

Developing ECO medical center



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References

- Chris Drew, P. (2021, October 24). *All 8 Models Of Communication, Explained*. Retrieved from helpful professor: <https://helpfulprofessor.com/communication-models/>
- Coaching, P. D. (n.d.). *Peter Doyle Coaching*. Retrieved from Peter Doyle Coaching: <https://www.peterdoylecoaching.com/blog/poor-delegation>
- DINARDI, G. (2019, MAY 03). *What is Business Communication & Why Do You Need It?* Retrieved from nextiva blog: <https://www.nextiva.com/blog/what-is-business-communication.html#:~:text=is%20Business%20Communication%3F-The%20Definition,interact%20to%20reach%20organizational%20goals>.
- Effective Communication*. (n.d.). Retrieved from [https://www.tutorialspoint.com/effective_communication/effective_communication_meaning_and_definition.htm#:~:text=Effective%20communication%20is%20defined%20as,understood%20by%20the%20recipient\(s\)](https://www.tutorialspoint.com/effective_communication/effective_communication_meaning_and_definition.htm#:~:text=Effective%20communication%20is%20defined%20as,understood%20by%20the%20recipient(s))
- Goldstein, M. (2013, October 29). *Project Management Institute*. Retrieved from Project Management Institute: <https://www.pmi.org/learning/library/important-project-manager-mindful-listening-5901>
- MCCORD, S. (2017, March 06). *3 Techniques to Help You Get Through to a Bad Listener*. Retrieved from Inc.: <https://www.inc.com/the-muse/3-ways-to-deal-with-bad-listener.html>
- RATHINASWAMY, J. (2017, July 20). *David Berlo's Model of Communication*. Retrieved from <http://jayaseelansr.blogspot.com/2017/07/david-berlos-model-of-communication.html>

1.1. Strategy:

Our strategy is based on what is being aspired and worked on in the Kingdom's Vision 2030 regarding green buildings.

we have been committed to contributing and fulfilling the promising vision goals driving us to be the first specialized company in Saudi Arabia in the ECO buildings in the medical sectors.

1.1.1. Vision:

Our vision to be the pioneers in field of green buildings in Saudi Arabia.

1.1.2. Mission:

Our mission is to provide professional services to restructure health centers and develop modern sustainable mechanisms with international specifications to keep pace with technical development and integrate them to create a sustainable environment for the targeted facilities.

1.1.3. Project objectives:

Our objectives are to rebuild and develop, 50% of total Ministry of Health medical buildings, minimize operational waste by 40%, and increase the operational capacity by 10% starting from 2023.

1.1.4. Project's Key Performance Indicators (KPI's):

1.1.4.1. Introduction:

The KPIs have been developed to prioritize improvements in support of overall our vision and materialize our goals. The KPIs are summarized into two categories:

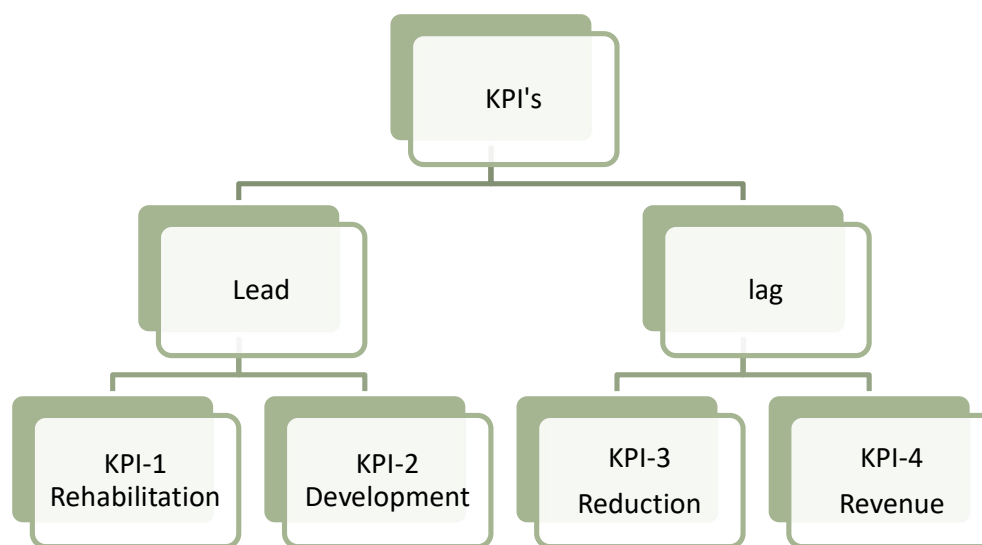


Figure 1 KPI's Categorization

1.1.5. Lead KPI

Reference no.	KPI
KPI-1	Develop and rebuild 80% of medical centers buildings during first 5 years from 2023.
KPI-2	Increase the green places by 50% of medical centers buildings during first 5 years from 2023

Table 1: Lead KPI's Summary Table

1.4.3. Lag KPI's:

Reference no.	KPI
KPI-3	Gradually reduce operational waste by 5 % annually.
KPI-4	Increase visitor flow by 5 % annually.

Table 2 Lag KPI's Summary Table

1.4.4. Lead KPI's Definition and Measurement:

KPI Ref	KPI Title
---------	-----------

KPI-1	Develop and rebuild 80% of medical centers buildings during first 5 years from 2023.				
Target performance against which the KPI performance will be assessed					
Bassline	Year 1	Year 2	Year 3	Year 4	Year 5
500	560	620	680	740	800
Description	The number of medical centers buildings that been rehabilitated and classified as safe and useful building from authorized governmental entity.				
Method of Calculation	Total Number of Classified Centers as Safe & Useful utilities / Sum of Total Medical Centers buildings * Sum of Total Medical Centers Buildings = 1000				

Table 3 KPI-1 Definition and Measurement

KPI Ref	KPI Title				
KPI-2	Develop 50% of medical centers buildings during first 5 years from 2023.				
Target performance against which the KPI performance will be assessed					
Bassline	Year 1	Year 2	Year 3	Year 4	Year 5
100	180	260	340	420	500
Description	The number of medical centers buildings that been developed and classified as investment opportunities building from authorized governmental entity.				
Method of Calculation	Total Number of Classified Centers as investment opportunities building / Sum of Total Medical Centers * Sum of Total Medical Centers = 1000				

Table 4 KPI-2 Definition and Measurement

1.4.5. Lag KPI's Definition and Measurement:

KPI Ref	KPI Title				
KPI-3	Gradually reduce operational waste by 5% annually				
Target performance against which the KPI performance will be assessed					
Bassline	Year 1	Year 2	Year 3	Year 4	Year 5
1 Billion	950.0 M	902.5 M	857.4 M	814.5 M	773.8 M
Description	Reduce the annual OPEX expenditure by 5 %				

Method of	Sum of OPEX expenditure (last year) * 0.95
Calculation	* Sum of OPEX expenditure 2022 = 1,000,000,000 SAR

Table 5 KPI-3 Definition and Measurement

KPI Ref	KPI Title				
KPI-4	Increase the capacity of total medical centers by 10 % annually.				
Target performance against which the KPI performance will be assessed					
Bassline	Year1	Year 2	Year 3	Year 4	Year 5
10,000	11,000	12,100	13,310	14,641	16,105
Patients	Patients	Patients	Patients	Patients	Patients
Description	Increase the capacity of total medical centers				
Method of Calculation	Total Number of totals medically equipped rooms and number of patients served				

Table 6 KPI-4 Definition and Measurement

1.5 Project Charter Model



Project Charter – ميثاق المشروع

DEVELOPING ECO MEDICAL CENTER

Date: 01/03/2022

1.5.1. Project Information

Project Title	Developing a medical center to be ECO in Riyadh city – Northern area
Program	Developing a medical center to be ECO in Saudi Arabia
Project Manager	Faisal Mohammed Almutairi
Program Manager	Mohannad Saaid Alfaqeeh
Sponsor	Enad Khaled Alotaibi
Project Start Date	01/01/2023
Project End Date	31/12/2029

Project Cost	100 million (Saudi Riyal)
---------------------	---------------------------

Table 7 Project Information

1.5.2. Project Description

Develop 50 medical center to be Eco centers served by construct and develop utility and patient's zone.

