

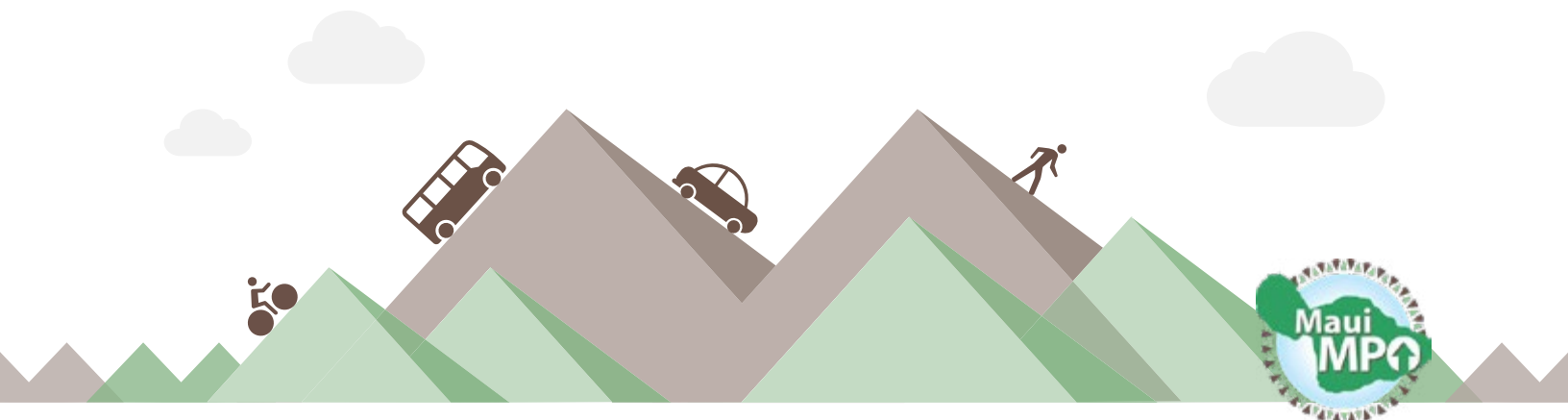


# hele mai maui

Long-Range Transportation Plan 2040

## Factbook

DECEMBER 2018



## PART ONE

# What is

# hele

# mai

# maui?

Hele Mai Maui is a 20-year plan that will identify safe and comfortable transportation options, services, and infrastructure for people of all ages and abilities.

## Why Hele Mai Maui?

Maui is growing, creating challenges for our current transportation system. Our population is also changing—the number of older adults is growing, and young people are driving less than their parents. Hele Mai Maui is the long-range transportation plan for the island of Maui, a key federal requirement carried out by the Maui Metropolitan Planning Organization (MPO). Hele Mai Maui will prioritize transportation projects to receive limited funds.

# The Planning Process on Maui



## Who is the Maui MPO?

Hele Mai Maui is led by the Maui Metropolitan Planning Organization (MPO). The MPO was formed in 2016 by Federal requirements to develop plans and programs for a multimodal transportation system. The formation of the MPO was triggered when the urbanized area of Kahului, Wailuku, and Pā'ia exceeded 50,000 residents. The role of the MPO is:



### COLLABORATION

To facilitate regional and local surface transportation planning by serving as a forum for collaboration among local communities and government agencies.



### FUNDING

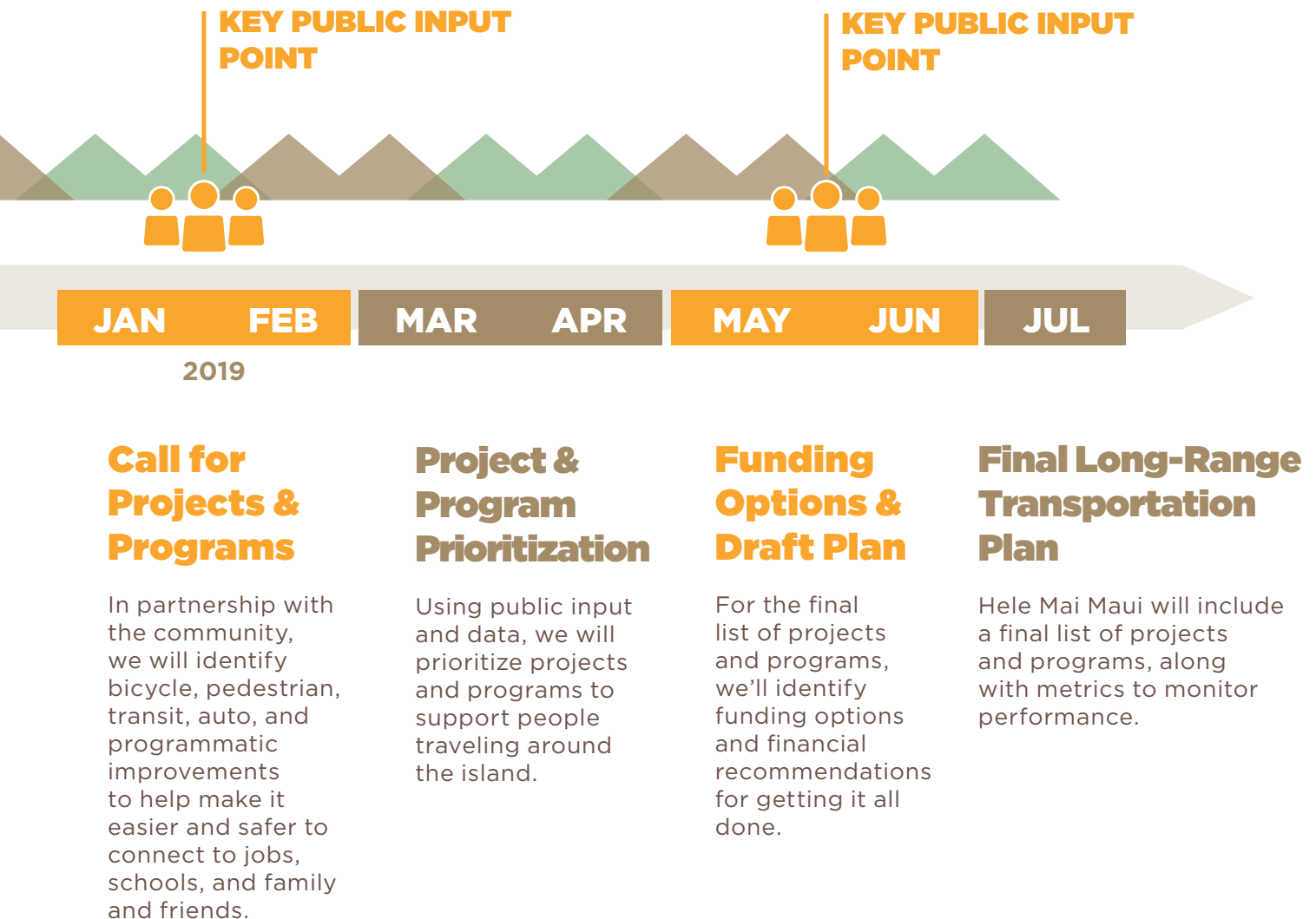
To direct federal funds toward projects that increase access to opportunity and prosperity, while promoting the health and wellness of Maui's people and environment through improved multimodal pedestrian, bicycle, and transit options

To learn more about the MPO, go to [www.mauimpo.org](http://www.mauimpo.org)

# Hele Mai Maui Process

Hele Mai Maui will develop a vision for our transportation needs and opportunities over the next 20 years to ensure that our communities are connected by a safe, efficient, and sustainable transportation system. The project team—made up of County staff and consultants—will be engaging with the community at key milestones.





# Who Guides Our Work?

## Community Think Tank

The Community Think Tank is an 18-member committee comprised of residents of all ages and geographies across the island. Think Tank members include students, teachers, advocates, and industry representatives. A full list of members can be found on the **Hele Mai Maui website**. The Think Tank will help identify key issues and opportunities, prioritize projects, and serve as an important sounding board for the project team throughout the development of Hele Mai Maui.

## Technical Advisory Committee

The MPO's Technical Advisory Committee (TAC) is a standing committee that provides input and technical advice to the Maui MPO Policy Board. It includes staff representatives from County of Maui Department of Planning, County of Maui Department of Public Works, County of Maui Department of Transportation, and the State of Hawai'i Department of Transportation. The TAC will provide technical guidance and oversight as Hele Mai Maui is developed, reviewing the plan before it is adopted.

## Policy Board

The Maui MPO Policy Board is another standing MPO committee that includes elected officials and department leaders. Members include the County of Maui Department of Planning Director, County of Maui Department of Transportation Director, County Department of Public Works Director, three Maui County Council members, and the State of Hawai'i Department of Transportation Director. In 2019, two state legislators will join the Policy Board. The Policy Board will review progress as Hele Mai Maui is developed and will approve the final plan.

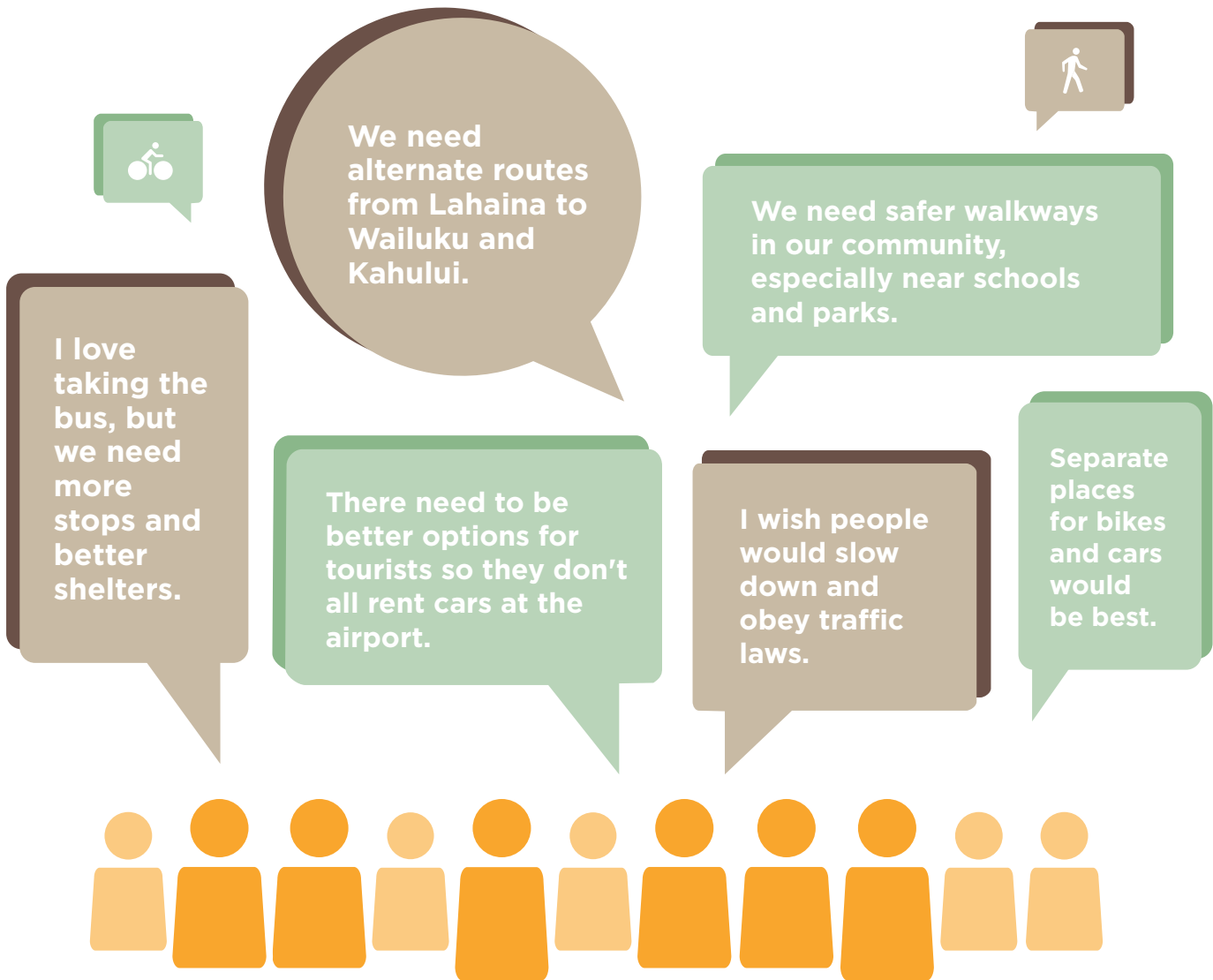
## You!

Hele Mai Maui includes many opportunities to provide input along the way. Sign up for updates on the project website and check back frequently to see where and how you can get involved: **<https://mauimpo.org/hele-mai-maui-2040>**

**WHAT  
WE'VE  
HEARD  
SO FAR:**

**Our roads are  
eroding and  
ocean water  
sometimes  
covers the  
highway.**

**Guiding  
Principles for  
Hele Mai Maui**



#### PARTNERSHIPS

Include partner agencies and departments to ensure that plans reflect diverse needs.



#### EQUITY

Involve underrepresented communities in the process to ensure all voices are heard.



#### RESILIENCE

Consider impacts of climate change on transportation infrastructure.



#### LAND USE

Link transportation conversations to how communities are built.



#### PERFORMANCE MEASURES

Apply performance measures to project funding decisions to ensure effective progress toward community-wide goals.

**PART TWO**

# Maui's Past

As we begin to think about ways to make it easier for people to move around the island, both today and in 20 years, it's important to first take a step back to understand the history of transportation on Maui and the plans that have shaped Maui into the place it is today. At the same time, we must look ahead to the emerging trends in transportation that will help to shape future mobility on Maui, including changes to our population and new technologies.

## A Rich History

From the first Polynesian settlers to the growth of the sugar plantations in the 1800s, Maui has a rich history that shaped its transportation network. Pi'ilani, ruling chief of Maui in the 1600s, created Ke Ala Loa—the first trail to encircle an entire Hawaiian island.

The island's first “modern” transportation system—the railroad—was built to accommodate the growing sugar industry. But the railroad closed in the 1950s, leaving the island dependent on air, ocean, and local roads to transport a growing number of people and goods. The closure of HC&S sugar cane operations in 2016 affected 32,000 acres of agricultural land. Coordinated land use planning is more important than ever.

## Did you know?

- ▶ Many of the island's primary roads have their roots in pathways used by Native Hawaiians. Others were developed as part of the sugar industry, although many are no longer in use today.
- ▶ Maui's communities are as diverse as its landscapes, with communities that are more central and urban having very different needs than those in more rural areas or along the coasts. For example, in Wailuku and Kahului, traffic congestion is a challenge, while in Kīhei, pedestrian safety is a bigger issue.
- ▶ While some Maui residents speak only English, almost half (46%) speak a second language. More than a third (36%) of those living on Maui speak a native Asian or Pacific Islander language.

# A Strong Planning Foundation

Maui has a strong history of plans that highlight the community's commitment to the environment, protection of natural resources, respect for diversity, and access for all. These planning processes (described in the first section of the Factbook) have tackled the complex and varied needs of different parts of the island: from rural to more urban and from Upcountry to coastal. Hele Mai Maui will build on these past plans as we develop a vision for moving people around Maui in the years to come.

## 7 Plans

6 Key Themes

6 Legacy Projects



# The 6 Key Themes

## Environment

Protection of the island's natural environment is at the forefront of nearly all of Maui's past plans.

## Economy

Transportation plays a large role in Maui's economic growth. Tourism is a significant contributor to the local economy but also presents challenges for transportation.

## Connections

Past plans emphasize transportation as a service for the community that should connect all people to jobs, destinations, and other key locations on the island.

## Multimodal Systems

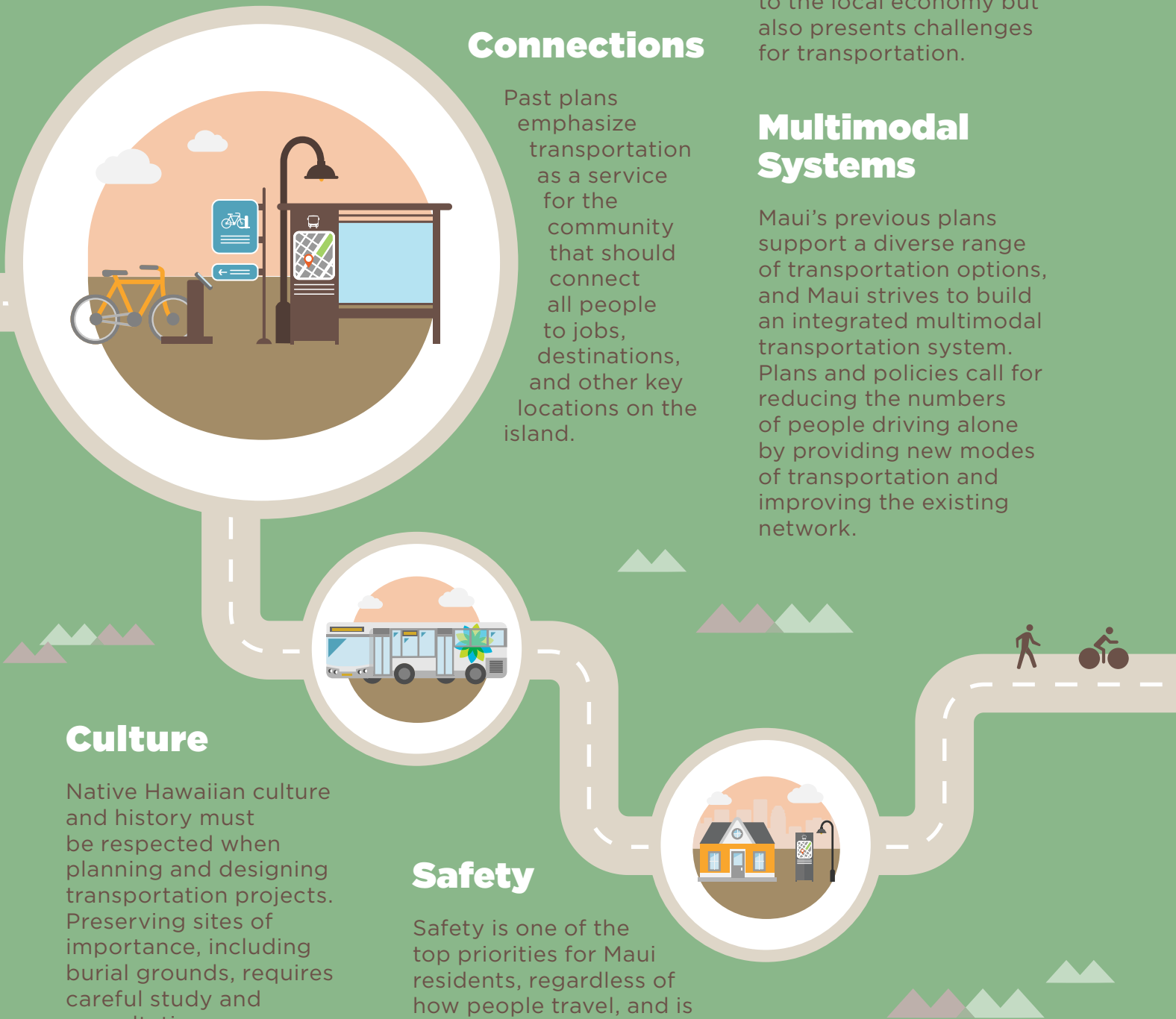
Maui's previous plans support a diverse range of transportation options, and Maui strives to build an integrated multimodal transportation system. Plans and policies call for reducing the numbers of people driving alone by providing new modes of transportation and improving the existing network.

