



Final Project

PHARMACY APP

group 9 | final project | 11-3-2022

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1. Introduction

1.1. STRATEGY

1.1.1 Vision Statement

Our vision is to be the greatest middle platform for delivering and supplying medicines from pharmacies and serve more clients each day. Simplify the process of finding medicines with alternative options.

1.1.2 Mission Statement

Our mission is to become the number one distinguished pharmacy medicines supplier in KSA by providing clients with multiple pharmacies to supply medicines to them in under 24 hours from requesting with 90 percent user satisfaction.

1.1.3 SMART Model

The project objectives in SMART Model:

Specific: Grow the number of weekly users of our pharmacy supply platform by increasing the number of medicines that the client can request and allowing in-app payment in order to receive the desired supplies.

Measurable: Increasing the number of our weekly users by 500 clients of our pharmacy supply platform by making a predefined list of 5000 known medicines that the client can request the payment in order to receive the order.

Attainable: Increasing the number of our weekly users by 500 clients of our pharmacy supply platform by making a predefined list of 5000 known medicines after consulting experts. Clients can request medicines payment in order to receive the products.

Realistic: Increasing the number of our weekly users by 500 clients of our pharmacy supply platform by making a predefined list of 5000 known medicines after consulting experts. Clients can request medicines to be processed with the

payment in order to receive the order. Because sick people or clients that want to have easier procedures will use our platform continuously and growing it will increase our profit margin.

Timeframe: Increasing the number of our weekly users by 500 clients of our pharmacy supply platform by making a predefined list of 5000 known medicines after consulting experts which will be finalized by 15/4/2022. Clients can request medicines processed with the payment in order to receive the order in less than 24 hours from the request. Because sick people or clients that want to have easier procedures will use our platform continuously and growing it will increase our profit margin.

1.1.4 Performance measurements indicator (Lead/Lag)

Strategic Objective	Lead Measure	Lag Measure
- FINANCIAL PERSPECTIVE		
Improve profit margin	Add more features	Profit margin
Reduce overall cost	Add more features and neglect any unneeded elements	Expense costs
- CUSTOMER PERSPECTIVE		
Increase customer satisfaction	More features and pharmacies	The satisfaction score
Decrease customer attrition	Improve customer services	Number of customers
- INTERNAL PROCESS PERSPECTIVE		
Improve knowledge base	Number of articles and research submitted	Knowledge base in place
Reduce operational problems	Hours spent with customer	Service error rate
- LEARNING AND GROWTH PERSPECTIVE		
Better communication	Information availability	Employee satisfaction
Personal goals alignment	Goal alignment	Revenue per employee

1.1.5 Project Charter Model

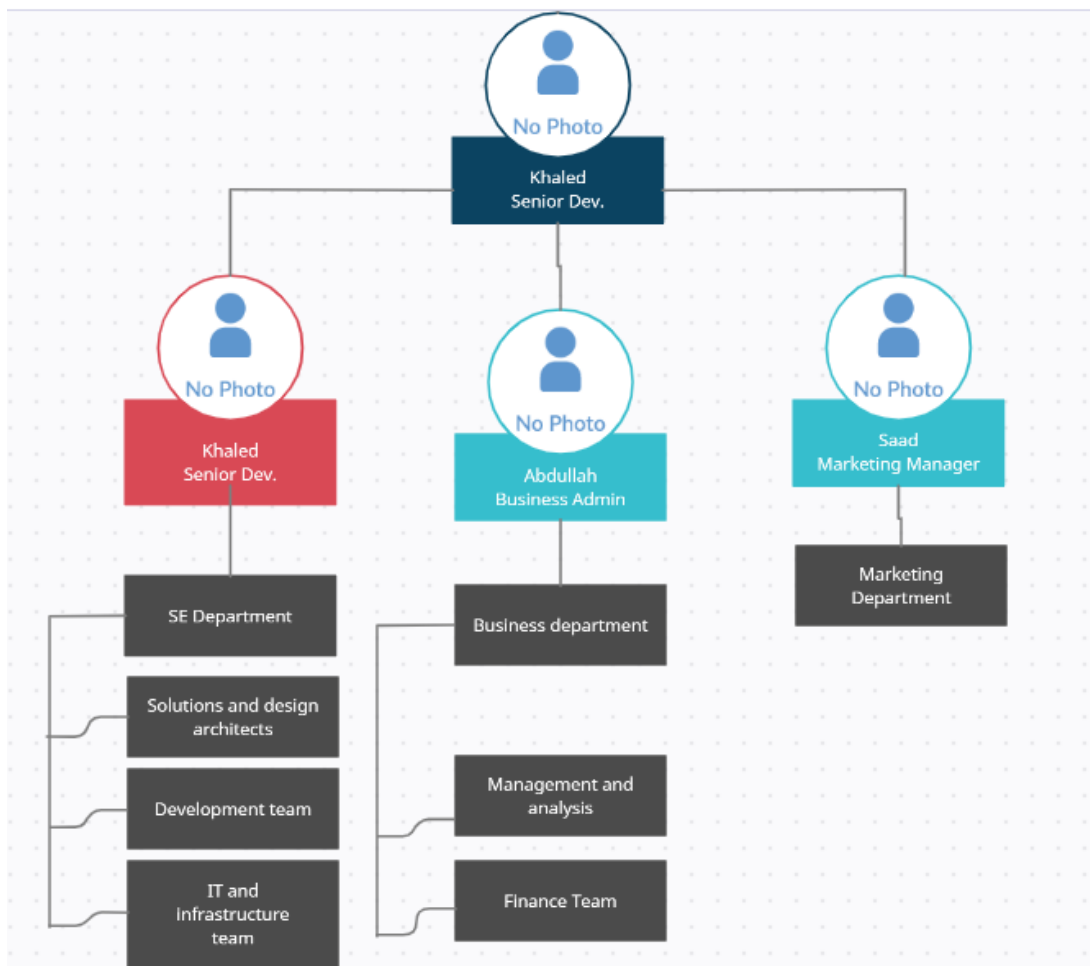
Project Charter			
Project Name	Pharmacy Medicine Supply Management (PMSM) System		
Project Sponsor	Mr. Ahmed	Project Manager	Mr. Anas
Date of Project Approval	10 th January 2022	Last Revision Date	15 th February 2022
Project Description	To introduce a new pharmacy medicine supply management platform that ensures the efficiency of the communication between clients and pharmacies.		
Scope	This system is introduced to enhance the medicines supplying process by ensuring the implementation of communication between clients and pharmacies. In scope The system scope includes clients who want to benefit from medicines and to be supplied from pharmacies in the platform. Out of scope The system will not include and provide any doctors visit to make through the platform.		
Business Case	To increase supply efficiency. To reduce the communication time and complexity between suppliers (Pharmacies) and clients by 75%. And, to increase their satisfaction points by 90%.		

Constraints (In Priority Order)	Time		6 months
	Budget		8 developers + 1 Marketeer 450,000 SAR
	Scope		Client and Pharmacy
	Quality		Prioritize time over quality
Project Deliverables	An analysis and documents of the statistics and details of the project And a platform system to assist pharmacies and clients		
Benefits (Measurable Results)	(KPI – BUSINESS CASE)		
	KPI	Baseline	Goal
	Satisfaction	10	19
	Communication complexity	20	35
	Easy to use	10	18
Steering Committee	Pharmacy manager	Project Team	Marketeer
	Sponsor of the project		8 developers
	Transportation manager		
Key Stakeholders	Name		Success Criteria
	Mr. Ahmed (Sponsor)		Approving the project
	Pharmacy managers		Accepting project idea

Risks	The team has no professional experience specializing in the supplying management system, prices of medicines and procedures in Pharmacies.
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1.2 Governance, Structure, and Process

1.2.1 ORGANIZATIONAL STRUCTURE



1.0 Organizational Structure

1.2.2 PRACTICAL AND SCIENTIFIC BASES

In order to develop the project structure some practical and scientific methods and bases were used and adapted for a more concrete structure of the system.

Scientific bases:

For scientific bases, some methods and research were adopted in this project. Methods and observations were conducted and reviewed from literature reviews and teams to make an analysis of the suitable structure of the project we have.

Practical bases:

For practical bases, there was some development and facilitator implementation in the structure of this project. There were some selected staff interviews and practical bases are moving around the knowledge area of PMs such as implementing risk management, scope management, cost management, and other PM areas of knowledge. Documents and approved documents were also done in order to develop and maintain the project structure.

1.2.3 PROJECT OFFICE MODEL

Strategic planning and governance:

For this project, the planning is maintained in a way to aligns business goals. A cost-benefit analysis was conducted, and a project charter was maintained to assign criteria of the project that can resolve and work perfectly to end up the project's success.

Best practices and process:

To follow up with the best strategies in this project, the team will be using tools and software in order to communicate and manage their tasks. This will include project management tools to assign tasks and schedule them to finish them up at the specified time.

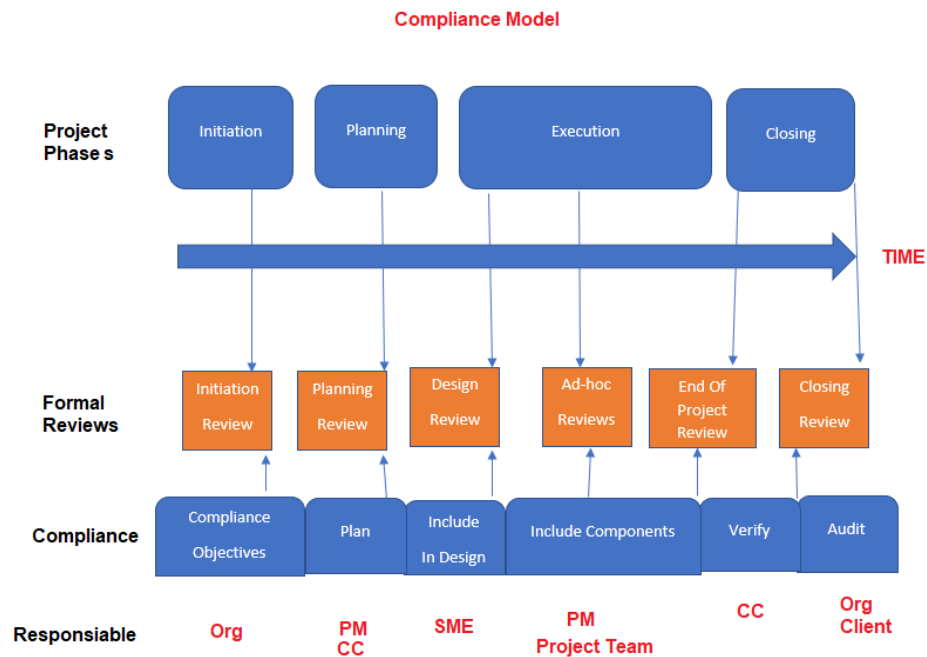
Defining the project management methodology:

This project will be going with an iterative approach such as Agile or incremental approach and this will be considered when the project is accepted and started.

2 Compliance and Values

2.1 COMPLIANCE, STANDARDS, AND REGULATIONS

2.1.1 Check Compliance Model



2.0 Check Compliance Model

2.1.2 Checklist Model for Project Stages

Checklist				
Project stages checklist				1/2/2022
	Verification			
Stages	Started	Done all phase specifications	End	Comments
Start	✓	✓	✓	Finished all required points in start phase documents for this project
Plan	✓	✓	✓	Maintained the planning documents of this project by building models and conducting scheduling
Achieve	✓	✗	✗	On going
Close	✗	✗	✗	-

	1 Start
--	---------

	Yes	No	Comments
Project idea	✓		-
Assign project sponsor	✓		-
Maintain project charter	✓		Will be updated
Assign team and PM of the project	✓		-

	2 Plan		
	Yes	No	Comments
Maintain project plan	✓		-
Scheduling	✓		-
Deliverables	✓		-

	3 Achieve
--	-----------

	Yes	No	Comments
Performing requirements document	✓		-
Managing the team	✓		-
Performing design document	✓		-
Implementing the platform		✗	On going

	4 Close		
	Yes	No	Comments
Providing all deliverables		✗	-
Final document of the project		✗	-
Project control and update		✗	-

2.2 POWER AND INTEREST

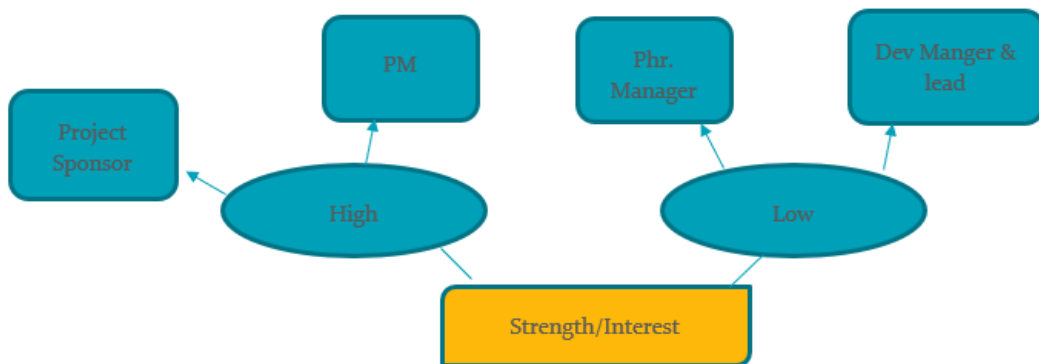
2.2.1 Stakeholder register

Stakeholder Name	Role	Designation	Communication Requirement	Influence Power (H/L)	Influence Interest (H/L)
Ahmed	Sponsor	CEO	Formal documents	H	H
Anas	PM	Sr. Developer	Emails	H	L
Khaled	Developer	Sr. Developer	-	L	H
Nasser	-	Phar. Manager	-	L	L

2.2.2 Networks (Strength/Interest) and (Influence/Strength)

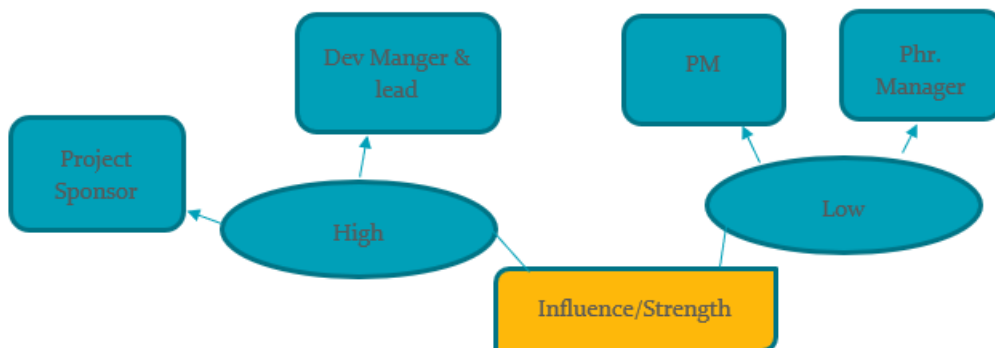
For the networks we have two networks for the strength and interest and the other for the influences.

