Group Project

VOLKSWAGEN EMISSION SYSTEM

Project Management

Section No: 57194

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Studentس:

Name	*Student ID*	*Work*
Abdulrahman alarwy	***436100078***	***Project time and scope and other related topics***
Nafea Alharbi	***436106155***	***Cost and salary estimation and related topics***
Abdullah Alessa	***436102985***	***Project task list and related topics***
Abdulrahman alburaidi	***436103629***	***Risk management and related topics***

1.0 Introduction:

Volkswagen is a German company founded in 1937 by the German Labor Front. The company produce and sell automakers.in 2015 the United States Environment Protection Agency (EPA) have stated that Volkswagen have violated the Clean Air Act. Volkswagen have intentionally programed turbocharged direct injection (TDI) diesel engines to activate their emissions controls only during laboratory emissions testing , this meant that vehicles did not meet United States Standards .
500.000 vehicles in the United States (11 million Worldwide) had this problem in models from 2009 to 2015.
We will clarify our agenda, process and system to re-opened the project again, and fix all the mistakes that happened before, the first project has very mistake in many factor, such as: the honesty and integrity between employees and stakeholders, the efficiency in all work conditions and work factor, there was a clearly huge gap.
In fact, these are the mistakes that we want to fix and produce the project to build trust and fix our reputation that was hurt.
All things are under control and we are fully prepared for everything that would come up during our project, we have designed several structures that would organize the work flow and we have estimated the project cost that includes every part in the project.

2.0 Goals & objectives:

2.1 Project name:

The name of the project is: fixing vehicle emissions systems.

2.2 business goals and project goals:

Business goals:

1- Build a strong relationship with our customers by increasing customers satisfaction
2- Align our services and support with our business strategy
3- Solving and fixing any problems that would come up in our process
4- Reduce our charges and fees in way that could be affordable to our customers
5- Focusing on rapid response so we can differentiate our business from other’s

Project goals:

1- Increase our customers satisfaction and quality of our services.
2- our projects intend to attract more customers by fixing the vehicles that will show we care about our customers satisfaction.
3- by fixing the vehicles perfectly, customers will come back and trust will be built again, and that would bring in more customers.
4- hiring more honest, efficient, and employees with integrity, Customers will trust your company to provide products with best quality.
5- we will make sure our cars to be aligned with our vision “Together 2025” to be a role model for environment, safety and integrity.

2.3 Scope:

The scope of the project covers the planning, design and implementing our new updated emissions system for cars effected by the previous emission system, our project consists of: New and improved emissions system, Qualified and honest employees, New and fixed Alternative cars for customers who have damaged emissions system in their cars, our objective is to implement a global plan across our branches around the world.
Our project aims to fix the effected vehicles from the mistake made in the emission system by using these steps:

First of all, we will search for effected cars using VIN (Vehicle Identification Number) after that communicate with the owners of the effected vehicles to take their vehicles to the nearest maintenance center to book an appointment as soon as possible
After booking the appointment, customers will go on the date given to them so that the maintenance center can coordinate their work without congestion
While we are fixing the original vehicles, alternative vehicles will be given to the customers until we finish fixing their vehicles
Coupons will be given to customers as an apology for the previous mistake
After we fix the customer car they will expect from us that we provide the best service for them but if there any mistakes happened from us related to emissions we are committed to fix the problem without any fees
But on the other side if the customer didn’t find any problems.

2.4 Time and budget constraints:

The biggest issue that huge numbers of cars from the year 2009 to 2015 were damaged so we have to fix them in short period of time, And the customers were furious because they felt the company sold them broken cars, so we decided to fix their cars immediately to minimize their anger and disappointment.
And also because of the heavy number of cars and a limited time to fix the issue, so we must pay more money (as an overtime) for labors.
And when we talk about labors, we mean not only the workshop workers, we also mean the manufacture workers.

Time:

We decided that we are going to start on the first quarter of 2016 specifically at the beginning of January no later than 1 July 2016 (the start of the second quarter).

Cost:

The estimated cost for the emission system (part) is 300 $ per piece.
And we are going to fix 500,000 cars in our project.
Estimated overall cost for parts is 150,000,000 $
There are 20 technical centers that will be involved in this project
Every center has 80 mechanics each of them will fix 3 per day
We have 500,000 cars and 1600 mechanics = 313 cars per mechanic
313 cars divided by 3 cars per day = 105 days to finish fixing all cars
the wage of every mechanic is 15 $ per hour x 8 working hours per day = 120 $ per day
the total salary of each mechanics is 120 $ per day x 105 days = 12,600 $
the total number of all mechanics we have is 1600 x 12,600 $ = 20,160,000 $
the overall estimated cost is 150,000,000 $ + 20,160,000 $ = 170,160,000 $

* All managerial wages will be paid regardless the existence of our project.

Number of employees required: 1600 mechanics + 400 testers + 200 managerial staff = 2200.
Qualification of employees: Mechanical Engineering, Mechanical Diploma, High School Degree with Specialized Training in Mechanical Major.
Outside service: Cleaning staff and tea boys**.**

2.5 GENERAL AND TECHNIQAL REQUIREMENTS:

General requirements:

1- A new emission system to replace the previous one.
2- To get your emission system replaced your car model should be from 2009 to 2015.
3- A new equipment is needed to be used for replacing the old emission system with the new one.
4- Employees with experience and familiarity with our system “emission system”.

