Applied Project Management: A Proposal for a New Quick Delivery System

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Abstract— **Favorite food delivery systems earn this status through proven dependability and service. There is a vast market scope; it makes restaurants, food, needed household items ready for distribution. Amazon and Door Dash depend upon top-notch and well-known courier services such as UPS and FedEx. The company proposed will deliver food, household items, and groceries to a customer's door with ease. This Lean Six Sigma-flavored project proposal includes the project's scope, project management team, milestones, work breakdown structure, risks, budget, planning, designing, flow charts, and the final project report.**

Keywords—Project, Project Management, Delivery Service.

I. BACKGROUND

Within the United States in 1989, online grocery delivery was started by Andrew and Thomas Parkinson in Evanston, Indiana, by the brand name Peapod. Later in January 1994, Pizza Hut established a fast-food chain, a digital ordering platform, and the first-ever online order for pizza [1]. In July 2008, in India, Zomato started its online food delivery and became a popular restaurant delivery service and attracted many young citizens to their benefit. With Zomato and most of the takeaway food courts, and most of the restaurants, creating an agreement with them made huge profits. Then, Swiggy launched its online food delivery in August 2014. Like Zomato, so many restaurants tied up and agreed with them and bagged huge profits.

II. INTRODUCTION

Food delivery platforms are the most important, offering unique foodservice businesses a run for their money. In recent times, the online food delivery system market has evolved and expanded its business throughout the nation. Few developed in different countries. In general, the food delivery companies charge around 25% to 35% commissions on your orders' total [2].

The online delivery industry is a service-based industry, which delivers the items customers need from restaurants, food courts, malls, furniture, and many more. It is a straightforward process when ordering food from a mobile application. Then from the database, a restaurant is selected, the order is taken, and with the help of the GPS signal, the food/item is delivered by the delivery person to the person's home.

Motivation is needed for the employees to work hard and to be quick and smart in the delivery process. They must be familiar with the advanced technology of using smartphones. One motivation that should be considered is creating a system with minimum office errors and high productivity. This system needs a software team for the maintenance of the application for it to run without errors and bugs.

There are more delivery companies in the present market. Still, the company proposed offers the quickest service by using advanced software technology. As in the current situation, the world is in a panic due to the COVID-19 virus, so it is best to stay at home and order everything possible online. Delivery personnel will bring those items to your home or business. As the population increases, the delivery industry is also increasing rapidly, so any new company with a good marketing strategy will sustain and be successful. The average American spends roughly $232 per month on food by ordering through delivery apps. That means they spend $54 per week or $7.64 a day on food which nearly costs as a chipotle bowl. With this quick delivery service demand, it is an excellent time to start a food delivery business.

Like the food industry, furniture is looking to deliver products through online orders. Many people like fabricated furniture in India, hometown in the USA, and provide products like home décor, furniture, gardening essentials, medical supplies, and other items.

III. THE WORKFLOW PROCESS

The delivery system's workflow process is like a chain process; it contains steps like select, order, payment, delivery person pickup, GPS location determination, vehicle delivery, and feedback for both the employee and restaurant, including a star rating system with a comment box. Like that, it goes on. In this industry, customers are the most important people who help develop the business in all aspects.

Consumers will place an order via some of the food delivery apps through their smartphones, tablets, PCs. Once they have placed the order, the restaurant will confirm the order with seamlessness and prepare food and pack. Then it will deliver by a delivery person from the restaurant to where you want it to be delivered. Moreover, a few restaurants offer services in which customers can come and pick their orders as well. The online food delivery system is fully automatic and completely digitizes the restaurant food ordering procedure [2].

In the case of the product, the business flow process has been explained in Figure 1. Business flow process of an online delivery system, here it is clearly showing how we deal with the products other than the food because food should be delicious so usually take care and go y own and pickup. But in the case of the large items in some other places like furniture, wardrobes, closets, dining table, cycle, bike, and many other household items. We will ship those items from the suppliers; it worked like when you placed an order; we need to check with the suppliers. Then we will receive a confirmation mail from them regarding the processing time. How many days will it take to reach us? Then we will update the information from the inventory then we will have our days in and outgoing reports of the products. Now the product is kept side by attaching the bill. The product is ready for delivery. At this moment, our delivery person will approach the site and load the things you ordered. He or she checks the dispatch address, and then with our cargo travel vehicle, they come to you with the product. Figure 1 is extracted from www.conceptdraw.com about the functioning of the warehouse and workflow process of the product.
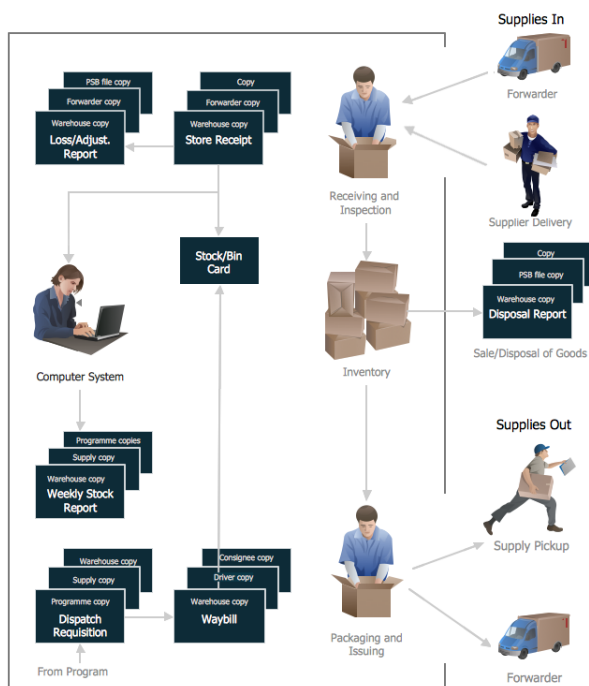