1: S/I network



3.0 S/I network

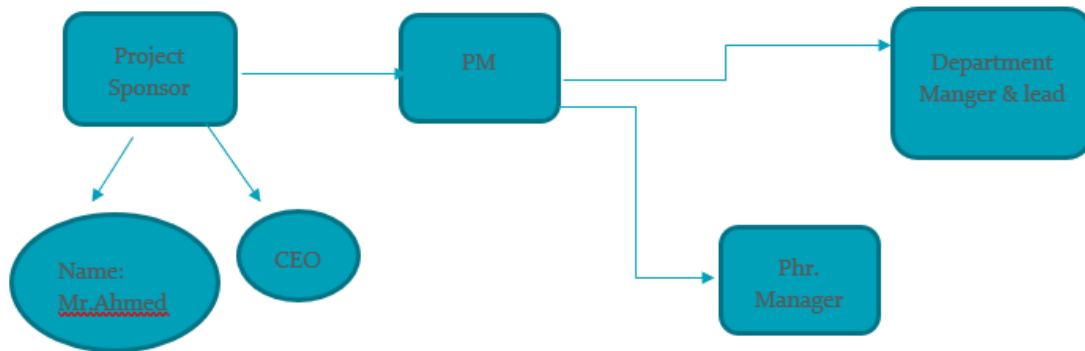
2: I/S network



4.0 I/S network

2.2.3 Logical Diagrams for The Register of The Stakeholder

The logical diagram shows the levels and the attributes in which each registered stakeholder has, and it is represented on the level from up to low going by three-levels from left to right. As we are having the sponsor at first then we have the project manager for this project to direct and then we have other department managers as stakeholders for this project.



5.0 Logical Diagrams for The Register of The Stakeholder

2.3 CULTURE AND VALUES

2.3.1 Organization Culture

For the organization's culture is maintained and standardized to be upon the social and material of the work in this project. The culture basically works between members as a hierarchy that starts with the higher management, then we have department managers and leads and ends with team members. This maintains a culture in which his work is directed and assigned from the higher management.

2.3.2 Proposals of The Organization's Values That Can Be Adopted

Once we obtain our organization's mission and vision, it becomes easier to define the values that will help us achieve our goals. These values can be integrity, innovation, collaboration, and teamwork. All of them work for the project's success.

3 Self-Management and Communication

3.1 SELF-REFLECTION AND SELF-MANAGEMENT

3.1.1 "3" Personal Behaviors of The Student That Can Influence The Project &

3.1.2 Behavior Study for each one of the "3"

Time management

Time management can be a critical trait that influences the project success. The project team having this behavior unstable will make the project outcomes overdue and affected negatively. Reasons for delaying and not having clear time management could be due to having multiple tasks and pressure that cause the time to be stressed.

Also, having unclear tasks would result in bad time management as well. To eliminate such behavior from happening regarding the time, tasks should be set clearly during the planning and conducting multiple analyses to ensure the duration of each task and manage the time efficiently.

Motivation

Team members could be not interested or motivated in the project outcomes and work. This will result in unwanted bad outcomes. The reason for that is due to the unclear tasks that can make team members confused and not willing to work as desired. The project manager can define a set of clear tasks to eliminate having decreased motivation in the project and perform rewards for each completed task to enhance the motivation.

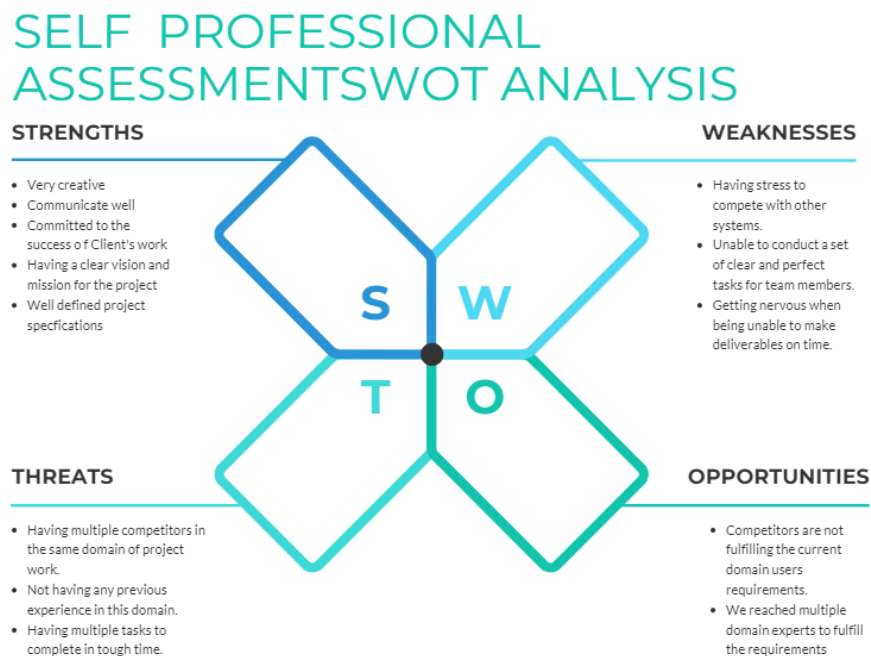
Communication

In most cases, planning tasks might not be the biggest problem for project managers. Instead, the greatest challenge for manager

s is how to communicate what they want from their project team. During a project, there are a lot of open communication channels between project team members and stakeholders.

In this extensive exchange of information, it can be extremely hard and difficult for people to avoid confusion. Therefore, it is extremely important to identify which of these channels yield positive and fruitful interactions.

As project managers, we need to establish a conducive environment for nurturing positive interactions between team members. Doing so clears out any confusion and allows your team to work in cohesion and produce better results. Self-Professional Assessment using SWOT



6.0 SWOT Diagram

3.2 PERSONAL INTEGRITY AND RELIABILITY

3.2.1 “3” Behaviors That Contradict Moral Integrity

Dishonesty:

Being not honest during the work contradicts moral integrity. Without being honest at the work providing real problems that are faced by reliable work, the work will not be successful anymore.

Disloyalty:

Being loyal to the project team and the organization improves the success of the project. Not being loyal can lead to not respecting the project policies and affect other team members with this behavior that contradicts the integrity of the work.

Undependable:

If you are not dependable then assigning tasks to you is extremely hard. The team will not rely on undependable members, and this will affect the success of the project and contradicts moral integrity.

3.2.2 Behaviors Influence on The Works of The Project and The Relationships

These behaviors affect and influence the work of the project as the team will not depend on or rely on members who embody these behaviors. This will break relationships within the team as they are not going to rely on or communicate well as these behaviors contradict moral integrity causing the project to be unable to succeed or meet expectations.

3.3 PERSONAL COMMUNICATION

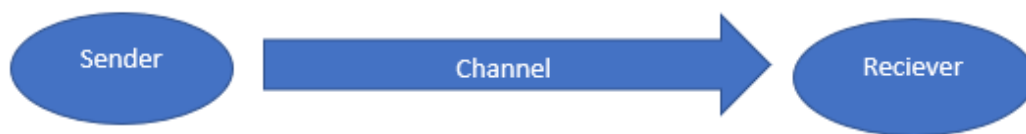
3.3.1 Register of The Stakeholder

For registering the stakeholders of this project, multiple stakeholders were included from the project sponsor and higher departments in the organization. The project manager is directing and facilitates the work of the project. The pharmacy managers are giving their requirements for the platform. The development and other departments are engaging in this project. Communication to each department happens by the higher manager or leads in each department engaging as a stakeholder to this project and contributing and influencing the project work and success.

3.3.2 Personal Communication and Effective Communication

Personal communication can be done among members in the same team under a specific department to interact and communicate with each other. Effective communication between them can occur to work upon problems that are being solved by them for the project. However, very effective communication is encountered outside the department I where the project manager or other managers communicate effectively with different departments or sectors to gather works and tasks concretely to be worked on and finished on the specified criteria and time.

3.3.3 Shapes, Models, and Channels of Personal Communication



7.0 Shapes, Models, and Channels of Personal Communication

For the personal communications that can happen in the work of the project the structure for the personal communication consists of sender and receiver. Here we have the channel in which the two communicate. This channel can be text, email, software tools, voice (face to face), or by phone. This communication can be maintained in many shapes in which one member interacts with other members from various working departments that are dealing with the project work.

3.3.4 Communication Matrix

COMM.	PURPOSE	MEDIUM	FREQUENCY	AUDIENCE	OWNER	DELIVERABLE
Planning	Introducing a project. Review objectives and goals.	In-person / Face-to-face	Once	Project team Project sponsor Stakeholders	Project manager	Agenda
Project Requirements Gathering	Review status of project	Face-to-face or Conference call	Weekly	Project team	Project manager	Agenda Project schedule
Technical & Creative Design Meetings	Discuss, review technical & design problems and solutions.	In-person / Face-to-face	As needed	Technical team Creative team	Technical lead Creative lead	Agenda
Monthly Project Status Meetings	Update leadership on project status.	Face-to-face or Conference call	Monthly	Project manager Stakeholders	Project manager	Slide presentation Project schedule
Project Status Reports	Detailed report on project status including progress, costs, and problems.	Email	Monthly	Project manager Stakeholders	Project manager	Project status report Project schedule
Project development	Maintain and work on the platform deliverable	Using Software to communicate or at office	As scheduled (Every workday)	Project manager Technical and development team	Project manager and Development lead	Project platform

3.3.5 “3” Wrong Scenarios of Communication

Scenario 1:

The first wrong scenario could happen if the development communicated directly to stakeholders and other managers. This can affect the management and the planning structure of the desired communication and hence it should be done by the lead or the PM of the project.

Scenario 2:

The second scenario can happen if the departments communicate directly with each other causing many conflicts to happen that can not be handled.

Scenario 3:

The last scenario might end up with wrong communication if the medium or specified structure of the communication was not adopted by the team itself and instead another medium or tools were used to communicate.

3.3.6 STAKEHOLDER ASSESSMENT MATRIX

Stakeholder Name	Impact <i>How much does the project impact them? (Low, Medium, High)</i>	Influence <i>How much influence do they have over the project? (Low, Medium, High)</i>	What is important to the stakeholder?	How could the stakeholder contribute to the project?	Strategy for engaging the stakeholder
<i>Project sponsor and higher department Mr. Ahmed</i>	<i>High</i>	<i>High</i>	<i>Directing and investing on the project idea</i>	<i>Providing the team and the project with all investments and resources to carry on the project</i>	<i>Monthly round-table discussions</i>
<i>Project Manager Mr. Anas</i>	<i>High</i>	<i>Medium</i>	<i>Maximizing quality of project work</i>	<i>Communicate with other stakeholders to express their support and directing the team on the project</i>	<i>Information and feedback meetings every workday</i>
<i>Pharmacy managers</i>	<i>Low</i>	<i>High</i>	<i>Getting a good story</i>	<i>Providing with data and features that could be done to the platform to maximize efficiency</i>	<i>One meeting every month</i>

4.1.1 leadership model and which is preferred for project leadership.

Leadership is defined as the ability to stimulate and arouse the interest of a group of individuals, and to unleash their energies towards achieving the desired goals with effectiveness and enthusiasm, and leadership can be defined as the ability that distinguishes the leader from others by directing him to others in a way that can win their obedience, respect and loyalty, sharpen their motivation, and create cooperation between them in a way to achieve a goal by itself (Jetu & Riedl, 2012).

1.Affiliative Leadership model

Are one of 7 styles of Emotional leadership and promotes positivity, a harmonious workplace and team building. This leadership style focuses on conflict resolution and creating personal connections between employees and their managers to build a sense of community and trust.

2. Authoritarian / Commanding /The Boss/Autocratic Leadership model.

Is centered on the boss. the leader holds all authority and responsibility. The leader centralizing decision making and limiting participation. leaders make decisions on their own without consulting subordinates. They reach decisions, communicate them to subordinates and expect prompt implementation. One of the famous examples for an authoritarian is of Napoleon Bonaparte and Hitler.

3-Coaching Leadership model.

