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Business Strategy for Potential Sustainability Organizations of the Future

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Business Strategy for Potential Sustainability Organizations of the Future

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The University of Akron

Senior Seminar in Organizational Supervision: 2420 421

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Position & Organization Identification

Given that our senior honor's project is incumbent on a future position that doesn't currently exist, I felt a brief explanation of the potential advents of technology and political discussions was necessary to establish a proper identification. For my project, I've chosen to focus my research efforts on a position that requires several of both. Firstly, it is obvious, with the growing number of scientific journals and documentaries, that global climate change and the effects of pollution, particularly plastic in the case of my project, is becoming an issue that is reaching the mainstream consciousness of our society. The potential technological advancements that I have based my position on include a cost effective method of recycling ALL types of plastics, as well as a netting type of instrument that is capable of separating plastic particulates from water molecules, as the plastic in our oceans can range anywhere from large pieces to microscopic fragments. These two advents would be coupled with an adaptation of our current drone technology to underwater, submersible units, capable of carrying this netting and collecting large quantities of plastic.

The second defining factor to the position I've chosen has to do with the political realm. I believe that as a result of the Paris Agreement dissolution with the United States, there will be a point in time in the near future in which another international agreement will be met that involves a more comprehensive effort of sustainability practices than just regulating carbon emissions. Among these efforts would be specialized, cross-functional governmental task forces that are created to address specific environmental issues. In the case of my position, this task force would involve a cross-functional team of EPA scientists and Naval technological officers.

The individual position I've chosen is an Underwater Plastic Removal Drone Operator. It is a specialized position within the U.S. Navy that utilizes naval experience and resources, and works in direct contract with an EPA scientist to assess and remove the ocean's plastic buildup, beginning near our own coastlines, and working internationally outwards in a global effort to rectify our mistakes about the use and disposal of plastic.

- Position: Underwater Plastic Removal Drone Operator
- Organization: Governmental EPA/Naval Task Force
- Industry: Environmental Sustainability

Job Description

Job Title

Underwater Plastic Removal Drone Operator

Job Statement

Unmanned aircraft, known as drones, have grown exponentially in popularity due to their wide range of applications and greatly reduced risk of individual harm to the operator. This technology has been adapted for submersible units, to be piloted through bodies of water by qualified drone operators, in efforts to collect and dispose of the ocean's plastic particulates. This involves direct cooperation with an EPA scientist, the ability to safely launch and land

underwater drone units, as well as the ability to utilize sonar as a means of avoiding collisions and mapping path directions.

Essential Duties:

- Check drone for proper operation before launch and monitor its handling
- Plan routes for drone path and navigate them accordingly
- Utilize sonar technology to effectively cover large areas of ocean
- Collect plastic elements utilizing specialty netting technology
- Remove collected plastic elements and ship for recycling
- Perform preventative and concurrent maintenance on drone and netting
- Communicate and cooperate with EPA scientists
- Objectively report results to superiors in timely fashion

Job Specifications (KSAO's)

Education and Experience

The qualified candidates for underwater drone operations should contain:

- Associates in electro-mechanical engineering (Required)
- Bachelor's in related field (Preferred)
- Military experience highly preferred
- Computer expertise is preferred, with a focus on electronic systems management
- Mechanical maintenance background preferred
- Drone piloting experience preferred

Skills and Abilities

The position of underwater drone operator requires individuals that possess the following:

- Interest in remote/radio controlled vehicles
- Strong communication skills for conveying data effectively
- Ability to critically analyze information
- Strong problem-solving mindset to assess issues that arise during operation
- Strong attention to detail
- Background in computer technology and electronic systems
- Background in mechanical aptitude with a focus on electronics and submarine technology
- Computer expertise is preferred, with a focus on electronic systems management
- Mechanical maintenance background preferred
- Drone piloting experience preferred
- Team mindset
- Must be able to pass a physical exam and meet legal and moral standards
- Must meet citizenship requirements (see NAVY.com for details)
- If not a prior military serviceman, the ability to complete basic Navy boot camp and officer training is required
- Ability to undergo 10 week sonar training if applicable
- Ability to follow governmental chain of command
- Ability to multi-task and respond to several stimuli at once
- Ability to travel up to 50% for several weeks at a time for ocean surveying

Salary

Utilizing the U.S. military pay chart for naval officers, as well as another reference for similar job type in drone operations, my best estimate for this position 5 years from now would be approximately \$65,000-\$80,000 annually, based on experience and number of years as a military officer. The sources I've utilized can be found in my references excerpt, and I've factored in a relative income increase of 2% over 5 years of inflation. This is the annual base salary and does not include military benefits or pay allowances, such as sea pay, submarine pay, BAH allowances, etc. all of which would be administered based on qualifications, service requirements, and experience. Below is a printout of the 2019 monthly military pay for officers, source in the reference section.

