, where as many stakeholders are brought into the process to maximize the long-term effectiveness of the team. Open and frequent communication throughout all major phases of the project are necessary for the team to remain integrated over the course of the project. A stakeholder can include any person or group of persons associated with the design:

» **USER GROUP**
   Tenants, Employees, etc.

» **CONSULTANT GROUP**
   Architects, Engineers, General Contractor, etc.

» **TECHNICAL GROUP**
   Security, Utilities, Maintenance, etc.

» **SUPPORT GROUP**
   Administrators, Analysts, Procurement, etc.

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KEY QUESTIONS: CONSIDERING
SENSE-OF-PLACE

For may project teams, coming up with creative ideas to express *sense-of-place* is an exciting, yet daunting opportunity, especially for teams with diverse backgrounds and worldviews. Conflict that may result from this initial process may be avoided if the task to integrate *sense-of-place* into a project is approached as an educational opportunity to learn more about Hawai'i and Hawaiian culture. The following outlines "key questions" based on the themes and principles presented in the Design Lens, which the team may ponder to catalyze the creative process.

2. KAUHALE (ORGANIZATION + FUNCTION)
   » relationships to the surrounding geography, i.e. orientation with topography?
   » arrangements of space according to single or multiple uses?
   » adjacencies between various spaces in relation to other spaces and open circulation?
   » incorporation of open lanai spaces?
   » effective use of spatial adjacencies and potential synergies?
   » synergy through proximity to surroundings?
   » use of local materials?
   » expression of structure within a building's interior?
   » expression of a raised foundational platform?
   » blurred distinction between wall and roof?
   » incorporation of lanai spaces?
   » material references to thatching, wood, lashing, and stone?
   » layering of material around building envelope?

1. MAI KAHIKI MAI (PROCESS + PERSPECTIVE)
   » directional references?
   » solar, moon, or star references?
   » wind references?
   » geographical references?
   » celestial/terrestrial alignments?
   » acknowledgement of past history?
   » historical references?
   » place name references?
   » incorporation of language, legends, chants, songs?
   » overall appropriateness of cultural references?

3. AHUPUA'A (SYSTEMS + LIFESTYLE)
   » efficient use of energy, water, and resources?
   » responsible disposal of waste?
   » efficient design and integration of MEP/HVAC and building envelop systems?
   » effective use of daylighing and energy systems?
   » response to site-specific conditions, i.e. wind, rain, sun, topography?
   » focus on place-based innovation?
   » focus on awareness of place through directional references?
   » consideration of social, economic, and ecological influences?
   » references to the various native habitats within a Hawaiian ecosystem?
   » ability to educate occupants about environmental awareness and responsibility?
   » emphasis on community and place?
   » incorporation of edible foods in the landscapes?

TRANSLATING CONCEPTS INTO CONTENT

For *sense-of-place* considerations, translating a concept into something tangible can "make or break" the final outcome of a design. For example, communicating the concept of Polynesian voyaging with images of a canoe (cliché) versus emphasizing the important connection between star alignments, ocean winds, and land views a voyager may experience (multi-dimensional). While such translations are subjective and always open for interpretation from different perspectives, the goal of the Design Lens is to help project teams to dig deeper and find creative solutions for Hawaiʻi's unique culture. All translations should be in accord with the *Cultural Appropriateness Guidelines* and approved by a cultural consultant.

To begin the process of translating concepts into content, at least three major approaches can be identified:

- » Historical Reference
- » Metaphorical Interpretation
- » Literal Response

Identifying the difference between strategies for interpretation will help a project team achieve a common perspective to affirm or reevaluate the appropriateness of their strategy.

HISTORICAL REFERENCE

A historical reference may include any intentional display of Hawaiʻi's history and culture for educational purposes, such as specific periods of time, historical peoples, places, or things. Historical interpretations should be approached with caution and avoid any bias toward any one particular perspective.

METAPHORICAL INTERPRETATION

A metaphorical interpretation may include any intentional expression of Hawaiʻi's culture for more artistic purposes. These draw from legitimate resources to demonstrate an appreciation for the intangible qualities, feelings, relationships, and experiences that occur throughout Hawaiian culture. These may include interpretations of story, or specific expressions of terrestrial/celestial alignments and directional markers.

LITERAL RESPONSE

A literal response may include any intentional reaction to Hawaiʻi's climate and other technical/programmatic aspects of the building process. For instance, installing exterior sunshades to optimize energy performance could be a climatic response. Innovating HVAC/MEP systems to maximize building systems performance could be a technical response.

ECO-CHARETTE

WHAT IS AN ECO-CHARRETTE?