Technical requirements:

1- After replacing the old emission system, cars will be tested to check if the new emission system is working without any dilemmas and issues.
2- We need a database to store customers information that replaced the emission. system so we don’t change it again.
3- We need ERP systems to integrate the replacing part with the testing part.

2.6 Training and documentation:

Training:

Employees are very important stakeholders in this project. We need employees who are excellent at emission systems and honest in their work

We will bring the best employees at emission systems in the company to train our employees and show them the best and the efficient way to do the required work

In this project, we needed to train our employees on new tools and equipment to change emission systems as fast as possible because the time is not on our side, every day goes by the customers become more and more angry and frustrated with the company, so every day we do not fix the emission system we lose customers faith and the customers themselves.

Technical training is not enough because the emission system accident happened because a number of employees were not honest about their work and broke the customers trust in them, so if we do not train our employees on ethics and being honest in their work, maybe the same problem happened before will happen again and we don't need that to happen.

Project documentation:

There are no doubts that the documentation is a necessary part of our project to make sure that we are on the right track of the project.
We are making documentation for two essential functions:

1. To make sure that our project requirements are performed on a perfect way.
2. To perform traceability with regard to what has been done, when it has been done, and who has done it.

We are trying in this project to make daily, weekly, and monthly objectives and document every progress, and the accomplished objective.
Also, we need to confirm the responsibilities of each worker, so that no disarrange could happen.
The project managers try to reuse some successful project plans, business cases, and project status reports to help them concentrating on their core competencies of dealing with the project instead of balancing the unmanageable paperwork.

2.8 The project Charter:

Our main purpose of designing the project charter is to set out our project objectives for the emission system, and also setting out detailed roles and responsibilities for each worker, identifying the main stakeholders, and the level of authority of the project manager.

Project Title: fixing vehicle emissions systems.
Project Start: 15-2-2016 **Finish Date: 30-6-2016**

Budget Information: We have allocated 170,160,000$ to this project and all project activity.

Project objectives: The overall project objective is to fix the damage was happened to our customer to re build the trust again with them, so our project is customer focused that is our first priority, also increase our work efficiency and effectiveness that will appear in our company name and reputation after all.

Approach:

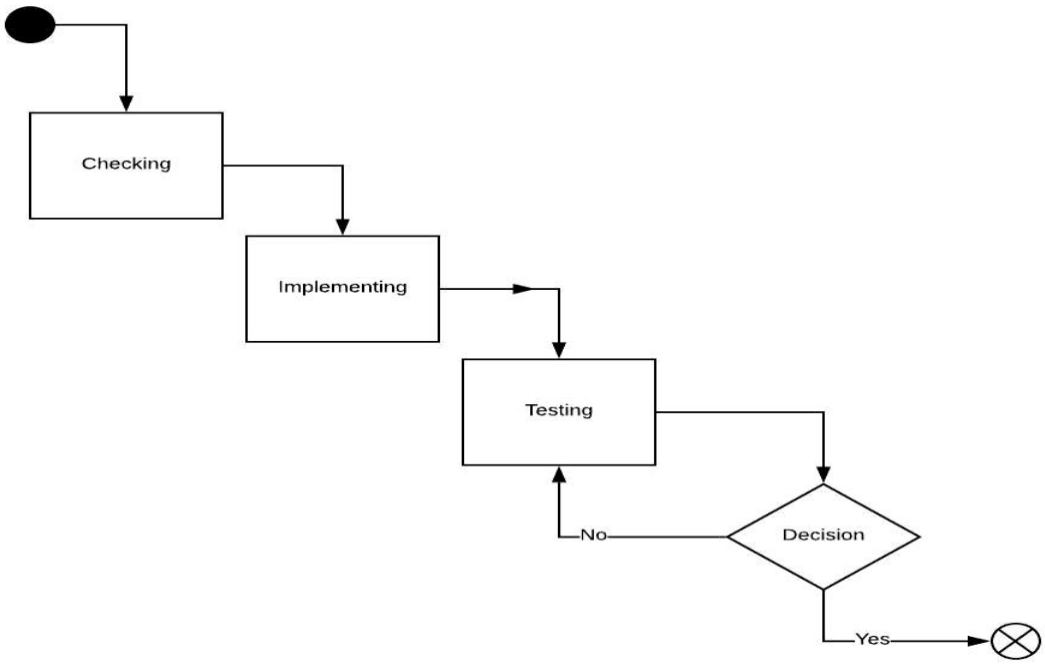
- **Take our customer damaged cars and prepare them and remove the damaged emissions parts.**
- **Replace the old damaged parts with new good one that we made them in our project.**
- **After replacement process has done, we will provide to our customer a survey to gain their feedback about our process.**
- **If there is any complaints and comments during or after process about our work, of course that would matter and we will take care of them well.**

Name:	**Role:**	**Contact Information:**
Abdulrahman Alburaidi	**Sponsor**	**Alburaidi@ Volkswagen.com**
Abdulrahman Alarwy	**Team member**	**Alarwy@Volkswagen.com**
Abdullah Alessa	**Team member**	**Alessa@Volkswagen.com**
Nafea Alharbi	**Team member**	**Alharbi@Volkswagen.com**

2.9 Installation:

In the beginning, we must see if the error affects something else in the car, if it does affect something else, we must fix it and the customer will not pay for anything

Then the work on the car starts by removing old emission system from the car.
after that we bring the new emission system and install it and make sure it is implemented to the affected cars and check everything is ready for the testing phase.
now we are moving to the next step. this step requires from us to test the new system implemented in the cars and check if there is a mistake so we can fix it before moving to the next step.
after the test is completed we have to provide a report to the manager about particular information on the car, then the manager adds fixed cars to the database, the reason why the manager adds the fixed cars to the database is to make sure that fixed cars are not fixed again.



