

منصة وصل الصحية **WASL**



رقم المجموعة

اعداد

الرقم الجامعي	الاسم	
2021201942	عامر عبيد الدلبي	1
2021202147	أمل حامد البلوي	2
2021202096	ناصر عبدالمحسن بن جمعان	3
2021203468	خالد جبران حسن	4
2021200436	يوسف حمد السيف	5
2021200183	نادية حمد العبدالجبار	6
2021200976	ملوك متعب الحارثي	7
2021203351	وليد حميد العقيلي	8
2021203312	مدالله بن طالب مرزوق البعيجي	9

بإشراف/ د. وليد صديق
الفصل الدراسي الثالث
1442هـ - 2021 م

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Table of Contents

Contents	Page
STRATEGY	9
GOVERNANCE, STRUCTURE AND PROCESS	12
COMPLINCE, STANDRDS AND REGULATIONS	15
POWER AND INTERST	17
CULTURE AND VALUES	18
SELF-REFLECTION AND SELF- MANAGEMENT	20
PERSONAL INTEGRITY AND RELIABILITY	24
PERSONAL COMMUNICATION	25
STAKEHOLDER ASSESSMENT	38
LEADERSHIP	39
TEAMWORK	41
CONFLICT AND CRISIS	44
RESOURCEFULNESS	47
NEGOTIATIONS	49
PROJECT DESIGN	51
REQUIREMENTS AND OBJECTIVES	55
SCOPE	57
TIME	59
QUALITY	62
FINANCE	64
RESOURCES	66
PROCUREMENT	67
PLAN AND CONTROL	70
RISK AND OPPORTUNITIES	73
STAKEHOLDER	77
REFERENCE	78

Tables

Table Number	Table Name	Page
Table 1	Project Charter	9
Table 2	Check list	14
Table 3	Stakeholder register	15
Table 4	SWOT analysis	21
Table 5	Stakeholder assessment matrix	37
Table 6	Table RACI matrix	43
Table 7	Crashing and Fast-tracking	49
Table 8	Requirement traceability matrix	55
Table 9	Project Scope Statement	57
Table 10	Relationships between the activities	59
Table 11	Project Gantt chart	61
Table 12	Change Request Form	72
Table 13	List of Risks	74
Table 14	Risk Matrix	75
Table 15	Risks Probability and Impact	75
Table 16	. Risk Register	76
Table 17	Stakeholder Engagement Assessment Matrix	77

Drawings

Drawings Number	Drawings Name	Page
Chart 1	organization structure	10
Chart 2	Projects office model	11
Chart 3	WASL PMO	12
Chart 4	WASL Compliance Model	13
Chart 5	Project stakeholders	25
Chart 6	Characteristics of Effective Communication	30
Chart 7	Linear Model	31
Chart 8	Interactional Models	32
Chart 9	Transaction Models	33
Chart 10	Rules of negotiation	50
Chart.11	Triple constraints	51
Chart.12	Project process	54
Chart.13	WASL Portal Work Breakdown Structure	54
Chart.14	Deming model for quality	62
Chart.15	SIPOC model	63
Chart.16	Ishikawa diagram	63
Chart.17	Cost Breakdown Structure	64
Chart.18	Earned value	65
Chart.19	Procurement procedures	67
Chart.20	virtual meeting's Agenda	70
Chart.21	dashboard	71

ABSTRACT

This research will cover project to create medical portal web named (WASL), and this portal will be collecting the hospitals in Saudi Arabia either governmental or privet under one portal, that will help them to share any medical information or patients' history faster and accurate. During the emergencies event the hospitals should be work together gather to take right decisions on the right time to rescue live of people.

TABLE OF CONTENTS

1. CHAPTER 1. STRATEGY	9
1.1. THE MISSION	9
1.2. THE VISION	9
1.3. THE OBJECTIVES.....	9
1.4. THE PERFORMANCE MEASUREMENT INDICATORS	10
1.5. THE PROJECT CHARTER MODEL	10
2. CHAPTER 2. GOVERNANCE, STRUCTURE AND PROCESS.....	12
2.1. PROJECTS OFFICE MODEL	13
3. CHAPTER 3. COMPLIANCE, STANDARDS AND REGULATIONS	15
3.1. COMPLIANCE MODEL.....	15
3.2. CHECK LIST	16
4. CHAPTER 4. POWER AND INTEREST.....	17
5. CHAPTER 5. CULTURE AND VALUES	18
5.1 THE CULTURE OF THE ORGANIZATION	18
5.2 PROPOSALS OF THE ORGANIZATION VALUES.....	18
6. CHAPTER 6. SELF-REFLECTION AND SELF- MANAGEMENT	20
7. CHAPTER 7. PERSONAL INTEGRITY AND RELIABILITY	24
8. CHAPTER 8. PERSONAL COMMUNICATION	25
8.1. PREPARING RECORDS OF PROJECT STAKEHOLDERS AND STAKEHOLDERS.....	25
8.2. PROJECT STAKEHOLDERS.....	26
8.3. THE PERSONAL COMMUNICATION AND THE EFFECTIVE COMMUNICATION PERSONAL COMMUNICATION	30
.....	31
8.4. THE SHAPES, MODELS, AND CHANNELS OF THE PERSONAL COMMUNICATION	32
8.5. COMMUNICATION MATRIX	36
8.6. WRONG SCENARIOS OF COMMUNICATION.....	36
9. CHAPTER 9. STAKEHOLDER ASSESSMENT	38
10. CHAPTER 10. LEADERSHIP	39
10.1. LEADERSHIP MODEL	39
10.2. MODEL IS PREFERRED.....	40
10.3. MOTIVATION METHODS:.....	40
11. CHAPTER 11. TEAMWORK	41
12. CHAPTER 12. CONFLICT AND CRISIS.....	44
13. CHAPTER 13. RESOURCEFULNESS	47
14. CHAPTER 14. NEGOTIATIONS	49
15. CHAPTER 15. PROJECT DESIGN	51
16. CHAPTER 16. REQUIREMENTS AND OBJECTIVES.....	55

17.	CHAPTER 17. SCOPE	57
18.	CHAPTER 18. TIME	59
19.	CHAPTER 19. QUALITY	62
20.	CHAPTER 20 FINANCE.....	64
21.	CHAPTER 21 RESOURCES	66
22.	CHAPTER 22 PROCURMENT.....	67
23.	CHAPTER 23 PLAN AND CONTROL	70
24.	CHAPTER 24 RISK AND OPPORTUNITIES	73
25.	CHAPTER 25 STAKEHOLDERS	77
26.	REFERENCE.....	78

1. CHAPTER 1. STRATEGY

The Strategy is results from the detailed strategic planning process and it's "A general direction set for the company and its various components to achieve a desired state in the future.

1.1.The mission

"Provide updated medical information between hospitals according to the highest quality standards, and to maintain the patient's safety".

1.2.The vision

The vision of WASL portal is: "WASL medical portal to be the first portal to provide the history medical information, and to be a reference and a leader in connection between the government hospitals and private hospitals in Saudi Arabia by 2023".

1.3.The Objectives

SMART goal setting structure system and trackability into the goals and objectives targets, Instead, lieu of vague resolutions, SMART goal setting creates makes verifiable objective trajectories towards a certain specific objective goal, with clear milestones and the estimation approximation of the goal target's attainability. The objectives of WASAL portal:

- To determine the unified medical portal to the patient's file
- To complete the connection between hospitals and the portal
- To share the patient information and medical history between hospitals
- To reduce the decisions time during emergency status.

1.4.The performance measurement indicators

We defined the indicators to tracking progress against the targets. the leading indicators like reduce medical mistakes and the patient's satisfaction

Managing with the use of KPIs includes setting **targets** (the desired level of performance) and managing with KPIs often means working to improve **leading indicators** that will later drive lagging benefits. Leading indicators are precursors of future success; **lagging indicators** show how successful the organization was at achieving results in the past (1).

We will choose the indicators that suits our standard to monitor it and as we know “What gets measured gets done” and “if you measure it, you can improve it “and that will be help us to improve the portal achievements like:

- No of hospitals in the portal
- No of patient's files in the portal
- % Percentage of patient satisfaction

1.5.The project charter model

“The project charter is a stakeholders' agreement, providing the written authorization to proceed with a project.” (1) and the Project Charter documents the formal conversation between the Project Sponsor and the Project Manager/Team, including the definition of success for the project. Once approved, the Project Charter communicates the current agreement between the Project Sponsor and the Project Team throughout the lifecycle of a project. The Charter provides a high-level overview of the project, including the definition of project success and project resource (people

and funds) requirements. The project charter for the WASAL portal showing at form number 1.

Table.1 Project Charter

Project Charter					
Project Title	WASL Medical Portal			Project Manger	Amal Albalwi
Project start date	5.12.2021	Project End Date	24 .02.2022	Project Sponsor	Amer Aldalbahi
Business Need					
All hospitals will be able to use one portal and share patient’s information. This project was initiand to get the patients information at any time without delay and with accurate information.					
Project Scope			Deliverables		
To Create a new portal to share the patient’s history information between hospital ,and they will know any medical or illness. The patients will register on the portal by ID and the hospitals will upload any update on the portal.			• Create data base of the patients • Connect all hospitals WASL portal		
Risks and Issues			Assumptions / Dependencies		
1.Resistance from some of hospitals 2.Pay the fees through insurance company			Any Approvals from MOH		
Financial					
Budget to complete this project is 800,000 SAR					
Milestones Schedule					
Milestones			Target completion date		
Complete Discovery and planning			16 Dec2021		
Complete Design phase			6 Jan 2022		
Content writing and assembly			13 Jan 2022		
Development and programming			3 Feb 2022		
Testing and review			17 Feb 2022		
Portal launch			24 Feb 2022		
Project Team			Approval /Review committee		
Project Manger	Amal Albalwi		Sponsor	Amer Aldalbahi	
IT team lead	Khaled		Business Division Head	Nasser	
Testing Team lead	Yosef		Audit Manager	Malok	
Web Manger	Nadiah		Quality manager	Waleed	
Training Manager	Madallah				

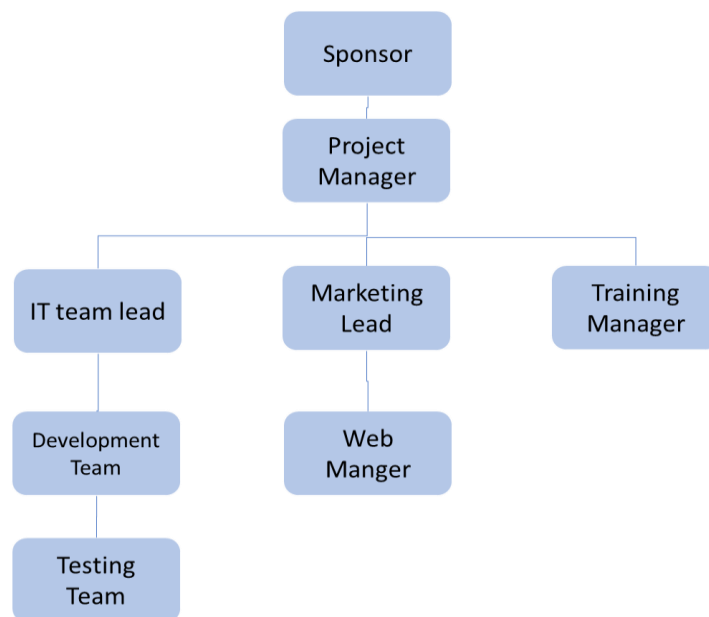
2. CHAPTER 2. GOVERNANCE, STRUCTURE AND PROCESS

Governance structure refers to the framework of project management, especially regarding rules, procedures, roles, and the division of responsibilities within the whole decision-making process. It keeps the project in check, allowing it to run flawlessly and in accordance with the plan.