An intensely focused activity intended to build consensus among stakeholders, develop specific design goals and objectives for a project in regards to sustainable high-performance, and motivate stakeholders to be committed to reaching those goals. Participants should represent those stakeholders who can influence project decisions.

BENEFITS OF AN ECO-CHARRETTE

There are many benefits of using eco-charrettes early in a high-performance project, including efficiency in time and money while improving project performance. Eco-charrettes aim to accomplish the following objectives:

- » Save time and money by soliciting ideas, issues, and concerns for the project design to help avoid later iterative redesign activities
- » Facilitate implementation of the *Sustainable High Performance Guidelines*
- » Provide a forum for those who influence design decisions on a project to meet and begin planning the project
- » Provide sustainable objectives and measures for evaluation as a basis to advance development of design solutions within the design process
- » Establish a creative environment for identifying and incorporating design strategies and priorities regarding sustainable design
- » Encourage agreement on project goals
- » Promote enthusiasm for a project and result in early direction for the project outcome

ECO-CHARRETTE PLANNING

The project team shall present the alternatives being developed during the conceptual basis of design phase for evaluation during the eco-charrette in accordance with the *Sustainable High Performance Guidelines*. Additional evaluation utilizing the eco-charrette process shall be conducted only when new alternatives are required by DOT-A. New alternatives are not revisions and refinements of previously evaluated concepts or designs.

Understanding where the project stands relative to these issues will increase the likelihood of meeting the overall project goals.

Kick-off Meeting: Hold an in-house kick-off meeting/conference call to assemble the project team and begin the eco-charrette planning process. A kick-off meeting is vitally important for defining the roles of each of the project team members and for bringing focus to the tasks that need to be accomplished. During the kick-off meeting, be sure to discuss the following items:

Project Program: The program includes the estimated size of the project, functions of the required spaces and adjacencies, average number of occupants in the spaces, the time of use of the spaces, lighting and space condition (i.e., temperature and humidity) requirements, and any unique requirements for specific aspects of the project.

Project Information: List high priority items needed for the eco-charrette. Make this information available to all participants so they can review and become familiar with important project information *before attending* the eco-charrette. This includes the following:

- » Project mission statement and short paragraph about the project history and/or project master planning
- » Current site master plan

- » Base information of existing facilities and their operations and maintenance issues
- » Square footage of overall project and spaces
- » Space requirements for the project
- » Define spaces, occupancy levels, use, daylighting needs, temperature ranges, and adjacency requirements
- » Drawings of the project site(s) showing existing topography, vegetation, structures and infrastructure (Note scale on map for participant use)
- » Drawings of the project site(s) showing proposed topography, vegetation, structures and infrastructure (Note scale on map for participant use)
- » Description (and drawings or images if possible) of larger context site, such as population, geography, transportation modes, utility lines, and other infrastructure of the surrounding area
- » Current status of green procurement measures, retail initiatives, and interpretation and education considerations

Purpose & Goals: Carefully identify the purpose of the eco-charrette and the characteristics and expertise of participants needed to achieve that goal. A good understanding of the intended outcome and participant characteristics will improve the likelihood of a successful event and help participants agree that it was worth their time to participate.

Project Champions: Identify one or more individuals to conduct the eco-charette and maintain communications thereafter. Review the responsibilities of this person during the eco-charrette to ensure a positive outcome. Assign "champions" to components/tasks that come out of the eco-charrette.

Length: Plan how long the eco-charrette will be and schedule the agenda accordingly. Eco-Charrettes can often become lengthy if careful attention is not given to time efficiency. The "champion" should typically be the one to keep the eco-charrette moving forward in an efficient and productive manner.

Agenda, Date, and Location: Assure there is an agenda, a set date and location, and adequate time for the eco-charrette. The space should be conducive to team interaction.

Participants: DOT-A shall establish a participant list per project. Participants may include the following:
- » DOT-A Division + District Representatives
- » Building Users
- » Building Operator/Maintenance
- » Planner
- » Architect
- » LEED Consultant
- » Interior Designer
- » Landscape Architect
- » Civil Engineer
- » Mechanical Engineer
- » Electrical Engineer
- » Commissioning Agent

Materials: Lead by Example. Employ green practices when preparing participant materials:

- » Use recycled paper
- » Make double-sided copies except site information and other charrette working materials
- » Use notebooks or folders made of recycled or environmentally preferable materials (i.e., recycled cardboard)
- » Avoid using paper when possible in favor of electronic copies, when possible

ECO-CHARRETTE PROCESS

Introduce Key Players.
Create a sign in sheet so that contact information can be shared.