3.Project Estimates:

3.1 people cost:

3.1.1 Historical or researched data used for estimates:

Estimating the people cost is key to determine the cost of the project. our project is simple and only need few major functions to perform the scope of the project. Functions needed are:

1 - Chief Information Officer: receives daily reports about the progress of the project. represents the project sponsor.
2 – Project Management Office: perform as the project manager and reports directly to Chief Information Officer.
3 – Branch Management: oversees the work of testers and mechanics for quality reasons and receive daily reports with information about the fixed cars and add them to the database.

Profession	Average Salary	Administrative cost	Total Cost
System Tester	4,200,000$	170,000$	4,370,000$
Mechanics	20,160,000$	345,000$	20,505,000$
Engineering Staff	262,000$	300,000$	562,000$
Cleaning Staff	88,200$	10,000$	98,200$

4 – Testers: test the finished cars to check if they work properly and returns the unfinished cars to the mechanics to work on it.
5 – Mechanics: their task is to check the cars to see that the emission system needs repairing and replace the old emission system with the new improved one.
6 – Call Center: their job is to communicate with the customers and answer any question related to the emission system project (nearest workshop to them, the earliest date to fix their cars, how long does it take to finish fixing the car)

Average people costs can be found using vendor like Microsoft project (recommended) because its available everywhere, manage your company projects easily and has advanced features that help your project.

3.1.2 Salary Requirements:

In this phase, we will calculate the cost by determining the average salary and all administrative cost by job title and of course other cost includes: equipment and other supply for example: air conditions, the network in the shop, lighting, and all what we need to prepare the work well.

Here we are going to clarify in the table the duration for our processing in our project, clarify it generally then we will apply it for as a template for all cars, also our process is a repetitive process so it will apply for all cars that enter our shop for fixing process.

Activity	Checking	Fixing	Testing	Reporting	Total Duration (in minutes)
Our Process	7	35	15	20	77 minutes (1 hour and half)

Hardware and software:
One of the most important thing in any organization that every organization needs to estimate the cost of hardware and the software it is important to monitoring budget for a couple of time. We can consider the tools which maintenance emission system and the parts, forklifts for example and so on all of these are hardware, about software we can also consider the emission system like a software and the system

which we entered the database on it to keep tracking fixed cars. This table shows you the cost of software and hardware:

Hardware:

Hardware	Costs
Checking tools *	0 $
Parts	150,000,000 $
Test tools *	0 $
Forklifts *	0 $

* The cost of the hardware (checking tools, test tools, Forklifts) is already paid before the start of our projects.

Software:

Software	Costs
Emission system	150,000,000 $
Database	0 $

* The cost of the software (database) is already paid before the start of our projects.

3.1.3Estimation techniques:

COCOMO:

We use COCOMO to help us estimate the project based on the: Hardware, Software, Personnel and Labor cost and salaries, this techniques was very helpful and useful in many factor that help us very much, because it was comparing our estimated cost to the real cost that exists in the market or the labor, So if we don't use this techniques we were not able to identify and determine out cost or salaries or any cost that relevant to our project, of course there were some restrictions that we faced during determining cost process but in the end we could pass all those restrictions such as: The field of our project was very complex and we could not find relevant field, The salaries of our project was very huge fist we thought we can reduce it but we reach the minimum eventually because the labor also was very expensive but we have to pay this huge salaries to produce honest and integrity work.

Eventually the technique helped us a lot and we make sure every step of our cost estimation was real and match to the labor market but we took advantage of the labor salaries and we provide a little more above of the minimum salary to attract the good employee and do the great work in our project.