Organizational structure.

The below diagram describes the organization structure which will be used in the project.

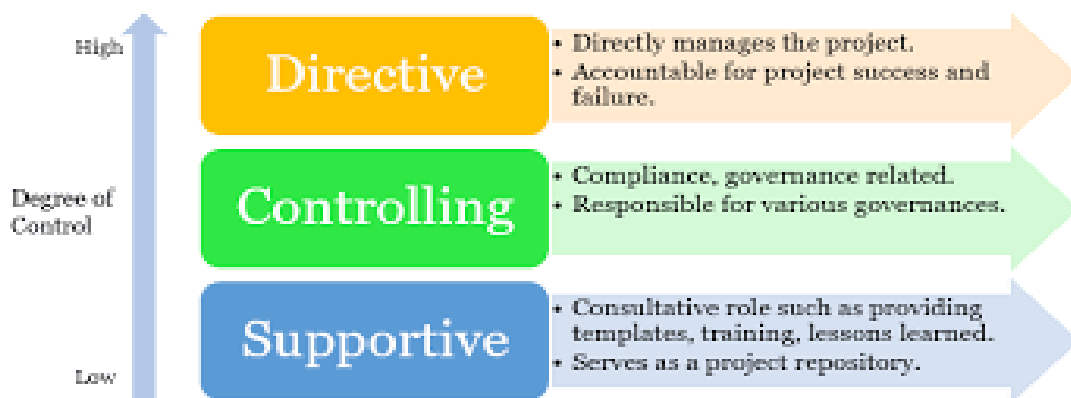
Chart.1 organization structure



2.1. Projects office model

There are three basic types of Project Management Office (PMO) organizations, varying in the degree of control and influence they have on projects within the organization.

Chart.2 Projects office model



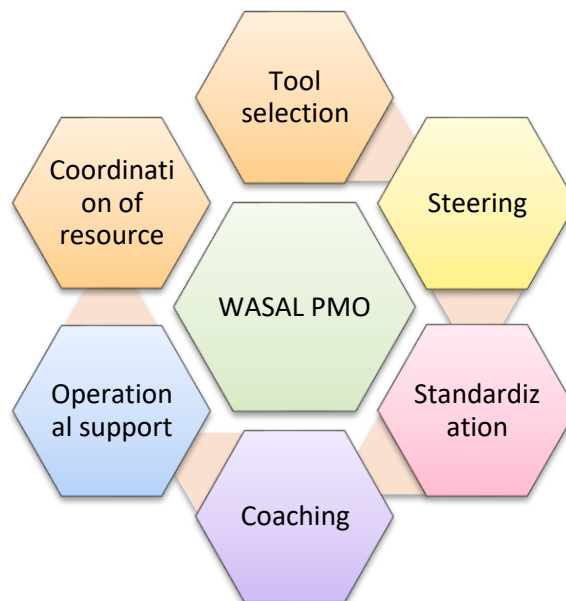
As we know the project office is an organizational body or entity assigned various responsibilities related to the centralized and coordinated management of many projects under its domain and it has various roles in an organization: Providing the policies, methodologies, and templates for managing projects within the organization, in the WASAL portal will use the directive type.

The Responsibilities of a PMO:

- Define standards and rules for project management
- Monitor and approve projects
- Improve the success rate of projects

- Provide training around project management methodologies and standards
- Create relevant documentation and templates.

Chart.3 WASL PMO



3. CHAPTER 3. COMPLINCE, STANDRDS AND REGULATIONS

A compliance framework is a structured set of guidelines to aggregate and harmonize, then integrate, all compliance requirements applicable to an organization.

3.1.Compliance Model

We customize our compliance to ensuring that the requirements of laws, regulations, industry codes, audit requirements, and organizational doctrines are met to bring business value while enforcing accountability.

Chart.4 WASL Compliance Model



3.2. Check List

It is important to use the compliance audit checklist is to determine the compliance with government regulations, industry standards, or internal policies. Compliance checklists help discover gaps in processes that can be improved to meet requirement.

Table 2. Check list

	Project Name	WASL medical portal		
	Date		Time	
			Yes, No	Notes
Initiation				
1				
2				
3				
4				
5				
6				
Planning				
7				
8				
9				
10				
11				
12				
Execution				
13				
14				
15				
16				
17				
18				
Closing				
19				
20				
21				
22				
23				
24				
Comments				
Project Manager signature				

4. CHAPTER 4. POWER AND INTERST

A stakeholder is a party that has an interest in a company and can either affect or be affected by the business and the stakeholder register in the table below describe their Strength/Interest and Influence/ Strength.

Table.3 Stakeholder register

Stakeholder Name	Role	Category	Stakeholder Analysis Group	Strength (H/L)	Influence (H/L)
Ministry of Health	Sponsor	Internal	Key Player	H	H
Hospitals	Users	Internal	Key Player	H	H
Patients	Users	External	Meet their needs	L	L
Insurance Companies	Users	Internal	Keep informed	L	H
WASL Team	Developer	Internal	Key Player	L	H

5. CHAPTER 5. CULTURE AND VALUES

5.1 The culture of the organization

The WASL medical portal culture is rooted in our values. Our integrity and policy of open and honest communication builds trust and collaboration, while our culture extends beyond good business practice. We created WASL medical portal to greet our members and make them feel secure and well taken care of by making their medical history available to the hospital, and making their visit easier, faster and less stressful. Hospital waiting times can be reduced by 50% with the WASL medical portal.

5.2 Proposals of the organization values

Passionate:

- Full of energy and inspiration
- Love what we do and why we do it
- Love our customers

Open:

- Share freely
- Really listen and understand
- Embrace diversity
- Seek new ideas and other points of view

Accountable:

- Always responsible
- Take ownership
- Make it happen

Courageous:

- Be brave
- Dare to try
- Speak up

Extraordinary:

- Go above and beyond.
- Be the best we can dream to be
- Deliver outstanding.

6. CHAPTER 6. SELF-REFLECTION AND SELF- MANAGEMENT

The most important three behavioral habits that the team can do may affect the project

1- Time mismanagement

Time is an element of great importance to our lives. Also, managing it properly is linked to improving performance, acquiring important opportunities, and returning to us with good productivity. Poor time management is one of the most important behavioral manifestations practiced by many individuals. Time management is the conscious organization and management of time, a method of planning to ensure that work performed achieves desired goals in the time available. Effective time management allows an individual to work smarter and more efficiently, which can result in getting more work done in less time.

The reason for this habit is that the individual is unable to organize his time in the absence of workloads, so the mismanagement of time may not be associated with an increase or decrease in these tasks, but rather belong to the person himself as a result of his inability to organize this time that may bring him benefits and beautiful opportunities.

To get rid of this bad habit, it is needed to define the tasks that need to be done and put them in a list of all the important, urgent, and quick work. The responsibilities and tasks must be prioritized and divided according to their importance. It is important to have persevered in achieving the goal and learn how to overcome frustration or failure that a person may face in tasks. Using a timetable to determine the individual's times in the various activities increase the investment of time, and those that lead to wasting it, and then replace everything that turns out to contribute to wasting time.

2- Negative Thinking

The second behavior habit is thinking negatively. Negative thinking is the process of thinking in which people tend to look for the worst in things, develop the worst possible scenarios and lower their expectations to their minimum.

The reason for negative thinking coming from overthinking or excessive thinking, which is directly related to anxiety, as anxiety is one of the main and most important causes of excessive thinking about everything and forces a person to imagine the worst scenarios and events when thinking about something. The overthinking can be due to social anxiety about what ought to be said and what ought not to be said. Anxiety and fear of society's view of the individual. Fear of failure. Previous difficult experiences and their bad results on the individual.

To get rid of this habit, it is required to identify creative ideas that make a change, by writing them on paper and seeking them to reach them, as creativity, in turn, helps to bring out emotions, as well as relieves boredom and depression. In addition, to write down the achievements on a piece of paper, this method improves positive thinking, and it is preferable to write down the good things that have been done. Not to think about the past, but rather to make it a lesson to move forward, and stay away from negative and frustrated people, and get closer to positive people (2).

3- Being late for work

It is considered one of the most common types of negative behaviors in the field of work. The reason for being late for work is the environment of the place. The most important reason of which is the direct impact on production, and it is recommended here instead of directly taking disciplinary action the question about the reason for the delay and seeking an appropriate solution. People who are late due to disorganization simply lose their sense of time, they are either bad at scheduling tasks, or they are overly optimistic about what they can achieve in each period.

To get rid of it, it may be useful to assign specific tasks to an employee of indiscipline and to specify the dates for the delivery of those tasks (3).

Self-Professional Assessment

Self-assessment aims at self-direction, coherent learning, and enhancing student participation, by expressing understanding and making decisions, and using peer feedback as part of the process. We will use the SWOT analysis for the self-professional assessment to show the self-abilities and the ways that can be adopted to improve these skills. SWOT is a method used in the strategic analysis by evaluating and analyzing four points and it reflects the strengths, weaknesses, opportunities, and threats, which means according to the sequence strength, weakness, opportunities, and risks. The self-professional SWOT analysis is a powerful technique for judging a person's condition and finding out the issues that it faces, along with the opportunities it has (4).