Figure 1: Business flow process of warehouse online delivery system

IV. THE SCOPE OF THE DELIVERY INDUSTRY

Shut-in people rely upon online delivery for most of their food items, this system helps customers and alleviates undo restaurant management of the system. It also utilizes a computerized algorithm for defining the best solution for each order; making changes a necessary in manual handling of the food—the scope of the delivery industry associated with the budget and the return time. For example, the company Fabfurnish in India is an online furniture delivery company. They started their venture in 2011 at Gurugram, founded by three people Mehul Agarwal, Vikram Chopra, and Vaibhav Aggarwal. Through the development of their company, they have achieved a $50 million fundraise from big industrial entities. This startup was going well, but one moment people are asked to replace the furniture which is not liked by them or which customer is not satisfied with, it is not an easy deal to replace. And company management failed to provide solutions to the many issues like refund, return, and warranty so customers began to lose trust in the company, until finally the company went out of business. Eventually, this company was acquired by the Future Group for $2.25 million [3].

We need to remember that the "Customer is King," in this industry, customers deserve that companies take care of them, then customers will take care of us through their patronage; it's like vice-versa since if a company wants to grow their grow in business, they will serve their customers.

It's never been easier for food companies to reach their customers. Restaurant delivery has grown 20% in the last five years; while estimates differ, online food delivery sales are estimated to rise as high as $220 billion by 2023 – 40% of total restaurant sales. Online grocery services may lag behind restaurants in online delivery adoption, but it's growing. Deutsche Bank estimates that the $24 billion online grocery market will surge to 120$ billion by 2025 [4].

V. IMPLEMENTATION AND PROJECT MANAGEMENT

It is a necessary process when a company is intending to implement a new strategy or methods in the flow process. This company must thoroughly verify in-development the processes and modify as needed. Implementing Lean Six Sigma methods in an online delivery service is yet another avenue to meet customer demand, control costs, and maximize profits.

With the effect of the modification, project management includes certain elements such as,

- Selecting a team
- Developing project objectives/ execution plan
- Performing risk management activities
- Cost estimating and budgeting
- Scheduling
- Managing resources [5]

VI. PROJECT SCOPE

The project scope is everything about a project, work content as well as expected outcomes. It consists of all the activities like naming, resources consumed, analyzing, results, quality standards. The scope also includes goals, constraints, and limitations.

VII. PROJECT NAME

The name of the project is the Quick Delivery System – FFF. The scope of the project includes the planning, development, implementation, budgeting, and using Lean Six Sigma tools to develop the inefficient process manner. The name itself says that we deliver products very quickly and our three F's

stand for fast, faster, fastest. The project is a very significant one with a lot of opportunities in the present market conditions. The name chosen is due to its catchy-ness, and everyone can easily understand it.

VIII. AVAILABILITY OF RESOURCES

Since deciding upon a online delivery venture, it related to so many resources like availability of vehicles, restaurant, customers, interior designers, computer operators, software managing people, app management, and/or a delivery personnel.

IX. SUPPLY CHAIN PROCESS

The internal supply chain process, customers first place an order in through the software management system application and log their preferred method of payment. Second, the system verifies past histories in payments. Third, the restaurant prepares the food and neatly packs it into a box. Lastly, delivery personnel are ready to deliver the customer's purchase. The supply chain process of the online delivery system is illustrated in Figure 2.

Figure 2: Internal Supply Chain of the Product

For food grocers looking to scale up their delivery operations, the biggest challenge will be overcoming their competitors who already exist in the market. It won't be easy, as most of the companies make zero delivery automation and offer maximized online orders, so it is essential to maintain good quality in the products delivered. For this reason, each process in the supply chain should work appropriately to avoid damaged food, packaging, or a poor delivery experience for the customer.

X. PARTNERSHIPS

Many companies work along with a partner due to difficult initial development stages that may be hard to manage. Others start their own companies, but it is risky to do alone since it may take a long time to deliver products promptly. By grouping with the nearest popular restaurants that offer delicious taste, big grocery stores, it will be easy to get the customer's business.

Partnerships play an essential role in the business sector. The main benefit of making partnerships is to minimize the time delay, improve quality, and enhance productivity.