Document/Record the Event
Assign someone to take minutes during the eco-charrette.

Describe Project and Eco-charrette Expectations
Send participants information prior to the eco-charrette for review. Clearly state the project description, issues, goals and expectations for the eco-charrette.

At a minimum, the project team should address:

  » Project description—brief overview of the project with photographs and drawings as appropriate
  » Goals—what results are desired from the project and from the eco-charrette
  » Project status—what decisions have been made already and what work has been performed
  » Issues or concerns—are there any barriers or problems that may affect the project

Review any Background Information as Necessary
(i.e. explaining LEED, USGBC, ACT 96, Sustainable High-Performance Guidelines, etc.)

Run Through Appropriate Checklists

  » Have an initial LEED/SHPG checklist ready to review with DOT-A
  » Run through the credits and discuss any issues with appropriate responsible parties and DOT-A. Have responsible parties review design/cost impacts of particular credits. Define what DOT-A would ideally like to have and what they can "live with"
  » Assess what credits are not applicable and not in-line with the project goals and scope
  » Gain input from the Sustainable DOT-A (sDOT-A) Representatives
  » When review of the checklist is completed, review status of accumulated "points."

  » Report to the group the status; if necessary review areas where DOT-A would like to see preferred efforts moving forward.
  » Where required, prioritize what sustainable initiatives are more important to DOT-A, and discuss the EONS impacts.

POST-CHARRETTE FOLLOW-UP AND NEXT STEPS

The follow-up for an eco-charrette is an important element. In this part of the process, the project's future goals are confirmed, and momentum is generated, moving the project toward completion.   For the event:

  » Summary of the background information provided to the participants
  » Detailed summary of the large-group discussions
  » Information presented in a workshop format and individual breakout group recommendations if needed
  » Detailed summary of the specific strategies that will be included in the project design
  » Sketches and drawings to be incorporated into the project construction plans
  » End the kickoff meeting with a review of action items

Project team to hold a debriefing meeting if necessary.

Conduct a debriefing meeting with the project team to wrap up the process of planning and to discuss the event outcomes. It is best to hold this meeting immediately after the eco-charrette concludes, such as the day after the eco-charrette. Use this time to review the success of the event activities, clarify the decisions and project directions agreed on by the participants, and consider the next steps. Action items resulting from the debriefing meeting should assign responsibilities and completion dates for the remaining items listed below.

Prepare a Report on the Results

Produce a written report that summarizes the results of the eco-charrette. The purpose of this report is to document and collate the information presented and discussed during the event. In many cases, these reports are useful in promoting acceptance of the decisions made during the eco-charrette.

» Executive Summary: It is best to develop an executive summary (one page front and back maximum) of the most important event outcomes to accompany the more detailed report. The executive summary can be used to brief key stakeholders and other interested parties. Incorporate photographs and scanned drawings created to illustrate the decisions made during the event if appropriate

» Checklist Summary (LEED and/or SHPG): The detailed report shall include a checklist evaluating the design scheme with the greatest potential. The checklist shall be accompanied by strategy descriptions of each credit

» For those credits indicating "yes" – Describe how the credit will be accomplished. List any affects the credit strategies may have on budget. List any elements needed to ensure credit achievement

» For those credits indicating "maybe" – Describe items that are pending and the level of effort it would take to achieve the credit. List any effects the credit strategies may have on budget. List any elements needed to ensure credit achievement

» For those credits indicating "no" – List reasons why the credit is not achievable or not applicable to the project and/or project goals

Follow Up with the Participants
and Encourage Involvement

Prompt follow-up with the participants will build upon the energy and momentum that emerged during the eco-charette. Send the executive summary and checklist summary to all participants.

SUPPLEMENTARY INFORMATION

The remainder of this document contains pictorial examples of the type of place-based information a project team can gather, as well as some examples of how that information may pertain to HNL. The images are meant to provide a starting point of inspiration for project teams, which show examples of the types of information that could facilitate place-sensitive considerations into the design. The following information will highlight:

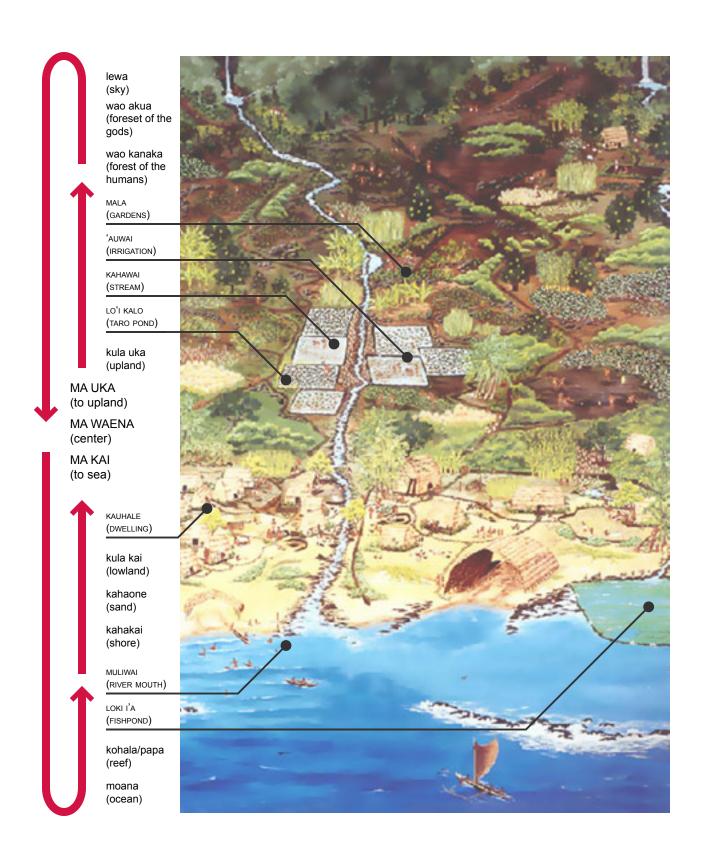Ahupua'a Directions and Zones

Ahupua'a & Moku of O'ahu

Winds of O'ahu
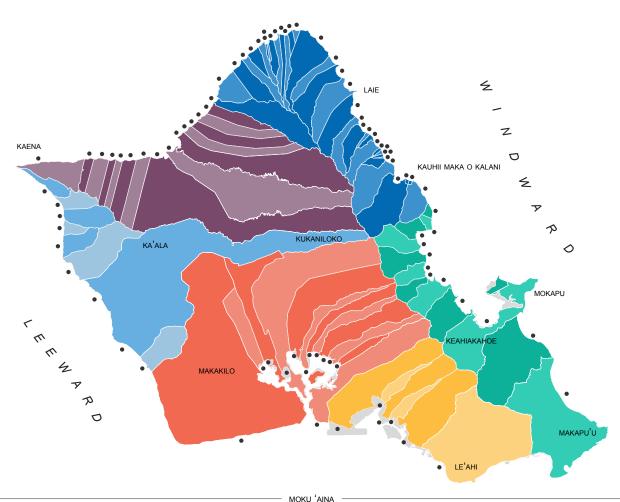
Star Compass

Sun Path Diagram

AHUPUA'A DIRECTIONS AND ZONES

The image above generally illustrates the various directions, zones, and elements of the ahupua'a. Please note the organization of these vary from place to place. Source: Painting by Kamehameha Publishing. Annotations by KYA Sustainability Studio.

lewa
(sky)

wao akua
(foreset of the
gods)

wao kanaka
(forest of the
humans)

MALA
(GARDENS)

'AUWAI
(IRRIGATION)

KAHAWAI
(STREAM)

LO'I KALO
(TARO POND)

kula uka
(upland)

MA UKA
(to upland)

MA WAENA
(center)

MA KAI
(to sea)

KAUHALE
(DWELLING)

kula kai
(lowland)

kahaone
(sand)

kahakai
(shore)

MULIWAI
(RIVER MOUTH)

LOKI I'A
(FISHPOND)

kohala/papa
(reef)

moana
(ocean)

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AHUPUA'A & MOKU OF O'AHU

Image illustrates the majority of ahupua'a found on O'ahu. Please note some of the traditional names or boundaries of certain ahupua'a have been lost. Source: Map adapted from a map by Kamehameha Publishing. Annotations by KYA Sustainability Studio.