Table4. SWOT analysis

Strength	Weakness
• Confidence and the ability to present me in front of others without fear or confusion. • The ability to influence others and attract their attention. • Enjoying a strong memory in addition to an intense focus on matters. • The response to changes and the ability to adapt to the most difficult circumstances. • The individual can defend very steadily without being subject to negative influences. • The intelligence of the individual and the multiple talents and the ability to take advantage of these talents.	• Nervousness and inability to control emotions. • The individual fails to find solutions to problems. • Failure of the individual to deal with changes and face challenges. • Fear of trying new experiences and a lack of adventurous spirit. • poor time management • Lack of training and qualifying to improve the skills.
Opportunity	Threats
• Use the technology to improve communication skills. • Take the advantage of training courses and mentoring opportunities • Rely on facts and avoid suspicion and belief. • New career paths that you can take • New projects and shifts in your life	• Negative technological trends can disrupt or affect us negatively. • Not to take the advantage of time management. • Lack of experience and skills • Need to learn about machine learning in writing

7. CHAPTER 7. PERSONAL INTEGRITY AND RELIABILITY

The behavioral integrity (BI) was positively related to job satisfaction, job engagement, health, and life satisfaction and negatively to stress, and work-to-family conflict, while moral distress was inversely related to those outcomes (5).

Example of behaviors contradict the moral integrity:

1. Sharing the patient's information with third party
2. Using change order in the system to get more money
3. Using bad language with the team

When the employees have of behaviors contradict the moral integrity as mentioned above that's will affect on the financial and technical also, will affect the relationships between the project team.

8. CHAPTER 8. PERSONAL COMMUNICATION

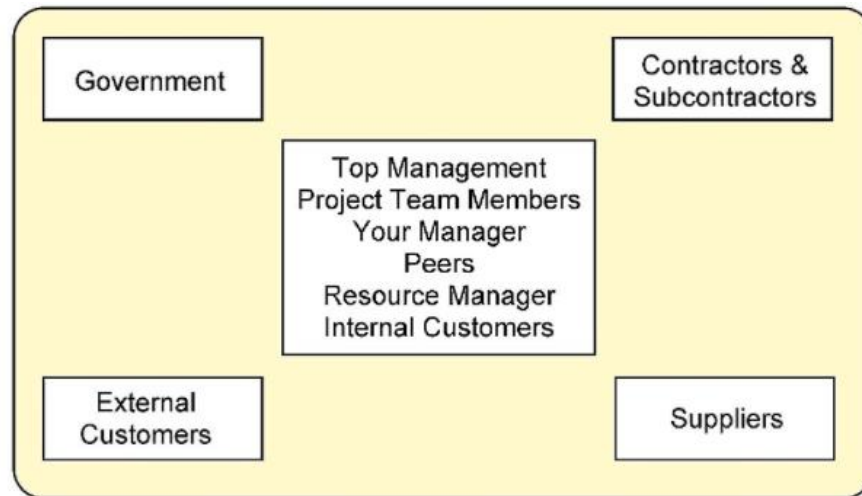
Personal communication is any source that cannot be recovered by a reader. This type of sources includes email, text messages, interviews, phone or in-person conversations, live speeches or webinars, messages on non-archived discussion boards or online bulletin boards, personal voicemail, unrecorded or live course lectures, social media limited to “Friends” only or restricted, and other sources that are similar in nature.

Personal communication can also be sources that have not been formally published or sources that are available only to a certain population (e.g., resources available to employees in a company’s intranet, training documents, etc.). In cases like these, be sure to consider the audience. If the document will be formally published to the general public, then these items should be treated as personal communication.

8.1.Preparing records of project stakeholders and stakeholders

A project is successful when it achieves its objectives and meets or exceeds the expectations of the stake-holders. But who are the stakeholders? Stakeholders are individuals who either care about or have a vested interest in your project. They are the people who are actively involved with the work of the project or have something to either gain or lose because of the project. When you manage a project to add lanes to a highway, motorists are stakeholders who are positively affected.

Chart 5. Project stakeholders



Project stakeholders. In a project, there are both internal and external stakeholders. Internal stakeholders may include top management, project team members, your manager, peers, resource manager, and internal customers. External stakeholders may include external customers, government, contractors and subcontractors, and suppliers

8.2.Project Stakeholders

Top Management

Top management may include the president of the company, vice-presidents, directors, division managers, the corporate operating committee, and others. These people direct the strategy and development of the organization.

On the plus side, you are likely to have top management support, which means it will be easier to recruit the best staff to carry out the project, and acquire needed material and resources; also, visibility can enhance a project manager's professional standing in the company.

On the minus side, failure can be quite dramatic and visible to all, and if the project is large and expensive (most are), the cost of failure will be more substantial than for a smaller, less visible project.

Some suggestions in dealing with top management are:

Develop in-depth plans and major milestones that must be approved by top management during the planning and design phases of the project.

Ask top management associated with your project for their information reporting needs and frequency.

Develop a status reporting methodology to be distributed on a scheduled basis.

Keep them informed of project risks and potential impacts at all times.

The Project Team

The project team is made up of those people dedicated to the project or borrowed on a part-time basis. As project manager, you need to provide leadership, direction, and above all, the support to team members as they go about accomplishing their tasks. Working closely with the team to solve problems can help you learn from the team and build rapport. Showing your support for the project team and for each member will help you get their support and cooperation.

Managing project team members requires interpersonal skills. Here are some suggestions that can help:

- Involve team members in project planning.
- Arrange to meet privately and informally with each team member at several points in the project, perhaps for lunch or coffee.
- Be available to hear team members' concerns at any time.
- Encourage team members to pitch in and help others when needed.

- Complete a project performance review for team members.

Project Manager

Typically, the boss decides what the assignment is and who can work with the project manager on projects. Keeping Project manager informed will help ensure that to get the necessary resources to complete your project.

Peers

Peers are people who are at the same level in the organization as you and may or may not be on the project team. These people will also have a vested interest in the product. However, they will have neither the leadership responsibilities nor the accountability for the success or failure of the project that you have.

Resource Managers

Because project managers are in the position of borrowing resources, other managers control their resources. So their relationships with people are especially important. If their relationship is good, they may be able to consistently acquire the best staff and the best equipment for their projects. If relationships aren't good, they may find themselves not able to get good people or equipment needed on the project.

Internal Customers

Internal customers are individuals within the organization who are customers for projects that meet the needs of internal demands. The customer holds the power to accept or reject your work. Early in the relationship, the project manager will need to negotiate, clarify, and document project specifications and deliverables. After the project begins, the project manager must stay tuned in to the customer's concerns and issues and keep the customer informed.

Common stumbling blocks when dealing with internal customers include:

- A lack of clarity about precisely what the customer wants
- A lack of documentation for what is wanted
- A lack of knowledge of the customer's organization and operating characteristics
- Unrealistic deadlines, budgets, or specifications requested by the customer
- Hesitancy of the customer to sign off on the project or accept responsibility for decisions
- Changes in project scope

To meet the needs of the customer, client, or owner, be sure to do the following:

- Learn the client organization's buzzwords, culture, and business.
- Clarify all project requirements and specifications in a written agreement.
- Specify a change procedure.
- Establish the project manager as the focal point of communications in the project organization.

External customer

External customers are the customers when projects could be marketed to outside customers. In the case of Ford Motor Company, for example, the external customers would be the buyers of the automobiles. Also if you are managing a project at your company for Ford Motor Company, they will be your external customer.

Government

Project managers working in certain heavily regulated environments (e.g., pharmaceutical, banking, or military industries) will have to deal with government

regulators and departments. These can include all or some levels of government from municipal, provincial, federal, to international.

Contractors, subcontractors, and suppliers

There are times when organizations don't have the expertise or resources available in-house, and work is farmed out to contractors or subcontractors. This can be a construction management foreman, network consultant, electrician, carpenter, architect, or anyone who is not an employee. Managing contractors or suppliers requires many of the skills needed to manage full-time project team members.

8.3. The personal communication and the effective communication Personal communication

Is any source that cannot be recovered by a reader. This type of sources includes email, text messages, interviews, phone or in-person conversations, live speeches or webinars, messages on non-archived discussion boards or online bulletin boards, personal voicemail, unrecorded or live course lectures, social media limited to "Friends" only or restricted, and other sources that are similar in nature.

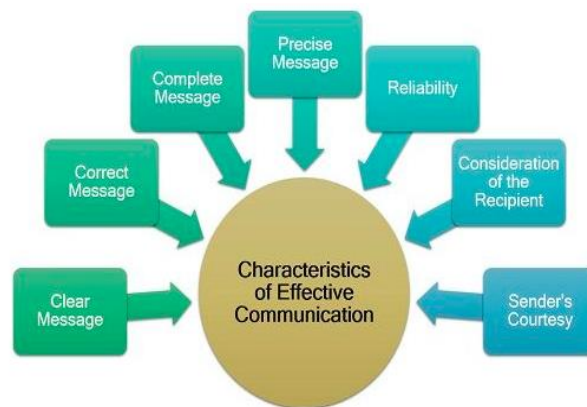
Personal communication can also be sources that have not been formally published or sources that are available only to a certain population (e.g., resources available to employees in a company's intranet, training documents, etc.). In cases like these, be sure to consider the audience. If the document will be formally published to the general public, then these items should be treated as personal communication.

Effective communication

Effective Communication is defined as the ability to convey information to another effectively and efficiently. Business managers with good verbal, nonverbal and written communication skills help facilitate the sharing of information between people within a company for its commercial benefit.

Is a process of exchanging ideas, thoughts, knowledge and information such that the purpose or intention is fulfilled in the best possible manner. In simple words, it is nothing but the presentation of views by the sender in a way best understood by the receiver.

Chart6. Characteristics of Effective Communication



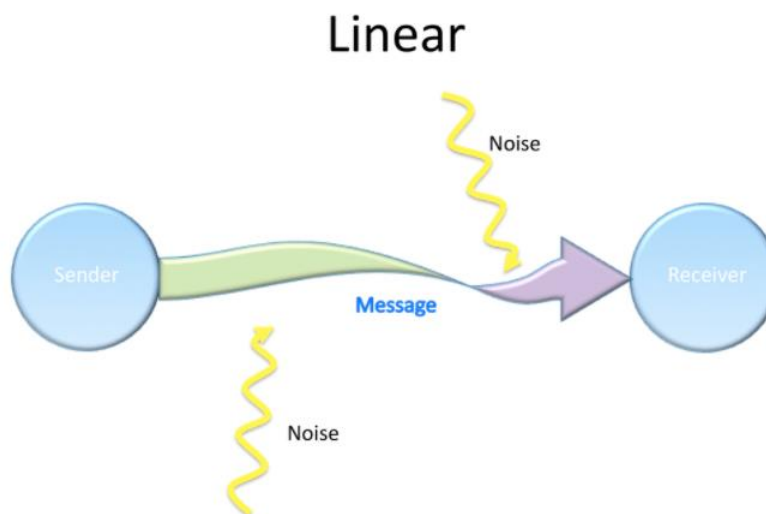
8.4.The shapes, models, and channels of the personal communication

The models are:

Linear Models

Originally developed by Shannon & Weaver in 1948, this model describes communication as a linear process. (See chart 7.) This model describes how a sender, or speaker, transmits a message to a receiver, or listener. More specifically, the sender is the source of the message. A message may consist of the sounds, words, or behaviors in a communication interaction. The message itself is transmitted through a channel, the pathway or route for communication, to a receiver, who is the target or recipient of the message. There may be obstacles in the communication process, or noise. Noise refers to any interference in the channel or distortion of the message. This is a fairly simple model in which a message is simply passed from sender to receiver.