XI. STAKEHOLDERS

For any project, there are two types of stakeholders: Internal and External. Internal stakeholders will be strictly affected by any project changes, and work with the project. External stakeholders are the one who relies on the project; there is nothing to do with the ongoing project inside.

Still, they help in all other aspects like environmental, pollution, and ethical concerns. For instance, in managing the company, pollution is causing by vehicles, food quality requires maintenance and upkeep, and permissions are agreed by the external groups – See Figure 3.

Internal Stakeholders	External Stakeholders
Proprietor	Competitors
Project Team members	Environmental Control groups External auditing staff Suppliers
Employees – Cooking, Front desk, operators, staff, makers, office delivery person	Customers
Management	Suppliers & Buyers

Figure 3: Internal and External Stakeholders

XI. DECISION CRITERIA

The criteria that will be given to our products and service list, for which priority is most important and for what least the giving numbering decides it as rank from 1 and above. As we see in Figure 4, ranking the importance, decision making can be made.

Priority	Rank
Customers	1
Food And product quality	2
Software Management	3
Vehicle and Driver safety	4
Office details	5

Figure 4: Ranking the Priorities

1. The first important thing in the business is to take care of your customers and make them comfortable. Offer want ever they want legally and ethically.

2. The quality of the product which directly linked to the reputation of the company, so it is crucial to concentrate on it.

3. Software management is essential here that take orders and provide billing statements and payments that happen through the application, so it is crucial.

4. Vehicle and driver safety is paramount because of the people traveling in company vehicles. Hence, their safety is a must; wearing a seat belt, having insurance, and a thoroughly checked vehicle. A person should be in good health condition.

5. Office details are also essential to maintain confidentiality to compete in the market with other companies.

XII. PROJECT MANAGEMENT TEAM

There are many steps in selecting and finalizing the project team before starting the process. These include budget, salary issues, planning, and organizing of the crew. The organization must go through different phases to get the final output ready to serve the customers in society. There are many interlinked with the project management explained below – see Figure 5.

Name	Title
Jayendra Kumar	Owner of Quick Delivery Service
Uday Kiran	Project Manager
Karthik Nuka	Financial Head
Bhavana	Planning and Organizing head
Keerthi	Creative head and Software management
Ravi Teja	Operations manager deals with partners & App Development
Shiva Sai	Lean six sigma implementation
Tarun	Vehicle and pollution control
Aravind	Outsourcing quality consultant

Figure 5: Project Management Team

XIII. SELECTION OF CREW

The company, after conducting so many tests and analyzing the previous reports of their work and decided to take them into the project team and selected for the different positions and the details of the organization were provided in Figure 5 in relation to details about the Quick Delivery Service – FFF. Shiva Sai was a lean six sigma consultant. He was hired to implement, so the salary was a little bit high although he was part-time so that the salary would be around $4000 per month. Bhavana has planning and organizing experience since she worked for more than four years in the same field in a different state. She moved here and was hired to work. Keerthi, is the company's creative head in marketing and public relations. Aravind works as an outsourcing quality consultant; he usually inspects the restaurant about its quality and all our partnership stores to check whether they are making products as per rate. All the people are assigned their work with the help of Bhavana using spreadsheets.

XIV. SALARY DISCUSSION

Name	Salary/hr	Work Hours	Total / Month
Jayendra Gupta	$ 40.00	300	$ 12,000
Uday Kiran	$ 25.00	240	$ 6,000
Karthik Nuka	$ 20.00	240	$ 6,000
Bhavana	$ 40.00	160	$ 6,400
Keerthi	$ 30.00	160	$ 4,800
Ravi Teja	$ 25.00	240	$ 6,000
Shiva Sai	$ 15.00	160	$ 2,400
Tarun	$ 40.00	100	$ 4,000
Aravind	$ 20.00	200	$ 4,000
Total			$ 51,600

Figure 6: Team Members Salary

Within Figure 6, note the remuneration for each employee working 12 hours a day since it is the initial stage of the project. These charts serve as rough estimate salaries of the employees for the Quick Delivery Service Company. The wages and hours can change at any point in time since it is the employee's rough estimation; based on the performance, the salary may rise or fall. It is a new company, and bank funding also matters to run the company

XV. WORK ASSIGNMENT CHART

Error-free and organized work requires a work assignment chart. Team members were assigned as needed. It can be done with the help of the responsibility assignment matrix, and it is the chart with work posting the responsible, accountable, consulted, informed [6]. It is a project management software with a RACI matric+ Work breakdown structure, then check with the planner- a combination of classical and agile tools with a Kanban board.

XVI. TEAM MOTIVATION / MEETINGS

The project team selected will work together as a team for several periods. Before they start working in the Quick Delivery Service company, they need to perform specific tasks regarding their motivation towards work and ethics. The project lets them know what they want to work on and what they need to concentrate on in day-to-day activities. This will make them build confidence, which will be held in the company's meeting room. This event will be organized and planned by the Bhavana and guided by the creative head Keerthi. It will make them potential and work for the project. Here, the goals and objectives are determined.

