



MSUS Culminating Experience

Spring 2023

Aramark's Expansion of Plant-based Food Options at Arizona State University

Team: New Norm

Melanie Chen MSUS Spring 2023

Markkus Pfirman Schlosser MSUS Spring 2023

Carli Van Valkenberg MSUS 2023



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I. Executive Summary

The Masters in Sustainability Solutions (MSUS) program at Arizona State University develops partnerships between community project “sponsors” and students in their final semesters in the program. Students combine project management skills with sustainability knowledge, to assist the project partner in exploring and achieving specific sustainability goals. This culminating experience is between the 2023 MSUS group “New Norm” and Aramark, the food service provider for ASU, known on campus as Sun Devil Hospitality.

Sustainability goals are engaged at many levels within Aramark, as well as with the organizations they serve. Aramark recognizes that plant-based foods play a crucial role in reducing the emissions associated with purchasing, but stakeholder perceptions and behavior are much harder to predict. One of the unique qualities of this partnership is the multi-directional learning and teaching opportunities, both as Sun Devil Hospitality continue to adapt to this changing demand, but also for students, who will benefit from learning about their foods through empowering tools.

Currently, Aramark partners with the World Resources Institute to design “Cool Foods” dishes, meals with low carbon footprints. They also have a long-standing partnership with the culinary department of the Humane Society of the United States to receive training in plant-based cooking techniques. While Aramark’s initiatives are moving them towards their goal, they have noticed difficulty in selling this way of thinking (and eating) to their consumers. Aramark has asked New Norm to help with current research and ideas in order to get the consumers excited about these new initiatives.

In our work with Sun Devil Hospitality on ASU’s Tempe campus, we observed a disconnect between the goals Aramark had set, and the awareness students had of these goals. Students report and demonstrate that they experience “knowledge gaps” at a higher rate than they face “access barriers” to plant-based food. Many students were reluctant to choose plant-based dishes, citing concerns about nutrition and taste.

The reports created out of this study outline industry-wide best-practices, before focusing on how Aramark can use their internal and external change drivers to promote innovative and informed progress towards their goals. Based on findings from surveying primary stakeholders at residential dining halls on campus, New Norm recommends a multi-tiered approach for engaging and promoting plant-based foods. Some of these recommendations include deeper, ongoing research into stakeholder behavior and needs regarding plant-based food and increased signage and promotion of resources to students. We expect that by aligning with students on goals like nutrition, access, and planetary health, Aramark can educate and empower this population to make informed choices. Marketing and promotion of plant-based ingredients in a way that highlights taste, availability, and nutritional value are crucial and practical elements to this project; these expanded recommendations, as well the full-length PBFPS survey report are available as supplemental reports.

Universities around the world are turning to plant-based foods to meet customer demand and to reduce the strain on food systems. Developing mid and long-term sustainability strategies looks different based on factors including organizational structure, stakeholder support, and resource allocation, among others. Ultimately, there is no “one size fits all” approach, however, organizations are eager to share their success stories and to teach and learn from others. Despite the wealth of resources dedicated to this issue, it will take time, patience, and a multitude of engagement techniques, to influence the long-standing beliefs of society. We hope that Aramark’s ongoing dedication to education and empowered decision-making at ASU improve the stigma and misinformation some students exhibit about plant-based foods.

II. Introduction

For this project, Aramark, Arizona State University’s (ASU) primary food service provider, is working to “increase plant-based purchasing on campus to align with ASU’s sustainability goals and efforts to maintain their AASHE STARS platinum rating” (Project Background Form, 2022), as well as lower their carbon footprint within their own company. Aramark is known as Sun Devil Hospitality on ASU’s campuses, and both ASU and Sun Devil Hospitality work on similar goals outlined by the Association for the Advancement of Sustainability in Higher Education’s (AASHE) Sustainability, Tracking, Assessment & Rating System (STARS) program. This is a ranking system for higher educational institutions of all sizes, based on sustainability metrics. One component of AASHE reporting includes promoting low-carbon transactions within food and beverage purchasing. Within AASHE’s Food and Beverage Purchasing section (Section OP 7), an institution can receive a maximum of six points for their efforts to “support sustainable food systems through their food and beverage purchases” (AASHE, 2019). These points can be earned by buying either sustainably/ ethically produced foods or by buying plant-based foods. While Sun Devil Hospitality has focused on sustainably or ethically produced foods AND increasing plant-based foods, this project's primary focus is to help Sun Devil Hospitality increase plant-based food purchases. By focusing on increasing plant-based foods in the five ASU dining halls, Aramark is able to pursue dual goals; increasing their AASHE STARS rating at ASU as Sun Devil Hospitality and lowering Aramark’s overall carbon footprint. Below is the scoring chart AASHE uses to assess an institution's points in regard to food and beverage purchasing.

Criteria	Factor		Percentage of total annual food and beverage expenditures on products that meet each criterion (0-100)	Points earned
Sustainably or ethically produced	0.06	×	_____	=
Plant-based	0.03	×	_____	=
Total points earned →				Up to 6

We formed the group “New Norm” after signing up for the Aramark team in the Project Management Class at Arizona State University in Fall of 2022. This group (Melanie Chen, Markkus Pfirman Schlosser, and Carli VanValkenberg) was excited to explore the potential for a more plant-based campus, and began exploring the landscape for plant-based food initiatives on other large campuses, as well as the proximal stakeholder perceptions of plant-based foods, and how Aramark can align their goals with informed strategy. Early in the project, we outlined three Guiding Questions in partnership with the Project Brief Aramark wrote prior to the team’s formation.

Guiding Questions:

1. What are the **existing best practices** for increasing plant-based food at other universities and corporate campuses?
2. How might these best practices **inform Aramark’s expansion** of ASU’s plant-based food options?
3. How should Aramark develop a pilot program and/or **engage critical stakeholders** to expand ASU’s plant-based food options? (Critical stakeholders in this case are students, faculty, staff on campus, the consumer base at cafeterias).