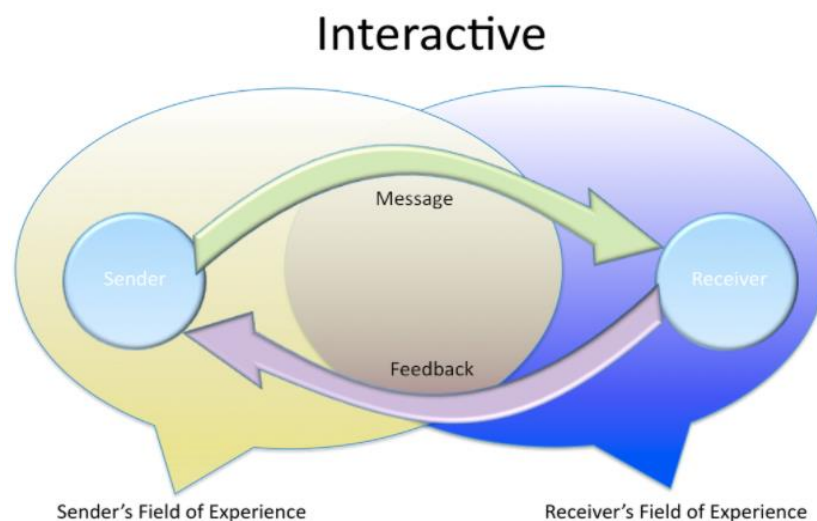
Chart 7. Linear Models



Interactional Models

In the move to a more dynamic view of communication, interactional models follow two channels in which communication and feedback flow between sender and receiver. Feedback is simply a response that a receiver gives to a sender. (See chart 8) Feedback can be verbal (i.e. “yes”) or nonverbal (i.e. a nod or smile). Most importantly, feedback indicates comprehension. It can help senders know if their message was received and understood. By focusing on flow and feedback, interactional models view communication as an ongoing process.

Chart 8. Interactional Models

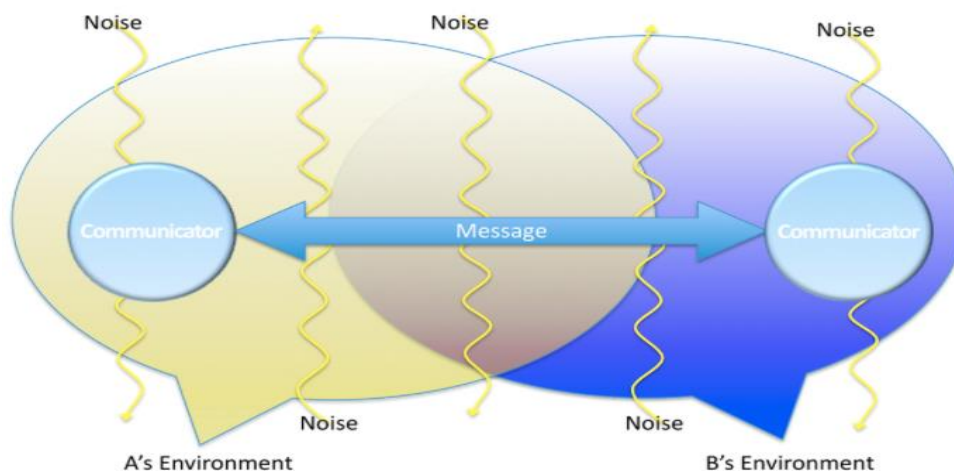


Transaction Models

The transactional is the most dynamic of communication models. One notable feature of this model is the move from referring to people as senders and receivers to referring to people as communicators. This implies that communication is achieved as people both send and receive messages. (See chart 9) Fundamentally, this model views communication as a transaction. In other words, communication is a cooperative action in which communicators co-create the process, outcome and effectiveness of the interaction. Unlike the linear model in which meaning is sent from one person to another, also unlike the interactional model in which understanding is achieved through feedback, people create shared meaning in a more dynamic process in the transactional model.

Chart.9 Transaction Models

Transactional



Forms personal communication

- Face to face.
- Telephone.
- Emails.
- Letters & post.

Personal communication channels- channels through which two or more people communicate directly with each other, including face to face, on the phone, via mail or e-mail, or even through an internet “chat”. Personal communication channels are effective because they allow for personal addressing and feedback.

Offline channels: think posters, flyers, displays, banners, and other physical collateral that you can deploy in places like kitchens, break rooms, meeting areas and other spaces where your employees are likely to congregate.

Online channels: these are channels that require your employees to connect to the internet or intranet to use. This includes email, the intranet, blogs, videos, e-newsletters, project sharing platforms and more.

Interactive channels: there are lots of different ways to reach people in a way they can interact. This can include social media, surveys, polls, quizzes, instant messengers, chat rooms, comments sections and more.

Live events: these can be in-person or online but include townhalls, webinars, meetings, focus groups, social gatherings, lectures and more.

8.5.Communication matrix

communication matrix It's simple: A communication matrix is just an easy way to keep key players in the loop. It details things like project owners, deadlines, project status, objectives, and so on

8.6.Wrong scenarios of communication

Examples of the causes of communication problems:

- People are not aligned with mission and vision
- People are unclear on goals, accomplishments, and timelines
- People don't always realize who their internal and external customers are, who they need to work with and who has the information or other resources they need
- People are undisciplined about when to communicate with others
- People don't know how to communicate appropriately with managers, staff, and others.

Failure to articulate

Sometimes, the simplest explanation for a failure in conversation is the most accurate; if one party fails to express things in clear and understandable terms, it stands to reason that the other party won't have any idea what's going on.

For example, if you speak incoherently, or in a way that isn't well-organized, the other party may be intently listening but still have difficulty following. To prevent this, work on what you want to say before the conversation if possible. Overly rehearsing can be a bad thing (as you'll never be able to completely predict how the conversation will go), but some preparation could help you find the right words for what you want to express.

Lack of interest or motivation

When people are not interested in what is being discussed, or they lack the motivation to work hard, they are more likely to disregard or ignore your messages. While this means that you certainly need to look at your internal communications, using tools such as corporate desktop wallpaper software, the intranet, and others can help you reach your staff members so that they feel more motivated and engaged in their work and in the organization

Failure to listen

Too many people focus on the speaking part of a conversation; after all, that's the part you can control. But it's far more important to be a good listener. Being a good listener first demonstrates that you're invested in the conversation and makes the other person feel welcome to share his or her thoughts.

Listening intently prevents interruption and other habits that can interfere with the natural pattern of conversation and provides a stable ground for mutual communication. Finally, and most importantly, listening allows you to hear and understand what the other party needs, giving you context and direction for your response. Without that initial effort, the conversation will never go anywhere.

9. CHAPTER 9. STAKEHOLDER ASSESSMENT

Stakeholder communication is facilitated and managed during the different phases of the project's life cycle. By building on the information processing view and the stakeholder salience framework and shows how stakeholder communication practices vary among the impersonal, personal, and group modes of communication

This document that includes all the information about the project's stakeholders and identifies the people, groups, and organizations that have an interest in the work, the project, and its results (6).

Table Stakeholder assessment matrix

Stakeholder Name	Unaware	Resistance	Neutral	Supportive	Leading
Ministry of Health	C			D	
Hospitals				D	
Patients				D	
Insurance Companies			C	D	
WASL Team				D	C

C: current engagement, D: desired engagement

10.CHAPTER 10. LEADERSHIP

The Leadership is the ability of an individual or a group of individuals to influence and guide followers or other members of an organization. Motivation is important because it allows a leader to meet and even exceed own organizational goals. The Benefits of a motivated workforce: Cost savings, Increased quality, reduced turn over, speed to market and Contributing to a better society.

10.1. Leadership model

There are seven primary leadership styles:

Autocratic: Best applied to situations where there is little time for group decision-making or where the leader is the most knowledgeable member in the group

Pacesetter: Leader is highly focused on performance and expects the same of the team. This leadership style can be good to reach short term results and Ability to achieve results quickly.

Democratic : In this leadership style, subordinates are involved in making Decisions and the leadership is centered on subordinates' contributions. The democratic leader holds final responsibility and known to delegate authority to other people, who determine work projects.

Coaching: involves teaching and supervising followers, They prep individuals to enhance both information and skills.

Affiliative: This leadership style focuses on conflict resolution and creating personal connections between employees and their managers to build a sense of community and trust.

Laissez-Faire : Subordinates are allowed to work as they choose, with complete freedom to make decision. With minimal or no interference

Transformational: this style is one of the most implemented styles. It has integrity, defines clear goals, encourages clear steps to communication and expressive. The transformational style requires several different skills. And its primary focus is to make change happen in our self, others, groups, and organizations.

10.2. Model is preferred

We preferred to use **democratic leaders** because it will keep the lines of communication open and democratic leadership works best in situations where group members are skilled and eager to share their knowledge. To design the portal, we need to have plenty of time to allow people to contribute, develop a plan and then vote on the best course of action

10.3. Motivation methods:

Motivation is something that moves the person to action and continues him in the course of action already initiated. Employee motivation is psychological forces that determine the direction of the person's behavior in an organization (7)

We can consider below as Motivation methods:

- Share positive feedback
- Offer flexible scheduling
- Allow honest criticism and complaints.
- Pay them more and ensure a healthy work life balance.

11.CHAPTER 11. TEAMWORK

Good teamwork describes groups that can communicate effectively and constructively to solve problems. Teamwork is a skill that can strengthen and unify business, project or department (8)

One of a streamlined way to define and document roles within a team for any given project or goal called RACI.

RACI stands for Responsible, Accountable, Consulted, and Informed, referring to the four roles that stakeholders might take on for any project. A RACI matrix is the simplest, most effective means for defining and documenting project roles and responsibilities. Knowing exactly who is responsible, who is accountable, who needs to be consulted, and who must be kept informed at every step will significantly improve your chances of project success.

The four roles that stakeholders might play in any project include the following:

- **Responsible:** People or stakeholders who do the work. They must complete the task or objective or make the decision. Several people can be jointly *Responsible*.
- **Accountable:** Person or stakeholder who is the “owner” of the work. He or she must sign off or approve when the task, objective or decision is complete. This person must make sure that responsibilities are assigned in the matrix for all related

activities. Success requires that there is only one person *Accountable*, which means that “the buck stops there.”