A monthly meeting is held on every 1st Friday of the month. Bhavana and Keerthi organize these meetings to explain the project goals see in Figure 7. Sometimes personality tests are also conducted to look at the employee performance with the team members. Some fundamental values and rule that should be followed are described in Figure 8.

Goals
- Implement lean six sigma methodology in the Quick Delivery Service -FFF company
- Use of DMAIC approach
- Implement 5S in the delivery process
- Using vehicles productively
- Maintaining good customer relations

Figure 7: Project Goals

Basic Rules and Values
- Be honest with the employee and management
- Participate in all the decision making events
- Maintaining proper quality and quantity
- Sharing Ideas
- Carrying all the required documents in the vehicle
- Delivering the product on-time
- We are maintaining time and quality.
- Be respectful with the customers and deal in a polite manner
- Check the project status frequently and take work reports quarterly
- Attend all the board meetings

Figure 8: Basic Rules and Values of Company

The goals and objectives are discussed by the team members and management in the meeting. Bhavana and Keerthi will explain the procedures that are going to perform and modify the changes needed to it. At the meeting, generally, the company rules are discussed and guided by the management and frequently make employees check their email for the recent news and modifications made in the company.

XVII. COMMUNICATION

There is a meeting scheduled to meet with employees to discuss the project performance to push towards success. Each member of the team is assigned a particular task. There are reports generated weekly and monthly to document delivery personnel performance; creative head Keerthi will analyze the necessary changed and communicate with employees' areas for improvement. Bhavana will organize and plan the meetings as per the available schedule. From the Figure 9 communication schedule, responsible personnel and modified reports, and how often they happen, how they conducted either a video call or in-person, and how many will attend are documented.

Communication	Description	Frequency/Format	Participants	About	Decision maker
Weekly Report	Email sent	Weekly/Paper	Each Team Head	Project Status	Project Manager Jayendra
Monthly Meeting	Email sent of cost and analysis	Monthly / In-person	All delivery persons/Keerthi	Reduction of cost, Improve the efficiency of work	Bhavana/Shiva/Sai/Aravind
Monthly Report	Printed Report	Monthly	Ever employee	Monthly performance	Jayendra
Summary	Overall Report	Quarterly	Individual/In-person	Performance/Problems	Bhavana/Keerthi

Figure 9: Communication Schedule

XVIII. DEADLINES, MILESTONES

The organization has several deadlines for the process to make it faster and practical. The specific deadlines of the project are in Figure 10 Deadlines.

Deadline 1: Purchasing Vehicles	In the First Week of the start date
Deadline 2: 5S Completion	End of the first month
Deadline 3: Deal with restaurants	End of the First month
Deadline 4: Reaching 100 customers	End of the first month

Figure 10: Deadlines

The milestones were selected based on the project that so ends the project successfully. These milestones are required to ascertain project success. The few landmarks of the project are explained in Figure 11.

Milestone	End date
Phase I: Establishment of a company	End of the First week
Phase II: Vehicle purchasing and inspection	End of the second week
Phase III: Delivery persons and Training	End of the third week
Phase IV: Reaching maximum customers	End of the First month
Phase V: Modification	End of the second month
Phase VI: Repeat, Reduce errors	End of the Third month

Figure 11: Milestones

XIX. DATA FLOW DIAGRAM

The Data Flow Diagram (DFD) background is a data flow diagram showing only a high-level, intelligent one called level 0. Only one visible process at this level that represents the complete program's functions depending on how it works is shown in Figure 12.
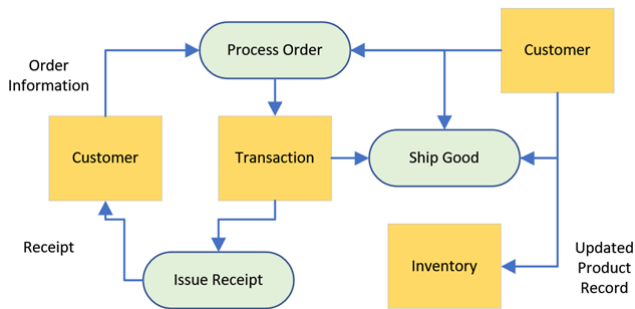
Figure 12: Data Flow Diagram

