

The background is a stylized illustration of an ocean scene. It features blue waves with white foam, a yellow sandy beach at the bottom, and a light blue sky with white clouds. Two small, stylized fish are visible in the water. The title 'Sweep the Sea' is centered in the upper half of the image.

# **Sweep the Sea**

Fiza, Omar, Darren, Lee, Mike F., Mike L., Jiawei, Azizz

# Project Description

SweepSea is a NJ-based non-profit organization aiming to solve the problem of litter and polluted oceans by connecting high schoolers to an app that identifies pollution nearby and rewards for clean-up.

We want to see our planet get cleaner and see students get connected with community service easier.



# Elevator Pitch

SweepSea aims to reduce the effects of litter and polluted bodies of water by presenting an app is able to log and locate polluted areas in need of attention.

- Over the past years, climate change has been increasingly detrimental to the environment.
- Approximately 8 **million** tons of plastic enters our nation's oceans every year.

Sweepsea is a non-profit organization whose main function is presented via app available on both IOS and Android. SweepSea's vital users are high school students in New Jersey that want community service hours. They can log polluted areas of concern, claim spots to clean up alone, or with a group.

SweepSea will require designers for the app, access to GPS/location, and phone cameras for capturing and logging areas of concern.

With students all around the states, we're hoping to see less pollution and litter in America.

**The change starts with you!**

# High Fidelity Prototype

[https://www.figma.com/proto/4IDx1oUVGCLfV1KorDD8EC/SweepSea-Prototype-\(Community\)-\(Community\)?page-id=0%3A1&node-id=1-107&viewport=412%2C237%2C0.23&scaling=scale-down&starting-point-node-id=1%3A445](https://www.figma.com/proto/4IDx1oUVGCLfV1KorDD8EC/SweepSea-Prototype-(Community)-(Community)?page-id=0%3A1&node-id=1-107&viewport=412%2C237%2C0.23&scaling=scale-down&starting-point-node-id=1%3A445)



# Lessons Learned

-  Narrow down our target audience
- Realizing that there are competitors out there, making ourselves unique
-  How to interpret market data
- Teamwork
- How to run numbers for our project cost
- Fundamentals of building an app
- How to efficiently gather data taken from surveys
- Using the gantt chart to plan out organizational processes

# Stakeholders



## High School Students

High Schools want their students to succeed provide students with meaningful resources



## Environmentalists

People and organizations who care about the planet are likely to support SweepSea



## Parents

Some parents seeking to help their college student find community service may support SweepSea

# Stakeholders Continued...



## Waste

### Management

Private companies that collect and dispose of waste, including those that specialize in recycling and composting



## Fleet Trackers

Tech companies that specialize in deploying GPS systems.



## SweepSea Team

The members of SweepSea that are directly impacted by the company's success or failure

# Customers

## High Schools

High schools can direct their students to our app

## Parents

Parents can direct their child to our app

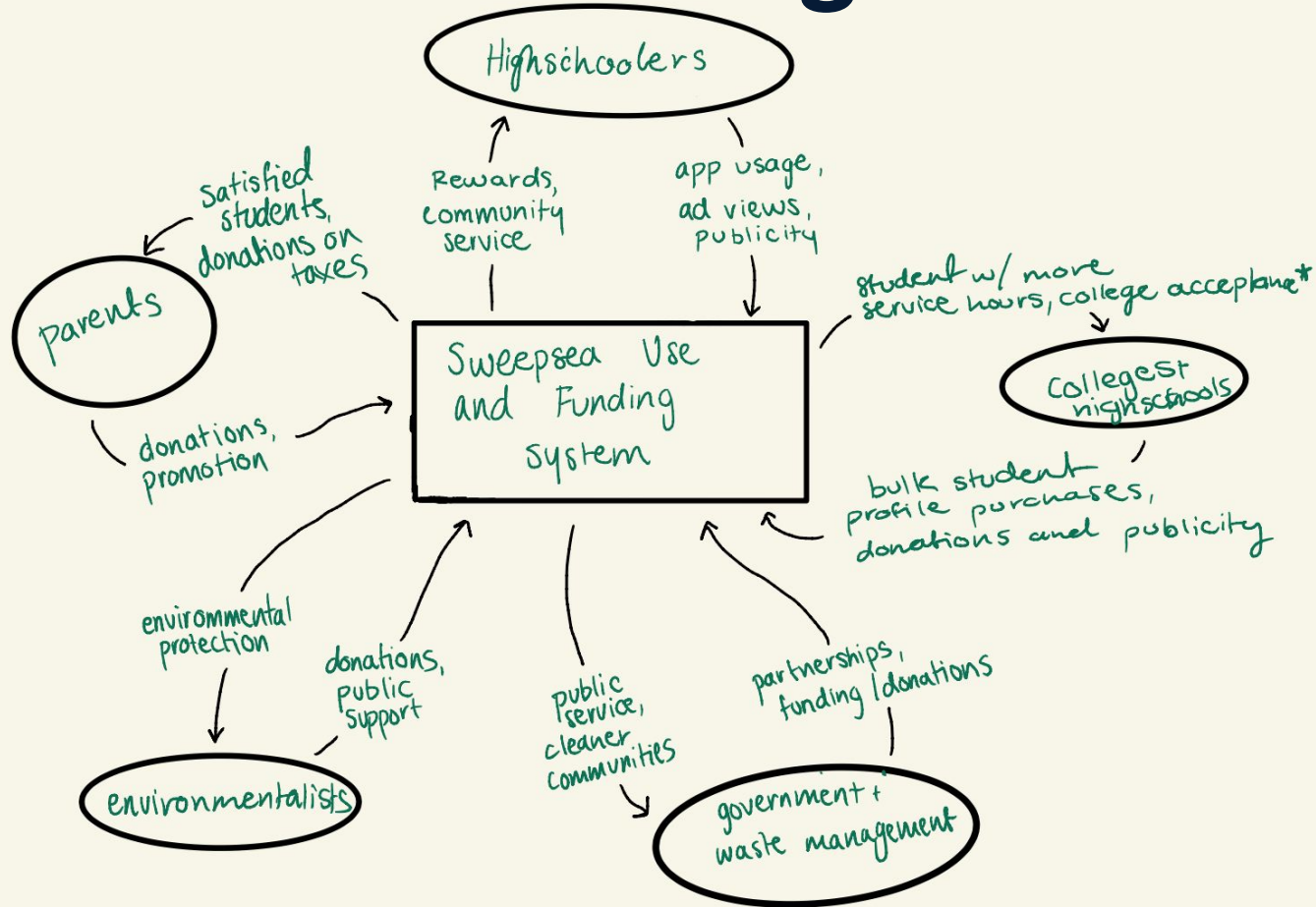
## Students

Our app primarily targets high school students since the incentives our app offers matches their needs

# Scope

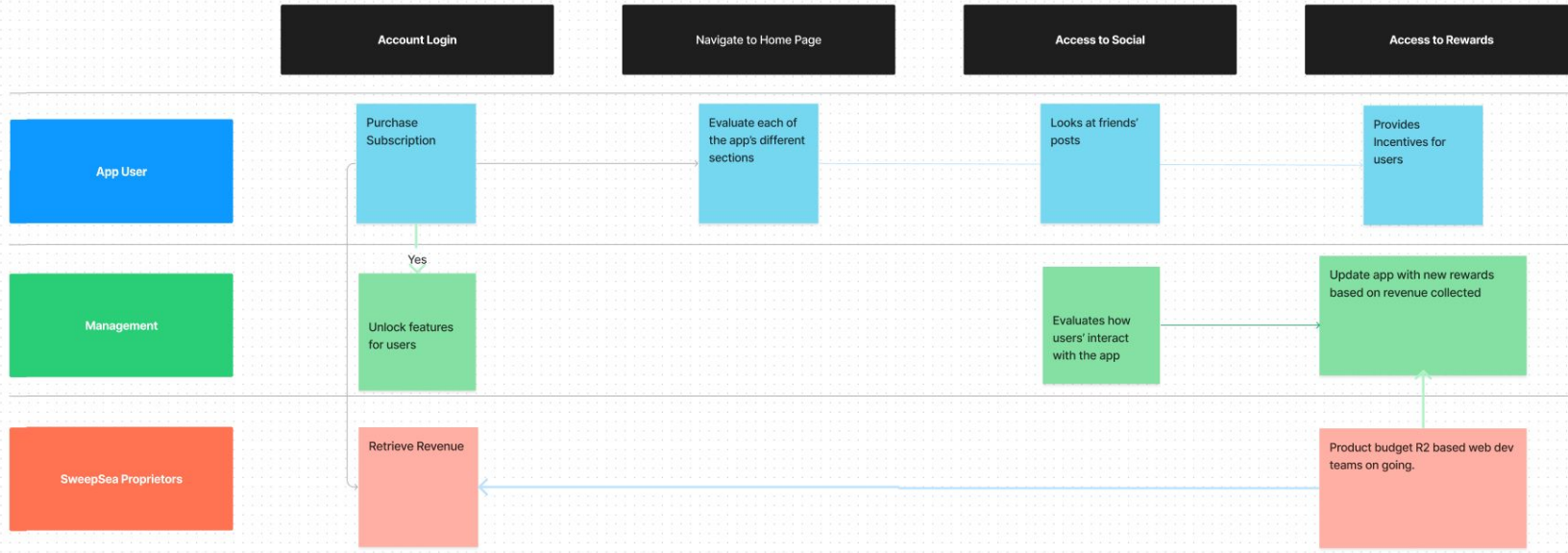
- As a startup in New Jersey, our SweepSea app aims to provide high-school students an incentive to engage in environmental cleanup.
- The app will operate through use of GPS for users to search for polluted areas and to log their findings.
  - An example of the app's reward system is the option to score points base off their logs
- We will have a dedicated server space to maintain smooth online functionality
- Will be available on iOS and Android smartphones for free.
  - High-level software such as xCode and Belatrix will be necessary for coding the SeaSweep application.
    - Costs roughly \$5000 /yr to develop, plus labor team costs
  - To enhance the user experience, SeaSweep will require UX designers to create an appealing design for the app
    - Gamification
      - Leaderboards to compare points with friends

# Context Diagram



# Cross-Functional Flow Diagram (to be updated)

## Software Maintenance and User Experience Process



# SweepSea IT Architecture

## Front-end components

Mobile App UI ((built on Figma)

Graphical elements

## Back-end Components

Application server  
(coded with Python)

Database Server  
(managing user data  
on MySQL)

API Server

## GPS Tracking

Location Accuracy /  
Security

Location Services

Data Collection  
Consent from User

Offline Tracking

Battery Optimization

## Rewards

Gamification

Transparency

In-app Virtual  
Currency

Progress Notifications

Criteria for Earning  
Rewards

## Social Sharing

User Privacy /  
Consent

User Authentication

Social Media ADKs

UI Components

Social Media APIs

## Governance Architecture

Waste Management  
Regulations

Gov't Integration  
Module

Accurate Data  
Reporting



The background is a light blue gradient representing the ocean. It is filled with several large, crumpled, translucent blue plastic bags that appear to be floating or sinking. In the bottom corners, there are dark blue silhouettes of coral reefs and seaweed. Small white circles representing bubbles are scattered throughout. On the left side, there is a complex network diagram with nodes of various colors (orange, blue, green, purple) connected by thin lines. Small blue fish icons are also visible, swimming near the plastic bags.