- **Consulted:** People or stakeholders who need to give input before the work can be done and signed-off on. These people are “in the loop” and active participants.
- **Informed:** People or stakeholders who need to be kept “in the picture.” They need updates on progress or decisions, but they do not need to be formally consulted, nor do they contribute directly to the task or decision.

How to create a RACI matrix

The simple process for creating a RACI model includes the following six steps:

1. Identify all the tasks involved in delivering the project and list them on the left-hand side of the chart in completion order.
2. Identify all the project stakeholders and list them along the top of the chart.
3. Complete the cells of the model identifying who has responsibility, accountability and who will be consulted and informed for each task.
4. Ensure every task has at least one stakeholder *Responsible* for it.
5. No tasks should have more than one stakeholder *Accountable*. Resolve any conflicts where there is more than one for a particular task.
6. Share, discuss and agree the RACI model with the stakeholders at the start of the project. This includes resolving any conflicts or ambiguities.

Table 6. RACI matrix

Tasks	Ministry of Health	Hospitals	Patients	Insurance Companies	WASL team
Define functional needs	C	A	I	I	R
Risk assessment	A	R		R	I
Define performance requirements	R	C	I	I	A
Financial plan	C	I	C	A	R
Design framework	C	A	I	C	R
Technology recommendation	C	A	I	I	R
Insert records/ logs	C	R	I	R	A
User testing/ Quality assurance	C	A	C	I	R
Sign up/ User journey	I	I	R	I	A
Utilize App	C	R	R	R	A
Create lesson learned	C	I	C	A	R

12.CHAPTER 12. CONFLICT AND CRISIS

The Concept of Conflict Management

According to Robbins (2005) conflict is a situation that surfaces the moment one party perceives that another party has adversely affected or is about to gravely affect something that the first party desires. Similarly, Mullins and Christy (2013) assert that conflict is a behavior projected to obstruct the achievement of some other person's plans

The Concept of Crisis Management

According to Karam (2018) crisis refers to as a low probability-high impact phenomenon that threatens the viability of the organization. It is seen as an inescapable disruption every organization is bound to encounter at any point in their lifetime and this most times occurs with or without sufficient warning signals.

The manner in which organizations respond to each crisis situation is dependent on how crisis management ready they are before, during and after the crisis occurrence (9).

We can Conflict Resolution in the workplace by:

- 1. Clarify what is the source of conflict :** The first step in resolving conflict is clarifying its source. Defining the cause of the conflict will enable to understand how the issue came to grow in the first place.
- 2.Find a safe and private place to talk:** before trying to resolve any issue, find a safe and private place to talk. Do not choose the office of either party or a location near them. And while at this place, ensure that each party gets enough time to air out their views regarding the matter.

3. Listen actively and let everyone have their say: After getting both parties to meet in a secure and private place, let each of them have the opportunity to air out their views and perceptions regarding the issue at hand, taking this approach will encourage both these parties to articulate their thoughts in an open and honest manner as well as comprehend the causes of the conflict and identify solutions.

4. Investigate the situation: After listening to the concerns of both parties, take time, and investigate the case. Do not prejudge or come up with a final verdict on the basis of what you have.

5. Determine ways to meet the common goal : when managing conflict processes, you need to have a common objective, which is resolving the issue and ensuring it does not resurface. And to solve any problem, you need to be aware of the different stages of conflict. This will enable you to look for the ideal ways to meet the common goal. After clarifying the source of conflict, talking to both parties, and investigating the situation, you need to sit down with both parties and discuss the common ways you can execute to meet the common goal, which is managing and resolving the matter at hand. Listen, communicate and brainstorm together until you exhaust all options

7. Agree on the best solution and determine the responsibilities each party has the resolution : Managing and resolving conflict leaps model of communication. Employees will find it easy to interact with another as they understand that they have one goal, which is meeting the company's objectives. So, after investigating the situation and determine ways through which you can resolve the issue, both

parties need to develop a conclusion on the best solution for the problem. And to agree on the best, you need to identify the solutions which each party can live with

8. Evaluate how things are going and decide preventative strategies for the future

Never presume that the issue is resolute, continue keeping an eye on the issue and assess if the solution is effective. If the issue resurfaces, take necessary action (10)

Expected scenarios of the conflict's events:

First scenario: Lack of Role Clarity

Lack of role clarity can lead to tension and conflict between employees, we will ensure all employees receive necessary information, instruction, supervision and training to perform their work safely and without risks.

Second scenario: Difference in Prioritizing Tasks

Effective prioritization comes from understanding the full scope of what we need to get done. We will ensure that every task tackle drives value and keeping unimportant tasks from cluttering to-do list.

Third scenario: Waiting on Completion of Task Dependencies

Setting dependencies between tasks can make the planning process easier and more accurate. Also, having set task dependencies makes it possible to execute the work in an organized manner so that no loopholes are left

13.CHAPTER 13. RESOURCEFULNESS

Resourcefulness skills are a person's ability to find efficient and innovative ways to overcome challenges. Being resourceful also involves optimizing your resources to make something new or better.

To be resourceful means to be able to create useful and unique solutions in challenging situations. Useful means your solution works and it's practical. Unique means the solution is interesting, unexpected, or clever. When you find creative solutions in tough situations, that's resourceful

Distribute the human resources on the functions.

Dividing work tasks between employees is an essential step in running the project . A clear-cut job description and duty assignment for each employee ensures that all necessary tasks are completed. Assigning specific duties also allows employees to specialize and perform their tasks efficiently. An evaluation of current employees and their responsibilities is a key step in dividing duties. Eliminating redundancy in the duties each person performs makes more efficient use of time and money.

The influence of conducting Crashing and Fast-tracking process:

The differences between fast tracking vs crashing are: Fast tracking involves the performance of activities in parallel, whereas crashing involves the addition of resources to a project. In fast tracking, there is increased risk, whereas in crashing there I increased cost.

In the below table showing the influence of conducting Crashing and Fast-tracking process on the timetable

Table 7. Crashing and Fast-tracking

Week #	1	2	3	4	5	6	7	8	9	10	11	12
Normal	Task1	Task1	Task2	Task2	Task2	Task3	Task4	Task4	Task4	Task5	Task5	Task6
Fast-tracking	Task1	Task1										
		Task2	Task2	Task2								
				Task3	Task4	Task4	Task4					
							Task5	Task5	Task6			
Crashing	Task A	TaskB	TaskB	Task C	Task C	Task C	Task D	Task E				

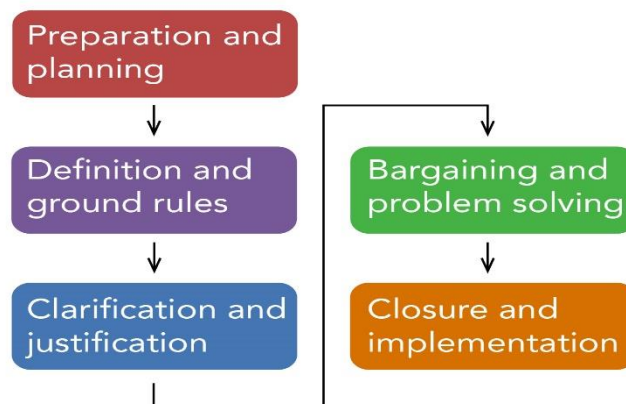
14.CHAPTER 14. NEGOTIATIONS

A negotiation is a strategic discussion that resolves an issue in a way that both parties find acceptable. By negotiating, all involved parties try to avoid arguing but agree to reach some form of compromise. Negotiations involve some give and take, which means one party will always come out on top of the negotiation (11).

General rules of negotiation

Negotiation, in simplified terms, is a five-step process. Those steps are shown in Figure:

Chart.10 Rules of negotiation



Preparation and Planning: In the preparation and planning stage, we need to determine and clarify our goals in the negotiation.

Definition of Ground Rules: After the planning and strategy development stage is complete, it's time to work with the other party to define the ground rules and procedures for the negotiation.

Clarification and Justification: Once initial positions have been exchanged, the clarification and justification stage can begin. Both will explain, clarify, bolster, and justify the original position or demands. This is an opportunity to educate the other side on your position, and gain further understanding about the other party and how they feel about their side

Bargaining and Problem Solving: This is the essence of the negotiation process, where the give and take begins.

Closure and Implementation: Once an agreement has been met, this is the stage in which procedures need to be developed to implement and monitor the terms of the agreement. They put all the information into a format that's acceptable to both parties, and they formalize it.

Negotiation plans example :

- a. Negotiation during select the best vendor to create WASL portal and each side often adopts an extreme or fixed position then seeks to cede as little as possible before reaching a deal.
- b. Negotiation with insurance companies to pay the fees of the patients to use the portal.

15.CHAPTER 15. PROJECT DESIGN

During WASL design the project constraints always exist because if one constraint changes, the other constraints are likely to be affected.

The triple constraint is a model that describes the three most significant restrictions on any project: scope, schedule and cost. It can measure both project success and estimating accuracy by the triple constraints.

Scope

Project Scope refers to the extent range, breadth, reach, confines, dimension, realm, gamut, spectrum or spread of the work that's to be done on a project.

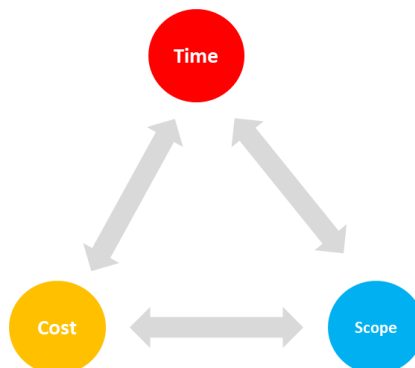
Time

The amount of time we need to complete the project or tasks within the project duration, the project will start at 5 Dec 2021 to 24 Feb 2022

Cost

Project cost refers to the resources required for the project. It includes developer costs, hardware, software, and other charges. The total cost is 800,000 SAR

Chart.11 Triple constraints



Project success factors

Success factors are components of the project that must be put in place to ensure the completion of the project

Proper Planning :Adhere to the Best Practices: we use frameworks and best practices wherever possible. Instead of constructing everything from the ground up, draw from the experience of past successes and adapt proven strategies to your individual case

Monitoring & Control : We Check progress and regularly evaluate the results. To quickly understand if the project is on track, define key performance indicators (KPI), and use reports. We will recognize early on when things go sideways and can take countermeasures before greater harm is done.