## Culture

Native Hawaiian culture and history must be respected when planning and designing transportation projects. Preserving sites of importance, including burial grounds, requires careful study and consultation.

## Safety

Safety is one of the top priorities for Maui residents, regardless of how people travel, and is mentioned in the majority of past plans.



## The 6 Legacy Projects

Along with a strong history of planning on Maui, there are a number of transportation projects that have been identified as priorities over the years. While this long-range plan won't necessarily solve every one of these major transportation issues or identify funding to complete all the legacy projects, the work we do as part of Hele Mai Maui can help to build on the initial ideas that have emerged from many community discussions.

### **A West Maui Greenway**

The West Maui Greenway is a proposed multi-use trail that would connect Olowalu and Lāhaina. The 25-mile trail would use abandoned cane haul roads and a railroad right-of-way to create a recreational trail connecting people to destinations between Ukumehame and Lipoa Point. The first phase will connect people from Ka'anapali to Lāhaina.

### **B Lāhaina Bypass**

The most recent phase of the Lāhaina Bypass was completed and opened to the public in April 2018. It includes the following improvements:

- ▶ A new 2.7-mile road between Hokiokio Place and Honoapi'ilani Highway
- ▶ Intersection improvements at Hokiokio Place and Kai Hele Ku Street
- ▶ A new bridge over the future Punakea Loop
- ▶ Two detention basins and drainage structures
- ▶ A connection to Honoapi'ilani Highway (Hwy 30), including a new South Connector Road

The next phase (shown on the map) will extend the bypass north to Ka'anapali.



## © North Shore Greenway

The North Shore Greenway is a 1.7-mile path accessible from Kanahā Beach Park or the Kaunoa Senior Center. The next phase of the project will fill in the gap between Ulupua Place and Baldwin Park, allowing people to ride or walk continuously from Kanahā Beach Park to Pā'ia.

## © Pā'ia Relief Route

This project aims to alleviate congestion, accommodate future travel demand, and improve access and safety through widening of the Hāna Highway and/or constructing a new highway. One possible route for the project is currently in the environmental review phase.

## © Honoapi'ilani Highway

The Hawai'i Department of Transportation (HDOT) has several active projects along the Honoapi'ilani Highway:

- ▶ **Jun 2018** - A second turn lane at the Kapunakea and Keawe Street intersections
- ▶ **Aug 2018** - Resurfacing between Puamana Beach Park to Aholo Road
- ▶ **Sept 2018** - Safety enhancements (rumble strips, pavement markings, signs) from Kapoli Street to Papalaua Beach Park and Ukumehame to Olowalu
- ▶ **Dec 2018** - Feasibility study of alternatives for realignment of critically vulnerable section of highway from mile marker 13.5-14.5 just south of Olowalu
- ▶ **Jan 2019** - Upgraded traffic signals along the corridor

The Pali to Puamana Parkway Plan outlines the vision to move the highway inland to improve safety and resilience to sea level rise, while protecting public open space and parks along the shoreline.

## © Kīhei North-South Collector

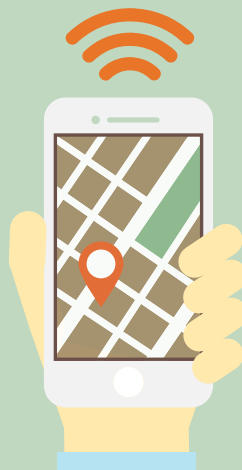
Kīhei's North-South Collector road will bring much needed connectivity to the community. With a projected right-of-way of 60 feet, the new road will provide dedicated pedestrian and bicycle facilities to make it safer for everyone to use the road.

# A Look Ahead...

The transportation landscape is changing daily. New technologies are making it easier for people to connect to transportation options, and people are demanding new travel choices. Hele Mai Maui will consider the influence of these trends—and the ways that Maui can help to shape them—throughout the planning process.

## Technology

New technology is changing the ways people connect, how information is shared, and what services are offered. Real-time travel information available via smart phone helps people make travel decisions at a moment's notice. Apps connect people to new services and improve the experience of using current services, such as riding the bus.



## Shared Mobility

Shared mobility options provide new ways for people to get around without owning a vehicle. Car share and bike share systems make vehicles and bicycles readily available and accessible via smartphone; rideshare services support carpooling; shuttles connect people to transit or destinations; and ridehailing services, like Uber and Lyft, expand upon traditional taxi services.

## Autonomous Vehicles

The potential benefits of automation—such as improved safety, increased mobility, and maximized efficiency—may be just around the corner. However, Maui must be prepared to address potential challenges, including safety, integration with existing systems, and increasing congestion.



## Tourism

The local economy relies heavily on tourism, which accounts for 39% of the gross county product, 75% of all private sector jobs, and \$3 billion in annual visitor spending. Despite shuttle bus service to many of the resort areas today, visitors often rely on rental cars to get around the island, increasing traffic congestion.

**Tourism accounts for**

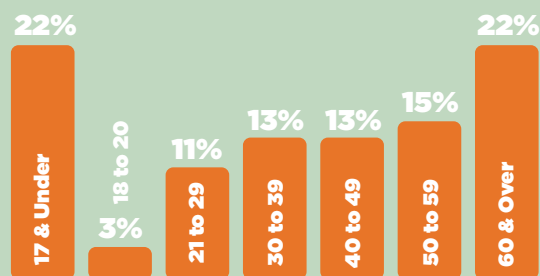
**39%**

**of the gross county product**



## Demographics

Today, people 65 and older make up approximately 17% of the state's population; the same group is expected to be nearly a quarter of the population by 2040. The growth in older adults may be even greater on Maui, where 22% of the population is already at least 60 years old. This points to a need for a transportation system that safely serves people of all ages and abilities with a variety of travel options.

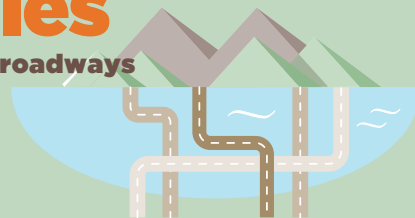


Source: 2016 ACS Census Data (5-Year)

## Resilience

The threat of global sea levels rising as much as 3.2 feet by 2060 could lead to \$3.2 billion in economic loss (due to structure and land loss), 1,600 displaced homes, 3,130 flooded acres, and 11.2 miles of flooded major roadways on Maui. Damage to major utilities would have significant impacts on our communities and the economy, further limiting mobility on the island.

**11.2 Miles**  
of flooded major roadways  
by 2060



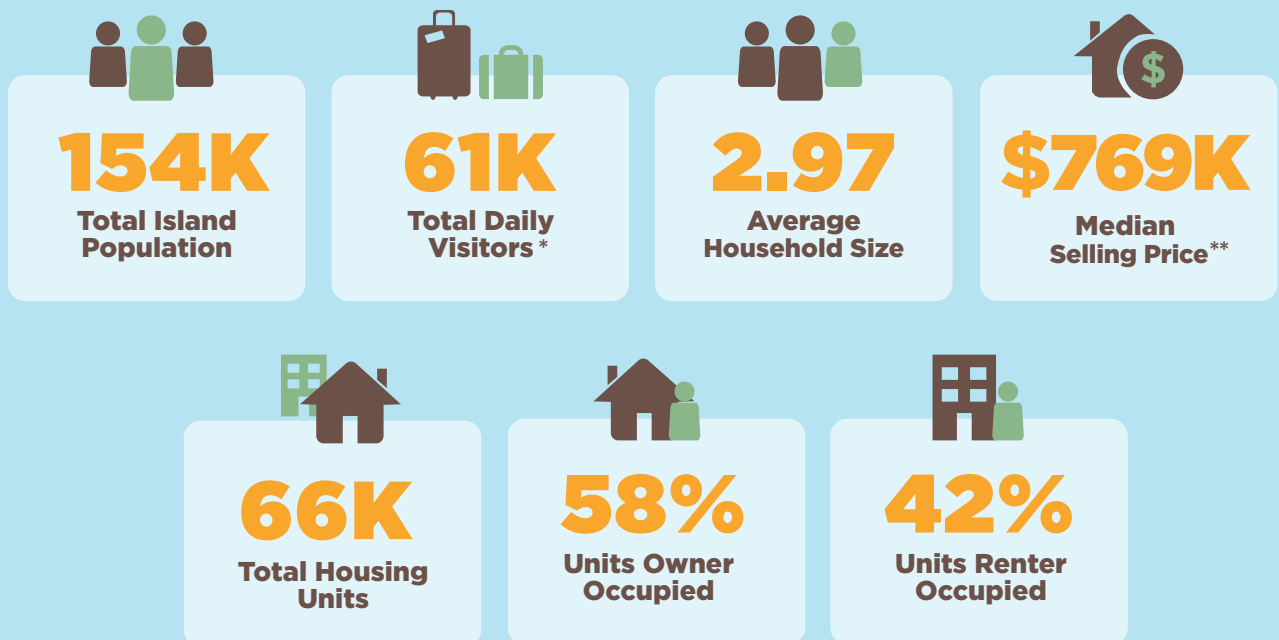
Source: Hawai'i Climate Change Mitigation and Adaptation Commission. 2017. Hawai'i Sea Level Rise Vulnerability and Adaptation Report.

## PART THREE

# Who We Are

Maui is a diverse island that has seen significant growth in the last 50 years. With that growth and diversity comes opportunities and challenges for the people that live, work, and visit the island. Hele Mai Maui will identify investments and improvements that help all people connect to home, school, work, and Maui's beautiful natural areas.

## Maui by the Numbers



Source (unless otherwise noted below): 2016 ACS Census Data (5-Year) and State of Hawaii Department of Business, Economic Development, and Tourism. (2018). Population and Economic Projections for the State of Hawaii to 2045.

\*Source: 2017 Hawaii Data Book

\*\*Source: Mayor's Office of Economic Development Maui County (Aug 30, 2018)

## How many people live on Maui?

Maui's population has grown quickly since 1960 from 35,000 residents to over 150,000 residents in 2016. On an average day in 2018, about 61,000 visitors are on the island, resulting in an average daily population of 215,000 people. The number of visitors varies throughout the year, as does the number of residents, many of whom are seasonal.

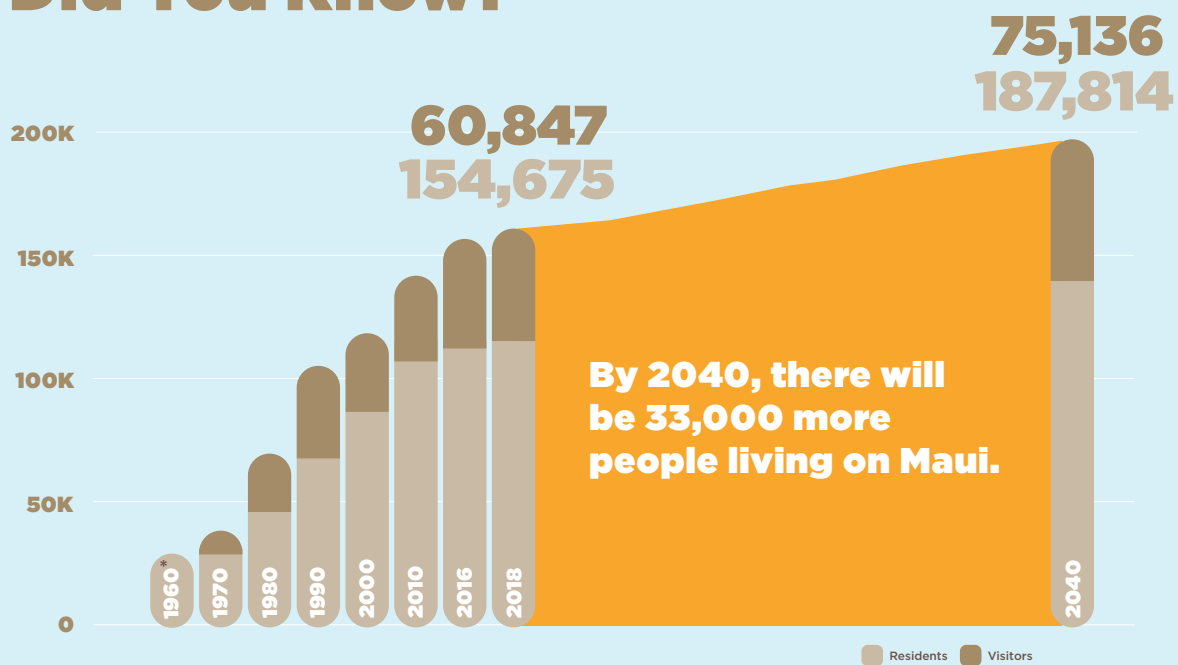
Moving forward, predictions indicate that both population and visitor rates will continue to rise, but at a significantly slower rate. Between 2018 and 2040, population will grow at an average rate of 0.86% per year in Maui County—a far cry from the 33.5% average annual growth rate between 1960 and 2010. The number of visitors is also projected to grow at a rate of 1.7% to 2.7% until 2040.

Maui will grow at an average rate of

**0.86%**  
per year



## Did You Know?



Source: 2016 ACS Census Data (5-Year) and State of Hawaii Department of Business, Economic Development, and Tourism. (2018). Population and Economic Projections for the State of Hawaii to 2045.

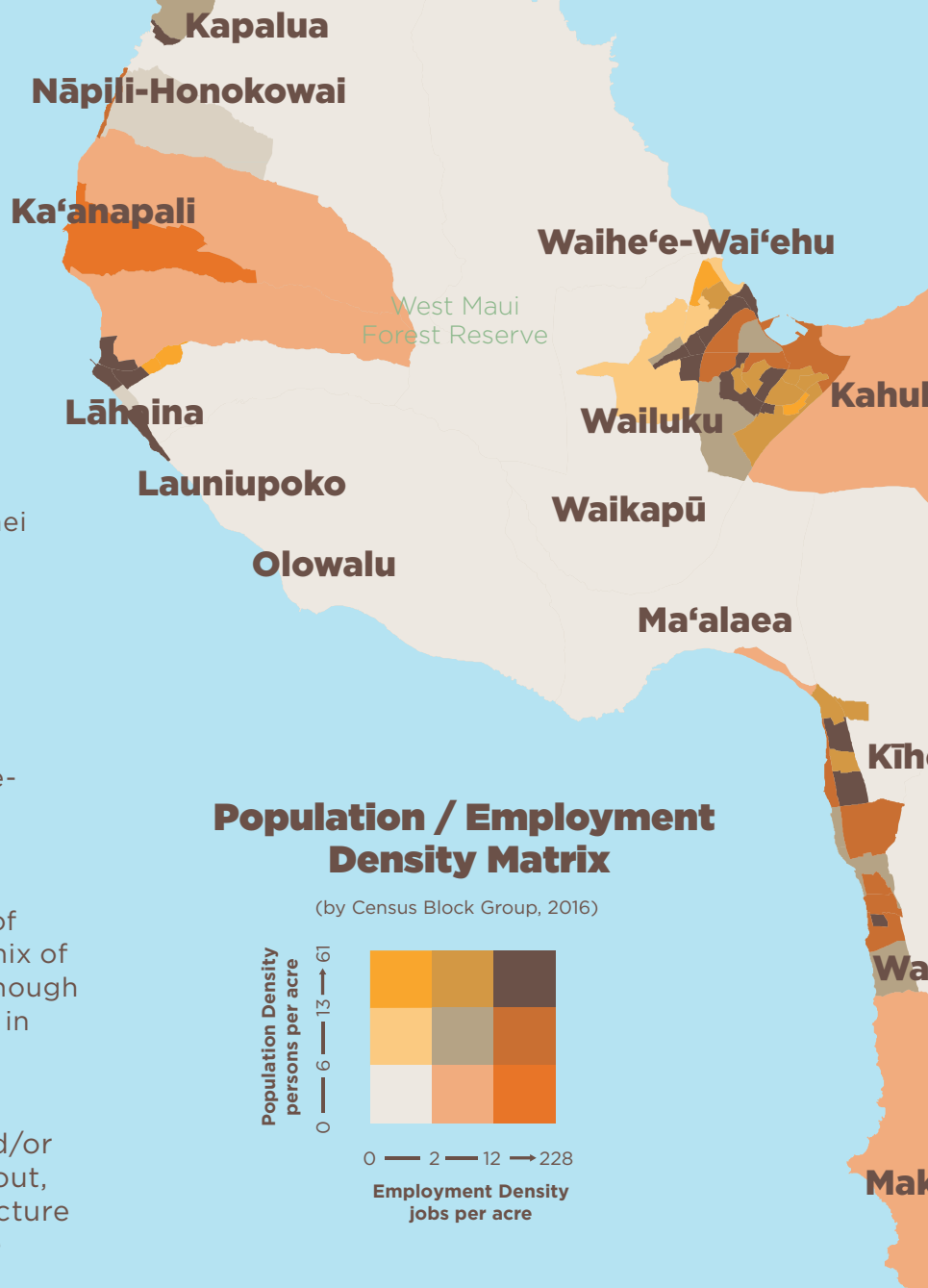
\*Visitor data not available for 1960 (visitor census data available from 1965).

# Where Do People Live & Work?

People and jobs on Maui are concentrated in a handful of areas. The darker areas on the map show parts of the island with more housing or more jobs. The darkest brown areas are those with a mix of many homes and many jobs.

- ▶ Communities such as Ka'anapali in West Maui, Kīhei and Wailea in South Maui, and Kahului in Central Maui have higher employment density due to jobs at the resorts and the industrial area around the airport.
- ▶ Ha'ikū-Pauwela and Waihe'e-Waiehu are areas with high concentrations of residents.
- ▶ Makawao, Kīhei, and much of Central Maui have a dense mix of people living and working though many people may commute in and out.