# Research

| K<br>What do we know?                                                                                                                                                        | W<br>What do we want to know?                                       | H<br>How will we learn it?                                                                                                                        | L<br>What have we learned?                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Ocean pollution is a growing environmental issue that affects</p> <ul style="list-style-type: none"> <li>❖ Marine life</li> <li>❖ Ecosystems</li> <li>❖ humans</li> </ul> | What are the most significant sources of beach pollution?           | <p>Research scientific studies and reports and the impacts</p> <p>Consult with experts in the field of oceanography and environmental science</p> | <p>Preventing and bringing awareness to ocean pollution required effort from individuals, businesses, and governments</p>                     |
| Plastic pollution is concerning because of the longevity of degrading and harm it causes                                                                                     | What can individuals and communities do to prevent beach pollution? | Browse websites of organization and initiatives focused on ocean and beach conservation                                                           | Cleaning the beaches and oceans involves a mass team effort and no one man can clean it                                                       |
| Plastic waste makes up 80% of marine debris                                                                                                                                  | How effective will this be?                                         | Read news articles and interview founders or team members of other similar organizations                                                          | Effective ways to reduce plastic waste include reducing consumption, reusing items, recycling, and switching to more sustainable alternatives |
| The app rewards users for participating in clean-up efforts                                                                                                                  | What type of clean-up efforts are rewarded?                         | Research and survey High school students on how they would like to be rewarded                                                                    | High school students get community service hours to add to their academic career                                                              |

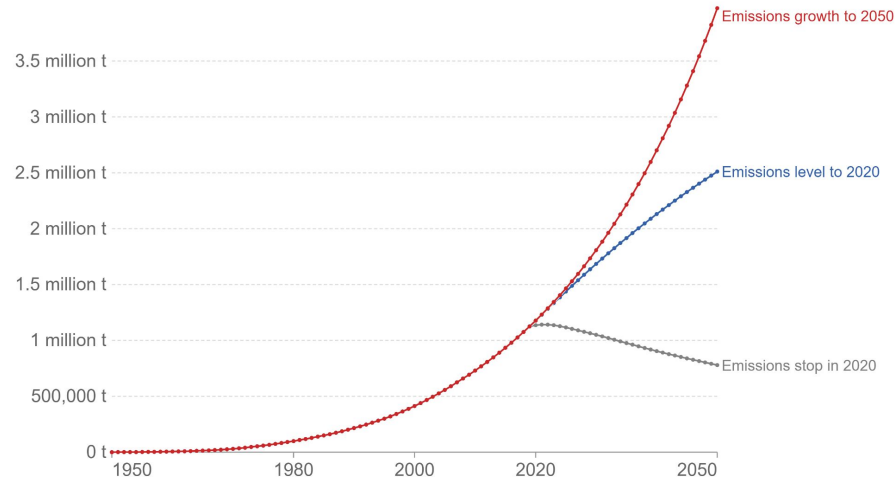


# Secondary Research

## Macroplastics in the surface ocean, 1950 to 2050

Our World  
in Data

Macroplastics are buoyant plastic materials greater 0.5 centimeters in diameter. Future global accumulation in the surface ocean is shown under three plastic emissions scenarios: (1) emissions to the oceans stop in 2020; (2) they stagnate at 2020 emission rates; or (3) continue to grow until 2050 in line with historical plastic production rates.

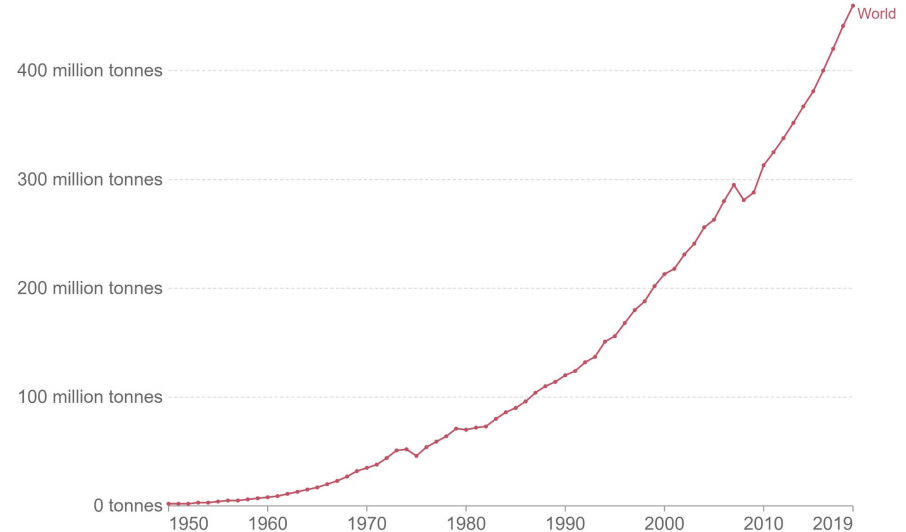


Source: Lebreton et al. (2019). A global mass budget for positively buoyant macroplastic debris in the ocean.  
[OurWorldInData.org/plastic-pollution](https://OurWorldInData.org/plastic-pollution) • CC BY

## Global plastics production

Our World  
in Data

Plastic production refers to the annual production of polymer resin and fibers.



Source: Our World in Data based on Geyer et al. (2017) and the OECD Global Plastics Outlook  
[OurWorldInData.org/plastic-pollution](https://OurWorldInData.org/plastic-pollution) • CC BY

- Macroplastics are likely the most dangerous kind of plastic because of their size
- Macroplastics are any piece of plastic larger than five millimetres in size
- They are detrimental to wildlife as some wildlife can ingest large pieces of plastic or become entangled in pieces

# Secondary Market Research (Cont.)

## Community Service makes a huge difference in a student's academic career

- Students applying to college are often concerned about their hours in community service
- This survey shows that 53% of admissions officers agreed that hours in community service is a tiebreaker when 2 students are relatively qualified



# Primary Market Research Summary

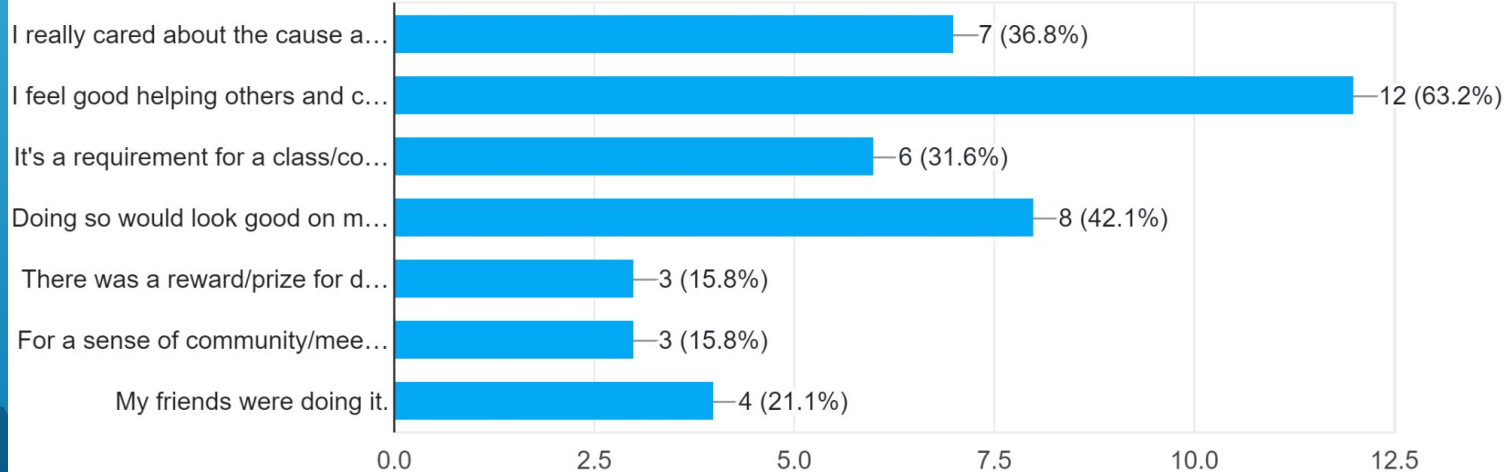
We conducted a survey with our targeted demographic of high school students

- We received a total of 19 responses
- information we've gathered from this survey include:
  - Over 75% of respondents expressed at least some concern about climate change
  - At least 90% of respondents expressed at least some concern about ocean pollution
  - 63.2% of respondent's main incentive for volunteer work was that it feels good helping others and communities
    - The second highest reason was due to resume building and potential opportunities at 42.1% of respondents

# Market Incentive For App Usage

If you do/have done volunteering work, what were your main reasons for doing so? If you haven't what WOULD your main reasons be? (Choose 2 )

19 responses

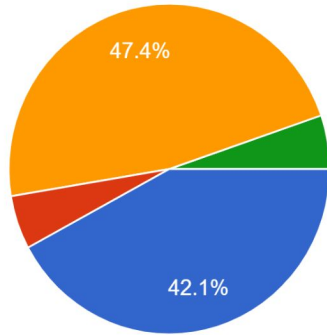




# Limitations on Engagement

What would be your main reason for NOT doing volunteer work?

19 responses



- I have a busy schedule/too much time commitment.
- I don't believe in(or care about) the cause.
- I don't know my options/where to start.
- I don't get anything in return/waste of time.

Most respondent's main reason for not engaging in volunteer work was due to not having enough time on their hands or being uninformed on ways to engaged

# Main takeaways from our research

- Most genuinely care about the helping the environment and not just for the rewards
- Many do not know how to start, our app will make it easy for them to hit the ground running
- One of the primary reasons for not doing volunteer work is not having the time.
  - Our app is on the go and is not limited to a specific time. Our app can be access whenever and wherever, linking you to the nearest beach in NJ.



The background of the image is a light blue wash featuring several crumpled, translucent plastic bags that appear to be floating or sinking in water. In the bottom corners, there are dark blue silhouettes of coral reefs and seaweed. Small, faint blue fish are scattered throughout the scene. In the top-left corner, there is a complex network diagram consisting of numerous colored dots (orange, blue, green, purple) connected by thin lines of the same colors, representing a data or social network.

# Analysis

# SWOT Analysis

|  Strength                  | Weakness                                                                                                                                   |  Opportunities                                          | Threats                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Innovative app-based solution to help encourage activists and conservation amongst high schoolers           | Difficulty measuring actual impact of the clean up efforts particularly if the app is not used consistently regardless of the a log system | Growing concern and interest in environmental conservation and activism among high schoolers, emergence of youth-led climate movements    | Fluctuating interest and engagement from high schoolers over time along with privacy concerns of location and parents allowing their high schoolers to use app |
| Unique gamification to incentivize pollution clean up                                                       | Reliance on user participation for success of the app, high schoolers may have limited time and competing interests                        | Potential to develop additional features to increase engagement and usage of the app, Social media integration or peer to peer challenges | Dependence on technology causing technical issues or glitches could discourage high schoolers                                                                  |
| Strong potential with growing digital age for community engagement and participation through high schoolers | Limited to areas where high schooler have access to beaches and other bodies of water                                                      | Extending to other countries and regions where environmental issues may be more pressing                                                  | Program may face challenges with data collection, analysis, and reporting which would be used to measure success                                               |

# SweepSea Magic Quadrant



Ability to Execute

Completeness of Vision



## Our App

- SweepSea gives an opportunity for high-school students primarily in New Jersey to earn community service hours as well as a reward system that include gift cards and merchandise. This is so that these students have another reason to go out and help fight against pollution.

## Our Competitors

- Oceanhero serves as a challenger with their search engine that cleans one plastic bottle every five web searches. CleanSwell is an app that promotes environmental awareness by connecting users to the Ocean Conservancy's worldwide ocean trash database.
- Team Seas created by MrBeast is a strong leader as it's global campaign removed over 30 million pounds of plastic. The Ocean cleanup is also a strong leader as its been around for over 10 years cleaning up millions of plastic.
- Sea Change is placed in visionary as it is an educational app that help users learn about ocean plastic pollution and how to reduce their environmental impact.

## Where are we at?

- As a start up organization, we believe that SweepSea belongs in the niche category as we are still small compared to the rest of our competitors. We however offer a twist and a rewarding system when cleaning up.

# Ethics, Privacy, and Security

|          | Potential Problems                                                                                                     | Solutions                                                         | Costs                                                |
|----------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------|
| Ethics   | User might not necessarily want to have information tracked as well as not liking their location displayed on the app. | Have the user agree to having their location displayed on the app | Hire a legal team that costs \$95,000 per year       |
| Privacy  | Users might not want any social media app containing information attached to their account.                            | Option to not link social media to account                        | Hire a legal team that costs \$95,000 per year       |
| Security | Confidential information risks potentially being stolen by hackers.                                                    | Focus heavily in ensuring users data is not in danger             | Hire a cyber security that costs \$160,000 per year. |





The illustration depicts a man in a dark suit and red tie pushing a large, blue-rimmed clock. To his right, another man in a dark suit and red tie is pushing a large, gold coin with a dollar sign and stars. They are walking on a path of light that leads from the bottom left towards the right. The background is a vast expanse of crumpled blue plastic bags, suggesting environmental pollution. Small blue fish and white bubbles are scattered throughout the scene. In the bottom corners, there are dark silhouettes of coral and seaweed.

# Financials



# Labor Costs

## 1. Project Management (3): **\$83,000 + 3%/yr**

- Oversees project, coordinates team
- Scrum Master: facilitates Agile development process.

## 2. Design (3): **\$75,000 + 3%/yr**

- UI/UX Designer: creates app interface.
- Graphic Designer: creates visuals..

## 3. Development (3): **\$75,000 +3%/yr**

- Front and back end Developer: codes app interface.
- Database Developer: designs and creates database.

## 4. Quality Assurance (2): **\$60,000/yr**

- QA Tester: ensures app quality.
- Automation Engineer: develops automated testing processes.

## 5. Marketing (2): **\$60,000/yr**

- Marketing Specialist: promotes app
- Social Media Manager: manages social media presence.

## 6. Legal Support (2): **\$75,000 + 3%/yr**

- Legal Counsel: provides legal advice.
- Patent Attorney: protects app's intellectual property.



