"Freshest thing on earth"

Fresh Express

Purdue University

Spring 2018

TLI 213

Team 8

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Table of Contents

1. Overview of project
1.1. Introduction……. 2
1.2. History of project……..2
1.3. Why your group selected the project…….2
2. Team Data
2.1. Team Members……..3
2.2. Team Contract…….. 4
3. Human Resource Plan
3.1. Project organization charts…… 5
3.2. Roles and responsibilities…….. 6-9
3.3. Staffing management plan…..…… 10-11
4. Project Charter, Scope, and Research
4.1. Project Charter……..…….. 12-13
4.2. Project Scope……..……... 14-15
4.3. Lit Search……..…… 16-18
5. Stakeholder & Communication Plan
5.1. Stakeholder Classification Grid……..…… 19
5.2. Stakeholder Management Strategy……..…… 20
5.3. Communication Management……..…….. 21
6. Activity Analysis
6.1. WBS Chart……..…….... 22
6.2. WBS dictionaries ……..…… 23-36
6.3. Activity list…. 37-38
7. Budget Plan
7.1. Project Budget……..…… 39
7.2. Revised Budget……..…….. 40
8. Scheduling
8.1. Network Diagram ……..…… 41
8.2. Critical Path……..……... 41
8.3. Gantt chart…….…… 42
8.4. Time Optimization……..…… 43-49
8.5 Resource Leveling……..…….. 50
9. Risks Assessment
9.1. Assumption log…… 51
9.2. Risk Analysis…….. 52-53
10. Changes Management
10.1. Change Requests……..……. 54-59
10.2. Change Log…….…….. 60
11. Project Reflection
11.1. Lessons Learned……..…… 61-62
11.2. Future Recommendations on Project……..…… 63
11.3. References……..……..…… 64
11.4. Glossary…….……..…….. 65
12. Team Organization
12.1. Group Meeting Minutes……..…… 66- 75

1.1-1.3 Overview of Project

Introduction (1.1): The Fresh Express was an idea brought to you by Daniel Horton, Benya Chongolnee, Jayne Jaworowski, and Eli Hegg. We are a group of students at Purdue University who want to see Purdue University and West Lafayette businesses sell healthier food so that consumers can lead a healthier lifestyle. Our goal is to show consumers how easy and convenient it is to eat healthy food.

History of Project (1.2): Typical vending machines have been around for over 100 years, but most of the time the options in the vending machines are not healthy or fresh ones. Fresh, refrigerated vending machines are not common, and not something that is found at all at Purdue University or business surrounding West Lafayette. We would like to make fresh vending machines the new vending norm.

Why we chose it (1.3): The Fresh Express is an idea for students to be able to have healthier, fresher options on campus. Student health is important and not everyone wants the unhealthier options of cookies and snack cakes that normal vending machines provide. This is why we came up with the idea of the Fresh Express.

2.1 Team Members Information

Course Section 003

Teaching Assistant Kara McCollum

Team Members/Contact Information

Name	Phone	Availability During the Week	Email
Benya Chongolnee	2246190413	Monday and Fridays	bchongol@purdue.edu
Eli Hegg	7653374928	Not weekends, Wednesdays, every other monday	erhegg@purdue.edu
Jayne Jaworowski	7163414337	Monday, Tuesday night, Sunday evenings	jjaworow@purdue.edu
Daniel Horton	812-528-1402	Monday, Wednesday	horton21@purdue.edu

Majors, Talents, and Skills

Name	Major	Talents	Skills
Benya Chongolnee	Computer & Information Technology	Ability to put myself in someone else's shoes	Communication, analytical, organization, leadership
Eli Hegg	OLS	Getting stuff done ahead of time	Organized, reliable, time management, hardworking
Jayne Jaworowski	Communications	incorporating others ideas, putting all different parts together	organization, hard work ethic, time management
Daniel Horton	IET	Problem solving, thinking outside the box	reliable, communication,

2.2 Team Contract

Course Section	003
Group Members	Eli Hegg, Daniel Horton, Benya Chongolnee, Jayne Jaworowski
Group Project	Fresh Express

Team Guideline & Expectations

Attend meetings, come to class, and participate in group projects. Do any work due beforehand. If you cannot attend a meeting, give notice beforehand.

Team Rules for Meeting Times & Deadlines

If you cannot attend a meeting, let the group know within 24 hours. Get the work done 24 hours before the deadline so the group can discuss it and make changes if needed.

Ensuring Collaboration & Fair Distribution

Divide the work equally among everyone in the group. Don't let one person do more work than another. Ask for help if you think you'll need it.

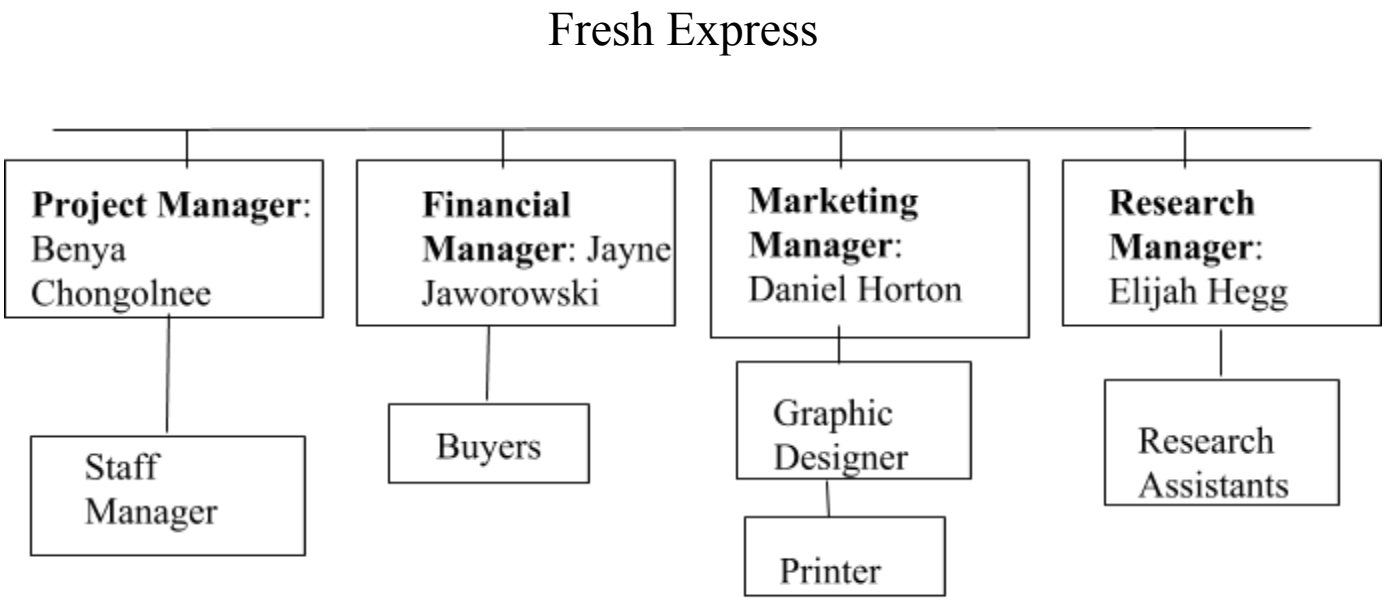
Corrective Action Plan

Talk as a group, talk to the TA, and then talk to them about what they did wrong.

Steps of Action Plan

Steps	Action Taken
Talk as a group	**As a group, discuss what the problem is.**
Talk to the TA	**As a group, talk to the TA about what the problem is and what action should be taken.**
Talk to them personally	**Relay information to the person.**
Talk to professor	**If nothing changes, talk to the professor and see what action should be taken.**

3.1 Project Organization Chart



3.2 Roles and Responsibilities

Project Title: The Fresh Express **Date Prepared:** Feb 19th, 2017

Resource Role Description:
Provides the role or job title and a brief description of the role

Financial Manager: Jayne Jaworowski: this person is responsible for every financial decisions such as figuring out what the budget for vending machine, food, workers, etc. He/she also figure out how much to sell each items for.

Authority:
Defines the decision making limits for the role. Examples include alternative selection, conflict management, prioritizing, rewarding and penalizing, etc. Also indicates reporting structure.

Figure out budget using available money and ROI. Report all financial questions and conclusions to the financial or project manager who is in charge of approving every budget for the whole company. If there is a conflict, also report that to the financial manager.

Responsibility:
Defines the activities that the role carries out and the nature of the contribution to the final product. Examples include job duties, processes involved and hand offs to other roles.

Ensure that budget is met and that there needs to be good reasoning behind every budget not met. If there are enough money leftover, ensure that it goes into something worth it. Understand what to do in order to get the most profit from the Fresh Express.

Qualifications:
Describes any prerequisites, experience, licenses, seniority levels, etc

Business major in undergrad or grad. Have worked with budgeting other big projects before. Understand how marketing work in order to figure out how much to sell each items for.

Competencies:
Describes specific role or job skills and competencies. May include details on languages,technology or other info necessary to complete the job

Understand the importance of the project and understand that the health of the students and staff is very important. Though budget is important, especially to Purdue University, understand that the health of their students and staffs are also as important. Understand how technology of vending machines work and the ROI on why it is important to implement The Fresh Express.

Resource Role Description:
Provides the role or job title and a brief description of the role

Marketing Manager: Daniel Horton: this person will be in charge of marketing in terms of clients we will distribute to and customers who will purchase from the vending machines.

Authority:
Defines the decision making limits for the role. Examples include alternative selection, conflict management, prioritizing, rewarding and penalizing, etc. Also indicates reporting structure.

This person will be in charge of getting the word out about this new type of vending. They will have priority on design and creating our company brand. Our marketing manager will have no say in rewarding and penalizing over other projet staff. They will report to the project manager.

Responsibility:
Defines the activities that the role carries out and the nature of the contribution to the final product. Examples include job duties, processes involved and hand offs to other roles.