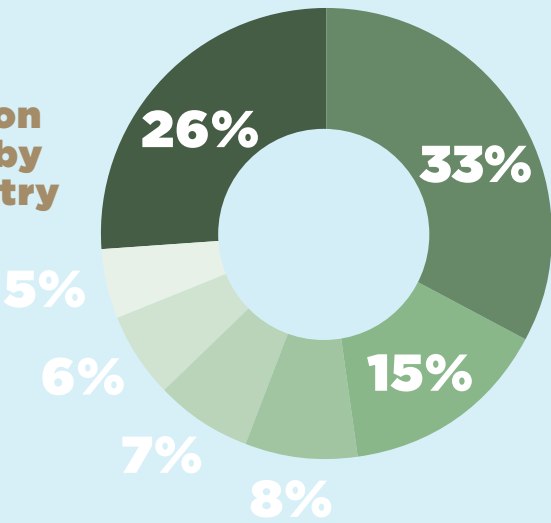
High concentrations of jobs and/or residents are relatively spread out, resulting in a need for infrastructure and services to connect people across the island.



# Did You Know?

Nearly a third of Maui's jobs are related to accommodations and food service, reflecting the importance of tourism to the island's economy. Other job sectors include real estate, manufacturing, educational services, and agriculture.

**Jobs on Maui by Industry**



- Accommodation & Food Services
- Health & Social Services
- Administration & Support, Waste Management & Remediation
- Construction
- Transportation & Warehousing
- Retail Trade
- Other

Source: 2016 ACS Census Data (5-Year)

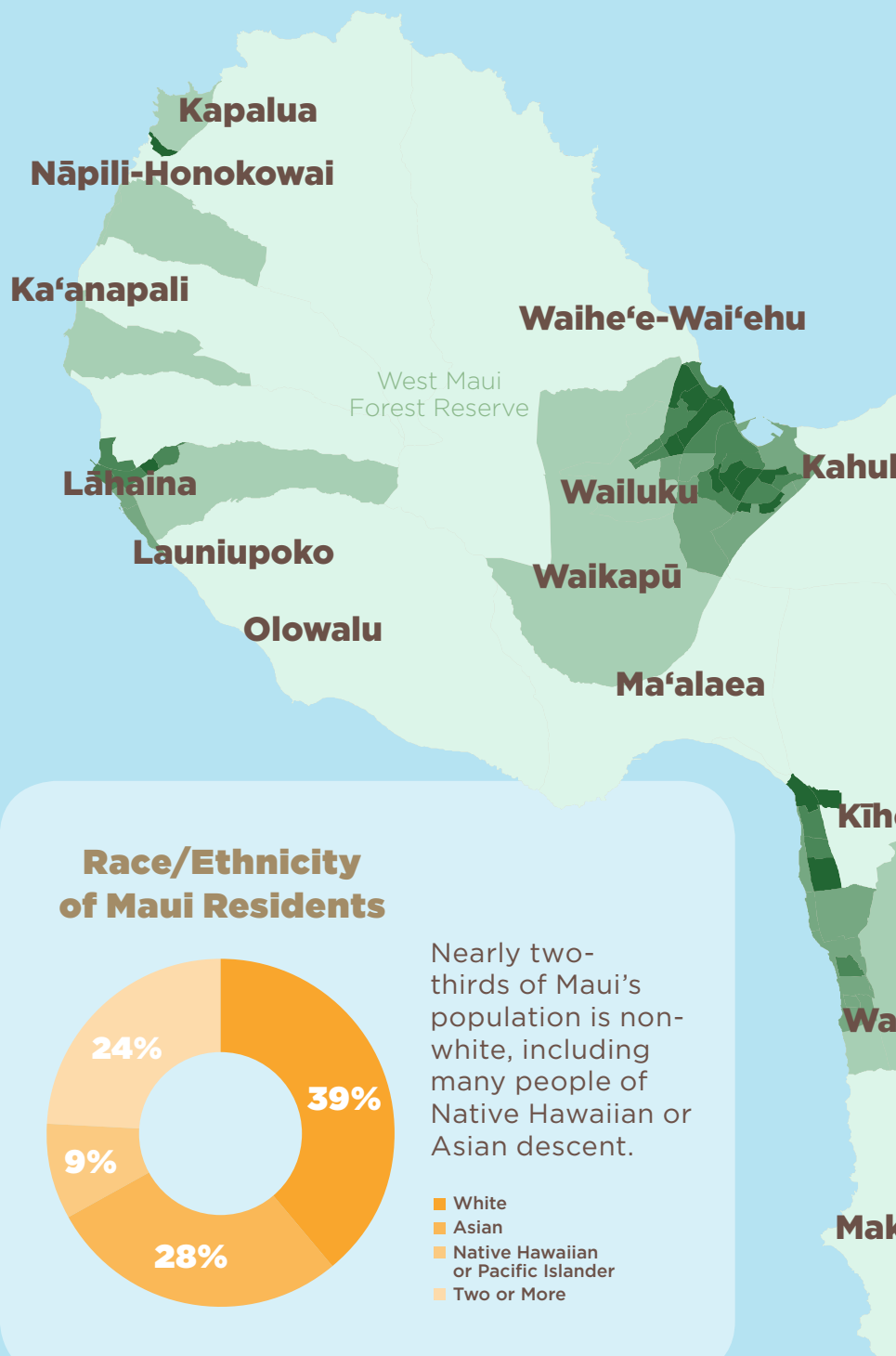


# Focusing on Equity

Equity is an important tool to analyze people's access to transportation and to plan future investments. Planning within an equity framework empowers decision-makers to invest in places where transportation projects and programs can support historically underrepresented communities that may have fewer transportation options.

Communities identified in darker shades of green may have a higher reliance on non-auto forms of transportation and are likely to benefit the most from multimodal investments in the transportation system.

The transportation equity index is based on combined densities of people below 200% of the federal poverty level, adults aged 65 and over, youth between the ages of 10 to 17, households without access to a vehicle, people with a disability, people with limited English proficiency, and people who self-identify as not white/Caucasian.



# Did You Know?



**10%**

of residents live below the poverty line (\$13,370)



**11%**

of households rely on food stamps



**5%**

of homes do not have access to a vehicle



**6%**

of Maui residents are unemployed (about 1% higher than national rates)



**22%**

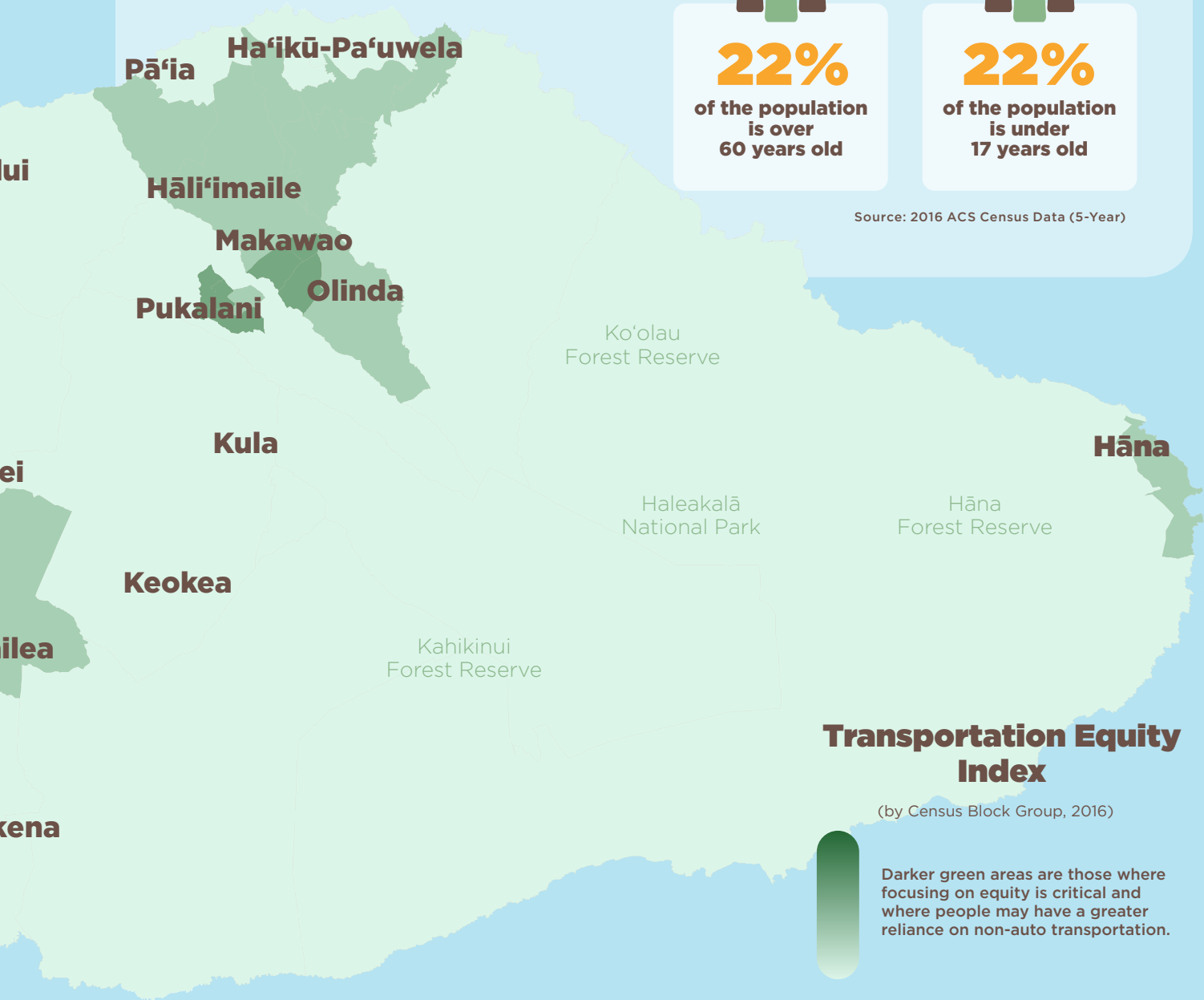
of the population is over 60 years old



**22%**

of the population is under 17 years old

Source: 2016 ACS Census Data (5-Year)



## Transportation Equity Index

(by Census Block Group, 2016)

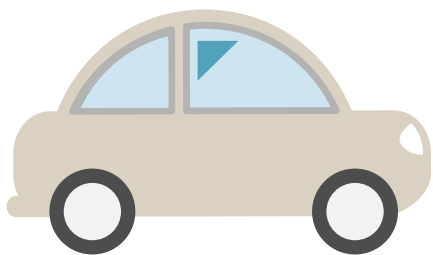
Darker green areas are those where focusing on equity is critical and where people may have a greater reliance on non-auto transportation.

## PART FOUR

# How We Get Around

The past plans and future transportation trends described earlier in the Factbook are an important piece of Maui's mobility story. The way people get around today—and the ways they want to move in the future—point to opportunities for Hele Mai Maui to guide the next 20 years of transportation on the island. This section looks at who drives, walks, bikes, and takes the bus on Maui today, focusing on the places people need to go and the connections they are making.

## Getting to Work on Maui



People who work on Maui mostly drive alone to work.

Source: 2016 ACS Census Data (5-Year)

**72%**

**drive alone to work.**

**14%**

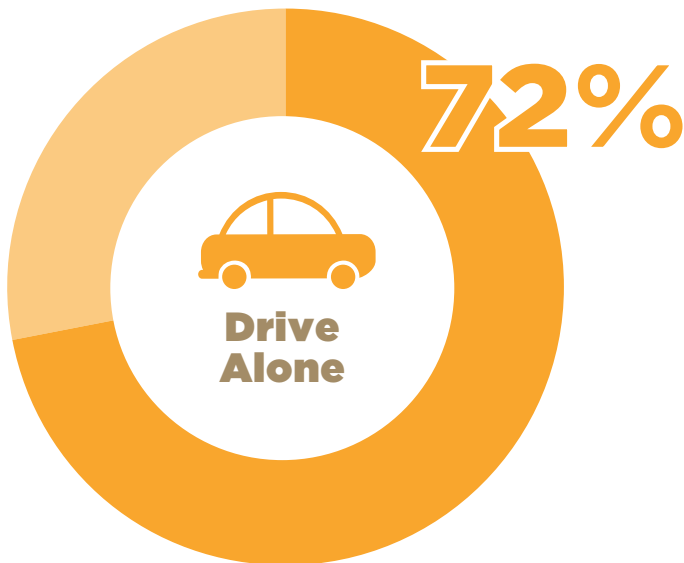
**share rides to work.**



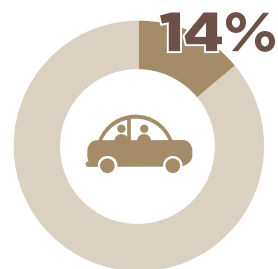
**2%**

**increase in the number of people driving alone to work since 2013.**

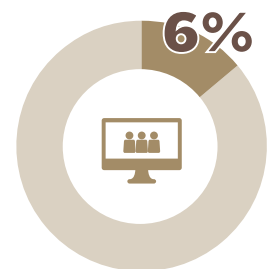
## Commute by Mode



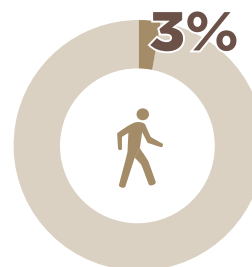
Source: 2016 ACS Census Data (5-Year)



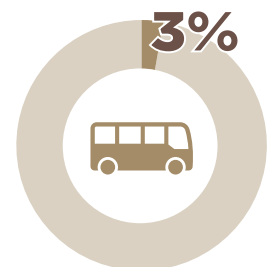
**Carpool  
& Vanpool**



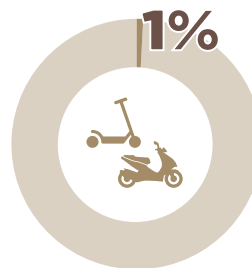
**Work from  
Home**



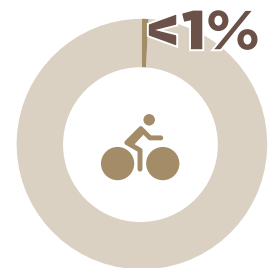
**Walk**



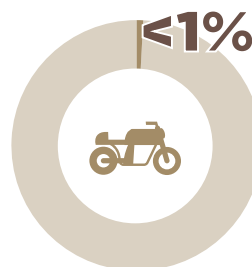
**Bus**



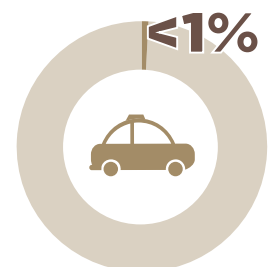
**Other**



**Bicycle**



**Motorcycle**



**Taxi**

### Did You Know?

Just over half of Maui commuters can get to work in



**less  
than  
20  
minutes**

which is 20% less than the national average.

# Transit on Maui

Maui Bus has provided transit service to move people around the island since 2009. Understanding how existing service operates is important for identifying ways to make the bus easier for everyone to use. In July 2018, for example, Maui Bus launched the new Kula Islander and Waihe'e Villager services to bring transit to new areas. New buses and real-time information available on the Maui Bus app also make it easier than ever to ride the bus on Maui.

## ▶ 13 Maui Bus Routes

help move people across the island seven days a week, including the new Kula Islander and Waihe'e Villager routes.

## ▶ 4 Commuter Buses

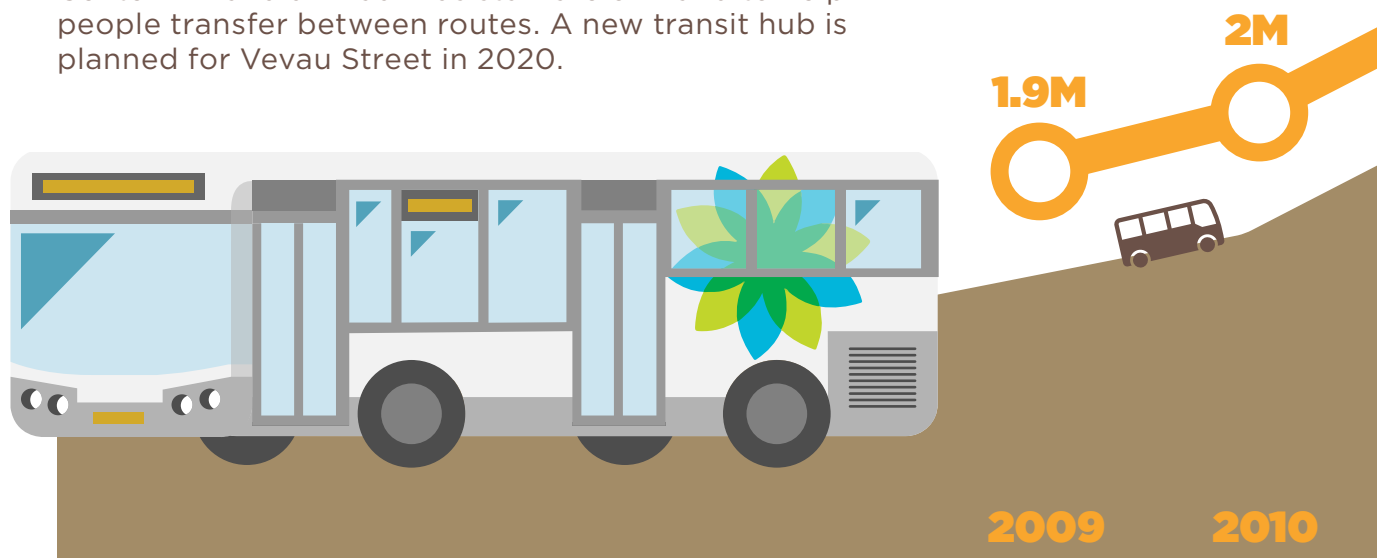
help get people to work on Maui. There are often long lines of people waiting for the commuter buses, suggesting a need for more of these services.

## ▶ Several Private Shuttles

transport visitors between airports and hotels, on tours and sightseeing trips, and to shopping centers.