We explored these topics over the course of the academic year, first, by working to understand the current landscape of plant-based foods. We found that there are a number of reasons food service providers and diners alike are looking to plant-based foods, as well as a number of methods that have already been tested in large scale university settings. From these, we developed an investigative and practical approach to address the goals of this partnership. First, a comprehensive exploration of Aramark's current practices, compared to existing best practices, in the form of Landscape and TOWS Analysis (See Appendix B and A). This gave us the answer to our first two Guiding Questions, but we were still curious about how receptive students would be to plant-based foods, and how best to engage them (in this case, this report identifies primary stakeholders as the residential students who regularly utilize on campus or residential dining halls). Over the winter, we developed the Plant-Based Food Perception Survey (PBFPS) which was conducted at campus dining halls. Our results from this survey helped us further understand the best ways to engage these students, which informed the recommendations and tools developed for Aramark’s future use.

III. Literature and Foundational Knowledge:

Shared Values Inform Shared Goals

This project requires us to explore motivation within two groups: the motivation of food service providers to increase plant-based offerings, as well as the motivation of consumers to choose plant-based foods over animal-based products. We expect that leveraging the “common good” values of plant-based foods can be an engaging and powerful intersection that Aramark can optimize on. Aramark’s strategy as a company, as well as the goals for this partnership, are a merging of research and action, with a number of specific drivers of change. It is imperative that work for this project aligns with Aramark’s existing commitments while enhancing the service they provide to customers.

Internal drivers: ESG Goal setting, evolving to engage customers, meeting diverse customer needs- nutrition, preparation, ingredients.

External drivers: Market competition (within the food service industry), challenges associated with sourcing foods, regulations, cost, environmental health benefits of plant-based food, rapidly changing consumer demands.

Defining Plant-based Foods

Aramark uses language within their ESG Report which is important to distinguish and define, not only for this project but also for Aramark's future. Simple yet informative messaging, labeling and language is a vital consideration when engaging customers and building their comfort with plant-based foods.

'Plant-forward' and 'plant-based' are terms our team used in researching best practices and market trends. Aramark uses both terms in their ESG report and in the description of this partnership. 'Plant-forward' describes meals or meal items that are not exclusively vegan or vegetarian, but have a higher ratio of plant to non-plant items. 'Plant-based' is commonly understood as completely free from animal products, but it should be noted that these terms are not formally defined in literature- this adds to the confusion for the newly curious, but provides an opportunity for Aramark to educate consumers. In this project, and within ASU dining halls, the term "vegan" is used for items completely free from animal products (which is the common definition), and the term "plant-forward" is used for items primarily made of plants.

Sustainability and Plant-Based Eating:

Aramark's 'Be Well. Do Well.' commitment is articulated in their annual ESG report: it includes goals of reduced greenhouse gas emissions and improved equity (Aramark, 2021). Top sustainability, management, and higher-education journals support the urgency of moving away from the meat industry, and emphasize that this transition must exist both at a personal and societal level. There are more than enough metrics that correlate meat (especially beef) production with high methane and carbon emissions, exorbitant water usage, and an unsustainable supply chain (See Table 1). Plant-based foods have a variety of environmental and personal health benefits: including lower GHG emissions, less water usage, and often can be sourced at a much more local level than animal products. Plant-based foods can be fresh, simple, adaptable, and nutritious; and in 2023, there are more options available than ever before.

Table 1:

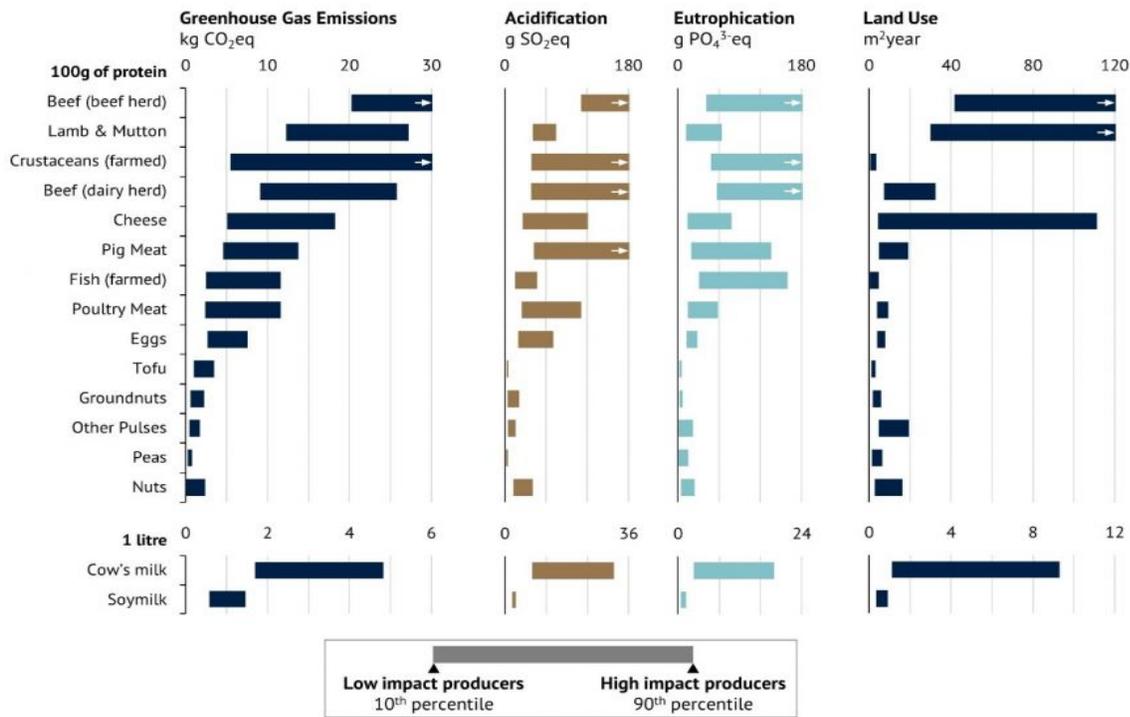


Table from University of Oxford article, 2018

<https://www.ox.ac.uk/news/2018-06-01-new-estimates-environmental-cost-food>

Challenges

The question of *why* consumers still hesitate to choose plant-based items is complex in nature and calls on proponents of plant-based foods to take a critical look at how “vegan” and “vegetarian” labeling influenced society’s perceptions of who *could* or *should* access them. Over time, plant-based diets have increased in popularity, but society never moved past the binary classification of foods as either being accessible for their “group” or not. Terms like “vegan” and “plant-based” have moved from being adjectives describing the qualities of the ingredients to categorical titles given to dietary groups. It is crucial that when re-imagining offerings and access, we remember that nutrition is a universal requirement, highly dependent on the qualities of plant-based ingredients.

While the truth itself is simple and undisputed from a nutrition, climate, and economic standpoint, the success of a single initiative to expand plant-based food options will not succeed without investment in engaging all stakeholders in the process. Understanding what makes plant-based foods more or less appealing to consumers, understanding what information students need to be provided to confidently make an informed decision, and how plant-based cooking can be re-imagined to be inclusive, rather than exclusive.

Despite the systemic challenges associated with large-scale change, we do know of a number of concerns reported among Americans surveyed. First, a lack of trusted resources spurs concern and misinformation about nutrition. Thirty percent of consumers feel that plant-based food doesn't give them the nutrient content they require, primarily, enough protein. Forty percent of consumers also cite “unfamiliarity with

ingredients” found in plant-based alternatives that mimic the taste, texture, or flavors of meat; while this suggests a desire to eat clean, simple ingredients, it shows the complexity of meeting the vast range in preferences, even within the world of plant-based foods (Solway, 2022). Addressing these issues, among others, is crucial to this partnership. Aramark has the power to both re-imagine access, as well as promote a much-needed dialogue within the ASU community, about the vital relationship between human and food systems.

Increasing Access for All:

Reimagining who can or should access plant-based foods starts with how plant-based ingredients are served and presented in dining halls. While there are dedicated vegan stations at all ASU dining halls, it is unclear who is accessing these stations and who is not, and the reasons behind these choices. Sun Devil Hospitality posts daily menus on their website, which allows users to filter for “vegan” and “vegetarian” among other meal types. The ability to access nutritious meals that align with one’s personal dietary needs is crucial to students who are living on campus, especially because much of the on-campus student population are first-year students, learning to independently meet their needs. Access to specific foods is important, but so too is the ability to access these foods without feeling that they are separate from “other” foods. Whether students are accessing plant-based foods for religious or health reasons or simply out of curiosity, they deserve the same resources and consideration as non-plant-based peers. The inclusion of plant-based dishes is vital to remind students that everyone can access and enjoy plant-based foods. Access is a value both of ASU and of Aramark, and with a student body as diverse as that of ASU, there is likely an untapped potential on campus, to connect communities using plant-based meals. One of the keys may be to integrate vegan foods into all the stations and increase access for everyone so people begin to perceive vegan foods as mainstream and not an alternative way of eating.

IV. Project Plan

Fall 2022

After forming the team and meeting with Aramark, we worked to define the Guiding Questions. This directed our focus, as we began to explore universities that have found success increasing plant-based options, similarly, we wanted to be mindful of the challenges they encountered, and make sure that Aramark had tools to address common challenges. This exploration is reflected in the Landscape Analysis (appendix B) and also in the TOWS analysis (appendix A). In November of 2022, we presented our findings to the Project Management class, and the Aramark project sponsors, as well as our plans for the following semester.

Spring 2023

New Norm worked with Aramark to develop a short survey and conduct it at a campus dining hall. The results from the survey and recommendations for ongoing engagement across various stakeholder groups can be found in the Plant-based Food Perceptions Survey as well as the marketing report..

At this point, we had insight into the needs of student diners and the potential for receptivity to plant-based foods. In-person observation of the setting and engagement with primary stakeholders gave New Norm insights into how the environment could be enhanced with educational signage. Our final Guiding Question involved creating and sourcing materials for Aramark **to engage stakeholders**, which we address in the Recommendations section of this report.

V. Findings

Aramark's goals of increasing plant-based options at ASU offer a number of inroads to hopeful partnerships between the ASU community and Aramark. The foundation for this hopeful outlook comes from Aramark, which, as a company, has set ambitious goals for its purchasing strategy, but the realistic outcomes from this project will be reliant on the ongoing partnership of Aramark and the ASU students.

Research

Universities and other large institutions have incorporated plant-based foods into their sustainability goals. Research and data collection in this area is still emerging, limited by regional challenges, resource availability, and constantly changing "best practices" to stay on the cutting edge of. Through our sustainability TOWS analysis (Appendix A) we discovered that Aramark has had difficulty marketing plant-based foods to students. We discovered in our Landscape Analysis (Appendix B) that many of the universities have had to address this issue as well and there seems to be no "one size fits all" solution. A lecture series by the U.S. Environmental Protection Agency has been able to highlight some of the efforts made by over a dozen individual universities (EPA lecture series, nd). We also look at Sodexo in our Best Practices report (Appendix C). One thing Sodexo does well is train chefs to focus on the "crave-worthy" qualities of delicious plant-based food while collecting continual feedback from stakeholders. For additional information about their efforts see Appendix "C".

Survey Insights

New Norm designed and conducted the Plant-based Foods Perceptions Survey in Spring of 2023. The full report explores the development of the survey and discusses the findings in detail. The survey gave us insight into consumer interest in plant-based foods. Our in-person sample and later QR Poster response groups showed different concerns that we can address.

