sustainable**DOT-A**

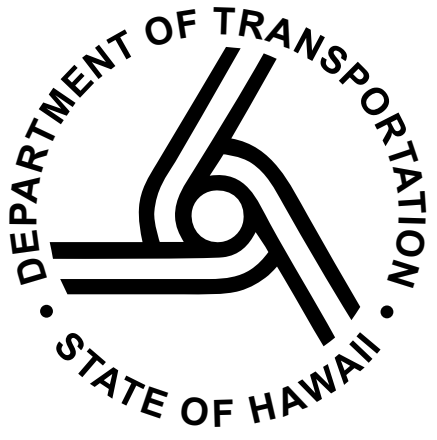
sustainable**HNL**

Sustainable Management Plan

A flight plan for the DOT-A flagship airport

MADE IN HAWAIʻI • 2016

STATE OF HAWAI'I
2016



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

Disclaimer: KYA Sustainability Studio obtained data from a variety of sources to produce this sustainability plan. The reporting team did not have access to all source data directly from the airport, and thus was not able to verify all data sets fully against the source documents. Due to these constraints, it is possible that performance metrics in the baseline may not be accurate.

CONTENTS

FIGURES

TABLES

HOW TO USE THIS DOCUMENT

PURPOSE

The Honolulu International Airport (HNL) Sustainable Management Plan (SMP) has been developed to support SustainableDOT-A and its ongoing mission to incorporate the principles of sustainability in all aspects of airport operations. This SMP provides the framework for a management plan rooted in the best practices of sustainability that can serve as a model in design and process for state-run airports across the country. The goal of the SMP is to leverage design, construction, operations, and maintenance dollars through proven business practices, goals, and initiatives in order to pay benefits to the customers, employees, industry and local community. Through the SMP, HNL will align with the State and local goals, policies, and initiatives by conducting a comprehensive analysis of how and where sustainability management is implemented into long-term planning.

DOCUMENT STRUCTURE

This document gives a general overview of the main phases of the SMP process and offer a look at the current state of sustainability performance at HNL. The contents and practical application of each section are summarized below.

EXECUTIVE SUMMARY includes an overview of the SMP, as well as a comprehensive table of SMP's focus areas, goal statements, objectives, targets, key performance indicators (KPI's), and initiatives.

SUSTAINABILITY PLANNING gives an overview of the Sustainable HNL Program and its latest effort in airport sustainability, the creation and adoption of the SMP.

AIRPORT PROFILE describes the various attributes of HNL, its recent trends in passenger growth, and the Department of Transportation organizational hierarchy. This section also includes a boundary map of the areas effected by the HNL sustainability program.

SUSTAINABILITY PERFORMANCE summarizes the baseline assessment that provided the observations, metrics, and indicators necessary to develop this SMP. The summary includes the assessment findings of the top priority sustainability categories, Energy, Carbon, Water, Waste, and Storm Water, as well as a general overview of the additional, longer-term sustainability focus areas.

GOALS, OBJECTIVES & TARGETS describes the goal selection process and outlines the goal statement, objectives, and targets for each sustainability focus area.

ENGAGEMENT explains how stakeholders were engaged during the SMP planning phase and how they can be engaged during the implementation of the SMP initiatives. For guidance on determining appropriate communication activities, refer to the Implementation section.

INITIATIVES goes over the general initiative selection process, explaining how the initiatives were identified and then evaluated. This section lists the initiatives selected for immediate implementation.

IMPLEMENTATION introduces the Plan-Do-Check-Act cycle that informs the SMP Implementation Plan, as well as the outline of the general implementation schedule.

MONITORING & REPORTING PERFORMANCE introduces the Performance Monitoring Tool that will be used to track the success of the SMP and covers the KPI's and metrics for the top five sustainability focus areas.

THIS PAGE WAS INTENTIONALLY LEFT BLANK

SUSTAINABILITY POLICY FOR THE HONOLULU INTERNATIONAL AIRPORT

MISSION

To promote sustainability in Hawai'i by empowering airport projects, fostering collaboration and communicating progress through education and outreach.

VISION

As the most isolated landmass on earth with abundant natural resources, Hawai'i is ideally located to become a thriving regenerative community with capacity for self-reliance. As Honolulu International Airport (HNL) serves as the international gateway for the Pacific Region and plays a vital role in Hawai'i's local community, HNL will become a world leader in airport sustainability. The HNL Sustainability Program will instill a sense of pride among airport stakeholders, the general public, and visitors alike, thereby proactively inspiring tenants, government agencies, businesses, and individuals to transition to a model of sustainable living.

POLICY

The State of Hawai'i Department of Transportation – Airports Division (DOT-A) will actively pursue opportunities for airport sustainability at the State's busiest airport, HNL. The DOT-A intends to lead by example as it incorporates the principles of sustainability into all aspects of airport operations as outlined in the Sustainable Management Plan (SMP). The policy and SMP document are in alignment with local legislation, airport community initiatives, Federal Aviation Administration goals, and the global movement for aviation sustainability. HNL created the SMP to initially focus on sustainability initiatives directly under DOT-A control. In the future, DOT-A will work to support and guide stakeholders and business partners to plan, act, monitor, and report on sustainability at HNL.

COMMITMENT

- DOT-A will implement initiatives and maintain best practices to strive to achieve sustainability goals.
- DOT-A will set aside funds for implementing initiatives, monitoring progress, and creating annual sustainability progress reports.

The Accountable Manager for the implementation of this policy is the Oahu District Airport Manager. This policy will be communicated to DOT-A employees and the airport community through electronic and other means.

Ford N. Fuchigami
Director
State of Hawai'i Department of Transportation

Honolulu International Airport serves as the international gateway for the Pacific Region and plays a vital role in Hawai'i's local community. HNL has a vision to become a world leader in airport sustainability and to instill a sense of pride among customers, employees, industry, and the community.

HNL SUSTAINABLE MANAGEMENT PLAN SUMMARY

The Hawai'i Department of Transportation - Airports Division (DOT-A) intends to serve as an example for the airport industry and Hawai'i by incorporating the principles of sustainability into all aspects of HNL operations, as outlined in this Sustainable Management Plan (SMP).

Previously, the DOT-A has been successful at measuring sustainable performance and implementing actions to address areas of opportunity. The reason why the DOT-A was interested in preparing the SMP was to design a management system that established the airport's sustainability goals, identified measurable targets, and outlined the process for selecting and implementing appropriate sustainability initiatives. Such a system would support and further develop the efforts of HNL's existing sustainability program, Sustainable HNL. The DOT-A seeks to unite all on-going and future sustainability initiatives under the SMP.

Under the management of Sustainable HNL, and with the assistance of the Federal Aviation Administration, the DOT-A has created this SMP based on the EONS framework for airport sustainability, which is based on the principles of economic viability, operational efficiency, natural resource conservation, and social responsibility.

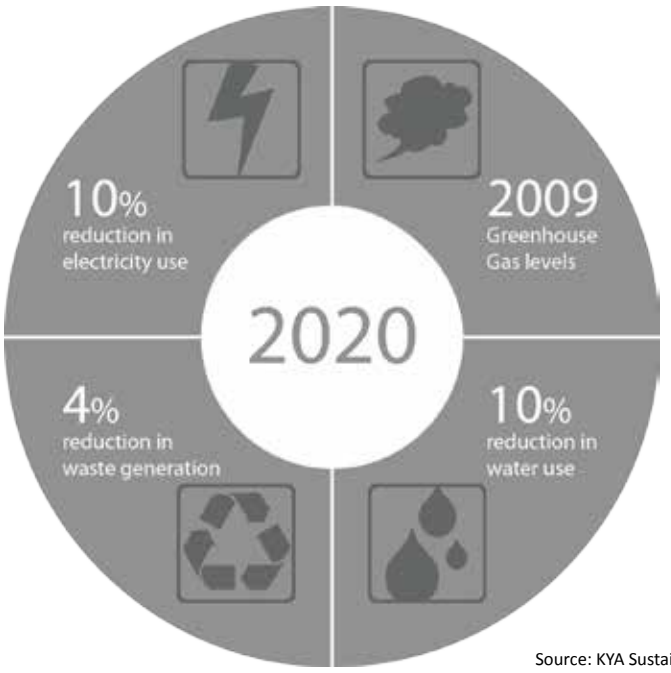
The first step in developing the HNL SMP was establishing a baseline by assessing the status of sustainable airport performance. This baseline assessment was completed in 2014 and looked at data from the past five years, back to 2009. Next HNL leaders selected sustainability focus areas, and defined a mix of quantitative and qualitative goals and related performance targets. Initiatives to achieve the SMP goals were designed and then evaluated using airport management criteria. Once scored, initiatives were given a time line for implementation. The highest scoring initiatives were then planned, approved, and executed. Performance is tracked using monitoring tools created for the SMP continuous improvement. Effectiveness of initiatives will be communicated via annual sustainability reports.

SUSTAINABILITY DEFINED

This SMP is informed by HNL's definition of airport sustainability, which is leveraging design, construction, operations, and maintenance dollars through proven business practices that pay benefits to the customers, employees, industry, and community.

The DOT-A has given priority to the five sustainability categories of Energy, Carbon, Water, Waste, and Storm Water. Targets for Energy, Carbon, Water and Waste have already been set for 2020, while measurable targets for Storm Water are still in development. After 2020, other sustainability categories will be prioritized. Table 1 on the following two pages presents the commitment that the DOT-A is making to the continuous, sustainable improvement of HNL through this SMP.

FIGURE 1. SMP GOALS FOR ENERGY, CARBON, WATER & WASTE



Source: KYA Sustainability Studio 2016

NOTES:

- Energy: 10% reduction in electricity use per passenger (enplaned plus deplaned) from 2014 baseline by December 31, 2020.
- Carbon: 2009 GHG levels for scope 1 and scope 2 emissions per passenger (enplaned plus deplaned) from 2014 baseline by December 31, 2020.
- Water: 10% reduction in potable water use per passenger (enplaned plus deplaned) from 2014 baseline by December 31, 2020.
- Waste: 4% reduction in MSW generation per passenger (enplaned plus deplaned) from 2014 baseline by December 31, 2020.

GOALS, OBJECTIVES AND TARGETS SOURCES

- Aloha Plus Challenge
- Hawaii Lead by Example State Initiative
- Hawaii Clean Energy Initiative (HCEI)
- Global Warming Solutions Act
- Hawaii 2050 Sustainability Plan
- Airports Council International - North America (ACI-NA) Sustainability Committee

GUIDING RESOURCES

- Federal Aviation Administration (FAA)
- Transportation Research Board: Airport Cooperative Research Program (TRB ACRP)
- Sustainable Aviation Guidance Alliance (SAGA)
- Global Reporting Initiative (GRI)

TABLE 1. SUMMARY OF FOCUS AREAS, GOAL STATEMENTS, OBJECTIVES, TARGETS, KEY PERFORMANCE INDICATORS, AND INITIATIVES

FOCUS AREAS	GOAL STATEMENTS	OBJECTIVES
Energy: Electricity consumption and cost	Maximize efficiency and increase renewable energy. [1,3,5,6]	• Reduce energy consumption through efficiency. • Harness renewable energy resources.
Carbon: The total greenhouse gas (GHG) emissions generated from activities and resource consumption under DOT-A control	Reduce greenhouse gas emissions of DOT-A controlled operations. [4,5,6]	• Reduce DOT-A carbon footprint. • Establish an alternative-fuel strategy.
Water: Consumption and cost.	Decrease the use of potable water. [1,5,6]	• Reduce potable water use. • Encourage efficient water use and reduce water waste. • Increase the use of reclaimed water.
Waste: Management and recycling activities	Reduce the solid waste stream prior to disposal and increase recycling and reuse. [1,5,6]	• Increase the recycling rate. • Reduce total amount of waste generated at HNL.
Storm Water: Runoff from HNL during storms	Minimize the downstream impacts of storm water. [5,6]	• Meet National Pollutant Discharge Elimination System permit compliance requirements.
Financial Sustainability: The ability to finance capital and operational costs to meet future demand	Ensure long-term financial viability. [5]	• Optimize existing resources and reduce utilities costs • Increase non-aeronautical revenue. • Create a green revolving fund for sustainability projects.
Day-to-Day Operations: Sustainable operation requires airport spaces that are operated based on best practices	Incorporate sustainable principles and practices into airport governance. [5]	• Measure the purchase of goods and services from locally owned businesses. • Reduce overall life cycle cost for capital investments. • Provide commitment around sustainability implementation.
Design and Construction: Airport spaces based on integrated sustainability approaches	Incorporate sustainability planning, design, and construction best practices into airport projects. [1,5]	• Meet 3rd party certification and achieve certification where possible for airport projects. • Incorporate the Sustainable High Performance Guidelines for projects.
Ground Transportation: Promotes alternative transportation for passenger & employee travel	Provide public transportation infrastructure to achieve district-wide sustainability. [1,5]	• Plan for future ways to reduce congestion on the roadways by supporting public transportation. • Embrace hybrid and electric vehicle infrastructure for DOT-A, tenant and public vehicles.
Climate Resiliency: Resiliency to episodic events and longer term meteorological and environmental shifts	Plan for climate change resiliency. [1,5]	• Incorporate climate change impacts and vulnerabilities into the management.
Community: Workplace and environmental health and safety	Maintain a safe and healthy HNL for passengers and employees. [5]	• Engage employees and airport community stakeholders in sustainability activities of the Airport. • Provide opportunities for health and wellness education and support of work site wellness.
Food and Beverage: Support resiliency and bring identity to HNL food	Increase organic &/or locally sourced & produced food & beverages sold at HNL. [1,5]	• Encourage concessionaires to serve healthy, locally grown, and/or produced food options.
Social-Cultural: Incorporating the local culture into airport planning	Honor local culture and heritage [5]	• Encourage designs that perpetuate the local culture.

NOTES:

The wording on the objectives, targets, key performance indicators, and initiatives has been shortened for display purposes. For full text, see the Goals, Objectives, and Targets section.

Source: KYA Sustainability Studio 2016

TARGETS	KEY PERFORMANCE INDICATORS	NEW INITIATIVES
• Reduce energy by 10 percent by 2020.	• Annual electricity consumption. • Annual renewable energy generation.	• Pursue efficiency, conservation, and PV.
• DOT-A emissions at or below 2009 levels by 2020. • Establish an alternative-fuel strategy by 2020.	• Annual carbon emissions inventory. • Annual fuel purchased.	• Develop a reduced vehicle idling plan. • Study feasibility of alternative fuel vehicles.
• Reduce potable water consumption by 10 percent by 2020. • Increase water reclamation by 2020.	• Annual water consumption. • Annual water reclamation. • Gallons of water reclaimed and re-used.	• Extending the DOT-H's greywater line. • Sustainable landscaping guidelines/ specifications.
• Reduce waste generation by 4% by 2020. • Increase the recycling rate to 4% by 2020.	• Annual waste disposal. • Recycling rate.	• Waste Management Plan and policy. • Paper use reduction program. • Print on recycled paper. • Donate surplus food & goods to charity. • Paper recycling awareness campaign. • Waste receptacle branding. • HI-5 recycling program improvement.
TBD	• Permit exceedances associated with storm water quality or quantity.	• Education campaign airport-wide.
• Decrease utility costs by 5% by 2030. • Establish a fund for sustainability projects by 2030.	• Focus area utilities costs annually. • Revenue generation by fiscal year. • Presence of green revolving fund for sustainability projects.	• Energy, Carbon, Water, & Waste initiatives. • Rest room upgrades.
• Implement sustainability strategies by 2030.	• Value of materials purchased. • Life cycle cost of assets. • Useful life of assets. • Asset monitoring and maintenance. • Implemented SMP Initiatives.	• Evaluation tool for Sustainability Projects. • Sustainable Building Maintenance Requirements.
• Increase building space that achieves sustainable design guidelines by 2030. • Increase project achievement of the SHPG by 2030.	• Projects verified using 3rd party sustainability criteria. • Projects verified using DOT-A sustainability criteria.	TBD
• Increase hybrid and electric vehicles by 2030.	• Infrastructure investments provided primarily for public benefit. • Electric vehicle charging infrastructure.	TBD
• Create a Climate Action Plan by 2030. • Educate staff on the potential effects and efforts.	• Preparations for weather-related short-term hazards and long-term adaptability. • Outreach with employees around climate change.	TBD
TBD	• Outreach with employees around sustainability. • Employees engaged in health and wellness programs.	TBD
• Implement a Sustainable Food & Beverage Guideline by 2030.	• Concessionaires with local and organic options.	TBD
• sDOT-A Cultural Appropriate Guidelines use.	• Adoption of Cultural Appropriate Guidelines.	TBD

GOAL, OBJECTIVES AND TARGETS SOURCES

1. Aloha Plus Challenge
2. Hawai'i Lead by Example State Initiative
3. Hawai'i Clean Energy Initiative
4. Global Warming Solutions Act
5. Hawai'i 2050 Sustainability Plan
6. Airports Council International - North America (ACI-NA) Sustainability Committee

SUSTAINABILITY DEFINED

HNL airport sustainability leverages design, construction, operations, and maintenance dollars through proven business practices that pay benefits to the customers, employees, industry, and community.