# Hardware and Software Costs

## Hardware cost

- Computers: \$5,000 once
- Mobile/Testing Devices: \$3,000 once
- Server hardware: \$8,000 once
- Networking equipment: \$3,200 once
- Printers and scanners: \$1,500 once

## Software costs

- Development and Supporting Software: \$5,000/yr
- Operating systems: \$800 once
- Database software/support: \$2,000/yr
- Cloud services: \$800/yr





# Workspace, Legal, Insurance, and Fees

## 1. Coworking Office Space Rent: \$6000/mo

- Amenities, Meeting rooms, Outdoor Space
- Furniture (not including tech) \$6000 single payment

## 2. Cell phones and Service (3): \$70/phone, \$2,520/yr

- For customer calls and business communications

## 3. App Integration Fees

- Android Integration **\$25**
- IOS Integration **\$99**

## 4. Legal and Insurance

- General Liability **\$2,000/yr**
- Cyber Liability **\$2,000/yr**
- E&O Liability **\$2,000/yr**
- Workers Comp **\$10,600/yr**
- Utility Patent **\$2,000 once**
- Devices Insurance **\$2,500/yr**

# 5-Year Cost Spreadsheet

|                               |                                                 | Year 1             | Year 2             | Year 3             | Year 4             | Year 5             | Total              |
|-------------------------------|-------------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Labor</b>                  | Project Management Team(3)                      | \$249,000          | \$256,470          | \$264,164          | \$272,088          | \$280,250          | \$1,321,972        |
|                               | Design Team (3)                                 | \$225,000          | 231750             | 238702             | 245863             | 253239             | \$1,194,554        |
|                               | Development Team (3)                            | \$225,000          | 231750             | 238702             | 245863             | 253239             | \$1,194,554        |
|                               | Quality Assurance Team (2)                      | \$120,000          | 120000             | 120000             | 120000             | 120000             | \$600,000          |
|                               | Marketing Team (2)                              | \$120,000          | 120000             | 120000             | 120000             | 120000             | \$600,000          |
|                               | Legal Team (IP and Business Attorney) (2)       | \$170,000          | 175100             | 180353             | 185763             | 191336             | \$902,552          |
| <b>Merchandise Production</b> | T-shirts, Hats and Totes (\$10/unit, 500 units) | \$5,000            | \$5,000            | \$5,000            | \$5,000            | \$5,000            | \$25,000           |
| <b>Hardware /Software</b>     | Development and Supporting Software             | \$5,000            | 5000               | 5000               | 5000               | 5000               | \$25,000           |
|                               | Operating Systems                               | \$800              | -                  | -                  | -                  | -                  | \$800              |
|                               | Database Software + Support                     | \$2,000            | 2000               | 2000               | 2000               | 2000               | \$10,000           |
|                               | Cloud Services                                  | \$800              | \$800              | \$800              | \$800              | \$800              | \$4,000            |
|                               | Computers                                       | \$5,000            | -                  | -                  | -                  | -                  | \$5,000            |
|                               | Mobile/Testing Devices                          | \$3,000            | -                  | -                  | -                  | -                  | \$3,000            |
|                               | Server Hardware                                 | \$8,000            | -                  | -                  | -                  | -                  | \$8,000            |
|                               | Networking Equipment                            | \$3,200            | -                  | -                  | -                  | -                  | \$3,200            |
|                               | Printers and Scanners                           | \$1,500            | -                  | -                  | -                  | -                  | \$1,500            |
| <b>Workspace and Legal</b>    | Coworking Space Rent 5,000sqft + Amenities      | \$72,000           | 72000              | 72000              | 72000              | 72000              | \$360,000          |
|                               | Furniture (desks, chairs, boards, enrichment)   | \$6,000            | 6000               | 6000               | 6000               | 6000               | \$30,000           |
|                               | Cell Service (3)                                | \$2,520            | 2520               | 2520               | 2520               | 2520               | \$12,600           |
|                               | Basic Phones (3)                                | \$210              | -                  | -                  | -                  | -                  | \$210              |
|                               | Android App Integration                         | \$25               | -                  | -                  | -                  | -                  | \$25               |
|                               | IOS App Integration                             | \$99               | -                  | -                  | -                  | -                  | \$99               |
|                               | Worker's Compensation Insurance                 | \$10,600           | 10600              | 10600              | 10600              | 10600              | \$53,000           |
|                               | Utility Patent                                  | \$2,000            | -                  | -                  | -                  | -                  | 2000               |
|                               | Insurances (Error, Cyber+ Gen. Liability        | \$6,000            | 6000               | 6000               | 6000               | 6000               | \$30,000           |
|                               | Devices Insurance                               | \$2,500            | 2500               | 2500               | 2500               | 2500               | \$12,500           |
| <b>Total</b>                  | -                                               | <b>\$1,245,254</b> | <b>\$1,247,490</b> | <b>\$1,274,341</b> | <b>\$1,301,997</b> | <b>\$1,330,484</b> | <b>\$6,399,566</b> |

# Benefits

Our employees on salary will receive a 3% yearly increase in salary

Worker's compensation and benefits are a package we offer for all employees

Most employees have the option to work remotely



# Revenue Streams

## 1. Donations

- Flow from large corporations **\$15,000/yr**
- Flow from NJ based companies and events **\$20,000/yr**
- Flow from marketing reach **\$60,000/yr**

## 2. Partnerships with high schools (\$25/student account/year)

- Cost associated with bulk high school profile creation via email + ID verification
- \$10,580/school/year based on average student count of 529 in NJ high schools
- Given that we can partner with just 1/6 of the 512 secondary schools in New Jersey, we are looking at up to an average of **\$1,128,093/yr**

## 3. Merchandise

- T-shirts, hats, and tote bags sold via Shopify
- Given an average of 400 units sold a year (events, site visitors), for an average price of \$25, merchandise entails revenue of **\$10,000/yr**

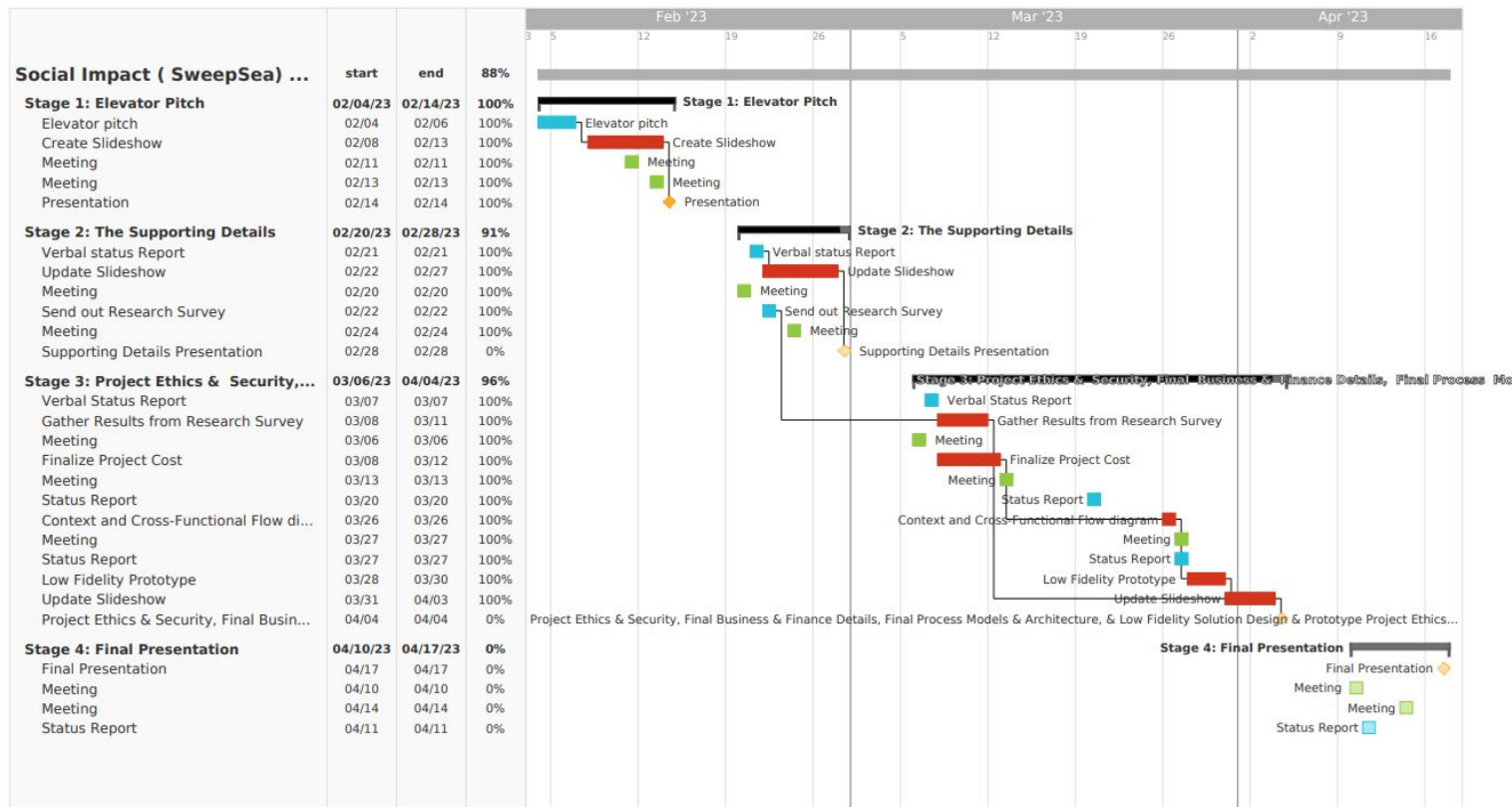
## 4. Ad Revenue

- Ad views and clicks generate revenue as users spend time on the app
- Given 30 ad sponsors distributed on our app and webpage, the rate of \$14.2/1000 views, we're looking at **\$19,222/yr** (calculated based on total students expected to use our app yearly)

**Total: +\$1,252,315, expected yearly increase**

# Gantt Chart

teamgantt  
Created with Free Edition



# Final Roles

|        | Primary Role                        | Secondary Role(s)     |
|--------|-------------------------------------|-----------------------|
| Fiza   | Presentation/Document Manager       | Financial Analysis    |
| Azizz  | Business Analysis/Context Modelling | Team Leader           |
| Darren | UX/UI Design                        | Market Research       |
| Lee    | Prototype Development               | Project Manager       |
| Mike L | Cross-functional process model      | UX/UI Design          |
| Mike F | Prototype Development               | Market Research       |
| Omar   | Business Analysis/Context Modelling | Market Research       |
| Jiawei | UI/UX Design                        | Prototype Development |

**Blue:** Leadership and Management

**Yellow:** Business Analysis

**Green:** Solution Design and Development

# Detailed Appendices

- <https://www.publicschoolreview.com/school-size-stats/new-jersey#:~:text=The%20public%20school%20in%20New,Charter%20School%20with%206%2C298%20students>. Average public school size in NJ
- <https://www.businessofapps.com/ads/research/mobile-app-advertising-cpm-rates/>
- <https://www.condorferries.co.uk/marine-ocean-pollution-statistics-facts>
- <https://blog.padi.com/11-inspiring-quotes-thatll-make-you-want-to-protect-the-ocean/>
- <https://www.nrdc.org/stories/beach-pollution-101>
- <https://courses.lsa.umich.edu/healthy-oceans/group-1/group-1-sub-1/plastic-pollution-and-its-economic-damage/>
- <https://www.sciencedirect.com/science/article/pii/S0048969722028054?via%3Dihub>
- <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>
- <https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/>
- <https://ourworldindata.org/plastic-pollution>
- <https://www.plasticpollutioncoalition.org/blog/2019/2/20/report-plastic-threatens-human-health-at-a-global-scale>
- <https://repository.usfca.edu/cgi/viewcontent.cgi?article=1009&context=inom>
- <https://som.yale.edu/story/2022/global-network-survey-finds-students-more-urgently-focused-sustainability#:~:text=A%20majority%20of%20students%E2%80%949452,the%20impacts%20of%20climate%20change>
- <https://www.businesswire.com/news/home/20180420005010/en/Survey-College-Admissions-Officers-Sponsored-x2VOL-Verifies>



# Detailed Appendices Cont.

Survey Questions:

[https://docs.google.com/forms/d/e/1FAIpQLSedJLNwUzMs5NBvbekgzvMRKmHzeI8sYbsbGeGf7kEWr4QO2Q/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSedJLNwUzMs5NBvbekgzvMRKmHzeI8sYbsbGeGf7kEWr4QO2Q/viewform?usp=sf_link)

The background is a deep blue illustration depicting a polluted ocean. Several large, crumpled, translucent blue plastic bags are floating, filling much of the upper and middle portions of the frame. Scattered throughout the scene are small, white, cartoonish icons: a fish, a hand, a beach ball, and coral. The bottom of the image features dark blue silhouettes of coral reefs and seaweed. The overall composition suggests a message about marine pollution.