Coaching leadership involves teaching and supervising followers. A coaching leader is highly operational in setting where results/ performance require improvement. Basically, in this kind of leadership, followers are helped to improve their skills. coaching leadership does the following motivates followers, inspires followers and encourages followers. A coaching leader is A great mentor is a pioneer who also has a remarkable ability to instruct and train. They prep individuals to enhance both information and skills. (build the skills of others).

4-Democratic Leadership model

In this leadership style, subordinates are involved in making decisions. Unlike autocratic. This leadership is centered on subordinates' contributions. The democratic leader holds final responsibility, but he or she is known to delegate authority to other people, who determine work projects. His style of authority depends on the group been counseled and their feelings being esteemed.

5-Laissez-faire Leadership model

Laissez-faire leadership gives authority to employees. (LEAVE IT BE) Subordinates are allowed to work as they choose, with complete freedom to make decision. with minimal or no interference. This kind of leadership has been always found to be the least satisfying and least effective management style.

6-Pacesetting Leadership model

Pacesetting leadership is when the leader sets an example of high performance, high pace and high-quality. Team members are expected to follow suit, and the pacesetting leader values results more than anything. This is 'lead by example' (do as I do, now). Leader is highly focused on performance and expects the same of the team. Works best with teams that already preformat a high level. Role model, high standards.

7-Transformational / Visionary Leadership model.

The transformational leadership style is one of the most implemented styles. It has integrity, defines clear goals, encourages clear steps to communication and expressive. This type of leader inspires their team to work together towards a common target. Transformational leaders combine the best practices and are leaders who are trusted and can motivate others.

Democratic model is preferred for project leadership.

The democratic leadership vogue is depicted by leadership that depends on human relations, participation, and delegation of authority. Democratic leadership depends chiefly on healthy human relations between the leader and his subordinates that square

measure supported satisfying their wants, making cooperation between them and finding their issues.

The democratic leadership adopts methods of persuasion, martyrdom and facts, considering individuals' feelings, feelings, dignity and importance in achieving goals and the need to involve them in decision-making in order to motivate them to cooperate. Therefore, the democratic leader enjoys the opinions of his followers, expresses their ideas, provides them with the necessary information and guidance, and plays an effective role in developing innovation and Achieving cooperation and unleashing the capabilities and energies of his subordinates, and democratic

leadership is based on foundations that are:

- Establish human relations with subordinates.
- Involving employees in some leadership tasks

4.1.2 the reasons for which such a leadership model is preferred.

In any workplace scenario, democratic leadership model is most preferred over other leadership meeting models. It was debatable for quite some time to consider coaching as a model of leadership or not. However, it is one of the most effective leadership models that doesn't lead directly but indirectly.

leadership models because it allows lower-level employees to exercise authority they'll need to use wisely in future positions they might hold. It also resembles how decisions can be made in company board meetings.

4.1.3 Five proposals for the motivation methods that are compatible with the nature of the project.

1. Provide Meaningful and Challenging Work

When people feel that the work, they are doing is meaningful - makes a difference in some way - and provides them with challenges that stretch them (but also mesh with their ability to achieve them) they become internally motivated. In other words, they don't need anyone standing around coercing them into higher levels of performance.

Regardless of the actual work that is being done, people generally want to feel a sense of:

Achievement, Responsibility, Enjoyment, Recognition

Even the most mundane of work can be motivating if the leader helps the team member put into context the value their work brings either to the consumer or to the organization.

Work that many see as demanding - for example being a doctor or an air-pilot may well become rote and uninspiring if the individual, is not regularly given the opportunity to extend him/herself. Similarly, work that for many may be rote and uninspiring, for example, a cleaner or a supermarket cashier can become challenging by incorporating other activities, that are meaningful to that person, into their daily work.

In other words, when you increase the scope of work to be done, to the level of the individual's capability, then people generally become more engaged and energized.

A great leader can help inspire and motivate people by getting them to see beyond the immediacy of what they are doing to the bigger picture. This story illustrates a great example of how hospital ward orderly can create meaning in their job.

Providing challenging work is also intrinsically motivating for people - most people want to feel that their potential is being regularly challenged. When the team leader provides

the team member with the environment that enables, for example, learning new techniques or taking on additional tasks this can engage them more fully.

2. Set Clear Targets and Expectations and Measure Performance

Imagine you were bowling and no-one told you the aim of the game and each time you bowled the ball as it got halfway down the alley a curtain came down so you couldn't see how many pins you had knocked over.

How long do you think you'd remain interested, excited, engaged by the game? If you are like most people not too long!

It's the same in organizational life.

People can be all fired up and ready to give of their best, but if they don't know what is excellent performance, or don't know when they've performed excellently, or don't know what the aim of the game is ... you can pretty well shut the gate on motivation.

Spelling out specific targets, goals, and expectations for behavior and performance need not be anything complicated ... it just needs to be done and people need to get regular and timely feedback on how they are performing against those goals.

3. Give Regular, Direct, Supportive Feedback

Feedback - both positive and performance improving - is vital to continuous improvement and done well it motivates and inspires people to continually move toward using more of their potential.

Feedback needs to be timely, specific and presented in such a way that the individual is clear about what behaviors or skills they need to modify (or continue using) to improve performance. If providing performance-enhancing feedback isn't a strength for you, then access the training "Successful Feedback".

4. Design People's Roles so They Can Use Their Strengths.

Assigning people to specific tasks and duties that play to their strengths is one of the best employee motivation techniques. Research has shown, more than anything, people who can make use of their strengths regularly while at work are more likely to work in teams that perform at higher levels.

When people are playing to their strengths on a regular basis - they feel effective, focused and fulfilled ... a win for them and for their organization. The person becomes more internally motivated ... feeling upbeat and enthused by what they are doing ... and will feel inspired to continue more. Read more about strengths in the workplace.

5. Enable Input and Choice in How Work Gets Done.

95% of people (regardless of their walk of life) want to do a good job, feel pride in what they do, have good relationships with their co-workers and feel they are contributing in a meaningful way. In other words, they are set up by their own internal nature to be a high performer.

Unfortunately, in many organizations managers turn the majority of their focus toward the 5% of people who are allergic to work and then instigate rules, policies and practices (such as close supervision) to control this 5%. As you can imagine all that does is demean, annoy and demotivate the 95% who are motivated to do their best. You are wasting the talent and natural motivation that the overwhelming majority of people bring to the workplace.

Provide people with a forum where they can provide their input into how work is performed. Giving people control over how they perform the work is intensely motivating.

4.2.1 RACI MODEL FOR ADMINISTRATIVE MEASURES IN THE PROJECT.

Informed	Consulted	Accountable	Responsible	Action/Task
All Users/OSS (only if not updated)		program Analyst	program Analyst	Verify that the daily database update ran successfully and act as the main point of contact /liaison for questions, problems suggestion for improvement.
Seals Managers		Sales Staff	Sales Staff	Use database to review and act upon daily available items list.
Seals Managers	OSS	Program Analyst	Program Analyst	Research error/problems reported, engage OSS for assistance if needed, and communicate status to sales staff and manager, as applicable.
Director		Sales Staff	Seals Managers	Monitor reports for workload and/or performance issues.
Director	Sales Staff	Seals Managers	program Analyst	System Admin Function: Update Assignment tables and reassign work in the system if /when needed

4.3.1 CONFLICT AND CRISIS.

This part of the research deals with finding the difference between the concept of conflict and crisis and finding the difference between them in some detail:

4.3.1.1 Crisis concept.

It is a defect that materially affects the entire system and threatens the main assumptions on which the system is based. Accordingly, at least two conditions are required for the existence of the crisis:

- a. The first condition: that the whole system be subjected to severe influence.
 - b. The second condition: the assumptions and postulates that the members of the organization believe in become challenged.
- Administrative approach to crisis management:

When addressing the concept of crisis, we find ourselves in connection with three distinct groups:

- a. The first group: embraces a historical and social point of view, they view crises as a result of a cumulative process, and that crises are a natural thing, as they result from the complexity of the technology they use.
- b. The second group: embraces a social, psychological and political point of view, which sees crises as a result of wrong decisions, and that the responsibility lies with individuals and groups.
- c. The third group: It attempts to combine the two previous points of view, as it affirms that crises are nothing but natural events that occur due to the complexity of systems, wrong decisions, and the interaction between technological systems and the person trying to manage them.

(1) The first element: determinism.

(2) The second element: freedom of will.

- classification of crises:

Crises can be categorized into groups, but this does not preclude some overlap between these groups.

1. An external threat against information includes all forms of attack on the organization by other organizations, with the intent of threatening information of a confidential nature or its registered rights.
2. A group related to failures and failures, including equipment failure or operator failure due to stress and physical error.
3. An external threat directed against the organization's economy, including attack by other organizations, with the intent of threatening the organization's economic position.
4. Heavy losses, including massive disasters that harm workers, residents and the environment.
5. Psychological threats, including various forms of attack carried out by mentally disturbed individuals, or outside the community and the organization, and inflict psychological disorders on individuals.
6. Occupational diseases, including deaths due to occupational hazards, such as lung damage caused by asbestos.

- Types of crises

1. In terms of external threat related to information

Infringement of rights - loss of information – counterfeiting - malicious rumors

2. In terms of the external threat against the economy of the organization

Blackmail – bribery - boycott

3. In terms of failure

defects in products - Factory or facility defects - Computer malfunctions -

Factory or facility defects - Weak security systems

4. In terms of psychological threats

Terrorism – tradition - Vandalism and product tampering outside the organization

Weak senior managers - malicious rumors - And the. Heavy losses and environmental accidents

4.3.1.2 CONCEPT OF CONFLICT

Conflict is a situation related to competition, in which the conflicting parties become aware of diminishing, and each party seeks to achieve its end at the expense of the other. Modern administrators defined conflict as an interactive state that shows disagreement, disagreement, and discord within or among individuals, or within or between groups.

(Pondy, conflict and crises 2004) also defined conflict as a disruption or breakdown in the means of normative decision-making, or in its techniques, which makes the individual live with difficulty choosing alternatives to action or performance.

(Robbins, entrance to management ,1993) defined conflict as a process that involves making an intentional effort by one person to obscure the efforts of another, by resorting to some form of obstacles that result in the frustration of the other.

The researcher believes that the conflict is the conflict resulting from the difference as a result of different visions, beliefs, ideas, programs and interests between two or more groups, and it may have justification, as in the struggle of peoples with their tyrannical regimes, or it may be otherwise, as in the ethnic and sectarian conflicts within the frameworks of citizenship and one homeland, note The intervention of many cultural, social and political factors in activating and detonating conflicts and containing them within the accepted patterns. Therefore, there were peaceful conflicts affected by constitutionally and legally codified incidents and differences, and violent and bloody conflicts that did not adhere to any disciplined legislative or moral framework.

- The concept of conflict in the third world theory:

The concept of conflict is centered in the third universal theory on the need to reach a means to avoid disturbances and conflict that cause sabotage and destruction to society, and make the essence of this idea in the pursuit of human happiness as the real criterion in the process of change, so conflict appears when there are relationships that are not accepted by society. The Third Universal Theory also sees that the engine of human history is the social factor, that is, the national one. The social bond that binds individual human groups, from the family to the tribe, is the basis of the movement of history. The theory aims to eliminate all causes of conflict through its reliance on natural rights and rules, as the only mechanism for the salvation of society from all forms of contradiction and conflict, leading to the state of the masses.

- Multiculturalism and conflict

As a result of the multiplicity of languages, religions, and environments, cultures in societies are multiplied, diversified and struggled, for hegemony and control over the material experiences of peoples on the surface of the globe. Therefore, cultural diversity leads all peoples to be proud of their culture, which distinguishes them from other peoples.

4.3.2 THREE EXPECTED SCENARIOS OF THE CONFLICT'S EVENTS IN THE PROJECT.

Scenario 1: personal clash

Co-workers can find themselves in the midst of a workplace dispute over a personal clash. Different people see the world from completely different perspectives, and personality clash can occur simply because of conflicting work approaches, different cultural backgrounds or a variety of other reasons. Dealing with a personal clash can be difficult because often there is no specific problem leading to engagement.

When there is a personal clash in the workplace, it has to be dealt with, or workers end up feeling trapped in a hostile and tense work environment. If different characters create tension and discomfort, management must intervene and find a way to mediate. Pay attention to both sides and deal with the situation quickly so as not to continue to deteriorate.

Scenario 2: failure of communication

Lack of communication is clearly one of the most common reasons for a workplace conflict. When the instructions for a project or task are not clearly connected, this may result in a lot of time focusing on the wrong things. The result is tension and loss of productivity. Another example of failure to communicate is when an employee makes a comment that another is going the wrong way.

Resolving the non-contact dispute depends on making both parties express what could have been done differently. It is important to look at the situation and determine exactly what happened and why, and how to prevent failure to communicate in the future. Managers need to set clear expectations for future communication and clarify what is expected of each employee in their role. All parties concerned should practice effective listening to make sure they listen and understand each other.

Scenario 3: Conflict with management model

He leads managers in different ways and different people are comfortable with different management methods. Some managers are authoritarian while others are more lenient. An employee who likes to interact frequently with his manager will not be comfortable with the non-interventionist approach. Managers may set detailed goals for the employee without thinking about whether the employee may be cumbersome.

Effective managers can communicate with employees regardless of their preference for management style. Setting up weekly or bimonthly individual meetings gives employees an opportunity to express their concerns. Frequent meetings also help to ensure that the manager is aware of dissatisfaction or potential inconsistency so that they can work together towards a mutually acceptable solution.