- Creating surveys about what customers would like to see in the fresh vending machines
- Generate online and print marketing around campus and in town
- Create and implement promotional campaigns
- Create an overall company brand
- Make the design for company logo and vending machines

Qualifications:
Describes any prerequisites, experience, licenses, seniority levels, etc

- Have a bachelor's degree in marketing, business, or advertising.
- At least 3 years of industry experience

Competencies:
Describes specific role or job skills and competencies. May include details on languages,technology or other info necessary to complete the job

For this you must be creative, goal-oriented, and an effective communicator. You must be a team player and work well with others to finish the project as efficiently as possible.

Resource Role Description:
Provides the role or job title and a brief description of the role

Project Manager: Benya Chongolnee: Lead the project and organize everything to ensure delivery on time

Authority:
Defines the decision making limits for the role. Examples include alternative selection, conflict management, prioritizing, rewarding and penalizing, etc. Also indicates reporting structure.

The project manager is the main person in seeing that a project gets done on time and within the budget. The most important person that determines a lot of the budget and timeline is the customer. They have to insure the customer is happy for the project to be successful.

Responsibility:
Defines the activities that the role carries out and the nature of the contribution to the final product. Examples include job duties, processes involved and hand offs to other roles

The project manager delegates what jobs need to be fulfilled and who will do them. They help in planning and designing projects as well as staying with the project to ensure that the project gets completed.

Qualifications:
Describes any prerequisites, experience, licenses, seniority levels, etc
Business Management Degree - Bachelor's or Master's
Professional Certificate

Competencies:
Describes specific role or job skills and competencies. May include details on languages,technology or other info necessary to complete the job
Project managers possess excellent people skills and can manage people effectively. They also have knowledge in all areas of the project so that they can manage the whole project.

Resource Role Description:
Provides the role or job title and a brief description of the role

Research Manager: Elijah Hegg: Does the research for how much things cost, how much inventory we need, who to buy from, etc.

Authority:
Defines the decision making limits for the role. Examples include alternative selection, conflict management, prioritizing, rewarding and penalizing, etc. Also indicates reporting structure.

- *Prioritizes of what is needed to be researched and reports to whoever needs to know what they have found. If they figure out the cost of something, they will report this information to the financial manager to see if it is in our budget to purchase it.*

Responsibility:
Defines the activities that the role carries out and the nature of the contribution to the final product. Examples include job duties, processes involved and hand offs to other roles.

- Research many different types of information for the project. This information gets passed on to whoever needs to know it whether it be the financial manager, marketing manager, or the project manager.

Qualifications:
Describes any prerequisites, experience, licenses, seniority levels, etc

- Bachelor's degree
- Research Experience

Competencies:
Describes specific role or job skills and competencies. May include details on languages,technology or other info necessary to complete the job

- *Technological skills*
- *Understand the importance behind the project*
- *Know how to work with a budget*

3.3 Staffing Management Plan

Staff Acquisition

- HR can help in finding staff to maintain the machines and get/switch out food
- They will be working on site - part time
- Most likely they will be the students of Purdue University

Staff Release

- If they make 3 or more mistakes during the job/ showing up late
- If they are not being safe during the job
- If they do not respect their coworkers or others

Resource Calendars

- How often they need to order food and change food
- How often they have to change the pricing for the food
- How often they have to clean up the machine
- How often they have to ensure the safety of the food and the machine
- How often they have to change the machines

Training Needs

- To tell when food is ready to switched out
- How to open and add food to vending machines
- Collect and handle money from vending machines

Rewards and Recognition

- Staff evaluations every 6 months
- Pay increase depending on evaluation level

Regulations, Standards, and Policy Compliance

- Pass the FDA regulations
- Ensure that all of the food are fresh and healthy
- Ensure that there are variety of foods for allergic reasons

Safety

- Food handling safety
- Safety while driving company truck/van

4.1 Project Charter

Project Title: Fresh Express

Date Prepared: 2/26/18

Project Manager: Group 8 Project Customer: Purdue University, various West Lafayette businesses

Project Purpose or Justification:

Provide healthier food options for students and faculty through a vending machine process.

Project Description:

We will create fresh vending machines called "Fresh Express." We will distribute our vending machines filled with fresh foods including fruits and vegetables to buildings on Purdue's campus and local business in West Lafayette.

Project Deliverables:

Budget, Vending Machines, Food Distribution, Process of Changing Food, Sell ideas to Purdue, Building Locations, Marketing for Users

Conflict Resolution Process:

If there is conflict between our company and our customers, they will file a complaint and we will act upon it if it is concerning to us. We want our customers to be happy, so if there is an issue, we will work to resolve it.

Initial Risks:

Slow business, Too expensive, food distribution, Purdue/businesses not accepting idea

4.2 Project Scope

Project Title: Fresh Express **Date Prepared:February 26, 2018**

Product Scope Description:
We will create vending machines with fresh foods to be distributed to Purdue University buildings and surrounding West Lafayette businesses by the beginning of the 2018-2019 school year. This vending machine will include foods such as sandwiches, fruits, salad, granola bars, and more. The pricing of these food will be the same price as Au Bon Pain to ensure that it is in students' budget.

Project Deliverables:
1. Budget such as researching and asking for loans from investors
2. Vending Machines research and finding companies that will be able to provide vending machines with our needs
3. Food Distribution research and find a company that will be able to prepare food every morning and give a good pricing on it. Also find a price that we will sell food for in order to make profit
4. Process of Changing Food: Make a schedule for workers to change food before the food go bad. Also hire staffs to help change the food, etc.
5. Sell ideas to Purdue: Research pitching ideas to pitch to Purdue to put our vending machines in their buildings
6. Building Locations: Research high traffic areas around Purdue University to find where is the best place to put the vending machines. Talk to building administrators to get permission and help from them
7. Marketing for Users: target Purdue University students and spread the words around through advertisements

Project Acceptance Criteria:
Find distributor that will meet our financial and quality needs
Negotiate a reasonable price to sell to Purdue
Have project finished by August 2018

Project Exclusions:
Cost might be more expensive than predicted
Students might prefer unhealthier snacks rather than healthier ones
Food storage might be more difficult than originally thought

Project Constraints:
Purdue has to accept our idea and allow our vending machines in buildings.

There will be a large initial cost to get a bunch of vending machines, so we will have to start small with only a few machines to test the popularity and grow from there. Students have to buy-in to the idea of buying meals from a vending machine.

Project Assumptions:
Students/faculty will use our vending machine over a normal vending machine because of the healthier, fresher options. Machines will be more convenient than dining courts.

4.3 Lit Search

Eli

1.https://healthy.iu.edu/culture-wellness/healthy-vending/index.html

This talks about a healthy vending machine idea that has "healthy snacks". Then, it gives ideas of what healthy snacks consist of based on calories, sodium, etc.

2.http://college.usatoday.com/2014/03/12/colleges-promote-healthy-living-campaigns-food-options-on-campus/

This discusses what colleges try to do today with healthier options and campaigns. It gives statistics on college student health.

3.http://blogs.cornell.edu/foodstories/2014/03/03/nutrition-of-campus-dining-an-increasing-matter-of-worry/

This article discusses why nutrition on campus is becoming an issue and why we should worry. It discusses dining court food and gives some good statistics and numbers.

4.https://www.forbes.com/sites/natalierobehmed/2012/07/27/healthy-vending-machines-the-future-of-snack-food/#3ab39fd242ee

This discusses why healthier vending machines are a good idea. It calls them "the future of snack food". Discusses that americans are becoming obese and why it is an issue.

5.https://www.huffingtonpost.com/joanna-dolgoff-md/dorm-nutrition_b_930963.html

This discusses that college food in the dining courts is bad and that college students should switch over to healthier options. The options they have now are bad for their health.

Benya

1.http://college.usatoday.com/2012/07/13/food-for-thought-the-challenge-of-healthy-eating-on-campus/

From the survey done, 90% of the students wants to see nutritional information for foods in cafeterias. For many business administrators, food is seen more as a revenue stream than for improving health. This must change.

2.http://newsroom.ucla.edu/stories/snack-on-this:-healthier-choices-score-at-campus-vending-machines

Viana recently concluded a study on whether people at UCLA would pick items like trail mix, nuts and air-popped snacks or continue buying potato chips, cookies and candy bars. He found people were interested in having healthier items available in vending machines and healthier items did not hurt the vending machines' sales.

3. http://popupcity.net/next-generation-vending-machines-dispense-healthy-food/

Farmer's Fridge is a new vending machine that offer fresh salads in recyclable plastic jars. Every morning the team picks up fresh produce and starts preparing the salads at 5 AM then they fill the vending machines, and removes yesterday's salads. The salad costs about $6 to $8.

4. https://www.huffingtonpost.com/2014/02/07/salad-vending-machine-chicago_n_4745201.html

Farmer's Fridge is made from reclaimed wood and surrounded by real plants. Whatever is left at the end of the day is donated to a local food pantry.

5.https://www.fastcompany.com/3060035/reinventing-the-vending-machine-with-healthy-local-food

Byte's small fridges, loaded with locally made salads, cold-pressed juices, sandwiches, and coffee are accessed with the swipe of a credit card. When someone takes out a snack, the fridge tracks each purchase.

Jayne

1. https://dining.purdue.edu/AboutUs/FoodStores/CampusSupport.html

Campus Support-This article will give us a look into where we could possibly put vending on Purdue's campus and who is in charge of that.

2.http://www.weightwatchers.com/util/art/index_art.aspx?tabnum=1&art_id=7191

Q & A: Keeping Veggies Fresh- We can use this article to give us some insight as to how long fruits and vegetables will stay fresh for and which ones are not good with being refrigerated.

3.https://www.fitnessmagazine.com/recipes/snacks/healthy/vending-machine-snacks/

10 Healthy (and 10 Terrible) Vending Machine Snacks- This article talks about the best and healthy snacks that are put in vending machines.

4.https://www.naturalproductsinsider.com/news/2011/08/college-students-want-healthy-dining-options.aspx

College Students want Healthy Dining Options- Many college students are not happy with the food options that are available to them. It states that only 28% of college students are satisfied with the healthy food options available to them.

5.http://www.vendingmarketwatch.com/article/12055719/inside-the-healthy-vending-business

Inside the Vending Machine Business- This article talks about how healthy vending machines are become more and more popular. Two of the major facts to healthy vending is location and the type of product in the machines.