**Thanks For Listening!**

The background is a stylized illustration of an ocean. It features light blue water with white foam on the waves. There are several light blue circles of varying sizes representing bubbles. A small, light blue jellyfish is visible on the right side. The bottom of the image shows a yellow sandy beach with wavy lines representing sand dunes or waves washing onto the shore.

# **SweepSea Stage**

## **3**

Fiza, Omar, Darren, Lee, Mike F., Mike L., Jiawei, Azizz

# Project Description

SweepSea is a NJ-based non-profit organization aiming to solve the problem of litter and polluted oceans by connecting people to an app that identifies pollution nearby and rewards for clean-up.

We want to see our planet get cleaner and see students get connected with community service easier.



# Ethics, Privacy, and Security

|          | Potential Problems                                                                                                     | Solutions                                                         | Costs                                                |
|----------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------|
| Ethics   | User might not necessarily want to have information tracked as well as not liking their location displayed on the app. | Have the user agree to having their location displayed on the app | Hire a legal team that costs \$95,000 per year       |
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# KWHL Table

|  <b>K</b> <br>What do we know? | <b>W</b><br>What do we want to know?                                                                                                                                                                               | <b>H</b><br>How will we learn it?                                                                                                                                                                                          | <b>L</b><br>What have we learned?                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Litter and pollution are estimated 8 million metric tons of plastic, NJ has 700 water ways impaired                                                                                              | What specific types of litter and pollution are most found in New Jersey's bodies of water?                                                                                                                        | Conduct research studies and surveys on the types and sources of litter pollution in New Jersey's bodies of water                                                                                                          | Plastic waste is a major contributor to ocean pollution, estimated 1.2 million tons of plastic generated each year  |
| New Jersey has over 700 waterways listed as impaired by New Jersey Department of Environmental Protection                                                                                        | What percent of active High School students are actively involved in environmental activism and volunteer?                                                                                                         | Survey high school students in New Jersey to better understand their interests and motivations                                                                                                                             | High School students are a key demographic for SweepSea's mission, due to passion about environment                 |
| High school students are interesting, Pew Research Center 70% of US teens say climate change is major threat   | How can SweepSea  effectively partner with local organizations to incentivize clean-up efforts, and successful strategies for app | Conduct case studies of successful environmental non-profit organizations and initiatives to learn from their strategies and tactics  | SweepSea offers rewards to users who participate in clean-up efforts, successful strategies for app and user engagement use reward                                                                     |

# Primary Market Research Summary

We conducted a survey with our targeted demographic of high school students

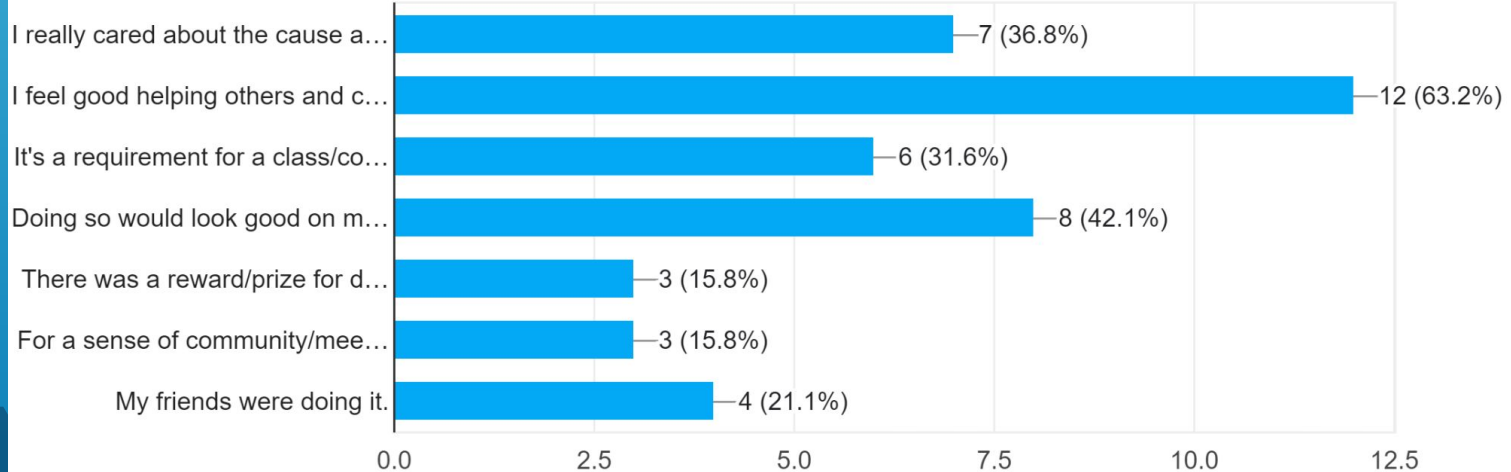
- We received a total of 19 responses
- information we've gathered from this survey include:
  - Over 75% of respondents expressed at least some concern about climate change
  - At least 90% of respondents expressed at least some concern about ocean pollution
  - 63.2% of respondent's main incentive for volunteer work was that it feels good helping others and communities
    - The second highest reason was due to resume building and potential opportunities at 42.1% of respondents



# Market Incentive For App Usage

If you do/have done volunteering work, what were your main reasons for doing so? If you haven't what WOULD your main reasons be? (Choose 2 )

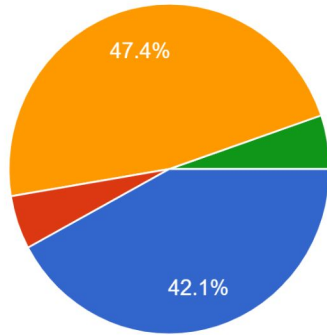
19 responses



# Limitations on Engagement

What would be your main reason for NOT doing volunteer work?

19 responses



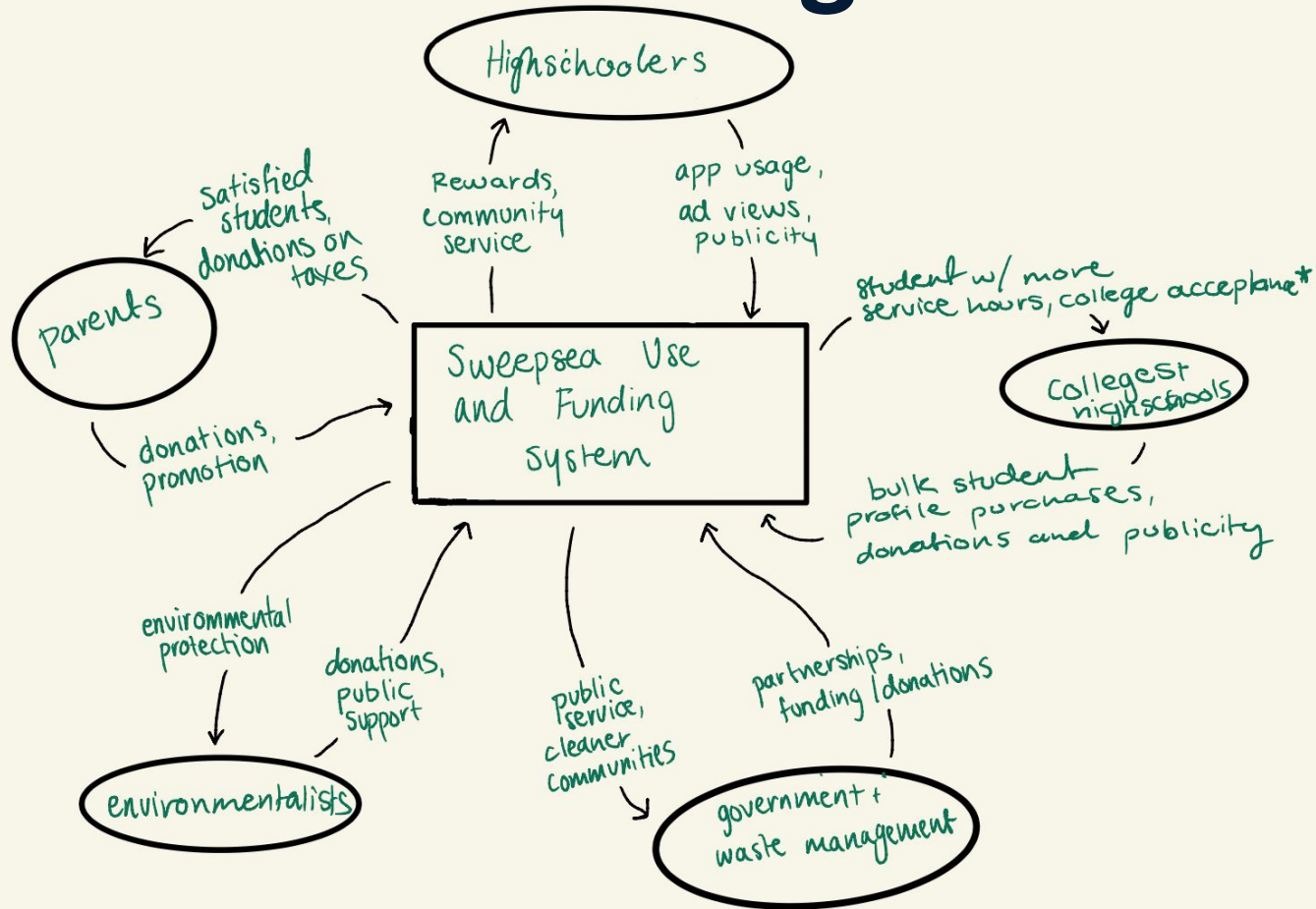
- I have a busy schedule/too much time commitment.
- I don't believe in(or care about) the cause.
- I don't know my options/where to start.
- I don't get anything in return/waste of time.

Most respondent's main reason for not engaging in volunteer work was due to not having enough time on their hands or being uninformed on ways to engaged

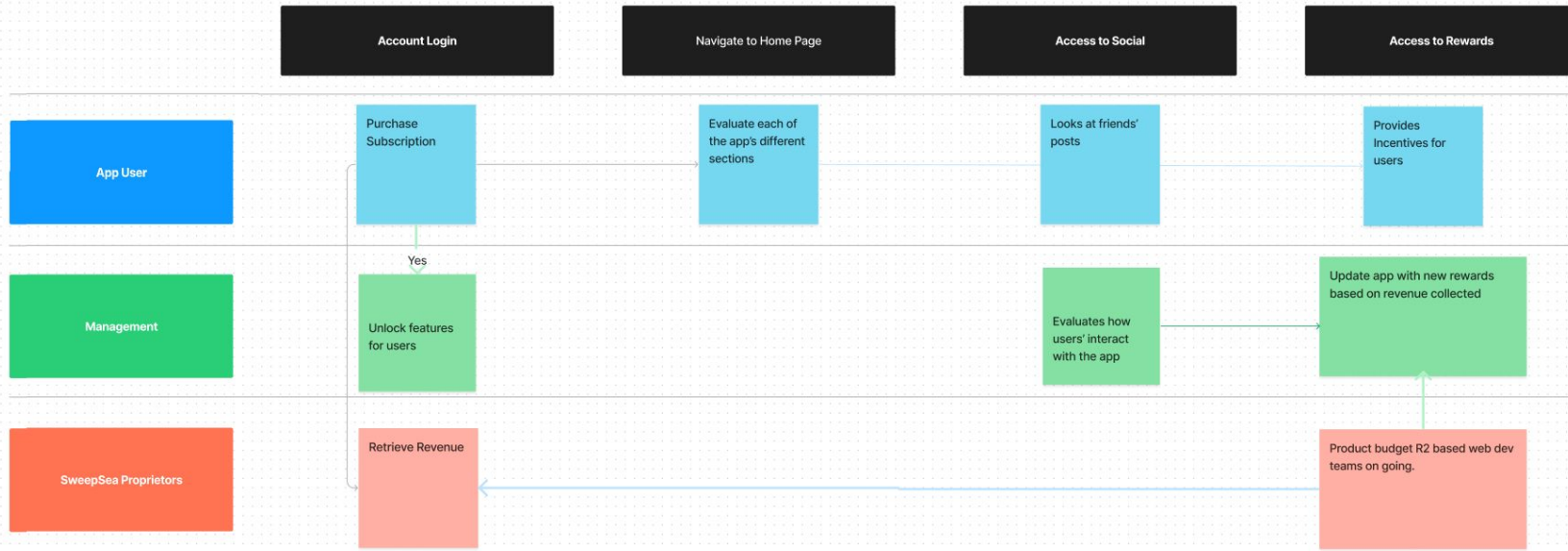
# Main takeaways from our research

- Most genuinely care about the helping the environment and not just for the rewards
- Many do not know how to start, our app will make it easy for them to hit the ground running
- One of the primary reasons for not doing volunteer work is not having the time.
  - Our app is on the go and is not limited to a specific time. Our app can be access whenever and wherever, linking you to the nearest beach in NJ.