SUSTAINABLE HNL MISSION

To promote sustainability in Hawai‘i by empowering airport projects, fostering collaboration, and communicating progress through education and outreach.

SUSTAINABLE HNL VISION

As the most isolated landmass on earth with abundant natural resources, Hawai‘i is ideally located to become a thriving regenerative community with capacity for self-reliance. As Honolulu International Airport serves as the international gateway for the Pacific Region and plays a vital role in Hawai‘i’s local community, HNL will become a world leader in airport sustainability. The Sustainable HNL program will instill a sense of pride among airport stakeholders, the general public, and visitors alike, thereby proactively inspiring tenants, government agencies, businesses, and individuals to transition to a model of sustainable living.

SUSTAINABLE HNL PROGRAM

Sustainable HNL (sHNL) is an airport-wide initiative dedicated to promoting sustainability across HNL and Hawai‘i. A part of the larger, state-wide Sustainable DOT-A Program, it oversees all sustainability-related efforts at HNL and builds community support and internal collaboration across stakeholder groups. The sHNL program was established in 2011 in accordance with the Sustainable Aviation Guidance Alliance (SAGA) recommendations for airport management, which fosters an approach to organizational design from the perspective of sustainability.

BENEFITS OF AIRPORT SUSTAINABILITY

- Improved capital asset life cycle & operating costs
- Better design
- Increased competitiveness & productivity
- Better customer service & satisfaction
- More effective use of resources
- Elimination of waste
- Optimized technologies
- Enhanced relationships with customers and staff

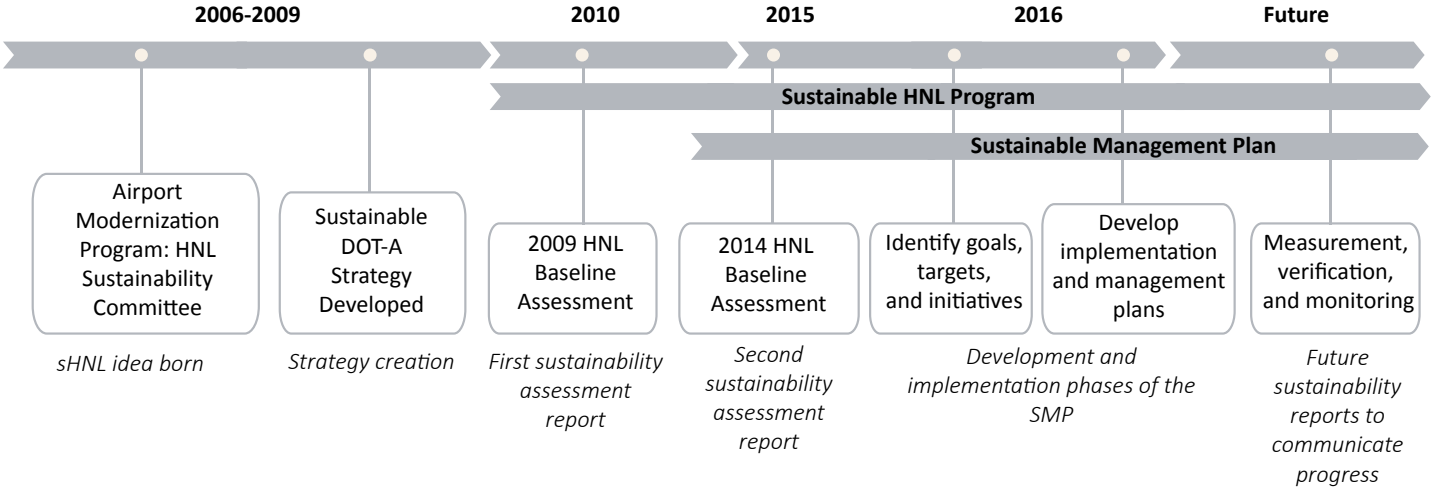
SUSTAINABILITY COMMITTEE

At the forefront of sHNL is the HNL Sustainability Committee (HNL-SC)—a dynamic, interdisciplinary, and consensus-based team of DOT-A stakeholders inspired by the vision of HNL as a leader in sustainability. The committee is responsible for facilitating a common perspective of airport sustainability, engaging stakeholders, identifying goals and strategies, organizing project initiatives through developed action plans, and implementing protocols for measuring, evaluating, and communicating progress over time. The committee meets voluntarily to represent the various perspectives of each airport department at HNL.

NOTABLE HNL SUSTAINABILITY ACHIEVEMENTS

- Energy Savings Program
  - LED Lighting, solar photovoltaic (PV) panels, air conditioning & ventilation system upgrades, transformer replacement, and automated building controls
- Airport Carbon Accreditation
  - Level 2 - Reduction (2016)
- Use of reclaimed water for landscaping irrigation
- Recycling Program
  - Ramp side: paper, scrap metal, cardboard,
  - Public side: cans, and plastic bottles
- Electric vehicle charging stations in Public parking lots
- Oahu Climate Change Planning

FIGURE 2. SUSTAINABLE HNL TIMELINE



Source: KYA Sustainability Studio 2016

SUSTAINABLE MANAGEMENT PLAN

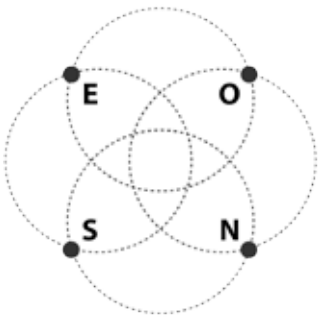
The leadership role demonstrated by the DOT-A and its sHNL program has been recognized by the Federal Aviation Administration (FAA). In 2014, the DOT-A received a grant from the FAA Master Plan Pilot Program to incorporate sustainability into HNL planning through the creation of a Sustainable Management Plan (SMP). Based on SAGA recommendations and the ACI-NA definition of airport sustainability, this SMP is built on the EONS framework, which encompasses the principles of Economic Viability, Operational Efficiency, Natural Resource Conservation, and Social Responsibility. The DOT-A aims to unite all sustainability initiatives under the SMP. The SMP presents an opportunity for a strategic sustainability program unique to HNL, which can serve as a model in design and process for state-run airports across the country.

The goal is to provide the framework for an airport management plan rooted in the best practices in sustainability. Through the SMP, HNL will align with the State and local goals, policies, and initiatives.

FAA SUSTAINABILITY MASTER PLAN PILOT PROGRAM

This is a pilot project funded by the Federal Aviation Administration (FAA) as part of a program undertaken by the Agency's Office of Airport Planning & Programming – National Planning and Environmental Division at its Washington D.C. Headquarters. Since the SMP's inception in 2010, the FAA has funded 45 airports, including HNL, to develop their Sustainability Planning documents.

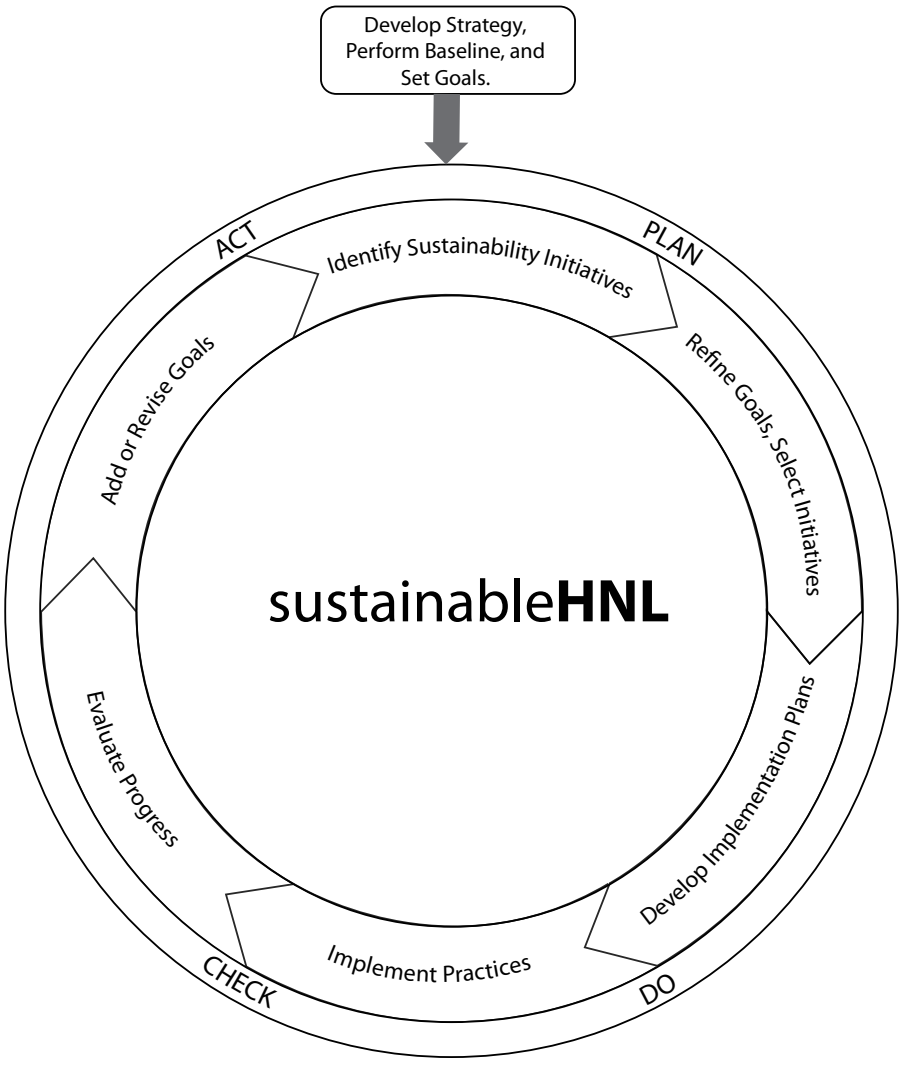
FIGURE 3. EONS MODEL FOR AIRPORT SUSTAINABILITY



Economic viability
Operational efficiency
Natural resource conservation
Social responsibility

Source: KYA Sustainability Studio (2015)

FIGURE 4. OVERVIEW OF SUSTAINABLE HNL THROUGH THE SMP



Source: KYA Sustainability Studio (2016)

HNL SUSTAINABLE FOCUS AREAS

The driving factors of this SMP are its sustainability categories, or focus areas. They have been identified by the HNL-SC as the areas in which the airport hopes to affect change. To select the categories, a list of potential focus areas was identified based on best practices currently in the aviation industry, an assessment of DOT-A sustainability activities, state government goals, and FAA and ACI goals. After a comprehensive review, the 13 categories listed below were chosen. The HNL-SC ranked the categories in order of importance to identify the top 5 strategic priorities, Energy, Carbon, Water, Waste, and Storm Water.

TABLE 2. SUSTAINABILITY FOCUS AREAS & SUMMARIES

TOP 5 PRIORITIES	**ENERGY**	Electricity consumption and cost
	CARBON	The total greenhouse gas (GHG) emissions generated from activities and resource consumption under DOT-A control, including the following sources: electricity, natural gas, propane, gasoline, diesel, compressed natural gas, bio-diesel and refrigerants.
	WATER	Water consumption and cost.
	WASTE	Waste management and recycling activities from the following sources: MSW, Scrap Metal, Pallets, Hazardous Waste, Office Paper, Newspaper, Cardboard, Green Waste, E-Waste.
	STORM WATER	Water runoff from HNL that affects the quality of downstream waters.
	FINANCIAL SUSTAINABILITY	The ability of an airport to finance its capital needs and to cover its annual cost of operations to meet existing as well as future demand.
	DAY-TO-DAY OPERATIONS	Sustainable operation requires airport spaces that are operated based on best practices.
	DESIGN AND CONSTRUCTION	Sustainable design recognizes airport spaces that are intentionally conceived based on integrated sustainability approaches.
	GROUND TRANSPORTATION	Promotes alternative passenger transportation to decrease passenger travel to and from an airport site by conventional fuel, single-occupancy vehicles.
	CLIMATE RESILIENCY	Resiliency to episodic events and longer term meteorological and environmental shifts, thereby avoiding service interruptions in air service and ground transportation. Climate change impacts may include changes in temperature, precipitation levels, storm frequency, and storm severity; sea level rise; habitat impacts; and changes in wildlife.
	COMMUNITY	Workplace and environmental health and safety.
	FOOD AND BEVERAGE	Concessionaires offering local and organic options to support resiliency and bring identity to HNL food.
	SOCIOCULTURAL	Incorporating the local culture into airport planning.

ABOUT

Honolulu International Airport (HNL) is located four miles west of the downtown business district in Honolulu, Hawai'i. Approximately 19.6 million passengers (domestic and international) passed through the Airport in 2014. HNL covers 4,520 acres of fast and submerged land which contain a total of four runways, including the 12,000 ft. Reef Runway, 2 sea lanes, 450,000 square feet of warehouse space, one million square feet of cargo ramp area, and 3.7 million square feet of terminal space. Within this area are nine cargo terminals, three passenger terminals with three airside concourses and 55 aircraft gates. Transportation between terminals, main lobby areas, and baggage claim is provided by a free shuttle service known as the Wiki-Wiki shuttle. Additional amenities include airline lounges, retail stores, restaurants and bars, a barbershop, business center, post office, sheriffs office, and other miscellaneous business facilities.