Daniel

1. http://www.healthyvending.com/machines/

This is an innovative vending machine company that has come up with many new ways in appearance and how the machine works. They also promote healthy foods in their machines.

2. http://www.healthyyouvending.com/

Healthy you vending is a large company that sells vending machines and will provide the food that goes in them. They are the industry leader in providing healthy foods in vending machines.

3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3655774/

This is an article about healthy vending machines in schools in 7 large cities in the US. The article talked about the positive effects offering healthy options has on students.

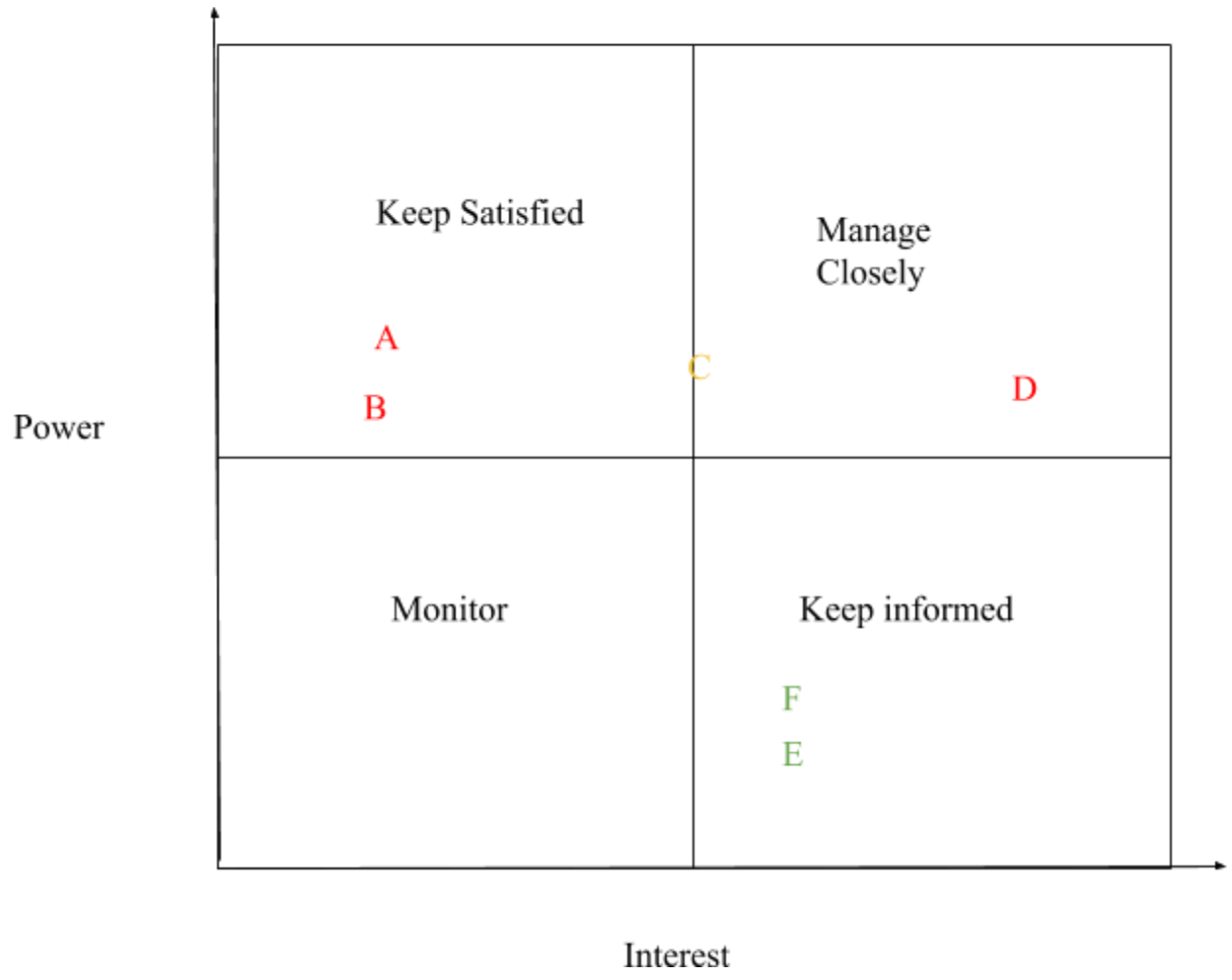
4. https://www.reuters.com/article/us-health-signage-vending-machines/signs-may-help-vending-machines-peddle-healthier-snacks-idUSKBN16G2FD

This article talked about how advertising the health benefits that the healthy food in the vending machines will help sales of food. If you talk about the positive impacts, they will buy the food.

5. http://www.choiceusavending.com/3-benefits-healthy-vending-schools/

This article also talked about the positive impacts of having healthy food available to students in schools. The article said that the earlier the students start ratting healthy, the easier it will be to adopt into their everyday lives.

5.1 Stakeholder Classification Grid



A. Purdue University Administrators
B. Campus Businesses
C. (perspective) Students/faculties
D. Building managers
E. Machine Suppliers
F. Food suppliers

5.2 Stakeholder Management Strategy

Stakeholder	Interest	Impact Assessment	Potential Strategies
1 Purdue University Administrators	Gives their students healthier options from vending machines.	10	Frequent updates, meetings when necessary
2 Campus Businesses	Gives employees healthier options from vending machines.	10	Frequent updates, meetings when necessary
3 (perspective) Students/faculties	Will buy the food in machines	9	Advertise, offer appealing foods
4 Building managers	Give us access to putting our machines in buildings	7	Keep food stocked in machines
5 Machine Suppliers	Provide refrigerated vending machines	5	Keep them up to date with our plans
6 Food Suppliers	Provide food for the fresh vending machines	5	Keep them up to date with our plans

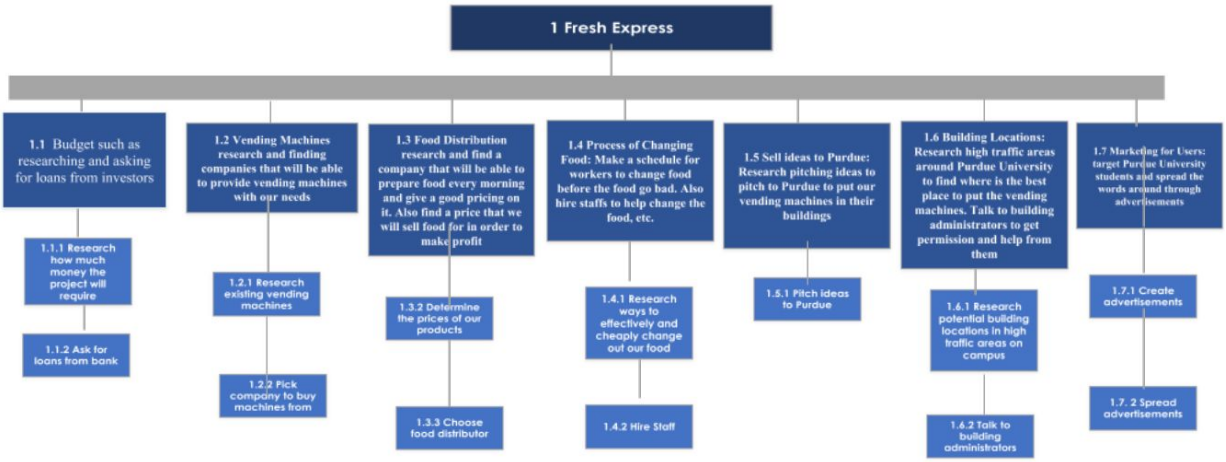
Impact Assessment:
1 - low impact
5 - neutral impact
10 - high impact

5.3 Stakeholder Communication Management

Stakeholder	Power/Interest	Comm Strategy	What	When	How	Who
1 (perspective) Students/faculties	Will buy the food in machines	Surveys on prices, types of food, email, newsletter	Type of food, overview of the system, price, FAQ, deadlines	At the beginning before type of food is decided on	Fliers, email, newsletter, social media	(perspective) Students/faculties
2 Building managers	Give us access to putting our machines in buildings	Formal letter/email	Overview of the system, training details, deadlines	Beginning of the project and once we have a product	Phone calls, emails, try to set up a meeting for a sales pitch	Building managers
3 Purdue University Administrators	Gives their students healthier options from vending machines.	Sales pitch	Goals, objectives, overview of system, budget,deadlines	Monthly update on project	Phone calls, emails, try to set up a meeting for a sales pitch	Purdue University Administrators
4 Machine Suppliers	Provide refrigerated vending machines	Through their website, phone call	Overview of the system, deadlines	Beginning of project	Email /call	Machine Suppliers
5 Campus Businesses	Gives employees healthier options from vending machines.	Sales pitch	Overview of the system, budget, deadlines	Beginning of the project and once we have a product	meeting	Campus Businesses
6 Food Suppliers	Provide food for the fresh vending machines	Through their website, phone call, email	Overview of the system, deadlines	Beginning and once the food idea have been completed, at end.	email/ calls	Food Suppliers

6.1 Work Breakdown Structure Chart

PROJECT TITLE	Fresh Express	COMPANY NAME	Fresh Express
PROJECT MANAGER	Benya Chongolnee	DATE	March 5th, 2018



6.2 Work Breakdown Structure Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Budget Research **WBS ID:** 1.1

Description of Work: Research details about the budget for Fresh Express and how one might ask for a loan.

Milestones: 1.1.1 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.1.1.1	Gather data for previous vending machines projects	Old Documents	1	$20/hr	$20	1	$0	$0	$20
1.1.1.2	Research about previous Purdue projects	Old Documents through Purdue	1	$20/hr	$20	1	$0	$0	$20
1.1.1.3	Reach out to loan company and find information on getting a loan	Internet and loan companies	2	$20/hr	$40	1	$0	$0	$40
1.1.1.4	Research information on keeping healthy foods fresh	Current food distribution companies	2	$20/hr	$40	1	$0	$0	$40
Totals			6		$120	4	$0	$0	$120

Quality Requirements: Accurate information, we need information to be as accurate as possible because this decides how much money we will need throughout the project

Acceptance Criteria: Fairly accurate information, we do not need information to be exact numbers, but we do need a good estimate so that we can figure out loan information.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Ask for Loans **WBS ID:** 1.1

Description of Work: With information from budget research get loan for project totals.