Use a Professional Software: professional and intuitive software minimizes the risk of errors and miscalculations, provides the best possible overview of all relevant KPIs, and reliably displays significant data on all necessary devices

Effective Communication: With proper communication, many undesirable developments in projects could be prevented or at least discovered earlier. Ensure that formal communication processes (meetings, documentation), as well as informal processes, are implemented and used. Communication between members of the team plays an important role.

Work with Committed People: it is important to assign the right individuals to each aspect of the project and make sure they work together well.

Careful Management of Risks: If something happens, with the management plan that has already been set up, the team can quickly resolve the problem. When facing

project risks, this will give the team confidence and help the team feel comfortable with the project's progress.

Strong Closure of Project: It is necessary to agree and sign off on confirmation of the project delivery, testing, and release. Satisfaction surveys are good forms of documentation for future reference to be logged and filed and valuable information for future use.

Work Breakdown Structure

A Work Breakdown Structure (WBS) is a hierarchical outline of the tasks required to complete a project. The WBS “breaks down” the structure of a project into manageable deliverables. Each deliverable is assigned a task, or series of tasks that can be further broken down into subtasks to meet the needs of the project.

The advantages and benefits of creating a WBS:

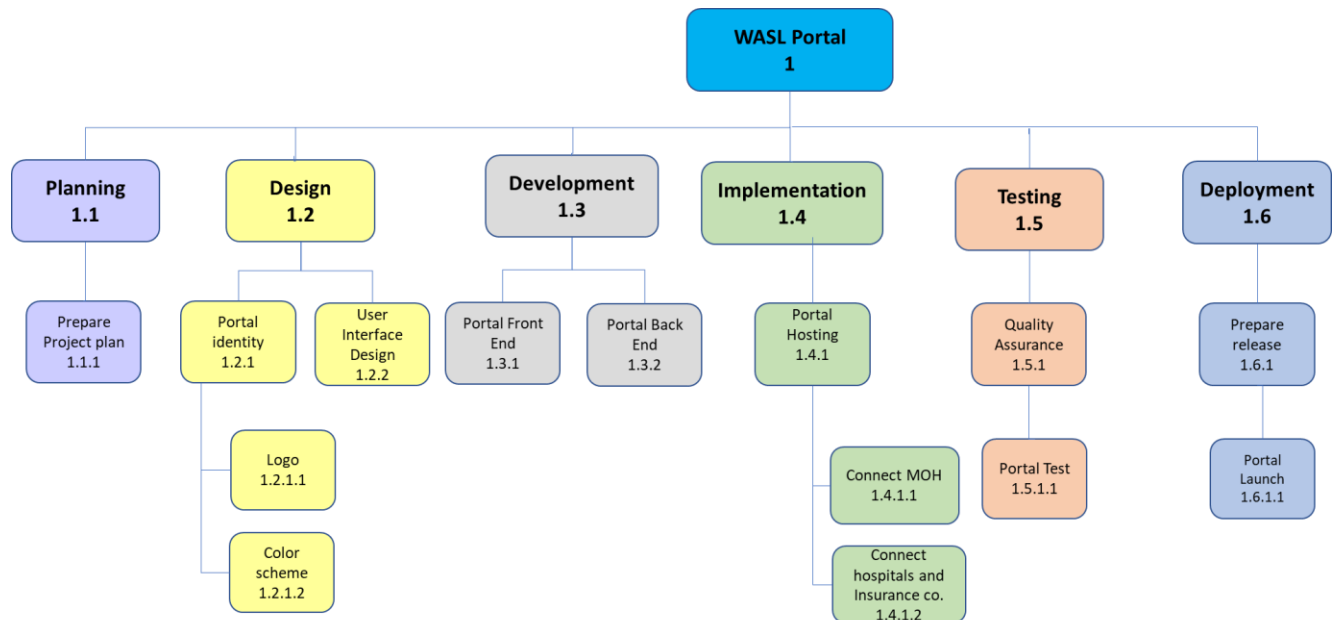
- Provides a visual representation of all parts of a project
- Offers an ongoing view for management and team members into how the entire project is progressing
- Defines specific and measurable outcomes
- Breaks the work into manageable chunks
- Provides a way to make successful experiences repeatable
- Sets a foundation for estimating costs and allocating human and other resources
- Ensures no overlap and no gaps in responsibility or resources
- Minimizes the chance of adding items outside the scope of work or forgetting a critical deliverable.

Chart.12 Project process



At WASL portal project there are 6 process groups: Planning, Design, Development, Implementation, Testing and Deployment in the Chart 12 shows a work breakdown structure

Chart.13 **WASL Portal Work Breakdown Structure**



16.CHAPTER 16. REQUIREMENTS AND OBJECTIVES

Requirement traceability matrix

The Requirements Traceability Matrix (RTM) is a tool to help ensure that the project's scope, requirements, and deliverables remain “as is” when compared to the baseline. Thus, its “traces” the deliverables by establishing a thread for each requirement- from the project's initiation to the final implementation.

Table 8 Requirement traceability matrix

ID	Description	Date	Important	Test Case #
001	Prepare Project plan	16 -Dec-21	Must	
002	User Interface Design	23-Dec-21	Should	
003	Portal identity	23-Dec-21	Should	
004	Logo	30-Dec-21	Should	
005	Color scheme	6-Jan-22	Should	
006	Portal Front End	5-Jan-22	Must	Test Case 001
007	Portal Front End	13-Jan-22	Must	Test Case 002
008	Portal Hosting	23-Jan-22	Should	
009	Connect MOH	27-Jan-22	Must	Test Case 003
010	Connect hospitals and Insurance co.	3-Feb-22	Must	Test Case 004
011	Quality Assurance	10-Feb-22	Should	
012	Portal Test	17-Feb-22	Must	Test Case 005
013	Prepare release	22-Feb-22	Should	
014	Launch	24-Feb-22	Must	

Requirements management process:

- Collect initial requirements from stakeholders.
- Analyze requirements.
- Define and record requirements.
- Prioritize requirements.
- Trace requirements to work items.

17.CHAPTER 17. SCOPE

Table 9. Project Scope Statement

Project Scope Statement	
Title	WSAL medical portal
Project Manager	Amal Albalawi
Project Scope Description	Connect all hospitals with one portal
Project Objective	To provide medical patient reports
In Scope	Connect with MOH and insurance company
Out of Scope	Generate private reports
Assumptions	MOI will support the idea
Deliverables	Medical portal
Constraints	The project will start at 5 Dec 2021 to 24 Feb 2022 , with cost 800,000 SAR

Scope Creep

Scope creep occurs when a client adds new provisions, tasks, or deliverables to a project that are outside of an existing scope of work like :

Poor planning

Poor planning can lead to overpromising. This often originates in a lack of experience and knowledge about the resources needed to complete a certain task or project.

Poor communication between stakeholders

Sometimes scope creep happens because the miscommunication happens not at the beginning of the project

Product analysis is an effective tool in project management. It is used in determining the product that will be delivered will be effective in drawing in its target client. It is important to take note that each application area has generally more accepted methods to create a good product that can be released to the market but product analysis includes different sets of tools to analyze the product. These techniques include systems analysis, product breakdown, system engineering, requirement analysis, value analysis and value engineering.

18.CHAPTER 18. TIME

Table 10 .Relationships between the activities

WBS#	project activities	Activity Name	Dependencies	Duration (Days)
1.1.1	Prepare Project plan	A	-	10
1.2.1	Portal identity	B	A	5
1.2.1.1	Logo design	C	A	3
1.2.1.2	Color scheme	D	C	5
1.2.2	User Interface Design	E	D	5
1.3.1	Portal Back End	F	E, B	7
1.3.2	Portal Front End	G	F	7
1.4.1	Portal Hosting	H	G	6
1.4.1.1	Connect MOH	I	H	4
1.4.1.2	Connect hospitals and Insurance co.	J	H	5
1.5.1	Quality Assurance	K	I, J	5
1.5.1.1	Portal Test	L	K	5
1.6.1	Prepare release	M	L	3
1.6.1.1	Portal Launch	N	M	2

We will use arrow network diagram uses arrows to represent the project activities, with the tail of the arrow being its start and the point the finish. The length of the arrow is the duration of the activity. The arrows connect nodes that are milestone symbols of the start and finish of the activity in sequence.

The “critical path” refers to the sequence of tasks with the longest duration that needs to be completed to successfully close out a project.

We have 4 project paths:

A-C-D-E-F-G-H-I-K-L-M-N = 62 days

A-C-D-E-F-G-H-J-K-L-M-N = 63 days

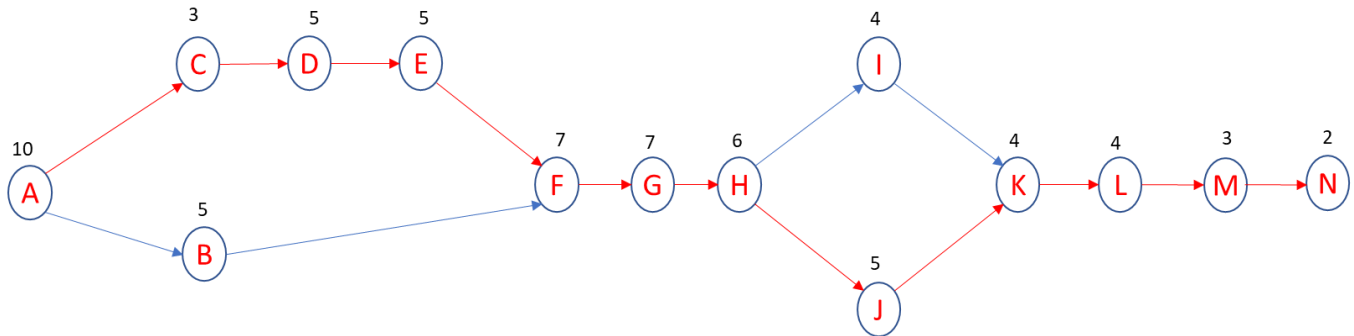
A-B-F-G-H-J-K-L-M-N = 55 days

A-B-F-G-H-I-K-L-M-N = 54 days

The critical path is :

A-C-D-E-F-G-H-J-K-L-M-N = 63 days

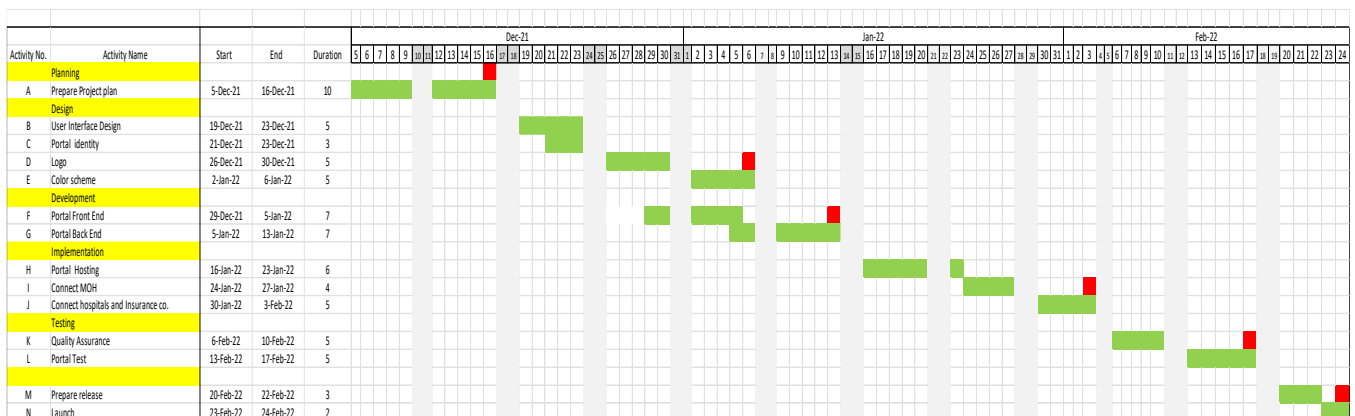
Logical diagram



Gantt Chart:

We use a Gantt chart because is a project management tool assisting in the planning and scheduling of projects of all sizes, although they are particularly useful for simplifying complex projects

Table 11 .Project Gantt chart



19.CHAPTER 19. Quality

The Deming cycle is a continuous quality improvement model which consists of a logical sequence of four key stages: Plan, Do, Check, and Act.