XX. WORK BREAKDOWN STRUCTURE

The Work Breakdown Structure (WBS) of the Quick Delivery Service is shown in Figure 13. The WBS process is made by implementing the Lean Six Sigma methodology of 5S technology in five steps. There are individual sections in the WBS, depending on the process going on.
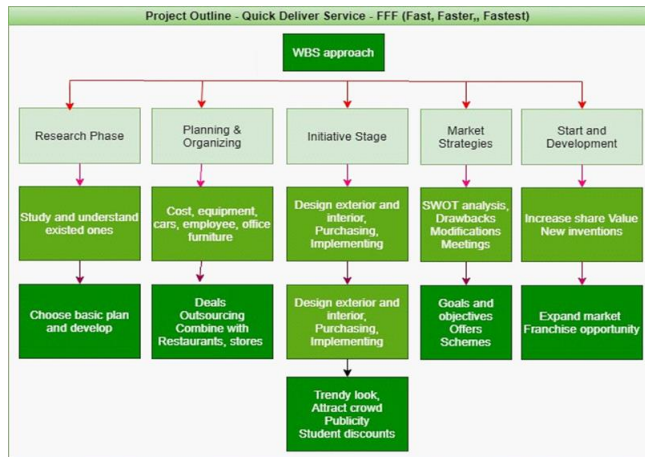

Figure 13: Work Breakdown Structure

XXI. MOBILE APP

For the project, a mobile application was designed and shown in Figure 14. Requirements are explained below.

Figure 14: Application Development

XXII. MOBILE APPLICATION TEAM

Ravi Teja and Keerthi conducted software management. Both have good experience in app development and command of the present market trends. Some critical terms in the project are described here,

• New order: It is the main feature of the project. Customers used to make different orders.
• Order History: Customer to view the previous orders made by them.
• Restaurant Profile: It is an important feature. It is essential to know a customer or provide contact details and the location of the restaurant.
• Order: The order list has been made by each restaurant [7].
• Menu: Generated by each restaurant which is tied up with our Quick Delivery Service
• Courier: It is a feature by the restaurant, admins can analyze the data delivery process
• Customer: Both customer and admin modify customer lists in this application and change the customer profile [8].

XXIII. SOFTWARE MANAGEMENT

The software is monitor and modified by Keerthi and Ravi Teja using the storyboard design – constructed through application design workflow for the customer, restaurant and courier service, admin, and the customer side. The diagram and activity diagram, and database structure design are comprised in the unified modeling language.

• Storyboard design: Designing the user interface is done by storyboard design which includes each interface description.
• User experience design: When interacting with the application, designing the totality of end-user perception, this design is used.
• UML design: The UML design contains a use case to define the system function from each actor perspective then accomplished by an explanation in use case narrative, to draw the process of each actor in a diagram activity diagram is used, to draw object or class of system with its relationship class diagram is used and to mark the message interaction with its objects base on its order of time sequence diagram is used.
• Database structure design: By the result of the class diagram, the database structure design is made. Classes that need to be saved in a database and their relationship are drawn by this design.

XXIV. AUDITING

The auditing software is installed and controlled by the Bhavana and Jayendra, which is important to maintain the reports to know the organization's regular profits and losses. Project audits can also be done regularly by the managers and owners to assess the risk, cost, project schedules. An audit should always be entrusted to independent teams.

XXV. RISK MANAGEMENT

In the corporate world, it refers to the practice to identify potential risks in advance and analyze them and take precautions to reduce the project's risk [9]. It is a qualitative problem-solving approach that uses

various assessment tools to work out and analyze, rank risks to assess and resolve them. The risk level is identified by the number given from 1 – 10 seen from the Figure 15 Risk level.

Figure 15: Risk Level

XXVI. PRODUCT DELIVERY

In delivering the product, there is a risk of the product's safety; while carrying the product, care must be taken in making, packing, scheduling, and delivery. The delivery person should always be attentive to analyze the risk of time management, product safety, and risk analysis.

XXVII. ANTI-HACKING SOFTWARE

The software is the company's heart, as the whole functions and programs are linked to the app. It is advisable to hire an anti-hacker to the organization, Mr. Sudheer, an expert in antihacking works. If the antihacking system is not working, then the company may automatically lose all the money, plans will be leaked, and can lead to company bankruptcy.

XXVIII. VEHICLE INSURANCE

Once the vehicles are purchased, vehicles must be inspected and maintained since some are not new because 5-10 employees are to be hired for delivery; a few may use bikes in a large city, some may need purchased cars, also, insurance is required. Safety is more important than money; if time and security is present, the company can win the competitive race.

XXIX. EMPLOYEE BENEFITS

Finally, a company should concentrate on the employee benefits the same as they focus on the organization's growth. As employees are working hard to deliver products, software teams are working efficiently (minimizing order and payment errors), and the creative team works hard to push the organization as the best in the market, equitable employee benefits need to be present to have a strong foundation for all stakeholders. So, it is necessary to give some perks like a holiday trip, bonuses, vacation, party nights, funds for their child, and many more.

Risk	Level	Likelihood of Occurrence
The project runs as preschedule	3	4
Vehicle safety	6	2
Budget analysis	3	3
Delivery process	6	2
Project fails	10	1

Figure 16: Risk Level and Occurrence Matrix

The project should have a risk analysis to evaluate potential risks as noted in Figure 16; we can see that the level of risk is three in the case of the budget report. It might not often happen, so the likelihood of occurrence is also 3. In the case of vehicle safety, there might be chances of food/product damage or sometimes minor accidents, delivery personnel might be injured (or worse; death), the level of risk is around six and occurrence is not expected – except in rare cases so it is 2. When it comes to a project, it does not fail. Still, the level of risk is maximum that if the project fails everything goes to zero, it may not occur at any cost unless they don't know how to perform. Hence, the level of occurrence is 1.

