

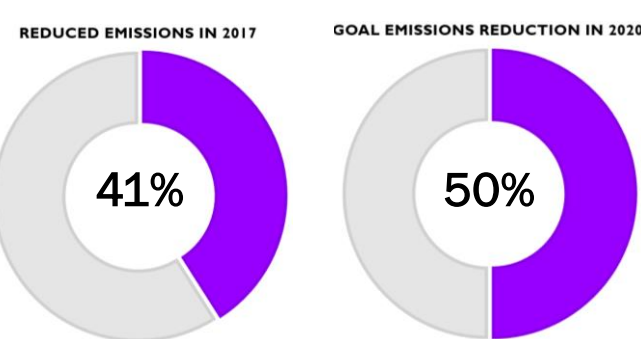
THE MOST MAGICAL CARBON FOOTPRINT

ERIKA SCHMIDT,
UNIVERSITY OF ARIZONA

BACKGROUND

The extensive release of carbon dioxide into the atmosphere, due to new technological breakthroughs, is the leading cause of global warming. The Walt Disney Company, also known as Disney, is a multinational entertainment business that contributes to these emissions.

What is the Walt Disney Company's indirect contribution to carbon emissions through the transportation of guests?



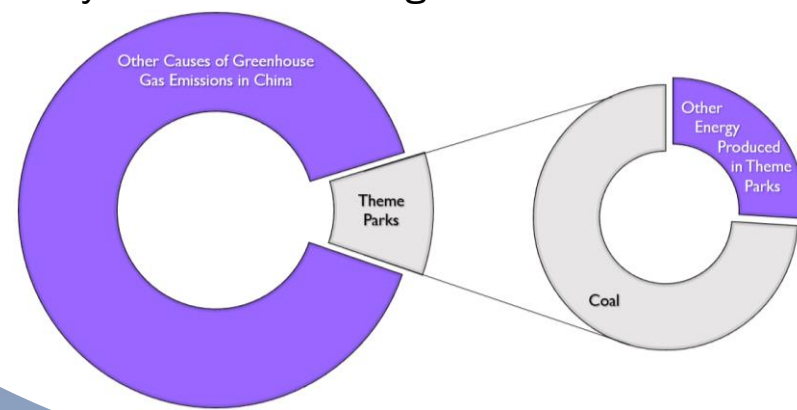
(Figure 1- Disney's Emission Rates)

How can this data be utilized to predict the total amount of carbon emissions produced by the transportation of guests to all the Disney park locations?



(Figure 2- Walt Disney World Public Transportation)