At a high level, we were able to uncover specific barriers between the current offerings and the goals of expanding access to plant-based foods. We found that, while the majority of respondents are willing to increase the plant-based foods in their diet, they are reliant on the availability of these offerings, something that is in Aramark's control. Additionally, we found that students are hesitant to try plant-based foods on the basis of taste, and nutritional value. From these insights, we recommend that Aramark use marketing tools to educate, promote and engage students on these issues specifically. This lays the foundation of trust for students, and will be integral in the success of this project.

Working to better understand the nuance of this relationship meant exploring the ways in which it might be improved, and our group found that marketing tools should address the specific barriers uncovered in the survey. Students surveyed report access and availability as a primary barrier to increasing their own uptake of plant-based foods, a challenge that can be addressed.

Based on the results of the survey from ASU (see survey report for additional information) as well as the research conducted in the initial stages of this project we have created the following recommendations.

VI. Recommendations:

Early work in this partnership allowed New Norm to think broadly about theoretical frameworks, practical approaches, and ongoing strategies for Aramark, as they work to understand and influence customer food choices. After much research and using various tools such as a sustainability TOWS,

landscape analysis and best practices report (see appendix), we feel confident that the recommendations that are listed below will serve Aramark well while transitioning Arizona State University's dining halls to more sustainable, plant-based food offerings.

Component One: Focus on Taste:

In general population surveys, it has been shown that taste along with cost and convenience are foundational drivers of food choice (Szejda et al., 2020). Sun Devil Hospitality has a unique opportunity to increase plant-based meals because it can address two of these drivers automatically. First, Sun Devil Hospitality (Aramark) is specifically designed for on campus student convenience. Second, students pay a set price for a meal plan, prices do not fluctuate like they do outside of the campus experience. This leaves taste as the crucial element for Sun Devil Dining.

An anecdote illustrates this point. In an Environmental Protection Agency (EPA) lecture series, Dr. Christopher Gardner of Stanford was stunned that after 20 years of nutrition research people weren't following the science. He ran into Greg Drescher of the Culinary Institute of America who stated, "You're missing the whole point, you've sort of left taste out of this whole thing". Mr. Drescher believed in elevating the "Unapologetic Deliciousness of Food". This stuck with Dr. Gardner because he realized that as a public health researcher he had been apologizing for the taste of healthy food for years. At this moment he realized plant-based food can be amazingly delicious.

Taste will be one of the main components to a successful plant-based transition. Creating new and exciting plant-based meals and taste testing them on the ASU population will be a key component in increasing their plant-based purchases in order to lower carbon emissions. Once the foundational drivers of food choice are met, especially taste, consumers are then able to incorporate their higher ideals into food choice. Depending on the market segment these can include health, animal welfare, social impact, familiarity and sustainability (Szejda et al., 2020).

Once the taste factor has been sufficiently addressed, other barriers still come into play. While barriers differ by consumer segments, a main concern is nutrition. Adequate protein content is the main health concern, but there are other vital nutrients that people believe they can only get through animal products such as B12 and calcium. There are also social norms to overcome. Another barrier is societal beliefs about masculinity and meat. Some people have fear of new foods, and there's always just the basic enjoyment of eating meat. How do you change deeply ingrained beliefs and behavior patterns? How do we effectively reduce consumption? According to Dr. Maya Mathur, assistant professor at Stanford University, there are two ways: Educational Interventions, which provide people with reasons why they should choose plant-based foods and Choice Architecture Interventions which change the environment in which food is served in order to influence choice. We will discuss both.

Component Two: Education and Marketing:

The educational component needs to be focused on the biggest concerns and largest knowledge gaps. This is for people across the stakeholder arena. There are a large number of chefs and cooks (within the United

States), for example, that have not been trained in plant-based cooking. A lack of understanding can create poor morale and a reluctance to engage. Periodic and ongoing training is critical in working with a variety of plant-based foods. For consumers of plant-based foods, numerous studies have shown that a main concern of plant-based diets is a lack of protein. Also, a 2017 survey found that people were unaware of the impact eating meat had on the environment. This lack of knowledge in various areas may explain, in part, why consumers have been unwilling to reduce their meat consumption (Szejda, 2020). While trying to fill in the knowledge gaps and create interest in plant-based foods, the marketing team will need to keep certain principles in mind. Most marketing professionals are familiar with the “Rule of 7” which states that a person needs to see or hear an advertisement seven times before they will take action in relation to a product (Sunsplash Media Group, 2019-2021). However, since we are bombarded with more messaging in this day and age than we used to be, it can take up to five viewings for an individual to read an advertisement or marketing message, and it can take up to 20 views before a person starts considering its content (Red Crow Marketing, Inc. 2021). Commitment and consistency will be key in messaging to students about the benefits of plant-based foods.

Signs: Aramark has power over how they serve, display, and advertise foods. This can be done in ways that emphasize the plant-based options, but it also can educate consumers in the environmental impact associated with the options available (similar to Eco-Labeling). Signage can articulate serving sizes and model nutritionally complete plant-based meals. This is one of the simplest methods with high impact. Students are constantly visiting dining halls, and signage is an efficient way to promote, engage, and educate students even before they choose their food. If specifically appealing to meat eaters, for example, there can be a side by side comparison of a ¼ pound hamburger patty next to a ¼ pound Beyond patty so they can visually see the comparison. Any information given should have a simple message and be eye-catching so the consumer doesn’t lose interest. Information can be rotated every couple of days so there are always new “fun facts” to watch as customers are in line. As a side note, New Norm noticed that several of the screens in the Hassayampa dining hall were out of service. We recommend repairing these and using them as tools in Aramark’s pursuit of increasing plant-based foods.