XXX. PROJECT SCHEDULE

The project needs a perfect schedule to complete on time; things need to be guided to have accurate results without errors. The project schedule is clearly explained in Figure 17. Project schedule created in Microsoft Project.

Outline no.	Task Name	Duration	Incharge
1	**Implement 5S Tool**	45	Shiva sai
1.1	Introduction and planning	1	"
2	**5 S Tool**	7	Bhavana, Keerthi
2.1	Sort	1	"
2.1.1	All the tasks are sorted	1	Bhavana, Keerthi
2.2	Set In Order	1	"
2.2.1	Sorted Task are set to orser	2	"
2.3	Shine	1	"
2.3.1	The required things maintaine	2	"
2.4	Standardize	1	"
2.4.1	The above all performed	4	"
2.5	Sustain	1	"
2.5.1	Need to implement everyday	5	"
3	**DMAIC Approach**	7	Jayendra, Bhavana
3.1	Define	1	Ravi Teja, Aravind
3.1.1	The complete process defined	1	"
3.2	Measure	4	Aravind
3.2.1	Check Sheet	5	"
3.2.2	Pareto Diagram	2	"
3.3	Analyze	3	Tarun
3.3.1	Why-why Analysis	1	"
3.4	Improve	2	Uday Kiran
3.4.1	Force Firld Analysis	1	"
3.5	Control	2	Karthik
3.5.1	Complete process	1	"

Figure 17: Project Schedule by Microsoft Project

XXXI. TIME ALLOTMENT, OPERATING SCHEDULE, AND WORK SHARING

Depending on the employee time's availability and schedule, time is allotted to the person with the necessary work. Time management is essential to finish the project on time. In software management, they need more time to create and develop the software on the computer.

The project schedule will be created in Microsoft Project – this software can give the schedule of the tasks, each person what they need to do, and the available resources.

Depending on team members, the project managers focused on leading their projects and often face challenges finding new ways to transfer their knowledge. The experienced project manager will guide team members and maintain proper knowledge about the project. Project managers can collaborate with other project managers to increase their effectiveness. Knowledge transfer is essential because an effective means of transferring learning from experience on projects was identified as one of the critical factors leading to an organization consistently having successful projects [10].

XXXII. CRITICAL PATH AND FLOW PROCESS

The Quick Delivery Process ordering section flow diagram is created from the website www.paradigm.com. The flow process is shown in Figure 18. Here it can be seen that for the online strategy of delivery of other products rather than food, first, a customer must place an order, then the software check all the items and whether it is present in the product concerned outlet warehouse or not, if yes then it will be finalized and packed into the boxes and then send to the customer by the delivery agents. When the product is not present, it will send information to the seller to get the product or not; if yes, then cycle repeats. If not, the customer will be notified when the product will arrive. Here the seller information and customer information will be shared by the company's software system.
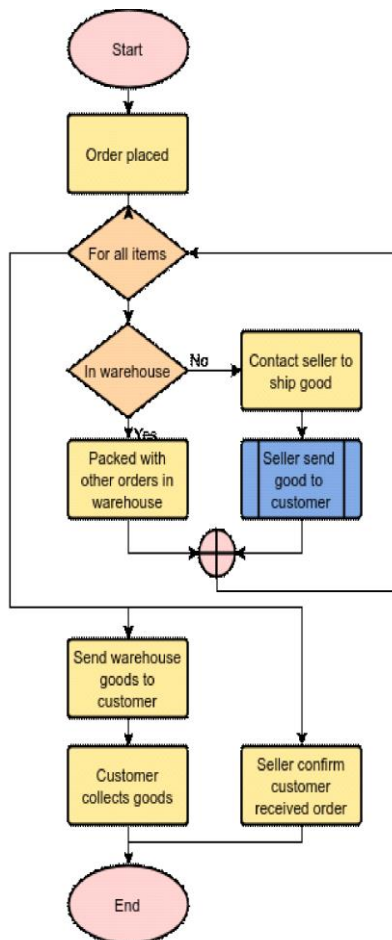
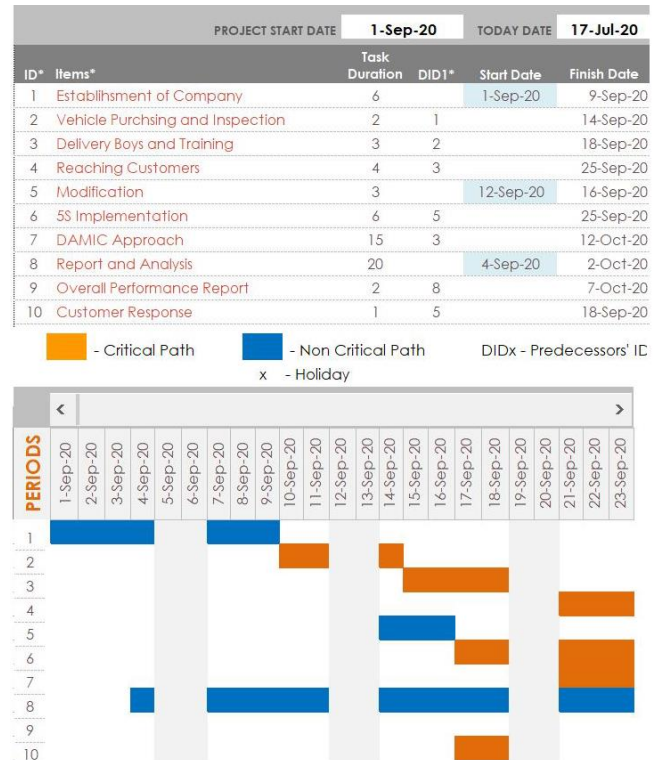