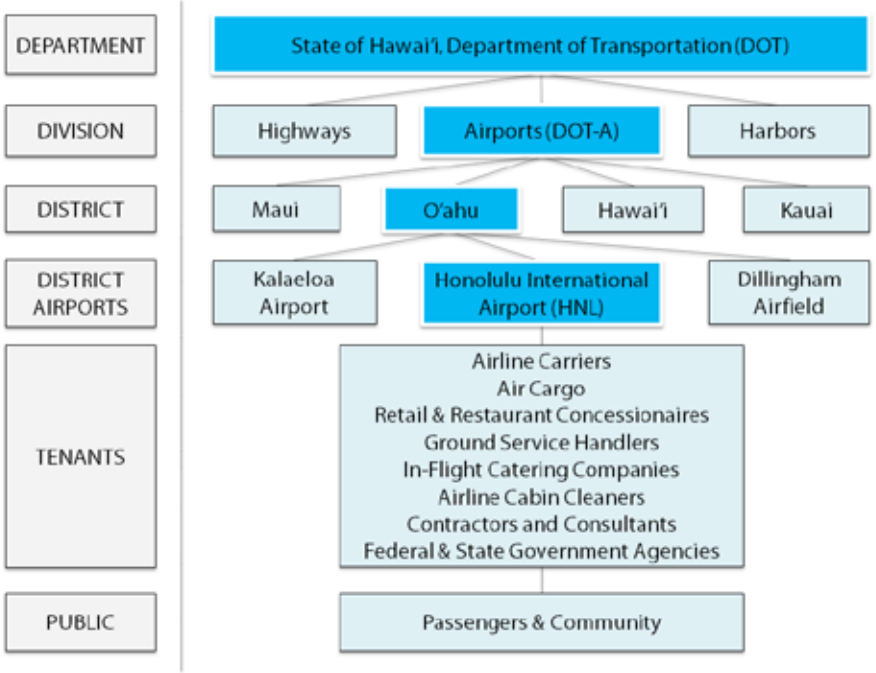
AIRPORT GROWTH

The airport has been steadily increasing in traffic over the last few years despite global economic uncertainty. Air traffic, cargo and passengers enplaned and deplaned increased since this SMP's baseline year of 2009. Forecasts indicate the airport may see 22 million passengers in the very near future due to the increasing number of travelers coming from developing countries around the pacific rim and the steady supply of domestic arrivals.

OWNERSHIP

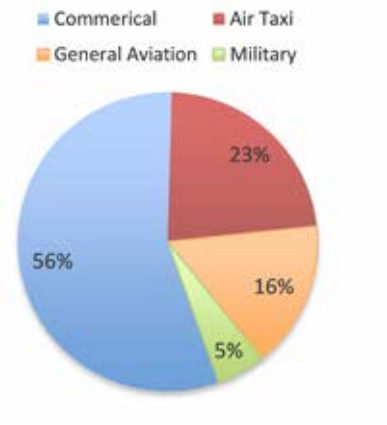
The State of Hawai'i Department of Transportation – Airports Division (DOT-A) manages Honolulu International Airport (HNL). Unique among its peers on the US Mainland, HNL is a state owned and operated airport. The DOT-A manages 15 airports in 4 Districts throughout the State. At HNL, the DOT-A owns and controls the main terminal spaces (terminals and concourses), non-terminal spaces (parking structures, maintenance base yard, and chillers), and airfields.

FIGURE 5. ORGANIZATIONAL MAP (2014)



Source: KYA Sustainability Studio 2016

FIGURE 6. HNL FLIGHT OPERATIONS (2014)

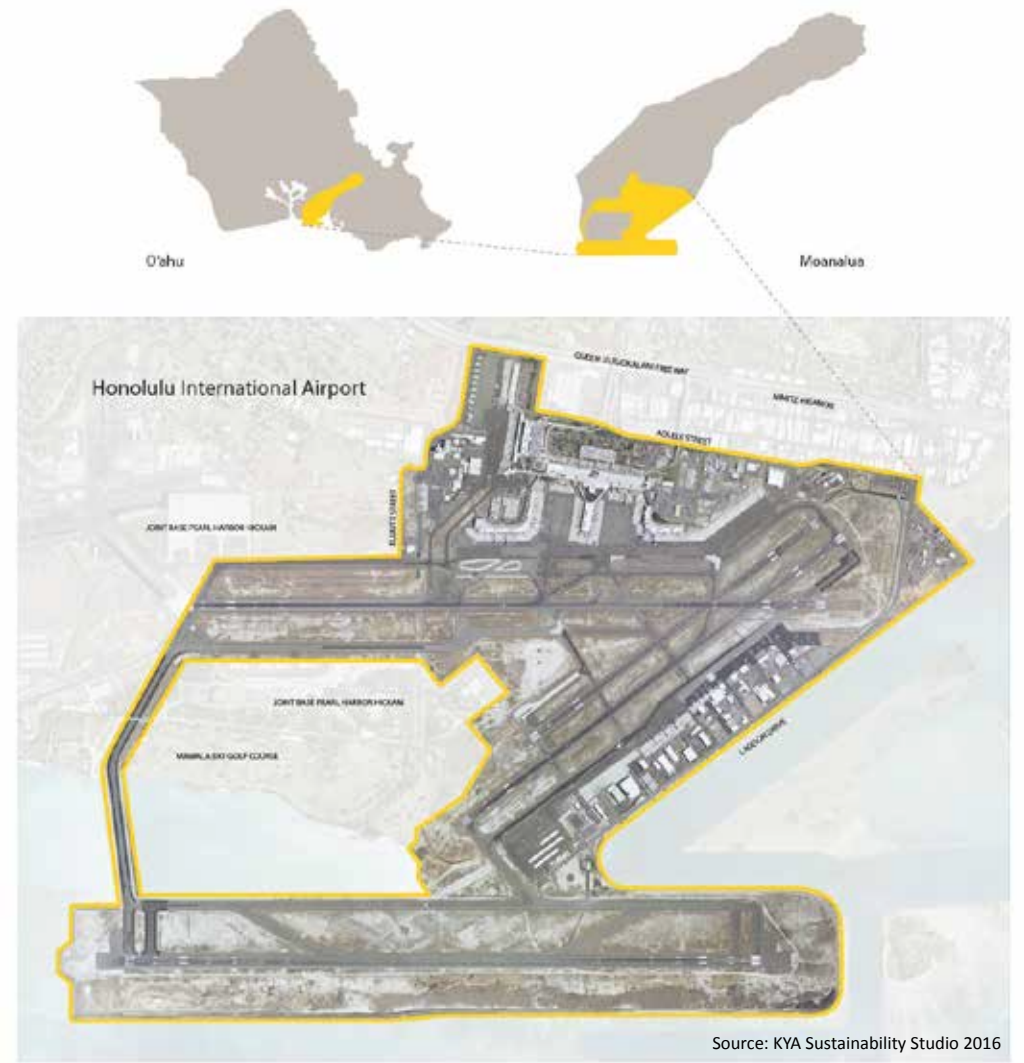


Source: FAA Statistics (2015)

FIGURE 7. AIRPORT TOTAL PASSENGERS (2009-2014)

Source: DOT-A Statistician 2015

FIGURE 8. SUSTAINABILITY PROGRAM BOUNDARY MAP (2014)



Source: KYA Sustainability Studio 2016

BASELINE ASSESSMENT SUMMARY

Note: Both the complete 2014 Elements Baseline Update and the 2009 Elements Baseline Report can be found on the Sustainable HNL website (http://hawaii.gov/hnl/airport-information/sustainablehnl).

In 2009, HNL commissioned a sustainability baseline report, known as the Elements Baseline. Five years later, the 2014 Elements Baseline Update was completed using the same methodology. Comparison of the two baseline assessments showed that between 2009 and 2014, the DOT-A made great strides in reducing the impact of HNL operations in the top priority focus areas of Energy, Carbon, Water, and Waste. It should be noted that though the Storm Water category was not quantified in the 2009 or 2014 baselines, the HNL-SC has designated it as a high priority focus area moving forward, in line with best practices.

Overall, HNL demonstrated improvement through decreased per passenger energy consumption and carbon emissions, however potable water consumption and waste generation increased. There is room for improvement in processes and procedures, thus the HNL-SC seeks to identify those opportunities by setting goals and implementing initiatives, then monitoring and improving the program.

The performance summary on the next page is a snapshot view of quantitative data that was gathered in the baseline and will continue to be monitored and recorded. The five year baseline trend is presented both as a percentage and in a red-yellow-green performance visualization. Performance is either Green (improving) or Red (in decline). Yellow symbolizes data collection issues.

A baseline is a set of critical observations, performance metrics, and indicators used as a benchmark for measuring progress over time.

TABLE 3. QUANTITATIVE PERFORMANCE SUMMARY OF ENERGY, CARBON, WATER AND WASTE

	Indicator	2009	2014	Baseline Trend
ENERGY				
Electricity Consumption	kWh	101,650,852	97,330,250	**-4%**
Renewable Energy Generation	kWh	8,474	-	**-**
Total Energy Use (DOT-A)	kWh	101,650,852	97,330,250	**-4%**
	kWh / passenger	5.6	5.0	**-11%**
CARBON				
Mobile Sources Emissions	mtCO2e	2,569	2,475	**-4%**
Stationary Sources Emissions	mtCO2e	84,539	80,969	**-4%**
Total Emissions (DOT-A)	mtCO2e	87,108	83,444	**-4%**
	lbs. CO2e / passenger	10.6	9.4	**-11%**
WATER				
Potable Water Use	kgal.	399,969	431,060	**8%**
Non-potable Water Use	kgal.	61,967	86,214	**39%**
Sewer Water Discharge	kgal.	399,969	344,846	**-14%**
Total Water Use (DOT-A)	kgal.	461,936	517,274	**12%**
	gal. / passenger	25.4	26.4	**4%**
WASTE				
Total Waste	tons	3,126	5,231	**67%**
Municipal Solid Waste Stream	tons	2,795	5,000	**79%**
Scrap Metal Recycled	tons	14	20	**42%**
Pallets Incinerated	tons	68	174	**156%**
Hazardous Waste Treated	tons	-	10	**-**
Office Paper Recycled	tons	20	5	**-76%**
Newspaper Recycled	tons	2	6	**228%**
Cardboard Recycled	tons	8	16	**100%**
Green Waste Composted	tons	39	-	**-**
Waste Diversion Rate (DOT-A)	percent diverted	2.7%	0.9%	**-67%**
Diverted from Landfill and Incineration (DOT-A)	tons	83	46	**-44%**
	lbs. / passenger	0.01	0.01	**-48%**
Incinerated off-site (DOT-A)	tons	2,576	4,657	**81%**
	lbs. / passenger	0.31	0.52	**68%**
Landfilled (DOT-A)	tons	279	500	**79%**
	lbs. / passenger	0.03	0.06	**66%**

For methodolgies on how the data in Table 3 was collected and quantified, see the 2014 Elements Baseline Update document. *http://hawaii.gov/hnl/airport-information/sustainablehnl*
[illegible]

Source: KYA Sustainability Studio 2016

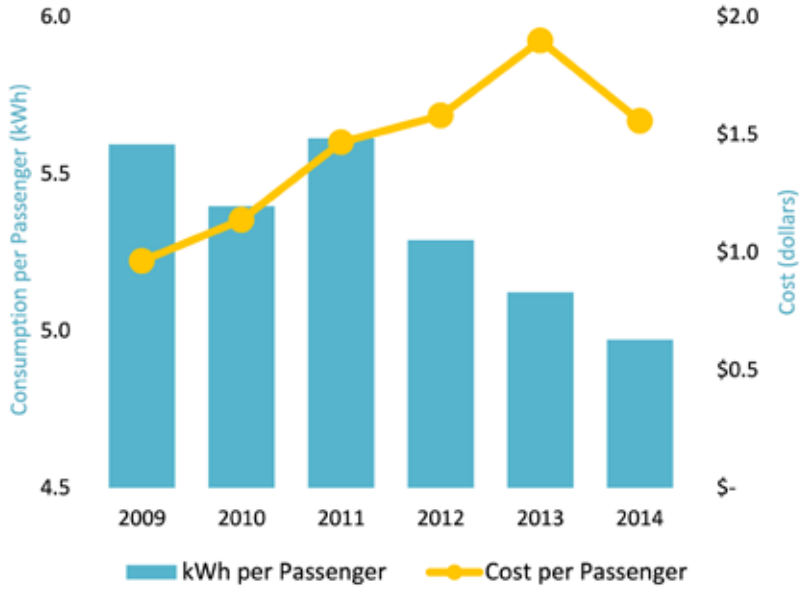
ENERGY

HNL-SC HIGH PRIORITY

Findings

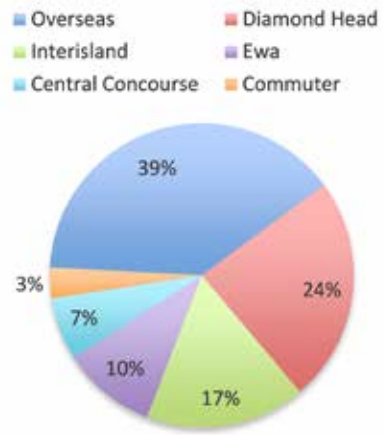
- DOT-A 2014 managed electricity consumption has been reduced by 4% and 11% per passenger since 2009.
  - Energy conservation measures in 2014 were responsible for the reduced electricity consumption from 2009-2014.
  - Despite efforts to reduce energy use since 2009, the cost of energy continued to rise until 2014, when the energy savings initiatives were implemented.

FIGURE 9. ENERGY CONSUMPTION AND COST PER PASSENGER (2009-2014)



Source: DBEDT, 2015

FIGURE 10. ENERGY USE BY TERMINAL (2014)



Source: DBEDT, 2015

ANNUAL SAVINGS GUARANTEED AT HNL FROM ENERGY CONSERVATION MEASURES (2013):

$10.8 Million Dollars

38.5 Million kWh

Source: State of Hawai'i , Department of Transportation. June 2013. Investment Grade Audit Report. Prepared by Johnson Controls. Report.

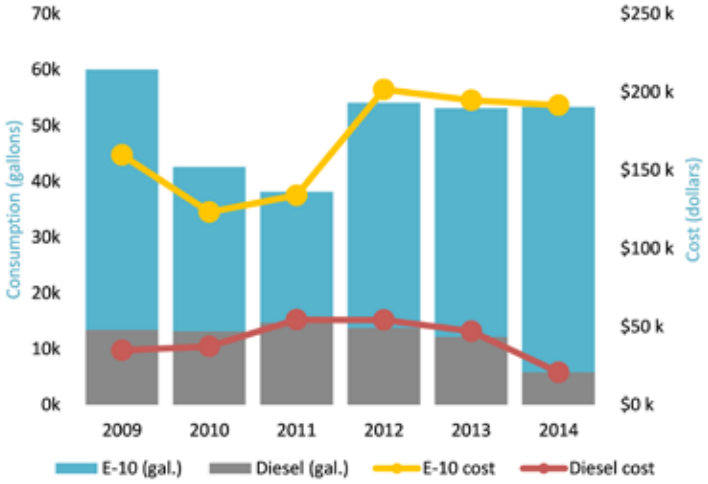
CARBON

HNL-SC HIGH PRIORITY

Findings

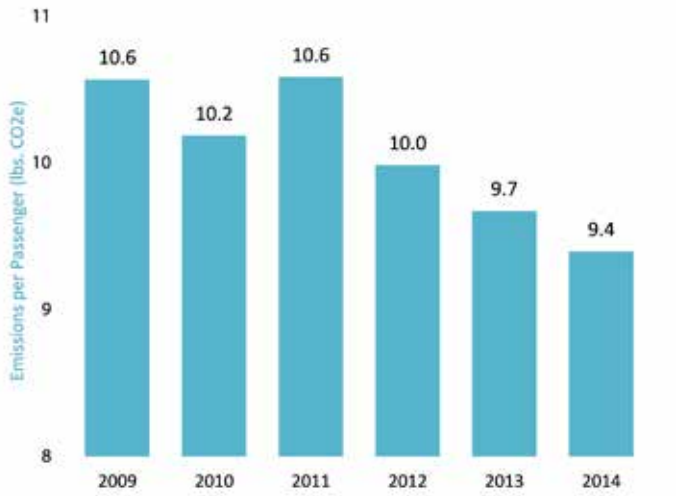
- DOT-A 2014 direct and indirect greenhouse gas emissions (carbon) have been reduced by 4% and 11% per passenger since 2009.
  - Energy conservation measures reduced carbon emissions related to electricity consumption by 4%.
- Most of the electricity recommendations from the 2009 Elements Baseline were taken into consideration and contributed to reducing GHG emissions at the airport.
- Airport management has purchased more fuel-efficient vehicles and designed an emergency power facility to operate on 100% biodiesel, beginning in late 2015.
- Changes in operations, combined with unexpected vehicle maintenance and repair, reduced fuel purchased for ground support resulting in a 21% carbon emissions reduction.