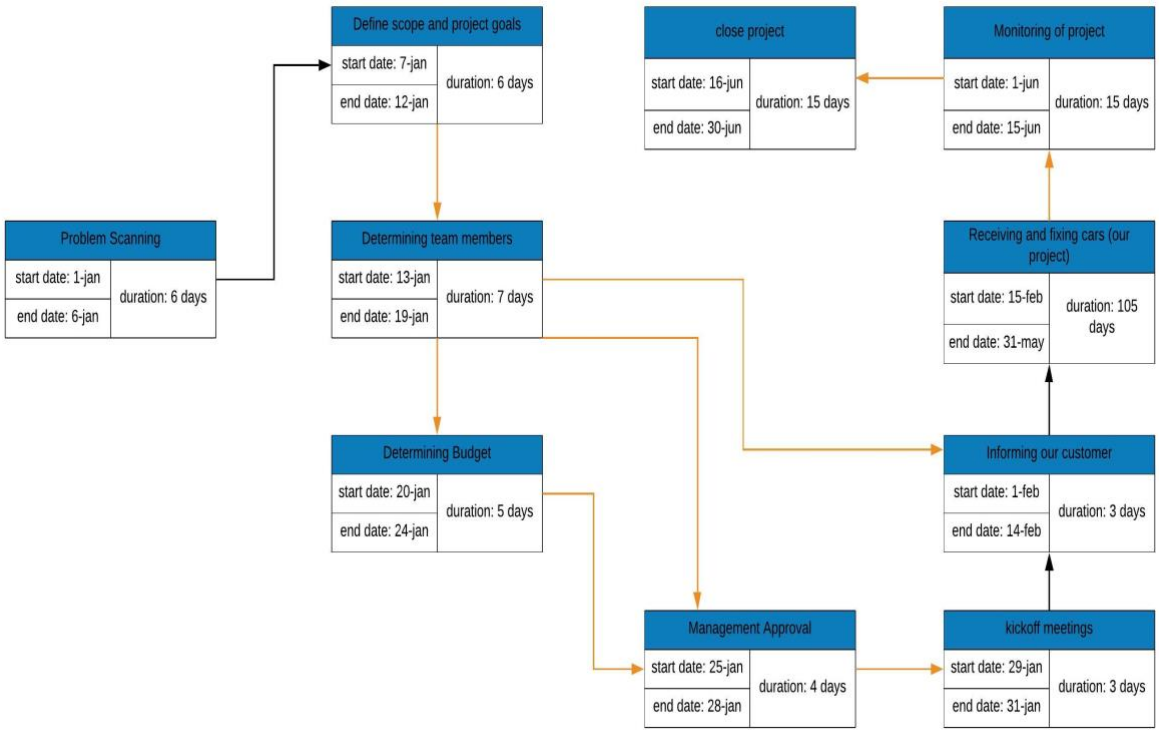
4. Project Schedule:

4.1 Project Task List:

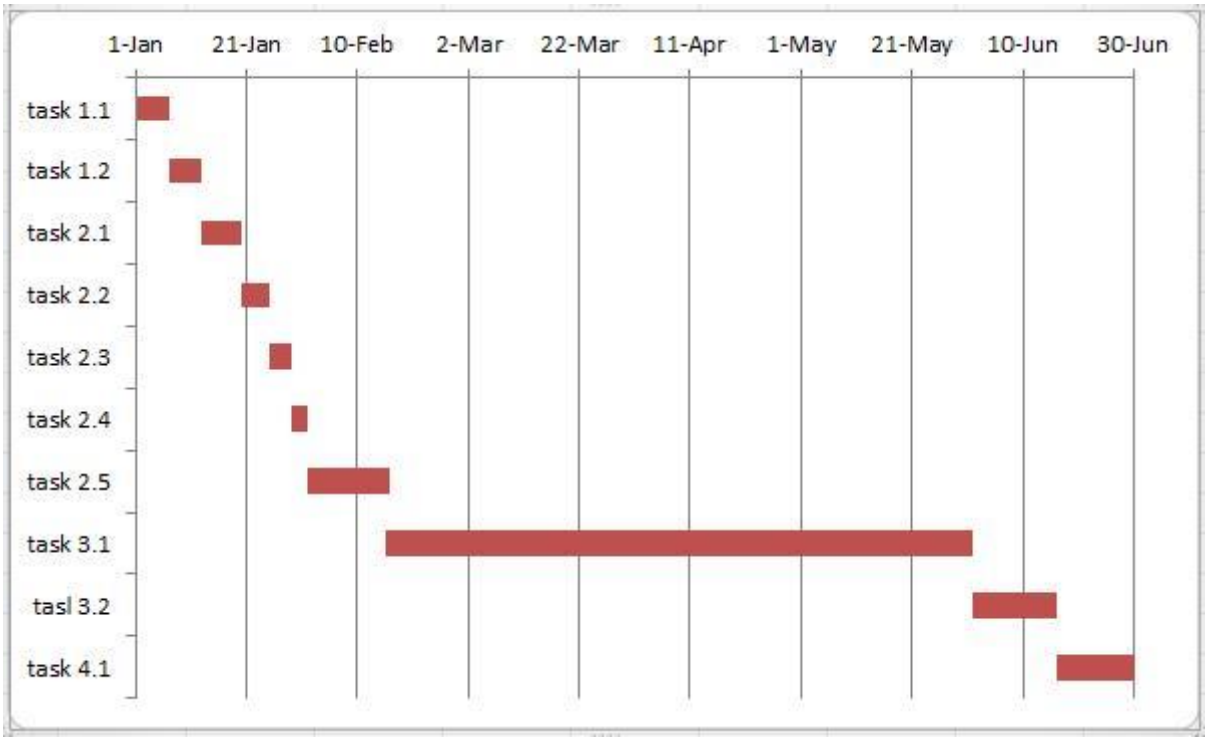
Task number	Task name	Outcomes	Start date	Dependencies	End date
1 investigation and analysis					
1.1	Problem scanning	Find the problem we are trying to solve	1-1-2016		6-1-2016
1.2	Define scope and project goals	Scope and goals are defined	7-1-2016	1.1	12-1-2016
2 planning					
2.1	Determining team members	Create project team	13-1-2016	1.2	19-1-2016
2.2	Determining budget	Create estimated project budget	20-1-2016	2.1	24-1-2016
2.3	Management approval	Get formal approval from management	25-1-2016	2.1,2.2	28-1-2016
2.4	Kickoff meeting	Meeting with the team to organize the work	29-1-2016	2.3	31-1-2016
2.5	Informing our customer	Booking appointment	1-2-2016	2.1,2.4	14-2-2016
3 start of the project					
3.1	Receiving the cars and starting our fixing process	Reach our daily average of fixing cars in our plan	15-2-2016		31-5-2016