4.3.3 STRATEGIES TO DEAL WITH CONFLICTS

Scenario 1: personal clash

Conflict 1: Altercation between coworkers

Strategies to deal with the conflict: Collaborating

Reason for Preference: it is a win-win resolution technique

- place the altercation parties in different rooms or areas and listen to their side of the story to identify the root of the conflict
- speak to each employee who attended the conflict and know their side of the story too to analyze the full picture of the conflict
- Work together with the employees to resolve the conflict and identify a solution for the conflict
- Implement the solution agreed on and follow up with each party of the conflict

Scenario 2: Failure of Communication

Conflict 2: Lack of communication between coworkers

Strategies to deal with the conflict: Confronting / Problem Solving

Reason for Preference: Makes finding a solution for the conflict a priority

- Define the reasons behind the lack of the communication problem
- Analyze the reasons and develop solutions
- Approve the solutions
- Establish communication standards
- Implement the solutions and follow up on it

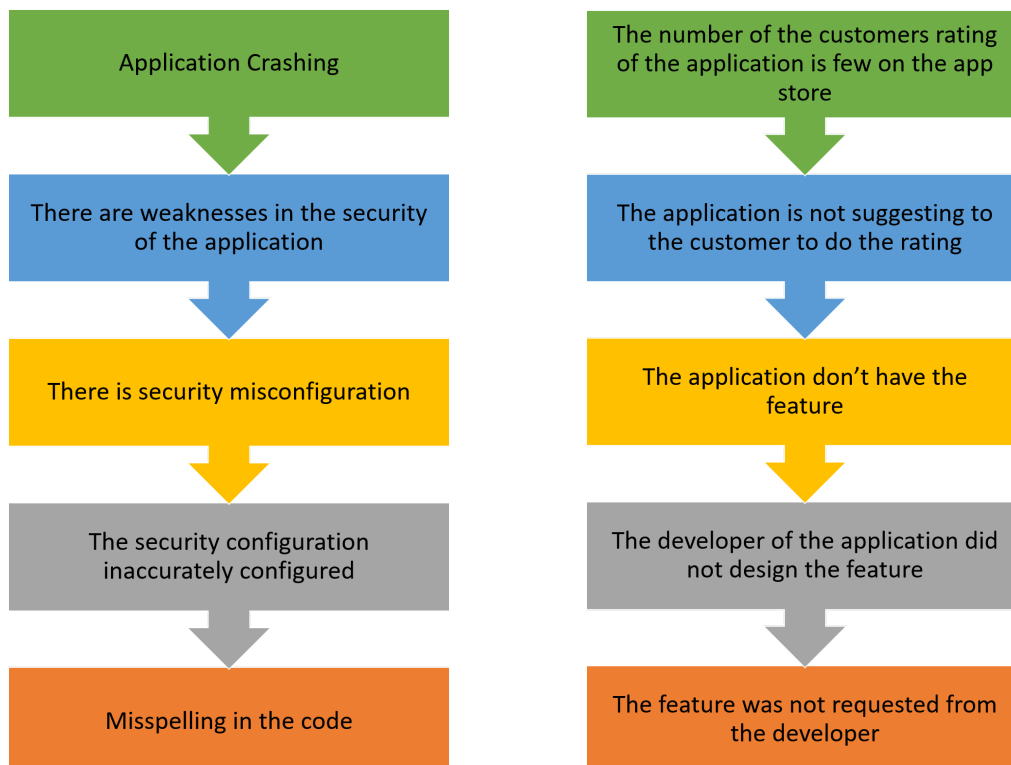
Scenario 3: Conflict with management model

Conflict 3: Different management models inside one organization

Strategies to deal with the conflict: Confronting / Problem Solving

Reason for Preference: Makes finding a solution for the conflict a priority

- Find how the organization want to execute its business
- Find how the organization want to innovate products, services, and future business
- Find how the organization want to improve the business in the future
- Find how to let employees perform at their highest level
- Develop a management model to reach goals
- Implement and monitor the performance



4.3.4 ROOT CAUSE ANALYSIS



5.1.1 HUMAN RECOURSE DISTRIBUTION

Management level	Position Title	Number of Employees
Higher Management	Project Manager	1
Middle Management	Finance & Marketing Section Head	1
	Operational Section Head	1
	SE Section Head	1
Operational Level	Solution Designer	2
	Developer	8
	IT & Infostructure Engineer	1
	Finance Agent	2
	Sales & Marketing Agent	2

- Project Manager Position Tasks:
 - Functional and technical designs
 - Working with key strategic partners
 - Create scope, requirements, timelines, and resource allocation
 - Analyze business requirements
 - Execute project plans
 - Develop functional requirements,
- Finance & Marketing Section Head Position Tasks:
 - Monitor the day-to-day financial operations
 - Prepare monthly and quarterly management reporting
 - Participate in strategic data analysis, research, and modeling for senior company leadership
 - Support project analysis
 - Manage financial accounting, monitoring, and reporting systems

- Ensure compliance with accounting policies and regulatory requirements
- Manage the team of financial analysts
- Coordinate strategic financial plan process
- Manage public communications, including print, digital, and video assets
- Manage content, updates and provide sales support
- Create marketing programs
- Operational Section Head Position Tasks:
 - Lead the operational team including setup and implementation of problem solution
 - Operations data collection, reduce cost per unit, eliminate errors, and deliver excellent customer service
 - improving tools and systems
 - Manage materials and inventory
 - Report cost plans
- Solution Designer Position Tasks:
 - Analyzing the technology environment
 - Analyzing enterprise specifics
 - Analyzing and documenting requirements
 - Setting the collaboration framework
 - Creating a solution prototype
 - Participating in technology selection
 - Controlling solution development
 - Supporting project management
- Developer Position Tasks:
 - Build an application that fulfills specific needs
 - Find solutions to security threats, viruses, or errors that might hinder the performance of applications
 - Carry out regular security and performance checks

- Remain current on technology trends to keep our application as innovative as possible
- Stay on track of the application lifecycle to ensure necessary updates are completed on time
- IT & Infostructure Engineer Position Tasks:
 - updating hardware required for maintenance of servers and the network
 - Fixing any network and connectivity issues
 - Detecting system and application issues
 - Ensuring the smooth flow of data and voice throughout the organization
- Finance Agent Position Tasks:
 - Prepare balance sheets
 - Process invoices
 - Record accounts payable and accounts receivable
 - Update internal systems with financial data
 - Prepare monthly, quarterly and annual financial reports
- Sales & Marketing Agent Position Tasks:
 - Build relationships with potential clients by seeking out their needs and offering solutions that our application can provide them with
 - Acquire new accounts through networking and outreach targeted at potential new clients and set goals to ensure that sales quotas are met
 - Maintain client satisfaction by keeping the quality of products and services high and meeting new client needs
 - Track the sales cycle to see potential clients through the lifetime of their partnership with us
 - Strategize new approaches for attracting clients

5.1.2 ANALYZE THE INFLUENCE OF CONDUCTING CRASHING AND FAST-TRACKING PROCESS:

Fast Tracking vs Crashing

The reality of project management is that sometimes you will need to compress the project schedule and deliver the project's product, service, or result sooner than originally planned. Schedules are constantly subject to change; in most cases, schedules get longer as opposed to getting shorter, which can negatively affect the original schedule because the project team will not be able to complete it in the time available.

There is no reason to fast track or crash any activities that are not on the critical path; you won't gain any time on your overall schedule if you cannot shorten your critical path.

When Should You Use Fast-Tracking vs Crashing?

There are two methods that can be used to cut down how much time is spent on projects while maintaining the project scope: fast-tracking vs. crashing. Crashing is a method in which cost, and schedule trade-offs are examined to figure out the best way to obtain the greatest amount of compression for the least incremental cost. Crashing is used if fast-tracking did not save enough time.

Both fast-tracking and crashing should be used on important projects (those on the critical path) to have a real impact on the actual project schedule.

5.2.1 DEVELOP GENERAL RULES FOR THE NEGOTIATION PROCESS:

Negotiation Lifecycle



9.0 Negotiation Process

Rule	Project Management Example
1. Be patient	Dealing with a team member who is underperforming—and perhaps defensive—may be uncomfortable for a project manager, so the tendency is to get the encounter over with as quickly as possible. A better approach is to develop rapport with the person, ask for permission to provide feedback or suggestions, carefully answer any questions that come up, and take the time to reach satisfactory agreement.
2. Be positive	A principle of persuasive influence is to deal with people you like. A positive attitude with project sponsors helps build confidence and credibility in their minds. This means they engage more willingly with the PM in supporting the project and maintaining that support throughout the project lifecycle.

3. Gather information	Clients or customers have challenges that may be addressed by the outcome of your project. Ask probing questions about what they are doing...and listen to the answers. Review the relationship history, especially if support issues have come up and whether or not they were adequately addressed. Find out their timetable or deadline, both to purchase and then to implement the solution.
4. Float trial balloons	Ask “What if we could provide key features in Phase 1 and address other wants in later phases?” These questions make no commitments but do explore reactions from the other party about possible approaches they may be willing to consider.
5. Know your status	Project managers are closest to the action on most projects and have significant status attributable to the information they possess. Other stakeholders have status via the authority they have to allocate resources or dispense funds. The real opportunity to achieve better outcomes is when one side is anxious to reach agreement; the other side may then nibble to gain additional concessions, such as extend a resource’s time on the project or reduce features in order to meet cost or time pressures.
6. Know your opening offer	You estimate the project will take between 4 to 6 months. Ask the customer when they want it, and they may respond in 8 months, in which case you have a cushion. If the PM were aggressive and quoted first, saying 4 months (the bottom line), there is no room to negotiate. If the customer has no clue and may ask for 2 months, the PM can open first by quoting 6 months (the edge of the envelope) and have room to negotiate something in between.
7. Limit your authority	Try to negotiate with the decision-maker so you deal with them directly and get agreement quickly. When you are the decision-maker, have someone else

	negotiate on your behalf so you cannot be pinned down by hard core negotiating tactics. This provides opportunity to practice patience, review the proposal more thoroughly (instead of in an emotional moment), and to come back with counter proposals.
8. Know your bottom line	Two vendors have similar products where one has a slight edge and costs more. The PM wants the better product but has a strict budget limit of \$10K. Negotiations with the higher priced vendor proceed in order to get a lower price or arrange terms that fall within the budget limit. Use the limit to stand firm, negotiate with due diligence, and fall back on the other vendor if not successful. Knowing these limits determines whether to continue or walk away.
9. Be prepared	Have a risk management plan that provides advance notice of technology that may not work or tasks that take longer than planned. Clear trigger points invoke contingency plans calling for negotiations on the pros and cons of various options, leading to quick resolution. Preparation avoids being caught by surprise and having to invent options where none previously existed.
10. Never reward intimidation tactics	A PM whose does not push back against unreasonable scope, schedules, or resources is training sponsors to continue a demanding behavior. Instead, set expectations by negotiating the triple constraints at project start-up and when changes occur. Make concessions when the other side makes them as well. Do not give in to intimidation tactics or “the beatings will continue until morale improves.”

5.2.2 PREPARE 2 NEGOTIATION PLANS:

Plan 1:

Planning your negotiation

No amount of preparation is too much in approaching complex or high-stakes negotiations. Plan both your approach to the subject under negotiation, and your tone and communication style.

In approaching the subject of your negotiations:

- set your objectives clearly in your own mind (including your minimum acceptable outcome, your anticipated outcome and your ideal outcome)
- determine what you'll do if the negotiation, or a particular outcome, fails
- determine your needs, the needs of the other party and the reasons behind them
- list, rank and value your issues (and then consider concessions you might make)
- analyse the other party (including their objectives and the information they need)
- conduct research and consult with colleagues and partners
- rehearse the negotiation
- write an agenda – discussion topics, participants, location and schedule.

In deciding your communication style, familiarise yourself with successful negotiating strategies. Arm yourself with a calm, confident tone and a set of considered responses and strategies to the tactics you anticipate.

Engaging with the other party during the negotiation

- Introduce yourself and articulate the agenda. Demonstrate calm confidence.
- Propose – make your first offer. The other party will also make proposals. You should rarely accept their first offer. Evidence suggests that people who take the first proposal are less satisfied and regret their haste.
- Check your understanding of the other party's proposal.
- Remember your objectives.
- Discuss concepts and ideas.
- Consider appropriate compromises, then make and seek concessions.
- Suggest alternative proposals and listen to offered suggestions.
- Paraphrase others' suggestions to clarify and acknowledge proposals.
- Give and take.

Closing the negotiation

Take a moment to revisit your objectives for the negotiation. Once you feel you are approaching an outcome that is acceptable to you:

- look for closing signals; for example
 - fading counter-arguments
 - tired body language from the other party
 - negotiating positions converging
- articulate agreements and concessions already made
- make 'closing' statements; for example
 - 'That suggestion might work.'
 - 'Right. Where do I sign?'
- get agreements in writing as soon as you can
- follow up promptly on any commitments you have made.

Plan 2:

Planning your negotiation

No amount of preparation is too much in approaching complex or high-stakes negotiations. Plan both your approach to the subject under negotiation, and your tone and communication style.

In approaching the subject of your negotiations:

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6.1 Project design

6.1.1 Identify the Triple constraint of the project.

1- Cost:

One of the constraints for this project is to estimate how much the project budget will cost. In order to determine this budget, we need to look at the resources, materials, technologies, and equipment needed for the project. For the cost constraint, we can consider some work to perform such as the following:

Using costs of similar projects in order to make comparisons.

Estimate the cost of the highest quality for activities.

Measure statistical relationship between historic data and other variables.

Determining the rate of cost for goods and labor by unit.