MOKU 'AINA

KONA	EWA	WAI 'ANAE	WAIALUA	KO'OLAULOA		KO'OLAUPOKO

AHUPUA'A

KONA	EWA	WAI 'ANAE	WAIALUA	KO'OLAULOA		KO'OLAUPOKO
Waikiki	Halawa	Nanakuli	Ka`ena	Waimea	Keana	Kualoa 1
Honolulu	`Aiea	Lualualei	Kealia	Pupukea	Malaekahana	Kualoa 2
Kapalama	Kalauao	Wai`anae	Kawaihapai	Paumalu	La`iewai	Hakipu`u
Kalihi	Pu'uloa	Makaha	Kikahi	Kaunala	La`iemalo`o	Waikane
Kahauiki	Waimalu	Kea`au	Auku`u	Waiale`e	Kaipapa`u	Waiahole
Moanalua	Waiau	`Ohikilolo	Mokule`ia 2	Pahipahialua	Hau`ula	Ka`alaea
	Waimano	Koiahi	Mokule`ia 1	`Opana 1	Makao	Waihe`e
	Manana	Makua	Kamananui	`Opana 2	Kapaka	Kahalu`u
	Waiawa	Kahanahaiki	Pa`ala`a	Kawela	Kaluanui	He`eia
	Waipi`o	Keawa`ula	Kawailoa	Hanaka`oe	Hale`aha	Kane`ohe
	Waikele		Lauhulu	`Oi`o 1	Kapano	Kailua
	Ho`ae`ae		Kuikuiloloa	`Oi`o 2	Wai`ono	Waimanalo
	Honouliuli		Punanue	Ulupehupehu	Punalu`u	
			Kapaeloa	Punalau	Kahana	
				Kahuku	Makaua 2	
					Ka`a`awa	

WINDS OF OʻAHU

The image above lists the variety of winds for the different places on the island of Oʻahu, organized by the different moku. Source: Wind Gourd of Lamaomao. Island map by KYA Sustainability Studio.

[Kona]
Puʻuokona is of Kuliʻouʻou,
Ma-ua is the wind of Niu,
Holouha is of Kekaha,
Maunuunu is of Waiʻalae,
The wind of Leʻahi turns here and there,
ʻOlauniu is of Kahaloa,
Waiʻomaʻo is of Palolo,
Kuehu-lepo is of Kahua,
Kukalahale is of Honolulu,
ʻAoʻaoa is of Mamala,
ʻOlauniu is of Kapalama,
Haupeʻepeʻe is of Kalihi,
Ko-momona is of Kahauiki,
Hoʻeʻo is of Moanalua,

[ʻEwa]
Moaʻe-ku is of ʻEwaloa,
Kehau is of Waiʻopua,
Waikoloa is of Lihuʻe,
Kona is of Puʻuokapolei,
Maunuunu is of Puʻuloa,

[Waiʻanae]
Kaiaulu is of Waiʻanae,
Kumumaʻomaʻo is of Kamaile,
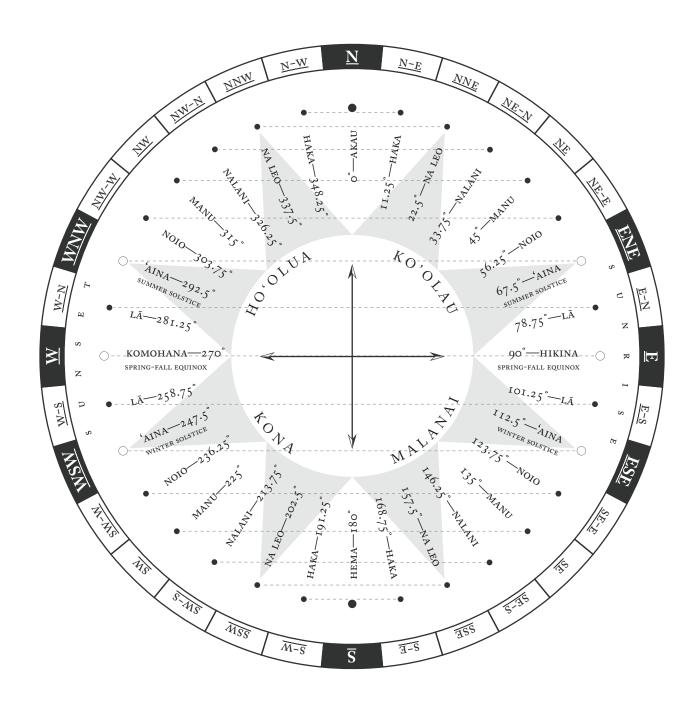Kualele is of Kumaipo,
Kopiliehu is of Olopua,