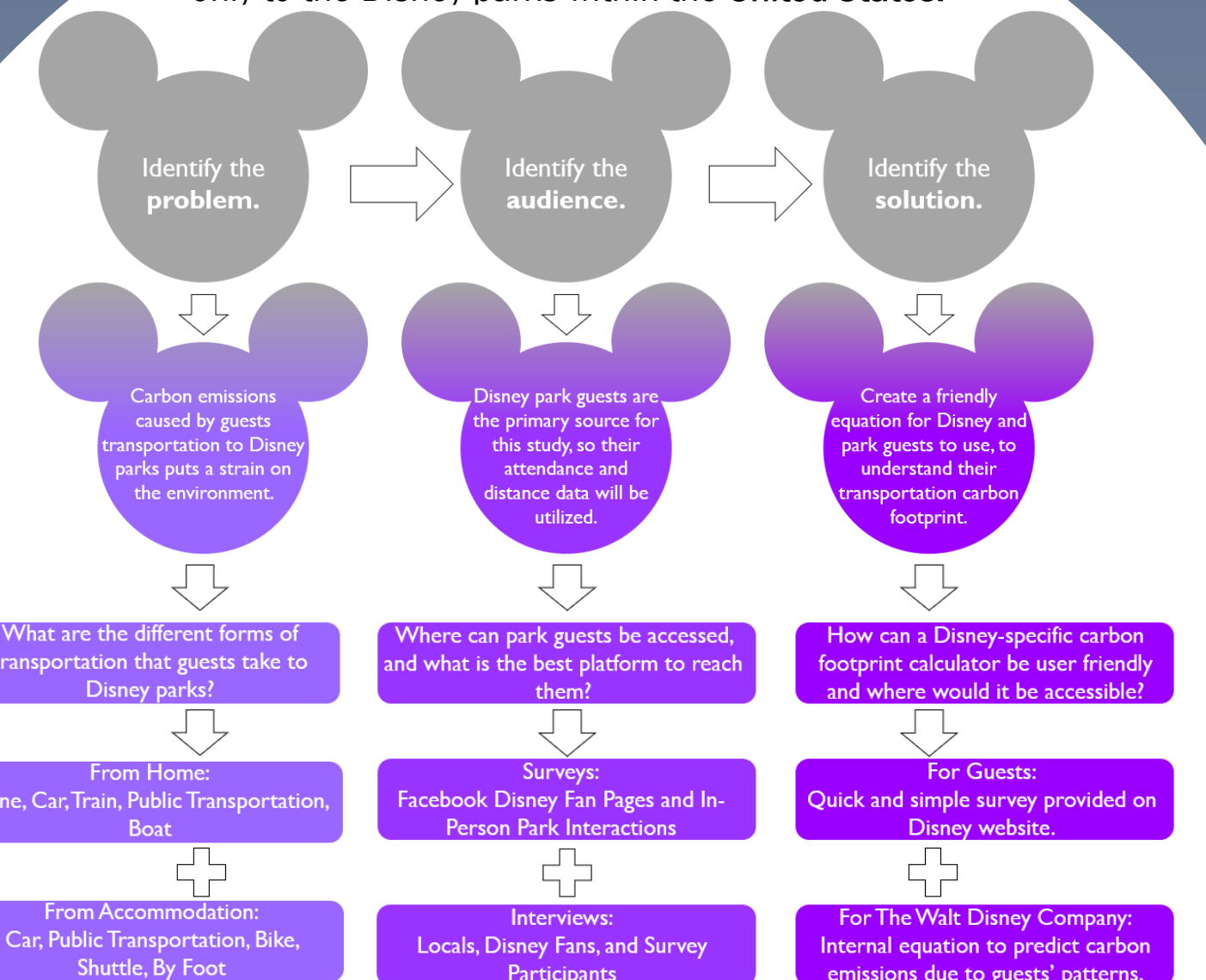
By using renewable diesel made from non-consumable food waste and used cooking oil, Disney has cut this sector's emissions in half. Between 2016 and 2017, Disney has lowered its direct emissions by approximately 23,000 pounds of CO₂e. Eventually, Disney states that their goal is to have zero net greenhouse gas emissions.



(Figure 3- China's Greenhouse Gases)

METHODOLOGY

Though there are Disney parks all around the world, the location of the study pertained only to the Disney parks within the United States.



OVERVIEW OF REPORT'S DETAILS	
Unit of Analysis	Transportation and Distance
Study Type	Cross-Sectional
Target Population	Disney Park Attendees
Sample Population	Facebook Users and Walt Disney World Cast Members
Type of Statistics	Quantitative (Some Qualitative) and Descriptive Statistics