Social Media: This tool can be used to gear marketing strategies to certain market segments. For example vegans and vegetarians are already on board with plant-based eating and could benefit from recipe ideas and new product announcements. Flexitarians (defined as low and medium meat consumers by The Good Food Institute) are more driven by health concerns and environmental impact than traditional meat eaters and could benefit from advertising the superior health benefits of plant-based food and the positive environmental and animal welfare impacts of plant-based foods. Marketing to traditional meat eaters may take more strategy to involve them in the plant-based movement. One idea is a blind taste test among plant-based doubters between an Impossible burger and a traditional burger. This allows the traditional meat eater to see comparisons in texture and mouthfeel on the way to increasing plant-based foods.

Social Media can also be used in other strategies to address social norms and masculinity beliefs regarding meat (Szejda, 2020). Sun Devil Hospitality can promote plant-based foods using prominent university figures such as athletes, leadership or student organizations to build excitement and engagement around a favorite plant-based meal. We would encourage using multiple traditionally masculine spokespeople (as well as others) in order to start challenging traditional stereotypes.

Lastly, social media can be used to promote limited time, seasonal and other special items. Use the platform to engage students and hold special plant-based focused events such as a viewing of “Forks over Knives” or blind taste tests on campus for example.

Events: This was touched on briefly in the social media section, but bears repeating. The more engagement the better. Consider partnering with various student groups such as Veg Out at ASU or perhaps a fraternity or sorority. Showings of documentaries that elaborate on the benefits of plant-based foods. Taste tests, recipe competitions. All of these things can encourage different segments of students at different times.

Education is a critical component of the overall transition to a more plant-based campus. However, even the most educated person in the world is subject to other factors such as personal tastes, environment, and other outside influences. For more marketing ideas directly related to the ASU survey, please see the Marketing Report. The next section addresses how to “nudge” a person towards a more plant-based lifestyle.

Component Three: Choice Architecture:

Choice Architecture refers to the process of influencing choice by designing the environment to impact decision-making. Setting up your environment to achieve success is a well-known strategy to help in many aspects of life. It can be as simple as a student having a designated homework space or surrounding yourself with colors that relax you. Setting up the environment for success will also be necessary for ASU to transition to a more plant-based culture.

Indulgent Labeling: Some interesting studies have been done on the impact of language on behavioral outcomes. What these studies found was that how you describe an item has a huge impact on the sales of that item, even if it is the same recipe described in different ways. For example, words that indicate an absence of something such as fat-free or meatless tend to turn off consumers. Rob Morasco of Sodexo told a story on an EPA lecture series of crabless crab cakes his company created for their plant-based food initiatives. At first, they were not selling, they changed the name to Chesapeake Cakes and the demand increased. The goal is to focus on the amazing things in a particular meal or entree, not name it for the items that are missing.

An interesting experiment with carrots was carried out by researchers from multiple universities. A carrot recipe was made and then labeled in three different ways. The recipe and the look of the dish stayed the same throughout this experiment. The only thing that changed was the name of the carrot dish. This experiment demonstrated that if you give carrots a health-focused name, in this case, “high fiber carrots”, people will order less than even if you just called them by the basic name of “carrots”. However, if you give it a taste focused, indulgent name, in this case “twisted citrus glazed carrots, carrot consumption increased. Across five universities the results were replicated. The researchers found that taste focused labels increased vegetable selection by 29% over health focused labels and by 14% compared to basic labels (Stanford University, n.d.).

Sun Devil Hospitality should avoid labeling things with potentially negative connotations. For example, in the U.S., we tend to associate the word “healthy” with poor tasting. Another example of limiting

consumers is if something has “vegan” in the name of the dish. New Norm is not suggesting that Sun Devil Dining eliminate the icons they use for people to be able to identify a dish as vegetarian or gluten free (for example), consumers need to be able to identify their food requirements. Our recommendation is that they avoid putting those descriptors in the *name* of the dish. People may avoid it because they perceive it’s for vegans or people who have gluten allergies (for example). Whether it’s vegan, vegetarian, kosher or whatever descriptor you may give it, it’s all food and Aramark will want to avoid names that potentially eliminate consumers from trying a particular dish. Focus on taste and creating indulgent, inclusive names for their dishes.

Greener By Default: Greener by Default is both a concept and an organization that works with institutions to make “plant-based food the default, while giving diners the choice to opt into meat/ dairy” (Greener by Default, 2023). Historically meat has been at the center of the plate and dishes were created to go with this meat. If the consumer wanted a vegetarian meal or some other option, they had to make a special request. The concept of plant-based food being the default and having meat upon request turns the old idea on its head, while still giving consumers the freedom to choose. A study done by Hansen, Schilling and Malthesen decided to see what happens when you make plant-based foods the default at scientific conferences in Denmark. Approximately 300 registrants were tested in randomized groups. Some groups were given cards that said there will be a meat buffet served at lunch (default) and if you want to opt out of the buffet and have a vegetarian meal they could do that. Other groups were told there would be a vegetarian buffet served at lunch (default) and if you wish to opt out and have a meat dish, that was available. What they found was that when the default was meat, 94% stuck with the default and only 6% opted for a vegetarian meal. Conversely, when the default was vegetarian, 87% of participants still stayed with the default and only 13% opted to have a meat dish (EPA Lecture Series, Stanford, 2021). While further study is needed, this shows promising results in creating a plant-based default.

Expanded Choices: Another way to impact decision making towards plant-based foods is by expanding plant-based offerings. Based on research by Dr. Emma Garnett of Cambridge University, doubling the availability of plant-based foods from 25% to 50% led to a 15% increase in plant-based foods being consumed (EPA Lecture Series, University of Cambridge, 2022). While further research needs to be done, this shows a promising tool to utilize while encouraging students to eat more plants.