## ▶ 1 Key Transit Hub

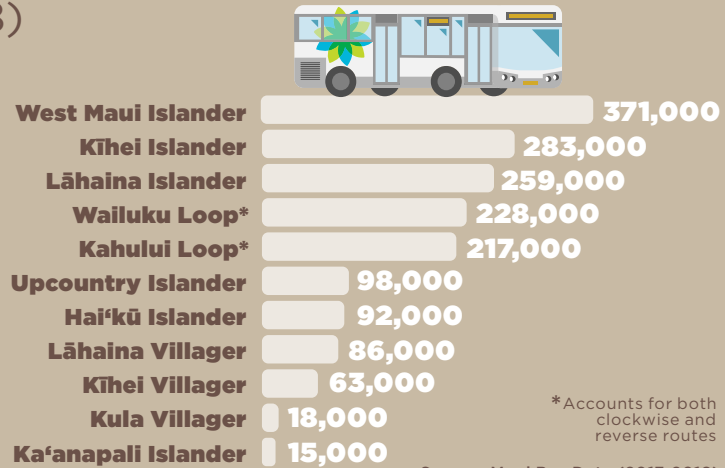
connects most routes at the Queen Ka'ahumanu Shopping Center in Kahului. Maui Bus staff are on hand to help people transfer between routes. A new transit hub is planned for Vevau Street in 2020.



## Annual Ridership by Route

(May 2017- April 2018)

The West Maui Islander, Kīhei Islander, Lāhaina Islander, Wailuku Loop, and Kahului Loop routes have the highest ridership. These routes also serve areas with the highest population and job density.



Maui Bus ridership peaked in 2012 with

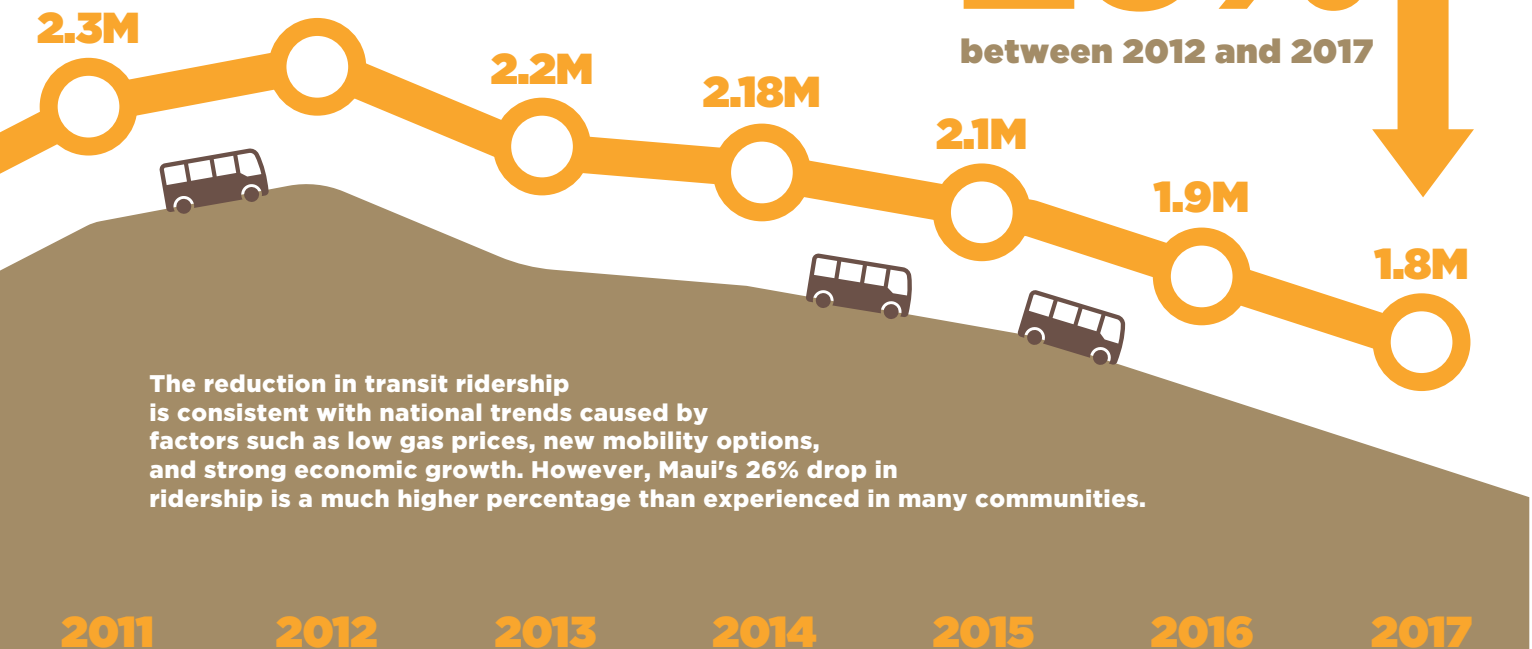
# 2.4M

annual riders

Ridership dropped

# 26%

between 2012 and 2017



Source: Maui Bus Data (2017-2018)

# Walking on Maui

Each day, people walk, roll, or use mobility devices like wheelchairs to move on Maui. Whether getting to the bus stop, to their parked car, or within their community, people should feel safe and comfortable getting around Maui.

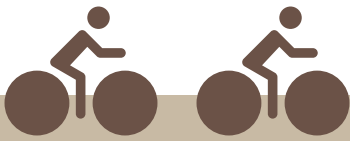
Providing safe places to walk on Maui requires careful consideration of and respect for the natural and rural context of the island. While sidewalks are not needed along every major highway in Maui—especially longer-distance connections between towns—providing safe places to walk to schools, community centers, and other local destinations is critical. In more rural areas, creative design approaches can be used, such as crushed gravel paths away from the side of the road, to avoid disrupting the natural environment.



Existing pedestrian infrastructure in Kīhei, Wailuku, Pāʻia, and Lāhaina (clockwise from top left). Sidewalks or trails and well-marked crossings were noted as the two items most needed to make walking better on Maui by survey respondents in August 2018.

# Biking on Maui

Whether it's riding along the coast or through Upcountry, bicycling on Maui is popular among residents and visitors. However, creating a bikeable Maui that makes it easier and safer to ride for all types of trips requires a more intentional approach to bicycle infrastructure.



A new bike lane in Pā'ia (top) and a multi-use path in Kīhei (bottom) provide dedicated space for people biking.

# Maui's Bicycle Facilities



## Greenway

Greenways provide a space completely separated from the roadway, usually buffered by landscaping, for bicyclists. Examples include a greenway running parallel to Maui Veterans Highway and the North Shore Greenway connecting Kahului and Pā'ia.



## Bicycle Lane

Bicycle lanes create dedicated space on the roadway for bicycles. This helps improve safety by providing clear space for cars and bikes, but bike lanes that lack protection may not be comfortable for all types of riders.



## ◀ Bicycle Route

Bicycle routes are typically marked with signs but include no other roadway treatments or improvements. On Maui, routes tend to be along major corridors where bicyclists are encouraged to ride on the shoulder. Bicycle routes along high-speed roads generally attract only the most fearless of riders.



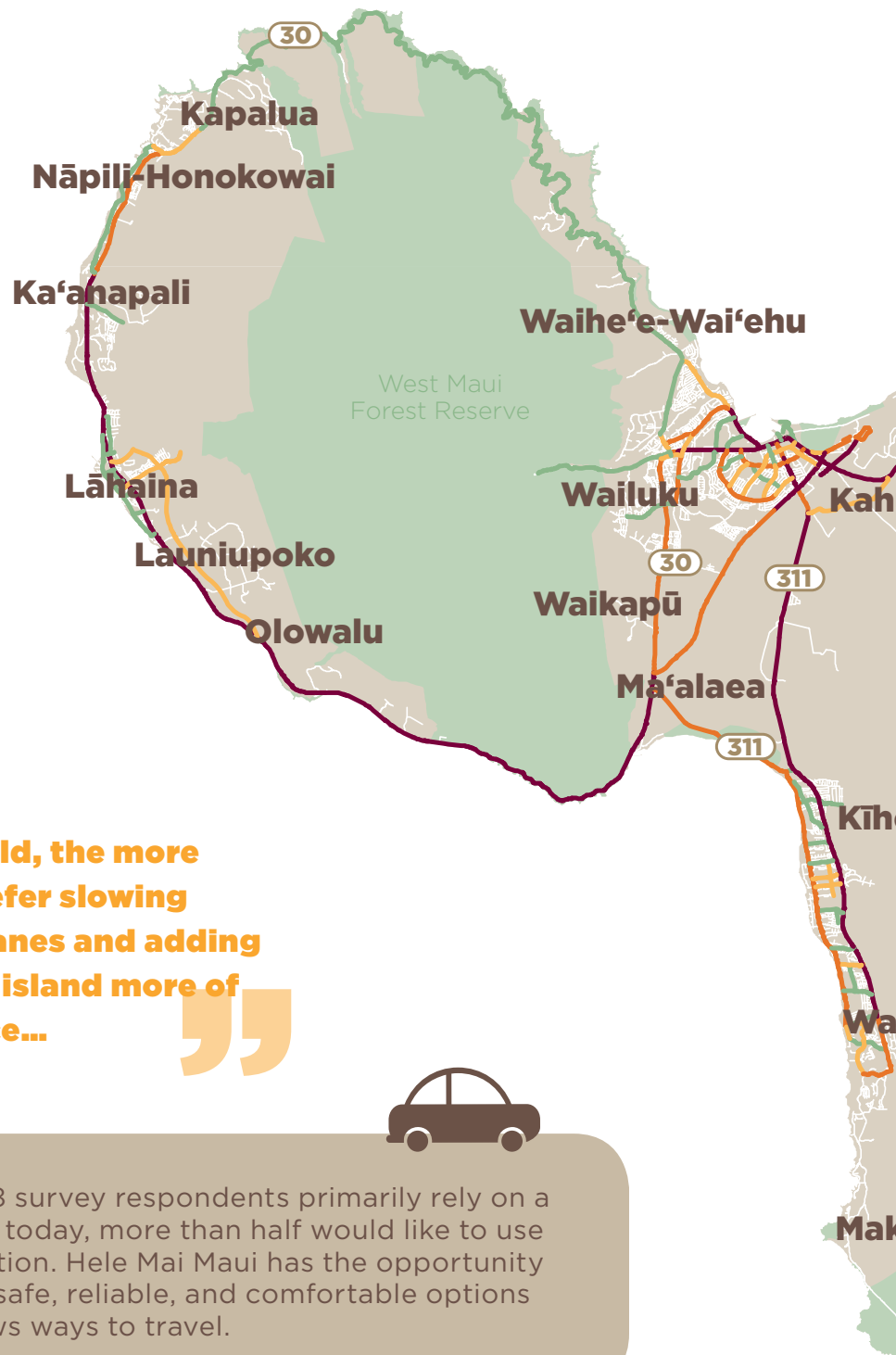
## ◀ Trails

Trails are secluded and provide access to walkers, hikers, and bikers. Most trails on the island are maintained by the Hawai'i Na Ala Hele Program.



# Driving on Maui

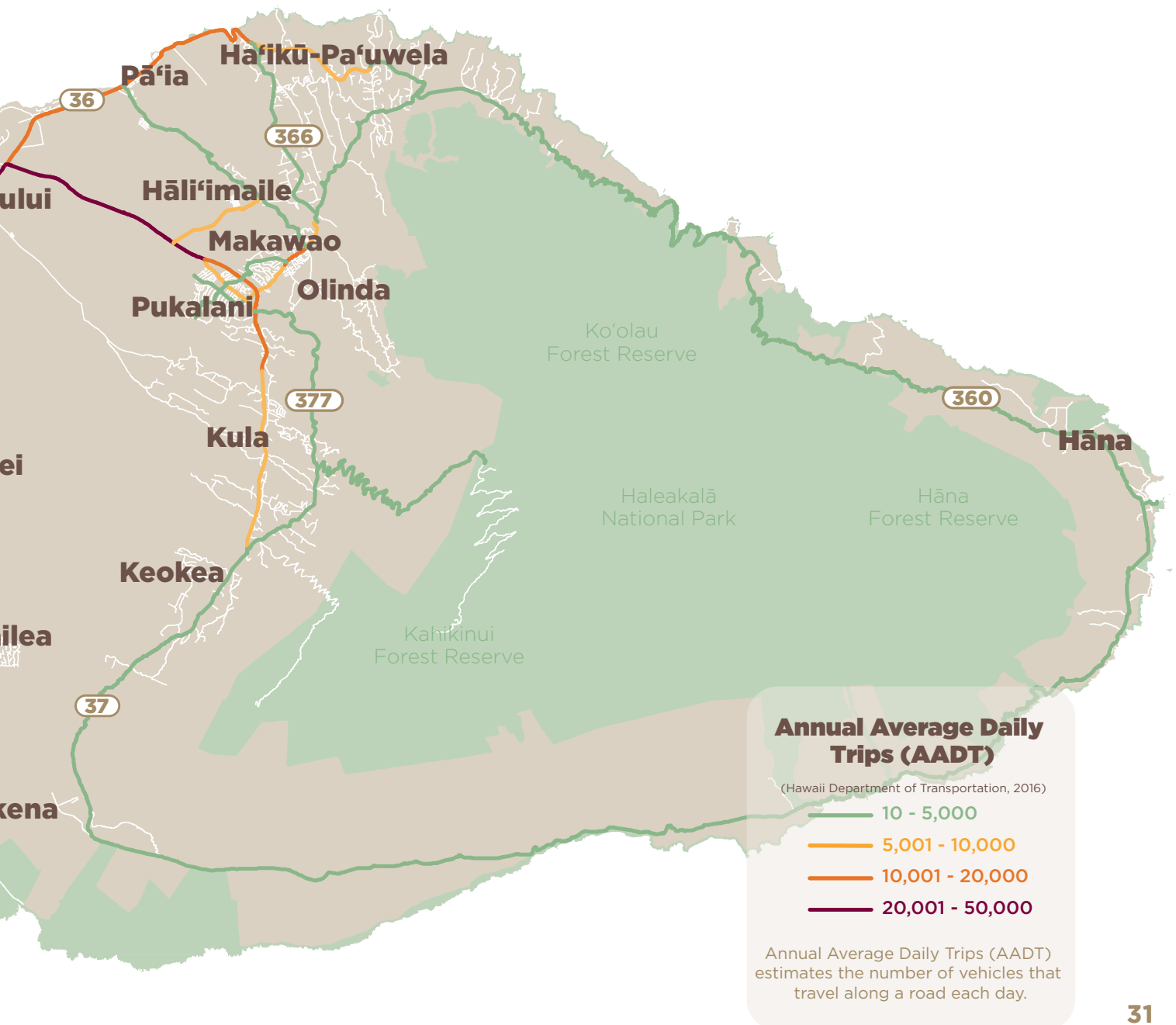
About 85% of people use a car to get to work on Maui, whether they drive alone or carpool. Respondents to the Hele Mai Maui survey (summer 2018) indicated that they drive for most trips, especially when traveling between communities. This reliance on driving leads to congestion, increases the need for roadway maintenance, and adds greenhouse gases and other pollutants to our air. Visitors to Maui are also primarily driving—Maui has the largest number of rental vehicles in the state.



**“...The more roads we build, the more traffic we will have. I prefer slowing down drivers with less lanes and adding greenways to make this island more of a meandering experience...”**

While 90% of summer 2018 survey respondents primarily rely on a vehicle to get around Maui today, more than half would like to use other modes of transportation. Hele Mai Maui has the opportunity to increase the number of safe, reliable, and comfortable options to provide people with new ways to travel.

- ▶ The busiest roadways on Maui are those that connect people to jobs located in Kahului, Wailea, and Ka'anapali. These roads link the major employment centers and residential centers of the island.
- ▶ Because many parts of Maui are connected by only one major road, the most travelled roadways are those in areas with few options, such as Honoapi'ilani Highway or Haleakalā Highway. A transportation system with limited options—or a lack of redundancy—can create challenges during emergencies when demands to get into or out of an area are high.



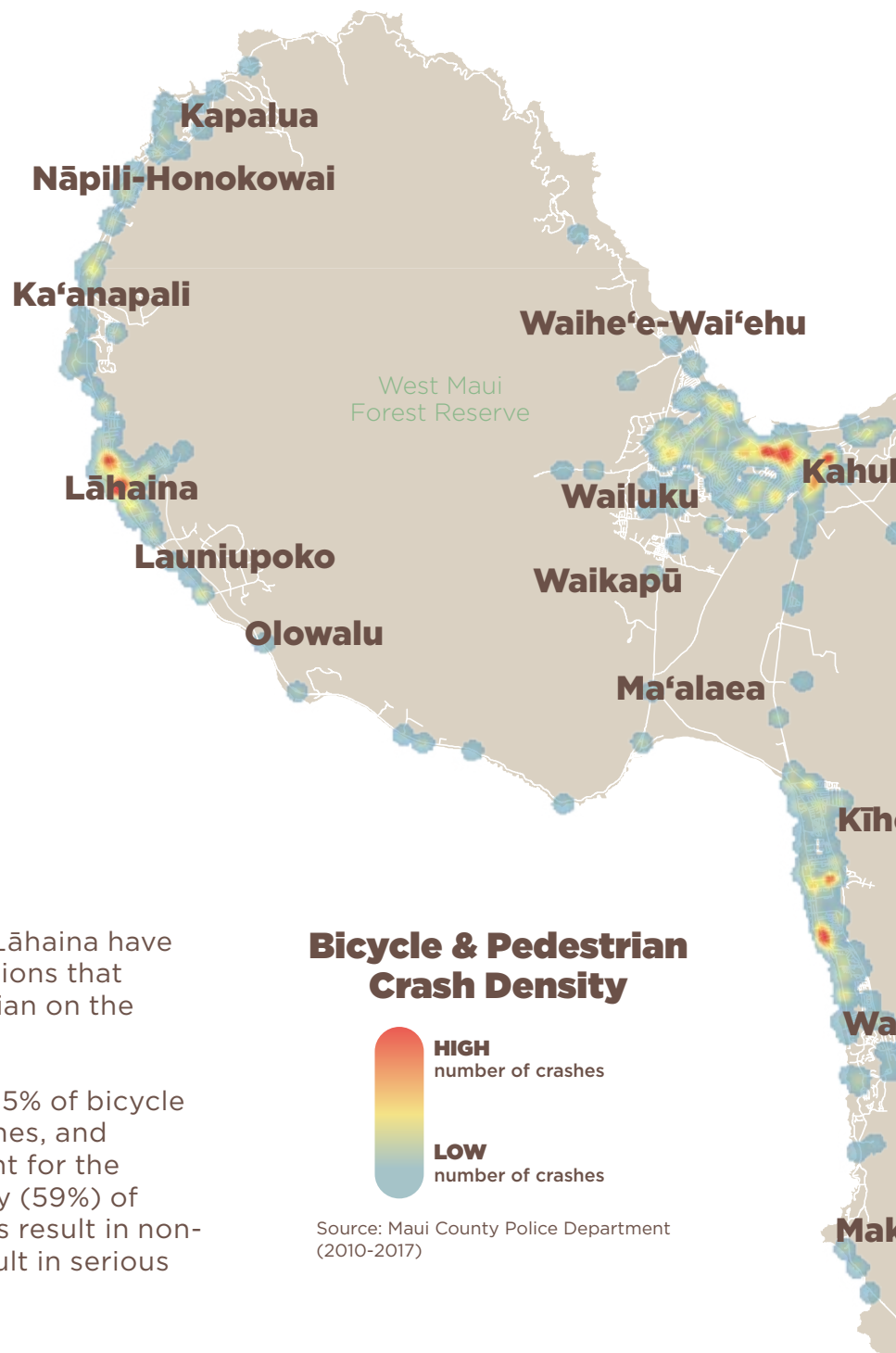
# Safety on Maui

The County of Maui has adopted Vision Zero, with a goal of eliminating all traffic fatalities by 2040. Maui police data shows there are more than 100 traffic collisions on Maui involving people walking and bicycling each year.