FIGURE 11. GSE FLEET FUEL CONSUMPTION AND COST (2009-2014)



Source: DOT-A AIR-OSU 2015

FIGURE 12. CARBON EMISSIONS PER PASSENGER (2009-2014)



Source: KYA Sustainability Studio 2016

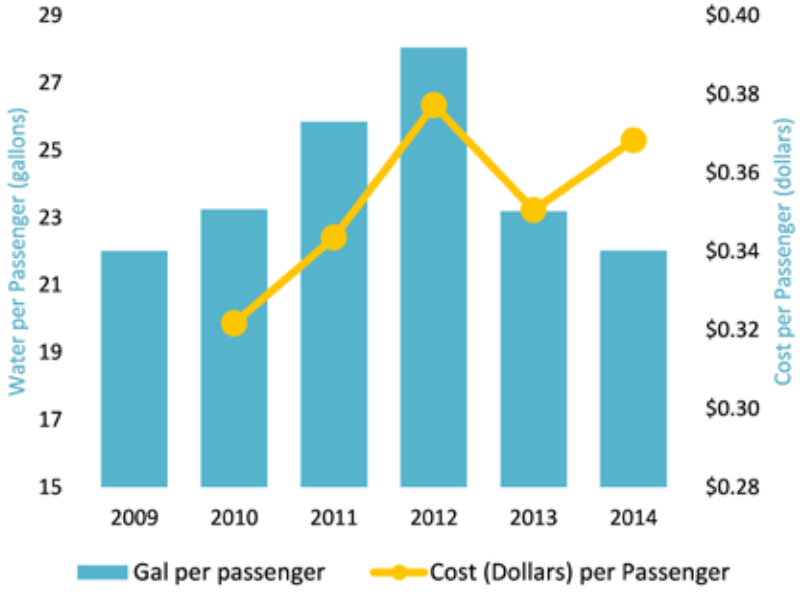
WATER

HNL-SC HIGH PRIORITY

Findings

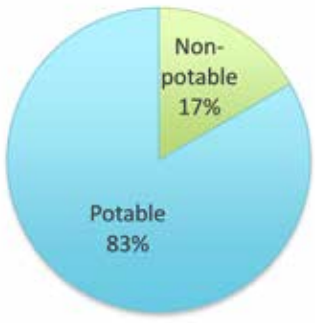
- DOT-A 2014 managed water consumption increased overall by 12% and by 4% per passenger. The increase may be due to leaks and unmetered user consumption.
- Water management at HNL continues to face some of the challenges as mentioned in the 2009 Elements Baseline.
  - Lack of an automated management and control system to remotely track performance.
  - Metering and management of tenant spaces.
  - Unknown condition and location of all potable water infrastructures.
  - Unknown volume of wastewater generated.
  - The distinction of actual water consumption versus leaks is unknown without an effective leak detection program.

FIGURE 13. POTABLE WATER CONSUMPTION PER PASSENGER AND POTABLE WATER & SEWER COST PER PASSENGER (2009-2014)



Source: DOT-A Water and Sewer Utility Bills, 2015

FIGURE 14. WATER SOURCE TYPE (2014)



Source: DOT-A Water and Sewer Utility Bills , 2015

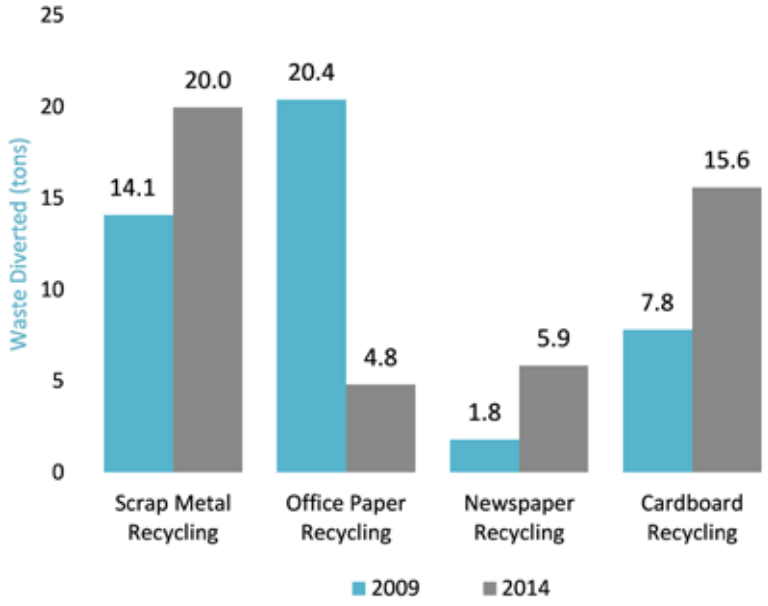
WASTE

HNL-SC HIGH PRIORITY

Findings

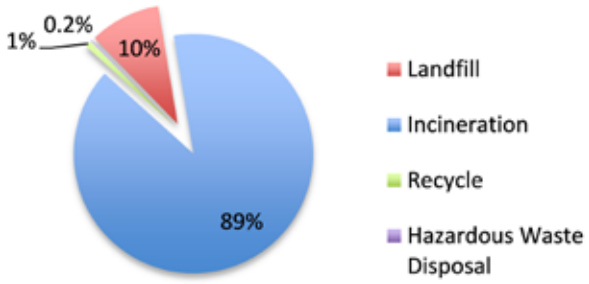
- DOT-A 2014 managed MSW increased absolutely by 79%, due to changes in methodology of calculations.
- The waste diversion rate decreased 67% from 2009 due to the weight increase of MSW in the 2014 calculations.
- While the MSW goes to incinerator first, the ash goes to the landfill, accounting for 10-20% of disposal by weight.
- Most waste data is based on estimates from contractors as opposed to disposal manifests.

FIGURE 15. DOT-A WASTE DIVERSION (2009 AND 2014)



Source: KYA Sustainability Studio, 2015

FIGURE 16. DOT-A WASTE DISPOSED BY WEIGHT (2014)



Source: KYA Sustainability Studio, 2015

STORM WATER

DOT-A owns and operates the Small Municipal Separate Storm Sewer System (Small MS4) to drain storm water from structures, runways, taxiways, and roadways at HNL.

The HNL Storm Water Management Program Plan (SWMPP) was designed to minimize the discharge of storm water and pollutants from HNL and ensure compliance with state and federal regulations. The DOT-A Environmental Section manages the HNL SWMPP and tests the quality of storm water at HNL when weather conditions permit.

OTHER SUSTAINABILITY CATEGORIES

FINANCIAL SUSTAINABILITY

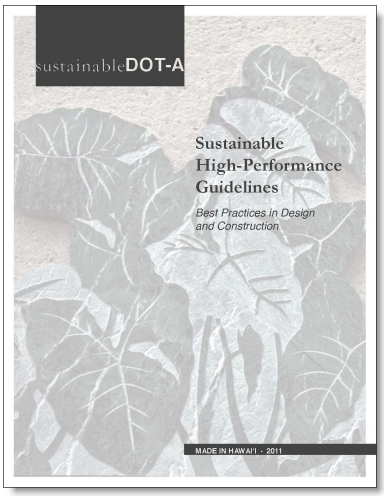
HNL provides convenient and affordable air travel to local, domestic, and international travelers. Economically, HNL generates a significant amount of benefits for the entire state through about 600 DOT-A Oahu District employees and over 20,000 Airport Employees. The Airport plays an important role in the local and state business community as the primary mode of transporting people, cargo, and mail to and from the rest of the world.

DAY-TO-DAY OPERATIONS

The DOT-A has put into place systems and processes that make HNL a well-run and efficient airport. HNL benefits from fairly consistent weather and has a low number of delays for travelers, thereby reducing air pollutant emissions from aircraft engine idling. The FAA runs an efficient air side operation with a state of the art air traffic control facility.

DESIGN AND CONSTRUCTION

In 2009 the DOT-A created the Sustainable DOT-A program, which established policies and procedures. The first is the Cultural Appropriateness Guidelines, a document which addresses how Hawai‘i’s cultural heritage is portrayed throughout the airport system. The second is the Hawai‘i Sense-of-Place Primer, a document that introduces place sensitive considerations as it pertains to airport design and construction. And lastly the Sustainable High Performance Guidelines, a performance standard and rating system guide that addresses best practices and green building criteria considerations unique to airport facilities in Hawai‘i.



Electric vehicles are exempt from payment of airport parking fees.

State of Hawai'i Act 168 (2012)

GROUND TRANSPORTATION

In 2014, approximately 19 million people traveled through HNL, along with about 20,000 airport employees who work for the DOT-A and airport tenants. The 2009 Elements Baseline identified most of these people arriving and leaving via single occupancy vehicles, buses and taxi's. Electric vehicle (EV) charging stations in parking garages have dedicated EV-only stalls. The C&C Honolulu bus currently provides island-wide transport to and from HNL.

CLIMATE RESILIENCY

The waterfront property at HNL is vulnerable to future climate change impacts. To date, initiatives are in the areas of assessment and planning with the Oahu Metropolitan Organization Risk Assessment and the State of Hawai'i Office of Planning. Since 2012, the DOT-A has been considering the state Climate Change Adaptation Policy (2012) in its land use, capitol improvements, and decisions.

COMMUNITY

The airport is comparable in land size and workforce to a small city, with the land area being larger than Waikiki, and the workforce the size of a small army (about 20,000). As one of the largest employers, both directly and indirectly in the state, the DOT-A maintains a safe and healthy HNL for passengers and employees. Community initiatives include employee and tenant engagement through recycling and foreign object debris (FOD) cleanup events, airport artwork exhibit program in the terminals, and indoor air quality improvement through LEED buildings. The workplace culture of HNL is focused on safety first.

LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)

As part of the larger statewide Hawai'i Airports Modernization Program, new facilities and improvements are happening at Honolulu International Airport. The following HNL projects have been registered with the USGBC and will pursue LEED certification:

- Airport Lounge Renovation
- Relocate IIT Maintenance Facility
- Relocate IIT Cargo Facilities
- New Mauka Concourse Improvements
- New Diamond Head Terminal
- New Consolidated Rental Car Facility

FOOD AND BEVERAGE

The DOT-A maintains a contract with HMS Host to operate and maintain concessions at the airport. HMS host, whose mission is "making the traveler's day better", has a variety of local brands and national chains to meet the needs of travelers. Hours of operation are based on flight schedules. Food and beverage initiatives at HNL include but are not limited to locally grown products and locally packaged Hawaiian foods, diverse offering of restaurants, tenant restaurant food waste sent to a local piggery, and fryer oil from restaurants sent to a local biofuel plant.

SOCIOCULTURAL

The DOT-A has completed a number of initiatives that enhance, strengthen, and perpetuate the local culture and heritage of Hawai'i .

- Hawai'i Sense of Place Primer (DOT-A 2011)
- Cultural Appropriateness Guidelines (DOT-A 2011)
- Hawaiian language spoken in airport messaging throughout the airport
- Three gardens (Hawaiian, Japanese and Chinese) with a culturally symbolic landscape connected by waterways
- Various local artworks and exhibits throughout the terminals

The Sustainable HNL Sustainability Committee identified realistic quantitative and qualitative goals, objectives, and related performance targets in sustainability to gauge progress towards the HNL sustainability mission and vision.

SUSTAINABLE HNL GOALS PROCESS

The goal-setting process for HNL began by identifying the 13 sustainability categories, or focus areas, and ranking them in order of importance to identify the highest priority focus areas. The resulting top five strategic priorities have served as the drivers for the baseline and initiatives identification at the airport. Each of the 13 categories can be placed within at least one division of the EONS framework for airport sustainability.

The goals are organized using the following framework:

- SUSTAINABILITY CATEGORY
  - GOAL STATEMENT
    - OBJECTIVES
      - TARGETS & METRICS

SUSTAINABILITY CATEGORIES: focus areas identified by the airport that align with guiding frameworks.

GOAL STATEMENTS: general statements about a long-term desired outcome.

OBJECTIVES: types of feasible & attainable near-term actions to drive progress toward goal achievement.

TARGETS & METRICS: used to measure and track current status & future achievements.

HIGH PRIORITY, SHORT-TERM GOALS

ENERGY

GOAL: MAXIMIZE ENERGY EFFICIENCY AND INCREASE THE USE OF RENEWABLE ENERGY.

1. **OBJECTIVE:** Reduce energy consumption.
   - **TARGET:** Reduce energy consumption per passenger (normalized for growth and weather) in DOT-A controlled operations by 10 percent by 2020.
2. **OBJECTIVE:** Harness renewable energy resources.
   - **TARGET:** Increase the percent electricity generated on site from renewable sources.

CARBON

GOAL: REDUCE GREENHOUSE GAS EMISSIONS OF DOT-A CONTROLLED OPERATIONS.

1. **OBJECTIVE:** Reduce DOT-A carbon footprint.
   - **TARGET:** Reduce DOT-A carbon emissions at or below 2009 levels by 2020.
2. **OBJECTIVE:** Establish a sustainable alternative-fuel strategy.
   - **TARGET:** Establish an alternative-fuel strategy & measure annual fuel consumption of vehicle fleet & emergency generators by 2020.

WATER

GOAL: DECREASE THE USE OF POTABLE WATER.

1. **OBJECTIVE:** Reduce potable water used for landscaping.
2. **OBJECTIVE:** Encourage efficient water use and reduce water waste.
   - **TARGET:** Reduce potable water consumption per passenger (normalized for growth and weather) by 10 percent by 2020.
3. **OBJECTIVE:** Increase the use of reclaimed water.
   - **TARGET:** Increase water reclamation by 2020.

WASTE

GOAL: REDUCE THE SOLID WASTE STREAM PRIOR TO DISPOSAL AND INCREASE RECYCLING AND REUSE.

1. **OBJECTIVE:** Reduce total amount of waste generated at HNL per passenger.
   - **TARGET:** Reduce MSW per passenger by 4% by 2020.
2. **OBJECTIVE:** Increase the recycling rate.
   - **TARGET:** Increase the recycling rate to 4% by 2020.

STORM WATER

GOAL: MINIMIZE THE DOWNSTREAM IMPACTS OF STORM WATER.

1. **OBJECTIVE:** Meet National Pollutant Discharge Elimination System (NPDES) permit compliance requirements.
   - **TARGET:** Identification in next baseline assessment.

MEDIUM AND LONG-TERM GOALS

FINANCIAL SUSTAINABILITY

GOAL: PROMOTE EFFICIENCIES IN CAPITAL COSTS, OPERATION, AND MAINTENANCE TO OPTIMIZE THE FINANCIAL PERFORMANCE OF HNL AND ENSURE LONG-TERM FINANCIAL VIABILITY.

1. **OBJECTIVE:** Optimize existing resources and reduce utilities costs.
   - **TARGET:** Decrease utility costs per passenger by 5% by 2030 from 2014.
2. **OBJECTIVE:** Increase non-aeronautical revenue opportunities from sustainability.
3. **OBJECTIVE:** Create a green revolving fund for sustainability projects.
   - **TARGET:** Establish a green revolving fund for sustainability projects from 2020 through 2030.

DAY-TO-DAY OPERATIONS

GOAL: INCORPORATE SUSTAINABLE PRINCIPLES AND PRACTICES INTO AIRPORT GOVERNANCE (MANAGEMENT, OPERATIONS, AND DEVELOPMENT).

