

QR Cups – A UM Student Initiative to Reduce Single Use Plastics Manual by Grace Benyon, Jared Korotkin, Ava Schmidt, and Nicole Cuesta Casares

The University of Miami has an issue with plastics and recycling. Too many single use plastics are provided by the school to students on a daily basis, and there are limited options to recycle. The trash cans and recycle cans that sit around campus are all collected into the same container, and although campus is relatively clean, the lake and canals are littered with plastic pollution. QR Cups is an idea we created to help combat these problems. In order to produce less plastic, QR Cups advocates for the use of reusable containers, especially for drinks around campus, as plastic cups and straws are commonly seen littered. QR Cups would produce a QR code sticker for any student that wants to participate, so that they could put it on their own personal mug or reusable drink cup. That QR code would register them to the initiative, and could then be scanned at any dining area around campus that provides beverages for an incentive to the student, like \$0.10 off of every drink used with the reusable cup.

QR Cups was envisioned with the goal of combating climate change as well as addressing UN Sustainability Goals. Climate change is the consequence of anthropogenic activity, and plastic pollution is adding to this problem. For example, in 2015 over 5.9 million tons of CO₂ was released from the burning of plastic waste, which is equivalent to heating over 680,000 homes for a year. QR Cups aims to take away from that plastic waste by promoting reusable containers. The UN Sustainable Development goals that this initiative addresses are responsible consumption and production, and improving the quality of life on land and in the water.

The responsible consumption and production goal provides some alarming facts, such as if the population reaches a population of 9.6 billion by 2050, the equivalent of three earths would be needed to provide enough resources. The responsible consumption and production goal aims to achieve goals such as: by 2030 substantially reduce waste generation through prevention, reduction, recycling and reuse, and promote public procurement practices that are sustainable, in accordance with national policies and priorities. QR Cups addresses both of these goals, by encouraging reusable containers in light of the fact that it is hard to recycle on campus. In addition to this, the initiative would improve the quality of life on land and underwater at the University by reducing the amount of plastic pollution present.

Project Rationale

We believe that many students will be encouraged to join this initiative due to the fact that there will be two incentives. The first incentive is that campus will be cleaner, healthier, and more sustainable, which will be a benefit to all students, staff and wildlife on campus. Less plastic pollution also provides aesthetic benefits, which can help the University draw in more prospective students and encourage alumni to be connected to the beautiful school. The main incentive of the project though, is the discount students would be getting for each time they use their QR Cup on campus, which we have hypothesized to be a 10-cent discount on any drink that

they use for the cup at any beverage location on campus. This will provide a financial benefit as students can save money on campus.

Who is the project targeting?

The project targets college students and faculty, but it can also be implemented in other environments if wished; Our project idea is somehow helpful and straightforward, and that is its worth. The project is now targeting UM students and faculty specifically, and then we have to create something for UM. We firmly believe that this project could go along with many of the already existent green initiatives at UM since it encourages students and faculty to engage in an environment-friendly community in a creative and helpful way.

Where on campus will it be executed?

The idea is that this project will be all around campus, and that is also something positive about this project since we can target more people on campus because there is no need for it to be stationary. There will be points for cup refilling all around campus so people can fill their cups whenever they feel the need. It is an initiative that encompasses the whole campus and encourages people to engage in on-campus activities with rewards.

Will more team members be needed for implementation?

Yes! We are going to need help from other people to make this possible. The project is not something complicated or not much physical work is involved, but we are going to need some help from faculty and the board to put this project together on campus; we are going to need to work with the student senate.

Supporting Research

QR Cups will address various industry sectors. In addition to combating plastic pollution, QR Cups will promote a few UN Sustainable Development Goals, such as responsible consumption and production, as well as improving the quality of land and water. According to Our World in Data, there was 381 million tons of plastic produced in 2015. (2018) The global plastic waste that year exceeded the tons that was produced, due to waste from previous years. In the industrial sector, packaging is the primary producer and waster of plastics. In the same year, emissions from extraction and transport of plastic production were 9.5 to 10.5 million metric tons of CO₂ in the United States alone. Petroleum refineries, where plastic is made, is one of the largest producers of pollution. (2003) Such toxins caused by the petroleum industry is what enabled the creation of our environmental protection laws like the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, Emergency Planning and Community Right-to-Know (EPCRA), OSHA (Occupational Safety & Health Administration), TSCA (Toxic Substances Control Act), Oil Pollution Act and Spill Prevention Control and Countermeasure

Plans. Despite these various regulations, petroleum refineries pose a large threat to the areas surrounding their locations.