[Waialua]
The wind of Kaʻena turns in two directions,
Hinakokea is of Mokuleʻia,
The winds of Waialua blow,
Moving silently at the cape of Kaʻena,
Puʻu-ka-ʻala blows at Kaʻala,
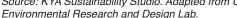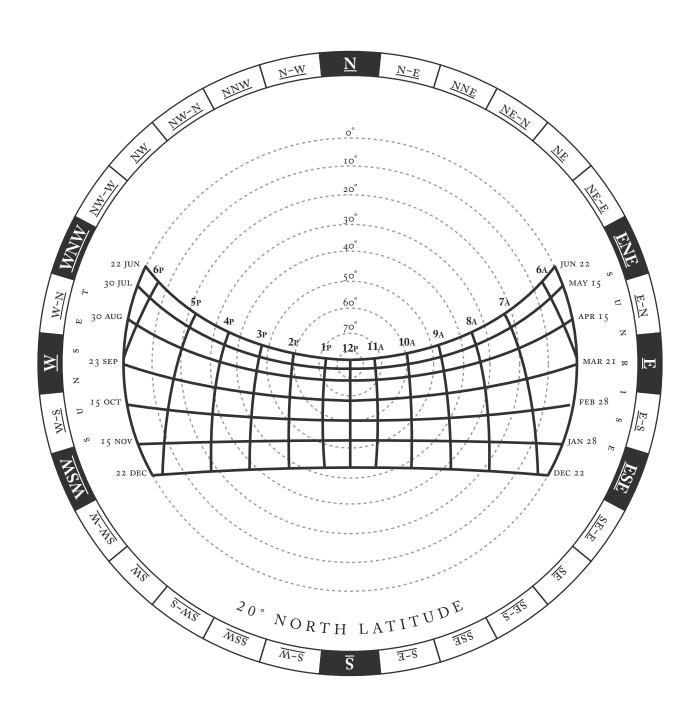Kehau is of Kapo,

[Koʻolauloa]
The sea wind blows hard,
Malualua comes from the northeast,
Peapueo is of Kaunala,
Ahamanu is of Kahuku,
Lanakila is of Hauʻula,
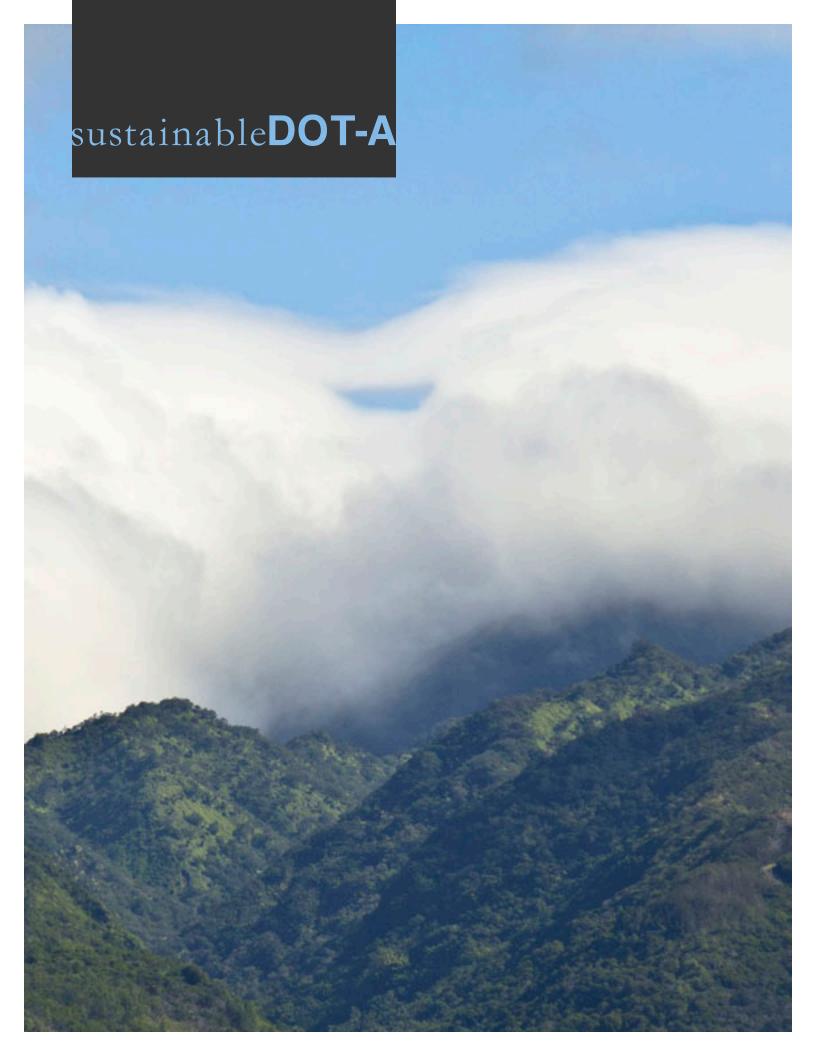Moaʻe is of Punaluʻu,
ʻAhiu is of Kahana,

[Koʻolaupoko]
Holopali is of Kaʻaʻawa and Kualoa,
Kiliua is of Waikane,
Mololani is of Kuaʻaʻohe,
Ulumano is of Kaneʻohe,
The wind is for Kaholoakeahole,
Puahiohio is the upland wind of Nuʻuanu,
Malanai is of Kailua,
Limu-li-puʻupuʻu comes ashore at Waimanalo,
ʻAlopali is of Pahonu,
At Makapuʻu the winds turn,
The Kona winds turn, the Koʻolau winds turn,

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20° NORTH LATITUDE

APPENDIX:
SENSE-OF-PLACE STUDY FOR
HNL AIRPORT

By KYA Design Group & HOK

OVERARCHING DESIGN CONCEPT

"PILI HONUA"

Ke ola pili ka honua, he pili wehena ʻole.
"The life joined with the land is an
inseparable relationship."

