

Presentation #1

(Element A, B, & C)

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Element A: Identification and Justification



- Samohi with its 3000+ students has a problem with waste and waste management
- This is especially seen in food waste (cafeteria, trash cans) and paper towel waste (bathrooms)
- Our solution is one that is needed and could be very useful/wanted by schools, businesses and other organizations with a large physical presence in spaces.
- Compared to similar solutions, ours is the most environmentally friendly, easy to use/implement and cost effective.



Problem Statement ✓

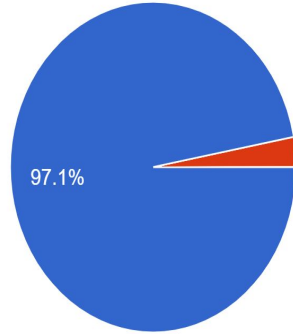
Becoming an expert ✓

Market research ✓

Survey #1 Results:

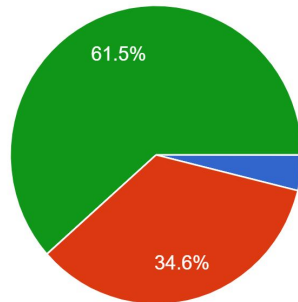
Do you see waste on campus?

34 responses



Where?

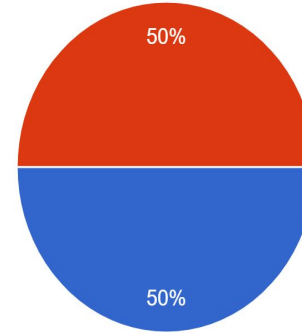
26 responses



● yes
● no

Do you know where the Trash goes at SAMOHI?

34 responses



● yes
● no

Conclusion:

- Waste is a problem on campus
- Many students may not have the proper knowledge to deal with waste

Element B: Documentation and Analysis of Prior Attempts



Past and Present Solutions:							
		Santa Monica highschool with its almost 3000 students has some problems with regards to waste and waste management. The bathrooms are often flooded with used paper towels and the food waste produced by the cafeteria is non negligible. The school also does not have a composting program to deal with the food waste and other compostable items. By fixing this problem, we can make our school more beautiful and by making changes when dealing with waste, becoming proactive in improving the environment	Environmentally Friendly	Easy to use/Implement	Cost Effective	Efficiency	Score out of 40
Authoritative Solutions		Past Solutions					
Source	#1	Garbage Collection Service	5	7	6	3	21
Source	#2	Trash Cans	5	8	7	3	23
Source	#3	Janitor	4	4	3	3	14
Source	#4	Recycling Service	7	4	3	8	22
Source	#5	Environmental Consultant	9	4	2	5	20
Source	#6	Waste Container	7	5	5	4	21
Source	#7	Paper Towel and removal accesory	5	6	7	4	22
		OUR SOLUTION:	9	6	8	8	OUR SCORE: 31
			Score	Score	Score		

Element B Conclusion:

- After comparing other solutions such as a garbage collection service, recycling service etc. our solution seems to be the one that can be most applied and achieved by Samohi and PLTW students.
- When using criteria such as Environmentally friendly, easy to implement, cost effective and efficiency, our solution scored a 31/40 while the average for other similar solutions was only a 20.4/40.
- Overall, we believe that our solution will be the optimal way for us to deal with the waste in Santa Monica High School.

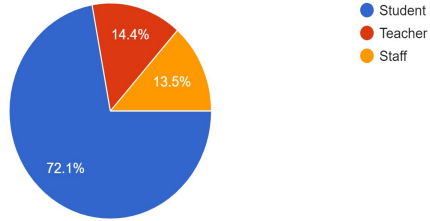
Element C: Presentation and Justification of Solution Requirements



- Our target consumer is the school, Santa Monica High School and all the staff and students who attend it.
- Our proposed solution is a waste management system that would be installed around the school to make it easier for students to throw away and sort their trash.
- This would allow for waste in Samohi to significantly reduce alongside having that trash be thrown away in an environmentally friendly way.
- We created a survey asking about the relevance of our solution and sent it to over 100+ students and staff.
- We also secured a mentor, Laura Moreno. She is a supervisor in the policy office at CalRecycle and has a background in food waste and measuring waste which will be very helpful for our project.

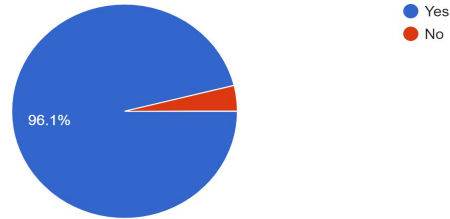
Are you a...

104 responses



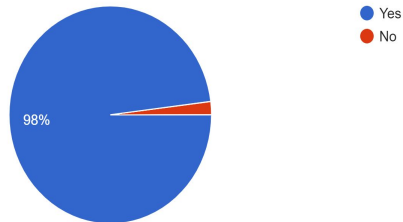
Do you think there is a lot of Paper Towel and Food Waste in Santa Monica High School?