Refineries cause air pollution, water pollution, and soil pollution. Thousands of pounds of the toxic pollutants are released into the environment annually through normal and fugitive emissions, accidental release, or plant upsets. In addition, the combination of these toxins contributes to ozone depletion, which is one of the largest problems we face in the world today. QR Cups aims to address this issue by reducing the amount of plastic packaging used on campus.

The plastic packaging used by retailers on campus such as Starbucks, Jamba Juice, Panda Express, etc., are all made by petroleum refineries. The largest plastic producers on campus cause the most plastic waste. According to the University of Miami Roadmap to Plastic-Free 'Canes, there is a comprehensive path working towards a plastic-free campus. However, because the restaurants and retailers we have on campus are privately owned cooperations, they do not necessarily have to adhere to UM's plastic free guideline. (2021) They make their own supply decisions. Therefore, QR Cups allows for the student to create their own consumer choices, instead of waiting for the retailers to make the decisions for them. The implementation of QR Cups will also create a sense of community within the campus. There will be a visual representation – students will be able to physically see the change they are making by walking around campus. There will be no more overflowing trash cans of single use Starbucks cups, no more littered straws or lids floating in the lake and hidden in the bushes.

In order for QR Cups to be a success here on the University of Miami's campus, our group has made the decision to look inward, so as to be able to deal with any roadblocks on the path to a more environmentally conscious college. It is of utmost importance to our team members to roll out the QR Cup program using the most efficient, cost-effective, and sustainable methods of marketing and planning in order to ensure the program's long-term success.

When coming up with our plan of action, we needed to identify how best we could achieve our goal. What is the simplest, most effective, and most importantly, inspiring way to roll out QR Cups and get students to use them? We realized that effective communication between our cause and the student body, as well as stellar and accountable inter-group communication, is key to being rid of the environmentally damaging habits running rampant here on Miami's campus. Using these strategies, we feel we have come up with the best possible method of implementation.

ROADMAP

Create website for Students to visit and learn more about our new program designed to give students a way to sustainably enjoy drinks on campus at a discount

- a. We will use this site as the “basecamp” for all things QR Cups. This includes launch date, events happening on campus, special drink specific discounts, etc.
- b. FIRST TEAM MEETING; create site, discuss Chartwells.

Approach Chartwells with the intent of showing our research, budget, and the opportunity for the dining company to reignite excitement about visiting on-campus dining options.

- c. This is crucial in order to ensure that QR Cups will be able to be used at ALL on campus dining options.
- d. SECOND TEAM MEETING

Begin marketing around campus. Let it be known that an exciting new program is coming that will allow you to use your own travel mugs & cups!

- e. We have decided that focusing on the Freshman and Sophomore residential colleges and the food court/dining hall themselves will be the best way to get off the ground. This was decided because underclassmen are more likely to sign up for a new initiative, and their classes are large enough to have a sizable impact on the opinions of students around them. The dining areas will also be targeted, as this is the predominant area in which QR Cups will be used.
- f. THIRD TEAM MEETING; design marketing strategy, prepare for beta-test + launch.

Allow select students to sign up to be the first “beta-testers” of the QR Cups initiative.

- g. A select 100 students, who signed up during various marketing events and will be chosen at random based on a minimum interest level, will be the first to be allowed to use their own reusable cups at on-campus dining options. We plan to track the amount these students saved and show the University that they make money by offering a discount + not using as much plasticware that is purchased.

Allow Students to pre-register their cups for the launch day.

- h. The website will have a page added to it. This will allow students to, at long last, register their personal cups to the QR Cup database. You will then show a QR Cups representative team member your registration code, and you will receive your sticker!

QR CUPS LAUNCH!

- i. The day has finally arrived! QR Cups will launch, and following the above steps, will be a roaring success. Students will now be able to slap a QR Cup Code onto their mugs and cups and start receiving discounts for being an environmentally conscious student!

Below is a breakdown of how QR Cups would use the funds received in order to follow through with this project. The low cost of our actual product, the QR Code stickers themselves, allows us to focus heavily on marketing: (INCOMPLETE)

5000 flyers = 214

2 banner stands = 300

Website domain per year = 216

250 Posters = 195

Remaining 6075 dollars = QR Codes for many semesters and students to come!

QR Cups will allow students to make their own consumer choices. There will be a sense of community on campus because peers will be able to actively interact with the environment surrounding them. With QR Cups, we hope to encourage conscious consumerism and active sustainability.

If our team was awarded \$1 million, we could utilize these funds to implement this project in other college campuses or working environments. We would like this project to be considered by other institutions so the impact would be greater. Since this is not an expensive initiative, these could be easily implemented anywhere. Hopefully, we can create awareness among college students and faculty to see how the project is perceived.

Sources

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