1. **OBJECTIVE:** Measure the purchase of goods and services from locally owned businesses.
   - **TARGET:** Identification in the next assessment.
2. **OBJECTIVE:** Reduce overall life cycle cost for capital investments.
   - **TARGET:** Identification of life cycle costing process and measurement in next baseline assessment.
3. **OBJECTIVE:** Provide organizational commitment around sustainability implementation.
   - **TARGET:** Implement sustainability strategies throughout organization by 2030.

DESIGN AND CONSTRUCTION

GOAL: INCORPORATE SUSTAINABILITY PLANNING, DESIGN, AND CONSTRUCTION BEST PRACTICES INTO AIRPORT PROJECTS.

1. **OBJECTIVE:** Meet 3rd party certification and achieve certification where possible for airport modernization, construction, and civil infrastructure projects.
   - **TARGET:** Increase the amount of building space that achieves self, 2nd, and/or 3rd party sustainable design guidelines certification by 2030.
2. **OBJECTIVE:** Incorporate the Sustainable High Performance Guidelines for modernization and construction projects.
   - **TARGET:** Increase the amount of building space that achieves the DOT-A requirements in the Sustainable High Performance Guidelines by 2030.
   - **TARGET:** Maintain quality of nearby natural resource areas.

MEDIUM AND LONG-TERM GOALS

GROUND TRANSPORTATION

GOAL: PROVIDE PUBLIC TRANSPORTATION INFRASTRUCTURE TO ACHIEVE DISTRICT-WIDE SUSTAINABILITY.

1. **OBJECTIVE:** Plan for future ways to reduce congestion on the roadways by supporting public transportation infrastructure.
   - **TARGET:** Identification in the next assessment.
2. **OBJECTIVE:** Embrace hybrid and electric vehicle infrastructure for DOT-A, tenant and public vehicles.
   - **TARGET:** Increase the amount of hybrid and electric vehicle charging stations within the airport boundary by 2030.

CLIMATE RESILIENCY

GOAL: PLAN FOR CLIMATE CHANGE RESILIENCY.

1. **OBJECTIVE:** Incorporate a scientifically sound understanding of climate change impacts and vulnerabilities into the management of HNL's assets and operations
   - **TARGET:** Create a Climate Action Plan by 2030.
   - **TARGET:** Educate staff at HNL on the potential effects of climate change and HNL's efforts to improve organizational and operational resiliency.
   - **TARGET:** Identification in next baseline assessment.

COMMUNITY

GOAL: MAINTAIN A SAFE AND HEALTHY HNL FOR PASSENGERS AND EMPLOYEES.

1. **OBJECTIVE:** Engage employees and airport community stakeholders in sustainability activities of the Airport.
2. **OBJECTIVE:** Provide opportunities for health and wellness education and support of work site wellness.

FOOD AND BEVERAGE

GOAL: INCREASE THE PERCENTAGE OF ORGANIC AND/OR LOCALLY SOURCED & PRODUCED FOOD & BEVERAGES SOLD AT HNL.

1. **OBJECTIVE:** Encourage concessionaires to serve healthy, locally grown, and/or produced food options.
   - **TARGET:** Identification in next baseline assessment.
   - **TARGET:** Create and implement a Sustainable Food & Beverage Guideline by 2030.

SOCIOCULTURAL

GOAL: HONOR LOCAL CULTURE AND HERITAGE BY PROVIDING A UNIQUE, MEMORABLE AND ENRICHING VISITOR EXPERIENCE.

1. **OBJECTIVE:** Encourage designs that enhance, strengthen and perpetuate the local and Hawaiian culture.
   - **TARGET:** Identification in next baseline assessment.
   - **TARGET:** Integrate the DOT-A Cultural Appropriate Guidelines throughout the airports operations, design, and construction.

ENGAGEMENT AT HNL

The efforts that sHNL makes now and in the future considers the DOT-A stakeholders involved, as well as the future impacts of its actions on employees, tenants and passengers. In particular, sHNL has made every effort to involve DOT-A stakeholders in the SMP across the largest departments of the Oahu District and Division offices as applicable. Sustainability works best when stakeholders have a chance to be a part of the decision making process and without their involvement, sHNL would not be where it is today.

The DOT-A will rely on stakeholder feedback to measure the success of engagement efforts. One example is to work with employees to incorporate staff ideas for new initiatives and projects to the sHNL program. The table on the next page shows how stakeholders were engaged during the SMP planning and how they can be engaged in the implementation of the SMP and its initiatives.

Initiatives, or actions, will come from various stakeholders.

- Staff
- Directors
- Tenants
- Industry

Every stakeholder is important to the airport and their feedback will be incorporated into annual plans.

OPPORTUNITIES FOR ENGAGEMENT THROUGH SMP

The current processes and procedures in place at the DOT-A were reviewed for additional opportunities to incorporate sustainability into the day-to-day operations and long term planning of the DOT-A. Best practices were identified and a list of recommendations was developed for the three main stakeholder groups. The opportunities below focus on education and awareness of sustainability and the efforts the DOT-A is making at HNL.

- Display all sustainability efforts on the website.
- Educate employees and tenants on sHNL goals and the initiatives through the HNL staff trainings, airport announcements, and various outreach materials.
- Consider incorporating the use of social media to communicate and gather feedback on sustainability efforts.
- Recognize sustainability efforts of tenants.
- Encourage tenants to create a sustainability plan and implement a successful program that aligns with the sHNL program goals.
- Incorporate green building and sustainable design into tenant design and construction project guidelines.
- Highlight sHNL efforts on displays throughout the airport that showcase the goals, targets, metrics, and initiatives at HNL.

TABLE 4. STAKEHOLDER ENGAGEMENT TABLE

DOT-A DIVISION & OAHU DISTRICT STAFF	DOT DIRECTOR AND DOT-A DEPUTY DIRECTOR	TENANTS, BUSINESS PARTNERS & COMMUNITY GROUPS	TRAVELING PUBLIC	AIRPORT INDUSTRY COMMUNITY
• Strategies • Goals • Initiative ideation • Implementation • Monitoring • Reporting	• Goal alignment • Policy direction • Funding assistance • Initiative ideation	• View outreach materials • Implementation coordination • Initiative ideation	• View outreach material	• Benchmarking • Industry conference presentation • View outreach materials • Case study sharing

Source: KYA Sustainability Studio, 2016

FIGURE 17. THE HNL SUSTAINABILITY COMMITTEE (HNL-SC) CAME TOGETHER TO IDENTIFY THE MOST IMPORTANT GOALS FOR THE AIRPORT TO PURSUE AND SELECTED INITIATIVES FOR IMPLEMENTATION.

Source: KYA Sustainability Studio, 2016

"Sustainability is… Preserving our natural resources so future generations can experience our lifestyle of Hawai'i today"

– HNL Sustainability Committee

PROCESS

Initiatives are actions that can be taken to achieve the sustainability goals, thereby contributing to the overall performance of HNL. Compiling all the initiatives into one place and evaluating through a standardized process provides for a pragmatic and logical selection process. The process draws on other airports who have implemented a Sustainable Management System (SMS), such as Denver, Dallas Fort Worth, Salt Lake City, and Massport to name a few.

INITIATIVES IDENTIFICATION

Initiatives were sourced from a mix of staff ideas, baseline recommendations, and industry best practices, making for a diverse mix of initiative sources.

- Sustainable Aviation Guidance Alliance SAGA best practices database; Transportation Research Board Airport Cooperative Research Program reports & case studies (SAGA, see Table 6)
- Baseline reports 2009 and 2014 recommendations (BASE, see Table 6)
- Staff ideation (STAFF, see Table 6)

EVALUATION

The Initiatives are stored in the Initiatives Register, a spreadsheet database. Once in the database, the initiatives are evaluated using the Criteria for Initiative Scoring Criteria, seen below. This screening tool estimates feasibility and considers costs and benefits, producing a weighted score that informs the timeline for initiative implementation.

TABLE 5. INITIATIVE SCORING CRITERIA (2016)

Level 1	**y/n**	**y/n**	**y/n**	**y/n**
Meets Goals	*Point awarded for each goal addressed*			
Feasible	Feasible for implementation	Compatible with the Terminal Modernization Program	Potential for regulatory issues	Other issues
Level 2	**Scoring: 0**	**1**	**2**	**3**
Capital cost	Very expensive	Moderate	Low	Marginal
O&M cost	High	Moderate	Low	Marginal or Savings
Payback period	Long	Moderate	Short	Immediate
Staffing requirements	High	Moderate	Low	Negligible
Benefits (effects) on focus areas: Energy, GHG, water, waste, storm water	Increase in negative effects	No effect	Small decrease	Large decrease
Social benefits	No	Low	Moderate	Significant, Multiple
Level 3				
Implementation schedule/ timeframe Selected by DOT-A and determined typically by total score of level 1 & 2	Immediate	Short-term	Medium-term	Long-term

Source: KYA Sustainability Studio 2016

The first 34 iniatives selected by the HNL-SC for immediate implementation are listed below.

TABLE 6. INITIATIVE SELECTION FOR IMMEDIATE IMPLEMENTATION (2016)

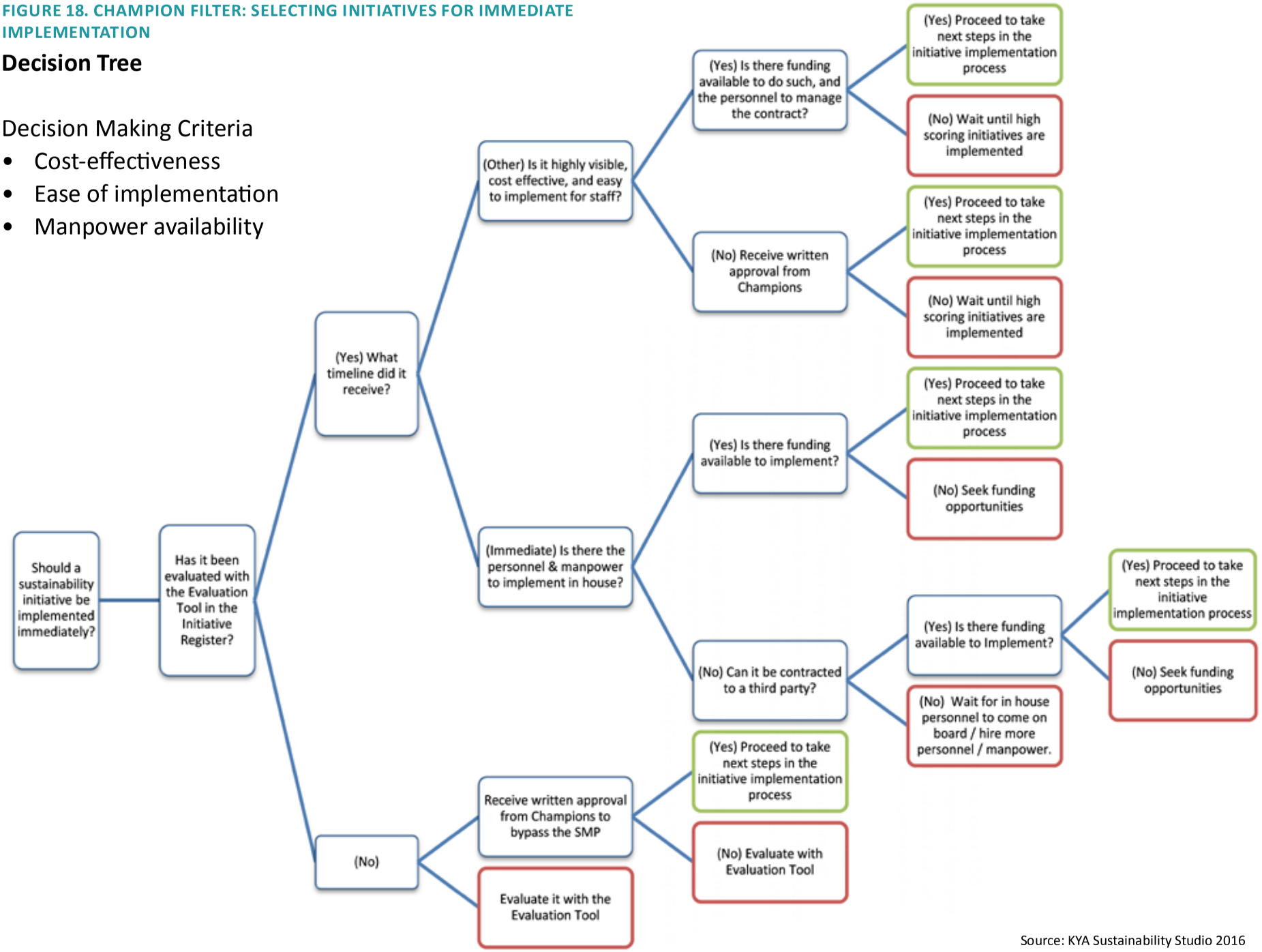
Initiative Identifier	Practice
STAFF - 1	Office paper, newspaper: improve outreach and education of office paper and newspaper recycling program in division and district offices.
STAFF - 2	Sustainability branding program: recycling signage, displays of efforts.
STAFF - 3	Identify and repair water leaks.
STAFF - 4	Develop a reduced vehicle idling plan and purchase and install vehicle air fresheners, placards, stickers, and/or decals (non-toxic) that promote and remind vehicle operators of a ""no-idling"" or ""engines off"" campaign.
STAFF - 5	Paper use reduction program.
STAFF - 6	Create a project decision tool for evaluating cost benefit.
STAFF - 7	Airport-wide recycling program for HI-5 recyclables: aluminum, plastic, glass.
BASE - 1	Develop a comprehensive water management plan and policy.
BASE - 2	Conduct a cooling tower water analysis.
BASE - 3	Conduct a comprehensive water audit.
BASE - 5	Evaluate the feasibility of extending the DOT-H's greywater line for increased irrigation throughout the terminals.
BASE - 8	Develop storm water quality management and water conservation signage along with education campaigns for stakeholders airport-wide.
BASE - 10	Continue to install energy efficient lighting throughout the airport.
BASE - 11	Sustainable buildings maintenance requirements.
BASE - 15	Generate clean and renewable sourced electricity for facilities.
BASE - 17	Develop a comprehensive waste management plan and policy.
BASE - 28	Study the feasibility of using alternative fuels in fleet vehicles.
SAGA - 2	Connect monitors, printers, and other accessories to a power strip/surge protector. Turn off the power strip to prevent them from drawing power (even when shut off) when they are not in use.
SAGA - 3	Unplug cell phone chargers, fans, coffeemakers, desktop printers, radios, and other equipment that drains energy even when not in use.
SAGA - 4	Select a power-down or "sleep mode" feature on the computer central processing unit and monitor.
SAGA - 5	Purchase and use printers and fax machines that have power-down or standby features.
SAGA - 6	Achieve direct line of sight to vision glazing for building occupants in 90 percent of all regularly occupied spaces.
SAGA - 7	Require a U.S. Green Building Council LEED (Leadership in Energy and Environmental Design) or equivalent building standard and green operating commitment from non-airport controlled buildings that are undergoing construction activities, including renovations.
SAGA - 8	Do not use computer screen savers since they consume more energy than not using one and/or they may disable power-down or "sleep mode" features.
SAGA - 10	Inscribe "printed on recycled paper" on the footers of applicable documents.
SAGA - 14	Develop a comprehensive operation and maintenance (O&M) manual, including record logs, for all systems and operations.
SAGA - 16	Minimize the use of printed materials.
SAGA - 17	Designate a majority of printers as general purpose to be loaded with 20 pound or 22 pound weight paper with only one or two printers to be loaded with higher quality paper.
SAGA - 18	Only purchase copiers or printers that offer double-sided printing options. Set all print drivers to default to double-sided printing.
SAGA - 20	Print documents in "draft mode" to reduce the use of printer ink.
SAGA - 23	Purchase reusable/recyclable printer cartridges.
SAGA - 33	Develop and implement sustainable landscaping guidelines/specifications that require plantings to be low-maintenance, drought resistant, and native species that are non-wildlife attracting.
SAGA - 39	Change soap dispensers to units that dispense soap foam instead of liquid soap.
SAGA - 82	Donate surplus equipment and other goods to charity.