2019 Active Duty Officer Basic Military Pay Chart

Monthly basic pay amounts are rounded to the nearest U.S. dollar and are for the active components of the Navy, Marine Corps, Army, Air Force, and Coast Guard.

Pay Grade	Years of Service				
	Under 2	Over 2	Over 3	Over 4	Over 6

O-8	10669	11019	11251	11315	11605
O-7	8865	9277	9468	9619	9893
O-6	6723	7386	7870	7870	7900
O-5	5604	6313	6750	6833	7105
O-4	4836	5598	5971	6054	6401
O-3	4251	4820	5202	5672	5943
O-2	3673	4184	4819	4981	5084
O-1	3189	3319	4012	4012	4012
Commissioned Officer With Over 4 Years of Active Service as an Enlisted Member or Warrant Officer					
O-3E				5672	5943
O-2E				4981	5084
O-1E				4012	4284
Warrant Officers					

	Under 2	Over 2	Over 3	Over 4	Over 6
W-4	4394	4726	4862	4995	5225
W-3	4012	4179	4351	4407	4587
W-2	3550	3886	3990	4061	4291
W-1	3116	3452	3542	3733	3958

Pay Grade	Years of Service				
	Over 8	Over 10	Over 12	Over 14	Over 16
O-8	12088	12201	12660	12791	13187
O-7	10164	10478	10790	11103	12088
O-6	8239	8284	8284	8755	9587
O-5	7268	7627	7890	8231	8751
O-4	6773	7236	7596	7847	7991
O-3	6241	6435	6751	6917	6917

O-2	5084	5084	5084	5084	5084
O-1	4012	4012	4012	4012	4012
Commissioned Officer With Over 4 Years of Active Service as an Enlisted Member or Warrant Officer					
O-3E	6241	6435	6751	7019	7172
O-2E	5246	5519	5730	5887	5887
O-1E	4443	4605	4763	4981	4981
Warrant Officers					
	Over 8	Over 10	Over 12	Over 14	Over 16
W-4	5453	5683	6030	6333	6622
W-3	4941	5309	5482	5682	5889
W-2	4649	4826	5001	5214	5381
W-1	4290	4446	4662	4875	5043

Pay Grade	Years of Service				
	Over 18	Over 20	Over 22	Over 24	Over 26
O-10 See Note 1		17240	17324	17685	18312
O-9		15079	15296	15610	16157
O-8	13759	14287	14639	14639	14639
O-7	12920	12920	12920	12920	12985
O-6 See Note 2	10076	10564	10842	11123	11668
O-5	8999	9243	9522	9522	9522
O-4	8074	8074	8074	8074	8074
O-3	6917	6917	6917	6917	6917
O-2	5084	5084	5084	5084	5084
O-1	4012	4012	4012	4012	4012

Commissioned Officer With Over 4 Years of Active Service as an Enlisted Member or Warrant Officer					
O-3E	7382	7382	7382	7382	7382
O-2E	5887	5887	5887	5887	5887
O-1E	4981	4981	4981	4981	4981
Warrant Officers					
	Over 18	Over 20	Over 22	Over 24	Over 26
W-5		7812	8209	8504	8831
W-4	6859	7089	7428	7706	8024
W-3	6261	6512	6662	6821	7038
W-2	5532	5713	5832	5926	5926
W-1	5198	5385	5385	5385	5385

Pay Grade	Years of Service
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	Over 30	Over 34	Over 38	Over 40
O-10	19228	20189	21199	Time for
O-9	16965	17814	18704	Retirement!
O-8	15006	15381	15381	Retire!!
O-7	13245	13245	13245	Retire!!
O-6	11901	11901	11901	Retire!!
Warrant Officers Over 30 Years of Service				
Pay Grade	Years of Service			
	Over 30	Over 34	Over 38	Over 40
W-5	9273	9736	10223	Make room
W-4	8184	8184	8184	you're old!!