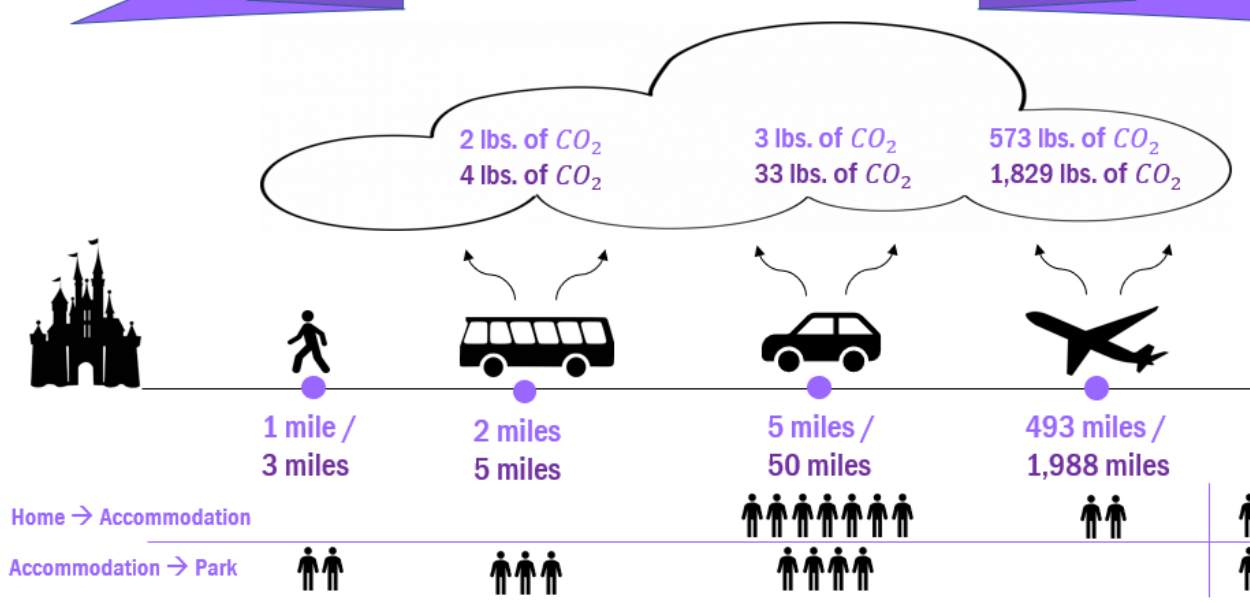
Please note, due to lack of information, in-person surveys from Walt Disney World were not taken into account in the results.

(Figure 4- Report Details)

RESULTS

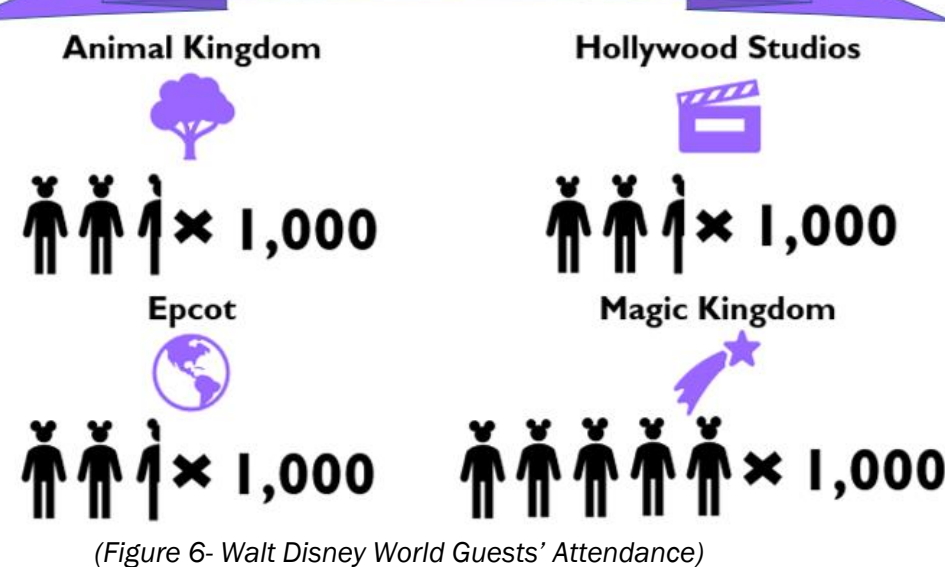
As of March 14th, 2019, there have been a total of 35 responses to the survey. The average age of the participant is approximately 29 years old, with guests being as young as 18 years old and as old as 60 years old.