1.5.2.1. Project Goals and Link it to Strategic Goals

Strategic Goals	Develop the medical centers buildings
KPI	Develop 50% of medical centers buildings during first 5 years from 2023
Project Goals	
1	Developing a medical center to be ECO in Riyadh city – Northern area
2	Increase Eco Service by 6.25 %

Table 8 Project Goals

1.5.2.2. Project scope

The project consists of:

1. Develop 30 medical center buildings in Riyadh city – Northern area.
2. Increase The green areas.
3. Use energy-saving products.
4. Exploiting natural light
5. Provide ECO medical equipment and supplies

1.5.2.3. Project Main Phases/Milestones

Phase	Description	Duration
Develop the medical center	It consists of Re-design, Construct, and Rehabilitate the facilities operating areas, and the waiting areas	11 Months
Develop medical equipment and supplies to be ECO	It consists of Mobility Equipment, Lifts & Ramps, Beds, Power Wheelchairs & Scooters, power distribution, Use of Power saving solutions and bath & Shower Safety	4 Months
Construct wide green gardens	Build and run a wide area of green gardens in the medical centers	8 Months
Handover the First Center	Handover the first Medical Center Building to Ministry of Health	15 Months

Table 9 Project Main Phases/Milestones

1.5.2.4. Project Budget Estimate

Phase	Budget
Develop the medical center	40 million (Saudi Riyal)
Construct wide green gardens	20 million (Saudi Riyal)
Develop medical equipment and supplies to be ECO	40 million (Saudi Riyal)

Table 10 Project Budget Estimate

1.5.2.5. Project Stakeholders Analysis

Name	Level
High Commission for the Development of AR Riyadh	Medium
Ministry of Health	High
National Energy Services Company (TARSHID)	High
Directorate of Health Affairs in Riyadh	High
Ministry of Finance	High
Saudi Electricity company	Medium
Ministry of Municipal and rural and housing	Medium

1.5.2.6. Assumptions

Sr.	Assumptions	Remarks
1	Water and wastewater network are working in good condition	N/A
2	The electric power system is connected and working in good condition	N/A

Table 11 Assumptions

1.5.2.7. Risks

Description	Level	Initial Respond
Infrastructure efficiency	Low	Utilities company to fix it.
Permits & Approval	Medium / High	Dedicate a high-level coordination with concern parties

Table 12 Risks

1.5.2.8. Approval list

Position	Name	Signature
PMO Manager	Mutaz Khwaytim Almutairi	
Finance Manager	Fahdah Mutlaq Alkahtani	
Engineering Department Manager	Ahmad Fhaid Almutairi	
MEP Manager	Enad Khaled Alotaibi	
IT Manager	Ali Hassan Yahia Almalki	
CEO	Mohannad Saaid Alfaqeeh	

Table 13 Approval List

1.6. Governance, Structure, and Process.

1.6.1. Develop an organizational structure for the teams and units of the project.

Our organizational structure provides a guidance to the stuff laying out the official communication reporting relationships that run the workflow of the company and the way of command.