Milestones: 1.1.2 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.1.2.1	Contact loan company about interest and payback time	Online and customer reps	1	$0	$0	1	$0	$0	$0
1.1.2.2	Apply for loan through website	Online	2	$0	$0	1	$0	$0	$0
1.1.2.3	Receive loan and distribute to different part of the project	Bank	2	$0	$0	1	$0	$0	$0
Totals			5	$0	$0	3	$0	$0	$0

Quality Requirements: Average, we need a loan with an average interest rate and easy to work with company.

Acceptance Criteria: A company that will give okay guidance on loans, but still an average interest rate.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Vending Machine Research **WBS ID:** 1.2.1

Description of Work: Research information about vending machines and how one may go about buying one

Milestones: 1.2.1 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.2.1.1	Research about existing refrigerated vending machines	Researchers, internet	5	$20/hr	$100	1	$0	$0	$100
1.2.1.2	Research about the best type of machine for our project	Researchers, internet	5	$20/hr	$100	1	$0	$0	$100
1.2.1.3	Research about the costs of vending machines	Researchers, internet	5	$20/hr	$100	1	$0	$0	$100
1.2.1.4	Look at previous Purdue vending machines	Vending Machines	3	$20/hr	$100	1	$0	$0	$100
1.2.1.5	Research about how to buy a machine	Researchers, internet	2	$20/hr	$100	1	$0	$0	$100
1.2.1.6	Research about laws and regulations regarding vending machines	Researchers, internet	10	$20/hr	$100	1	$0	$0	$100
Totals			25		$600	6	$0	$0	$600

Quality Requirements: Is accurate and has all of the information necessary to make decisions
Acceptance Criteria: Find all of the research necessary to make accurate decisions

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Buy vending machines **WBS ID:** 1.2

Description of Work: Process of buying vending machines from the chosen company

Milestones: 1.2.2 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.2.2.1	Figure out which company to buy vending machines from	Researchers, internet	10	$20/hr	$200	1	$0	$0	$200
1.2.2.2	Contact the company to buy the vending machines	Vending Machine company	3	$0/hr	$0	1	$0	$0	$0
1.2.2.3	Buy vending machines	none	0	$0	$0	3	$4000	$12000	$12000
Totals			13		$200		$4000	$12000	$12200

Quality Requirements: Pick the cheapest and the best vending machine company, easy delivery and have people that will help with it breaks down
Acceptance Criteria: The vending machine is lasting and will keep the food fresh. There are people that can help when the machine breaks down

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Food Distribution Research **WBS ID:** 1.3

Description of Work: Research how existing vending machine companies distribute their food to the machines and decide the best approach for our company to distribute our food.

Milestones: 1.3.1 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.3.1.1	Distribution Research	Researchers	5	$20/hr	$100	1	$0	$0	$100
1.3.1.2	Look at Transportation options	Researchers	2	$20/hr	$40	1	$0	$0	$40
1.3.1.3	How often we need to deliver food	Distribution company	2	$20/hr	$40	1	$0	$0	$40
Totals			9		$180	3	$0	$0	$180

Quality Requirements: Food must be delivered cheaply and on time.

Acceptance Criteria: Finding the cheapest way to distribute will help keep our prices low.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Food Distribution Pricing **WBS ID:** 1.3

Description of Work: Decide on what prices we should sell our food at.

Milestones: 1.3.2 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.3.2.1	Analize what students are willing to pay	Existing data	2	$20/hr	$40	1	$0	$0	$40
1.3.2.2	Determine our cost	Cost data	1	$20/hr	$20	1	$0	$0	$20
1.3.2.3	Set prices for our food	Determine what we need to make money	1	$20/hr	$20	1	$0	$0	$20
Totals			4		$80	3	$0	$0	$80

Quality Requirements: Competitive prices
Acceptance Criteria: We need competitive prices so students will buy our food.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Food Distributor **WBS ID:** 1.3

Description of Work: Determine who we will buy our food from.

Milestones: 1.3.3 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.3.3.1	Research food companies	Researchers	5	$20/hr	$100	1	$0	$0	$100
1.3.3.2	Analyse prices	Researchers	1	$20/hr	$20	1	$0	$0	$20
1.3.3.3	Choose a food distributor to buy our food from	Distribution company	1	$20/hr	$20	1	$0	$0	$20
Totals			7		$140	3	$0	$0	$140

Quality Requirements: Fresh, good quality foods, good pricing

Acceptance Criteria: Choose foods that students will like and buy.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Food Changing Process **WBS ID:** 1.4

Description of Work: Research how long we should keep food in the vending machines before changing it out

Milestones: 1.4.1 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.4.1.1	Research what kind of food we want to put in the vending machine.	Researchers	10	$20/hr	$200	1	$0	$0	$200
1.4.1.2	Research how long the food should be switched out.	Researchers	10	$20/hr	$200	1	$0	$0	$200
1.4.1.3	Research what healthier options students would want in a vending machine.	Researchers	10	$20/hr	$200	1	$0	$0	$200
Totals			30		$600	3	$0	$0	$600

Quality Requirements: Reliable research that can be used to make final decisions of the project.

Acceptance Criteria: Research is accurate and useful in helping us with the final outcome of the project.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Hire Staff **WBS ID:** 1.4

Description of Work: Conduct interviews with potential employees and hire them if they meet the requirements of the job.

Milestones: 1.4.2 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.4.2.1	Interview potential employees	Potential Employees	10	$0/hr	$0	0	$0	$0	$0
1.4.2.2	Accept Resumes	Potential Employees	0	$0/hr	$0	0	$0	$0	$0
1.4.2.3	Discuss with other employees	Employees	2	$0/hr	$0	0	$0	$0	$0
1.4.2.4	Make final decisions	Employees	3	$0/hr	$	0	$0	$0	$0
1.4.2.5	Make potential employees take a drug test	Potential Employees	1	$0/hr	$0	1	$30	$30	$30
Totals			16		$0	1	$30	$30	$30

Quality Requirements: Interview potential employees who seem they are right for the job.

Acceptance Criteria: Get good enough information during the interviews to figure out whether or not they would be an acceptable employee.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Pitch Idea to Purdue **WBS ID:** 1.5

Description of Work: Pitch the idea of vending machines so that they will allow us to put our machines on campus and recruit their students for employment

Milestones: 1.5.1 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.5.1.1	Research how to pitch idea	Researchers, internet	3	$20/hr	$60	1	$0	$0	$60
1.5.1.2	Research who to go to pitch the idea	Researchers, internet	1	$20/hr	$20	1	$0	$0	$20
1.5.1.3	Gather all information necessary to pitch idea	internet	5	$20/hr	$100	1	$0	$0	$100
1.5.1.4	Contact Purdue to set up time and location	internet	1	$0	$0	1	$0	$0	$0
1.5.1.5	Pitch idea	Purdue University	2	$0	$0	1	$0	$0	$0
Totals			12		$180	5	$0	$0	$180

Quality Requirements: Create the best pitch so that Purdue University will put our machine on campus for free

Acceptance Criteria: Purdue University put our machine on campus for free

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Research Building location **WBS ID:** 1.6

Description of Work: Find the best places on campus and around West Lafayette that will get out vending machines the most business and exposure.

Milestones: 1.6.1 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.6.1.1	Research the amount of people that have classes and work in building around campus	Campus buildings and online	4	$20/hr	$80	1	$0	$0	$80
1.6.1.2	Explore West Lafayette Business that would have a need for fresh vending	Around town research	3	$20/hr	$60	1	$0	$0	$60
Totals			7		$140	2	$0	$0	$140

Quality Requirements: Accurate information about amount of building traffic

Acceptance Criteria: Good estimates about amount of foot traffic in buildings because this determines where our vending machines are located and the amount of money we make.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Talk to building administration **WBS ID:** 1.6

Description of Work: We will need to talk with the administration of each building that we decide we want our vending machines in.

Milestones: 1.6.2 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.6.2.1	Find contact info for person in charge of each building	Online and other administration	2	$0	$0	1	$0	$0	$0
1.6.2.2	Find out if where and when in building we can put our vending machines	Phone and in-person	2	$0	$0	1	$0	$0	$0
Totals			4		$0	2	$0	$0	$0

Quality Requirements: Detailed information about what buildings we will have our vending machines in.

Acceptance Criteria: Basic information about what building and when we can put the machines into buildings.

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Create advertisement **WBS ID:** 1.7

Description of Work: Create advertisement for consumers (Purdue students, staff, etc) so that they would know about us and buy our products

Milestones: 1.7.1 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.7.1.1	Research marketing ideas	Researcher, internet	10	$20/hr	$200	1	$0	$0	$200
1.7.1.2	Create advertisements (logos, fliers, etc)	Graphic Designer, internet	10	$20/hr	$200	1	$0	$0	$200
Totals			20		$400	2	$0	$0	$400

Quality Requirements: The logos, fliers, etc are clean and easy to read. It captures people's attention.

Acceptance Criteria: The fliers, logos, etc captures people's attention

WBS Dictionary

Project Title: Fresh Express **Date Prepared:** March 19, 2018

Work Package Name: Spread Advertisements **WBS ID:** 1.7

Description of Work: Advertise around the community to get consumers to notice the Fresh Express vending machines.