Employment Ad

Job Title: Underwater Drone Operator - U.S. Navy

Location: Norfolk, VA, United States

Job Category: Environmental Sustainability Naval Officer

Posted: 11.15.2024

Age Requirements: Must be between the ages of 17 and 35

Job Description

The unmanned underwater drone operator is responsible for the safe and efficient operation and maintenance of naval submersible drone units. The primary objective of this position is to effectively utilize patented plastic netting technology to remove particulates from ocean waters in a bilateral effort in sustainability. This involves direct cooperation with an EPA scientist, the ability to safely launch and land underwater drone units, as well as the ability to utilize sonar as a means of avoiding collisions and mapping path directions.

Job Duties

- Check drone for proper operation before launch and monitor its handling
- Plan routes for drone path and navigate them accordingly
- Utilize sonar technology to effectively cover large areas of ocean
- Collect plastic elements utilizing specialty netting technology
- Remove collected plastic elements and ship for recycling
- Perform preventative and concurrent maintenance on drone and netting

- Communicate and cooperate with EPA scientists
- Objectively report results to superiors in timely fashion

Some of the Skills You'll Learn

- Navy chain of command practices
- Naval vessel operations, including fleet and submarine tech.
- Preparing maps, charts, and intelligence reports
- Analyzing sonar graphs
- Using computer systems

Helpful Skills

- Interest in remote/radio controlled vehicles
- Strong communication skills for conveying data effectively
- Ability to critically analyze information
- Strong problem-solving mindset to assess issues that arise during operation
- Strong attention to detail
- Background in computer technology and electronic systems
- Background in mechanical aptitude with a focus on electronics and submarine technology
- Computer expertise is preferred, with a focus on electronic systems management
- Mechanical maintenance background preferred
- Drone piloting experience preferred

- Team mindset

Through your training, you will develop the skills and experience to enjoy a civilian career with federal government agencies, including the CIA and NSA.

Earn While You Learn

Instead of paying to learn these skills, get paid to train. In the United States Navy, you will learn these valuable job skills while earning a regular paycheck and qualifying for tuition assistance.

Job training for an Underwater Drone Operator consists of 10 weeks of Basic Training, where you'll learn basic Soldiering skills, and 23 weeks of Advanced Individual Training (AIT).

Benefits/Requirements

Benefits

- Paid training
- A monthly paycheck
- Montgomery GI Bill
- Federal and State tuition assistance
- Retirement benefits for part-time service
- Low-cost life insurance (up to \$400,000 in coverage)
- 401(k)-type savings plan
- Student Loan Repayment Program (up to \$50,000, for existing loans)

- Health care benefits available
- VA home loans
- Bonuses, if applicable
- Most non-prior service candidates will earn between \$200 and \$250 per drill weekend, subject to change

Requirements

- Associates in electro-mechanical engineering (Required)
- Bachelor's in related field (Preferred)
- Military enlistment in the United States Navy
- Must be at least a junior in high school, or have a high school diploma or a GED certificate
- Must be between the ages of 17 and 35
- Must be able to pass a physical exam and meet legal and moral standards
- Must meet citizenship requirements (see NAVY.com for details)
- If not a prior military serviceman, the ability to complete basic Navy boot camp and officer training is required
- Ability to undergo 10 week sonar training if applicable
- Ability to follow governmental chain of command
- Ability to multi-task and respond to several stimuli at once
- Ability to travel up to 50% for several weeks at a time for ocean surveying

Requires military enlistment. Programs and benefits are subject to change.

All interested applicants are encouraged to submit a resume and initial application form at Navy.com, or meet an official Navy recruiter at your local recruitment office. Locations for all offices can be found at Navy.com

Actual MOS assignment may depend on MOS availability.

This position may qualify for a bonus.

Ask your Navy recruiter for the most up-to-date information.

Interview questions

Structured

1. Where does serving your country reside on the list of reasons you've applied for this position?
2. What experience, if any, do you have with the United States military, and are you prepared and willing to undergo basic and/or officer Naval training?
3. How much specialized individual training do you feel you would require to adequately perform the position's job duties?

Situational

1. What is the primary method you utilize to adapt when tasked with operating new technology?
2. What would you do if you were asked to perform additional duties in tandem with your essential position's roles?
3. How would you react to being asked to perform separate duties from a non-Navy government employee?

Behavioral

1. What is your relationship with past management in your prior work history? (Positions of authority for those without work history)
2. How would you describe your day to day relationships with co-workers or team mates?
3. Describe an instance in which you dealt with conflict with a co-worker or team mate.