To understand how safe Maui's roadways are today, we analyzed crash data from 2010 to 2017. The maps in this section show "crash density," which highlights areas of the island where more pedestrians and cyclists are hit by vehicles. This analysis helps point to areas of Maui where transportation improvements are needed.

*Note: Crashes are between either bikes and motor vehicles or pedestrians and motor vehicles.*

- ▶ Kahului, Wailea/Kīhei, and Lāhaina have the highest number of collisions that involve a bicycle or pedestrian on the island.
- ▶ Bicycle collisions make up 35% of bicycle or pedestrian involved crashes, and pedestrian collisions account for the remaining 65%. The majority (59%) of bicycle/pedestrian collisions result in non-serious injuries, but 15% result in serious injury or death.



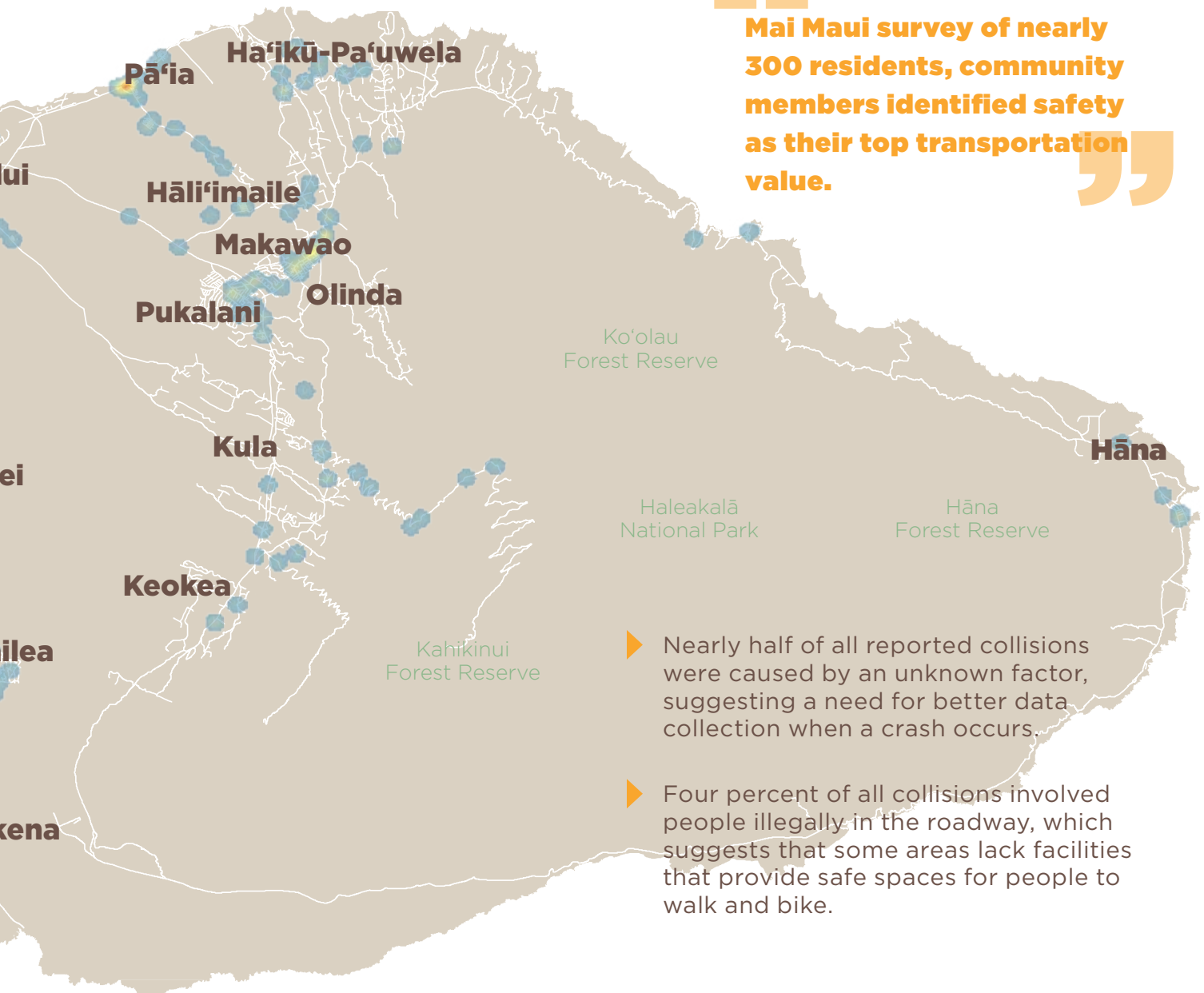
# Vision Zero

Vision Zero sets a goal to eliminate traffic deaths on Maui by 2040

- ▶ People walking and bicycling, who are often children or elderly, represent a disproportionate rate of fatalities
- ▶ County of Maui invests in Complete Streets and Safe Routes to School to encourage safe and active transportation
- ▶ Vision Zero Committee to advise Mayor's Office and County Council on implementing a Vision Zero Safety Action Plan



**In the summer 2018 Hele Mai Maui survey of nearly 300 residents, community members identified safety as their top transportation value.**



- ▶ Nearly half of all reported collisions were caused by an unknown factor, suggesting a need for better data collection when a crash occurs.
- ▶ Four percent of all collisions involved people illegally in the roadway, which suggests that some areas lack facilities that provide safe spaces for people to walk and bike.

# Central Maui

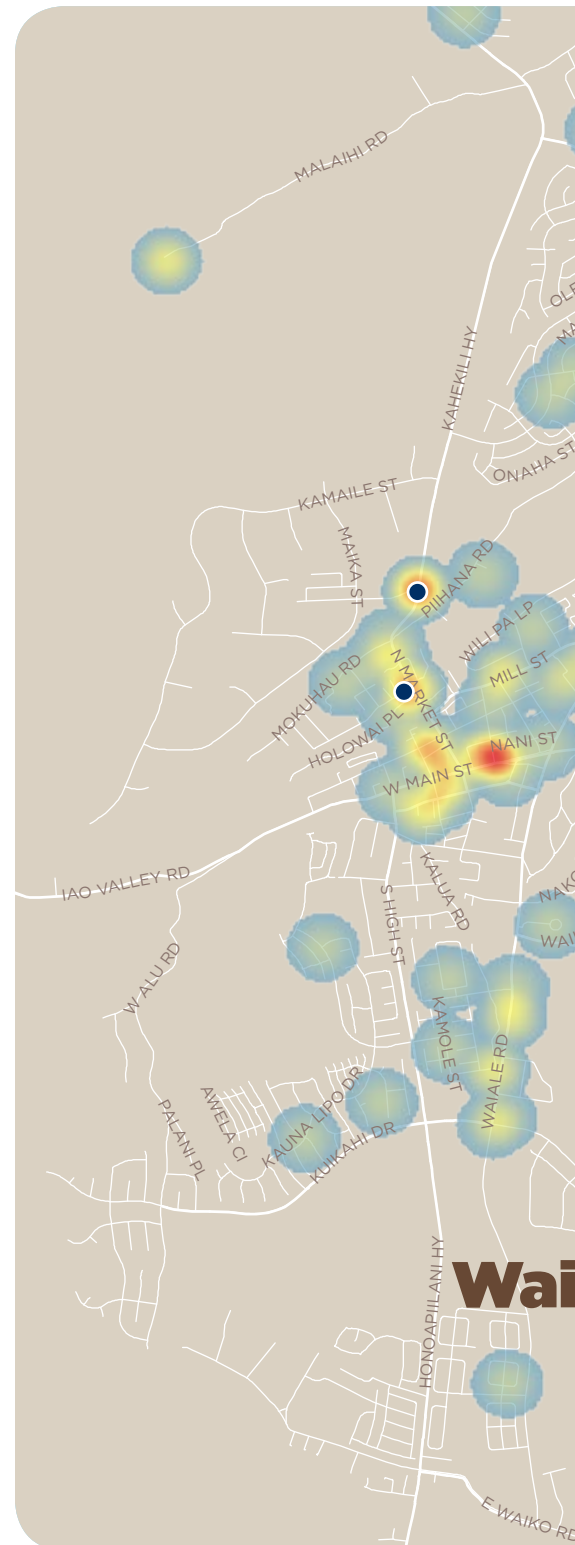
## What does this map tell us?

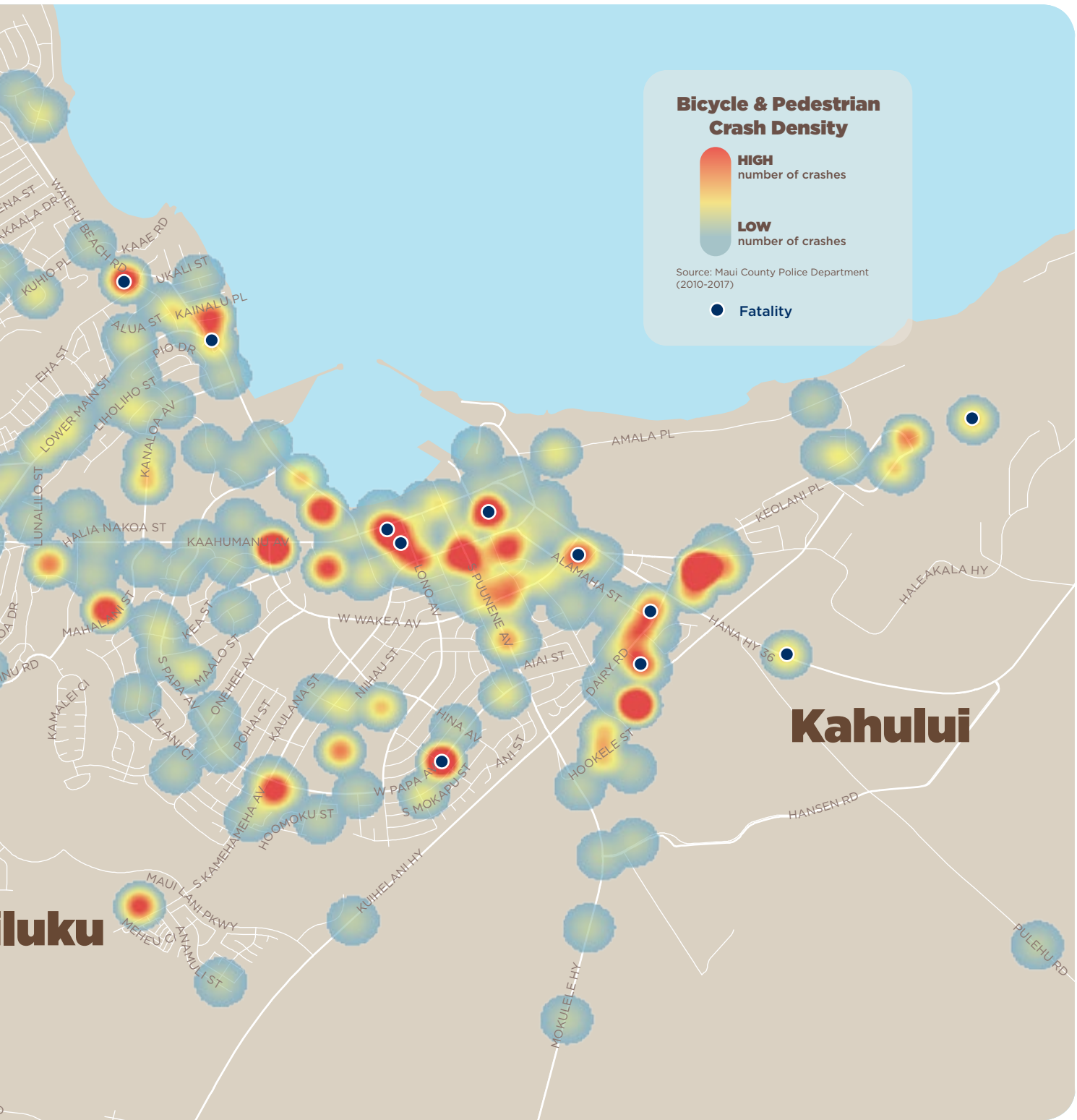
Large intersections with slip lanes—right-turn lanes that don't require a vehicle to stop—are major locations for crashes because they speed up traffic and create potential conflicts with pedestrians. Crash hot spots that have slip lanes include:

- ▶ Wai'ehu Beach Road/Eha Street adjacent to the shopping area
- ▶ Wai'ehu Beach Road/Kahului Beach Road
- ▶ Access points to University of Hawai'i - Maui
- ▶ Maui Memorial Medical Center
- ▶ Wakea Avenue/Ka'ahumanu Avenue adjacent to Queen Ka'ahumanu Center

There are also large concentrations of bicycle and pedestrian collisions in parking lots, which point to conflicts caused by multiple driveways or the design of parking lots themselves:

- ▶ Walmart
- ▶ Costco
- ▶ Maui Memorial Medical Center
- ▶ Queen Ka'ahumanu Center
- ▶ Maui Mall
- ▶ Maui Marketplace
- ▶ Safeway
- ▶ Shopping strip along Pu'unene Avenue from Kaua'i Street to Kamehameha Avenue



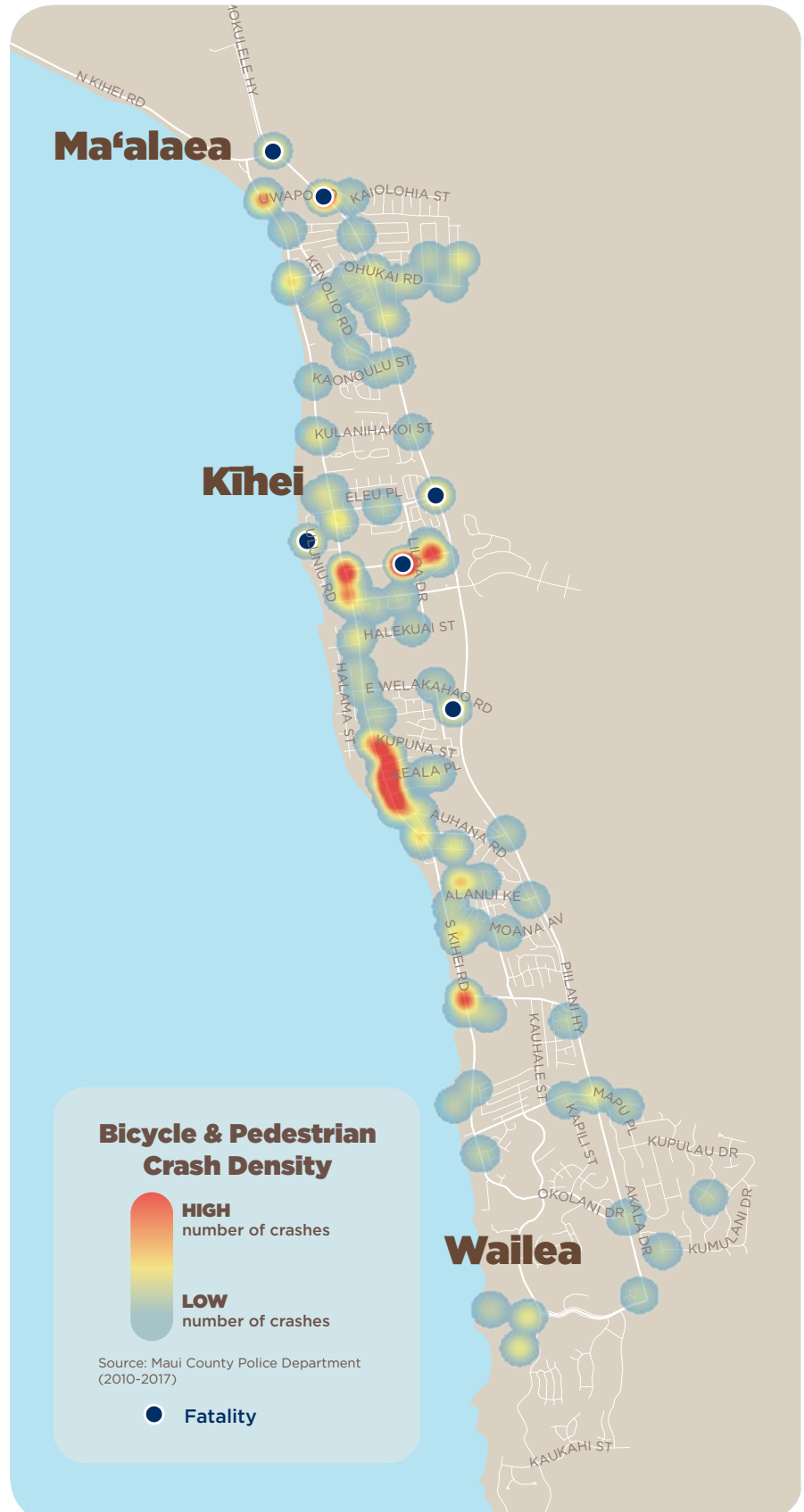


# South Maui

## What does this map tell us?

- ▶ Access points to Pi'ilani Highway have a large number of crashes. At Uwapo Road and Waipu'ilani Road, the slip lane creates a challenging environment for people walking and biking.
- ▶ Pi'ikea Avenue has a high concentration of crashes. The new roundabout should help to reduce collisions as people become accustomed to it.
- ▶ There are several safety hot spots along South Kīhei Road, particularly adjacent to Kalama Beach Park. South Kīhei Road has heavy pedestrian activity, suggesting the need for safer crossing opportunities between the beach and commercial destinations.