2- Scope:

Scope highlights the work needed to be done. It documents features and functions included in the project. Using WBS (Work Breakdown Structure) is used to break the scope into actionable tasks. It is also important to manage and prioritize tasks to plan and assign resources to the project effectively.

3- Time:

Another constraint is to determine the deadlines and time needed to complete project tasks. Each task is set with a timeline to specify the deadline for this task to be done with a certain iteration. Based on these timelines we can end up with the final release of the product with all features indicated in the scope for this project.

Some ways to visualize and make timelines for project tasks can be done using PERT or Gantt charts. With each task a point on that timeline, with task dependencies linked, and durations determined. Having historic data can help make more accurate estimates.

6.1.2 Set up a list of the project success factors.

For this project and in general for most projects we have the following success factors that play critical role on the project success.

Methodic Approach:

One of the project success factors is to specify a methodology that the project is going to follow during the project. The choice of such mythology will ensure that the process is clear and efficient. Following suitable frameworks for the project such as incremental approach can make the implementation of this project clear and end up with desired project objectives.

Proper Planning:

Most of project managers want to start quickly with project execution without having clear scope and time frame with accurate plans for the project. As we are constrained with the time and cost, proper planning gives accurate time and cost estimates in order to have clear documentation, estimations and deliverables for the project and this will lead the project to success.

Use a Professional Software:

Using professional software such as Trello for the management can direct to effective quality for the project management. Tracking milestones and specifying tasks using this software can lead to simplified work that ensure the success of the project.

Effective communication:

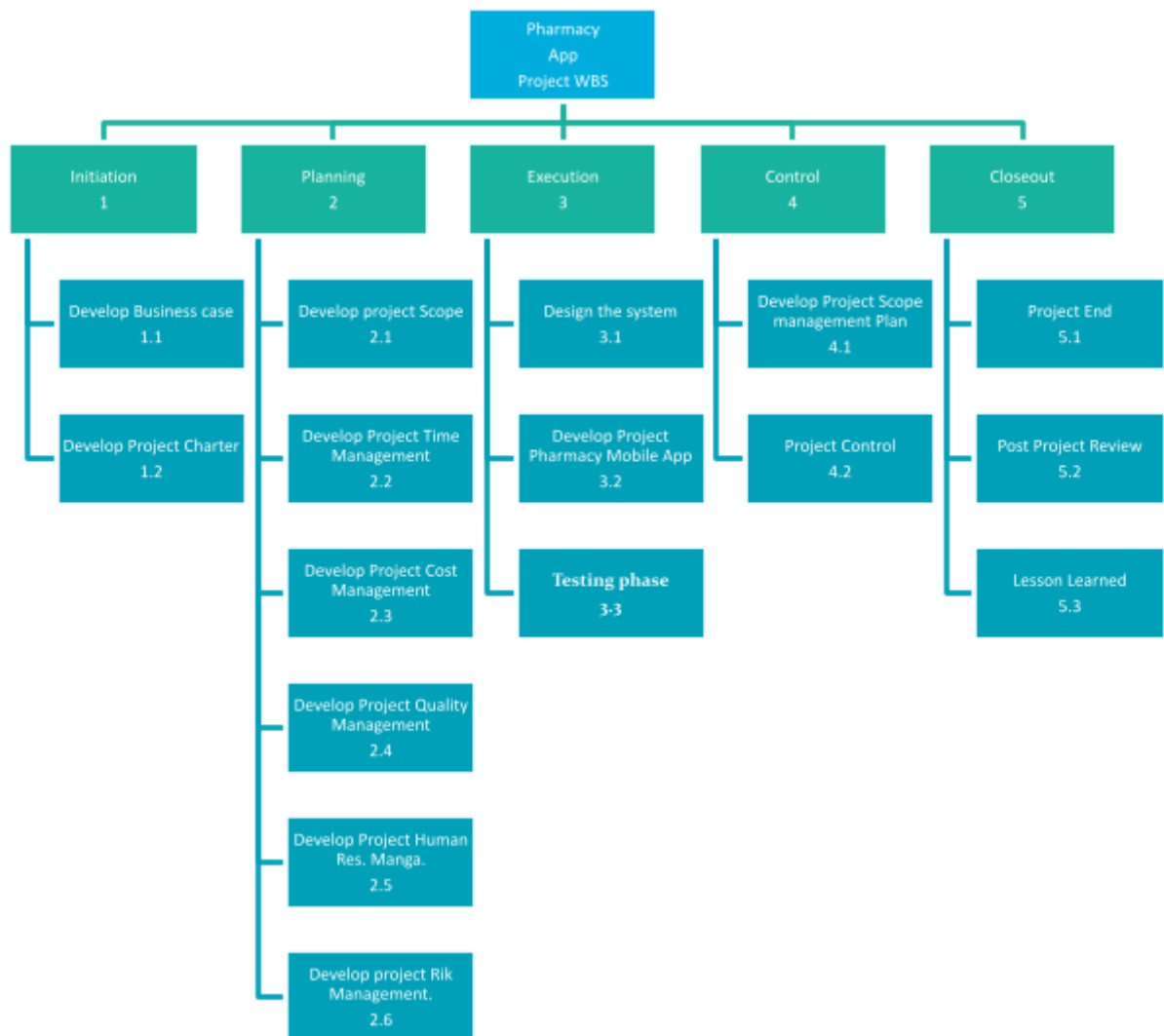
One of the problems that rise in many projects is to have some misconceptions and misunderstandings of the project requirements. Ensuring that formal communication processes (meetings, documentation), as well as informal processes, are implemented and used is important to avoid wrong development and deliverables for the project.

6.1.3 Develop and identify work breakdown structure.

The WBS is a view into the project which shows what work the project encompasses. It is a tool which helps to easily communicate the work and processes involved to execute the project. The Project Manager and project team will be using the WBS to develop the project schedule, resource requirements and costs.

In each package in the WBS we will be having a list of functions or tasks in which they are going to be included in that package. For this project, the three-structure view will be used to indicate each level and split levels into three levels.

We will have the main level, which is level one, the second level which contains groups of packages and then subgroups, work packages, functions or tasks as the third level. Each task can be considered as a deliverable of the project to be performed and assigned to a team member to finish it up.



6.2 Requirements and Objectives

6.2.1 Identify Requirement traceability matrix.

This project requirements traceability matrix demonstrates the relationship between requirements and other project aspects or tests. For this project, we are going to list requirements along with test cases to test these requirements for our product.

Requirements:

- Req-1: The system shall allow the user to Register in the pharmacy app.
- Req-2: The system shall allow the user to login into his/her account.
- Req-3: The system shall allow the user to logout from his/her account.
- Req-4: The system shall allow the user to view available medicines.
- Req-5: The system shall allow the user to filter available medicines.
- Req-6: The system shall allow the user to select desired medicines.
- Req-7: The system shall allow the user to view selected medicines in the cart.
- Req-8: The system shall allow the user to order medicines.
- Req-9: The system shall allow the user to specify the receiving option.
- Req-10: The system shall allow the user to pay for the order.
- Req-11: The system shall allow the user to view a list of orders done by the user.
- Req-12: The system shall allow the user to view order details
- Req-13: The system shall allow the user to cancel the order.

Test cases:

- TC-1: Registering and checking if a new user can enter the app.
- TC-2: Ordering a medicine without being logged in into the account.
- TC-3: Adding new medicines in the cart.
- TC-4: Confirming new order for a medicine.
- TC-5: Canceling an order.
- TC-6: Viewing specific medicine to order.
- TC-7: Searching for a medicine that is finished or not available.
- TC-8: Logging out from the account.

RTM	Req. 1	Req. 2	Req. 3	Req. 4	Req. 5	Req. 6	Req. 7	Req. 8	Req. 9	Req. 10
Test case 1	×	×								
Test case 2	×	×	×				×			
Test case 3						×	×			
Test case 4				×	×	×	×	×	×	
Test case 5										×
Test case 6				×						
Test case 7				×						
Test case 8			×							

6.2.2 Specify the methods used in requirement collection.

Collecting requirements for this project is done using four methods or techniques which are:

Brainstorming:

One of the important techniques used is brainstorming in which several brainstorming sessions in order to get the required requirements and ideas for the project.

Interviews:

Interviewing stakeholders of this project to discuss with them the required functions to be done in this project and list their requirements for the project.

Surveys:

To collect information from many people and expected users with low cost and specified questions the surveys were used to get the needed requirements.

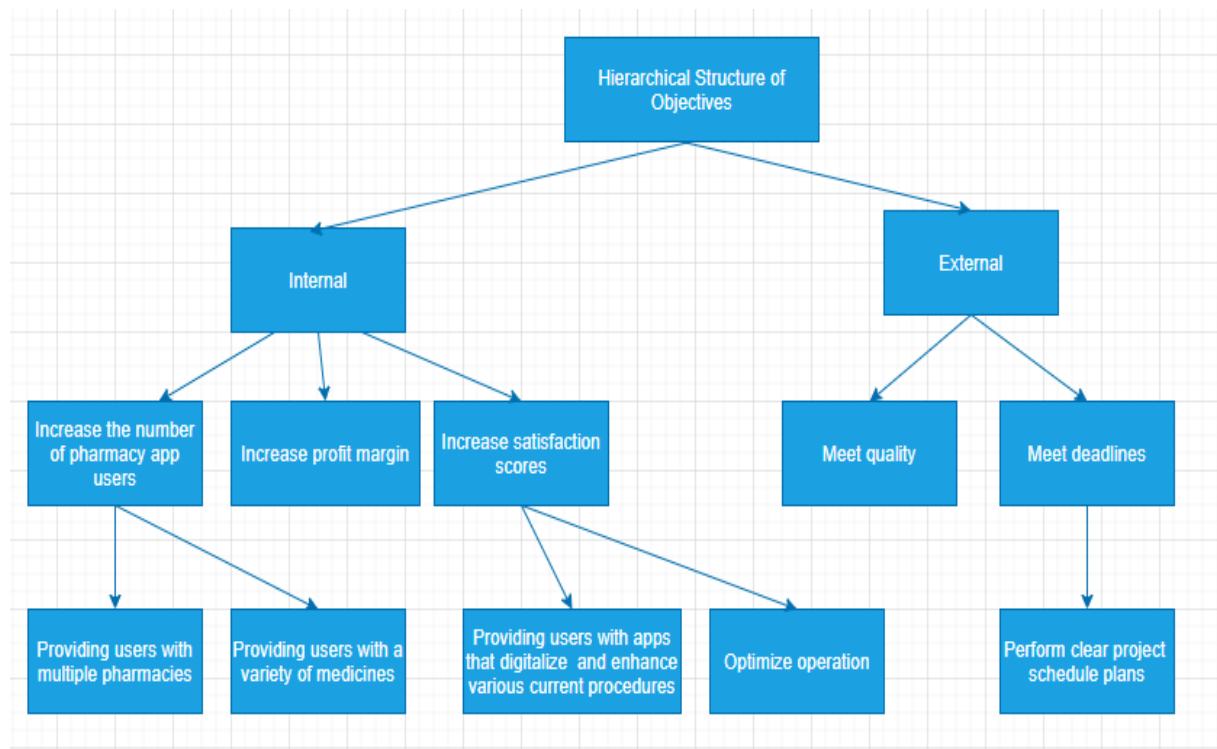
Focus group:

This method was done by gathering of people who are representative of the users or customers of a product to get feedback. The feedback can be gathered about needs/opportunities/ problems to identify requirements.

6.2.3 Develop the hierarchical structure of the objectives of the project.

This project hierarchical structure for objectives includes both internal and external objectives of our project. In the external, we are trying to meet quality and deadlines for our project that we have. On the other hand, we have the internal which is responsible for increasing the number of users of this project, increasing our profit margin by deploying this project, and increasing current satisfaction scores.

The following figure shows the hierarchical structure in which we have the objectives for this project.



7.1 Scope

7.1.1 Develop, identify and prepare the scope statement.

Project Charter			
Project Name	Pharmacy Medicine Supply Management (PMSM) System		
Project Sponsor	Mr. Ahmed	Project Manager	Mr. Anas
Date of Project Approval	10 th February 2022	Last Revision Date	15 th March 2022
Project Description	To introduce a new pharmacy medicine supply management platform that ensures the efficiency of the communication between clients and pharmacies.		
Scope Description	This system is introduced to enhance the medicines supplying process by ensuring the implementation of communication between clients and pharmacies. In scope The system scope includes clients who want to benefit from medicines and to be supplied from pharmacies in the platform. Out of scope The system will not include and provide any doctors visit to make through the platform.		
Project Deliverables	Project documents and specifications Pharmacy mobile app Pharmacy admin panel		
Constraints	Time	6 months	
	Budget	8 developers + 1 Marketeer 450,000 SAR	
	Scope	Client and Pharmacy	

	Other	Building the pharmacy app with specific colors and layouts.
Acceptance Criteria	If this project is accepted by getting the required score points and agreed on by users, pharmacies, and other stakeholders then this project is considered to be accepted.	
Assumptions	Admins will be the ones who have the right to access the database and modify data there such as medicines quantities.	

7.1.2 Develop, identify and explain Scope creeping.

As requirements are increasing for the project, then we might end up with some undesired requirements. This can include adding new features or work that is not authorized and indicated in the scope we have. Problems with stakeholders or having miscommunication can lead to such results.

For this project scope creeping can include some of the following requirements that could be added and not even specified in the scope or requirements documents for this project.

- ❖ Adding consultation chat with the pharmacies.
- ❖ Adding doctors visit option in the app.
- ❖ Adding unnecessary details that is not required.

The above list includes some of the features that are not required and considered as scope creeping in which we make additional features that are not indicated in our scope.