Performance Evaluation

Trait Based Evaluation

	Unsatisfactory	Poor	Average	Fair	Excellent
Attitude					
Knowledge					
Initiative					
Punctuality					
Teamwork					

Though there is plenty of debate over the effectiveness and validity of trait-based graphic rating scales, I feel that they are still a solid starting point in evaluating employee performance. I believe the United States military would be much more goal oriented in employee appraisal than most, but having a quick checklist like the one above offers a relative understanding of the individual characteristics of each person. If two soldiers, for instance, wound up with essentially the same performance metrics after results based analyses, utilizing a graphic rating scale could shed light on the fact that one of them is much more team-oriented than the other, which likely could have greatly impacted the two having the same output scores. Just as utilizing a balanced scorecard analysis for a company's overall performance on more than just output performance, the same should be utilized for individual appraisals.

The 5 metrics for the trait-based performance I've included in the graphic rating scale are those I felt would be of the greatest importance to a team based, governmental organizational setting. Knowledge and initiative reflect highly on the personality of the individual at hand, while teamwork, punctuality, and attitude directly impact the organization as a whole. All 5 give a thorough look into how well trained, motivated, and engaged the individual is to not only their position, but to the mission and team mates they interact with on a day to day basis, an important thing to note as these interactions affect the performance of those around them.

Unsatisfactory and poor results in any metric requires immediate feedback and potential disciplinary action. Average to fair results require standardized feedback and potential incentivizing initiatives to attain higher performance in said area. Excellence is the primary goal to strive for in all metrics, and should be rewarded when consistently scored as such. As aforementioned, all metrics should be utilized in tandem with results based evaluations, and

developmental feedback is a constantly occurring soft mechanism that should be used as each individual is trained and operating on a day to day basis.

Results Based Evaluation

The results based evaluation would be administered across the following metrics:

1. Monthly PPM water test by EPA scientist for plastic particulates in areas of operation.

Results would be shown in a graph similar to the example shown below:

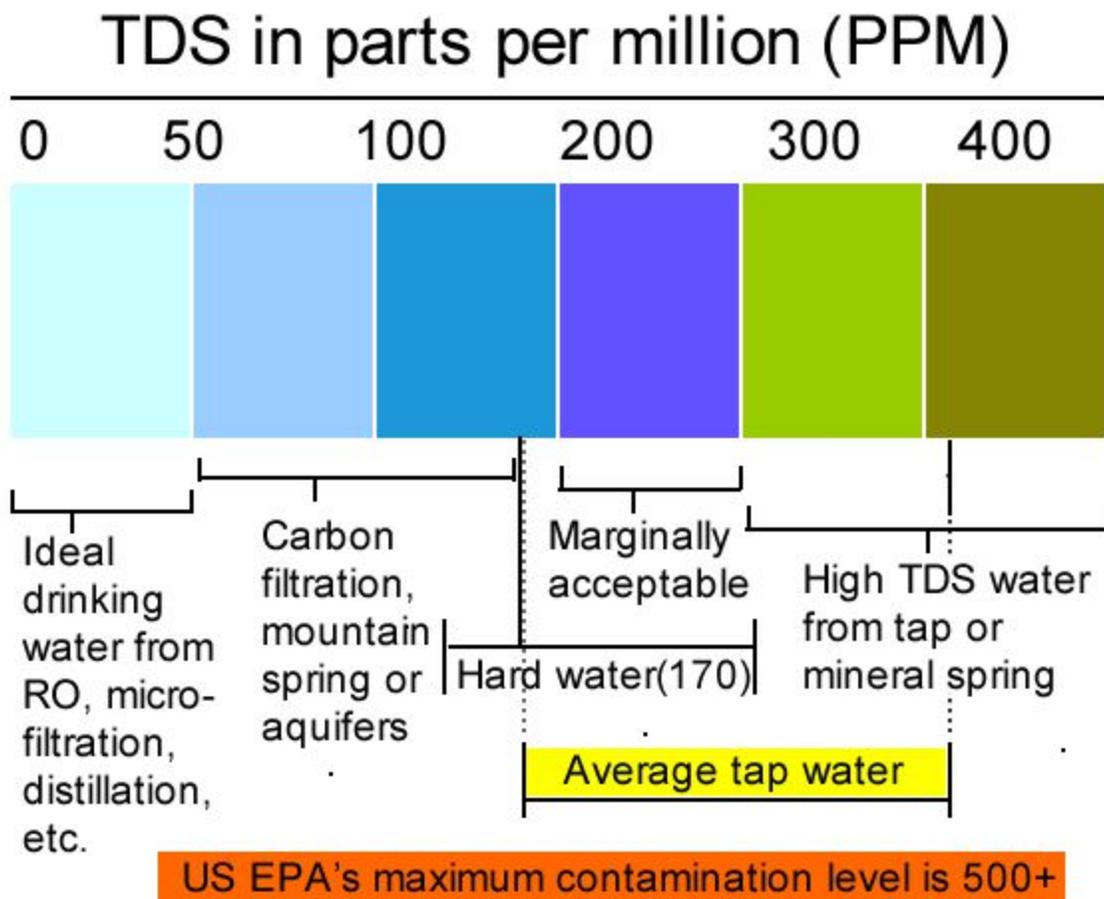


Chart values represent national U.S. averages. Actual TDS levels for geographic regions within the US and other countries may vary

2. Monthly weight goals of collected plastic particulates, based against the test operator of the position and other operators in the same field. 5% variance is acceptable.
3. Monthly totals of square footage of affected area the operator was able to operate in.
4. Monthly averages of total down-time for maintenance and unloading of collected particulates.
5. Monthly average of overall cost analysis against revenue accrued through plastic recycling efforts.

As this position does not currently exist, the above mentioned 5 metrics would be a good basis for results-based evaluation. There would of course be more technical aspects that would be ranked according to military grade performance, much of which civilians are not privy to. That being said, I felt that these 5 metrics would provide ample evidence for the necessity of the position in environmental sustainability, as well as the individual's performance in the field. Being a position based around an ambiguous field with few metrics of produced output, providing these facts and figures would be a sufficient guideline to continue such a governmentally funded operation.

As mentioned with trait-based evaluations, developmental feedback would be a constantly evolving and occurring phenomenon. I made performance metrics based on monthly appraisals not only for the sake of providing oversight with ample evidence to continue the operation, but also to instill the fact that more frequent evaluations and performance feedback is renowned for being more effective than annual assessments. These evaluations would occur not only by the direct supervising officer, but also by the EPA scientist assigned to the task force, as

well as additional co-workers and officers that interact with said individual, to provide a 360 degree appraisal for each candidate.

It should also be noted that, given the nature of the work and the fact that oceans are constantly in flux, eventually plastic will be removed from an area after sufficient operation has taken place. This should be assessed by EPA scientists and oversight and should be provided with evidence, such as covering the same square footage as previous months but resulting in less weight acquired. This by no means implies that the job is done, but merely it is time to move on to a different area for operation. The variables of these metrics should be taken into consideration each month of operation, and scientific research is paramount to continuing the operation in a cost beneficial manner, which for all intensive purposes, is not a responsibility of the given position.

To fully satisfy the requirements of the position, all the aforementioned metrics should be met with reasonable accommodation. Also of note, in terms of performance, is the efficiency in which the operator formulates plans for paths utilizing sonar and EPA guidelines. This is neither a trait-based or result-based standard, but I feel it is necessary to assess nonetheless. Accurately and efficiently mapping areas of concern lends itself to travel time and square footage achieved, but is directly affected by the work of the scientist assigned to the task force. This element of the performance must be based on the mutual teamwork and overall efficiency of the unit, as opposed to just the individual, so it should bear some amount of weight in the evaluation of both parties involved.

Bearing all metrics previously stated in mind, an overall score should be formulated using a weighted analytic approach for each element. Being that the military is a results based

organization, those 5 metrics would account for 50% of a 100% rating scale, each accounting for 10%. The trait based score would account for 30%, each category ranging from 1-6%, 6 being in the excellent category, and 1 being dismissable in the unsatisfactory category. Finally, the 360 degree feedback portion of employee assessment would account for the final 20%, with 10% based on the overall performance ratings assigned by peers, subordinates and CO's, and the other 10% based on the team effectiveness of the employee and their EPA counterpart, scored by one another and each member's direct supervisor. All opportunities for salary or position advancement would be based on this analysis, with anything less than 80% requiring direct supervisory feedback, and anything less than 70% requiring written documentation of potential dismissal. 60% or below is subject to immediate re-assignment and/or discharge from military service.