3.2	**Monitoring the project progression**	**Checking daily reporting to fix and solve problem with un fixed cars**	**1-6-2016**	**3.1**	**15-6-2016**
4 close projects					
4.1	**Close project**	**Close project**	**16-6-2016**	**3.2**	**30-6-2016**

4.2 Task Network (PERT):

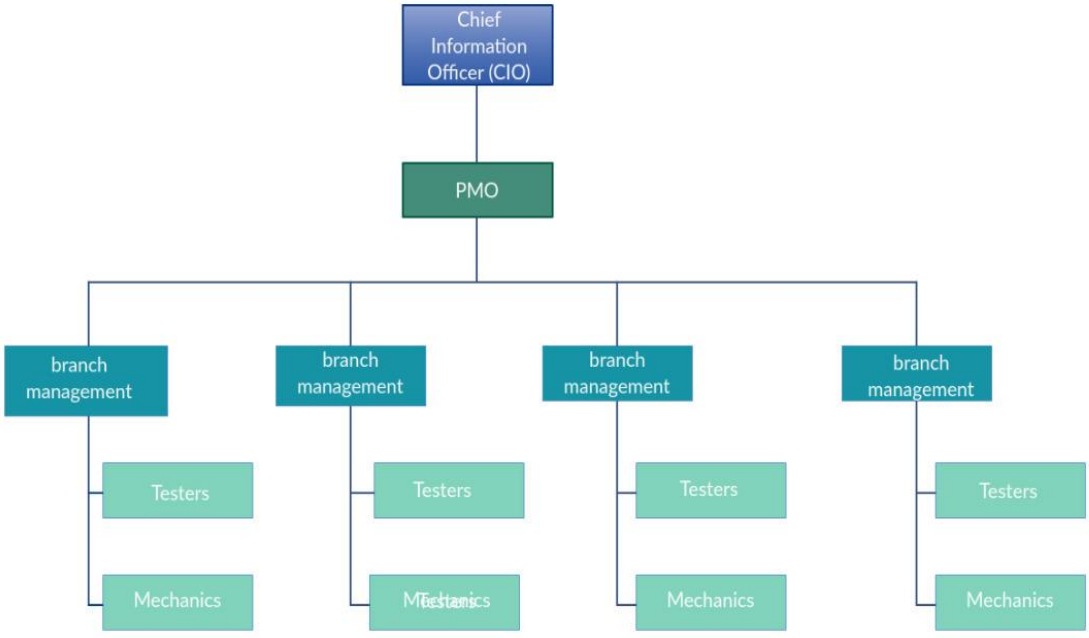


4.3 Timeline Chart (Gantt chart):



5. Staff Structure:

5.1 Team Structure:



These are the main positions needed in this project to be completed:
1- Mechanic: Mechanics responsibilities are taking the old emission system out of the cars and replace it with the new emission system
Responsibilities include:

- Removing the old emission system from the car.
- Install the new emission system in to the car.
- Make sure everything is completed to start the testing phase.

2- Tester: Testers job is to test the cars fixed by the mechanics to check for mistakes.
Responsibilities include:

- Test the finished cars.
- Send the information of the finished car to the branch manager.

3-Branch manager: branch managers review the number of finished cars every day to make sure the project is on track.
Responsibilities include:

- Track the number of finished cars.
- Talk to the employees if they are late on the project.
- Provide them with motivation and direction.
- Upload the finished cars information to the database.
- Report to the PMO.

4- PMO Director: Directors check the overall finished cars of all branches and managing the project.
Responsibilities include:

- Managing the project.
- Check branches that lag behind to tell them to work faster.
- Solve any problem faced by any member of the project team.
- Make sure we are on time and on budget.
- Summary report to the CIO.

5- Chief Information Officer: provide the team members with needed tools and resources to finish the project.
Responsibilities include:

- Check the report from PMO and give feedback of what is needed to be done.
- Approve any changes necessary to the project.

6- Call center: call center is needed to answer any question that the customer asks and inform them with the nearest workshop.
Responsibilities include:

- Book a date to fix their cars.
- Provide them information about the nearest workshop and work hours.

5.2 Management Reporting and Communications:

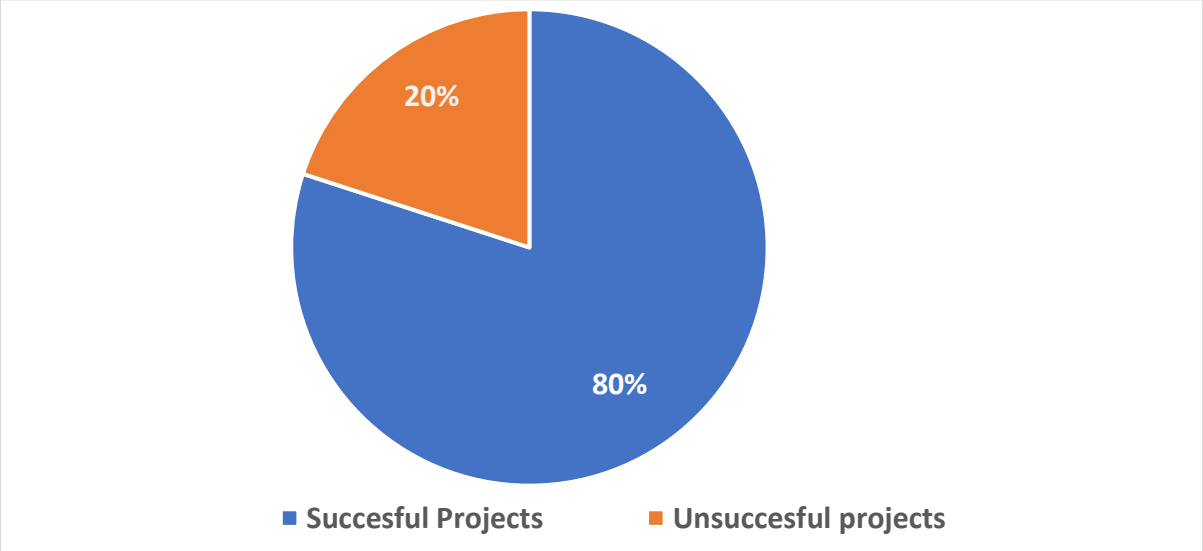
one of the most important success factor in any project is the well communication within the project, it is essential to defined the communications path to have a great team work and great sharing of the information within the project.