Chart.14 Deming model for quality



SIPOC model:

A SIPOC (suppliers, inputs, process, outputs, customers) diagram is a visual tool for documenting a business process from beginning to end prior to implementation. SIPOC (pronounced sigh-pock) diagrams are also referred to as high level process maps because they do not contain much detail.

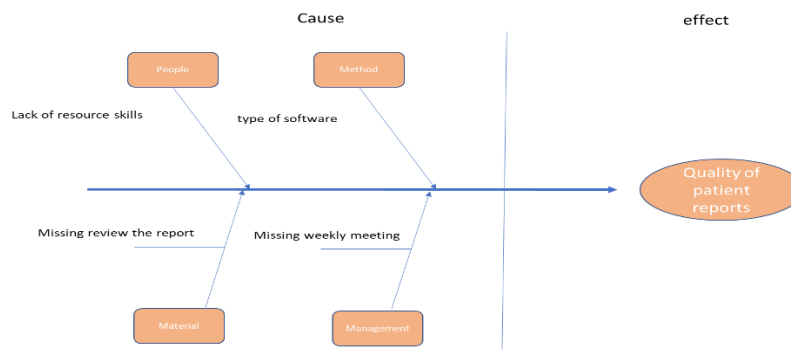
Chart.15 SIPOC model

WASL Portal project				
suppliers	inputs	process	outputs	customers
Development the portal	Patient information	Connect the portal with MOH and insurance company	Medical portal	Receive the patient information

Ishikawa diagram

An Ishikawa diagram is a diagram that shows the causes of an event and is often used in manufacturing and product development to outline the different steps in a process, demonstrate where quality control issues might arise, and determine which resources are required at specific times.

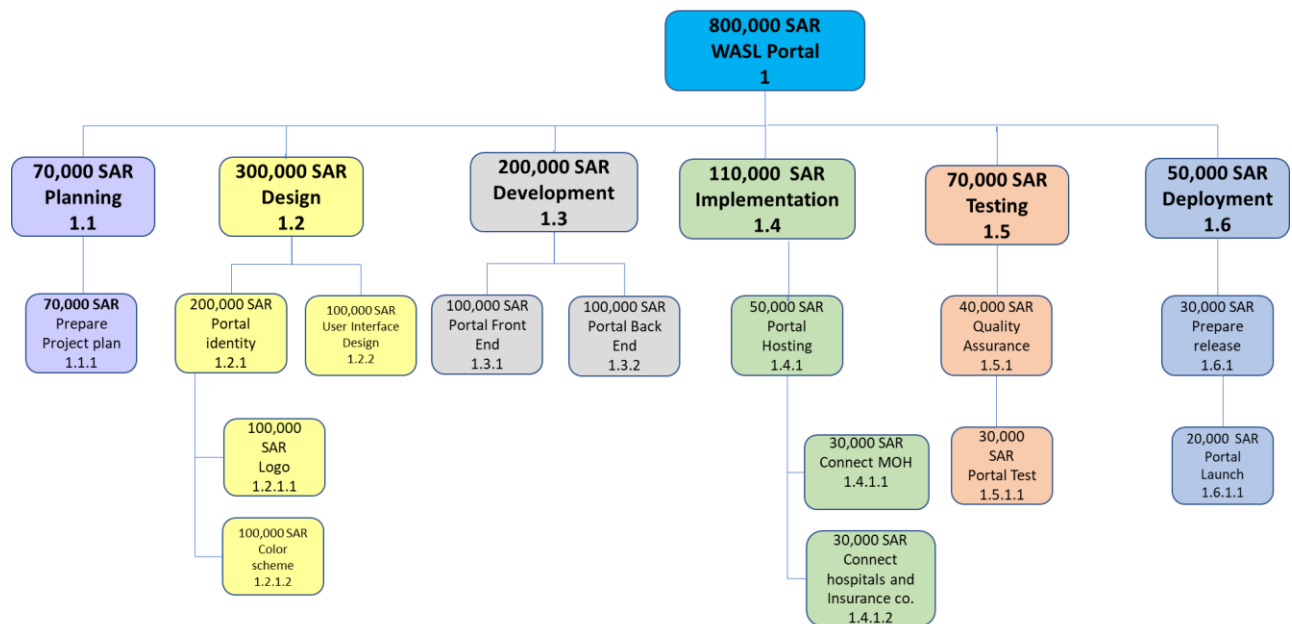
Chart.16 Ishikawa diagram



20.CHAPTER 20 FINANCE

A Cost Breakdown Structure (CBS) is a breakdown or hierarchical representation of the various costs in a project. ... It is the planning structure financial controllers use to create budgets and calculate various financial metrics such as: estimate at completion, cost to complete, variances and earned value.

Chart.17 Cost Breakdown Structure



Earned Value

Earned value management (EVM) is a project management methodology that integrates schedule, costs, and scope to measure project performance. Based on planned and actual values, EVM predicts the future and enables project managers to adjust accordingly.

We assumed the project completed 50% at the 20% of the period of the project and the XXXX shows the Project status indicators

Budget at Completion (BAC) = 800,000 SAR

Actual Cost of Work Performed (AC) = 400,000 SAR

Planned Value (PV) = 360,000 SAR

Earned Value (EV) = BAC x 20 % = 800,000 x 0.20 = 160,000 SAR

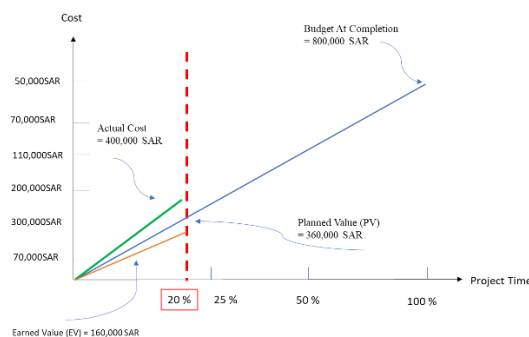
Cost Variance (CV) = EV – AC = 160,000 - 400,000 = -240,000 SAR Over budget

Schedule Variance (SV) = EV – PV = 160,000 - 360,000 = -200,000 SAR

Cost Performance Index (CPI) = EV / AC = 160,000/400,000 = 0.4 cost > plan

Schedule Performance Index (SPI) = EV / PV = 160,000/360,000 = 0.44

Chart.18 Earned value



21. CHAPTER 21 RESOURCES

Resource leveling

Resource leveling is a project management technique that involves resolving overallocation or scheduling conflicts to ensure a project can be completed with the available resources. Resources include the time, materials, or tools needed to complete a project.

Resource Smoothing.

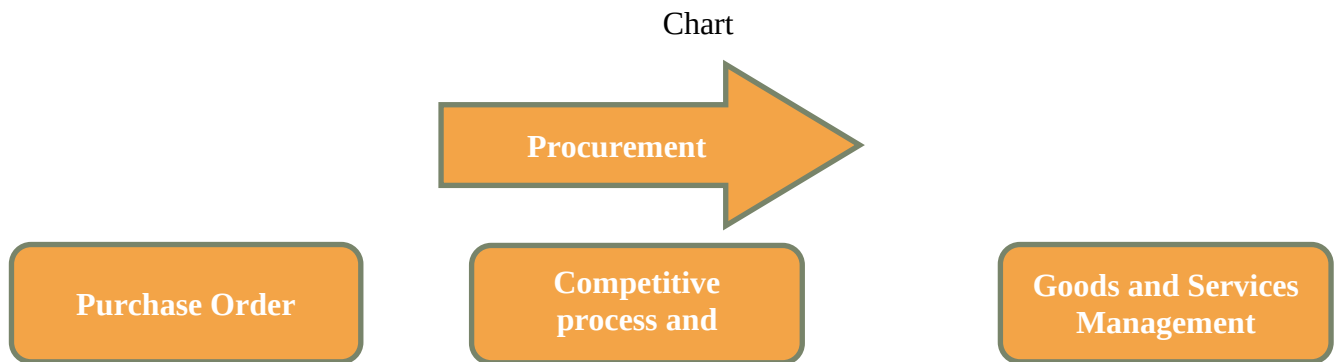
A technique that adjusts the activities of a schedule model such that the requirements for resources on the project do not exceed certain predefined limits

22. CHAPTER 22 PROCURMENT

Implementation of procurement:

Procurement must be implemented in accordance with the procedures and work instructions in force between establishments. The main procedures to be followed are shown as shown in the chart below:

Chart.19 Procurement procedures



In all procurement processes, even if the total value of the supply and purchase is low, there must be an official and documented request for supply and purchase, regardless of whether the request ends with the issuance of the purchase order or not.

Procurement Procedures

- The company is looking for suppliers.
- The company filters the suppliers based on their field of work.
- The company determines the companies and entities to be addressed and supplied to, and they have been emailed and asked for the items they need

- The company makes a quotation for the required items or services
- The supplier (the one to whom the supply will be made), represented by a technical and financial examination committee, determines the best offers submitted by the supply companies, from which he addresses the company that the committee has settled on and sends it a supply/purchase request.
- The company purchases the required products or services from the main supplier and ships them and delivers them to the customer.
- The company is waiting for the check to be issued after the period agreed upon with the customer in terms of supply, which ranges from one and a half to four months.
- When the check is issued, the representative of the company goes to collect the amount or the check.
- The company repeats the process with more than one destination, and thus the supply process is successful.