Distances to a Disney Park and Their Equivalent Carbon Emissions



(Figure 5- Distances and Carbon Emissions Rates)

Walt Disney World Attendance per Day

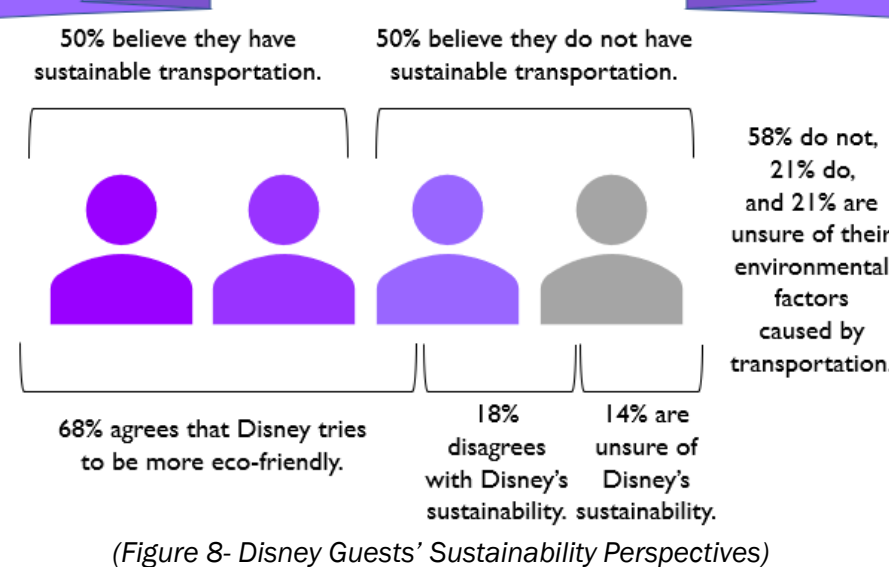


(Figure 6- Walt Disney World Guests' Attendance)

Form of Transportation to Each Park	Total Days Attended per Year
Disneyland Resort (Anaheim, California)	51 Days
I travel by train.	7 Days
I travel by driving.	34 Days
I travel by flying and driving.	10 Days
Walt Disney World Resort (Orlando, Florida)	206 Days
I travel by flying.	68 Days
I travel by driving.	95 Days
I travel by flying and driving.	43 Days
Grand Total	257 Days per Year

(Figure 7- Attendance and Transportation to US Disney Parks)