Code of Ethics

Department of The Navy Code of Ethics

All members of the United States Navy are required to adhere to the following principles:

- Place loyalty and defend the U.S. Constitution, the laws, and ethical principles above individual gain
- Behave in a fair and equitable manner in all facets of their lives
- Perform their job duties to the best of their abilities
- Utilize federal property in an efficient, equitable manner
- Report fraud, misuse of federal property, and/or corruption to appropriate authorities

- Fulfill, in good faith, all obligations as citizens and pay Federal, State, and local taxes.
- Comply with all laws providing equal opportunity to all persons, regardless of their race, color, religion, sex, national origin, age, or disability
- Represent the U.S. government in all manners of ethical conduct
- Actively promote and advance teamwork and the overall effectiveness of the entire organization

All members of the United States Navy are prohibited from the following:

- Use nonpublic information for individual benefit
- Solicit or accept gifts from any organization or organizational member
- Seek official action from DOD (unless permitted by an exception).
- Make unauthorized commitments that interfere with governmental position
- Use Federal property for unauthorized purposes
- Take jobs or hold financial interests that conflict with your government responsibilities

Confidentiality and Privacy Policy

Upon enlistment in any U.S. military branch, the applicant waives their individual rights for the duration of their enlistment. The United States Government requires a strict confidentiality agreement in perpetuity for all actional intel acquired by the individual while in service. The individual is subject to personal search and seizure at any time by the United States Government while actively enlisted and is not entitled to privacy at any point during their

service.

Violence and Drug Policy

The United States military has a zero tolerance policy in regards to workplace violence and drug use. Any illegal substance that has not been medically subscribed by a military physician found on the individual's person or in their system is grounds for immediate, dishonorable discharge, with no chance or reenlistment. Any individual proven to utilize violence toward another, both military and non-military, is subject to immediate, dishonorable discharge, with no chance of reenlistment.

S.W.O.T. Analysis

Strengths

1. Some of the world's most advanced technology
2. Military trained personnel and command structure
3. Largest amount of Government funding
4. Sole authorization to conduct business in the given field
5. Superior reputation

Weaknesses

1. Not profit-driven, leading to waste
2. Fixed budget for given field

3. Wide margins of accessibility for asset utilization
4. Rigid bureaucratic chain of command, leading to red tape
5. Past planning failures

Opportunities

1. No market rivals
2. Emerging technologies and advancements
3. Possibility to new markets in sustainability efforts
4. Political climate that bolsters program
5. Strong economy leads to more taxes and larger budget

Threats

1. New regulations
2. Diminishing market as plastic is removed
3. Changing market and/or political tastes
4. Political climate that limits program
5. Weak economy leads to less taxes and smaller budget

Strategic Plan

I personally would be more inclined to market this position as a private industry, but with the current, and most likely near future, environment of maritime law and governmental property claim of the world's oceans, it must be relegated to a public entity. With that in mind, I feel that the most effective way to formulate a strategy for this type of organization is to provide ample evidence that its existence is in the public's best interest. The majority of the issues with strategic

management for this function of the United States Navy revolves around the instability of the political and private economic climates surrounding the field of sustainability. The strategic method I would utilize to continue funding for this operation is to provide thoroughly detailed analytics of exactly how much plastic is being removed, its cost effectiveness, and most importantly, the subsequent environmental impact that the program has caused.

The biggest problem with sustainability efforts and environmental causes is that the vast majority of people, both public and private, are desensitized to the notion that if they can't see the changes being made, they don't matter. I chose to do this specific study because the severe issue of plastic pollution in our oceans was brought to my attention from an environmental science colloquium I took over this past summer. I will freely admit that I was oblivious to this problem until that class, which is relatively indicative of the population at large. The fact remains, however, that our worldwide ecosystem stems from the health of our oceans and waterways, and the organisms that inhabit them, and has unfortunately been declining for decades, due largely to our irresponsible dissemination of plastic.

Therefore, the other aspects of a strategic plan that I feel would instill the necessity of this program include R&D to advance the technology we have to not only increase the efficiency of the current operations, but also to further sustainability projects for future causes, as well as general education to the population at large. Environmental sustainability is not a good we can purchase, at least not until the world's resources become so scarce that only those who can afford them can have them. The objective of these types of programs is not to provide a good, but to ensure that all the goods others make can continue to be made indefinitely. That is the strongest point that can be made for any strategy plan of a sustainability operation, and can prove to be

highly effective when responsibly practiced with the aforementioned strategic initiatives.

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