Due to the nature of our project the communication must be organized and pre-determined so the parties of the project know how to reach any and communicate with any manager or employee in the project, also there is a hierarchy in our project so the parties must stick into it when they need to report or communicate, they must respect the hierarchy because we want the respect the jobs and respect all parties in the project.

The way that we think it is best for our team to communicate that we have a coloration environment, meetings every day (kick of meetings), also that we have communicating channel that everyone in our project can send any message to project member and can wait for answers (Group chatting).

In all elements of Project Management, the most common complaint about a project is 'lack of communication'.
Communication is the major key to a successful project, so every Project manager has to be a great communicator.
The project manager should succeed to make use of effective communications with his project team, and all of the stakeholders who are effected by the project.
The PMI (Project Management Institute) suggest a project manager, and his team members has to extend 90 percent of their time communicating.
Successful project management communication is about being available for project members when they are needed for support, and being in touch with the real challenges of the project.
Communication is not only about speaking to, and hearing from team members, it is about understanding the overall message.

We say that One out of five projects are unsuccessful due to ineffective communications.



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The PMBOK 6th edition categorizes methods of communication into three different categories:

- Interactive Communication.
- Push Communication.
- Pull Communication.

When exploring these effective communication methods, we see how, and in which situations they can be used.

Interactive Communication:
It is an example of an efficient way of communication method.
For interactive communication, all stakeholders who are involved in the communication can respond to each other in real time.
Some examples of interactive communication include:

- Face-to-face meetings, and it is the most effective, because they enable you to view the body language, and the facial expressions of the communicating members.
- Video conferencing.
- Phone calls.
- Messenger chats.

These are the most effective methods of communication, and are often used in projects than other methods of communication.

Push Communication:
It is one of the most effective communication methods in which the message is sent without any feedback from the receivers.
For example, you may send meeting notes to people after a brainstorming meeting.
Organizations usually use push communication to notify the shareholders through a press release.

Pull Communication:
Pull communication is the third effective communication method, and it is best when you have a large audience that needs to access information for their use.
Pull communication is all about providing a group access to a common information, when
the sender places the information at a central location and the receiver must retrieve the information from that location.

Project Reporting:
Project reporting is all about collecting information that is related to work performance, analyzing it, making reports and sending them to the stakeholders is involved in reporting the performance of the project.
The reports must provide all the information that needed by stakeholders to the level of details required by them.
The need for the project should be considered while designing the reports.
The method that used to send the report plays a critical role in getting the report read and acted upon.
A project manager should not spend all the time only for doing reporting activities.

The project manager plan can be used to select the performance measures baseline.
The baseline can be used in the reports to measure the performance of the project.
All reports must give a clear, brief, and correct picture of the information that is being captured.
Also reports should not just include schedule, but also include the cost, the scope, and the quality performance as well.

Position	Name	Project Role	Phone	Email
Chief Information Officer				
PMO Director				
Branch Manager				
Call Center				
Tester				
Mechanic				

Here we will go in details about our meetings agenda and how we organized it between all project stakeholders and what we have discussed and planned in every meeting even about the role and audience for every one of them.

Communication type	Objective of meeting	Medium	Frequency	Audience
Start-up meeting.	Set-up the project goals and cost, time, scope.	Face to face.	Just once.	All project stakeholders.
Kickoff meetings	Review of all project work and what we	Face to face.	One per weak.	Project team, project sponsor and project owner.

	have done so far.			
Team meetings	Monitor team work, ask questions	Face to face, over call.	When needed	Project team.
Monthly meetings	Meeting with stakeholders, seeking updates	Face to face.	One per month	All project stakeholders.
Project status report.	Reporting all paper work.	Over ERP system	One per month	To senior management.

6. Risk management:

6.1 Project risks:

1 - quality of performance:
the new emission system may affect the overall performance of the car which lead to the customer being unsatisfied.
2 - security:
we have a database that we store the customers information in. even though the information does not contain finance details but the customers personal information (name, email, phone number, etc) can be accessed by unauthorized people.
3 - work accidents:
Injuries happen in every work place but in workshop the injuries are common and more painful like slip and fall from oil on the ground and back pain from lifting heavy objects.