As a testament to Hawaiʻi's unique heritage and natural beauty, the new design for the Honolulu International Airport Terminal celebrates the connections between our local community and environment, expressed in the design concept, *Pili Honua*, meaning "relationships to land" or "connection to place."

In Hawaiian, *pili* means "to be close and belong to," used to name the wild pili grass that "sticks" with its neighbors as it grows. *Honua* means "land, world, foundation" and comes from the word *hoʻonuʻa*, which means to "give generously." Together, "Pili Honua" communicates a strong connection with the land—the unconditional giver of life.

Pili Honua will be expressed at the HNL Airport Terminal with directional references to the different mokuʻāina of Oʻahu. A mokuʻāina, or district, was a place-based system of resource management organized into various ahupuaʻa—the continuum between mountain, stream, ocean, and sky. Each mokuʻāina nurtured lifestyles of sustenance, self-reliance, and aloha, founded upon familial relationships with the land. These formed the very basis of one's identity, comprehensible only by connection to their community and environment as a whole.

Each of the six new concourses at the HNL Airport will represent one of the six mokuʻāina of Oʻahu. In honor of each mokuʻāina, each concourse will showcase a pōhaku (rock) that is to be gifted from its area during a grand opening ceremony. The goal is to create an airport that is functional, contemporary, and brilliantly inspiring while all together promoting environmental responsibility and enhancing the educational, meaningful, and appropriate *sense-of-place* experience of all building occupants.
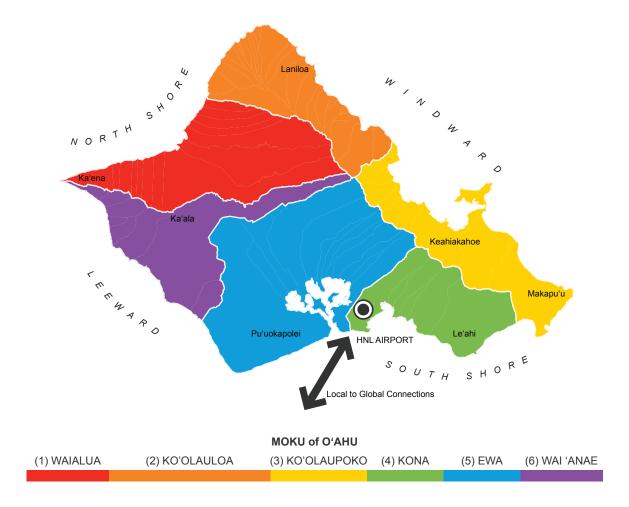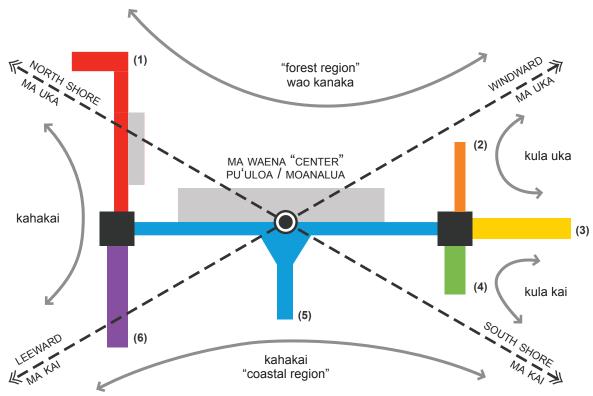
CONTEXT & APPROACH

Sense-of Place + Sustainability
Layers of Meaning

The design concept Pili Honua emerged from a thoughtful and critical exploration of *Hawaiʻi sense-of-place* as a blend between sustainability and Hawaiʻi's heritage, from both technical and experiential realms of the design spectrum.