Milestones: 1.7.2 **Due Dates: March 22, 2018**

ID	Activity	Resource	Hours	Labor Rate	Total	Units	Material Cost	Total	Total Cost
1.7.2.1	Hang up flyers around West Lafayette	none	5	$20/hr	$100	1	$0	$0	$100
1.7.2.2	Print flyers	Paper, ink	1	$0	$0	100	$20	$20	$20
1.7.2.3	Post things on social media	Internet	2	$0	$0	1	$50	$50	$50
Totals			8		$100	102	$70	$70	$170

Quality Requirements: Spread a variety of advertisements around the Lafayette area

Acceptance Criteria: Spread advertisements well enough to help gain consumers

6.3 Activity List

Project Title:___Fresh Express__ **Date Prepared:**__03/19/18___

ID	Activity	Description of Work
1.1	Research about the budget	Look at examples and studies regarding picking a budget for a project this size as well as how we may go about asking for loans in the future
1.2	Ask for loans	Ask potential investors to invest in Fresh Express that would be able to cover our budget
2.1	Research vending machines	Look companies that sell vending machines and see which company fits our project the best (regarding refrigeration, price, time, etc)
2.2	Pick vending machines to buy	Buy the vending machines from the chosen company
3.1	Research food distribution	Look at examples and studies regarding which food items are healthy Also research which (local) company will be able to make these fresh food for us daily.
3.1.1	Pricing	Find out how much each one should sell for to ensure that it is cheap while making profit
3.1.2	Choose food distributor	Choose the distributor that is cheap and reliable
4.1	Research process to change food	Research how long food items last in the vending machine and what is the best process to chang e the food items
4.2	Hire Staff	Hire staffs to change food, pick up food, software developer/database person, mechanic

5.1	Pitch idea to Purdue	Pitch our fresh vending ideas to Purdue and tell them all the benefits the vending machines will create.
5.2	Negotiate deal with Purdue	Negotiate with Purdue so that we will have vending machines in some of the high traffic buildings on campus.
6.1	Research building locations	Research local buildings with high food traffic that would be want the fresh vending machines in their locations.
6.2	Talk to building administrators	We will have to talk with the building administrators who will allow us to put our vending machines in their building and get any other details.
7.1	Create Advertisements	We will have our marketing manager create ad to help get the word out about the new vending machines.
7.2	Spread advertisements	We will distribute the advertisements we create to students, faculty, local residents, and other campus buildings.

7.1 Project Budget

7.1 Project Budget: Fresh Express								

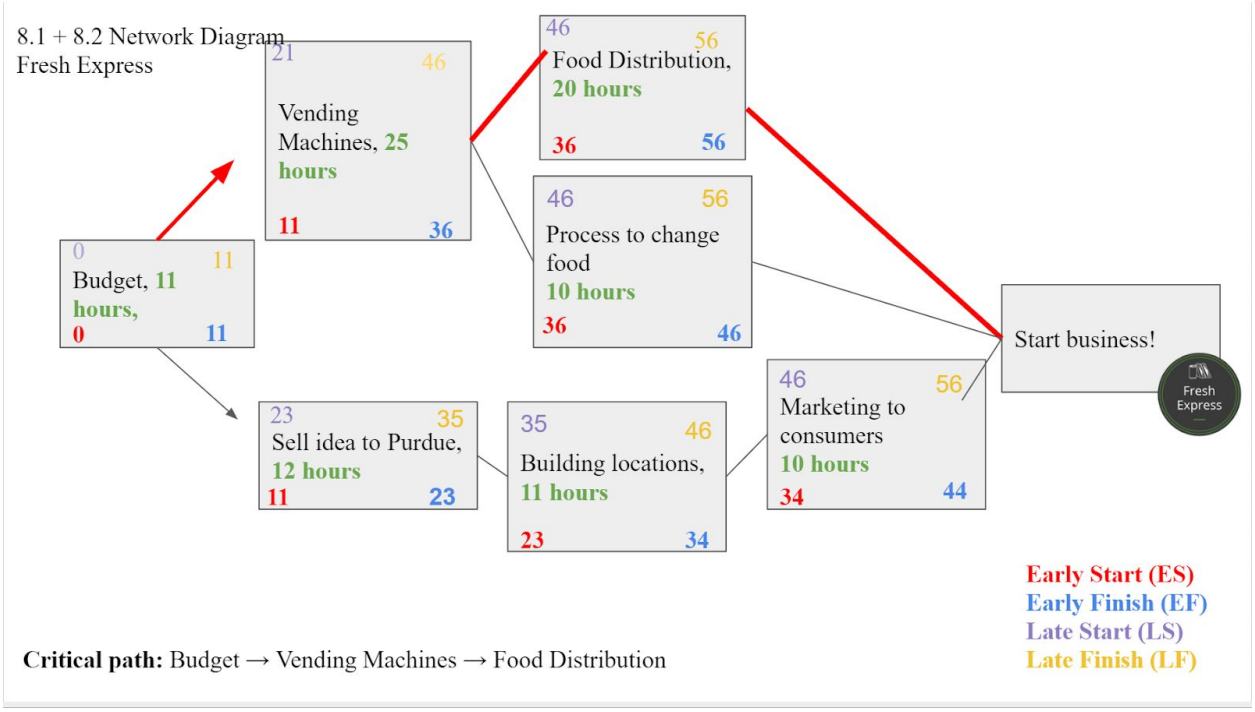
Deliverables number		1	2	3	4	5	6	7
Work Packages Number		1.1.1	1.2.1	1.3.1	1.4.1	1.5.1	1.6.1	1.7.1
	Materials	0	0	0	0	0	0	0
	Labor	120	600	180	600	180	140	400
	Total	120	600	180	600	180	140	400
		1.1.2	1.2.2	1.3.2	1.4.2		1.6.2	1.7.2
	Materials	0	12000	0	30		0	70
	Labor	0	200	80	0		0	100
	Total	0	12200	80	30		0	170
				1.3.3				
	Materials			0				
	Labor			140				
	Total			140				
Deliv Totals	Materials	0	12000	0	30	0	0	70
	Labor	120	800	400	600	180	140	500
	Total	120	12800	400	630	180	140	570
Project Total	Materials	12100						
	Labor	2740						
	Total	14840						

7.2 Revised Project Budget

7.2 Project Budget Fresh Express Revised								
Deliverables number		1	2	3	4	5	6	7

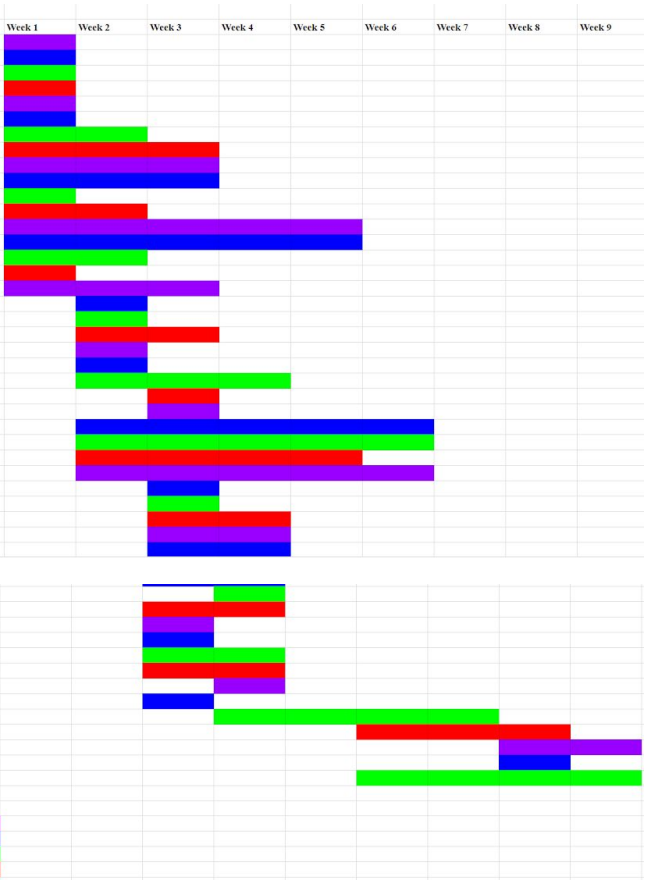
Work Packages Number		1.1.1	1.2.1	1.3.1	1.4.1	1.5.1	1.6.1	1.7.1
	Materials	0	0	0	0	0	0	0
	Labor	120	600	180	400	180	140	400
	Total	120	600	180	400	180	140	400
		1.1.2	**1.2.2**	**1.3.2**	**1.4.2**		**1.6.2**	**1.7.2**
	Materials	0	8000	0	30		0	70
	Labor	0	200	80	0		0	100
	Total	0	8200	80	30		0	170
				1.3.3				
	Materials			0				
	Labor			140				
	Total			140				
Deliv Totals	**Materials**	0	8000	0	30	0	0	70
	Labor	120	800	400	400	180	140	500
	Total	120	8800	400	430	180	140	570
Project Total	**Materials**	8100						
	Labor	2540						
	Total	**10640**						

8.1 & 8.2 Network Diagram and Critical Path


8.1 + 8.2 Network Diagram
Fresh Express
0
11
Budget, 11 hours,
0
11
21
46
Vending Machines, 25 hours
11
36
46
56
Food Distribution, 20 hours
36
56
46
56
Process to change food
10 hours
36
46
23
35
Sell idea to Purdue, 12 hours
11
23
35
46
Building locations, 11 hours
23
34
46
56
Marketing to consumers
10 hours
34
44
Start business!
Fresh Express
Early Start (ES)
Early Finish (EF)
Late Start (LS)
Late Finish (LF)
Critical path: Budget → Vending Machines → Food Distribution