7.1.3 Illustrate product analysis management.

This project product analysis defines scope by answering questions in order to describe what product are going to build.

1-What problem are we solving?

Ans: Problem that this project is trying to solve is the current medicines supplying mechanism. This project is aiming to enhance the medicines supplying process by ensuring the implementation of communication between clients and pharmacies.

a- How can we solve it?

Ans: By implementing a project pharmacy mobile app that contains functions that help users reach and obtain medicines.

- **Feature?** Ordering a medicine
 - i. **Can we, do it?** Yes
- **Feature?** Searching for a pharmacy
 - i. **Can we, do it?** Yes
- **Feature?** Viewing available medicines
 - i. **Can we, do it?** Yes
- **Is it expensive or cheap?** The app is somewhat considered to be expensive but however in case the app successes as planned then our profit margin will increase.
 - i. **Can we, afford it?** Yes
- **Who would use it?** Users seeking to order medicines would like to use the app and pharmacies who want to sell and promote their medicines.
 - i. **Why would they?** Because the app will provide a lot of medicines and pharmacies. Also, the app will enhance the ordering procedure to make it more convenient.

7.2 Time

7.2.1 Develop the functions list or the activities included in each work package in WBS.

Level 1	Level 2	Level 3
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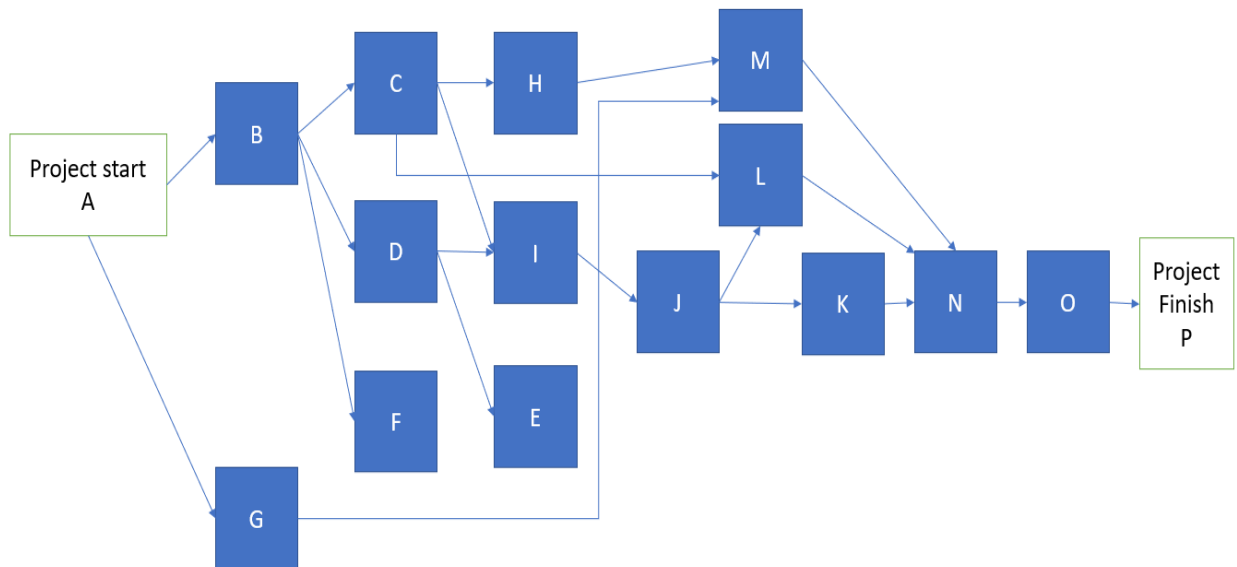
1 Pharmacy App Project WBS	1 Initiation	1.1 Develop Business Case ❖ Contributing to business strategies ❖ Making main timescales ❖ Making expected return on investments 1.2 Develop Project Charter ❖ Making project description ❖ Listing project benefits and stakeholders
	2 Planning	2.1 Develop project scope ❖ Develop project scope statement 2.2 Develop project time management ❖ Develop project Gantt chart 2.3 Develop project cost management ❖ Establish project balance 2.4 Develop project quality management ❖ Develop project quality 2.5 Develop project HR management ❖ Manage project HR 2.6 Develop project risk management ❖ Identifying and controlling project risks
	3 Execution	3.1 Design the system ❖ Specifying the design of the project ❖ Selecting the project architecture 3.2 Development of pharmacy app ❖ Develop the project app ❖ Develop the project admin panel 3.3 Testing phase ❖ Testing the project app to check that the features meet the requirements
	4 Control	4.1 Project scope management plan ❖ Plan the scope for any change 4.2 Project control ❖ Controlling the project changes
	5 Closeout	5.1 Project end ❖ Ending the project 5.2 Post project review ❖ Documenting and reviewing the project 5.3 Lessons learned ❖ Documenting lesson learned

7.2.2 Illustrate the relationships between the activities.

ID	Activity Identifier	Duration in days	Predecessor
1. Pharmacy app project	-	-	-

1 Initiation	-	26	-
1.1 Develop Business Case	A	13	-
1.2 Develop Project Charter	B	14	A
2 Planning	-	48	-
2.1 Develop project scope plan	C	10	B
2.2 Develop project schedule	D	10	B
2.3 Develop project cost estimations	E	10	D
2.4 Develop project quality plan	F	5	B
2.5 Develop project HR plan	G	3	A
2.6 Develop project risk assessment and plan	H	10	C
3 Execution	-	44	-
3.1 Design the system	I	12	C, D
3.2 Develop the pharmacy app	J	21	I
3.3 Testing phase	K	11	J
4 Monitor and Control	-	11	-
4.1 Develop Project Scope Management Plan	L	5	C, J
4.2 Project Control	M	6	G, H
5. Closeout	-	4	-
5.1 The End of The Project	N	2	K, M, L
5.2 Post Project Review	O	2	N
5.3 Lessons Learned	P	2	O

7.2.3 Develop the logical diagram of the project activities and identify the critical path.



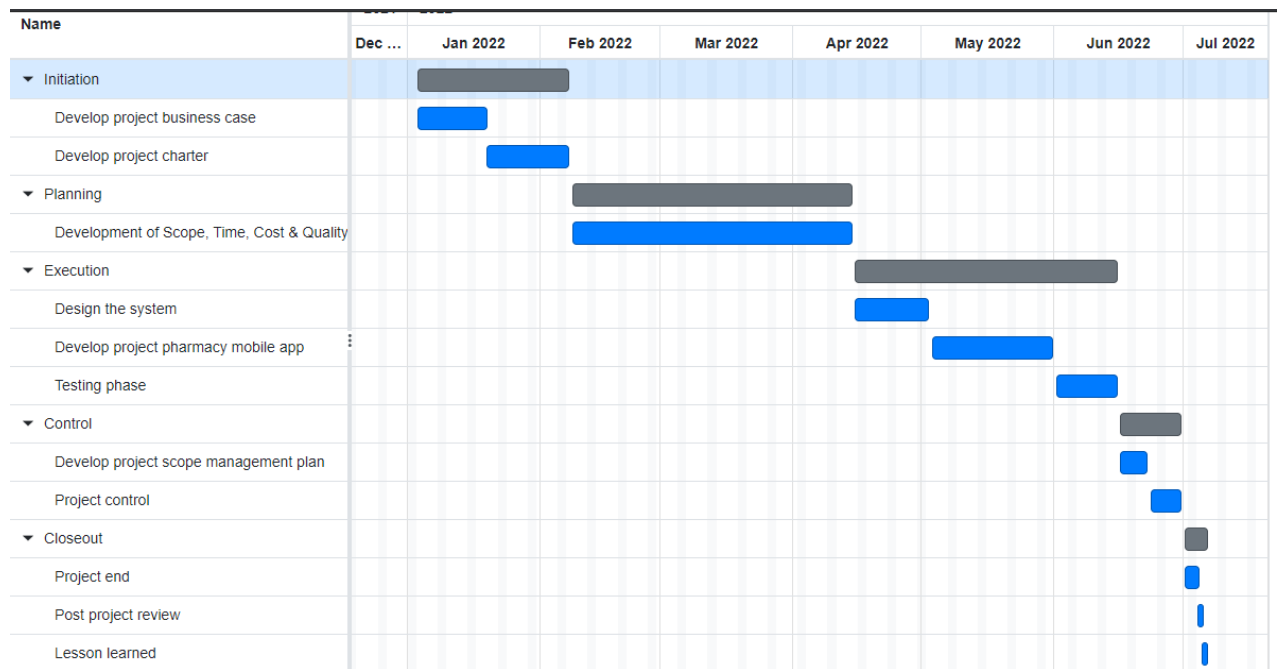
The critical path for this project according to the diagram and durations of activities is:

1-2-3-4-7-8-9-11-12-13-14 and critical activities: A,B,C,d,I,J,K,N,O,P with total time of 87 and from the above diagram we can go through the critical path we have.

7.2.4 Prepare Gantt chart and Milestones model.

The following figure and table include the project Gantt chart along with the milestones model for the project.

Gantt Chart



Project Milestones

ID	Name	Start Date	End Date	Duration
1	Initiation	Jan 03, 2022	Feb 07, 2022	26 days
1.1	Develop project business case	Jan 03, 2022	Jan 19, 2022	13 days
1.2	Develop project charter	Jan 19, 2022	Feb 07, 2022	14 days
2	Planning	Feb 08, 2022	Apr 14, 2022	48 days
2.(1-6)	Development of Scope, Time, Cost & Quality management	Feb 08, 2022	Apr 14, 2022	48 days
3	Execution	Apr 15, 2022	Jun 15, 2022	44 days
3.1	Design the system	Apr 15, 2022	May 02, 2022	12 days
3.2	Develop project pharmacy mobile app	May 03, 2022	May 31, 2022	21 days
3.3	Testing phase	Jun 01, 2022	Jun 15, 2022	11 days
4	Control	Jun 16, 2022	Jun 30, 2022	11 days
4.1	Develop project scope management plan	Jun 16, 2022	Jun 22, 2022	5 days
4.2	Project control	Jun 23, 2022	Jun 30, 2022	6 days
5	Closeout	Jul 01, 2022	Jul 06, 2022	4 days
5.1	Project end	Jul 01, 2022	Jul 04, 2022	2 days
5.2	Post project review	Jul 04, 2022	Jul 05, 2022	2 days
5.3	Lesson learned	Jul 05, 2022	Jul 06, 2022	2 days

7.3 Quality

7.3.1 Clarify Deming model for quality.

Deming Cycle Model	Quality Planning	Quality Control	Quality Assurance	Quality Improvement
	Plan	Do	Check	Act
What Is Done	Using the matrices and expert judgment to determine the quality baseline.	Monitor specific project results and determine whether they meet the performance requirements or not based on the matrices.	Determine if quality measurement is acceptable by assessing overall performance and using the quality checklist to ensure that the consumer is satisfied.	Improve the project's effectiveness and efficiency. Do change requests for the quality management plan and adhere to the PMP format.

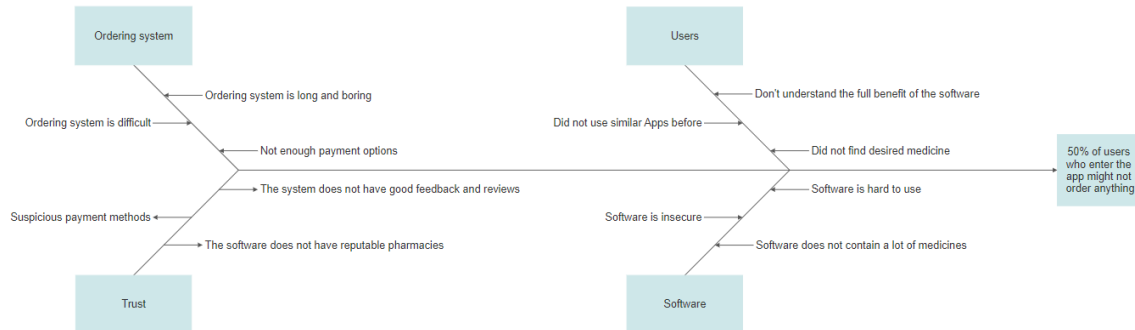
When It Is Done	In Project Planning Phase	In Project Execution & Control Phase	In Project Execution & Control Phase	
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7.3.2 Develop the SIPOC model and Ishikawa for one of the issues of the project outputs.

To document the business process from beginning to end prior to implementation a SIPOC model will be used as it visualizes (suppliers, inputs, process, outputs, customers).

To visualize causes of a certain problem in order to discover the root causes then root and effect diagram or Ishikawa diagram will be used.

S	I	P	O	C
Suppliers	Inputs	Process	Outputs	Customers
Project manager Marketing team Project stakeholders IT team Creative design team	Pharmacy app design Features Creative assets Documents	Input submitted to IT Campaign app developed Design review Final development build App launch	Pharmacy app App metrics Other project assets and documents	End users who are interested in the app and need to order medicines Pharmacies Leadership team



8.1 Finance

8.1.1 Establish Cost Breakdown Structure, and the project balance by WBS.

For the project cost balance, we have the total costs of the WBS elements we have and summing them up will give us a total of 132,050 SAR which is considered to be the cost of this project, and this is within the limit of our budget.

Marketing and other equipment could also arise to be with the cost we have but however we are trying to be within the budget and our cost estimations.