Supplier selection

1) Source of supply: The types of sources are:

- The base source: which means that there is only one source, due to the privilege of the invention, technical specifications, and raw materials.
- Multiple source: It means the use of more than one supplier in supplying the item.
- Single source or single source: It means the programmed decision taken by the organization in choosing a single supplier to supply the item when there are several suppliers for that item.

2) Supplier selection factors: There are many factors that are used in addition to quality, service, and price factors in choosing a supplier, which are:

- a) Technical ability
 - b) Manufacturing capabilities
 - c) Reliability
 - d) After-sales services
 - e) Status of Supplier
- Technical ability: It means whether the supplier has the technical ability to manufacture or supply the product according to the required specifications.
 - b- Manufacturing capabilities: It means the supplier's ability and ability to meet the specifications specified by the buyer in the commodity.
 - Reliability: It means choosing the supplier based on its position, financial strength and degree of stability.

23.CHAPTER 23 PLAN AND CONTROL

We use virtual meetings for work, to involve remote team members from around the world (or in different parts of the same building).

Chart.20 virtual meetings Agenda

WASL project – Virtual Meeting Agenda					
Date	15/12/2021	Time	10:00 A.M.	Location	Online
Agenda	1	To discuss the project schedule			
	2	To discuss the critical path			
	3	To review Millstone's date			
Attendees	1	Sponsor			
	2	PM			
	3	Finance manager			
	4	Technical leader			
Minutes Of Meeting					

Performance Measurement:

We will use the dashboard to measure the project performance and

Chart.21 dashboard

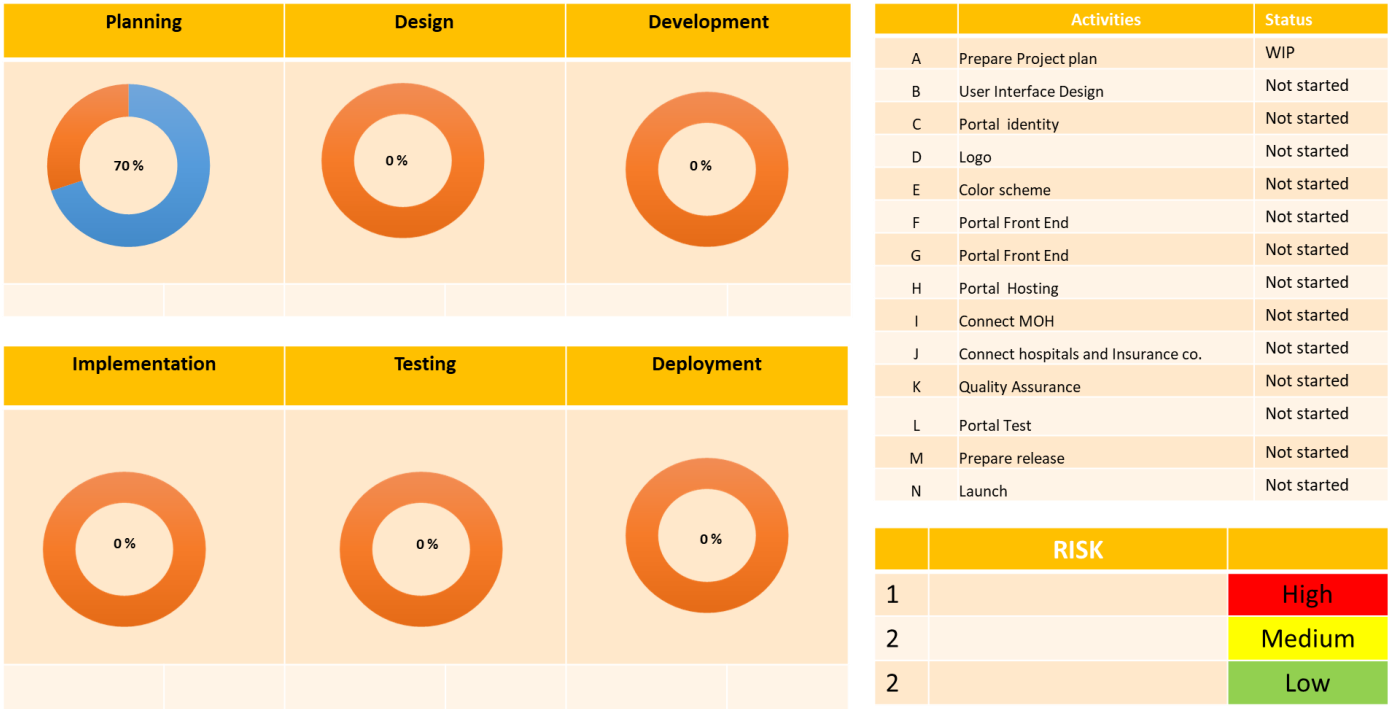


Table 12.Change Request Form

CHANGE REQUEST FORM		
Change Description		
Project Name:	Change Name:	Number:
Requested By:	Contact:	Date:
Description of Change:		
Reason for Change:		
Priority : 1. High 2. Medium 3. Low		
Impact on Deliverables:		
Impact of Not Responding to Change (and Reason Why):		
Date Needed:	Approval of Request:	Date:
Change Impact		
Tasks/Scope Affected:		
Cost Evaluation:		
Risk Evaluation:		
Quality Evaluation:		
Additional Resources:		
Duration:		
Additional Effort:		
Impact on Deadline:		
Alternative and Recommendations:		
Comments:		
Sign Offs		
1. Accepted 2. Deferred 3. Rejected 4. More Info Requested		
Comments:		
Project Manager Signature:	Date:	
Decision Maker Signature:	Date:	

24.CHAPTER 24 Risk and opportunities

Risk and Opportunity management is the control of business risks and opportunities in a manner to ensure that both long- and short-term objectives of the Councils are achieved and that opportunities are fully maximized. In this context risk is defined as uncertainty of outcome, whether positive opportunity or negative threat of actions and events. It is the combination of likelihood and impact, including perceived importance.

The Risk and Opportunity Management process

Stage 1 - Risk identification

Stage 2 - Risk Analysis

Stage 3 - Risk Control

We will expect risks scenarios and evaluate the probability and Impact after that we will select response plan for each risk.

1. Methodology

We are using 5 steps to cover the risk plan on our project:

- Identify potential risks
- Evaluate and assess potential risks
- Assign ownership for each potential risk
- Create preemptive responses
- Continuously monitor risks

3.1 Identifying risks

Risk identification occurs at the beginning of the project, as well as throughout the project and during brainstorming with stakeholders we identify all the possible risks.

Table 13. List of Risks

No.	Risks
1	Select the hosting of portal
2	Deployment is delays because COVID- 19 restrictions
3	Connect with MOH

3.2 Risk Analysis

Impact and probability are the two main components of Risk analysis. Looking at impact versus probability is common to categorize and prioritize risks as some risks may have a severe impact on projects objectives but only happen on rare occasions, while other have a moderate impact but occur more frequently.

Will assess the probability and Impact of each risk occurring and assign it a rating by using risk matrix and we have decided to use three distinct levels for risk: Low, Medium, and High.

Table 14.. Risk Matrix

Probability	0.8-1	High	High	Medium
	0.4-0.79	High	Medium	Low
	0-0.39	Medium	Low	Low
		0.8-1	0.4-0.79	0-0.39
		Impact		

Table 15. Risks Probability and Impact

No.	Risks	Probability	Impact
1	Select the hosting of portal	0.4	0.7
2	Deployment is delays because COVID- 19 restrictions	0.9	0.8
3	Connect with MOH	0.8	0.4

Then the severity calculated and evaluated and select the best response plans for each risk and try to mitigate the impact, also we assign risk owner to track the risks.

Table 16. Risk Register

No.	Risks	Probability	Impact	Severity	Owner	Response plan	Mitigate Action
1	Select the hosting of portal	0.4	0.7	High	Project Manager	Select more than vendor	
2	Deployment is delays because COVID- 19 restrictions	0.9	0.8	Medium	logistics department	Escalate the issue to the client to understand the situation	Execute the tasks which not dependent on Deployment
3	Connect with MOH	0.8	0.4	High	Project Manager /Sponsor	Follow up with MOH to receive the requirement early	Increase resources during implementation

25.CHAPTER 25 STAKEHOLDERS

Every project has stakeholders, yet the number and involvement of these stakeholders vary among the different types of projects or industries.

The Stakeholder Engagement Assessment Matrix is a simple yet powerful project management tool to record desired and detector actual engagement levels of stakeholders. It helps recognize potential gaps in the participation of stakeholders

Table 17 Stakeholder Engagement Assessment Matrix

Stakeholder	Power/ Interest	Unaware	Resistance	Neutral	Supportive	Leading
Ministry of Health	High /Medium	C			D	D
Hospitals	High/ High	C			D	D
Patients	Low/ High	C		C	D	
Insurance companies	Medium/ High	C			D	
WASL team	High / High				CD	CD

C= Current engagement

D= Desired engagement

26.Reference

- (1) <https://www.forbes.com/sites/bernardmarr/2020/10/23/whats-the-difference-between-lagging-and-leading-indicator/?sh=15de4b85009a>
- (2) Chermack, T. J., & Kasshanna, B. K. (2007). The use and misuse of SWOT analysis and implications for HRD professionals. *Human Resource Development International*, 10(4), 383-399.
- (3) Martin M. (2019). How to do a personal SWOT analysis. *Business News Daily*.
Businessnewsdaily.com/5543-personal-swot-analysis.html
- (4) Pluchevskaya, E. (2017). Application of the SWOT analysis as an evaluation tool to achieve a state of personal well-being. 548-553.
10.15405/epsbs.2017.01.74.
- (5) Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.
- (6) Aaltonen, K. (2010). Stakeholder management in international projects (Doctoral dissertation, Aalto University School of Science and Technology, Department of Industrial Engineering and Management, Espoo, Finland, Doctoral dissertation series 2010/13).
- (7) <http://zoefact.com/assign/business/human-resource-management/effective-methods-employee-motivation.html>

- (8) <https://www.cio.com/article/2395825/project-management-how-to-design-a-successful-raci-project-plan.html>
- (9) <https://www.hrcloud.com/blog/7-tips-on-how-to-manage-and-resolve-conflict-in-the-workplace>
- (10) <https://www.brighthubpm.com/resource-management/95971-recognizing-common-conflicts-that-can-impede-project-progress/#1---lack-of-role-clarity>
- (11) <https://courses.lumenlearning.com/wm-organizationalbehavior/chapter/stages-of-negotiation>