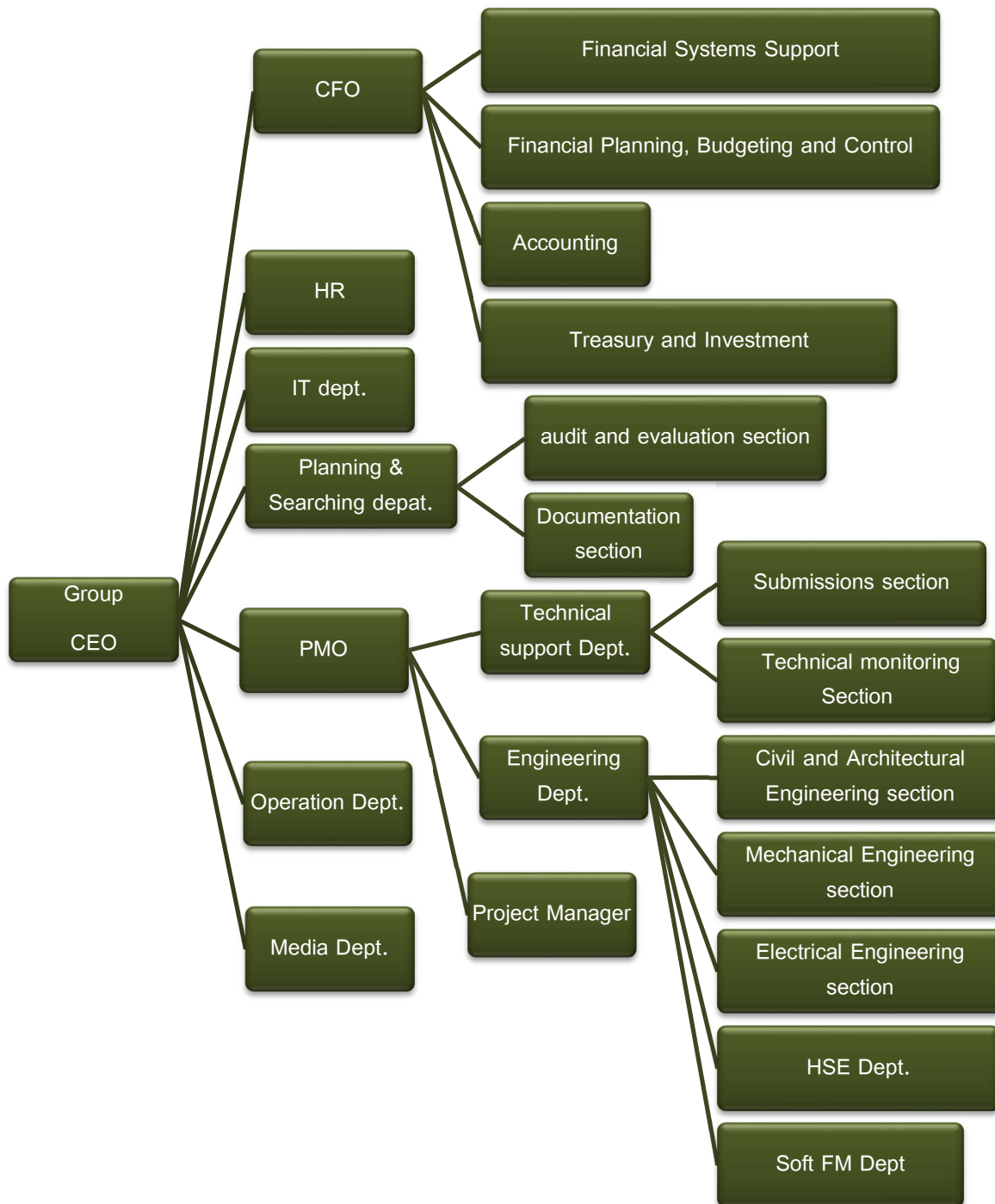


Figure 2 Organizational structure

1.6.2. Identify the practical and scientific bases, which adopted in developing the structure

The process of designing or developing the organizational structure is based on key organizational principles and foundations. It considers as a reference point for making decisions about multiple regulatory options. The bases are:

- Specialization – Departmentalization.
- Relative importance for Main functions
- Integration and Harmony

1.6.3. Identify the project's office model, most appropriate to manage the project, in addition to mentioning the reason.



Figure 3 Types of PMO

For this project, we obtain our PMO to be (directive). Such huge projects with large organizations who have many projects running simultaneously that need technical support in many and varied places.

Also, this type is characterized by providing high professionalism in project management, as each manager writes periodic reports for the office, which ensures a very high level of consistency in the work at the level of all projects.

2.1 Compliance, standards, and regulations

2.1.1. Design a check compliance model before delivering the project outputs.

Project Name:	Developing a medical center to be ECO in Riyadh city –Northern area	Owner:	MOH	Main Contractor:	Nesma Construction
Date		Day		Ref.	001
Compliance Model					
No.	Deliverables	Responsible	Compliant (Yes/No/NA)	Remarks	
1	List of lessons learned	PMO	Yes		
2	Project closure document	PMO	Yes		
3	Budget Closure memo	PMO	Yes		
4	Final project status reports	PMO	Yes		
5	Supply contracts and process	PMO	Yes		
6	Completed the development of buildings	Project Manager	Yes		
7	Engineering report.	PMO	NA		
8	Summary disposal equipment and material	PMO	Yes		

Table 14 Compliance model

2.1.2. Develop Check List model for the three stages of the project (Start– Plan– Achieve– Close)

Project checklists are a simple but essential tool, often developed and distributed by a Project Management Office PMO.