Expanded choices can also refer to customizable dishes. New Norm recommends incorporating some of Aramark’s own ideas from the ASU Catering: Decidedly Green Menu (2023) into the dining halls. Specifically, the “BUILD-YOUR-OWN BOWL” section. There are a variety of options for people to choose from that can satisfy a wide array of tastes. The protein options have the plant-based proteins listed first. This aligns with the “Greener by Default” principle by focusing on the plant-based proteins first, without eliminating choice. Consumers at various levels of plant-based eating can all enjoy a customizable dish.

All of these recommendations are not to be administered in any particular order or to any particular degree. We encourage Aramark to build on the survey that was conducted and continue to get to know their customers through regular interactions and observations in order to determine which of these recommendations to focus on. These include both short-term goals and long-term commitments for Aramark. With the results from customer surveys, Aramark has an opportunity to “fine-tune” their

purchasing. This means, if students are requesting a certain type of non-dairy milk that Aramark does not currently offer, they can plan to order this type specifically. The longer term strategy Aramark will need to maintain is the integration of customer feedback and demand. Engaging with stakeholders is a crucial best practice for companies in the industry. It is a strategy which offers an answer to Aramark's goals of understanding trends and engaging stakeholders.

VII. Conclusion

While the environmental benefits of moving towards a more plant-based diet at the university level (and society at large) are becoming more obvious, there is still a lack of research as to the best way to influence consumers to embrace these changes. Through our research of other universities and institutions, we have discovered that there is no "right way" to begin this process. We discovered that every organization we looked at has taken a unique approach towards encouraging plant-based eating. There is no single option that will be effective, a pursuit such as this must use multiple tools and strategies in order to begin the process of a plant-based transition.

Through a survey analysis, we were able to conclude that ASU and Aramark need to focus on building a marketing system/plan for plant-based meals. Currently, there is minimal communication of the benefits plant-based cuisine holds with students. This lack of knowledge has caused students to turn their heads away from plant-based options. Aramark does have an array of vegan/vegetarian choices for students, however, this kind of diet is not being pushed or marketed in ways that intrigue consumers.

A project of this scale can not exist without larger structural support, and while we recognize that ASU is only one university that Aramark serves, we focus specifically on Aramark's ability to build robust networks with other food service providers and with primary stakeholders- the regular visitors to campus dining halls. This impact has the potential to have global influence, both due to the diversity of ASU's student body, and the multi-national reach of Aramark. The opportunity we see is the ability for Aramark to reinforce a system of marketing for students that would eventually be considered a best practice.

Changing behaviors and attitudes takes time. There is a need for both patience and persistence. Within these attributes are opportunities. Aramark will be challenged to innovate and create more plant-based and plant-forward meal options, and increase marketing and education about these options: why they have lower carbon footprint, how they can be nutritionally comparable or superior to traditional meat-based dishes, and how students can make informed decisions in making their own plant-forward choices. These opportunities can create the next plant-based revolution.

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Note: Slide number 16 in the corresponding presentation to this report was created by Dr. Christopher Gardner of Stanford created for an EPA lecture series.

<https://drive.google.com/file/d/1a7TmVQGQGa5oVxj8TPFqsV6wbN3l2lQp/view>

IX. Appendices:

Sustainability TOWS Analysis (A)

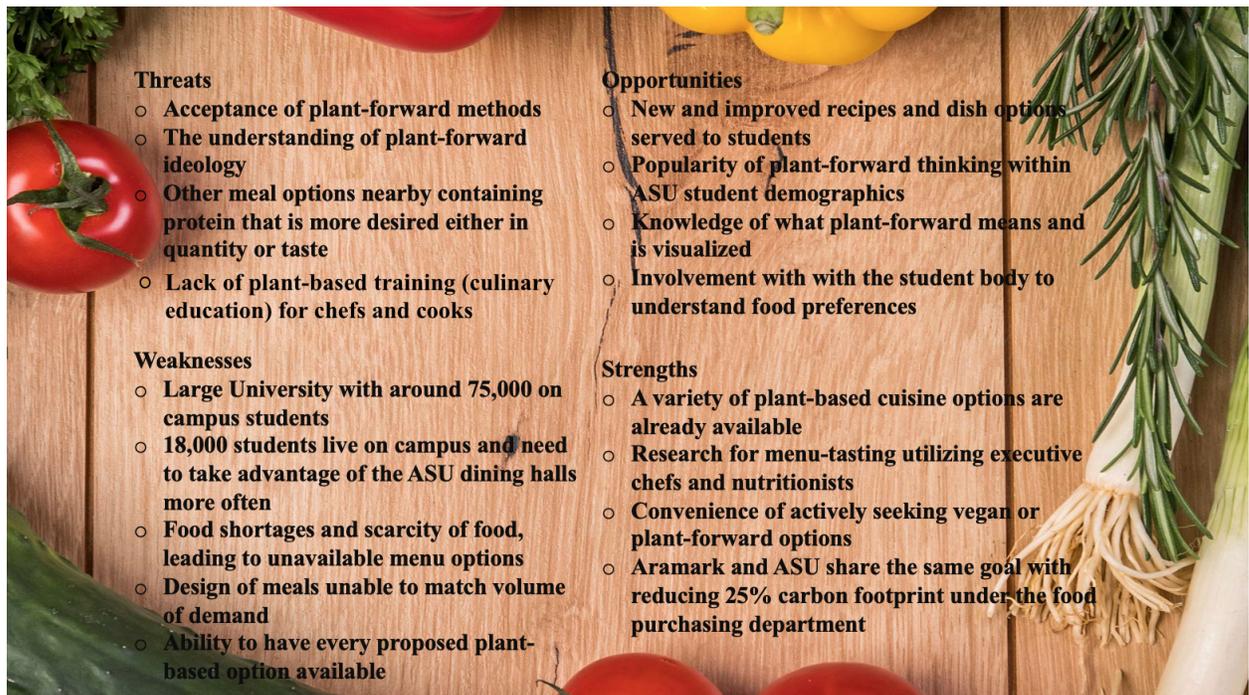
Landscape Analysis (B)

Best Practices (C)

Appendix A: Sustainability TOWS Analysis

New Norm conducted a TOWS analysis, as a tool to merge existing best practices with the unique threats, opportunities, weaknesses and strengths that Aramark experiences. As opposed to a traditional SWOT analysis, the TOWS analysis shifted perspective from internal to external because Aramark is dependent on a network of connections and partnerships from procurement to service. In discussions with Aramark contacts early in the project, we gained clarity on how their strategy is informed by customer demand, but exists within the complex network of purchasing, planning and purveying. We came to an agreement for each main concern and positive attribute within the TOWS analysis. Table 2 below is a visual TOWS analysis of New Norm performed with Aramark.