8.3 Gantt Chart

8.3 Gantt Chart	Fresh Express					
Task Name	Start Date	End Date	Duration (Hours	Hours Complete	Hours Remaining	Percent Complete
1.1.1.1	1/23/2018	1/23/2018	1	1	0	100%
1.1.1.2	1/23/2018	1/23/2018	1	1	0	100%
1.1.1.3	1/23/2018	1/23/2018	2	2	0	100%
1.1.1.4	1/23/2018	1/23/2018	2	2	0	100%
1.1.2.1	1/23/2018	1/23/2018	1	1	0	100%
1.1.2.2	1/23/2018	1/23/2018	2	2	0	100%
1.1.2.3	1/23/2018	1/30/2018	2	1	1	50%
1.2.1.1	1/23/2018	2/18/2018	5	2	3	40%
1.2.1.2	1/27/2018	2/18/2018	5	3	2	60%
1.2.1.3	1/27/2018	2/18/2018	5	2	3	40%
1.2.1.4	1/27/2018	2/3/2018	3	1	2	33%
1.2.1.5	1/27/2018	2/10/2018	2	1	1	50%
1.2.1.6	1/28/2018	3/4/2018	10	2	8	20%
1.2.2.1	1/28/2018	3/4/2018	10	3	7	30%
1.2.2.2	1/29/2018	2/5/2018	3	2	1	66%
1.2.2.3	1/28/2018	2/1//2018	0	0	0	100%
1.3.1.1	1/28/2018	2/18/2018	5	1	4	50%
1.3.1.2	02/11/2018	2/25/2018	2	1	1	50%
1.3.1.3	02/11/2018	2/25/2018	2	1	1	50%
1.3.2.1	02/11/2018	3/4/2018	2	1	1	50%
1.3.2.2	02/11/2018	2/25/2018	1	0	1	0%
1.3.2.3	02/13/2018	2/25/2018	1	0	1	0%
1.3.3.1	02/13/2018	3/13/2018	5	1	4	20%
1.3.3.2	02/17/2018	3/10/2018	1	1	0	100%
1.3.3.3	02/15/2018	2/22/2018	1	1	0	100%
1.4.1.1	02/15/2018	3/29/2018	10	1	9	10%
1.4.1.2	02/15/2018	3/29/2018	10	1	9	10%
1.4.1.3	02/15/2018	3/22/2018	10	2	8	20%
1.4.2.1	02/15/2018	3/29/2018	10	3	7	30%
1.4.2.2	02/20/2018	3/13/2018	0	0	0	100%
1.4.2.3	02/20/2018	02/27/2018	2	0	2	0%
1.4.2.4	02/20/2018	03/05/2018	3	0	3	0%
1.4.2.5	02/20/2018	2/20/2018	1	0	1	0%
1.5.1.1	02/20/2018	03/05/2018	3	1	2	33%
1.5.1.2	03/05/2018	03/10/2018	1	0	1	0%
1.5.1.3	03/08/2018	03/15/2018	5	1	4	20%
1.5.1.4	03/16/2018	03/16/2018	1	0	1	0%
1.5.1.5	03/08/2018	03/15/2018	2	0	2	0%
1.6.1.1	03/08/2018	03/22/2018	4	1	3	25%
1.6.1.2	03/08/2018	03/22/2018	3	1	2	33%
1.6.2.1	03/15/2018	03/22/2018	2	0	2	20%
1.6.2.2	03/20/2018	03/27/2018	2	0	2	0%
1.7.1.1	03/20/2018	04/20/2018	10	2	8	20%
1.7.1.2	04/01/2018	04/21/2018	10	2	8	20%
1.7.2.1	04/15/2018	04/22/2018	5	0	5	0%
1.7.2.2	04/22/2018	05/05/2018	1	0	1	0%
1.7.2.3	04/28/2018	05/05/2018	2	0	2	0%
				Hours Complete	Hours Remaining	% complete
						Benya
						Jayne
						Eli
						Daniel



8.4 Time Optimization

ID	Activity	Original Estimate	Worse	Best	Most likely	Final Selection	Explanation
1.1.1	Gather data for previous vending machines projects	1	3	1	1	1	Gathering data shouldn't take a long time unless problems occur.
1.1.2	Research about previous Purdue projects	1	3	1	1	1	Researching previous projects shouldn't take a long time unless problems occur.
1.1.3	Reach out to loan company and find information on getting a loan	2	5	1	2	2	Talking to a loan company shouldn't take long.
1.1.4	Research information on keeping healthy foods fresh	2	3	1	2	2	Researching information on healthy foods shouldn't take long.
1.2.1	Contact loan company about interest and payback time	1	3	1	1	1	Contacting a loan company shouldn't taken more than an hour.

1.2.2	Apply for loan through website	2	4	1	2	2	Applying for a loan shouldn't take very long.
1.2.3	Receive loan and distribute to different part of the project	2	5	2	2	2	Distributing money to different parts of the project shouldn't take long.
2.1.1	Research about existing refrigerated vending machines	5	10	1	5	5	This may take 5 hours because of the difficulty trying to find information on refrigerated vending machines.
2.1.2	Research about the best type of machine for our project	5	8	1	6	5	Researching and then Weighing our options may take a while.
2.1.3	Research about the costs of vending machines	5	8	1	6	5	Research on competitors websites shouldn't take long.
2.1.4	Look at previous Purdue vending machines	3	8	1	3	3	Look at previous vending machines and decide if ours will work.
2.1.5	Research about how to buy a machine	2	5	1	3	2	Researching how how to get our machines shouldn't take long.

2.1.6	Research about laws and regulations regarding vending machines	10	25	5	10	10	Could take 10 hours due to the Importance of knowing the rules and regulations
2.2.1	Figure out which company to buy vending machines from	10	15	2	8	10	Contacting people and finding a reliable company will take some time
2.2.2	Contact the company to buy the vending machines	3	7	1	3	3	People wants our money, so they do not want to make us wait
2.2.3	Buy vending machines	1/2	5	20 minutes	1/2	1/2	This part is just money transaction so it will not take too much time
3.1.1	Distribution Research	5	10	1	5	5	It is important to learn about distribution and make sure its accurate
3.1.2	Look at Transportation options	2	6	1	2	2	Researching about trucks may take a while to find the best deals
3.1.3	How often we need to deliver food	2	10	1	2	2	This activity may not take long because there are companies that exist that do this

3.2.1	Analyze what students are willing to pay	2	10	1	2	2	Look at already available options
3.2.2	Determine our cost	1	5	1/2	3	1	Compare to existing options
3.2.3	Set prices for our food	1	4	1/2	1	1	Analyze our costs
3.3.1	Research food companies	5	10	2	5	5	It is important to see which companies is cheapest, healthiest, and who are willing to do this
3.3.2	Analyse prices	1	3	1/2	1	1	Look at their prices
3.3.3	Choose a food distributor to buy our food from	1	2	1/2	1	1	Look at prices and availability
4.1.1	Research what kind of food we want to put in the vending machine.	10	12	7	10	10	This will take about 10 hours because of the detail that will be needed and because of previous research
4.1.2	Research how long the food should be switched out.	10	12	6	10	10	This will take about 10 hours because of the detail that will be needed and because of previous research

4.1.3	Research what healthier options students would want in a vending machine.	10	12	7	10	10	This will take about 10 hours because of the detail that will be needed and because of previous research
4.2.1	Interview potential employees	10	15	9	10	10	Depending on the number of prospective employees that show up, we expect about 10
4.2.2	Accept Resumes	0	0	0	0	0	Nothing after receiving apps
4.2.3	Discuss with other employees	2	4	1.5	2	2	Agreement does not take too long depending on number of candidates
4.2.4	Make final decisions	3	5	2	3	3	Agreement does not take too long depending on number of candidates
4.2.5	Make potential employees take a drug test	1	2	1	1	1	We will need to contact lab company about results
5.1.1	Research how to pitch idea	3	5	2	3	3	Online research, we decide how much to research
5.1.2	Research who to go	1	2	1	1	1	Purdue.edu

	to pitch the idea						
5.1.3	Gather all informatio n necessary to pitch idea	5	7	4	5	5	Put together Presentation
5.1.4	Contact Purdue to set up time and location	1	2	1	1	1	Phone Call
5.1.5	Pitch idea	2	4	1	2	2	Presentation
6.1.1	Research the amount of people that have classes and work in building around campus	4	6	3	4	4	Look at chart
6.1.2	Explore West Lafayette Business that would have a need for fresh vending	3	5	2	3	3	Have certain business in mind
6.2.1	Find contact info for person in charge of each building	2	4	1	2	2	Ask someone for a list

6.2.2	Find out if where and when in building we can put our vending machines	2	3	1	2	2	This step takes some time to find out where students go to the most
7.1.1	Research marketing ideas	10	15	8	10	10	There are a lot of articles about marketing; thus it will take sometimes to find a few good articles
7.1.2	Create advertisements (logos, fliers, etc)	10	15	5	10	10	Creating advertisement on the computer takes a lot of time and focus
7.2.1	Hang up flyers around West Lafayette	5	10	2	5	5	West Lafayette is big, but we have cars to make it faster
7.2.2	Print flyers	1	3	1/2	5	5	Printing flyers takes very fast because it depends on the printer itself
7.2.3	Post things on social media	2	3	1	2	2	Posting things on social media depends on internet speed as well what to say