Sense-of-place bears significance to one's identity and influences one's relationships with their surroundings, whether physical, emotional, mental, or spiritual. Sustainability perpetuates the health of a place for present and future generations. The marriage of *sense-of-place* and sustainability can be expressed through hoʻokipa (hospitality), pono (balance), ʻike (knowledge), lōkahi (respect), mālama (care/honor), and aloha (love). These are the foundation of three guiding themes that frame major design decisions for the HNL Airport vicinity. *Mai kahiki mai* (from distant lands) guides the process of respecting and honoring the past. *Kauhale* (dwelling) guides the construction and organization of building components based on function. *Ahupuaʻa* (land, sea, sky) guides the integration of environmental systems and environmental awareness and responsibility.

To capture this diverse range of considerations, Pili Honua and the story of the mokuʻāina are achieved by approaching the design holistically through a series of "layers," each expressing a particular aspect of how Hawaiʻi's community connects to place. Just as one may see the many colors of a single rainbow, so too do these "layers of meaning" combine to create a distinctly Hawaiian building. These layers range from subtle to obvious, and include the structure and building envelope, integrated environmental systems, organization, landscape, materials, and artwork. This design process parallels the actual action of pili, where the different layers of meaning stick to one another to become a whole greater than the sum of its parts—an appropriate gesture toward the richness and wonderful variety that make Hawaiʻi unique.

MOKU of O'AHU

(1) WAIALUA   (2) KO'OLAULOA   (3) KO'OLAUPOKO   (4) KONA   (5) EWA   (6) WAI 'ANAE

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CONTENT (TECHNICAL / FUNCTIONAL)

- » Structure
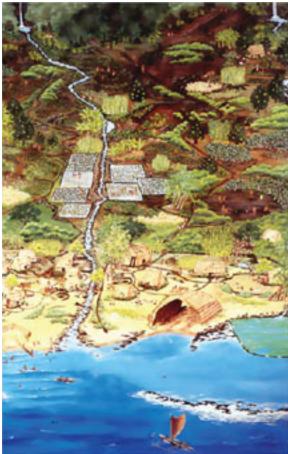- » *Envelope*
- » *Environmental Systems*

As a LEED Silver project and in alignment with sustainable, or "whole-building" design, Pili Honua is expressed in the very structure, envelope, and environmental systems of the HNL Airport Terminal, designed to function as a "healthy" building. This requires the coordination of all building components so they work together to achieve high performance. As a result, the HNL Airport Terminal merges *sense-of-place* with technical and functional considerations to become a subtle metaphor of the Ahupua'a and Kauhale—as lifestyles of awareness, responsibility, and aloha. Technical and functional expressions of Pili Honua include:

Structural bracing, HVAC, landscape, and daylighting, are integrated to maximize the performance of the building through energy efficiency and indoor environmental quality.

The building envelope blurs the distinction between indoor and outdoor through a series of overlapping components. These are a contemporary interpretation of the pili-grass thatching and exposed interior structure of the Hawaiian Hale.

The form of the building is composed of a solid lower-level platform, or *paepae*, which symbolizes the physical connection between the building and the earth that sustains us. In contrast, the upper level is a light exposed structural frame designed to accommodate interior daylighting and an unobstructed visual connection with the surrounding exterior.

Overall Pili Honua is expressed from a technical and functional perspective through place-based responses to the surrounding environment and metaphorical references to the ahupua'a, and traditional construction of the Hawaiian hale, reinterpreted for a contemporary context.

CONTENT (EXPERIENTIAL / EDUCATION)

» Spatial organization
» *Landscape*
» *Materials*
» *Artwork*

Pili Honua is expressed in the HNL Airport Terminal's spatial organization and choice of landscape, materials, and artwork. The more obvious expressions of Pili Honua include:

The artwork of each concourse tells the story of its representative mokuʻāina, focusing on an area's connection to the lands, waters, winds, sky, and people. Artwork includes a range of sculpture, painting, photography, and other mixed media created locally by local artists.

Similar to the traditional Hawaiian hale, the spatial organization of the building is compartmentalized by function. Major components include the gatehouses, which emphasize the process of arrival and departure, and the holdrooms, which are expressed as lanai. The experience of these areas will be enhanced with ambient Hawaiian music.

The interior landscape features lush gardens composed of native and adapted plants from the different parts of Oʻahu's diverse ecosystem. Plants selections correspond with interior sun exposure and are placed to frame directional views of upland/mountain or lowland/coastal areas one may see from the terminal.

The materials of the building are inspired by the contrasting colors and textures found throughout Hawaiʻi's diverse environment, for example the white of sea coral in contrasted with black lava rock. Material selections are intended to be neutral and honest in expression.

Together, these provide opportunities to showcase the more experiential and educational aspects of *Hawaiʻi sense-of-place*, which reinforce the more subtle expressions of Pili Honua in the building's structure, envelope, and environmental systems.

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