# Benchmark Project

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## What is sustainability?

The ability to be maintained at a certain rate or level. Based on our industry, transportation is sustainable because transport systems have significant impacts on the environment. Transport such as trucks, cars, trains, motorcycles, bikes, ships and aircrafts.

### Environmental consultants

An environmental consultant collects and analyse survey data from sites about environmental issues. Things that they do are help clients get environmental permits so they can conduct building projects within guidelines, review environmental impact reports to aid decision making and meet with clients to determine their needs.

To qualify to become a consultant you need to have

- Earn a bachelor's degree
- -Earn one or more environmental certifications
- -Gain a few years of work experience in a related position

Average salary: 16k-130k

### Research

Our industry is transportation. We chose this industry because we use this in our everyday lives. It impacts our everyday lives because we use it every day to go to school and even out of school as well. The major transportation energy sources in the United States Petroleum products made from crude oil and natural gas processing including motor and aviation gasoline.

## Research continued...

The carbon footprint of transportation is measured in grams of carbon dioxide (CO2) equal to each emitted per person to travel one kilometer. Biosphere is the one being impacted by the extraction and use of natural resources in our industry. A natural resource that our batteries will run on is lithium.

#### Pros:

- The transport encourages people to do physical activities from them walking a long distance to take the bus instead. When better infrastructure means that people have more ways to get regular physical activity. For example, people who use public transit can walk or bike to and from bus stops or transit stations.
- Public transportation leads to pollution by the extreme carbon emissions from buses and planes.

#### Cons:

• Cleanliness can be a big issue if public transport vehicles are not well-maintained. It leads to foul smells and hygiene problems.

## Our plan!

We are Way2Go! Our goal is to use safe transportation to improve our air quality, save more money, and overall improve our environment. We have a 2Go app that will be the next Uber app that will use less polluting cars powered by hydrogen, which is better for the environment. We also have our buses that have lots of routes and will get you wherever you need to go in the state. These buses are electric, less expensive, and great for the environment. Our most beneficial transportation is our electric trains and electric cars which emit 66-75% less carbon emissions than other forms of transportation. There will be stations all across the state, so getting somewhere will never be a problem.

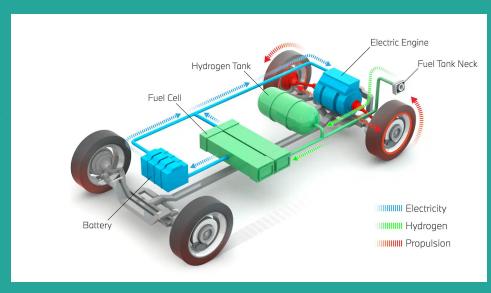


- The current price of hydrogen is higher than gasoline. It comes from natural gas and renewable power like solar and wind.
- The <u>"Coradia iLint"</u> is the world's first passenger train powered by a hydrogen fuel cell.

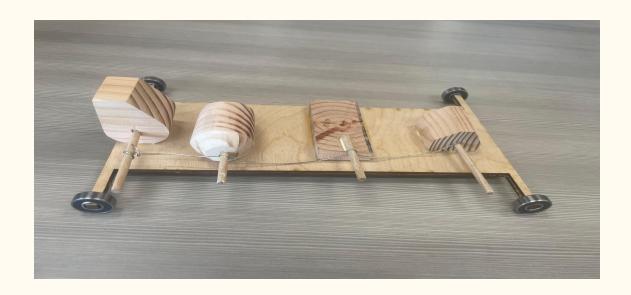
## Physical Design Blueprint

Our blue print of of model is and fuel cell vehicles which is an electric vehicle that uses a fuel cell, sometimes in combination with a small battery or supercapacitor, to power its onboard electric motor.

Hydrogen is a clean fuel that, when consumed in a fuel cell it produces only water.



## The Physical Component



### Sustainable Practice 1

#### **Electric Transportation-**

 They produce much less air and climate pollution than vehicles that run on gasoline. They also reduce air pollution and greenhouse gas emissions

#### Benefits- More efficient

Trade off-The negative side of batteries and air pollution





### Sustainable Practice 2

### Trains around the city-

• They emit 66-75% less carbon emissions than other forms of transportation

Benefits-Employee benefits

Trade offs-Running more BRAT trains on popular lines



### Sustainable Practice 3

#### Fuel cell Vehicles-

• This supports sustainability because they have less pollutants and they are powered by hydrogen.

Benefits- More efficient and produce no harmful tailpipe emissions.

Trade off- Highly flammable and the overall cost



## Resource Links

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