Its purpose is to assist project managers in following the project governance processes established in the organization, in this way standardizing the approach and assuring its quality.

Initiation stage		
No.	Description	Status
1	The scope of the project clear	
2	The project fundings are approved	
3	All the stakeholders have been identified	
4	Identify a sponsor	
5	Confirmed the project delivery expectations	
6	All the project benefits been captured and are reasonable	
7	Aware of the process of getting the project approved	
8	The business case cover assumptions, dependencies, and constraints	
9	Risk assessment be conducted	
10	The project team established & resources available to start the project	
11	The business cases to start work are approved	
12	Develop Project charter	

Table 15 checklist of the Initiation stage

Planning stage		
No.	Description	Status
1	Develop project management plan	
2	Develop work breakdown structure	
3	Create a baseline for the project plan	
4	Project team comfortable with the project schedule	
5	Defined the milestones for the project	
6	Plan to track project progress	
7	Collect Requirement	
8	Develop resource plan for the duration of the project	
9	Define the scope	
10	Plan cost management	
11	Plan quality management	
12	Plan risk management	
13	Plan procurement management	
14	Plan stakeholder engagement	
15	Assign the PMO and the main contractors	
16	Organized a project kick-off meeting	

Table 16 checklist of the planning stage

Execution stage		
No.	Description	Status
1	Signed off & finalized the business requirements	
2	The project team are aware of the project deliverables	
3	All infrastructure requirements are finalized and addressed	
4	The team are aware of roles and responsibilities for everyone	
5	The team are aware of the benefits and business value of the project	
6	Planned the resources required for the implementation	
7	The project team aware of the project deadlines	
8	Developed a plan to update the system documentation	
9	Develop a list of critical tasks	
10	Will there be a need for environment setup required?	
11	The project team have the required hardware and software	

Table 17 checklist of the execution stage

2.2. Power And Interest

2.2.1 Develop a stakeholder register and form groups for them.

2.2.2 Develop the two networks: (Strength/Interest) and (Influence/ Strength)

According to the PMBOK Guide, “A stakeholder is an individual, group, or organization who may affect, be affected by or perceive itself to be affected by a decision, activity, or outcome of a project.”

The project can have multiplied stakeholders (internal/external), and each one may have varied interests and Influence from the project. Which all must be registered in the Stakeholder Register.

project stakeholder register is a project-related document that includes all the information about the project's stakeholders Which may include but not be limited to:

Stakeholder Name, Title, Power (low/high), Influence (low/high), Current engagement level (Unaware, resistant, neutral, supportive, or leading), Desired engagement level (unaware, resistant, neutral, supportive, or leading), Interests (their interest and needs) and Concerns (their concerns and when do we start identifying stakeholders).

Some stakeholders are obvious (e.g., project sponsor, project team, project manager, suppliers, Government, Owners, and customers).

#	Stakeholder	Category	Influence	Interest	Expectations
1	Sponsor	Internal	Leading	Supportive	Finance and approval
2	Project Manager	Internal	Leading	Supportive	Initiate, plan, execute, M&C, and close the project
3	Ministry of Health	External	H	Supportive	Obtaining all the necessary documents for the project
4	Ministry of Finance	External	H	Neutral	Financing

5	National Energy Services Company (TARSHID)	External	M	Supportive	Approval on power-saving designs
6	Directorate of Health Affairs in Riyadh	External	H	Neutral	Approvals, Supervision, Handover
7	Ministry of Municipal and rural and housing	External	M	Unaware	Regulations and permits
8	Contractors and Suppliers	External	H	Neutral	Manpower, resources supplying, and execution
9	Project Consultant	External	H	Resistance	Approving and acceptance
10	NUPCO	External	H	Supportive	Procurement
11	Project Team	Internal	H	Supportive	Work on a project in different areas
12	CBAHI	External	H	Supportive	Approvals and handing over