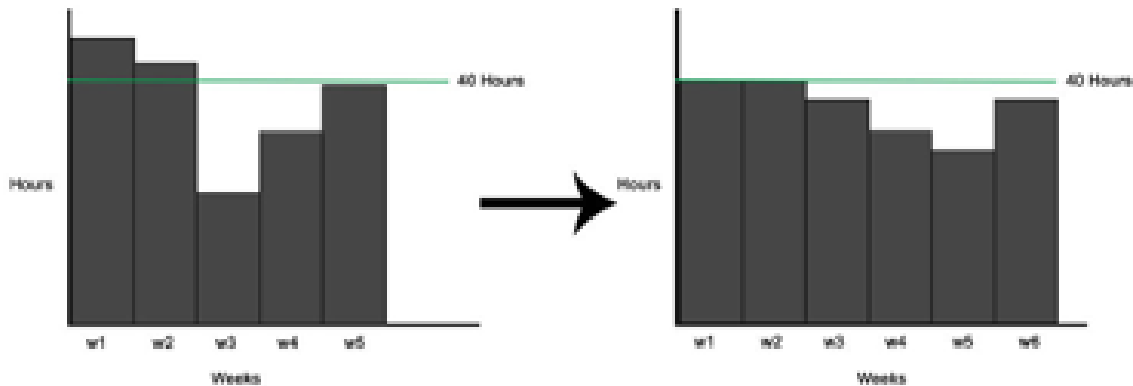
The following model is the CBS for the project in which each phase is represented along with its time in hours and with the phase and work total costs.

WBS #	Phase	Required Hours	Cost Per Hour (SAR)	Total Cost (SAR)
1	Imitation	30	100	3000 SAR
2	Planning	400	87	34,800
2.1	System Scope and Design	200	87	17,400 SAR
1.1.1	Medium level plan	100	87	8700 SAR
1.1.2	Detailed Plan	100	87	8700 SAR
2.2	Methodology and Processes	200	87	17,400 SAR
1.2.1	Timeline	100	87	8700 SAR
1.2.2	Deliverables and KPIs	100	87	8700 SAR
3	System Execution and Development	450	105	47,250 SAR

3.1	Design	100	105	10500 SAR
3.2	App implementation	300	105	31,500 SAR
3.2.1	Mobile app	150	105	15,750 SAR
3.2.2	Admin panel	50	105	5,250 SAR
3.2.3	Database and servers	100	105	10500 SAR
3.3	Testing	50	105	5,250 SAR
4	Project control	300	110	33,000 SAR
5	Project end	200	70	14,000 SAR

9.1 Explain the concept of Resource Leveling and Smoothing:

9.1.1 Resource Leveling



You use resource leveling when you have limited resources and you may extend the schedule.

Resource leveling is used when:

- A critical resource may not be available for a certain duration;
- A critical resource may not be available at a certain point of time;
- You have to share a resource with another project;
- The demand for a resource exceeds the supply.

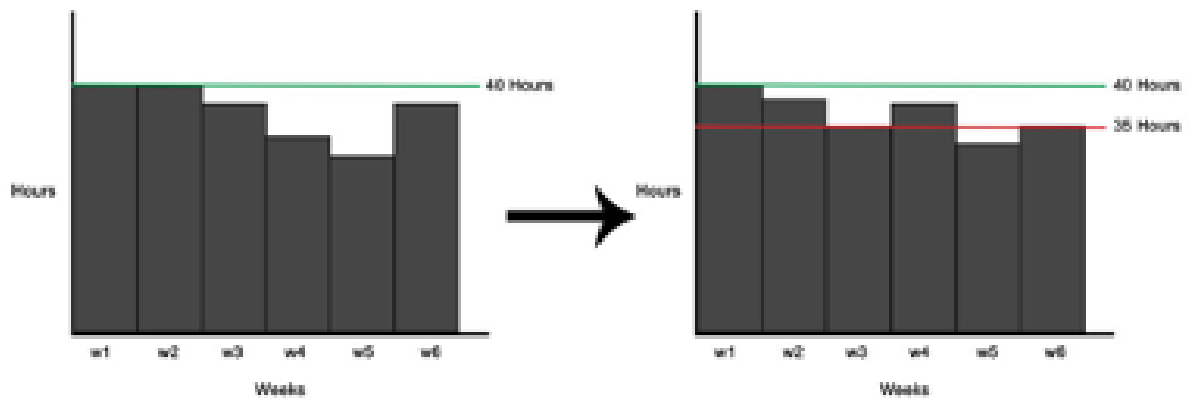
You also use this technique when you must keep some resource usage at a constant level.

In resource leveling, you are asked to optimize the limited resources given to you. Here the schedule is not fixed.

Resource leveling answers the question of when you will be able to complete the project with the given resources.

Resource leveling is sometimes called resource constrained scheduling (RCS). If resources are not available, the project duration may change.

9.1.2 Resource Smoothing



You use resource smoothing when you must optimize the resources and you cannot extend the schedule.

Since you cannot extend the schedule, the project completion date and the critical path will stay the same. Here the activities cannot be delayed more than their total and free float.

Using float in this technique will cause you to lose some flexibility from your path; however, the schedule will be optimized, efficient, and cost-effective.

In resource smoothing, you must be careful to avoid any delay in activity as it may affect your critical path.

Time is the main constraint here. You have a fixed schedule and are asked to optimize resources.

Resource smoothing is also known as time constrained scheduling (TCS). The project end date cannot be changed, and you must optimize resources within the float.

Resource leveling vs. resource smoothing



Resource leveling

Primary constraint is resource availability

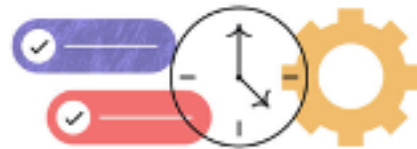
Project start and end dates can be adjusted

Critical path can change

Tasks can be delayed beyond the float period

Used when there's an over-allocation of resources

Used at the beginning of the resource optimization process



Resource smoothing

Primary constraint is time

Project end date is set and doesn't change

Critical path generally doesn't change

Tasks can only be delayed within the float period

Used when there's an uneven allocation of resources

Used after resource leveling is completed

9.2 Develop the Procurement execution process and contractor selection

9.2.1 Procurement execution process:

Step 1 – Identify Goods or Services Needed

Your procurement process should start when you realize that you need to obtain goods or services from an outsourced company. Your first step should be looking at the whole business and recognizing the needs of each department.

By doing this, you're presented with a great level of visibility of all the spending that's required in your company. Therefore, you can outline the areas of the business that you

Step 2 – Consider a List of Suppliers

Finding the right supplier for your business is vital, so it's not a decision that you should take lightly. If you choose to work with the wrong supplier, it could have a knock-on effect throughout your whole business.

Not only could you end up paying more than you should for your goods or services but the delivery times may not be suited to your business – which could delay your business operations.

Your suppliers are your partners and you wouldn't enter a partnership without doing your research, would you?

So, when you're looking at your suppliers you should weigh up your options. We recommend that you make a list and compare all the different options on offer. That way, you can compare the competition against each other and can see the different areas in which they excel.

Step 3 – Negotiate Contract Terms with Selected Supplier

After you've made your decision on which supplier to work with, you need to negotiate your contract terms with them. This stage is important as you want to agree on a price that's fair for both parties and that you're both happy to work with.

Contracts don't only cover pricing either. The scope of the whole project – terms, conditions and timelines of delivery are all areas that should be considered. You should always keep a copy of your contract so that you can refer to it should anything

Step 4 – Finalise the Purchase Order

Once you've submitted your contract to your supplier and both parties are happy with the detailing, it's time to finalise your purchase order. Your purchase order is a document that outlines:

- A description of the goods or service
- Total costs
- Quantity
- Approval of workflow

Step 5 – Receive Invoice and Process Payment

Once your supplier has received your purchase order, you'll receive an invoice from them detailing the agreed price and instructions on how to pay. On this invoice you'll find details of your order too, so make sure that you keep a record of them for any future reference necessary.

Depending on what you've agreed in your contract you'll have a certain amount of days to make the payment. A lot of businesses offer 30 days credit notice, which gives you leeway to make the payment if you can't do it at the time of the order. However, it'll depend on what you've agreed between you and your supplier and the strength of the relationship between both parties.

Step 6 – Delivery and Audit of the Order

Again, depending on what terms you've agreed in your contract your delivery will arrive soon after your purchase order has been sent in. You should always keep a record of when the order is delivered in relation to when you ordered it. That way, you can keep track of whether your supplier is sticking to their agreed delivery times.

If they're not, then you have a proven record of them not holding up to their side of the bargain. And if it shows that they are, then happy days!

You should always double-check the order upon arrival too. The last thing you want is for you to come to carry out a job and the product that you thought was there turns out it hasn't been delivered. could lead to you letting your customer base down for something that wasn't your mistake.

So, when your order arrives, take your invoice and inspect the delivery. If you notice that something is missing, then contact your supplier as quickly as possible to rectify the problem and reduce potential downtime.

Step 7 – Maintain Accurate Record of Invoices

Be sure to keep a record of all your invoices and payment records. In case of any audits carried out, you then know exactly how much you've spent throughout the allotted time and can categorise them to analyse your spending even further. Keeping all your invoices is key to working out whether you're overspending or sticking to your budget.

Contractor selection process:

Establishing a quality-based contractor-selection process is a necessary first step in forming a strong partnership between you and your security officer services provider. In a competitive environment, it is important to determine accurate comparisons between providers and thoroughly understand what you are receiving in return for your investment.

These nine steps will help to establish performance standards specific to your company's interests, then match those to a provider that will excel in delivering them:

1. **Define the internal process and select your team.** Which departments and individuals will participate? Who will make the final decision? What is the timeline?
2. **Evaluate your current environment and establish priorities.** What are the positives and negatives of your current security program? What are your goals and objectives?

3. **Define desired improvements.** Identify desired improvements or attributes to enhance the existing service.
4. **Define program needs and expectations.** Combine your priorities and desired improvements into a list of key objectives. Do a budget reality check; are your objectives affordable? Specify a wage rate or use a sample wage, often referred to as a wage marker, to clearly compare costs.
5. **Select potential contractors.** Research companies and utilize a pre-bid questionnaire to help you decide which contractors to invite to bid.
6. **Issue your request for proposal.** Provide an introduction that describes your organization and contractor selection process. Include topics such as hours of coverage, duties, equipment, uniforms, insurance, general terms, vendor history, management, employee selection, training, wages/benefits, and bill rates.
7. **Narrow the field.** Review the proposal responses to your RFP closely to ensure prospective partners have submitted complete answers that match your objectives and requirements.
8. **Presentations and meetings.** Meet with two or three contractors and discuss your potential partnership and set clear expectations for an on-going relationship post-award.
9. **Finalize selection of partner, price and transition elements.** Select your preferred contractor and ensure agreement on all terms of the contract.

Following these steps will put you on your way to a quality-based security officer services partnership that will provide measurable results, add value and exceed your expectations.

9.3.2 Performance Measurement

Performance measurement	
Goal	Measures
Survive	Cash Flow
Succeed	Quarterly Sales Growth
Prosper	Increased Market Share
New Products	Percent of Sales from New Products
Responsive Supply	On-Time Delivery
Manufacturing Excellence	Cycle Time Unit Cost
New Product Introduction	Actual Introduction Schedule Vs. Plan
Product Focus	Percent of Products that Equal 75% Sales
Time to Market	New Product Introduction Vs. Competition

10.1 Qualitative Risk Analysis

The stage of risk management is one of the most important stages in the project, where the project team completes the risk management plan

Before the completion of the project initiation document. It continues to update the plan with continuous monitoring and control of risks throughout the life of the project

Figure (1) shows how to follow risk management strategies. There are many ways in which these strategies can be analyzed. Risks, managing them, and then knowing how to deal with them

In order to manage the risks well, it must go through a set of stages, namely:

- o Identification of risks: identifying which risks are most likely to affect the project and documenting the characteristics of these risks.
- o Risk measurement: assessing risks and their interaction with the project and its outputs.
- o Developing responses: identifying reinforcement steps to prepare the response to respond to these risks.
- o Controlling risk response: responding to changes in risk over the life of the project.

Strategies are followed in managing risks, which are:

Elimination of risks in the project.

Minimizing risks.

Transferring these risks by making appropriate insurance.

Sharing of risks through subcontractors.

Accepting these risks if they are simple or the probability of their occurrence is very low.