Survey Sample Opinions on Disney's Sustainability

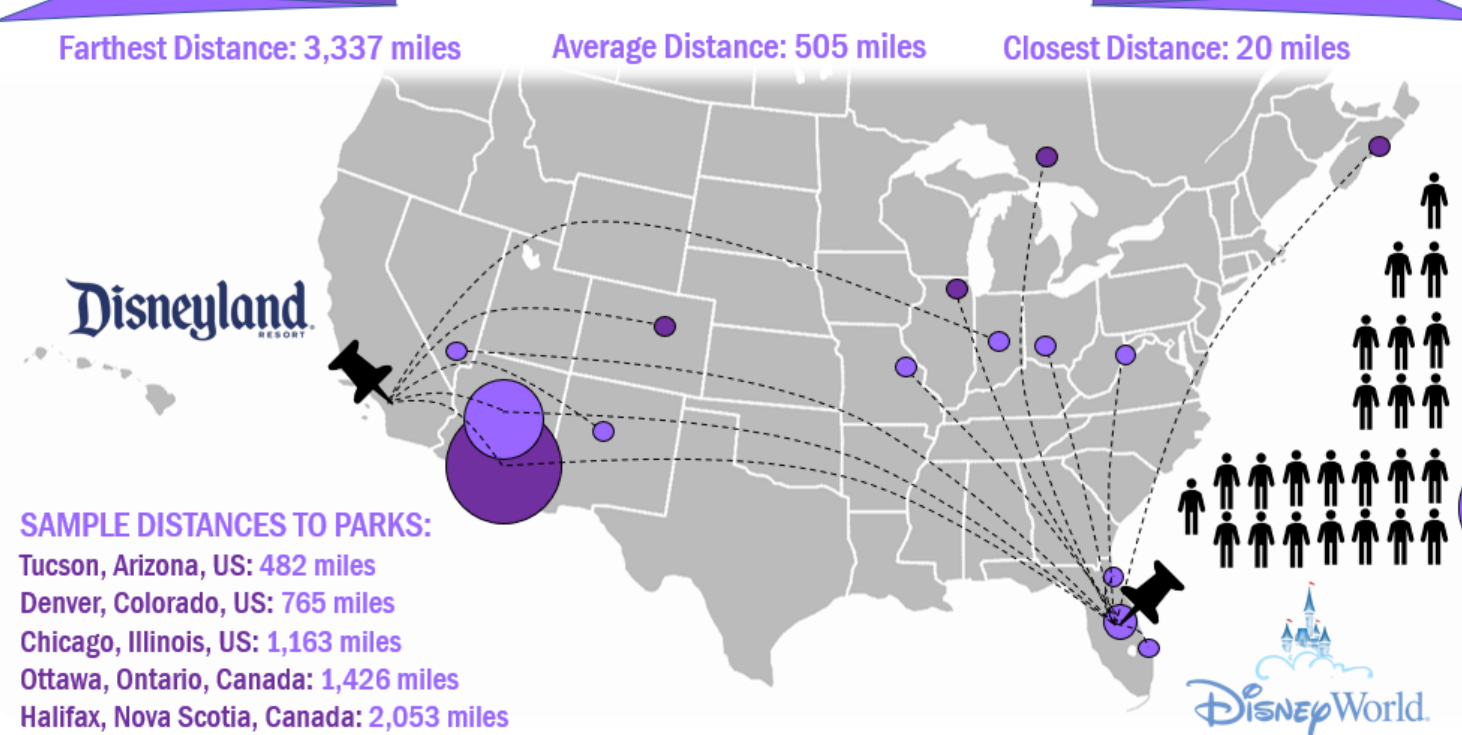


(Figure 8- Disney Guests' Sustainability Perspectives)

Why is this data useful?

Since the external emissions caused by the transportation of guests is not a focus of the Walt Disney Company, further collection of data can inform park guests and Disney of their indirect emissions. Eventually, a regression containing guest patterns can determine emissions from a predicted population.

Survey Sample Location and Their Preferred Destination



(Figure 9- Location of Guests and Distances to Parks)

"Disney World can be easily compared to a city. It has its own highway-like systems, parking, stores, and its own supply of carbon emissions. Not only are carbon emissions produced by the public transportation to the parks, but also from people renting cars to get there, the delivery of goods, and other vehicle-related transit."

- Anonymous, Previous Florida Resident

DISNEY FAN DAN

Lives roughly **600 MILES** to the closest Disney park

Visits a Disney Park **1 TO 8** times a year

Uses a **CAR** to travel to the park's city

Stays about **16 MILES** from the Disney Park

Takes a **CAR** to the Disney Park

Disney Fan Dan creates **794 POUNDS** of CO₂e, at minimum

Represents the average park attendant, based on the survey data.

Carbon Footprint Ltd. "Carbon Calculator." Carbon Footprint Calculator. www.carbonfootprint.com/calculator.aspx.

Florida Resident. In-Person Interview. March 14, 2019.

Guo, Tian, Zang, Gao, & Chen. (2018). The Role of Industrial Parks in Mitigating Greenhouse Gas Emissions from China. *Environmental Science & Technology*, 52(14), 7754-7762.

Holcomb, J., Okumus, F., & Bilgihan, A. (2010). Corporate social responsibility: what are the top three Orlando theme parks reporting? *Worldwide Hospitality and Tourism Themes*, 2(3), 316-337.

Walt Disney World Cast Member. In-Person Interview. April 15, 2019.