8.5 Resource Leveling

8.5 Resource Leveling - Fresh Express

				Enter the hours by week for each task								
ID	Activities	Hours	Assigned to	wk 1	wk 2	wk 3	wk 4	wk 5	wk 6	wk 7	wk 8	wk 9
1.1.1.1	Gather data for previous vending machines projects	1	Benya	1								
1.1.1.2	Research about previous Purdue projects	1	Jayne	1								
1.1.1.3	Reach out to loan company and find information on getting a loan	2	Eli	2								
1.1.1.4	Research information on keeping healthy foods fresh	2	Daniel	2								
1.1.2.1	Contact loan company about interest and payback time	1	Benya	1								
1.1.2.2	Apply for loan through website	2	Jayne	2								
1.1.2.3	Receive loan and distribute to different part of the project	2	Eli	1	1							
1.2.1.1	Research about existing refrigerated vending machines	5	Daniel	1	2	2						
1.2.1.2	Research about the best type of machine for our projec	5	Benya	2	1	2						
1.2.1.3	Research about the costs of vending machines	5	Jayne	2	2	1						
1.2.1.4	Look at previous Purdue vending machines	3	Eli	3								
1.2.1.5	Research about how to buy a machine	2	Daniel	1	1							
1.2.1.6	Research about laws and regulations regarding vending machines	10	Benya	2	2	2	2	2				
1.2.2.1	Figure out which company to buy vending machines from	10	Jayne	2	2	2	3	1				
1.2.2.2	Contact the company to buy the vending machines	3	Eli	2	1							
1.2.2.3	Buy vending machines	0	Daniel									
1.3.1.1	Distribution Research	5	Benya	2	2	1						
1.3.1.2	Look at Transportation options	2	Jayne		2							
1.3.1.3	How often we need to deliver food	2	Eli		2							
1.3.2.1	Analize what students are willing to pay	2	Daniel		1	1						
1.3.2.2	Determine our cost	1	Benya		1							
1.3.2.3	Set prices for our food	1	Jayne		1							
1.3.3.1	Research food companies	5	Eli		1	2	2					
1.3.3.2	Analyze food prices	1	Daniel			1						
1.3.3.3	Choose a food distributor to buy our food from	1	Benya									
1.4.1.1	Research what kind of food we want to put in the vending machine.	10	Jayne		3	2	1	2	2			
1.4.1.2	Research how long the food should be switched out.	10	Eli		2	3	2	1	2			
1.4.1.3	Research what healthier options students would want in a vending machine.	10	Daniel		3	3	3	1				
1.4.2.1	Interview potential employees	10	Benya		2	2	1	3	2			
1.4.2.2	Accept resumes	0	Jayne									
1.4.2.3	Discuss with other employees	2	Eli			2						
1.4.2.4	Make final decisions	3	Daniel			1	2					
1.4.2.5	Make potential employees take a drug test	1	Benya			2	1					
1.5.1.1	Research how to pitch idea	3	Jayne			1	2					
1.5.1.2	Research who to go to pitch the idea	1	Eli				1					
1.5.1.3	Gather all information necessary to pitch idea	5	Daniel			2	3					
1.5.1.4	Contact Purdue to set up time and location	1	Benya				1					
1.5.1.5	Pitch idea	2	Jayne			2						
1.6.1.1	Research the amount of people that have classes and work in building around campus	4	Eli			2	2					
1.6.1.2	Explore West Lafayette Business that would have a need for fresh vending	3	Daniel			1	2					
1.6.2.1	Find contact info for person in charge of each building	2	Benya				2					
1.6.2.2	Find out if where and when in building we can put our vending machines	2	Jayne			2						
1.7.1.1	Research marketing ideas	10	Eli				3	3	2	3		
1.7.1.2	Create advertisements (logos, fliers, etc)	10	Daniel						4	3	3	
1.7.2.1	Hang up flyers around West Lafayette	5	Benya								2.5	2.5
1.7.2.2	Print flyers	1	Jayne									1
1.7.2.3	Post things on social media	2	Eli						0.5	0.5	0.5	0.5

9.1 Assumption Log

What activity it is impacting?	Assumption	Why?
Food distribution	Food will be delivered to machines as needed and on time.	The food in the machines will need to be changed frequently and need to ensure it will be there in a timely manner.
Consumer health	Students will use the Fresh Express rather than a normal vending machine.	The Fresh Express will have healthier options for consumers.
Food shelf life	Our food in vending machines will stay fresh long enough for consumers to buy and eat it.	Fresh, convenient food is our goal.
Price of food	That our prices will be comparable or better than existing options.	Consumers, particularly students are usually on a strict budget.
Vending locations	Purdue and other West Lafayette businesses will want to have our vending machines in their buildings.	This is where we will best sell our products.
Marketing to Purdue/Businesses	Purdue and Businesses will purchase the Fresh Express vending machines.	The Fresh express has healthier, fresher options for students and faculty.

9.2 Risks Analysis

Project Name: Fresh Express

Risk Environment: This is the first project that the team has ever done together. All of us have completely different backgrounds and interests. But all of us have one goal in common which is to make sure that everyone are eating healthy, especially college students. This is how Fresh Express got started. All of us wants to improve students lives all across the country. This is important to us. This is why it is so crucial that the project is successful and we receive the support we need for it to be so. Every parts of the project can be tricky, that is why we need to take it slow and discuss every step of the way with others who may be more experienced than us.

Methodology: The ways for us to control or reduce the risk is described in "counteract risks" below.

Roles and responsibilities: All of us will work together to reduce the risks. Some may work more than others, depending on our specialization.

Timing: Since the project is a short project, we will be discussing risks everyday for a few minutes during daily stand-up meetings. This ensure that everyone are on the same page and that if risks were to occur, it can be dealt with quickly.

Top 15 Risks that Could Occur:

1. Executives and/or stakeholders fail to support project or become disengaged
2. Scope is poorly defined
3. Cost and schedule estimates are inaccurate (overly optimistic)
4. Too many scope changes (i.e. scope creep)
5. Problems with project communications
6. Resource shortfalls
7. Approvals and Red Tape
8. Procurement challenges
9. Unrealistic expectations
10. Lack of overall planning
11. Machines are more expensive that originally planned
12. Marketing does not reach as many people as planned
13. No profit

14. Food goes bad too quick
15. Purdue doesn't want the machines

15 Counteract Risks in Order:

1. Interact with stakeholders to try and make sure they are satisfied.
2. Redefine scope to make sure it is well defined.
3. Seek additional funding.
4. Adjust some features
5. Change communication plan and more communication channels for stakeholders
6. Seek additional funding.
7. Talk to stakeholders.
8. Find other distributors.
9. Get together as a group to make sure that idea is realistic.
10. Go over project together to make sure project is effective.
11. Seek other machine options or readjust budget.
12. Find effective ways to advertise.
13. Make adjustments to budgets and prices.
14. Replace food as quick as possible.
15. Look for other business' who might want our vending machines.

10.1 Change Request

Project Title: Fresh Express **Date prepared: 4/16/18**

Person Requesting Change: Group 8 **Change Number: 1**

Category of Change:

☐ Scope	☐ Quality	✓ Requirements
✓ Cost	☐ Schedule	✓ Documents

Detailed Description of Proposed Change:

Reducing our number of starting vending machines from 3 to 2.

Justification for Proposed Change:

We have a limited amount of money and by reducing the number of vending machines we have reduces the money we are using by $2,522.

Impacts of Change:

Scope	☐ Increase	☐ Decrease	✓ Modify
Description: The scope of our project is not changed by the simple reduction of vending machines being used in our project.			
Quality	☐ Increase	☐ Decrease	✓ Modify
Description: The quality is neither decreasing or increasing. We are simply just reducing the number of vending machines we are using by 1.			
Requirements	☐ Increase	✓ Decrease	☐ Modify
Description: By reducing the number of vending machines we are using also decreases the number of requirements needed. We now do not have to talk to as many building managers to see if our vending machines can be used in their building.			
Cost	☐ Increase	✓ Decrease	☐ Modify
Description: Decreased the amount of money we need to spend by $2,522.			

Schedule	☐ Increase	☐ Decrease	✓ Modify
Description: Reducing the number of vending machines does not have an affect on our schedule.			

Project Documents:

WBS, Budget, network diagram, gantt chart, resource leveling

Comments:

Reducing the number of vending machines at the start of the project means that there are less risks at the beginning of the project.

Disposition ✓ Approve ☐ Defer ☐ Reject

Change Control Board Signatures:

Name	Role	Signature
Daniel Horton	**Marketing Manager**	*Daniel Horton*
Eli Hegg	**Research Manager**	*Eli Hegg*
Benya Chongolnee	**Project Manager**	*Benya Chongolnee*
Jayne Jaworowski	**Financial Manager**	*Jayne Jaworowski*

Date: 4/16/18

Change Request

Project Title: Fresh Express **Date prepared: 04/16/18**

Person Requesting Change: Team 8 **Change Number: 2**

Category of Change:

☐ Scope	✓ Quality	☐ Requirements
✓ Cost	☐ Schedule	☐ Documents

Detailed Description of Proposed Change:

Reduce the research time for what kind of food we want to put in the vending machine.

Justification for Proposed Change:

There is no need to spend 10 hours researching for the food to put in the machine. 5 hours is reasonable for this project.

Impacts of Change:

Scope	☐ Increase	☐ Decrease	☐ Modify
Description:			
Quality	☐ Increase	✓ Decrease	☐ Modify
Description: The quality of the research may be reduced by having less time to fully read all of the documents. However, 5 hours is enough time to get a basic idea of this topic to help the project be successful.			
Requirements	☐ Increase	☐ Decrease	☐ Modify
Description:			
Cost	☐ Increase	✓ Decrease	☐ Modify
Description: Cost will go down, because we will not spend as much time researching.			

Schedule	☐ Increase	☐ Decrease	☐ Modify
Description:			

Project Documents:

WBS, Budget, network diagram, gantt chart, resource leveling

Comments:

Reducing the time to research by half significantly help reduce the cost of the project. This also gives more time for people to focus on other parts of the project.

Disposition ✓ Approve ☐ Defer ☐ Reject

Change Control Board Signatures:

Name	Role	Signature
Daniel Horton	**Marketing Manager**	*Daniel Horton*
Eli Hegg	**Research Manager**	*Eli Hegg*
Benya Chongolnee	**Project Manager**	*Benya Chongolnee*
Jayne Jaworowski	**Financial Manager**	*Jayne Jaworowski*

Date: 4/16/18

Change Request

Project Title: Fresh Express **Date prepared: 4/16/18**

Person Requesting Change: Group 8 **Change Number: 3**

Category of Change:

☐ Scope	✓ Quality	✓ Requirements
✓ Cost	☐ Schedule	☐ Documents

Detailed Description of Proposed Change:

Reduce research time for how long the food should be switched out.

Justification for Proposed Change:

Our original plan will take too long and be too costly.

Impacts of Change:

Scope	☐ Increase	☐ Decrease	✓ Modify
Description: Reducing the number of hours researching should not have an affect on our scope.			
Quality	☐ Increase	✓ Decrease	☐ Modify
Description: By reducing the number of hours researching, our research may not be as good as it could be. This could lead to our project being of less quality than it could have been.			
Requirements	☐ Increase	✓ Decrease	☐ Modify
Description: By reducing the number of hours needed for researching the food, we are decreasing the requirement of how many hours are needed to complete the project.			
Cost	☐ Increase	✓ Decrease	☐ Modify

Description: By reducing the number of hours needed researching, we are paying the researchers less which in the end reduces the cost of the total project.			
Schedule	☐ Increase	☐ Decrease	✓ Modify
Description: Reducing the number of hours researching should not have an affect on our schedule.			