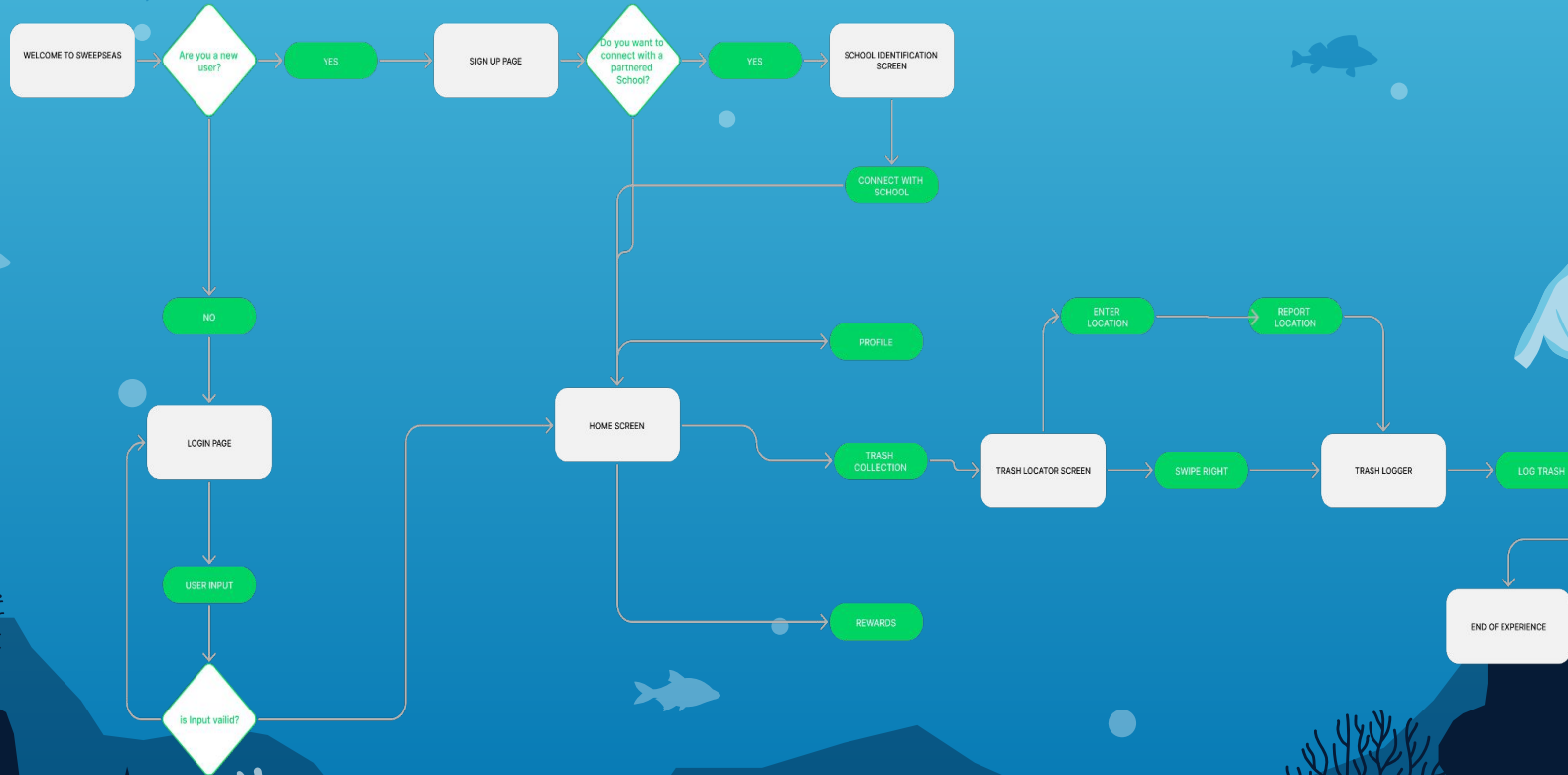
# Context Diagram



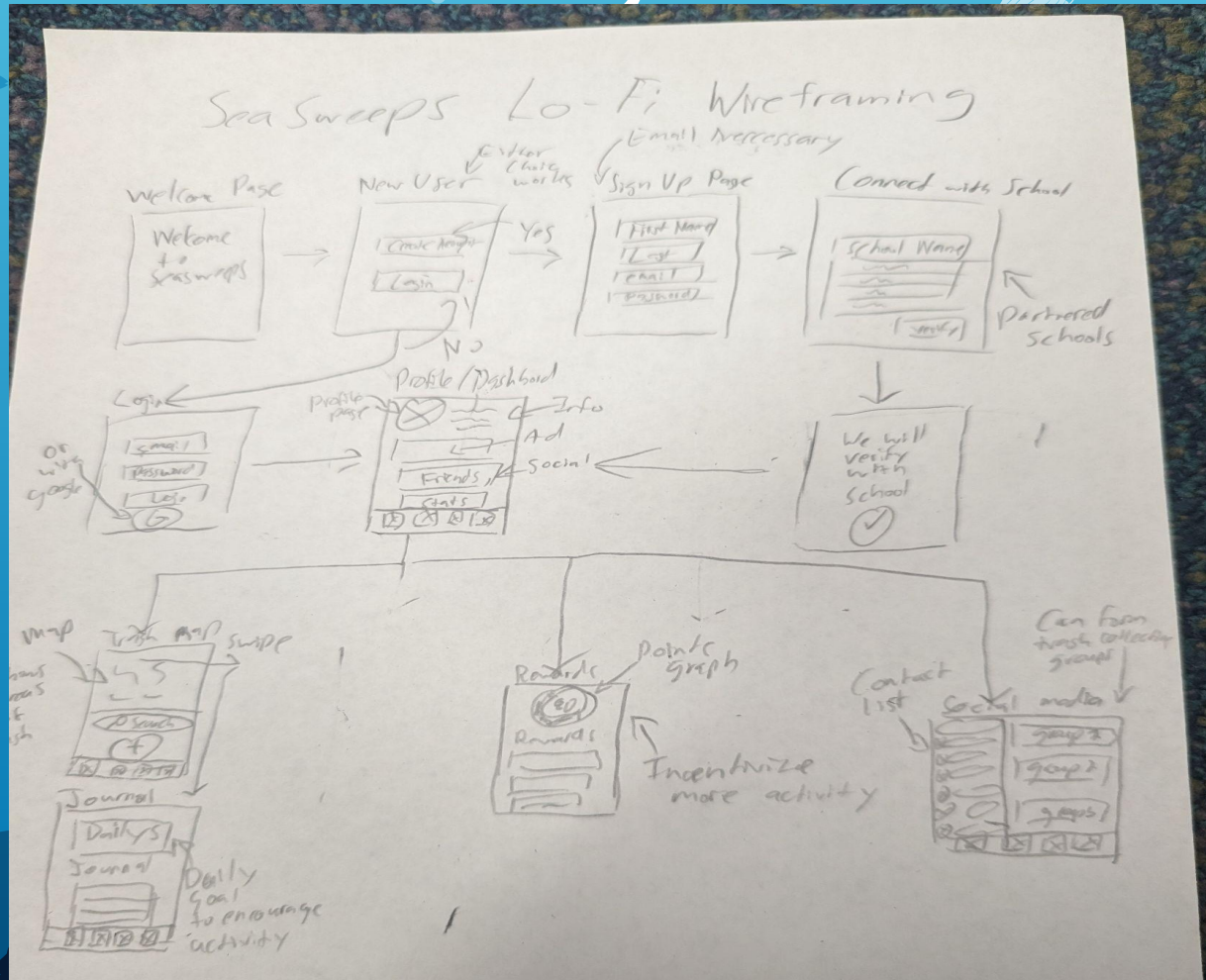
# Cross-Functional Flow Diagram



# Process Flow Diagram



# Low fidelity Sketch





# Low fidelity Mockup

9:27

## Welcome To SweepSeas!

### Login

Email Address

Password

☒ Remember Me [Forgot Password](#)

**LOGIN**

Or

[Login with Google](#)

New User? [SIGN UP](#)

9:27

## Sign up

First Name

Last Name

Email Address

Password

**Next**

9:27

Map Journal

Start Party?

## Map

Report Area

Search

**+**

Add Item

Locator Log Trash Rewards Dashboard

9:27

Map Journal

## Pollution Log

Daily Goal **30/80** Collected

**30** Total Items Collected Today

### Today's Entries

| Trash Type | Location | Time |
|------------|----------|------|
|            |          |      |
|            |          |      |
|            |          |      |

Locator Log Trash Rewards Dashboard

9:27

## Points and Rewards

### Points

**320** points

80 more till 400 point prize!

### Rewards

- \$10 McDonalds Gift Card- 100 pts
- \$10 Starbucks Gift Card- 100 pts
- \$10 Target Gift Card- 100 pts
- \$50 Dunkin Gift Card- 500 pts

Locator Log Trash Rewards Dashboard

9:27

Name - Eric Jones  
91 Days Since Joined  
Status: Online

## Collaboration/Advertisements

**Friends List** ▾

## Stats/History

Locator Log Trash Rewards Dashboard

# Completed Project Costs - labor

**Software Development Team** (3 People)-**\$285K** / Year

**UI/UX Design Team** (2 People)-**\$180K** / Year

**Cybersecurity Team** (2 People)-**\$160K** / Year

**Customer Support Team** (3 People)-**\$105K** / Year

**Marketing Team** (2 People)-**\$118K** / Year

**Finance Team** (1 Person)-**\$75K** / Year

**Human Resources Team** (1 Person)-**\$55K** / Year

**Legal Team** (1 Person)-**\$125K** / Year

**Entire team is \$1,093,000  
per year**



# IT Services & Equip.

Hardware (PC/Laptop, Monitor, Keyboard, Mouse): **\$1,800**

E-commerce Platform (Shopify): **\$348/year**

Payment Gateway (Stripe): **\$420/year**

Email Marketing Service (Mailchimp): **\$300/year**

Social Media Management Tool (Hootsuite): **\$588/year**

Cloud Storage (Google Drive): **\$120/year**

Website Hosting (Bluehost): **\$300/year**

Website Maintenance : **\$2,400/year**

Graphic Design Tool (Canva): **\$120/year**

Total: **\$5,196** for the first year, and **\$4,256** for each following year

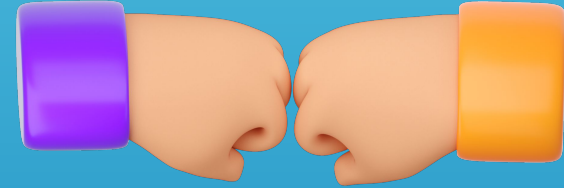


# Summary Impact of Stage 3

- Developed Low-fidelity prototypes
- Began working on High-fidelity prototype
- Created Cross-Functional Flow Diagram
- Created KWHL table
- Created Context Diagram
- Updated Elevator pitch, project subscription
- Assigned roles for Stage 4

# Final Role assignment

|        | Primary Role                        | Secondary Role(s)     |
|--------|-------------------------------------|-----------------------|
| Fiza   | Presentation/Document Manager       | Financial Analysis    |
| Azizz  | Business Analysis/Context Modelling | Team Leader           |
| Darren | UX/UI Design                        | Market Research       |
| Lee    | Prototype Development               | Project Manager       |
| Mike L | Cross-functional process model      | UX/UI Design          |
| Mike F | Prototype Development               | Market Research       |
| Omar   | Business Analysis/Context Modelling | Market Research       |
| Jiawei | UI/UX Design                        | Prototype Development |