Table 18 Risk Register

2.2.3 Use the logical diagrams for the register of the stakeholder.

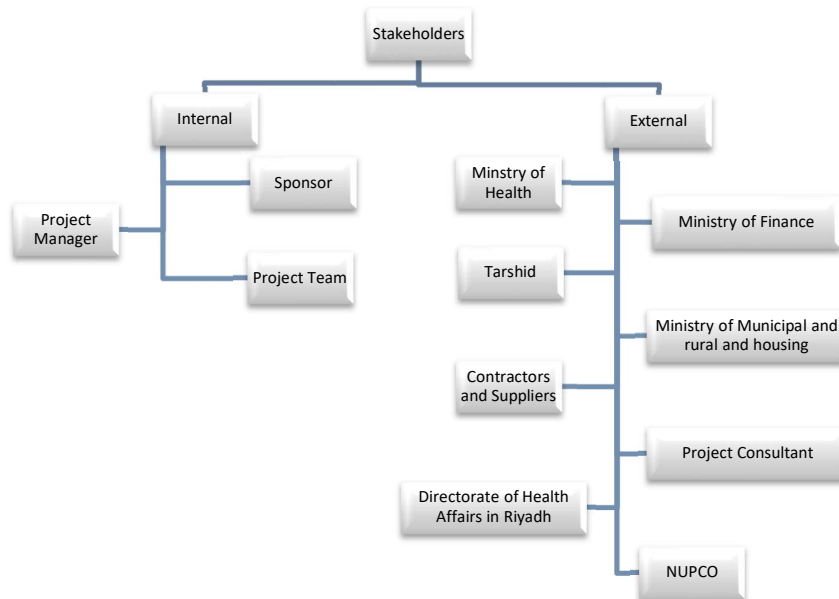


Figure 4 logical diagrams for the register of the stakeholder

2.3. Culture and Values

2.3.1. Identify the culture of the organization

The key to a successful organization is to have a culture based on a strongly held and widely shared set of beliefs that are supported by strategy and structure. When an organization has a strong culture, three things happen: Employees know how top management wants them to respond to any situation, employees believe that the expected response is the proper one, and employees know that they will be rewarded for demonstrating the organization's values.

Employers have a vital role in perpetuating a strong culture, starting with recruiting, and selecting applicants who will share the organization's beliefs and thrive in that culture,

developing orientation, training, and performance management programs that outline and reinforce the organization's core values and ensuring that appropriate rewards and recognition go to employees who truly embody the values.

If an organization's culture is going to improve the organization's overall performance, the culture must provide a strategic competitive advantage, and beliefs and values must be widely shared and firmly upheld. A strong culture can bring benefits such as enhanced trust and cooperation, fewer disagreements, and more efficient decision-making. Culture also provides an informal control mechanism, a strong sense of identification with the organization, and shared understanding among employees about what is important. Employees whose organizations have strongly defined cultures can also justify their behaviors at work because those behaviors fit the culture. See Toxic Workplace Cultures Hurt Workers and Company Profits.

2.3.2. Provide proposals of the organization's values that can be adopted.

The basic aspects that can give essential information on the general nature of the study are presented in this part. To this end, the background of the study, statement of the problem, objectives of the study, research questions, significance of the study, the scope of the study, limitation of the study, and organization of the study are covered.

The organization is a collectivity with a relatively identifiable boundary, a normative order, and ranks of authority, communications system, and membership coordinating systems. This collectivity exists on a relatively continuous basis in an environment and engages in activities that are usually related to set of goals (Hall, 1999). These activities have outcomes for organizational members, the organization itself, and for the society. The

essence of organizations revolves around the development of shared meanings, beliefs, values, and assumptions that guide and are reinforced by organizational behavior. These shared meanings, values, and assumptions represent the organizational culture

Organizational culture plays a significant role in the provision of goods and services. Therefore, studying its effects on decision-making has meaningful importance as it helps in realizing the extent to which organizational culture influences the efficiency and effectiveness of an organization. Every researcher should have something to contribute since a lot of time, money and above all human energy is exerted to do it.

3.1 Self-reflection and self-management

3.1.1 Specify “3” personal behaviors of the student that can influence the project.

3.1.2 Study such behaviors, identify their reasons, and how they can be eliminated

3.1.2.1. Inadequate assignment skills

Being the project manager, I assign much of the work to my team individuals. Here's the issue – group individuals are befuddled; they're not beyond any doubt of what is expected and when things are due.