4 - communication:
Poor communication with the customers to tell them that cars need fixing may lead to people coming after the end of the duration
5 - user acceptance:
After knowing that the company cheated and used parts that are not good in the car. the customer may say he does not the car anymore because his trust on the company is gone.
6 - financial:
The company paid nearly 25 billion dollars to solve the problem and that may affect the budget of the project. the resource may not be available to complete the project.
7 - employee's ethics:
The project is stressful and require a lot of work that is why so employees will try to finish the required work without caring about the quality of the work
8 - work environment:

The relationship between colleagues is important and affect the work and the project. good relationship between employees will have good effect on the project by working in harmony. The opposite will happen if the relationship between employees is bad, work may become

9 - noise and vibration:

The health of our employees is important to us so we need to make sure that employees are not exposed to the noise and vibration all the time because that will affect their health in the short term and long term

10 - hazardous substances:

Plenty of Hazardous substances can be found in workshops like asbestos, Antiknock Agents and Solvents & Diesel Exhaust Fumes that might have effects like vomiting, headache, chest and back pain and irregular breathing etc.

6.2 Risk table:

Risk Item	Category	probability	Impact
Quality of performance	Business	5 %	Critical
Security	Business	5 %	Marginal
Work Accidents	Operational	20 %	Critical
Communication	Business	20 %	Critical
User Acceptance	Business	20 %	Catastrophic
Financial	Business	15 %	Critical
Employees Ethics	Operational	10 %	Critical
Work environment	Operational	5 %	Marginal
Noise & Vibration	Operational	15 %	Marginal
hazardous substances	Operational	15 %	Catastrophic

6.3 Risk mitigation, monitoring, management strategy:

Quality of performance:

To avoid this risk, we should have designed a good part and a good emission system also higher efficient employee so they can deal with the cars professionally.

Security:

To avoid this risk also you need to look at your system and checking if there are any mistakes or sometimes it could be there what we call it in information security vulnerabilities it is like loophole on the system hackers and Thieves can steal the

information, also you have to improve your system and upgrade it every couple of times.

Work accident:
Accident happened in any work shop you should keep this in your mind and taking action if it is happened for example slip-and-fall hazards to avoid this accident you should keep your shop place clean after finishing from work another accident also happened when the laborers get injured and this accident is the most one to avoid this for example give labors gloves to protect them from injures, also there is another accident it could be accrued and you should consider because it a riskiest thing to labor and the car.

Communication:
We should advertise our project in public roads on billboard and send it on social media for example twitter, Facebook, Instagram and so on.

User acceptance:
When the customer coming to take his\her car first of all we must apologies to them and make sure that the customers are satisfied with our work by showing them what we have done to the car from parts and services also as an apologies method we have to give the customers some offers for example changing the engine oil or fix one thing from their car for free.

Financial:
The project is very important we should not delay it and make it our top priority, even if we had to take a loan from the bank to show the people we regret what we have done.

Employee's ethics:
As we know ethics are very important, we realized that some of our staff lacked ethics so we will provide them with seminars about the importance of ethics in making the company more successful and efficient, also monitoring them while on the work.

Work environment:
The environment effects the work so the good organization motivate their employees to achieve the organization goals and makes things easy, we will organize travels and tours to create positive environment and increase harmony between employees

Noise and vibration:
The health of employees will decrease when they continuously be exposed to noise and vibration so we will provide them with ear pieces to isolate the noises as much as possible

Hazardous substances:

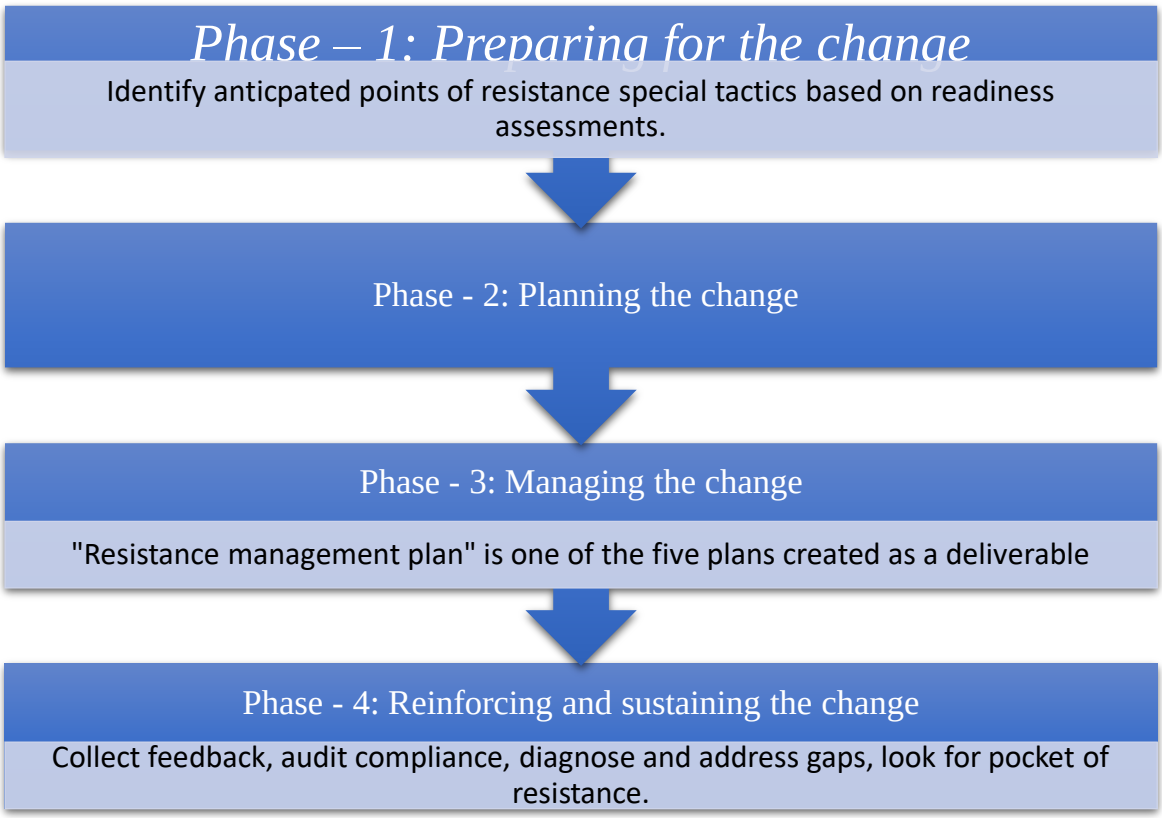
We will build a specific room for dangers and chemical materials to be used there and make sure anyone inside uses PPE (personal protection equipment) and clean all equipment after work every day.