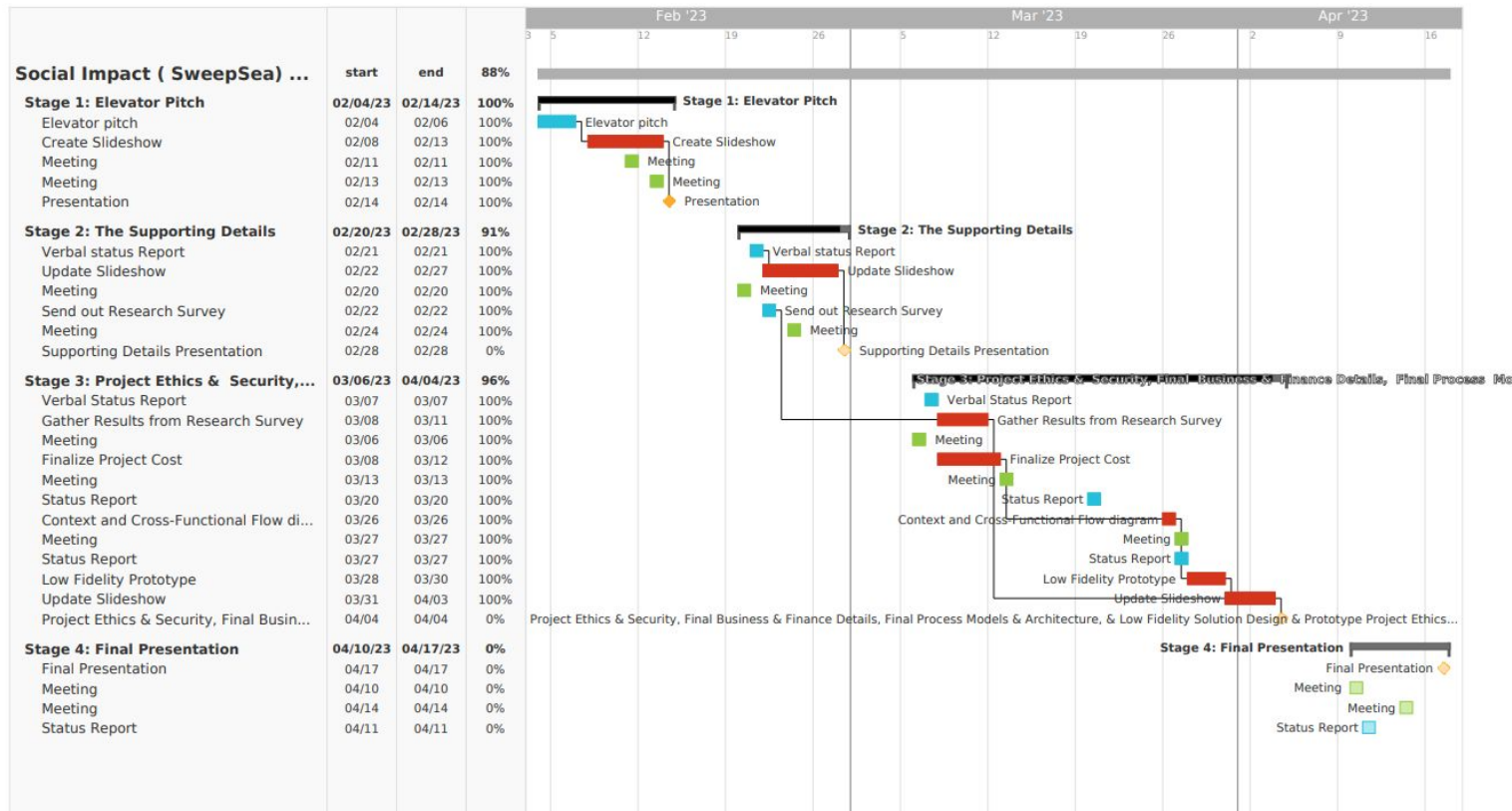


- **Blue:** Leadership and Management
- **Yellow:** Business Analysis
- **Green:** Solution Design and Development

# Gantt Chart

teamgantt

Created with Free Edition



# Next Steps

- High Fidelity Prototype
- Prepare for Stage 4 Presentation
- Reflect



# Works Cited

1. <https://www.condorferries.co.uk/marine-ocean-pollution-statistics-facts>
2. <https://blog.padi.com/11-inspiring-quotes-thatll-make-you-want-to-protect-the-ocean/>
3. <https://www.nrdc.org/stories/beach-pollution-101>
4. <https://courses.lsa.umich.edu/healthy-oceans/group-1/group-1-sub-1/plastic-pollution-and-its-economic-damage/>
5. <https://www.sciencedirect.com/science/article/pii/S0048969722028054?via%3Dihub>
6. <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>
7. <https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/>
8. <https://ourworldindata.org/plastic-pollution>
9. <https://www.plasticpollutioncoalition.org/blog/2019/2/20/report-plastic-threatens-human-health-at-a-global-scale>
10. <https://repository.usfca.edu/cgi/viewcontent.cgi?article=1009&context=inom>
11. <https://som.yale.edu/story/2022/global-network-survey-finds-students-more-urgently-focused-sustainability#:~:text=A%20majority%20of%20students%E2%80%949452,the%20impacts%20of%20climate%20change.>
12. <https://www.businesswire.com/news/home/20180420005010/en/Survey-College-Admissions-Officers-Sponsored-x2VOL-Verifies>

The background is a stylized illustration of an ocean. It features light blue water with white, bubbly waves at the top and bottom. The bottom of the image shows a yellow sandy beach. There are several light blue circles of varying sizes representing bubbles or underwater rocks. A small, white, jellyfish-like creature is visible on the right side of the water.

# **SweepSea Stage**

## **2**

Fiza, Omar, Darren, Lee, Mike F., Mike L., Jiawei, Azizz

# Project Description

SweepSea is a NJ-based non-profit organization aiming to solve the problem of litter and polluted oceans by connecting people to an app that identifies pollution nearby and rewards for clean-up.

We want to see our planet get cleaner and see students get connected with community service easier.



# Project Pitch

SweepSea aims to reduce the effects of litter and polluted bodies of water by presenting an app is able to log and locate polluted areas in need of attention.

- Over the past years, climate change has been increasingly detrimental to the environment.
- Approximately 8 **million** tons of plastic enters our nation's oceans every year.

Sweepsea is a non-profit organization whose main function is presented via app available on both IOS and Android. SweepSea's vital users are college students in New Jersey that want community service hours. They can log polluted areas of concern, claim spots to clean up alone, or with a group.

SweepSea will require designers for the app, access to GPS/location, and phone cameras for capturing and logging areas of concern.

With college students all around the states, we're hoping to see less pollution and litter in America. **The change starts with U!**

The background is a light blue illustration of several large, crumpled plastic bags floating in water. Small white circles representing bubbles are scattered throughout. At the bottom, dark blue silhouettes of coral and seaweed are visible. In the top right corner, a small blue fish is swimming. On the left side, there is a complex network diagram with nodes of various colors (orange, blue, green, purple) connected by thin lines. The text "01: Research" is centered in a bold, dark blue font.

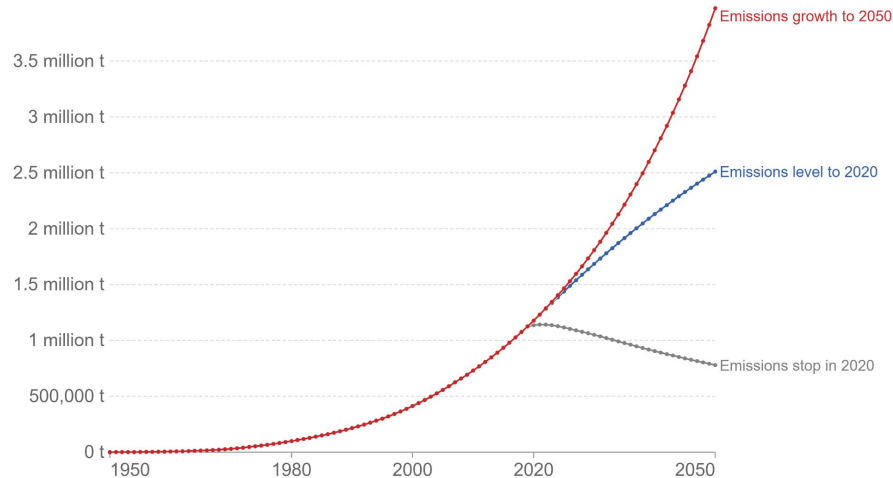
# 01: Research

# Secondary Market Research

## Macroplastics in the surface ocean, 1950 to 2050

Macroplastics are buoyant plastic materials greater 0.5 centimeters in diameter. Future global accumulation in the surface ocean is shown under three plastic emissions scenarios: (1) emissions to the oceans stop in 2020; (2) they stagnate at 2020 emission rates; or (3) continue to grow until 2050 in line with historical plastic production rates.

Our World  
in Data

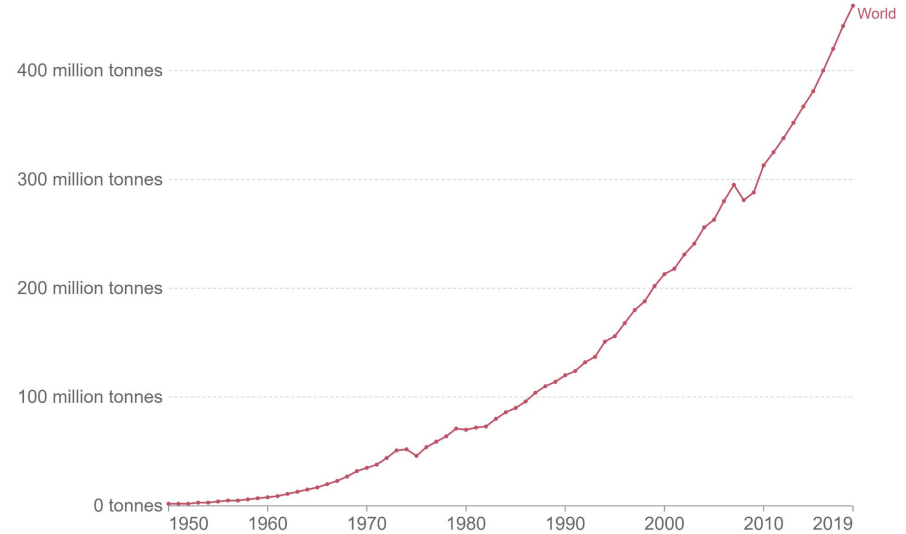


Source: Lebreton et al. (2019). A global mass budget for positively buoyant macroplastic debris in the ocean.  
[OurWorldInData.org/plastic-pollution](https://OurWorldInData.org/plastic-pollution) • CC BY

## Global plastics production

Plastic production refers to the annual production of polymer resin and fibers.

Our World  
in Data



Source: Our World in Data based on Geyer et al. (2017) and the OECD Global Plastics Outlook  
[OurWorldInData.org/plastic-pollution](https://OurWorldInData.org/plastic-pollution) • CC BY

- Macroplastics are likely the most dangerous kind of plastic because of their size
- Macroplastics are any piece of plastic larger than five millimetres in size
- They are detrimental to wildlife as some wildlife can ingest large pieces of plastic or become entangled in pieces



# Secondary Market Research (Cont.)

## Community Service makes a huge difference in a student's academic career

- Students going to college are often concerned about their hours in community service
- This survey shows that 53% of admissions officers agreed that hours in community service is a tiebreaker when 2 students are relatively qualified





# Secondary Market Research (Cont.)

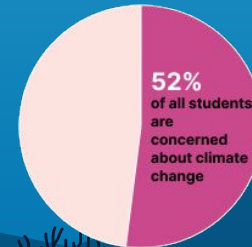
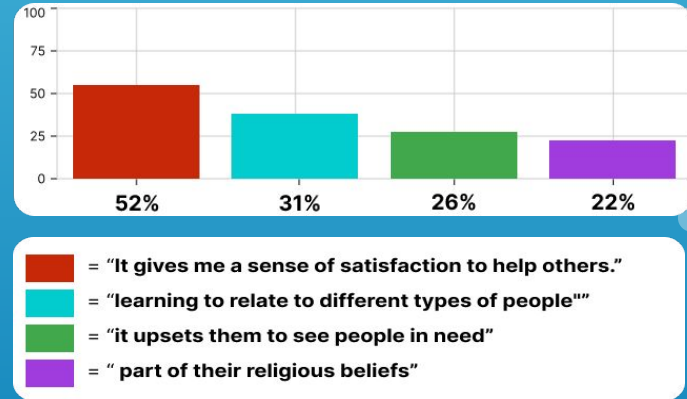
## Volunteering Rates amongst College Students

- At least **one-half** of the students had participated in some type of volunteer activity in high school or college, but the amount of time they spent volunteering was relatively low.
- Younger people are more interested in using volunteer work as **a means for personal growth and fulfillment, to obtain job training, and to explore career options**

## Environmental Concerns

- A majority of students—52%—are very or extremely concerned about the impacts of climate change.
- Asked to prioritize topics that business leaders should be knowledgeable about, however, students ranked sustainability below business domains like finance and operations.

## Reasons to Volunteer amongst College Students (CIRP Survey)



# Primary Market Research Plan

- For our Primary Market Research, we will be conducting a survey through google forms. Our Target demographic for our survey will be college students, specifically Rutgers students as they are the most accessible people to survey.
  - Generally targeting **ALL** college students, try to get a mix of students dependent on major and organization(i.e **fraternities/sororities**) for more diverse perspectives.
- Two main themes: **Environmental Issues/Habits** and **Volunteering Habits**.
- **The type of questions will be:**
  - How concerned are you about climate change?
  - How concerned are you about ocean pollution?
  - How environmentally conscious would you rate yourself in your everyday life
  - What do you think is the most effective way for you to contribute towards improving pollution and/or climate issues?
  - How often do you partake in volunteering/community service?
  - If you do/have done volunteering work, what were your main reasons for doing so?
  - If you haven't what **WOULD** your main reasons be?
  - What would be your main reason for **NOT** doing volunteer work?