FIGURE 18. CHAMPION FILTER: SELECTING INITIATIVES FOR IMMEDIATE IMPLEMENTATION

Decision Tree

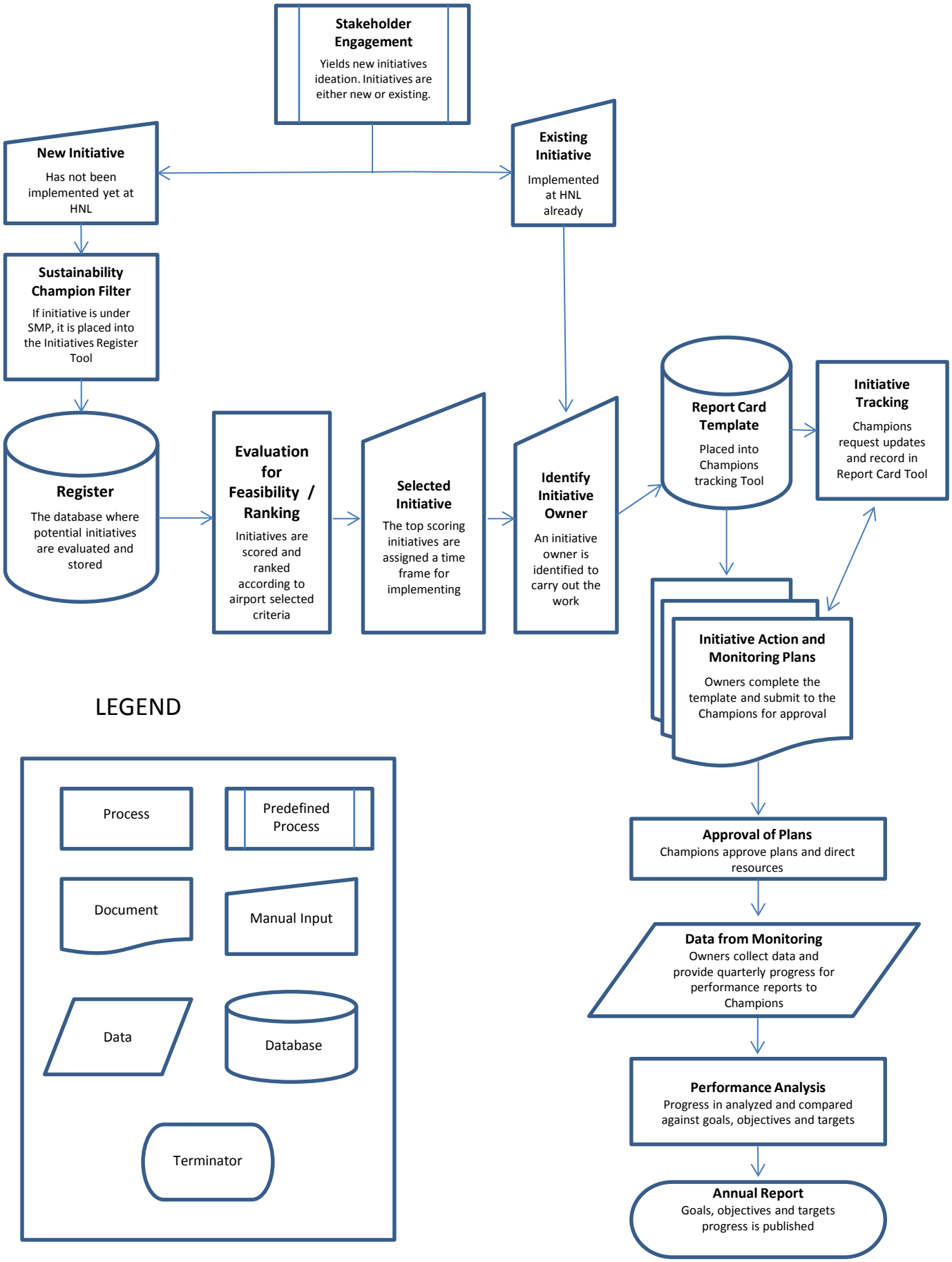
Decision Making Criteria

- Cost-effectiveness
- Ease of implementation
- Manpower availability



Source: KYA Sustainability Studio 2016

FIGURE 19. INITIATIVE START TO FINISH PROCESS (2016)



Source: KYA Sustainability Studio 2016

FUTURE INITIATIVES

Using best practices and baseline findings, management has over 150 initiatives in the register that meet the sHNL evaluation criteria. After the 2016 initiatives have been implemented, the airport will consider on an annual, or biennial, basis the implementation of the other sustainability initiatives.

Most initiatives will be evaluated in the way previously explained in this section. In some cases they may not, and will be pushed through, circumventing the Initiative Scoring Criteria. On page 27, the process for selecting initiatives for implementation is illustrated in a decision tree format.

The Process Flow Chart on page 28 shows how to identify and implement new sustainability initiatives or document existing initiatives and track their implementation progress and performance. This process is further explained in the Implementation Section.

THIS PAGE WAS INTENTIONALLY LEFT BLANK

SMP IMPLEMENTATION PLAN

The DOT-A views sustainability implementation as a process or journey, not an end goal or destination. As such, the SMP Implementation Plan details how the DOT-A must operationalize sustainability using a continuous improvement process. The process chosen is based on the current Environmental Management System Plan-Do-Check-Act cycle (PDCA), which creates goals, identifies initiatives and actions, records the results and refines the initiatives. Selected initiatives will start as pilot projects initially, and if successful will move toward airport-wide implementation.

The implementation of the SMP takes the first step in the new management system for the Sustainable HNL Program. Previously the management system of sHNL captured all sustainability-efforts under one umbrella but did not have a process for creating goals, evaluating initiatives for implementation, monitoring progress, and improving the process. The new management system will address all four short-comings thereby improving the resiliency of the sHNL program.

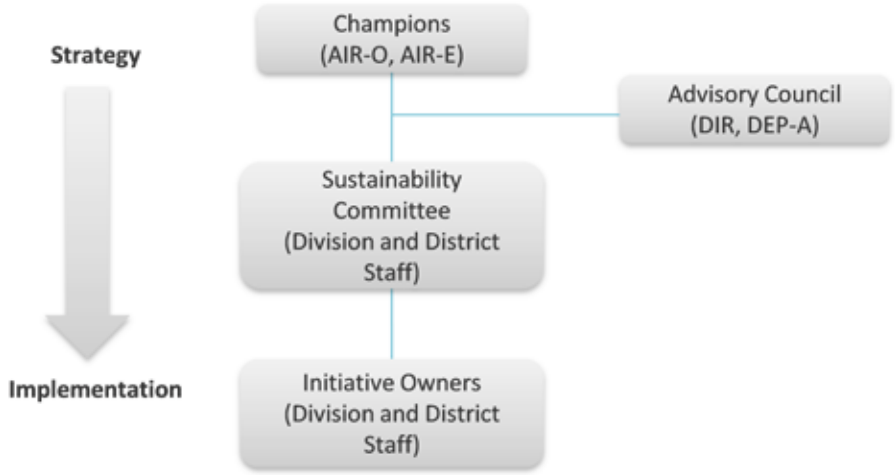
OUTLINE OF IMPLEMENTATION PLAN ACTIONS

- Input of monthly data
- Review initiative progress
- Input of annual data
- Produce annual report of initiatives and performance tracking
- Refine goals and initiatives
- Add new initiatives to register
- Adjust reporting tools, templates, and implementation steps as needed

RESOURCES AND TOOLS

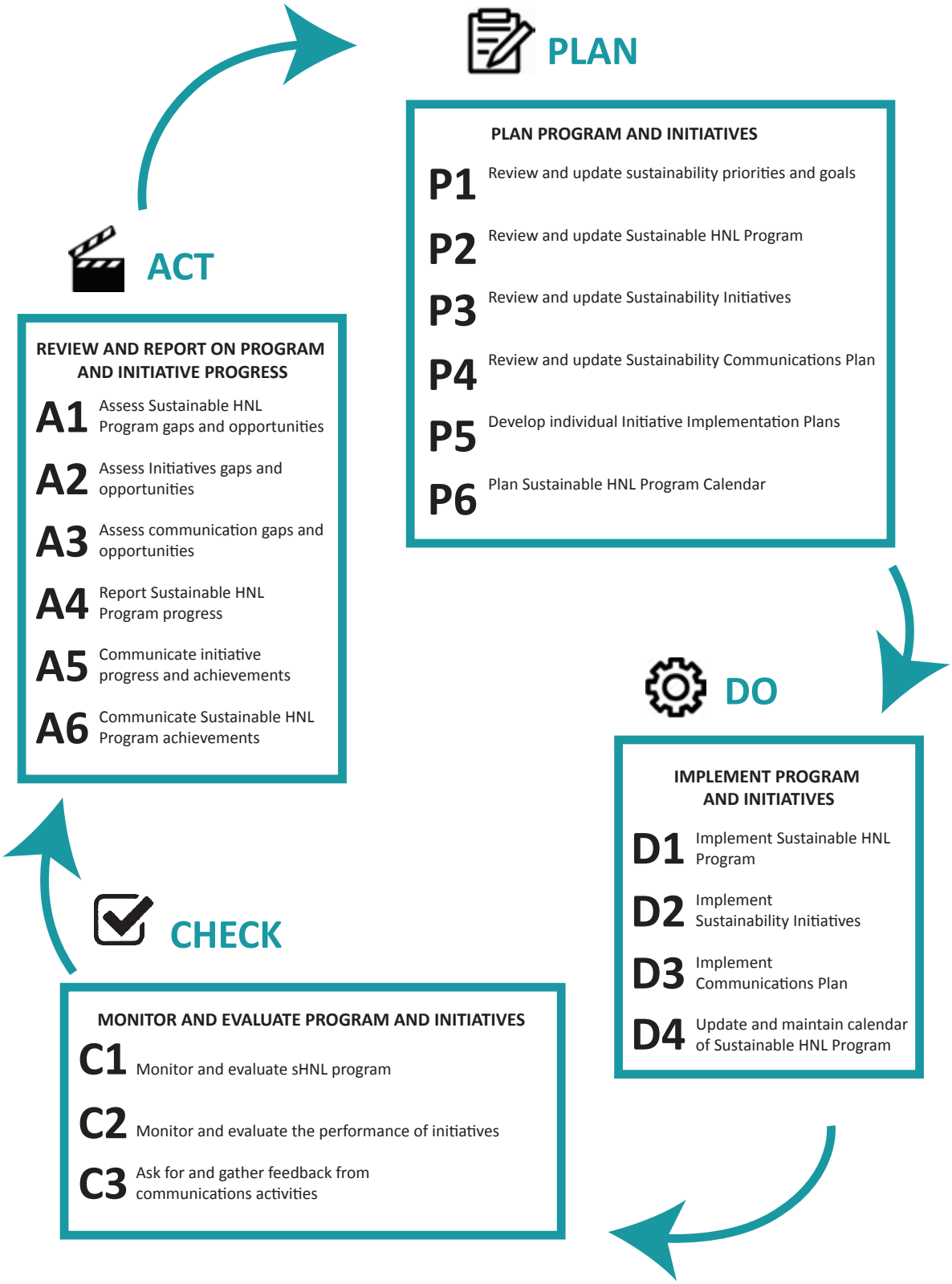
- Sustainability Policy (p iii)
- Initiatives Register (p 26)
- Initiative Implementation Plan Template
- Communications Plan (p 44)
- Performance Tracking Tool

FIGURE 20. ORGANIZATIONAL CHART FOR SUSTAINABLE HNL (2016)



Source: KYA Sustainability Studio 2016

FIGURE 21. IMPLEMENTATION ACTIVITIES OVERVIEW (2016)



Source: KYA Sustainability Studio 2016

SMP Approach

The approach of the SMP Implementation Plan was to first develop an understanding of the Sustainable HNL and Sustainable DOT-A management structure through a gap assessment and then make a recommended approach. The findings of the assessment suggest the SMP and initiatives use the Plan-Do-Check-Act (PDCA) process to implement change in a controlled way. This process builds on the successful implementation of the Hawai'i Department of Transportation's (DOT) Environmental Program, Environmental Management System (EMS). The management process will customize the structure and organization of the SMP to fit its needs. Since the SMP is a living document, in the future the Sustainable HNL can revise the structure of the Implementation Plan as needed.

THE OUTLINE FOR THIS SECTION IS SUMMARIZED BELOW:

- PLAN-DO-CHECK-ACT CYCLE OVERVIEW
- GAP ASSESSMENT OUTCOMES
- RECOMMENDED APPROACH FOR DOT-A
- STEPS FOR IMPLEMENTATION
- ROLES AND RESPONSIBILITIES OF SUSTAINABLE HNL SUSTAINABILITY COMMITTEE
- COMMUNICATIONS PLAN

Plan-Do-Check-Act Cycle Overview

Best practices recommend using a model for carrying out change called the Plan-Do-Check-Act cycle. The cycle is used for continuous improvement when implementing any change; be it starting a new project, developing a process, and problem solving with data analysis.

The four steps are explained below:

Plan: Establish objectives and processes required to meet policy and vision
Do: Implement the process
Check: Measure and monitor the processes and report results
Act: Take action to improve performance of the sustainability management system based on results

Once the cycle completes, needed changes are identified in the "Act" step and addressed in the next cycle, starting with the "Plan" step. The circular process should be repeated for continuous improvement. This chapter explains the process as it applies to Sustainable HNL Program.

Gap Assessment Outcomes

In order to define the management process to implement the SMP, information was collected on the current organizational and management structure in the DOT-A Division and District. The SMP team first worked on developing an understanding of the business practices, systems, and guidance structures, as related to sustainability. In general, there were two areas of focus:

1. Sustainable HNL management system: policy, plans, operations, monitoring, and performance review
2. Initiative implementation: strategy, programs, processes, tools, data and information collection

KEY FINDINGS

- The long term success of Sustainable HNL will depend on the DOT-A's ability to dedicate resources sufficient enough to meet and exceed the goals and objectives set for each planning cycle. It also requires senior level leadership and effective communication to DOT-A employees.
- The results of the Sustainable HNL management systems analysis found specific elements need improvement:
  - A policy directing resources
  - A unified planning process that drives management decisions and sustainability initiatives with long term overarching goals, short term objectives, and measurable targets
  - The authority, staffing, and resources to implement and maintain initiatives
  - A centrally located and utilized process for tracking the impacts of non-environmental sustainability initiatives
  - Continual improvement process of non-environmental initiatives implementation
  - Management review processes for non-environmental initiatives

- An evaluation tool for managers to understand risks and opportunities of a project on airport, tenant, and community using the EONS framework of economic viability, operational efficiency, natural resource conservation, and social responsibility
- Sustainability is tied to every division and section, thus having one section to manage the program is difficult as evidenced by previous projects. Sustainability is better managed and communicated from the senior staff level, where District is responsible for implementation, and Division supports with resources and technical expertise.
- Non-environmental key performance indicators (KPIs) are currently not tracked in a central location. The process for gathering data is not always documented. Effective implementation of the SMP will require monthly tracking of KPIs in one place with a written process.
- The EMS is operated by DOT-A Division Environmental and could implement the environmental components of the SMP. But the authority, resources, and staffing are not in place to manage and maintain environmental and SMP goals, targets, and initiatives.

Despite the gaps, HNL is building on the strengths of its sHNL Program thus far. Now that gaps have been identified, the recommended approach is explored.