7. Tracking and control mechanisms:

7.1 Change Management:

Change management in project management refers to the processes, tools, and techniques that used to handle changes that occurred during or after the project being completed.
When an organization undertakes projects aiming at improving performance, seizing opportunities or addressing key issues, it often requires changes; process changes, job roles changes, organizational structure changes, and forms and uses of technologies.
There are three different types of change management
“It’s important to distinguish change as occurring in three distinct categories.

1. **Individual Change Management:**
   First category is Individual Change Management, when people are the root of all change. You can change systems and procedures, but if you don’t address the human in the room, then you’re not changing anything. To get people to change, you must know your subject. What do they need to hear to become open to change? How and when should training be offered to help them with the transition? The tools of this trade are psychological; even neuroscience can help with finding the right angle to steer a person from one behavior to another more productive one.



2. **Organizational Change Management:**
   While the people on your team are the core target to effect change, there are also larger, more organizational issues you must address if you want to create real change in a project. To do so requires first identifying the groups that require change and how they must change. Then, create a plan that addresses these components of the project, which includes making everyone aware of the change, leading that change through coaching or some other method like training, and then driving that change in congress with the management of the whole project.
3. **Enterprise Change Management:**
   Taking a step up from the organizational change is to address the entire enterprise. It's basically taking change management writ large to encompass all aspects of an organization, meaning roles, structure, process, projects, leadership, etc. By approaching change on the macro-level you're more likely to implement change on the micro-level, as a strategic engagement with change has been applied to the very workings of the organization. It creates a nimbler organization, able to stay flexible and adapt quickly to changes as they occur."

Change management plan

- The Change request process flow requirements

Step	Description
Generate Change Request	A submitter completes a Change Request Form and sends the completed form to the Change Manager
Log Change Request Status	The Change Manager enters the Change Request into the Change Request Log. The Change Request's status is updated throughout the Change Request process as needed.
Evaluate Change Request	Project personnel review the Change Request and provide an estimated level of effort to process, and develop a proposed solution for the suggested change
Authorize	Approval to move forward with incorporating the suggested change into the project/product
Implement	If approved, make the necessary adjustments to carry out the requested change and communicate Change Request status to the submitter and other stakeholders.

- The Change request form and change management log

Element	Description
Date	The date the Change Request was created
Change Request	Assigned by the Change Manager
Title	A brief description of the change request
Description	Description of the desired change, the impact, or benefits of a change should also be described
Submitter	Name of the person completing the Change Request Form and who can answer questions regarding the suggested change
Priority	Provides a recommended categorization of the urgency of the requested change (High, Medium, Low)
Phone	Phone number of the submitter
E-Mail	Email of the submitter
Product	The product that the suggested change is for
Version	The product version that the suggested change is for

- Evaluating and authorizing change request

The Change request will be reviewed based on the following priority criteria:

Priority	Details
High	.
Medium	
Low	.

Then change requests will be reviewed and assigned to one or more of the following change type:

Type	Description
Scope	Change affecting scope
Time	Change affecting time
Duration	Change affecting duration
Cost	.Change affecting cost
Resources	Change affecting resources
Deliverables	Change affecting deliverables
Product	Change affecting product
Processes	Change affecting processes
Quality	Change affecting quality

The Change requests are then evaluated and assigned to status types:

Status	Description
Open	Entered/Open but not yet approved or assigned
Work in Progress	Change Request approved, assigned, and work is progressing
In Review	Change Request work is completed and in final review prior to testing
Testing	.Change Request work has been reviewed and is being tested .
Closed	Change Request work is complete, has passed all tests, and the updates have been released.

- The Change control board (CDC template):

Role	Name	Contact	Description
Project manager			
Key stakeholders			
Subject matter expert			
Project sponsor			

7.2 Change Control:

Change control refers to the set of activities which all requests to change the baseline scope of a project, program, or portfolio are captured, evaluated and then approved, rejected or deferred by the Change Control Board (CCB).
The change control board is responsible for:

- Approving or rejecting changes on a project.
- Providing guidelines for preparing change requests.
- Evaluating change requests.
- Managing the implementation of approved changes.

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