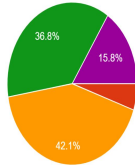


| K<br>What do we know?                                                                                                                                                        | W<br>What do we want to know?                                              | H<br>How will we learn it?                                                                                                                        | L<br>What have we learned?                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Ocean pollution is a growing environmental issue that affects</p> <ul style="list-style-type: none"> <li>❖ Marine life</li> <li>❖ Ecosystems</li> <li>❖ humans</li> </ul> | <p>What are the most significant sources of beach pollution?</p>           | <p>Research scientific studies and reports and the impacts</p> <p>Consult with experts in the field of oceanography and environmental science</p> | <p>Preventing and bringing awareness to ocean pollution required effort from individuals, businesses, and governments</p>                            |
| <p>Plastic pollution is concerning because of the longevity of degrading and harm it causes</p>                                                                              | <p>What can individuals and communities do to prevent beach pollution?</p> | <p>Browse websites of organization and initiatives focused on ocean and beach conservation</p>                                                    | <p>Cleaning the beaches and oceans involves a mass team effort and no one man can clean it</p>                                                       |
| <p>Plastic waste makes up 80% of marine debris</p>                                                                                                                           | <p>How effective will this be?</p>                                         | <p>Read news articles and interview founders or team members of other similar organizations</p>                                                   | <p>Effective ways to reduce plastic waste include reducing consumption, reusing items, recycling, and switching to more sustainable alternatives</p> |
| <p>The app rewards users for</p>                                                                                                                                             | <p>What type of clean-up</p>                                               | <p>Research and survey</p>                                                                                                                        | <p>College students get</p>                                                                                                                          |

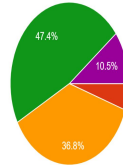
# Primary Market Plan

- For our Primary Market Research, we created a survey and sent it to student around campus.
- We asked students questions pertaining to environmental concerns alongside volunteering habits.

How concerned are you about climate change?  
19 responses

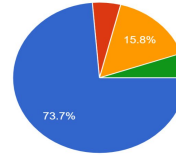


How concerned are you about ocean pollution?  
19 responses



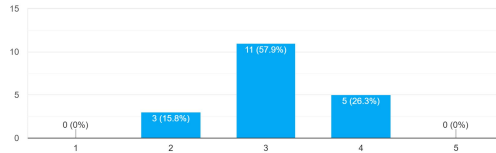
● Not concerned at all  
● Not very concerned  
● Somewhat concerned  
● Very concerned  
● Extremely concerned

What do you think is the most effective way for you to contribute towards improving pollution and/or climate issues?  
19 responses



● Being more environmentally conscious in my daily life, (Reusing/conserving items, eating less meat, recycling, walking, etc.)  
● Volunteering in clean-up community service or other environment-based or...  
● Donating to non-profit organizations/government services  
● Voting/supporting environment-friendly candidates/policies  
● Spreading Awareness Online

How environmentally conscious would you rate yourself in your everyday life? (i.e. recycling, using reusable shopping bags/other items, picking up litter...rbon footprint, eating less meat, etc). BE HONEST.  
19 responses



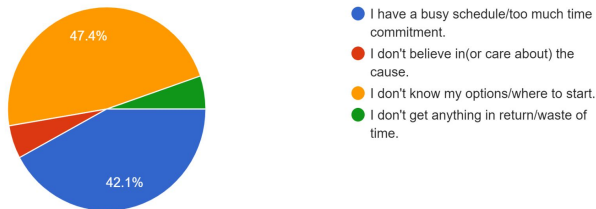
- Both Climate Change and Ocean Pollution were things students were relatively concerned with. **However**, there was **MORE concern for ocean pollution**.
- **Being more Environmentally Conscious** was the solution that people thought was the most important solution towards climate issues, leading with 73.7%. This was followed by donating to non-profit organizations, which was 15.8%.
- In terms of being environmentally conscious, **more than half** of people rated themselves as **3**, around 25% as a 4.

# Primary Market Plan Part 2

**Over 80% of people rarely do volunteer work.(Or not at all)**

What would be your main reason for NOT doing volunteer work?

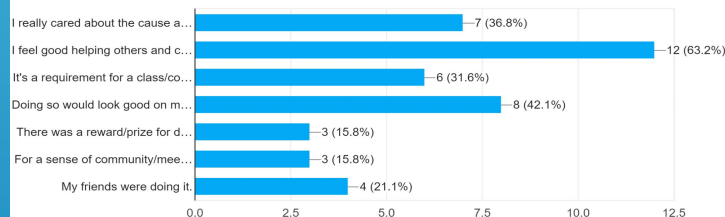
19 responses



The **top two** reason for not doing volunteering work were **split evenly** between **having a busy schedule** and **not knowing options/where to start.**

If you do/have done volunteering work, what were your main reasons for doing so? If you haven't what **WOULD** your main reasons be? (Choose 2 )

19 responses



The biggest motivator for doing volunteering work were:

1. Helping out/contributing makes people feel good about themselves - **63.2%**
2. Volunteering would look good on their resume/credentials - **42.1%**
3. Caring deeply about the cause - **36.8%**



## 02: Analysis



# SWOT Competitive Analysis

## Strengths

- Ethical Incentives
  - Offer useful ways to help against pollution such as community service hours

## Weaknesses

- App is reliant on community engagement
  - If users aren't incentivized by the rewards, they may not engage in environmental cleanup
  - User base is targeted towards college students

## Opportunities

- The points system could be expanded to include partnerships with businesses or retailers, offering discounts or other incentives to users who accumulate a certain number of points.
  - Giftcard to starbucks
- Students can show off their accumulated points to employers
- The project can use data collected from the app to identify areas where pollution is most prevalent, which could influence future environmental policy decisions.

## Our biggest threats

- Competition
  - Similar apps exist that challenge users to pick up trash and contribute to a cleaner environment
- Legal hurdles (users potentially roaming onto forbidden premises)
  - Trespassing
    - Example: "Pokemon Go!" resulted in users trespassing onto private property





# SweepSea Magic Quadrant



Ability to Execute

Completeness of Vision



## Our App

- SweepSea gives an opportunity for college students primarily in New Jersey to earn community service hours as well as a reward system that include gift cards and merchandise. This is so that these students have another reason to go out and help fight against pollution.

## Our Competitors

- Oceanhero serves as a challenger with their search engine that cleans one plastic bottle every five web searches. CleanSwell is an app that promotes environmental awareness by connecting users to the Ocean Conservancy's worldwide ocean trash database.
- Team Seas created by MrBeast is a strong leader as it's global campaign removed over 30 million pounds of plastic. The Ocean cleanup is also a strong leader as its been around for over 10 years cleaning up millions of plastic.
- Sea Change is placed in visionary as it is an educational app that help users learn about ocean plastic pollution and how to reduce their environmental impact.

## Where are we at?

- As a start up organization, we believe that SweepSea belongs in the niche category as we are still small compared to the rest of our competitors. We however offer a twist and a rewarding system when cleaning up.



## 03: Financials



# Labor Costs

## 1. Project Management: **\$40-\$150/hr**

- Oversees project, coordinates team
- Scrum Master: facilitates Agile development process.

## 2. Design: **\$50-\$150/hr**

- UI/UX Designer: creates app interface.
- Graphic Designer: creates visuals..

## 3. Development: **\$50-\$150/hr**

- Front and back
- -end Developer: codes app interface.
- Database Developer: designs and creates database.

## 4. Quality Assurance: **\$30-\$80/hr**

- QA Tester: ensures app quality.
- Automation Engineer: develops automated testing processes.

## 5. Marketing: **\$50-\$150/hr**

- Marketing Specialist: promotes app
- Social Media Manager: manages social media presence.

## 6.. Legal Support: **\$150-\$400/hr**

- Legal Counsel: provides legal advice.
- Patent Attorney: protects app's intellectual property.



# Hardware and Software Cost

## Hardware cost

- Computers: \$1,500 - \$5,000
- Mobile devices: \$1,000 - \$3,000
- Server hardware: \$5,000 - \$20,000
- Networking equipment: \$1,000 - \$5,000
- Printers and scanners: \$500 - \$1,500
- Testing devices: \$1,000 - \$5,000

## Software costs

- Development software: \$2,000 - \$10,000
- Operating systems: \$500 - \$1,500
- Database software: \$2,000 - \$10,000
- Cloud services: \$500 - \$5,000



# Workspace, Legal, Insurance, and Fees

## 1. Coworking Office Space

- Rent: \$6000/mo
- Amenities, Meeting rooms, Outdoor Space
- Furniture (not including tech) \$6000 single payment
- Cell phones \$70/phone and Lines \$70/phone

## 2. App Integration Fees

- Android Integration \$25 (15% commission)
- IOS Integration \$99 (30% commission)

## 3. Legal and Insurance

- General Liability \$2000/yr
- Cyber Liability \$2000/yr
- Error & Omission Insurance \$2,000/yr
- Utility Patent \$5000 one time
- Workers Comp \$10,600/yr for 20 employees
- Utility Patent \$5000 one time
- Devices Insurance \$2500/yr



# Cost Spreadsheet

| Team                                          |                       | Hardware                                      |                                      |
|-----------------------------------------------|-----------------------|-----------------------------------------------|--------------------------------------|
| Project Management Team(3)                    | \$83,000/yr/employee  | Computers                                     | \$5000 one time                      |
| Design Team (4)                               | \$95,000/yr/employee  | Mobile Devices                                | \$2,500 one time                     |
| Development Team (4)                          | \$100,000/yr/employee | Server Hardware                               | \$8000 one time                      |
| Quality Assurance Team (2)                    | \$60,000/yr/employee  | Networking Equipment                          | \$3200 one time                      |
| Marketing Team (2)                            | \$60,000/yr/employee  | Printers and Scanners                         | \$1500 one time                      |
| Legal Team (IP and Business Attorney (2)      | \$100,000/yr/employee | Testing Devices                               | \$1000 one time                      |
|                                               | <b>\$1,469,000</b>    |                                               | <b>\$21,200</b>                      |
| Workspace                                     |                       | Insurance + Legal + Fees                      |                                      |
| Coworking Space Rent 5,000sqft + Amenities    | \$72000/yr            | Android App Integration                       | \$25 one time + 15% in-app commision |
| Furniture (desks, chairs, boards, enrichment) | \$6000 one time       | IOS App Integration                           | \$99 one time + 30% in-app commision |
| Cell Service (3)                              | \$840/yr/line         | Worker's Compensation Insurance               | \$10,600/yr                          |
| Basic Phones (3)                              | \$70/one time/phone   | Utility Patent                                | \$2000 one time                      |
|                                               | <b>\$80,730</b>       | Insurances (Error, Cyber+ Gen. Liability      | \$6,000/yr                           |
| Software                                      |                       | Devices Insurance                             | \$2,500/yr                           |
| Development Software                          | \$5000/yr             |                                               | <b>\$21,224</b>                      |
| Operating Systems                             | \$800 one time        | <b>Total First Year</b>                       | <b>\$1,600,754</b>                   |
| Database Software + Support                   | \$2000/yr             | <b>Total Next Years (minus one time fees)</b> | <b>\$1,570,420</b>                   |
| Cloud Services                                | \$800/yr              |                                               |                                      |
|                                               | <b>\$8,600</b>        |                                               |                                      |



# Benefits for Our Audience & SweepSea

We are providing a new software and design using already existing technology. This limits our costs and strain on design.

We are a non-profit organization and our main goal is to support student and see the planet change for the better. This benefits the audience as it does us. We are attracting investors and corporations that offer grants to nonprofits.





## 04: Planning



## Summary Impact

### Target Audience

- We have scaled down our target audience to simply college students in New Jersey. There are plenty of students and beaches in the area, and it helps us to narrow down our reach as a start-up.

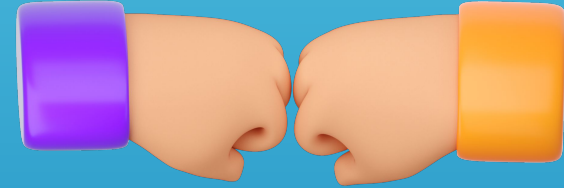
### Stakeholders

- Our stakeholders have changed! WE, the SweepSea team, are stakeholders. We would like to see SweepSea succeed.