Table 2:



<p>Threats</p> <ul style="list-style-type: none"> ○ Acceptance of plant-forward methods ○ The understanding of plant-forward ideology ○ Other meal options nearby containing protein that is more desired either in quantity or taste ○ Lack of plant-based training (culinary education) for chefs and cooks <p>Weaknesses</p> <ul style="list-style-type: none"> ○ Large University with around 75,000 on campus students ○ 18,000 students live on campus and need to take advantage of the ASU dining halls more often ○ Food shortages and scarcity of food, leading to unavailable menu options ○ Design of meals unable to match volume of demand ○ Ability to have every proposed plant-based option available 	<p>Opportunities</p> <ul style="list-style-type: none"> ○ New and improved recipes and dish options served to students ○ Popularity of plant-forward thinking within ASU student demographics ○ Knowledge of what plant-forward means and is visualized ○ Involvement with with the student body to understand food preferences <p>Strengths</p> <ul style="list-style-type: none"> ○ A variety of plant-based cuisine options are already available ○ Research for menu-tasting utilizing executive chefs and nutritionists ○ Convenience of actively seeking vegan or plant-forward options ○ Aramark and ASU share the same goal with reducing 25% carbon footprint under the food purchasing department
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Strengths and Threats:

New Norm found several factors that gave complimenting solutions to the external threats observed. With Aramark already purchasing plant-based and vegan options, this allows students a gateway to understand plant-forward ideology. This is achieved through visually appealing posters and advertising on station monitors to entice and educate students on the plant-based menu options available.

ASU's diverse selection of plant-forward options pairs with a convenience factor. This factor comes with availability and having the option of choosing plant-forward meals. With plant-based dishes being a convenient choice for students, this allows knowledge of this method of eating to be shared. Aramark's goal is that students will gravitate towards the plant-based and plant-forward options, considering their involvement in the development of the new menu items. Aramark and ASU share the goal of lowering their food purchasing carbon footprint by 25%. Though the competition with meat protein is extremely strong, new strategic marketing techniques have the ability to incentivize students to choose a plant-forward option rather than a competing dish.

Weaknesses and Threats:

Aramark's commitment to long-term goals and wealth of resources made it difficult to see obvious weaknesses and threats to the project. Despite this, we observed the structure of both ASU and Aramark to be large, decentralized, and difficult to engage with. Luckily, we were able to compare external threats to internal weaknesses in order to optimize the impact of this project. ASU is the largest university in Arizona. Though our project will focus on one campus, Tempe, food service providers and universities need to consider the expansion of plant-forward methods to other Universities. The main concern is; can this be expanded to a larger-scale level? ASU is a huge institution, how do we transition the mindset of thousands of students? Do the chefs of Aramark have enough training and experience with plant-based cuisine to have a project like this succeed?

Internal Strengths and External Opportunities:

The internal strengths and external opportunities this project presents bring value and optimize the abilities of what can be achieved. The involvement of nutritionists and executive chefs in menu tasting should add substantial knowledge and expertise needed to create delicious dishes while alleviating any protein or nutritional concerns. The goal is to entice and incentivize students to choose plant-based and plant-forward dining options. With help from a dietitian, proper information and data points on certain dishes will be communicated to students through signage. This allows students to gain an understanding of the dish compared to something non-plant-based like a hamburger. Finding vegan and plant-based foods carries a convenience factor with dining on campus. In turn, since this option is made to be an easy choice, the popularity of students purchasing these dishes will most likely increase.

Internal Weaknesses and External Threats:

Considering the internal weaknesses and external threats within this project, one of the main issues we found is that the design of meals is not being communicated in a way that creates excitement within the student body. With improper communication to students of Aramark's efforts to increase the amount of offered plant-based dishes in dining halls, progression has been minimal. In order to solve this, extensive marketing techniques need to be considered in order to broadcast Aramark's goal of reducing their carbon footprint by 25% to ASU students.

Takeaways

Through this TOWS analysis, our group was able to identify and find solutions to certain weaknesses and threats observed. The main factors to consider is how large ASU is and the difficulties that come with properly marketing plant-based cuisine to students. Through strategic advertising techniques, these weaknesses and threats can be minimized moving forward. The strengths and opportunities observed are able to be optimized by proper research and communicating plant-forward thinking to students effectively.

Appendix B: Landscape Analysis

A landscape analysis is a method of uncovering and understanding the broader networks in which Aramark operates. As a tool, it can give Aramark an understanding of the competitive landscape by answering questions such as: Who else is doing what you want to do? Who is doing it well? Is there an opportunity to fulfill a need (Maricle, 2018)? We began our landscape analysis by trying to answer these questions.