**We need more flashing crossing signs in Kīhei.**

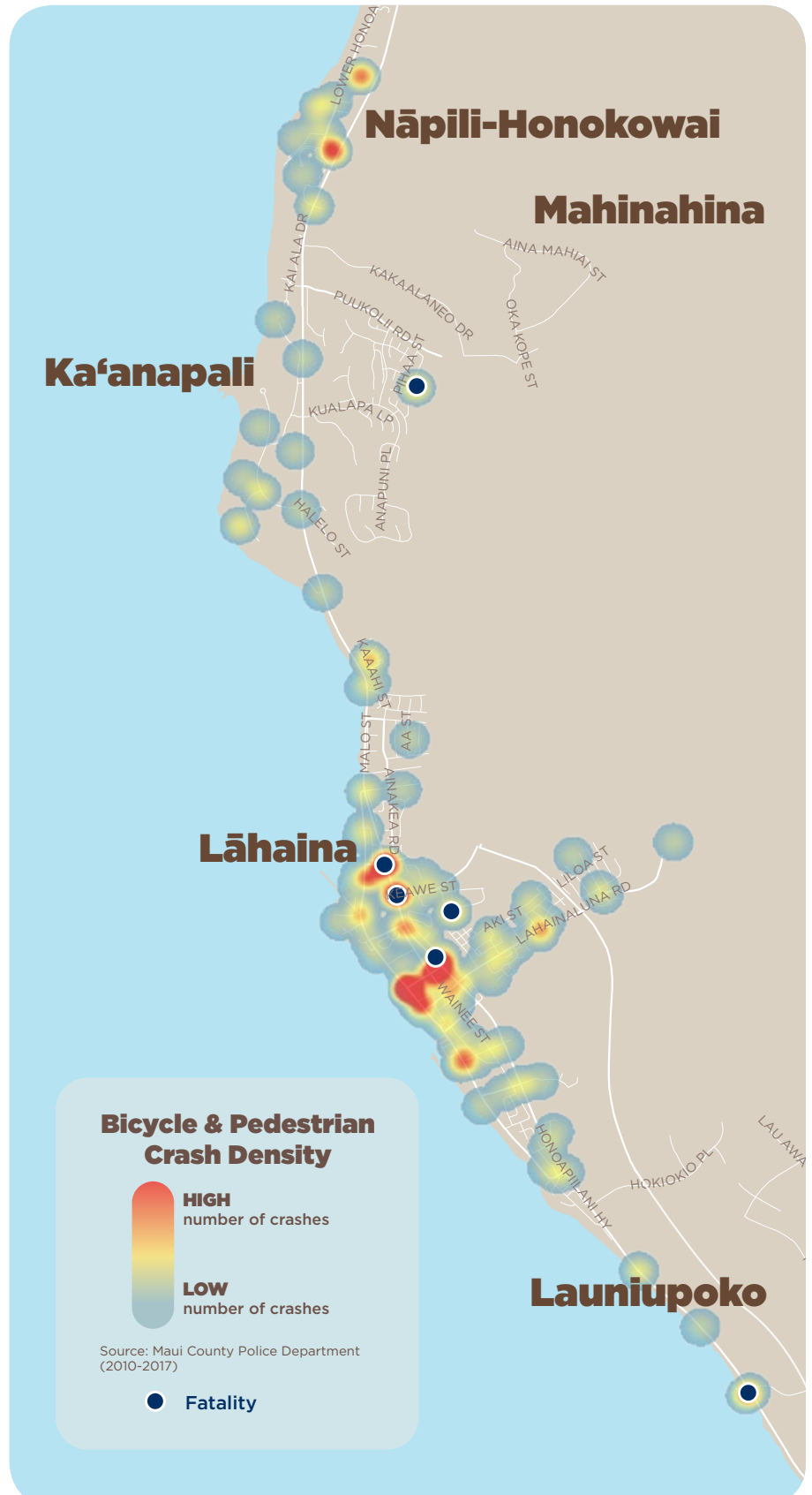


# West Maui

## What does this map tell us?

- ▶ Lāhaina Town has large numbers of people walking, including many visitors, in the historic center. This area has one of the highest densities of crashes in Maui.
- ▶ Retail developments with large parking lots and multiple driveways have high concentrations of collisions, such as Lāhaina Gateway, Lāhaina Cannery Mall, and destinations along Papalaua Street like the Old Lāhaina Center and Outlets of Maui.
- ▶ Slip lanes create challenging crossings where Keawe Street joins Honoapiʻilani Highway and where Honoapiʻilani Highway meets Lower Honoapiʻilani Road.

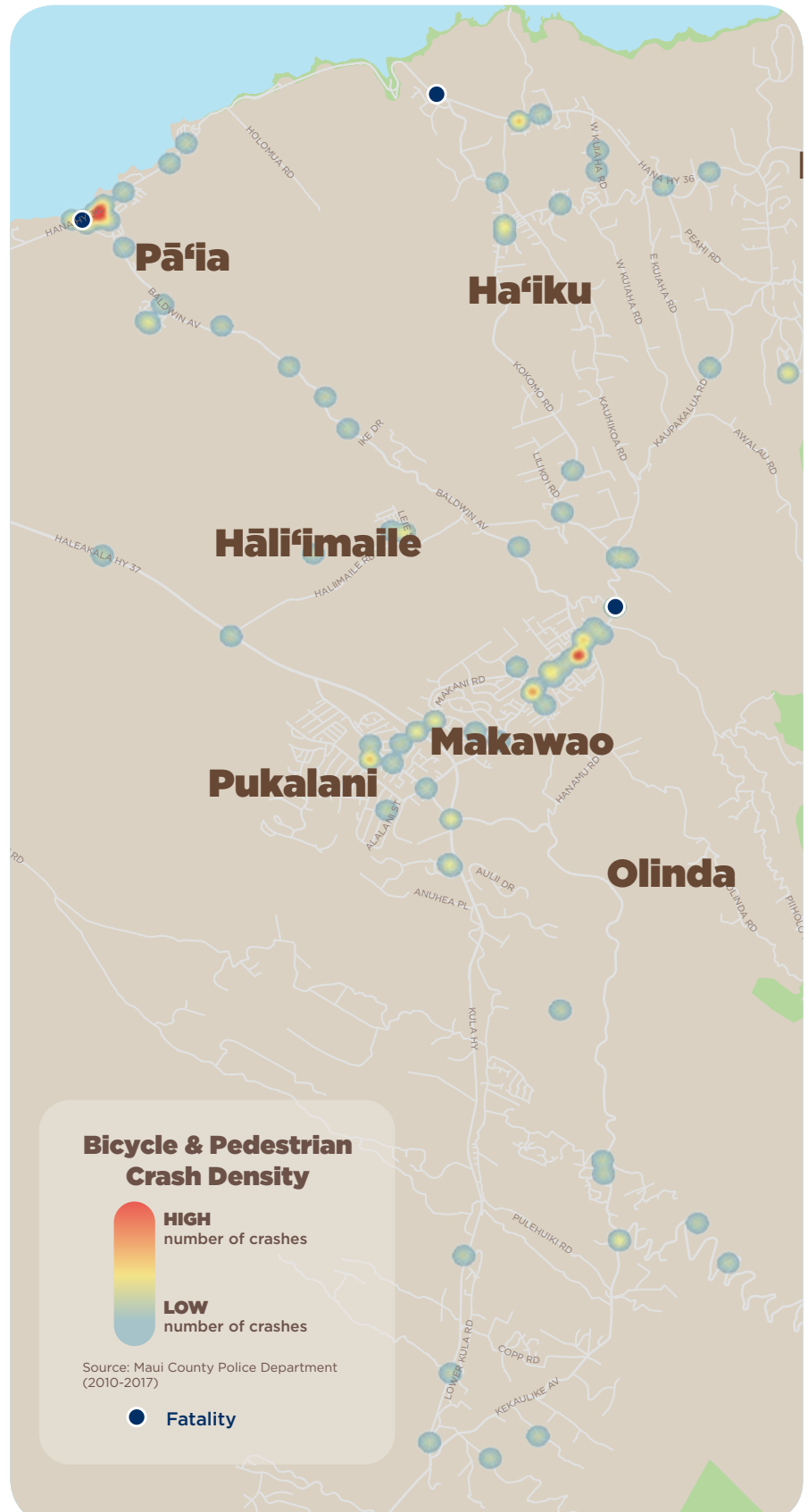
I find Keawe Street to be extremely dangerous to walk or drive.



# Upcountry

## What does this map tell us?

- ▶ Upcountry has significantly fewer crashes than other parts of the island, which may be due to the more rural character and a smaller number of people who walk or bike.
- ▶ The highest concentration of collisions is in Pā'ia, where Hāna Highway meets Baldwin Avenue. This is a site with large numbers of pedestrians due to a busy commercial strip and many visitor destinations. The street parking was recently redesigned to improve safety.
- ▶ The other concentration of crashes in Upcountry is in Makawao Town, another area with many shops and more opportunities for walking and biking.
- ▶ Crashes on Crater Road in Kula may be linked to downhill bicycle tours and lack of safe space on road shoulders.

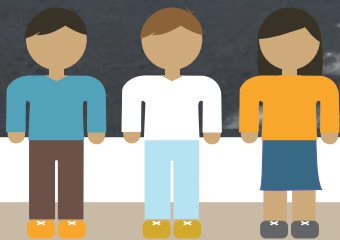


# East Maui

## What does this map tell us?

- ▶ East Maui has the least amount of crashes compared to other parts of Maui. This is likely due to the smaller population centers, and lower number of vehicles travelling east of Upcountry. Additionally, walking and biking along Hana Highway is likely limited outside of the small populated areas.
- ▶ Of 10 crashes involving bicyclists and pedestrians in East Maui, only two occurred in the same location. This location was the Travaasa Hana Resort, suggesting the possibility to improve crossing opportunities between the resort property and the parking lot located on the opposite side of Hana Highway.
- ▶ Most collisions occurred along rural sections of Hana Highway. This provides an opportunity to consider how highway signage and striping could be improved to limit incidents.





66

Average annual pedestrian collisions

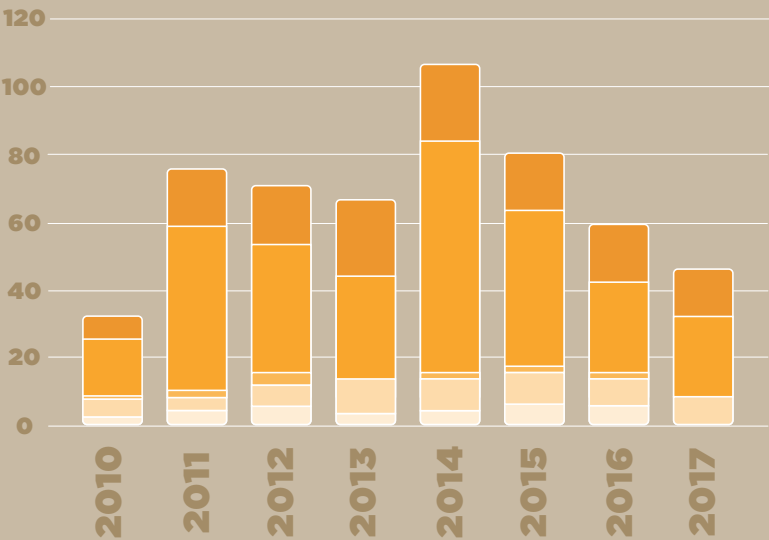
4

Average fatalities per year since 2010

17%

Reported collisions resulting in severe or fatal injury since 2010

### Pedestrian Collisions by Severity



Source: Maui County Police Department (2010-2017)

Unknown Non-serious Injury No Injury Serious Injury Fatal



**36**

Average annual  
bicycle collisions

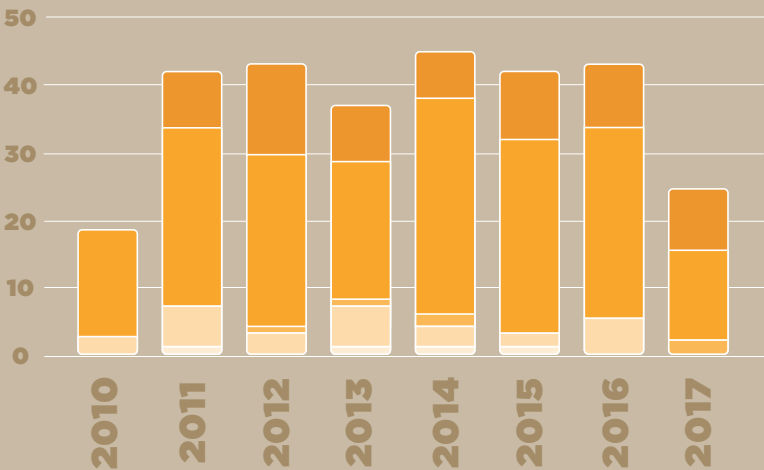
**1**

Average fatality  
per year since 2010

**11%**

Reported collisions  
resulting in severe  
or fatal injury since 2010

## Bicycle Collisions by Severity



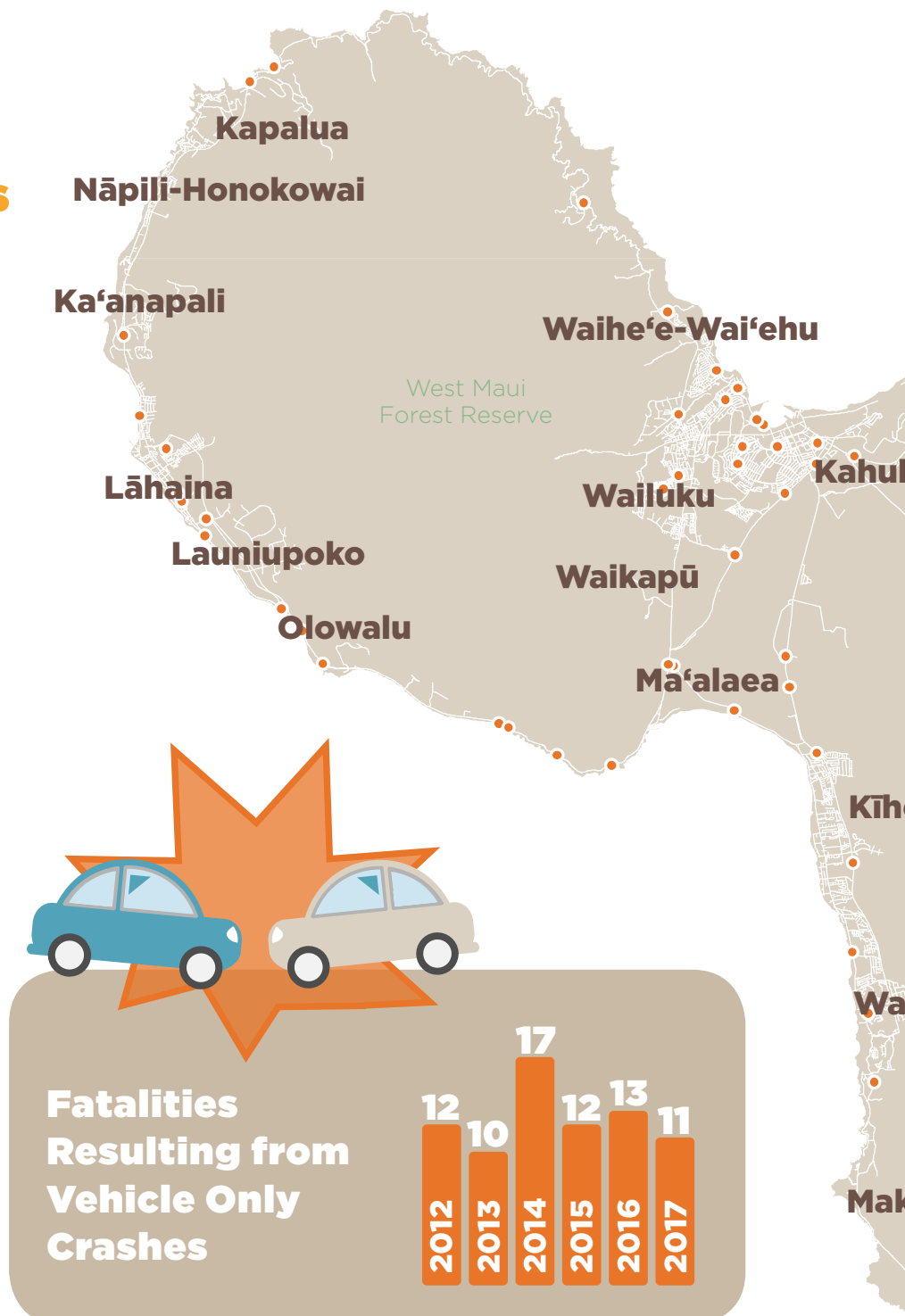
Source: Maui County Police Department (2010-2017)

Unknown Non-serious Injury No Injury Serious Injury Fatal

# Fatal Car Crashes

## Here's what we know about where fatal motor vehicle crashes occurred:

- ▶ Maui police data show that between 2012 and 2017 there were about 11 fatalities annually due to crashes involving vehicles only.
- ▶ The 75 fatalities are distributed across the island, but Upcountry and Central Maui each account for about a third of fatalities.
- ▶ Nearly all of these crashes occurred along the island's highways or other major thoroughfares, reinforcing the need to improve roadway design to enhance safety for all.



Source: Maui County Police Department (2010-2017)

## Here's what we know about why fatal motor vehicle crashes occurred:

- ▶ More than 75% of these fatalities were caused by drivers under the influence of alcohol or drugs.
- ▶ Speeding accounted for 8% of crashes, while no other individual factor accounted for more than three fatal crashes.
- ▶ These data suggest the importance of education and enforcement as well as better roadway design.



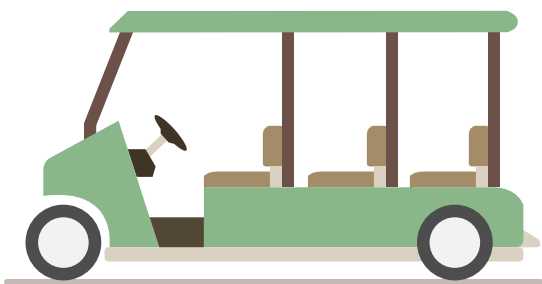
# Other Ways of Getting Around Maui Today

In 2015, there were nearly 140,000 passenger vehicles, over 20,000 rental vehicles, and just over 4,000 motorcycles/motor scooters registered in Maui County. While driving a personal vehicle is the primary mode of transportation on the island, Maui Bus and newer mobility options are changing the ways people get around.