**There are currently no changes our scope and pitch!**

# Team and Roles

|        | Primary Role                        | Secondary Role(s)     |
|--------|-------------------------------------|-----------------------|
| Fiza   | Presentation/Document Manager       | Financial Analysis    |
| Azizz  | Business Analysis/Context Modelling | Team Leader           |
| Darren | UX/UI Design                        | Market Research       |
| Lee    | Prototype Development               | Project Manager       |
| Mike L | Cross-functional process model      | UX/UI Design          |
| Mike F | Prototype Development               | Market Research       |
| Omar   | Business Analysis/Context Modelling | Market Research       |
| Jiawei | UI/UX Design                        | Prototype Development |

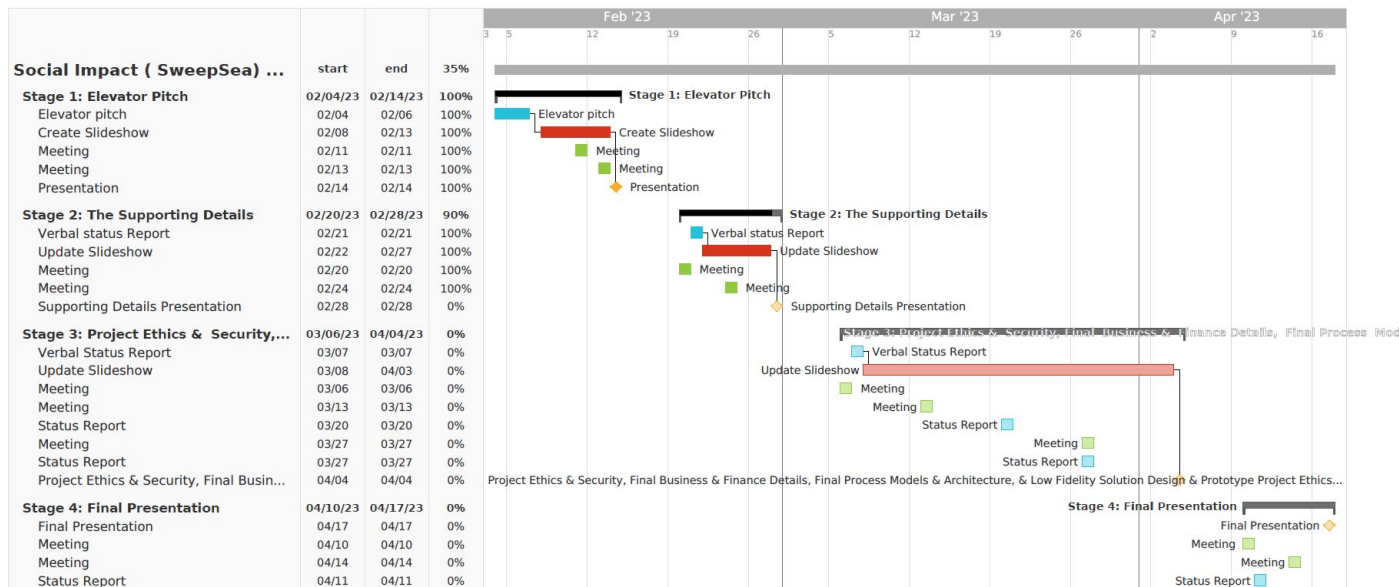


- **Blue:** Leadership and Management
- **Yellow:** Business Analysis
- **Green:** Solution Design and Development

# Stage 2 Expanded Gantt Chart

teamgantt

Created with Free Edition



The background is a solid blue color representing water. It is decorated with various white and light blue elements: small circles representing bubbles, several stylized fish of different sizes and orientations, and a white surgical mask floating in the upper left. At the bottom, there are dark blue silhouettes of coral reefs and a diver in a blue suit with a white tank, positioned near the center. In the bottom right corner, there is a celebratory graphic of yellow stars and lines, with the text 'CELEBRATION OF THE CENTURY' in a bold, yellow, outlined font.

# Project Plan: Next Steps

With the power of collaboration and support, we managed to put together strong research, financial plans. The SweepSea team is making good progress and are ready to tackle Stage 3.

CELEBRATION  
OF THE CENTURY



# Works Cited

1. <https://www.condorferries.co.uk/marine-ocean-pollution-statistics-facts>
2. <https://blog.padi.com/11-inspiring-quotes-thatll-make-you-want-to-protect-the-ocean/>
3. <https://www.nrdc.org/stories/beach-pollution-101>
4. <https://courses.lsa.umich.edu/healthy-oceans/group-1/group-1-sub-1/plastic-pollution-and-its-economic-damage/>
5. <https://www.sciencedirect.com/science/article/pii/S0048969722028054?via%3Dihub>
6. <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>
7. <https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/>
8. <https://ourworldindata.org/plastic-pollution>
9. <https://www.plasticpollutioncoalition.org/blog/2019/2/20/report-plastic-threatens-human-health-at-a-global-scale>
10. <https://repository.usfca.edu/cgi/viewcontent.cgi?article=1009&context=inom>
11. <https://som.yale.edu/story/2022/global-network-survey-finds-students-more-urgently-focused-sustainability#:~:text=A%20majority%20of%20students%E2%80%949452,the%20impacts%20of%20climate%20change.>
12. <https://www.businesswire.com/news/home/20180420005010/en/Survey-College-Admissions-Officers-Sponsored-x2VOL-Verifies>



The background is a deep blue illustration depicting an underwater scene. Several large, crumpled, translucent blue plastic bags are floating or sinking, dominating the upper and middle portions of the frame. Scattered throughout the scene are small, white, circular bubbles. In the bottom corners, there are dark blue silhouettes of coral reefs and seaweed. Small, white, stylized fish are also visible, swimming near the plastic bags. The overall composition suggests a message about ocean pollution.

**Thanks For Listening!**

\*\*\* start of Stage 1 \*\* upload with stage 2 slides

# SweepSea

Fiza, Omar, Darren, Lee, Mike F., Mike L., Jiawei, Azizz

- 



# Project Description

SweepSea is a NJ-based non-profit organization aiming to solve the problem of litter and polluted oceans by connecting people to an app that identifies pollution nearby and rewards for clean-up.

We want to see our planet get cleaner and see students get connected with community service easier.



# Project Pitch

SweepSea aims to reduce the effects of litter and polluted bodies of water by presenting an app is able to log and locate polluted areas in need of attention.

- Over the past years, climate change has been increasingly detrimental to the environment.
- Approximately 8 **million** tons of plastic enters our nation's oceans every year.

Sweepsea is a non-profit organization whose main function is presented via app available on both IOS and Android. SweepSea's vital users are college students in New Jersey that want community service hours. They can log polluted areas of concern, claim spots to clean up alone, or with a group.

SweepSea will require designers for the app, access to GPS/location, and phone cameras for capturing and logging areas of concern.

With college students all around the states, we're hoping to see less pollution and litter in America. **The change starts with U!**

# Data - Severity of Waste



- . Approximately 8 **million** tons of plastic enters our oceans every year.
- . There is an estimated 5.25 trillion pieces of plastic in our oceans as of today.



- . Around 1,000 species of marine animals get impacted by ocean pollution
- . 100 million marine animals die each year from plastic waste



- . Cigarette filters is the most common item from beach pickups
- . Approx. 3.5 million people get sick from water sewage from swimming, children being most vulnerable



# Data Continued...

Solid Waste , especially plastics, contributes directly to **greenhouse gas emission** through **methane** generation.



Methane has  
**21 times**  
the warming potential of carbon dioxide.



Microplastics **reduce** microalgae growth and photosynthesis. This greatly **reduces** plankton's ability to **remove carbon dioxide** from atmosphere.

Carbon Dioxide accounts for

**76%**

of all Greenhouse Gas Emissions into the atmosphere.



**\$255 Million**

**lost** in revenue in US due to plastic pollution in 2018 alone.





# Stakeholders



## Colleges

Colleges want to see their attendees succeed and want to provide students with meaningful resources



## Environmentalists

People and organizations who care about the planet are likely to support SweepSea



## Parents

Some parents seeking to help their college student find community service may support SweepSea

# Stakeholders Continued...



## Waste

### Management

Private companies that collect and dispose of waste, including those that specialize in recycling and composting



## Fleet Trackers

Tech companies that specialize in deploying GPS systems.



“The greatest danger to our planet is the belief that someone else will save it.”

—Robert Swan



# Target Audience

- Students in need of community service for honor society, college application, etc
- Fraternities and sororities looking for ways to take charge in their communities

# Scope

- As a startup in New Jersey, our SweepSea app aims to provide college students an incentive to engage in environmental cleanup.
- The app will operate through use of GPS for users to search for polluted areas and to log their findings.
  - An example of the app's reward system is the option to score points base off their logs
- We will have a dedicated server space to maintain smooth online functionality
- Will be available on iOS and Android smartphones for free.
  - High-level software such as xCode and Belatrix will be necessary for coding the SeaSweep application.
    - Costs roughly \$100 to develop
  - To enhance the user experience, SeaSweep will require UX designers to create an appealing design for the app
    - Gamification
      - Leaderboards to compare points with friends

# Team and Roles

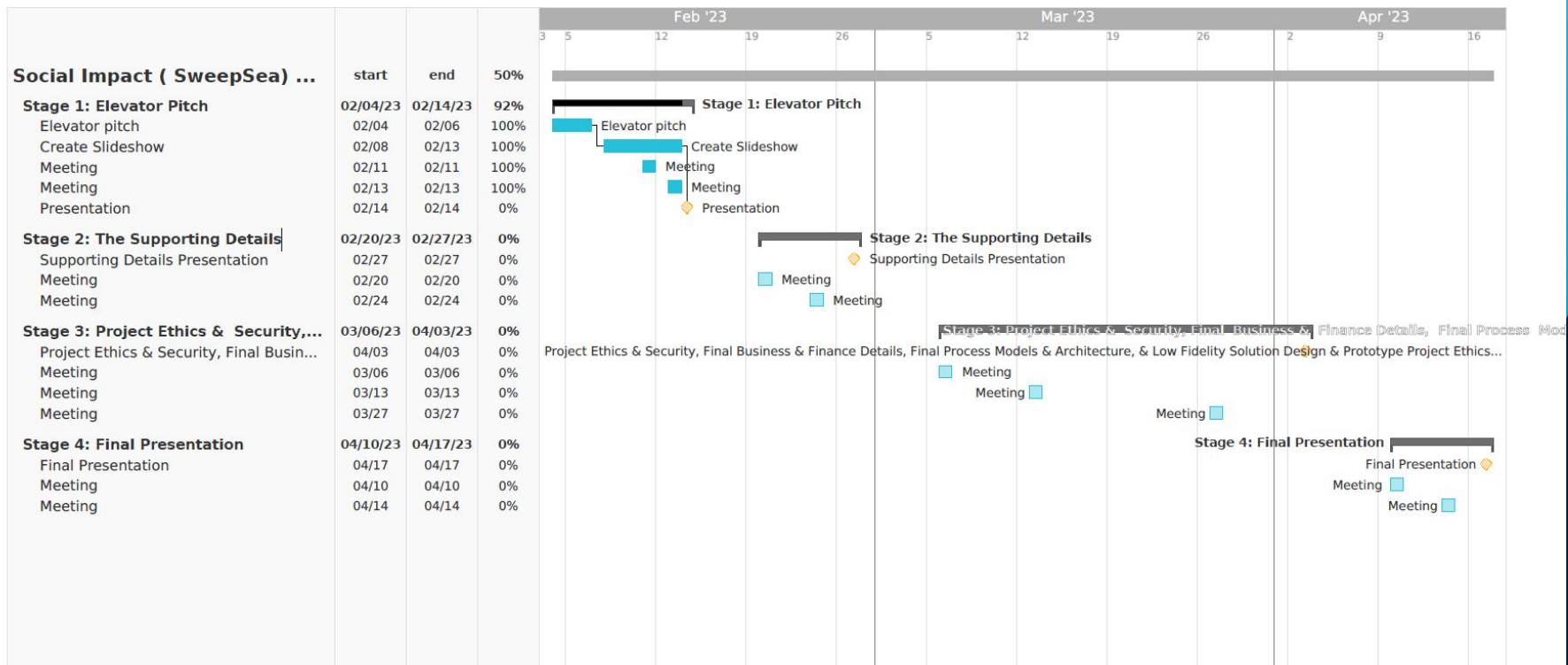
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- Blue: Leadership and Management
- Yellow: Business Analysis
- Green: Solution Design and Development

# Gantt Chart



Created with Free Edition





# Work Cited

1. <https://www.condorferries.co.uk/marine-ocean-pollution-statistics-facts>
2. <https://blog.padi.com/11-inspiring-quotes-thatll-make-you-want-to-protect-the-ocean/>
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5. <https://www.sciencedirect.com/science/article/pii/S0048969722028054?via%3Dihub>
6. <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>
7. <https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/>
8. <https://ourworldindata.org/plastic-pollution>
9. <https://www.plasticpollutioncoalition.org/blog/2019/2/20/report-plastic-threatens-human-health-at-a-global-scale>
- 10.

The background is a deep blue illustration depicting a polluted ocean. Several large, crumpled, translucent blue plastic bags are floating, filling much of the upper and middle portions of the frame. Scattered throughout the scene are small, white, cartoonish icons: a fish, a hand, a beach ball, and coral. The bottom of the image features dark blue silhouettes of coral reefs and seaweed. The overall tone is somber and environmental.

**Thanks For Listening!**