Figure 18: Flow Process of Online Orders

Figure 19: Critical Path

The project's critical path has been written in the Microsoft Project. It has been displayed in Figure 19 critical path table of the quick delivery process tasks and their management dates.

XXXIII. COST ESTIMATION

For any kind of project, irrespective of a small or big, short or long time, it should have some cost estimation before starting the project. Otherwise, the cost may increase with the unwanted expenses. The cost estimation should only concentrate on the required stuff only than the other materials. Since the initial stage of the project, each penny is important. For example, $100 wasted in the project may be a somewhat low amount in the budget, but it can even be used as money paid for gas for a one-week delivery period.

Good cost estimation is essential for keeping the project under control, in budget, and well-planning. Rough estimates bring the difference in the profits and may spoil the project life cycle [11].

The steps in the cost estimation process are:

a. Define estimate's proposal: Purpose of estimation, level of details, the overall scope

b. Develop an estimating plan: Assemble all teams, analyze the outline, and develop a timeline and create a full team schedule.

c. Define characteristics: Create baseline, performance, purpose, compare to existing ones.

d. Determine estimating approach: Work Breakdown structure, cross-check cost and checklist

e.   Identify rules and assumptions: Define all the rules and identify specific beliefs.

f.   Obtain data: Create a required plan, cost, analyze data.

g.   Develop point estimate

h.   Conduce sensitivity analysis

i.   Conduct risk and uncertainty analysis

j.   Document the estimate

k.   Present estimate to management

l.   Update estimate

XXXIV. INTERNAL COSTS

The internal costs are included with the salaries and the additional costs associated with the project. Both the internal fees and other charges are shown in Figure 20 & 21.

Name	Salary/hr	Work Hours	Total / Month
Jayendra Kumar	$ 40.00	300	$ 12,000
Uday Kiran	$ 25.00	240	$ 6,000
Karthik Nuka	$ 20.00	240	$ 6,000
Bhavana	$ 40.00	160	$ 6,400
Keerthi	$ 30.00	160	$ 4,800
Ravi Teja	$ 25.00	240	$ 6,000
Shiva Sai	$ 15.00	160	$ 2,400
Tarun	$ 40.00	100	$ 4,000
Aravind	$ 20.00	200	$ 4,000
Total			$ 51,600

Figure 20: Internal Cost (Salaries)

Additional Costs	No. Of Items	Cost per Item	Total
Stationary	4	25	$ 100
Software license	4	100	$ 400
Employee Maintenance	8	100	$ 800
Furniture	10	50	$ 500
Accessories	10	100	$ 1000
Vehicle Rent	4	500	$ 2000
Total			$ 48,000

Figure 21: Additional Costs

XXXV. FURNITURE, VEHICLES, & DESIGN COSTS

Since the company is an online delivery industry, there will be no high costs for machinery or other things. Low-cost items needed are office space, desks, computers, personal laptops, and stationary. A few cars may need to be rented but that depends upon the delivery personnel hired. Interior design is most important since clients come to the office. Some meetings will therefore occur; office events will be held to invest a reasonable amount for the office's best interior design. The Various costs associated are explained in Figure 22, and the prices vary depending on employee needs.

XXXVI. PROFIT MARGIN

The company signed agreements restaurants for the basic commission for the first six months of starting the Quick Delivery Service. For the first six months, the margin will be fixed at 18%; from the order's price after tax is applied. Then, for one and a half years, it increased to 23%, and from the third year, it is fixed as the 30% margin from the products delivered by the Quick Delivery Service.

XXXVII.   FINAL PROJECT REPORT / CLOSEOUT

The final project report is to check whether all the assigned tasks are done or not. Teams will be contacted about the progress of the project and their performances. The general information of the project is shown in Figure 22.

1   GENERAL PROJECT INFORMATION

Our company will provide best customer service to all the people in and around the city with good benefits and we do serve from small items to large household items, food, sweets, furniture and all services we do.