## Transportation Network Companies (TNCs) & Taxis

Several local taxi services, as well as TNCs such as Lyft and Uber, are available on Maui. Uber has been on Maui since 2014 and Lyft since 2017. These services provide alternatives to renting or owning a car for some people. They also provide a new travel option for some trips, especially shorter connections.



## Electric Carts

Turtle Tracks is a local business that uses five-passenger neighborhood electric vehicles to provide on-demand, local trips at \$3 per ride. The service operates along South Kihei Road and to Wailea. Most people who use the service are visitors.

## Kahului Airport

Kahului Airport—the state’s largest rental car provider with an average of 2,200 rentals per day—is in the midst of a \$340 million project to construct a consolidated car rental facility. When complete in May 2019, this new facility will move all car rental companies to a single location, reducing congestion in the airport area by eliminating the shuttles associated with the remote rental car lots.



Source: Pacific Business News

Rendering of Kahului Airport consolidated car rental facility.



## Rental Cars

Rental cars are popular with visitors, but shuttle ridership trends suggest visitors are now looking for alternatives. The large number of visitors to Maui—and current rates of car rentals—puts a tremendous strain on Maui’s roadways.

# What You Said

Through Hele Mai Maui outreach in summer 2018, the project team heard from people at in-person events and through an online survey. We talked to hundreds of people from all parts of Maui, asking about what works and what doesn't when it comes to transportation today. You told us what would make it better to walk, bike, take the bus, and drive, and you shared the values that are most important to you when it comes to moving around Maui. Here are a few highlights about how you move today:

## What's most important?

Safety, sustainability and resiliency, travel time, and affordability were the priorities people shared for getting around Maui.

Maui needs safe travel options and better connections between those options.



## Want to get involved?

Visit the Hele Mai Maui website to sign up for updates and learn about upcoming events:  
<https://mauimpo.org/hele-mai-maui-2040>

## Walking on Maui would be better if there were...

More than 80% of people identified more sidewalks or trails as the most important walking improvement needed on Maui. Crossing improvements and better street lighting were also identified as priorities. Comments cited the crossings along South Kīhei Road as examples of what is desired, and called for enforcement of speed limits and other traffic regulations for the safety of all.

**Sidewalks or trails**

**82%**

**Well-marked crossings**

**49%**

**Well-lit streets**

**46%**

**Pedestrian signals**

**45%**

**Trees/landscaping**

**38%**

**Slow cars**

**27%**

**Curb ramps**

**24%**

**Other**

**19%**

I would like to see more walking paths with places to stop and rest along the way. Also, more trees would make it nicer to walk on hot days.





Community members identify areas where they feel transportation solutions are needed on Maui.

## Biking on Maui would be better if there were...

Adding bike lanes, trails, and greenways were the improvements most people identified to help improve biking on Maui. Respondents also noted a need for parking facilities and lighting.

**Bike lanes**

**77%**

**Trails and greenways**

**63%**

**Places to park my bike**

**40%**

**Traffic signals**

**34%**

**Bikes to rent**

**26%**

**Slower cars**

**24%**

**Other**

**14%**

We need safe, well marked or separated, and clean bike lanes all around the island. Then I could go to common places like work, home, and entertainment on my bike.



## Riding the bus on Maui would be better if...

Nearly half of the survey respondents identified more frequent bus service and better shelters as improvements that would get them to ride the bus more often. Respondents also note the need for more stops and routes that allow tourists to move without a rental car.

**The bus came more often**

**51%**

**Better bus shelters**

**49%**

**Early and late times**

**38%**

**Faster buses**

**37%**

**More transit maps**

**37%**

**Other**

**28%**

**Weekend service**

**27%**

Bus routes on Maui need to be more integrated with each other. I shouldn't always have to go to Kahului to switch between routes.



Maui's younger residents enjoyed coloring and learning about transportation, while parents participated in completing surveys, identifying transportation hotspots, and communicating their mobility values.

## Driving on Maui would be better if there were...

People would like less traffic, separation between cars and bikes, and fewer potholes to make driving more pleasant on Maui. Written comments also call out the need for synchronized signals, alternative routes between communities, and enforcement to keep all users safe.

**Less traffic**

**59%**

**Clear spaces for cars**

**55%**

**No potholes**

**51%**

**Wider roads**

**39%**

**Lighting**

**32%**

**Other**

**27%**

**Faster signals**

**21%**

Maui needs reliable alternative routes between some of our major destinations. We need to have a new option between places like Lahaina and Kahului.



The Hele Mai Maui Community Think Tank convened to discuss the challenges facing Maui's transportation system.

## **PART FIVE**

# **Where We Go From Here**

Through Hele Mai Maui outreach and engagement, we've heard that Maui residents want safe, comfortable, and reliable ways to get around the island. For some that means better biking connections or safer walking conditions; for others, that means a reliable way to drive or an efficient trip to work on the bus. We also know that visitors need more options to reduce the need for car rentals for the duration of their stay.

This section summarizes what we've heard from the community. It also builds on our analysis of existing transportation options, how people get around, and who lives and visits the island today and in the future. This discussion sets the groundwork to explore solutions for transportation on Maui for the next 20 years.

Each of the six topics below includes a description of what we learned and introduces some of the opportunities that will be explored in the next phases of Hele Mai Maui.

## **Multimodal Options**

### **What we know:**

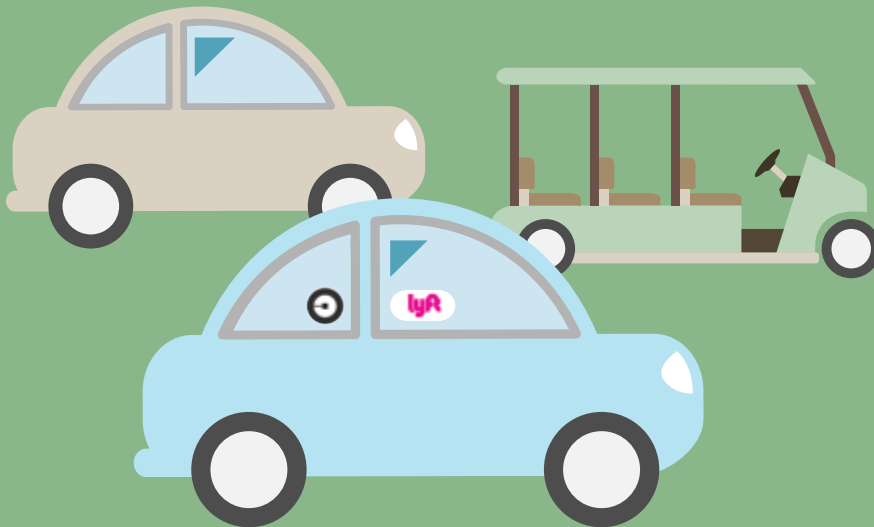
We've heard that people are interested in biking, walking, taking transit, and sharing rides on the island. And we've also heard that they want the trips they do need to make by car to be more reliable. However, making a variety of travel options a preferred choice to driving alone is challenging given the current transportation system and offerings.

**Nearly  
75%  
of residents  
drive alone  
to work.**

**Ridership on Maui  
Bus has declined**

**26%  
since 2012.**

Bus routes operate every hour at best, making it difficult to depend on transit for most trips.



**New mobility options  
like Uber and Lyft are just  
beginning to pop up on Maui.**

More localized options, like Turtle Tracks, provide an easy option for people get around Kīhei and Wailea.



**Technology  
is changing  
the way people  
commute and  
connect.**

It is easier than ever for people to use their smartphones to find shared rides and to see where the bus is in real time.

# Multimodal Options

## What we know:

Through our summer outreach, we learned about transportation “hot spots” on Maui. These are places that are challenging to walk, bike, take the bus, or drive.

### Freight

There are three key freight routes on Maui—Honoapiʻilani Highway, Kuihelani Highway, and Piʻilani Highway. These routes are often congested at peak hours, which can slow delivery times. With the increase in online shopping, freight and delivery needs are likely to increase.



Traffic is congested on key routes during peak travel times.



### Areas of community focus for:

- Walking safety
- Bike safety
- Bus shelter needs
- Traffic Congestion



## Queen Ka'ahumanu Center

Many Maui Bus routes start and end at Queen Ka'ahumanu Center, which increases the amount of time it takes to ride the bus.

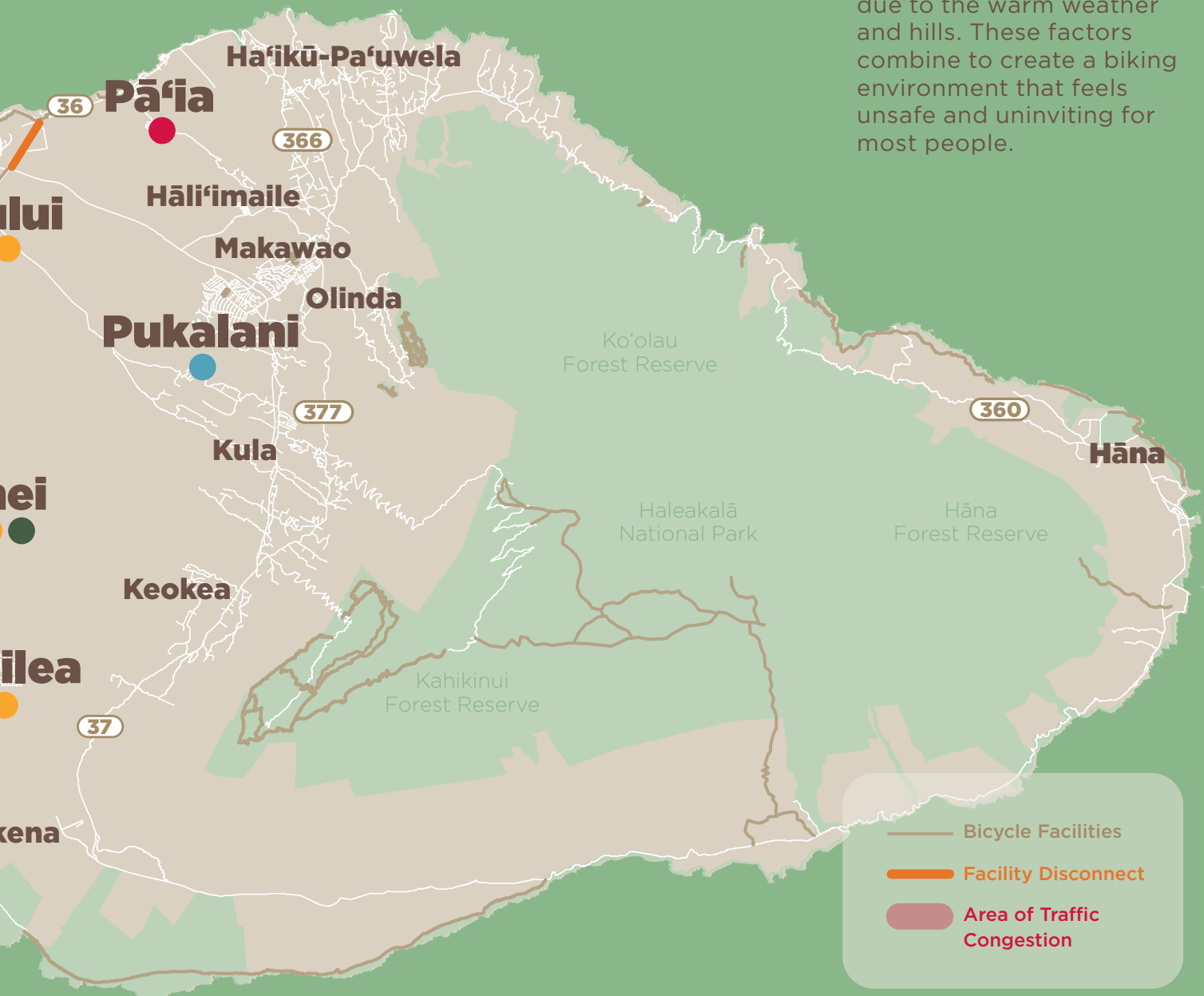


## Airport Rental Car Facility

The rental car facility at the airport is the primary rental facility on the island. This means that most visitors rent a car for their entire stay rather than having easy access to a vehicle for a day trip.

## Bike Routes

Bike routes on Maui are somewhat disconnected, and many of the existing facilities are simply signed routes. Long commutes also make biking challenging, particularly due to the warm weather and hills. These factors combine to create a biking environment that feels unsafe and uninviting for most people.



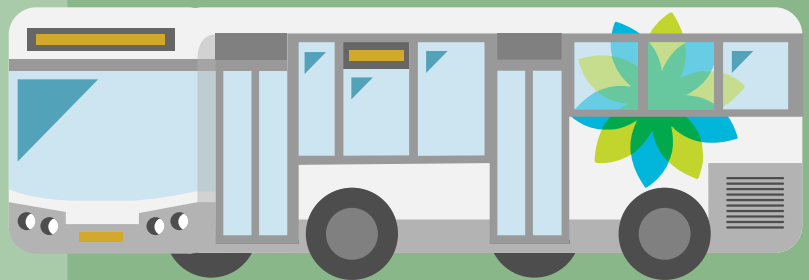
# Multimodal Options

## Opportunities we'll explore:

Helping people get around Maui now and in the future is not just about roads, bike lanes, and transit service—it's also about education, awareness, and building programs that reach people.

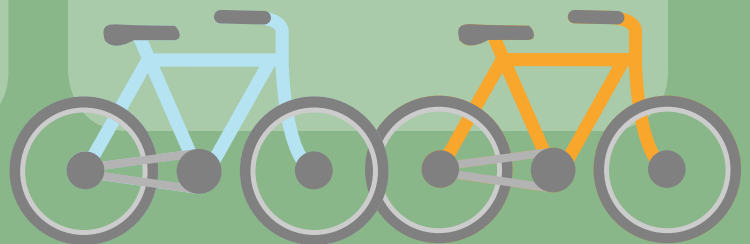
### Bus

- ▶ Explore opportunities for a second transit hub to make connecting between routes more efficient.
- ▶ Seek funds to increase bus frequency on high ridership routes.
- ▶ Consider places where it makes sense to designate transit corridors, giving priority to buses to improve reliability.
- ▶ Leverage success of visitor and commuter shuttles to resorts.
- ▶ Market Maui Bus to visitors with more convenient airport access.
- ▶ Create additional park-and-ride lots.



### Bike

- ▶ Encourage biking for short trips (3 miles or less) and for recreation.
- ▶ Explore bike share opportunities for major commercial centers and resorts, including electric bike share to support longer trips.
- ▶ Expand the bike network, including greenways and protected bike lanes.



## Walk

- ▶ Explore opportunities to make walking safer and more comfortable within our communities by using innovative and low-cost treatments.
- ▶ Map and preserve historic trails.
- ▶ Expand public access to parks and open space.



## New Mobility

- ▶ Consider programs that support shared rides that help people get to work or school and connect to transit.
- ▶ Explore new shared mobility options—such as shuttles, Lyft and Uber, short-term car rentals, car share, and bike share.
- ▶ Pilot a Central Maui shuttle service (modeled after “Free Ride Everywhere Downtown”).

## Programs

- ▶ Develop programs and campaigns to build the business case for biking, walking, taking transit, and sharing rides for all types of trips.
- ▶ Consider a public outreach campaign for a “car-free” visitor experience.
- ▶ Consider limiting rental cars, providing shuttles, or charging visitor tolls along the Road to Hāna and other key visitor destinations.
- ▶ Identify locations for short- and long-term car rental and car share options throughout the island and partner with hotels and resorts to host rental cars.



# Health & Safety

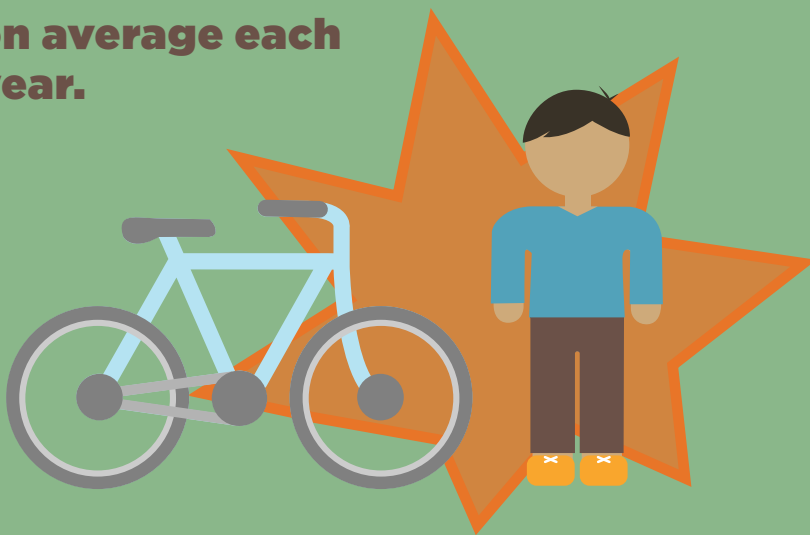
Having safe ways to move around the island is one of Maui residents' top concerns. People worry about fast-moving vehicles and limited facilities for people walking and biking. Those same concerns have an impact on the health of Maui residents, as a lack of a safe and connected bicycle and pedestrian network impacts our individual and community health.

## What we know:

There are  
approximately

**100** crashes involving  
people walking  
and biking

on average each  
year.



Source: Maui County Police Department (2010-2017)

**21%**

of these collisions  
involve people  
over the age  
of 60.

**17%**

are with  
kids under  
18 years old.

Maui's adult obesity  
rate is **24%**

And a quarter of  
children between  
the ages of 10-17 are  
overweight or obese.



Source: The State of Obesity. (2017). The State of Obesity in Hawaii

## Missing and disconnected facilities contribute to safety concerns and limited opportunities for physical activity.



Poorly maintained crosswalk on Pi'ikea Avenue, at South Kihei Road.



No sidewalk for pedestrians on Pi'ikea Avenue.



Difficult crossing at Onehe'e Avenue and Uhu Street.

### Opportunities we'll explore:

- ▶ Explore opportunities to partner with public health agencies to develop an education campaign that helps people understand the connection between transportation and health.
- ▶ Leverage existing organizations and island-wide efforts such as the Healthy Eating Active Living Coalition and Vision Zero.
- ▶ Identify opportunities to build on the County's existing Safe Routes to School program and to develop a Safe Routes for Seniors program to identify needed improvements and raise awareness about safety for Maui's most vulnerable people.