Since a key component of Aramark's goal is to create a demand for plant-based meals, we began by studying the attitude of college-age students toward plant-based foods. In recent decades, people are taking notice of the advantages of eating plant-based food. Social media and on-demand videos reach a wide audience and inform them about the benefits of eating plant-based. This is especially true of college-aged people and young adults - some of this project's primary stakeholders. These audiences are able to learn about the issues that meat and animal production create, including environmental, health and animal welfare concerns (Kim, 2022). Thanks to this increase in awareness, many universities are taking notice of their students' desire to eat more plant-based products and less meat. In response to this new consumer demand, nearly 70% of colleges now have vegan options for every meal of the day (Smith, 2022). Similarly, approximately 140 U.S. institutions have introduced "Meatless Mondays" (Schwartz, 2019). There are also articles on various websites that list and rank colleges that are the most vegan/vegetarian-friendly. U.S. News and World Report published an article titled "Colleges Catering to Vegetarians" and College Magazine has "The Top 10 Vegan-Friendly Campuses" and even PETA has a "Vegan Report Card" rating U.S. Universities. These initial findings helped New Norm determine that universities understand the urgency to create plant-based meals due to changing demand, and also to support global sustainability efforts.

New Norm then began research to see if universities helped encourage plant-based eating, or if they were just responding to the perceived or actual demands of students. If they are only responding to demand, it would be difficult for Aramark to introduce more plant-based meals into ASU's dining halls without creating new demand. Therefore, we searched institutions that had more plant-based eaters and more vegetarian meals consumed than the national average. We found similar rankings exist telling us which universities have the most plant-based eaters. However, we were unable to determine if the students who come to these vegan and vegetarian-friendly schools are already eating vegetarian due to cultural, demographic, or geographic influences or if the universities have any programs or educational services that encourage their students to eat more plant-based. While we did find some schools that had robust vegetarian menus and sustainability practices that were geared towards plant-based eating, it was difficult to determine what practices these schools actively engaged students in. Upon further exploration, we discovered a lecture series given by the U.S. Environmental Protection Agency that highlights individual universities' efforts and research toward transitioning to a more plant-based campus. This series provided a wealth of information on specific actions that some universities have taken to promote plant-based foods that we were unable to find on the websites of the universities themselves. Some of the research and strategies are highlighted in our recommendations to Aramark.

We then re-focused our research: away from parallel practice, and toward direct competitors in the food service industry. We turned to Aramark's main competitors that provide meals to collegiate consumers, Compass Group and Sodexo, to see *if* and *how*, at a corporate level, they were trying to actively engage their consumers to eat more sustainably by encouraging plant-based meals.

Compass Group actively promotes plant-forward eating in their Sustainability Report. In Compass Group's United Kingdom and Ireland business, they recently concluded an Eco-Labeling pilot project that saw positive shifts in consumer behavior towards plant-based protein. They are currently working on rolling out additional trials with more sites. Compass Group is also committed to reaching net zero greenhouse gas emissions by 2050 (Compass Group, 2021). Based on Compass Group's sustainability report, their efforts seem to be geared towards educating the public on the planetary impact of their food choices in order to get consumers to change their behavior.

Sodexo also is working on creating more plant-based meals in order to decrease their greenhouse gas emissions. Sodexo's current goal is to have 33% of planned menu offerings be plant-based globally by the year 2025. Currently, they are conducting "Plant Based Takeovers" in the approximately 140 U.S. universities they serve. These "Plant-Based Takeovers" partner with the Humane Society of the United States to train their chefs in preparing and cooking a plant-based menu. Sodexo kitchen staff prepare plant-based dishes for every station in the university's dining hall during these events, which are marketed and promoted on campus. The final and crucial element Sodexo integrated into their "Plant Based Takeovers" is the inclusion of feedback given by Faculty, staff and students. Sodexo uses this feedback to determine which dishes might become permanent fixtures on the menu.

Based on our research, every university and food service provider involved in transitioning to plant-based foods has its own path that they follow, and currently, much research is being done on the best ways to achieve consumer buy-in.

Appendix C: Best Practices

Best practices are techniques and strategies used by organizations that are proven to yield superior results compared to other methods that may be outdated or unproductive. Adopting such practices in one's organization can improve productivity and potentially reduce the risks of decision-making.

We found Sodexo's strategies for increasing plant-based foods superior to other institutions we researched. They seem to understand most of the barriers to plant-based eating and set out to address them while "always start(ing) with the customer". Sodexo understands that not every customer is in the same place when it comes to embracing plant-based foods, from vegan to flexitarian to avid meat eaters, all types of consumers need to be considered when creating plant-based offerings. To this end, Sodexo aims to make their plant-based meals "appealing, approachable and accessible" in other words, customers know what an offering is, they understand it and it looks delicious. Sodexo understands the importance of making food "crave-worthy" (EPA Lecture Series, Sodexo, 2021). Getting feedback from their customers is a top priority to see if their recipes are successful.

Sodexo also partners with the Humane Society of the United States (HSUS)*. Sodexo chefs and cooks have done dozens of training sessions with the culinary team at HSUS. Sodexo feels actionable training will help on-site chefs and cooks gain confidence in plant-based cooking. Once these individuals have a better understanding of the importance of plant-based foods and the best ways to cook them, they will be excited to help sell this way of eating.

Sodexo is also paying attention to the science behind plant-based food consumption. They pay attention to what they name their plant-based dishes since new studies show that naming a plant-based food with a "healthy" (i.e. high fiber) or "restrictive" (i.e. meatless) label decreases sales, but naming the same dish with an "indulgent" (i.e. honey glazed) name dramatically increases sales (Wise, Vennard, 2019). They have also created their "Future 50 Foods" (Sodexo, 2020). Realizing that the vast majority of the human diet (75%) comes from twelve plant and five animal species, Sodexo went in search of plant-based foods that can be sustainably grown, are much less resource intensive and are nutrient-dense. They are now experimenting with these ingredients and promoting the dishes they have developed using these 50 ingredients.

Given that Aramark is in the same collegiate space as Sodexo, they are in a position to utilize some of the ideas that are driving Sodexo's plant-based expansion.

*Aramark also has a long-standing relationship with HSUS and hopefully will continue to utilize them to continue plant-based training on ASU's campuses.