	Description
Project Name	*Quick Delivery Service – FFF*
Project Description	*Online Food and Product Delivery services*
Project Manager	*Jayendra Gupta*
Project Sponsor	*Self Owned Project*
General Comments	*We provide best service with safety*

	Baseline	Actual	Variance	% Variance
Start Date	*[09/01/2020]*	*[09/10/2020]*	*[10 days]*	*[00.0%]*
Finish Date	*[10/01/2020]*	*[11/15/2020]*	*[15 days]*	*[00.0%]*

2   MANAGEMENT EFFECTIVENESS

[The management effectively changed the needs of the customers like assigning employees to delivery items, taking safety precautions like sanitizing the products, using disinfected wipes because of the COVID-19. Changed their baseline format to achieve good success, it will show good impact on the company. Cost, schedule, salary, work allotments will be organized up on having discussions with employees. Providing the regular reports and overall performance reports.]

3   LESSONS LEARNED

[The major lessons like implementing Lean Six Sigma tools like DMAIC, 5S tool in the delivery process, software management, Proper scheduling the duties to the delivery boys. Organizing the events, preparing the reports, analyzing the performances. Discusses and solved specific issues and challenges of the project/ project team members.]

<Quick Delivery Service - FFF>

Appendix A: Project Close-Out Approval

The undersigned acknowledge they have reviewed the **Project Close-Out Form** and agree with the approach it presents. Changes to this **Project Close-Out Form** will be coordinated with and approved by the undersigned or their designated representatives.

[List the individuals whose signatures are required. Project Sponsor -Jayendra Gupta, Business Incharge- Ravi Teja, Technical Head- Shiva Sai and Project Manager – Jayendra Gupta.]

Signature:	Jayendra Gupta	Date:	07/20/2020
Print Name:	Jayendra Gupta		
Title:	Project Manager		
Role:	Manage the		

Signature:	Ravi Teja	Date:	07/20/2020
Print Name:	Ravi Teja		
Title:	Business Incharge		
Role:	Business head operations,		

Signature:	Shiva Sai	Date:	07/20/2020
Print Name:	Shiva Sai		
Title:	Lean Six Sigma Head		
Role:	Implementing Lean six sigma in process		

Figure 22: General Project Information

XXXVIII. CONCLUSION

In conclusion, when the project is in the final stage, all the tools need to be implemented and utilized correctly. Shiva Sai correctly assigned the Lean Six Sigma tools DMAIC approach, and 5S tools results in the best customer services. This project is the best example for the other online delivery service companies to modify the process by reducing the errors to implement Lean Six Sigma. Quick Delivery Services are going to expand through the different states on analyzing local market needs. The company will see many improvements and benefits through the customer services that are happening in other markets needing this service. Additionally, when the project is in the final stage, closing and terminating project techniques will be analyzed.

Training will be provided employees; with the knowledge they gain from the implementation of the Lean Six Sigma tools in the project. Hence, the employee and the company will benefit in both professional and personal ways on either side of the organization. Overall, the Quick Delivery Service will benefit from this project to start and proceed as fast as possible. This project is worth investing in in any situation. It offers customer services that are needed by homebound customers around the world.

XXXIX. REFERENCES

[1] Timeline of online food delivery. (n.d.). Reference from https://timelines.issarice.com/wiki/Timeline_of_online_food_delivery

[2] Loomba, N. (2020, January 06). How app like uber eats, seamless, grub hub, postmates, Swiggy, Zomato & Jumia works?. Retrieved from https://www.restroapp.com/blog/food-delivery-apps-workflow/

[3] Shubham, S. (2019, March 26). What happened to Fabfurnish, why did it failed? Retrieved from https://www.quora.com/What-happened-to-Fabfurnish-why-did-it-failed

[4] Cohen, R. (2020, July 07). Food industry delivery tends!. Retrieved from https://supplychaingamechanger.com/food-industry-delivery-trends/

[5] Pinto, J. K. (2016). Project management: Acheving competetive advantage. (4th ed.). New York, NY: Pearson Education Inc.

[6] Santos, M, J. (2018, November 20). Understanding responsibility assignment matrix (RACI Matrix). Retrieved from https://project-management.com/understanding-responsibility-assignment-matrix-raci-matrix/

[7] Oden, C. (n.d.). Design and implementation of online food ordering system. Retrieved from https://www.projecttopics.org/design-implementation-online-food-ordering-system.html

[8] Yadav, S. S. &Pimpale, S. S. (2020, March). Ecofriendly food delivery system using GPS shorter path. JETIRE, 7(2). Retrieved from www.jetir.ord (ISSN-2349-5162).

[9] Risk management. (n.d.). Retrieved from https://economictimes.indiatimes.com/definitio n/risk-management

[10] Cooke-Davies, T. (2002). The "real" success factors on projects. International Journal of Project Management, 20(2002), 185–190. Retrieved from http://www.science direct.com/science/article/pii/S0263786301000679

[11] Westland, J. (2019, August 21). Cost estimation for projects: How to estimate accurately. Retrieved from https://www.projectmanager.com/blog/cost-estimation-for-projects