Recommended approach for DOT-A

The SMP Implementation Plan is the strategy that will manage the sHNL Program. Goals are established to direct change, and initiatives are the means to achieve the program goals. Initiatives are managed by the Plan-Do-Check-Act cycle, establishing a process for continual improvement. The Implementation Plan is the means to do so. Given the current state of the sHNL Program, this new approach will help to unite sustainability related initiatives under one approach, ultimately creating a stronger sustainability program. As part of the SMP project, the first step of the Implementation Plan, “Plan”, was done. After the SMP is published, the DOT-A will be in charge of taking the next steps by implementing the initiatives, collecting data, establishing a check process, and reporting performance.

The sHNL Program is outlined in the form of the Plan-Do-Check-Act four step process.

- Plan: Identifying initiatives, refining goals, selecting initiatives, developing initiative implementation plans, budgeting and directing resources
- Do: Implementation of initiatives: roles and responsibilities & communications plan
- Check: Track and evaluate progress: initiative monitoring and data tracking
- Act: Add or revise goals and initiatives, sustainability reporting, start process again

MANAGEMENT STRUCTURE

The sHNL Program goals and initiatives process will be managed by the Sustainability Champions, influenced by the Advisory Council, steered by the Sustainability Committee (HNL-SC), and executed by DOT-A Oahu District and Airports Division staff.

The SMP Implementation identifies an organizational structure for the new sHNL Program management system, seen in Figure 20 (p 31).

THE ORGANIZATIONAL STRUCTURE FOR THE SUSTAINABLE HNL PROGRAM

The management structure is based on recommendations from SAGA, the Project Portfolio Management System, and the existing Sustainable DOT-A & Sustainable HNL programs. Structuring this way keeps builds on the existing top down initiative management structure, where:

- DOT influences decisions,
- DOT-A Division strategizes, manages, and supports, and
- Oahu District carries out the initiative tasks.

In the next pages we explore in depth the steps of the Plan-Do-Check-Act cycle for sHNL.

STEPS FOR IMPLEMENTATION

PLAN

Planning ("Plan") is the first step in the Implementation Plan PDCA cycle, involving the organizing of program goals and initiatives. This section focuses on how goals will be managed and how new initiatives will be identified through a process supported by tools. As part of the SMP project, there were five tools developed which support planning activities – the Initiatives Register, the SMP Initiative Action and Monitoring Plan Template, the sHNL Performance Monitoring Tool, the Report Card Template, and the SMP Program Calendar.

RECOMMENDED ACTIVITIES

P-1: REVIEW AND UPDATE SUSTAINABILITY PRIORITIES AND GOALS

P-2: REVIEW AND UPDATE SUSTAINABILITY PROGRAM

P-3: REVIEW AND UPDATE SUSTAINABILITY INITIATIVES

P-4: REVIEW AND UPDATE SUSTAINABILITY COMMUNICATIONS PLAN

P-5: DEVELOP INDIVIDUAL INITIATIVE IMPLEMENTATION PLANS

P-6: PLAN SUSTAINABILITY PROGRAM CALENDAR

FIGURE 22. STEPS 1-6 FOR IMPLEMENTATION OF "PLAN"

P-1: REVIEW AND UPDATE SUSTAINABILITY PRIORITIES AND GOALS
DESCRIPTION With changing priorities, review and update the categories, high priority focus areas, goals and objectives. At this point it is good to also assess funding levels and technical resources available until the next planning cycle starts.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for preparation and facilitation of a workshop with the HNL-SC to revise and approve categories, high priority focus areas, goals and objectives. SUSTAINABILITY COMMITTEE: Responsible for participating in workshop. ADVISORY COUNCIL: Responsible for informing champions of DOT priorities prior to workshop.
FREQUENCY Annually or biennially
RESOURCES & TOOLS Recommended review of baseline, annual reports, industry trends, best practices, immediate funding opportunities, and long term state goals.

P-2: REVIEW AND UPDATE SUSTAINABILITY PROGRAM
DESCRIPTION Following any changing categories, high priority focus areas, goals and objectives, review and update the targets, KPIs, and metrics as needed. Assess the performance data being captured and ensure it meets the needs, is accurate, and is capable of being captured for new initiatives. (Activities P-3 to P-5)
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for preparation and facilitation of a workshop with the HNL-SC to revise and approve targets, KPIs and metrics. Also responsible for establishing meetings based on program needs. SUSTAINABILITY COMMITTEE: Responsible for participating in workshop and attending future meetings based on program needs. ADVISORY COUNCIL: Responsible for informing champions of DOT targets prior to meeting.
FREQUENCY Annually or biennially as needed
RESOURCES & TOOLS Recommended review of Report Card from previous year

P-3: REVIEW AND UPDATE SUSTAINABILITY INITIATIVES
DESCRIPTION Following any changing categories, high priority focus areas, goals and objectives, targets, KPIs, and metrics, review and update initiatives as needed. Assess the performance of previous initiatives and ensure resources and staffing are available to implement initiatives.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for engaging stakeholders to bring new initiatives to the program for evaluation and to review existing initiatives implemented already. Champions designate staff to update and maintain the initiatives register using the tools available. SUSTAINABILITY COMMITTEE: Responsible for participating in initiatives review and update. ADVISORY COUNCIL: Responsible for bringing champions new initiatives prior to meeting.
FREQUENCY Annually or biennially as needed
RESOURCES & TOOLS Tool – Initiatives Register

P-4: REVIEW AND UPDATE SUSTAINABILITY COMMUNICATIONS PLAN
DESCRIPTION Review and update Communications Plan based on any changing categories, high priority focus areas, goals and objectives, targets, KPIs, metrics, and initiatives. Gather feedback and assess the performance of previous communications activities and ensure new and existing communication activities are necessary.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for coordinating with Division Marketing and Outreach team to update communication plan. MARKING AND OUTREACH TEAM: Revise Communications Plan based on comments and feedback.
FREQUENCY Annually or Biennially, or as needed for new communications.
RESOURCES & TOOLS Resource – Communications Plan Tool – Report Card Template

P-5: DEVELOP INDIVIDUAL INITIATIVE IMPLEMENTATION PLANS
DESCRIPTION Working to fill out initiative implementation templates for each of the initiatives that were identified in the activity P-3.
ROLES & RESPONSIBILITY INTIATIVE OWNER: Responsible for coordinating with Sustainability Committee and Champions to get the approval and resources identified when completing the initiative implementation plan template. TO BE IDENTIFIED: For each initiative, determine parties that need to approve the initiative implementation plan other than Champions and Sustainability Committee.
FREQUENCY Annually or Biennially.
RESOURCES & TOOLS Tool – Initiative Implementation Plan Template Resource – Completed Initiative Implementation Plans

P-6: PLAN SUSTAINABILITY PROGRAM CALENDAR
DESCRIPTION Create a calendar to schedule sustainability implementation activities.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Create a calendar to schedule activities.
FREQUENCY Annually or Biennially.
RESOURCES & TOOLS Tool – SMP Program Calendar Template Recommended activities include: SHNL Program meetings, staff workshops, stakeholder presentations, program gap and opportunity review sessions.

DO

The implementation of the initiatives represents the second step ("Do") of the PDCA cycle in the Implementation Plan. This section provides clear path for successful implementation of the SMP, the Program, Initiatives, Communications Plan, and any calendar updates.

RECOMMENDED ACTIVITIES OUTLINED

D-1: IMPLEMENT SUSTAINABLE HNL PROGRAM

D-2: IMPLEMENT SUSTAINABILITY INITIATIVES

D-3: IMPLEMENT COMMUNICATIONS PLAN

D-4: UPDATE AND MAINTAIN CALENDAR OF SUSTAINABLE HNL PROGRAM

FIGURE 23. STEPS 1-4 FOR IMPLEMENTATION OF "DO"

D-1: IMPLEMENT SUSTAINABLE HNL PROGRAM
DESCRIPTION Implementation of Sustainable HNL Program in D-2 to D-4.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Champions are ultimately accountable for the successful implementation of the Program. The Champions have final approval authority regarding implementation of new initiatives. Staff, Tenants, and Business Partners will approach champions with initiatives, same as they do under the current management system in place. The Champion's responsibility is to lead the Sustainability Committee and Initiative Owners, rely on them to communicate their progress, bring new projects & initiatives to the program, and direct the responsible staff to implement the program. They are accountable for maintaining the Initiatives Register, selecting new initiatives for implementation, approving Initiative Action and Monitoring Plan Templates, directing staff and resources to execute initiatives, completing the Report Card, compiling the Annual Report, and reviewing the SHNL program for continuous improvement. SUSTAINABILITY COMMITTEE: (HNL-SC) Responsible for the synchronization and systematization of the initiatives in the sustainability program.
FREQUENCY Ongoing
RESOURCES & TOOLS Resource – Approved Initiative Action and Monitoring Plan Templates.

D-2: IMPLEMENT SUSTAINABILITY INITIATIVES
DESCRIPTION Implement initiatives, capture performance data and other information, as shown on the approved Initiative Action and Monitoring Plan Templates.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for directing the appropriate staff to implement initiatives. SUSTAINABILITY COMMITTEE: (HNL-SC) The Sustainability Committee works to streamline resources and facilitate cross-departmental coordination by appointing initiative owners and their teams. INITIATIVE OWNERS: Responsible for engaging their team and performing the work of the initiative. They reference the approved plan, and at times coordinate and communicate with the HNL-SC for updates, activities, and annual initiative reviews. They track initiative progress and performance with the tools available.
FREQUENCY Ongoing
RESOURCES & TOOLS Resource – Approved Initiative Action and Monitoring Plan Templates

D-3: IMPLEMENT COMMUNICATIONS PLAN
DESCRIPTION Engage the various stakeholders with appropriate messaging regarding sustainability, Sustainable HNL, and the DOT-A. Record any data and information relevant to communications.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPION: Responsible for coordinating the communications plan implementation. Follows the guidance of the communications plan and utilizes the key messages, announcements, and marketing that needs to be delivered and or should be included with routine or ongoing communications. MARKETING AND OUTREACH DEPARTMENT: Works with the Champions to ensure the messaging is consistent across the DOT-A before communicating with the stakeholders and general public.
FREQUENCY Ongoing
RESOURCES & TOOLS Resource – Communications Plan

D-4: UPDATE AND MAINTAIN CALENDAR OF SUSTAINABLE HNL PROGRAM
DESCRIPTION Updating and maintaining the SMP Program Calendar
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for updating and maintaining the SMP Program Calendar by scheduling meetings, workshops, staff sessions, etc.
FREQUENCY Ongoing
RESOURCES & TOOLS Resource – Completed SMP Program Calendar Template

CHECK

In the "Check" step of the PDCA cycle, the sHNL Program will evaluate the data and information to determine whether implementation of initiatives is improving performance in KPIs and metrics. Depending on the success of the initiative at the time of checking, it may be determined that the "do" step must be repeated. The targets for each initiative would be defined in the SMP Initiative Action and Monitoring Plans.

ACTIVITIES

C-1: MONITOR & EVALUATE THE SUSTAINABLE HNL PROGRAM

C-2: MONITOR & EVALUATE THE PERFORMANCE OF INITIATIVES

C-3: ASK FOR AND GATHER FEEDBACK FROM COMMUNICATIONS ACTIVITIES

FIGURE 24. STEPS 1-3 FOR IMPLEMENTATION OF "CHECK"

C-1: MONITOR & EVALUATE THE SUSTAINABLE HNL PROGRAM
DESCRIPTION Collect performance data and lessons learned for SHNL Program and program elements, and assess outcomes
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for collecting and analyzing data for the program and initiatives to understand effectiveness of initiatives. Directs owners to update the SMP Initiative Action and Monitoring Plan Templates. Uses up-to-date SMP Initiative Action and Monitoring Plan Templates to gather the metrics and KPIs for input into SHNL Performance Monitoring Tool.
FREQUENCY Ongoing, with review and data analysis annually or biennially
RESOURCES & TOOLS Tool: SMP Initiative Action and Monitoring Plan Templates Tool: SHNL Performance Monitoring Tool Resource: Completed Initiative Implementation Plans

C-2: MONITOR & EVALUATE THE PERFORMANCE OF INITIATIVES
DESCRIPTION Monitoring and Evaluating performance of initiatives using the individual SMP Initiative Action and Monitoring Plan Templates, and sharing performance with the Sustainability Champions at initiative update meetings, as necessary.
ROLES & RESPONSIBILITY INITIATIVE OWNERS: Responsible for tracking, evaluating, and reporting performance data (metrics and KPIs) to Champions using SMP Initiative Action and Monitoring Plan Templates. SUSTAINABILITY CHAMPIONS: Responsible for collecting and analyzing data to understand effectiveness of initiatives using the Initiative Monitoring Template and updating the SHNL Performance Monitoring Tool.
FREQUENCY Update meetings or initiative milestones
RESOURCES & TOOLS Tool: SMP Initiative Action and Monitoring Plan Templates Tool: SHNL Performance Monitoring Tool Resource: Completed Initiative Implementation Plans

C-3: ASK FOR AND GATHER FEEDBACK FROM COMMUNICATIONS ACTIVITIES
DESCRIPTION Collect program and initiative feedback from stakeholders
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for collecting and analyzing feedback for the program and initiatives to understand perception of program and initiatives, and to integrate into Implementation Plan.
FREQUENCY Ongoing
RESOURCES & TOOLS Communications Plan

ACT

The “Act” step reviews and evaluates the results in the “Check” step and communicates the performance to the various stakeholders using Communications Plan and associated resources. The causes of any differences between expected vs. actual results are carried into the “Plan” step as the DOT-A improves initiatives and implementation through the PDCA cycle.

ACTIVITIES

A-1: ASSESS SUSTAINABLE HNL PROGRAM GAPS AND OPPORTUNITIES

A-2: ASSESS INITIATIVES GAPS AND OPPORTUNITIES

A-3: ASSESS COMMUNICATIONS GAPS AND OPPORTUNITIES

A-4: REPORT SUSTAINABLE HNL PROGRAM PROGRESS

A-5: COMMUNICATE INITIATIVE PROGRESS AND ACHIEVEMENTS

A-6: COMMUNICATE PROGRAM PROGRESS AND ACHIEVEMENTS

FIGURE 25. STEPS 1-6 FOR IMPLEMENTATION OF “ACT”

A-1: ASSESS SUSTAINABLE HNL PROGRAM GAPS AND OPPORTUNITIES
DESCRIPTION Identify lessons learned and consider incorporating opportunities for improvement.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for collecting and analyzing improvement opportunities to SHNL Program using the Report Card, Initiative Monitoring Template, and Annual Report Template.
FREQUENCY Annually or Biennially
RESOURCES & TOOLS Resource: Completed Report Card Template Resource: Completed Initiative Monitoring Template Resource: Annual Report Template Staying up to date on best practices in Sustainability Program Implementation through industry events and reviewing case studies.

A-2: ASSESS INITIATIVES GAPS AND OPPORTUNITIES
DESCRIPTION Review the data from performance monitoring to identify gaps & lessons learned. Consider incorporating opportunities for improvement.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for facilitating review of initiatives progress, identifying resource needs, and selecting new initiatives for implementation. INITIATIVE OWNERS: Participate in initiative review.
FREQUENCY Annually or Biennially, and based on the completion of initiatives.
RESOURCES & TOOLS Staying up to date on best practices in Sustainability Program Implementation through industry events and reviewing case studies.

A-3: ASSESS COMMUNICATIONS GAPS AND OPPORTUNITIES
DESCRIPTION Review the internal feedback and experiences with communication to identify gaps and opportunities in sustainability information communications flow and messaging.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for facilitating review of communications plan and processes. Identifying resource needs, and selecting areas for improvement.
FREQUENCY Annually or Biennially, and based on the completion of initiatives.
RESOURCES & TOOLS Staying up to date on best practices in Sustainability Program Implementation through industry events and reviewing case studies.