103 responses



Are you willing to change the waste problem on campus?

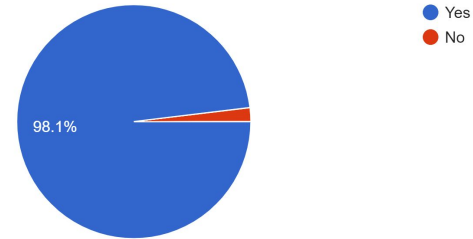
102 responses



Survey Responses

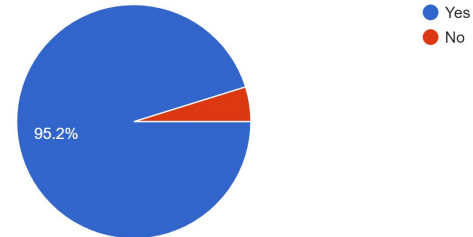
Would you be willing to separate your waste? Example: Throw excess food and napkins on your plate into a yellow trash can and then throw your plate away in a separate green trash can?

104 responses



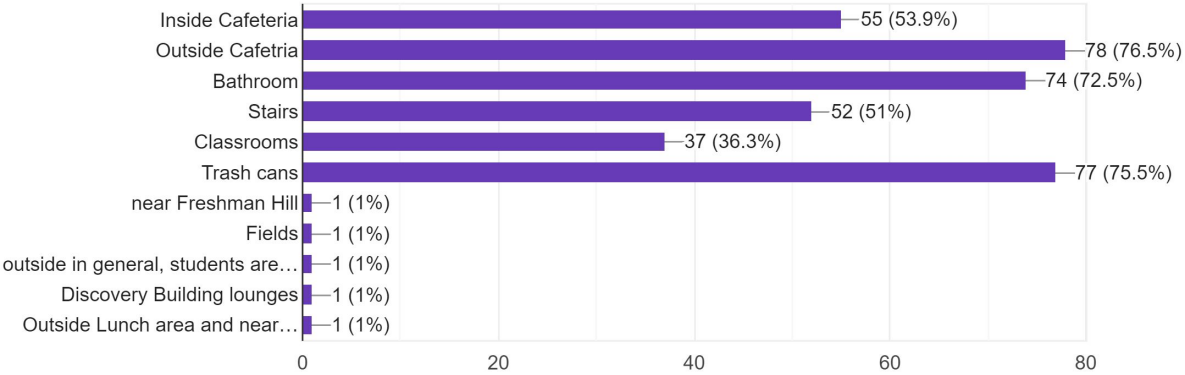
Would you be willing to throw your paper towel waste (such as the ones you dry your hands with) in a separate trash can from other bathroom trash?

104 responses



Where do you see the most trash/waste in SAMOHI?

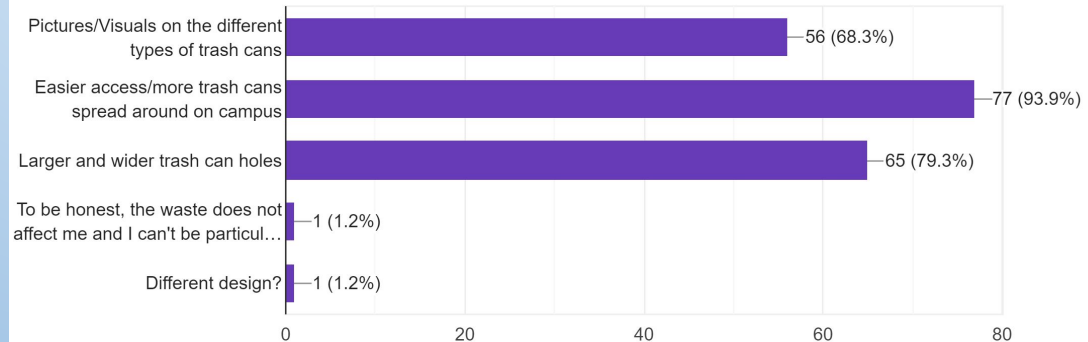
102 responses



Survey Charts

If you said no to the above questions, what would motivate you or allow you to throw your waste into separate trash cans?

82 responses



Survey Conclusions:

- Samohi does have a waste problem, specifically with food and paper towels (96.1% agree)
- Outside the cafeteria, Bathrooms and near Trash Cans themselves all see the most trash (76.5%, 72.5% and 75.5% respectively)
- Students ARE willing to solve the problem by sorting and selectively throwing trash (98%, 98.1% and 95.2% respectively)
- Adding visuals, having larger/wider holes and having more/easier access to trash cans around campus were all well received ideas and were supported by students (68.3%, 79.3% and 93.9% respectively)