Project Documents:

WBS, Budget, network diagram, gantt chart, resource leveling

Comments:

Reducing the time from 10 hours to 5 hours will be very beneficial to the project.

Disposition ✓ Approve ☐ Defer ☐ Reject

Change Control Board Signatures:

Name	Role	Signature
Daniel Horton	**Marketing Manager**	*Daniel Horton*
Eli Hegg	**Research Manager**	*Eli Hegg*
Benya Chongolnee	**Project Manager**	*Benya Chongolnee*
Jayne Jaworowski	**Financial Manager**	*Jayne Jaworowski*

Date: 04/16/18

10.2 Change Log

Project Title: Fresh Express **Date Prepared:** April 16, 2018

Change ID	Category	Description of Change	Submitted by	Submission Date	Status	Disposition
1	Cost	Reducing the number of machines we have from 3 to 2.	Eli Hegg	4/16/18	Complete	Approve
2	Quality	Reduce the research time for what kind of food we want to put in the vending machine.	Benya Chongolnee	4/16/18	Complete	Approve
3	Quality	Reduce research time for how long the food should be switched out.	Jayne Jaworowski	4/16/18	Complete	Approve

11.1 Lessons Learned

Project Title: **Fresh Express** **Date Prepared:** **April 20,2018**

Project Performance Analysis

	What Worked Well	**What Can Be Improved**
Requirements definition and management	Looking up definitions, using lit reviews	Could have used the textbook more
Scope definition and management	Using lit review to figure out how to set up project scope, and what it was	Added more to project scope
Schedule development and control	Working together to decide times for schedule	Had more precise times for things like research
Cost estimating and control	Looking up prices of machines and food	Had more precise times for research which would have made costs more accurate
Quality planning and control	Working together, finding risks	Looked for more possible risks
Human resource availability, team development, and performance	Meetings, working together	More knowledge on templates
Communication management	Communication plan and contract	Communication with outsiders or some stakeholder
Stakeholder management	Reaching out to Purdue and other vendors	Coming up with pitch to vendors and Purdue
Reporting	The communication plan we put together and our communication on completion	Stakeholder reporting
Risk management	Finding most risks, finding ways to mitigate the risks	Could have looked for more risks
Procurement planning and management	Creating scope, finding risks, WBS	Timing for WBS dictionary and
Process improvement information	Machine and food buying	Food switch out

Product-specific information	Finding an estimated cost	Not many vending machines like the ones we would use so it is hard to get exact costs and times

Risks and Issues

ID	Risk or Issue Description	Response	Comments
1.4	Research the process to change food, not knowing exact amounts	We got as close as possible and we can cut out money from other sources if necessary	n/a
1.2	We had to cut a whole vending machine to make the budget cut	We will hopefully make enough money to buy more in the future	n/a

Other

Areas of Exceptional Performance	Areas For Improvement
Team work	Exact price amounts
Creation of advertisements	Exact hours

11.2 Future Recommendations of Projects

Since there is a lot that could go wrong with the project, one must ensure that everything is checked twice to reduce error as much as possible. The project includes only 2 machines, but the cost of the project can be very expensive, so to save money, risks must be managed. A lot of factors goes into this project such as vending machine regulations, food regulation, and technology.

For the future, it is recommended that survey and observations should be conducted to see how worthy it is to place Fresh Express vending machine in a building. It should be considered that there are competitors that may be cheaper or more efficient than Fresh Express; thus, the building managers may prefer those companies. This idea will also be good if it was placed in fitness facilities. For the future, it may be a good idea to list the nutrition values as well as expiration dates on the food and snacks. Furthermore, it would be wise to advertise healthy eating with the Fresh Express vending machine. This will help encourage students to see how beneficial it is to eat healthy.

More planning and research may be needed in the future since there are more to vending machines laws and regulations than expected. More time may be necessary; thus, adding allocation time to finish the project is suggested.

11.3 References

Healthy Vending

Healthy Vending Snacks | Best-Selling Healthy Vending Products. (n.d.). Retrieved from http://www.healthyvending.com/products/

Healthy You Vending

E. (2013, September 11). Healthy Vending Product Options From HealthyYOU Vending. Retrieved from https://www.healthyyouvending.com/products/

Purdue University Dining

Purdue University. (n.d.). Purdue University - Dining & Catering. Retrieved from https://dining.purdue.edu/

11.4 Glossary

Air compressor: Keeps items in the vending machine cool resulting in food lasting longer.
Bill Validator: Reads and accepts paper money. This is an alternative to the coin slot.
Refill Driver: Person that refills the vending machine when food needs to be replaced.
Refill Schedule: How often the vending machine is refilled.
Service Order: A way to keep track of what went wrong with the vending machine and why.
Spiral: The metal ring that keep each item spaced apart. When paid for, the spiral spins and pushes the product out of the vending machine.
T-Handle: Lockable door handle on a vending machine.
Vendible Packaging: Term for packing a product that makes it usable in a vending machine.
Vending Operator: Company or person that specializes in stocking and servicing vending machines.

Meeting Minutes # 1

Date: 1/22/18	**Start Time: 12:30**	**End Time: 1:30**	**Location: WALC**

Meeting Called By	Team decision during class
Note Taker	Eli Hegg
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: Group rules, corrective action plan, guidelines and expectations for group, collaboration and fair distribution of work.

Conclusion: We finished the group contract and turned it in. We made a solid plan as how to work together as a group.

Action Items	**Person Responsible**	**Deadline**
Start thinking about project ideas	Everyone	Next class period

Meeting Minutes # 2

Date: 2/12/18	**Start Time:** 1:00	**End Time:** 1:45	**Location:** WALC

Meeting Called By	Team decision during class
Note Taker	We all took notes on google drive
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: Case study, stakeholder strategy plan, Communication management, stakeholder classification.

Conclusion: We now have a list of stakeholders, their impact on the project, and how/ what we will do to communicate with them.

Action Items	**Person Responsible**	**Deadline**
None	None	None

Meeting Minutes # 3

Date: 2/19/18	**Start Time:** 12:30	**End Time:** 1:30	**Location:** WALC

Meeting Called By	Team decision during class
Note Taker	We all took notes on google drive
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: Roles and responsibilities of staff, staff management plan, and discussed project deliverables

Conclusion: We now have a list of staff that would be needed and what they will do with our team. We have a list of solid deliverables that will be included in our project.

Action Items	**Person Responsible**	**Deadline**
None	None	None

Meeting Minutes # 4

Date: 2/26/18	**Start Time:** 12:30	**End Time:** 1:30	**Location:** WALC

Meeting Called By	Team decision during class
Note Taker	We all took notes on google drive
Attendees	Jayne Jaworowski, Daniel Horton, Eli Hegg

Agenda

Discussion: We worked on our project scope statement and the project charter.

Conclusion: We were able to get a good starting point for our project scope. We defined some of the acceptable criteria and exclusions of our project.

Action Items	Person Responsible	Deadline
Remember meeting with Prof. Dunlop for next Monday	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg	Monday March 5

Meeting Minutes # 5

Date: 3/5/2018	**Start Time:** 1:00pm	**End Time:** 1:45pm	**Location:** Krannert

Meeting Called By	Whole group during class
Note Taker	Whole group on Google Drive
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: We created the WBS and our assumption log. We also discussed the midterm binder check and what we need to finish for that.

Conclusion: We finished all pages that will be needed for the midterm binder check and will have it finished and turned in by Friday @ 4pm.

Action Items	**Person Responsible**	**Deadline**
Make sure all binder items are on google drive and available	Entire group	Wednesday March 7, 2018

Meeting Minutes # 6

Date: 3/19/18	**Start Time:** 12:30	**End Time:** 1:30	**Location:** WALC

Meeting Called By	Team decision during class
Note Taker	Team decision during class
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: Worked on activity list and WBS dictionary.

Conclusion: We decided on how many machines we were going to try and sell and the price of many of the items on our WBS.

Action Items	**Person Responsible**	**Deadline**
None	None	None

Meeting Minutes # 7

Date: 3/26/18	**Start Time:** 12:30	**End Time:** 2:00	**Location:** WALC

Meeting Called By	Team decision during class
Note Taker	We all took notes on google drive
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: We fixed WBS dictionary, worked on time optimization, and project budget.

Conclusion: A finished WBS dictionary, time schedule, and budget.

Action Items	**Person Responsible**	**Deadline**
None	None	None

Meeting Minutes # 8

Date: 4/2/2018	**Start Time:** 12:30	**End Time:** 1:30	**Location:** WALC

Meeting Called By	Team decision during class
Note Taker	We all took notes on google drive
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: Created Gantt chart and resource leveling chart. We discussed the amount of time that would be taken on each task and who would accomplish each task.

Conclusion: Create final timeline for project. Submitted final Gantt chart and resource leveling**.**

Action Items	**Person Responsible**	**Deadline**
None	None	None

Meeting Minutes # 9

Date: 4/9/2018	**Start Time:** 12:30	**End Time:** 1:20	**Location:** WALC

Meeting Called By	Team decision during class
Note Taker	Team decision during class
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: Looked at network diagram ppt, worked together to figure out network diagram, learned how to calculate float

Conclusion: Created network diagram, created float times for project.

Action Items	**Person Responsible**	**Deadline**
Remember to meet in Krannert next week.	Whole team	April 16,2018

Meeting Minutes # 10

Date: 4/16/2018	**Start Time:** 12:30	**End Time:** 1:30	**Location:** WALC

Meeting Called By	Team decision during class
Note Taker	We all took notes on google drive
Attendees	Jayne Jaworowski, Daniel Horton, Benya Chongolee, Eli Hegg

Agenda

Discussion: Change log and change request. What we need to cut back on to make a 17% decrease in the budget ($2522.80).

Conclusion: We finished the change log and change request sheet. We changed our WBS, WBS dictionary, network diagram, budget, resource leveling chart, and Gantt chart to match our updated budget and times.

Action Items	**Person Responsible**	**Deadline**
Meet with Prof. Dunlop on Friday in Krannert. Moved from Monday	Whole team	Friday April 20,2018