A-4: REPORT SUSTAINABLE HNL PROGRAM PROGRESS
DESCRIPTION Create Annual Report, considering the audience, and possibly creating an internal and external reporting format.
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for developing report content, engaging DOT-A content developers and contributors, and submitting report to higher ups, publishing on website, and sharing with business partners.
FREQUENCY Annually or Biennially, based on resource availability.
RESOURCES & TOOLS Tool: Annual Report Template Resource: Completed Report Card Template Resource: Completed Initiative Monitoring Template

A-5: COMMUNICATE INITIATIVE PROGRESS AND ACHIEVEMENTS
DESCRIPTION Communicate initiative success and lessons learned to stakeholders
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for identifying achievements and highlighting in communication to higher-ups, other stakeholders. INITIATIVE OWNERS: Supports identification of achievements for messaging.
FREQUENCY Annually or Biennially
RESOURCES & TOOLS Activity A-4

A-6: COMMUNICATE PROGRAM PROGRESS AND ACHIEVEMENTS
DESCRIPTION Communicate SHNL Program success specifically and lessons learned to stakeholders
ROLES & RESPONSIBILITY SUSTAINABILITY CHAMPIONS: Responsible for identifying achievements and highlighting in communication to higher ups, other stakeholders.
FREQUENCY Annually or Biennially
RESOURCES & TOOLS Activity A-4

ROLES & RESPONSIBILITIES OF SUSTAINABLE HNL SUSTAINABILITY COMMITTEE

The Sustainable HNL Program Group is organized according to Figure 20 in the Implementation Section. The Group consists of the Champions, Advisory Council, HNL Sustainability Committee, and the Initiative Owners (and their Implementation Teams).

CHAMPIONS

The Champions lead the development and implementation of the sHNL Program and work to ensure it addresses sustainability issues across the breadth of the airport's management practices and operations. Champions oversee implementation of sustainability initiatives and are ultimately accountable for the program implementation success. The Champions have final approval authority regarding implementation of new initiatives. Staff, Tenants, and Business Partners will approach champions with candidate initiatives, same as they do under the current management system in place.

The Champion's responsibility is to lead the Sustainability Committee and Initiative Owners, rely on them to communicate their progress, bring new projects & initiatives to the program, and identify and direct the responsible staff. They are accountable for maintaining the Initiatives Register, selecting new initiatives for implementation, approving Initiative Implementation Plans, directing staff and resources to execute initiatives, completing the Report Card, compiling the Annual Report, and reviewing the sHNL program for continuous improvement.

- (AIR-O) Airport District Manager
- (AIR-E) Engineering Program Manager

ADVISORY COUNCIL

The Advisory Council provides input to the Champions in establishing priorities that are consistent with the Department of Transportation (DOT) goals and aligned with the overall business strategy of the DOT and the Airports Division.

Responsibilities include proposing initiatives to Champions; identifying opportunities for collaboration and funding; and reviewing and reporting progress on sustainability performance to the governor, legislature and general public.

- (DIR) Director of Transportation
- (DEP-A) Deputy Director of Airports Division

SUSTAINABILITY COMMITTEE

The Sustainability Committee (HNL-SC) is a steering committee responsible for the synchronization and systematization of the initiatives of the sustainability program. Because much of the DOT-A's internal sustainability performance improvement will be achieved through the work of multiple departments, the Sustainability Committee works to streamline resources and facilitate cross-departmental coordination by appointing initiative owners and their teams.

The committee is a dynamic, interdisciplinary, and consensus-based team of DOT-A Division and Oahu District stakeholders inspired by the vision of Hawai'i airports as leaders in sustainability. The committee responsible for meeting with Champions and Initiative Owners as defined in the above "Plan" Section to update the initiatives register, select new initiatives for implementation, review initiative progress, provide technical expertise, and facilitating implementation across departments.

- (AIR-ED) Design Section: Design Engineer
- (AIR-EM) Facilities Maintenance: Head Facilities Maintenance Engineer
- (AIR-ER) Project Coordination Section: Project Coordinator
- (AIR-EC) Construction Section: Project Manager
- (AIR-EE) Environmental Section: Environmental Health Specialist
- (AIR-EP) Division Planning Section: Head Planner
- (AIR-AF) Financial Management: Fiscal Officer
- (AIR-L) Airport Operations: Airport Operations Officer
- Sustainability Consultants

INITIATIVE OWNERS (AND THEIR IMPLEMENTATION TEAMS)

Implementation Teams are headed by Initiative Owners who are responsible for engaging their team and performing the work of the initiative. They may be formed for each focus area or logical grouping of initiatives and will be comprised of staff at various levels from different departments. The Implementation Teams can be assembled for a specified duration (typically several months) as required to achieve the sustainability actions. The results of each team will be summarized for the Sustainability Committee in accordance with the Communication Plan. Their activities are to:

- Complete the SMP Initiative Action and Monitoring Plan Template,
- Submitting the completed template to Champions for approval,
- Executing the approved plan,
- Coordinate and communicate with the HNL-SC during update meetings and annual initiative reviews, and
- Tracking initiative progress and performance with completed template.

While the HNL-SC and Owners should meet regularly, it is up to both parties to determine the frequency of the meetings depending on the complexity of the initiative.

- (AIR-OME) Oahu District Engineer
- Other District representatives
- Consultants

RACI FRAMEWORK

The Responsibility Assignment Matrix (RAM) is often used to define and understand stakeholder responsibilities and accountabilities. RACI is a model for project management recommended by the Project Management Institute (PMI). RACI stands for and has example roles such as:

- Responsible – Who is responsible for the execution of the task?
  - One person, typically a staff member who performs the task.
- Accountable – Who is accountable for the tasks and signs off on the work?
  - One person, typically a manager who approves work.
- Consulted – Who are the subject matter experts to be consulted?
  - One or more people, typically supporting implementation.
- Informed – Who are the people who need to be updated of the progress?
  - One or more people, typically need to be notified of results but not involved in the decision making process.

In the Initiative Implementation and Monitoring Plan Template, the Initiative Owners identify the people. The following table provides an example RACI matrix using the SMP Implementation Plan.

FIGURE 26. RACI MODEL FOR SMP IMPLEMENTATION

IMPLEMENTATION TASK	RESPONSIBLE	ACCOUNTABLE	CONSULTED	INFORMED
SMP PROJECT MANAGEMENT & DOCUMENT PUBLISHING	SMP Project Manager – AIR-ED	Champions	HNL-SC	Advisory Council
MANAGE SUSTAINABLE HNL PROGRAM	Initiative Owners	Champions	HNL-SC, Advisory Council	Airport Employees and Business Partners affected
SMP INITIATIVE RACI	Initiative Owners	Champions	HNL-SC	Airport Employees and Business Partners affected

COMMUNICATIONS PLAN

Communicating is the second most important part of successful implementation, after the plan itself. This formal communications plan outlines the roles and responsibilities of the sHNL Program participants in the review, approval and dissemination of information about key processes, events, documents, and milestones. This plan will help to manage expectations, identify effective methods, identify levels of communication with stakeholders, provide the correct information, and sustain enthusiasm for the project.

The Communications Plan will provide guidance to the DOT-A for ongoing communication to stakeholders about the airport commitments, goals, objectives, targets, initiatives, and performance. Additionally, the Communications Plan provides guidance internally on actions and activities that engage the sHNL Program Group. The key to both internal and external communication is the establishment and maintenance of information flow to the appropriate parties.

The SMP audiences are divided between the internal organization and external parties. The internal group is a mix of DOT-A Division and District employees, the governor and legislature. Specific to the DOT-A sHNL Program are the Champions, Advisory Council, Sustainability Committee (HNL-SC), and Initiative Owners. External parties include the tenants and business partners, residents of Oahu and the State of Hawai'i , the traveling public, and the international aviation industry. The DOT-A communication is meant to inform internal and external stakeholders on sustainability efforts of sHNL. All information will come from the DOT unless otherwise noted.

The DOT-A Sustainability Champions, Airports Division and Oahu District Staff, and Division Public Information Officer will manage internal and external communications. The Advisory Council should inform how sustainability communications strategy should evolve as the SMP is implemented at HNL. DOT-A staff will implement the communications activities as directed in the SMP Communications Plan below:

FIGURE 27. SMP COMMUNICATIONS PLAN ACTIVITIES

ACTIVITY	DESCRIPTION	METHOD	FREQUENCY	RESPONSIBLE
EXTERNAL WEBSITE UPDATE	Report on progress of sustainability goals and initiatives, may use annual report.	Website	Ongoing	Champions, Airports Division and Oahu District Staff, and Division Public Information Officer
INTERNAL WEBSITE UPDATE	Establish an internal access point for all DOT-A staff to house the SMP report, appendix, and tools.	Intranet	Ongoing	Champions, Airports Division and Oahu District Staff, and Division Public Information Officer
OUTREACH TO EMPLOYEES AND BUSINESS PARTNERS	Trainings and outreach to address the SMP in general or an SMP topic of importance.	Airport Notice	Ongoing	Champions, Airports Division and Oahu District Staff, and Division Public Information Officer
SMP INFORMATIONAL MATERIALS	A brief handout that was developed as part of the SMP project to provide overview of SMP	Handout	Ongoing	SMP Project Manager
OUTREACH PRESENTATIONS	Template presentation developed as part of SMP for presentation to interested parties	PowerPoint	Ongoing	SMP Project Manager, Public Information Officer
INITIATIVE REGISTER MEETINGS	See "Plan" step			HNL-SC & Champions
COMMUNICATE PROGRESS	A report using the indicators identified in the SMP, to measure progress toward the vision, goals, objectives and targets.	Annual Report, Website	Annually	Champions, Airports Division and Oahu District Staff, and Division Public Information Officer

08

MONITORING AND REPORTING PERFORMANCE

Note: The templates and tools for monitoring and reporting performance can be found in the Appendices (DOT-A internal use only).

The DOT-A was interested in preparing the SMP in order to have an organized structure for selecting and implementing sustainability initiatives that were informed by measurable targets. Monitoring performance and reporting on progress is the critical element for the demonstrating the success of the SMP.

HNL has been given tools as part of the SMP project to measure and monitor goal and initiative progress using KPI's and metrics, as seen on the next page. HNL cannot manage what they don't measure, thus the creation of the Performance Monitoring Tool, which captures all Goals, Objectives, Targets, KPI's, and Metrics in one place. In addition to providing a snapshot view of sustainability performance at HNL, the tool provides graphs and charts for reporting and communicating the data. The sustainability champions are tasked with keeping the tool up to date by capturing data from initiative monitoring templates, and other sources specifically mentioned in the tool.

The selection of performance metrics and KPI's has been dependant on two areas. First, metrics and KPI's are ideally tied to specific goals and objectives. Second, they are relatable/ comparable to other airports as much as possible.

KPI'S AND METRICS FOR TOP 5 FOCUS AREAS

ENERGY

- Cost per kWh per passenger
- kWh per passenger
- Percent renewable energy generation

CARBON

- Tons of carbon emissions per passenger
- Type and quantity of alternative-fuel purchased for vehicle fleet & emergency generators

WATER

- Non-potable water gallons per passenger
- Potable water gallons per passenger
- Gallons of water reclaimed and re-used

WASTE

- Pounds of MSW per passenger
- Recycling rate: Percent of waste diverted from MSW stream

STORM WATER

- # exceedances for storm water quality
- # of penalties

FIGURE 28. SCREENSHOT OF INITIATIVE ACTION AND MONITORING PLAN (2016)

Initiative Implementation and Monitoring Plan

Sustainability Initiative Title:		Initiative Goal(s):		Case Studies	
Description, Scope and Boundary:		Initiative Objective(s):			
		Target(s):			
Todays Date:		Performance Indicator (ie weight of recycling, energy use, water use:			
Approved by Roy (yes or no):					
Airport Goal(s) Supported:		Data (ie: lbs., kwh, gallons, etc.)?			
Start Date:					
Target Completion Date:					
Owner:		Key Stakeholders and Needs:			
Staffing Needs / Team:					

	Specific Action Item(s) / Task(s)	Priority (High/Med/Low)	Responsible Party (Job/Personnel)	Deliverables	People Resource Needs	Financial Resource Needs	Schedule/Milestones	Status*	Issues/Notes
1									
2									
3									
4									
5									

Status*: Green = Ongoing; Grey = Planned; Yellow = Need Help; Red = Behind; Completed = Blue

Notes (Please write any additional notes that weren't covered above):

Source: Sustainable Aviation Guidance Alliance, modified by KYA Sustainability Studio 2016

FIGURE 29. SCREENSHOT OF PERFORMANCE MONITORING TOOL (2016)

Energy

Instructions

Directions - Fill in the yellow highlighted cells as applicable from the data sources referenced below.
Electricity Use - Using the annual electricity bill tracking data from DBEDT, summarize the data for HNL based on the HECO allocation month and year. See tracking data for example.
Renewable electricity generation - Reach out to JCI to get the calendar year annual energy generated in kWh from the solar PV

Details

Electricity Use

Year	2009	2010	2011	2012	2013	2014	2015	2016
kWh	101,650,852	99,529,658	101,269,567	102,036,388	100,949,118	97,330,250	-	-
Annual Cost	$ 17,514,472	$ 20,992,837	$ 26,478,223	$ 30,480,702	$ 37,415,083	$ 30,480,702	$ -	$ -

Source: DBEDT Energy Use Tracking Data, Alan Okimoto
Scope: Includes all DOT-A accounts at HNL (71 at time of SMP)
Resource: Energy Billing Data - DOTA HNL - 2006 to 2014 Updated 3.9.16.xlsx

Renewable electricity generation

Year	2015	2016	2017	2018	2019	2020
kWh	-	-	-	-	-	-
kW	-	-	-	-	-	-
Savings Generated	$ -	$ -	$ -	$ -	$ -	$ -

Source: KYA Sustainability Studio 2016

ACKNOWLEDGEMENTS

Thank you to all the HNL and DOT-A staff and extended community for your knowledge, expertise, insight, and support in the creation of this resource. The following individuals and organizations are among many who have helped in the creation of the Sustainable HNL *Sustainable Management Plan*:

FEDERAL AVIATION ADMINISTRATION

Ron Simpson
Cheryl Tsutsuse
Gordon Wong
Steve Wong
Kandyce Watanabe
Ronson Fox
Kim Evans

DEPARTMENT OF TRANSPORTATION

Allen Muranaka
Andrew Watson
Ann Shiigi
Anne Hayashi
Benton Ho
Brian Kami
Cathy Ehia
Charles Seabury
Chris Murphy
Deane Kadokawa
Dennis Lopez
Eddy Takiguchi
Evan Kimoto
Ford Fuchigami
Gary Yokoyama
Gaylene Chun
Guy Ichinotsubo
Herman Tuiolosega
Janne Brash
Jeff Chang
Jimmy Koshino
Joy Masuda
Keith Ishinaga
Kimberly Evans
Kurt Yamasaki
Lynette Kawaoka
Mary Montez
Perle Ho
Ross Higashi
Ross Smith
Roy Sakata
Sandra Kam
Segundo Velasco
Wendy Cheuk
Wesley Matsunaga

COMMUNITY

Gail Suzuki-Jones—DBEDT
Alan Okimoto—DBEDT
Naomi Akamine—DBEDT
Carilyn Shon—DBEDT
Steven Olson—Engineering Economics, Inc.
Stan Hirta—Honolulu Disposal Service
Elisa Asato—Honolulu Disposal Service
Craig Matsuo—Honolulu Recovery Systems
Dan Maxwell—Johnson Controls, Inc.
Leigh Masui—Johnson Controls, Inc.

STATE OF
HAWAI'I
2016

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

PAU