Neglecting the danger if the effect of it is negligible

a- Project risk analysis and management

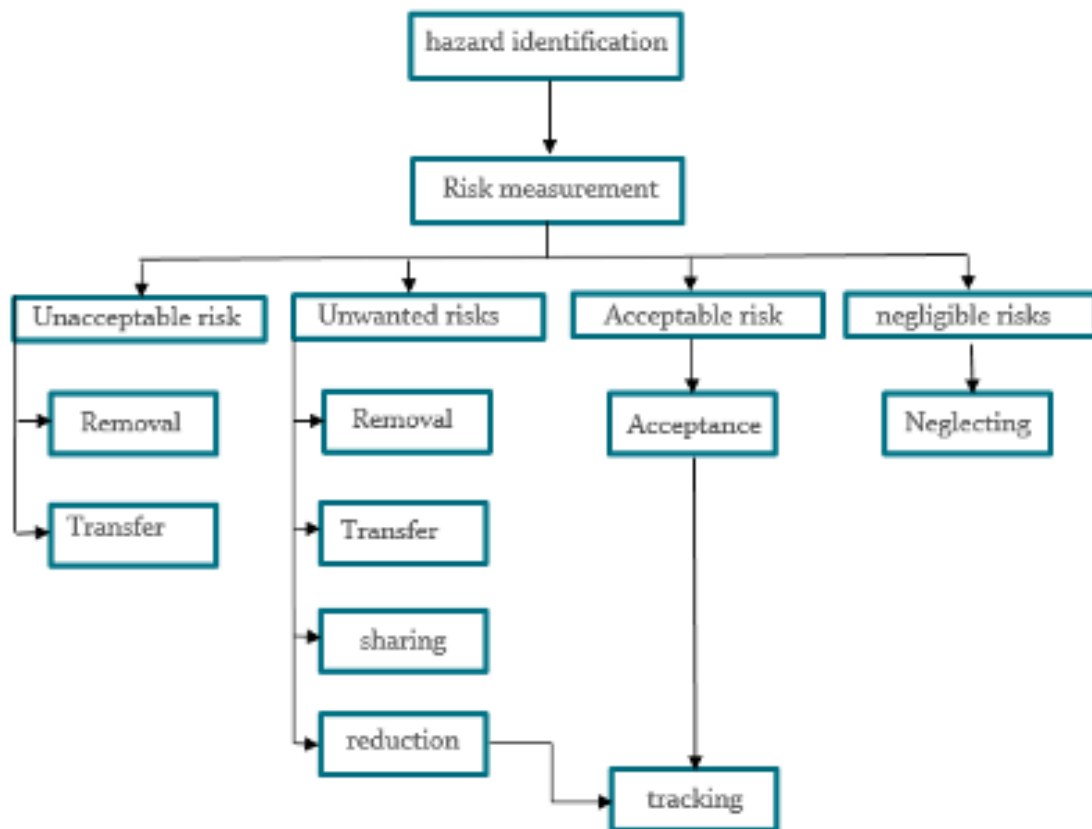
Project risk analysis and management is the process that enables knowledge of risks and analysis of those risks using the method

and then develop the appropriate solution that eliminates that danger or reduces its effects.

In other words, it is the process that increases the success and completion of the project from the perspective of cost, time and specifications, with as few problems as possible Many scientists have invented and developed methods for analyzing and managing risks, including:

According to (Carter et al., 1994), he developed risk management and started it by identifying and documenting the risk, and then classifying, analyzing and reporting this risk. Risk and search for the best strategy to mitigate and improve the risk and finally monitor and control the risk.

And according to (Chapman in 1997), he defined a more accurate method for risk management by defining the risk, focusing on it, and defining the type of risk And then creating an organizational structure to face the risk and then distributing the responsibilities of this structure to assess the risk and assess its size, and then develop a plan to manage the risk.



a- Inventory of the risks associated with the study case

- 1- The project's time schedule is inaccurate in terms of detailing the implementation items and the absence of specific dates for receiving Working drawings and approval of raw material samples.
- 2- Risks related to coordination between project planning and actual implementation, as the planned performance rates for the program the time schedule does not match the number of workers on the site.

- 3- Implementation risks that will lead to delays Implementation until it is fixed again, and then the project is delayed from the planned time schedule.

Therefore, it was necessary to assess those risks to which the project is exposed and to know the implications of them and the extent of their impact on the project time and cost.

b- Assessment (measurement) of risks

The process of evaluating the value of the risk is called Assessment, and it depends on two main components in the assessment process:

The potential for risks. Table (1) shows the measure of the probability of the occurrence of the risk. The resulting effects on its occurrence (the effects may be Negative and may be positive). (Table) (2) measures the effects of the occurrence of the danger, while Table (3) shows a probability measurement the occurrence of the danger

This is done through numerical and descriptive measures that help assess the potential for risks, and assess the impact resulting from these risks.

10.1.1 Measuring the probability of the occurrence of the hazard

illustration	points	probability
It is very rare, but it needs follow-up because it can increase Likelihood of it happening in some circumstances	(1)	A little bit
It is rare according to current information, because the conditions causing the risk unexpected to happen	(2)	Little
It is likely to happen because the evidence indicates that the danger will appear	(3)	Average
Expected to happen according to project circumstances	(4)	high
It is certain to happen, because the conditions causing the risk are very expected to occur	(5)	very high

10.1.2 Measuring the effects of the occurrence of the hazard

illustration	points	probability
An insignificant risk because it does not affect the project	(1)	A little bit
Risks that affect a small percentage of the project, for example: a change in direction Project framework - schedule - project cost >5%	(2)	Little
Risks that affect the project moderately, for example: a change in direction Project framework - schedule - project cost ratio 5-10%	(3)	Average
Risks that significantly affect the project, for example: a change in direction Project framework - schedule - project cost 10-25%	(4)	high
Risks that affect a very large percentage of the project, for example: a change in The direction of the project framework - schedule - project cost percentage 25%<	(5)	very high

10.1.3 Measuring the probability of the occurrence of the hazard

rates	probability factor
Risks that occur six or more times in a year	totally predictable
Risks that occur once or twice in a year	Expected
Risks that have occurred before and may occur	Possible
Unlikely risks, but they do happen	Unexpected
Risks that did not occur but could be challenged	totally Unexpected

10.1.4 Matrix for descriptive and quantitative analysis of risks

Coefficient Probability	totally predictable (5)	5	10	15	20	25
	Expected (4)	4	8	12	16	20
	Possible (3)	3	6	9	12	15
	Unexpected (2)	2	4	6	8	10
	totally Unexpected (1)	1	2	3	4	5
		slight (1)	secondary (2)	Important (3)	break (4)	Main (5)
		Impact factor				

The process must be stopped, and alternatives must be sought to carry out the task	15-25 not allowed
The risk must be reduced as much as possible, and the greater the risk, the greater the risk The specific effort to reduce that risk	6-12 Allowed with conditions
Danger can be left unattended, but watching it helps more to avoid future risks	1-5 allowed

The risk matrix is a matrix that provides information on risks in a way that is easy to deal with, as each risk appears in a box of The matrix, and the color of the box is an indicator of the value of the risk. Risk management has many benefits that may benefit the project if applied properly.

c- The application of the risk profile to the quantitative and descriptive analysis of the study case led to the project of creating a pharmacy application Positive repercussion:

1. A good understanding of the project, which leads to the formation of realistic and logical plans in estimating the cost of the project and determining the duration of the project.
2. A good understanding of the risks in the project allows all parties involved in the project to know how to face the risks.
3. A good understanding of the risks in the project helps to choose the most appropriate design, implementation and supervision contract clauses.
4. Knowing the risks allows for a logical and thoughtful estimation, away from randomness, of the emergency reserve that reflects the risks.
5. Not accepting financially ineffective items.
6. Contribute to building statistical information on risks that helps in the good design of future projects.

By using the quantitative-descriptive analysis tables and the risk matrix, we can determine the size and quality of the risks associated with the study case, whether During the construction implementation phase or during the building operation phase, which negatively affects the time and cost of the project. Table (5) They explain, respectively, the quantitative-descriptive analysis of the operational risks of the Bahteem Day Surgery Hospital The risks associated with the operational process have been listed after being counted from the practical experience of working on the site and estimating the numerical value according to the tables no. 1 and 2 for the implementation phase and tables No. 3 and **4. for the operating phase.**

10.1.5 Quantitative-descriptive analysis of operational risks

	Type of Risk	Probability Factor	Impact Evaluation	Sum	The degree of Risk
1	Raw materials price hike	3	3	9	Allowed with conditions
2	Workers strike	2	1	2	allowed
3	Double the means of transportation	3	2	6	Allowed with conditions
4	Deviation from the standard	2	2	4	allowed
5	Unsustainability of origin	2	2	4	allowed
6	Delayed delivery	4	4	16	not allowed
7	Natural disasters	4	2	1	allowed
8	Fire	2	2	7	Allowed with conditions
9	Hacker attacks	2	4	15	not allowed
10	Data loss	2	2	16	not allowed
11	adulterated products	4	2	16	not allowed
12	power outage	3	2	8	Allowed with conditions

Thus, the result of the use of quantitative and descriptive analysis of risks emerges in reducing the cost and time of the project and the risks to which it is exposed. It is compatible with the nature of the project and its requirements as a project directed to low-income people as a health project.

10.1.6 Risk response strategy

Each of these strategies has its own pros and cons, and you will most likely end up using both of them. Sometimes it is necessary to avoid danger, and other times you will want to mitigate the risk, move it, or simply accept it. Let's take a look at what each of the above means, and how to decide the correct classification for each of your business risks.

a-Risk Avoidance

Sometimes, the risk will be so serious that you simply want to get rid of it completely, for example by avoiding the activity entirely, or by using a completely different approach. If a certain type of trade is too risky, you may decide that what you are going to gain from it is not worth the risk, and then give it up.

The advantage of this strategy is that it is the most effective strategy when dealing with a risk. By discontinuing the activity that may cause potential problems, you eliminate the possibility of incurring any losses. But the bad thing about it is that you will also lose any of the benefits that can be gained. Risky activities can be very profitable, or they may have other benefits for your company. So, it is best to use this strategy as a last resort, when you have tried all the other strategies and found that the risk level is still very high.

b- Risk Mitigation

If you don't want to give up the activity entirely, reducing the risk associated with it is a common approach. Take steps to make a negative outcome less likely to occur, or to reduce its impact when it does.

For example, "The main customer of the organization (ABC) pays his bills late", we can reduce the possibility of this happening by providing incentives to get the customer to pay his bill on time. Perhaps a 10% discount for early payment, and a penalty for late payment. Dealing with late paying customers can be tricky, and we covered this more in our lesson on managing cash flow more effectively, and those were just a couple of options.

In the same example, we can reduce the impact of the risk by providing access to a short-term credit facility. This way, even if the customer pays late, we won't run out of money. For more information on short-term loan options like Factoring and Lines of Credit, see our lesson on borrowing money to finance a business.

This strategy is by far the most popular and is suitable for a wide range of different risks. They allow you to continue with the activity but take precautions to make it less dangerous. If done well, you get the best of both worlds. But the danger in them is that your means of controlling the danger are ineffective, and you end up suffering the loss you were afraid of.

c- Risk Transfer

We all know the concept of insurance from our daily lives, and the same goes for work. An insurance contract is simply the process of transferring risk from one party to the other, with payment for it.

When you own a home, for example, there is a high risk of losing it in a fire, theft, or any other type of damage. That is why it is possible to purchase a home insurance policy and transfer this risk to the insurance company. If things go wrong, the insurance company will pay the losses, and in exchange for the peace of mind you gain you pay a premium.

When you own a business, you have the option of transferring many of the risks to the insurance company as well. You can ensure your real estate and vehicles, and you can also take out many types of liability insurance to protect yourself from lawsuits. We'll look at insurance more in detail in our next lesson in this series, but it's a good option for dealing with risks that have a potentially big impact, as long as you can find a policy at a reasonable price.

d- Risk Acceptance

As you've seen, risk management comes at a price. Avoiding risk means restricting your company's activities and forfeiting potential benefits. Reducing risk may involve costly new systems or difficult-to-handle procedures and safeguards. Let's say the risk also has a cost, for example the insurance premium.

So in the case of minor dangers, the best option may be to simply accept them. There is no sense in investing and buying a complete package of expensive software just to mitigate a risk that does

not have such a huge negative impact if it occurs. For risks marked as low in impact and probability, look for a simple, low-cost solution, and if you don't find one, it may be worth simply accepting the risk and continuing with business as usual.

The benefit of accepting risk is very clear: there are no costs, nor does it reserve any resources to focus on the most important risks. The downside to it is also very clear: there are no means to control danger. If the effect and the probability of occurrence are very small, this may be good. But make sure you evaluate things correctly, so you don't get an unpleasant surprise later.

10.1.7 Stakeholder engagement assessment matrix

Every project has its stakeholders. However, the number and participation of stakeholders varies widely among different types of enterprises and industries. a small software development project, for example, might have only a few stakeholders. On the other hand, a big project, for example infrastructure building, could involve a large number of individual stakeholders and stakeholder groups. Regardless of the size of the project, managing the project's relationship with stakeholders is critical to ensuring the success of the project. This is particularly true of influential and interested stakeholders.

we are looking at the stakeholders of pharmacy app project.

The list of stakeholders Exist of:

- financial officer (sponsor),
- executive officer,
- information officer,
- accounting officer,
- regulatory reporting officer,
- Users of the new systems,
- IT Specialist,
- Internal Audit,
- External Auditors

10.1.8 Stakeholders engagement

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
financial officer					CD
executive officer			C	D	
information officer				CD	
accounting officer				CD	
regulatory reporting officer			C	D	
Users of the new systems		C		D	
IT Specialist			C	D	
Internal Audit			CD		
External Auditors	C		D		

Constraints and challenges of managing stakeholder engagement

In the context of managing stakeholder engagement, many obstacles and challenges can occur in practice. One of the most relevant issues (in my view) is that project documents can be easily accessed by team members and stakeholders (source: study guide by K. Heldman). In other words, if you document the classification of stakeholders and participation according to PMBOK®, you should keep in mind that this can become known to stakeholders and other people inside and outside the organization.

In some projects, this may lead to a trade-off between active management of stakeholder engagement, its proper documentation, and its potential political implications. For the stakeholder participation assessment matrix, a simple example is replacing the categories "unaware, resistant, neutral, supportive, and leader" with a neutral numerical scale.

Another obstacle in the field of stakeholder management is the limitations on the knowledge, skills and time of the project manager when it comes to proper analysis of all (relevant) stakeholders in the project (source). However, comprehensive stakeholder analysis is the basis for a sound stakeholder engagement plan. If the analysis is not done correctly, it will also affect the value of the project stakeholder participation Matrix. Stakeholder management tends to be difficult and often requires a lot of time, dedication, skill and patience from the project manager. Despite its obstacles, it is worth the investment, as proven by several studies (such as this study on the early participation of stakeholders in complex infrastructure projects).