# Sustainability & Resilience

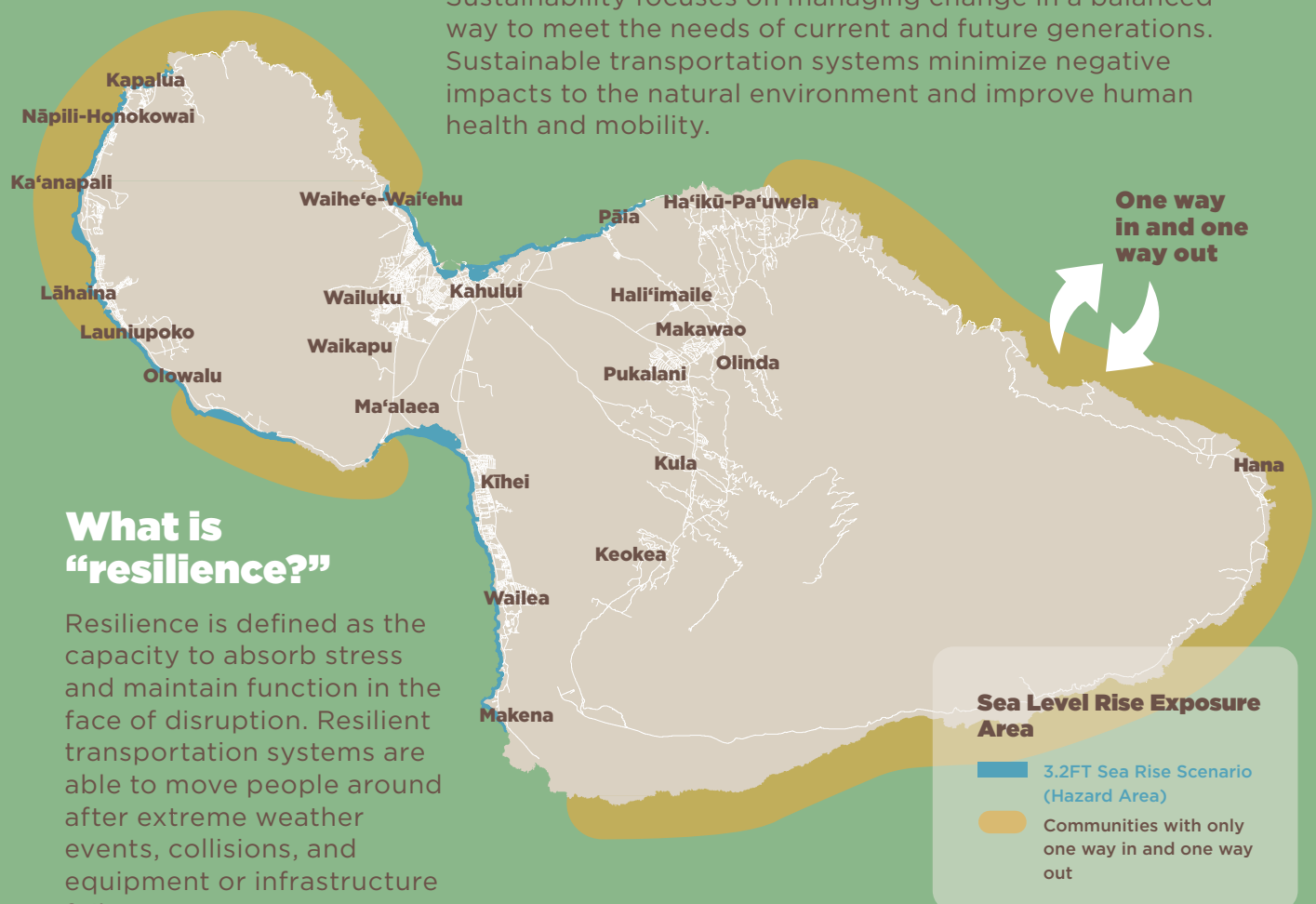
Ground transportation on Maui accounts for 27% of petroleum use on the island, contributing to carbon emissions that cause climate change. Additionally, a recent study found that sea level rise of 3.2 feet by 2100 would render more than 11 miles of major coastal roads on Maui impassible, jeopardizing critical access to and from many communities. Natural disasters like brush fires and flooding also cause closures, which could become more frequent with climate change.

## What is “sustainability?”

Sustainability focuses on managing change in a balanced way to meet the needs of current and future generations. Sustainable transportation systems minimize negative impacts to the natural environment and improve human health and mobility.

## What is “resilience?”

Resilience is defined as the capacity to absorb stress and maintain function in the face of disruption. Resilient transportation systems are able to move people around after extreme weather events, collisions, and equipment or infrastructure failure.



## What we know:

- ▶ Sustainability and resilience was one of the top values people shared through summer 2018 public input.
- ▶ Shoreline erosion, storms, and sea level rise are projected to increase and continue to damage major infrastructure like the Honoapi'ilani Highway.
- ▶ Increases in Maui's population, visitors, and auto rentals strains the transportation system, as well as the island's natural resources.



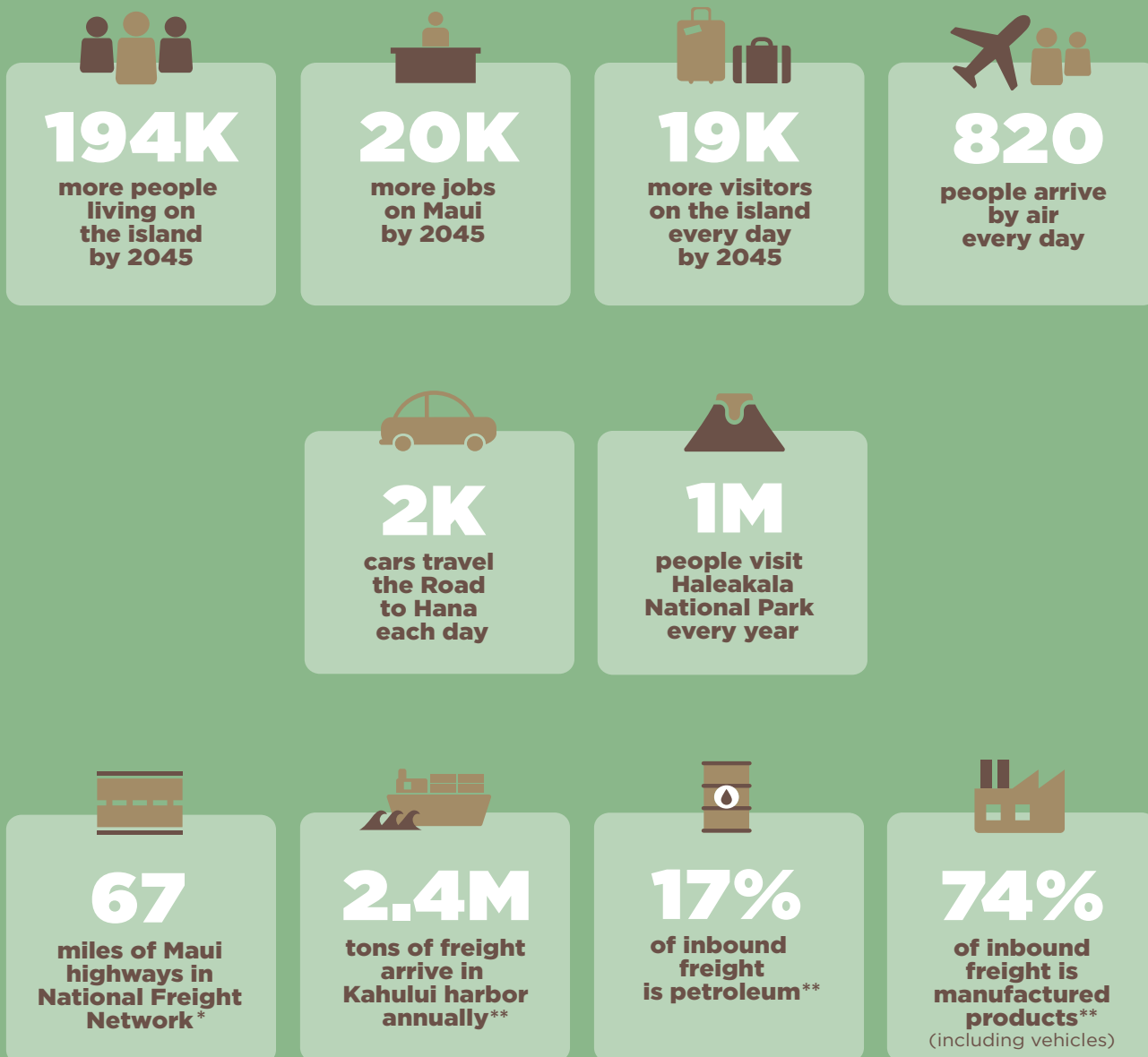
Infrastructure damage after Hurricane Lane passed south of Maui County.

## Opportunities we'll explore:

- ▶ Explore partnerships with private landowners to identify emergency routes that can be used during natural disasters.
- ▶ Protect views, archeological and cultural lands and resources, and environmentally sensitive areas through regulation and active management.
- ▶ Expand stormwater management and landscaping in new development and redevelopment to help prevent erosion, recharge aquifers, and provide shade.
- ▶ Coordinate with the County to develop an "adopt-a-street" program to incorporate small-scale stormwater management and landscaping into new and redevelopment projects.
- ▶ Learn from best practices to integrate adaptable approaches to infrastructure design to ensure resilience of public investments in a changing environment.
- ▶ Reduce greenhouse gas emissions by supporting expanded use of electric vehicles and biofuels, especially in County fleets and buses.

# Growth & Efficiency

Maui's transportation system is challenged by increased use—due, in part, to the large number of visitors. Maui has experienced significant growth in the past 40 years. Today, housing, job centers, and other key destinations are spread across the island, making it difficult to get around efficiently without a vehicle.



\*Source: Hawai'i Department of Transportation (2018)

\*\*Source: Maui County Data Book (2017)

## What we know:

- ▶ People value getting to the places they need to go efficiently. Those who participated in our summer 2018 engagement said that they don't want to be stuck in traffic—it takes them away from friends and family and from doing the things they enjoy.
- ▶ Our demographics are changing. By 2045, 23.8% of the island population will be over the age of 65—a 40% increase for this age group. In line with national trends, the younger generation on Maui is likely to drive less than their parents.
- ▶ While many people make long trips to work—like between Kula and Lāhaina—it generally takes less time for people on Maui to get to work than it does in other parts of the country.



Traffic congestion on Honoapi'ilani Highway.

## Opportunities we'll explore:

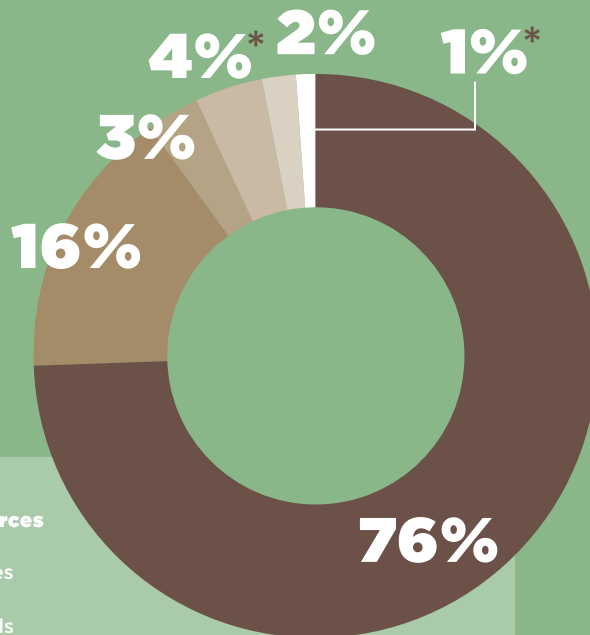
- ▶ Highlight the importance of infill development, complete communities, and transportation corridors. Leverage the County's update to its zoning code to strengthen the connection between land use and transportation and better manage growth and infrastructure needs.
- ▶ Use Maui County's new Street Design Manual to support right-of-way decisions that create great places and connect people.
- ▶ Consider the opportunity to require new development and redevelopment to include facilities and programs that support biking, walking, and taking transit.
- ▶ Update the County's subdivision code to support connectivity for people walking and biking.

# Funding & Affordability

Funding and affordability are a key issue for both Maui residents and for the agencies and departments who design, build, operate, and maintain transportation projects, programs, and services. Financial constraints represent a balance between a strong desire to meet Maui's infrastructure needs and known financial limitations.

## What are the sources of transportation funding today?

The funding that will be needed to support transportation and mobility on Maui will come from federal and state sources. Hele Mai Maui will prioritize projects and determine how funds should be allocated moving forward.



### Federal Highway Administration Constrained Funding Sources

- Surface Transportation Block Grant
- National Highway Performance Program
- Highway Safety Improvement Program
- Transportation Alternatives Program\*
- National Recreational Trails
- Safe Routes to School (\$200K annually)\*

Source: 4-Year Total from Federal Highway Administration (2019-2022 Estimates)  
\*Competitive grant program

## What we know:

Maui has 157 miles of highways owned and maintained by the State of Hawai'i Department of Transportation. The majority are on the National Highway System and all are eligible for Federal funding. These roads are critical to mobility for regional movements — they link airports, harbors, industrial areas, and major communities, and support commuter, visitor, and freight travel.

Also included in Maui's Federal Aid System are 185 miles of roads owned and maintained by Maui County Department of Public Works.

## Transportation and housing costs are high.

The average single family home sold for \$769,000 in 2018, which is up 30 percent since 2015.



GEOGRAPHY	PERCENT INCOME SPENT ON HOUSING	PERCENT INCOME SPENT ON TRANSPORTATION	TOTAL PERCENT INCOME SPENT ON HOUSING/TRANSPORTATION
<b>Maui Island</b>	<b>35%</b>	<b>23%</b>	<b>56%</b>
<b>County of Maui</b>	<b>33%</b>	<b>23%</b>	<b>55%</b>
<b>City &amp; County of Honolulu</b>	<b>33%</b>	<b>19%</b>	<b>52%</b>
<b>County of Kauai</b>	<b>32%</b>	<b>24%</b>	<b>55%</b>
<b>County of Hawaii</b>	<b>33%</b>	<b>28%</b>	<b>61%</b>
<b>Bend, Oregon</b>	<b>31%</b>	<b>25%</b>	<b>56%</b>
<b>Las Vegas, Nevada</b>	<b>29%</b>	<b>24%</b>	<b>53%</b>
<b>Cape Coral, Florida</b>	<b>32%</b>	<b>26%</b>	<b>59%</b>

With the increase in visitors, short-term rentals have squeezed the housing market, making long-term rentals difficult to find. These demands have driven prices to an average of about \$1,475 per month for a one-bedroom unit, which is unaffordable for many Maui residents.

## Opportunities we'll explore:

- ▶ Develop multimodal projects that can compete for varied funding sources.
- ▶ Plan for maintenance needs at the beginning of projects to ensure full lifecycle costing.
- ▶ Explore opportunities to partner with employers to fund transit and transportation services.
- ▶ Partner with Maui Bus to develop a low-income fare structure.
- ▶ Explore opportunities to create complete communities with a mix of housing and transportation options.
- ▶ Work in partnership with the State of Hawai'i Department of Transportation to identify funding strategies for state roads and proposed projects.

## PART SIX

# Next Up For

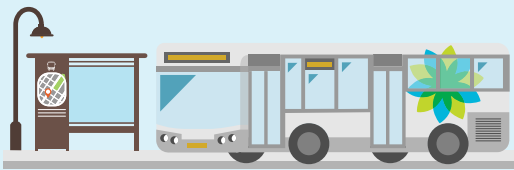
# hele mai maui

We heard that people on Maui want it to be safer, easier, and more convenient to travel around the island, for both residents and visitors. We also heard that people value a sustainable, resilient, and affordable transportation system that will serve people on Maui for years to come. Below are a few takeaways from our work that will help us launch the next phase of Hele Mai Maui, which is working with you to identify and prioritize projects that best meet these needs.



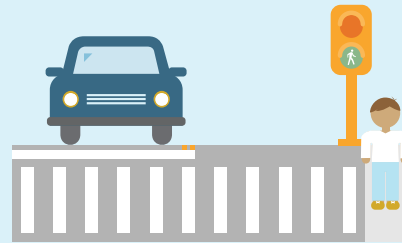
## Transit options can be improved.

While transit service reaches much of the island, ridership has declined and community members want service to be more convenient. People also want waiting for the bus to be more comfortable and pleasant.



## Safety is a priority.

Safety on the island is top of mind for community members, and the data show that serious and fatal collisions are a critical issue. Safety for everyone on our roads—whether they are walking, biking, or driving—is a focus for Hele Mai Maui.



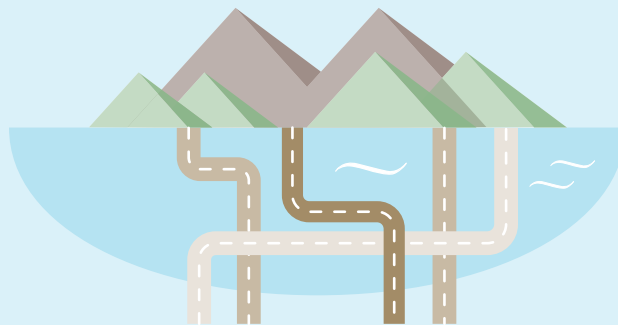
## Affordability is a challenge.



Housing and transportation affordability are a challenge for people on Maui, taking more than half of people's income. In many cases, people are forced to live long distances from where they work to find affordable housing, adding to the congestion on the island and to the cost of transportation.

## More sustainable and resilient infrastructure is needed.

Our transportation system contributes to climate change and is vulnerable to its effects. We need to focus on opportunities to better manage our impacts and create a system that will work for future generations.



## Driving is the most common way to get around.

With the growing population and growing number of visitors, there is a need to make driving on the island more reliable while providing better non-driving options for people.



## Walking and biking are challenging.

Missing and disconnected bicycle and pedestrian facilities make it difficult for people to bike and walk.



# Join Us!

Over the next eight months, the Hele Mai Maui project team will continue to ask Maui residents to help shape our work. We will partner with you to:

- ▶ Identify goals that represent the values you've shared
- ▶ Host a "call for projects" to make sure your transportation projects are captured
- ▶ Establish criteria to evaluate the benefits and tradeoffs of projects identified by the community
- ▶ Create a funding plan for the final list of projects
- ▶ Develop the final Hele Mai Maui Plan — the 20-year vision for transportation on Maui

**Check back to the project website for updates on the next round of community engagement in early 2019!**



**<https://mauimpo.org/hele-mai-maui-2040>**



# hele mai maui

Long-Range Transportation Plan 2040