Things to do:

Assigning tasks should reflect on the team members, their skills, their availability, whether the tasks would see them working to their strengths, or if there is an opportunity for their individual growth and development.

Be transparent about this process and let the team members know why you have made a particular selection when you delegate a task, delegate the authority as well to complete it, as this is helpful in their leadership journey, and let your team member

knows what is expected from them while being available to discuss the issues and provide them the support they need. (Coaching, n.d.)

3.1.2.2. Poor listener

Faulty listening is often responsible for mistakes, reduced effectiveness, and missed opportunities. There are numerous cases of failed projects where communication – the proper sending and receipt of information was listed as a prime contributor. (Goldstein, 2013)

Things to do:

Focus more on the person speaking. Make good eye contact and engage by asking specific questions, say something like "How would you improve on this approach?" or "What do you think we should tackle first?" This requires critical thinking, so they'll pay closer attention. And, if they've already lost, you'll be able to catch it in the initial conversation and pinpoint what needs clarification. (MCCORD, 2017)

3.1.2.3. Too many projects' meetings

Some project managers keep their team members in meeting prison, and often, the meetings are things that could have been managed in better ways. This behavior leads to a negative impact on the team members who are busy trying to complete their project work.

6.2 Study such behaviors, identify their reasons, and how they can be eliminated.

Things to do:

Eliminate recurring meetings when possible. Eliminate status meetings gather status information and share through status reports, cancel meetings without agenda. Always ask yourself: Is there another way to handle something that does not involve a lengthy meeting? A quick conference call. An email. Instant messenger. A quick stand-up meeting.

3.1.3 Conduct a self-professional assessment by using the SWOT model

S	Internal Strengths	W	Internal Weaknesses
1	Many health services costumers	1	Rising costs of building renovations
2	Reducing operating costs	2	High costs for Eco materials.
3	Many old medical centers	3	The complexity of operating tasks

O	External Opportunities	T	External Threats
1	Saudi Vision 2030	1	Availability of professional workers
2	The increasing demand of health services.	2	Raw materials increase costs
3	Diversity of new projects	3	Communication with concerned Government sectors.

Figure 5 SWOT analysis

3.2 Personal integrity and reliability

3.2.1. Provide “3” behaviors that contradict moral integrity.

3.2.2. Analyze the financial, social, and technical influence, if any, of such behaviors on the works of the project and the relationships.

3.2.2.1. Team Member Violation

Bad behaviors of the team member in dealing with work could affect the workflow and the productivity of the assigned tasks, which leads to uncompleted duties or non-compliance tasks, tasks could be a due date to complete the project.

In such encounters, an internal policy should be developed to report such immoral actions, the incoming reports will be investigated by a committee to study these

communications, and the results of the study of the communications are submitted to the stakeholders to review it and take the required action towards the violator.

3.2.2.2. Professional Integrity

Professional integrity affects several aspects of the project, including the financial and technical aspect, in which the project manager may have some personal interests in awarding contracts to suppliers that have a direct or indirect relationship with him for personal financial profit and overriding them over the quality of materials used in the project. Thus, this affects the final output of the project and may result in a distortion of the company's reputation in the labor market and additional financial costs to correct what has been accomplished from previous work.

Therefore, a special committee must be formed to review the offers submitted by suppliers, with a limit of three offers, and the conditions and technical specifications of the materials are verified, and then the contract is awarded to the best supplier that meets the technical conditions at the appropriate price, which does not exceed the allocated budget.

3.2.2.3. Failure to comply with the statutory requirements

Disappointment to comply with the statutory necessities leads to the suspension of the company's projects and thus the disappointment to follow the time plan for the completion of the project and to weaken the company's validity towards its clients. In this manner, an independent division must be allocated to guarantee that all the statutory prerequisites of the significant administrative authorities are completed to maintain a strategic distance from any sudden stoppage of work since of noncompliance with them.

3.3. Personal communication

3.3.1. Prepare the register of the stakeholder.

A stakeholder register is a document that describes who (individual or group) is affected by a project and their effect and impact on the project.

No.	Stakeholders	Channels of & personal communication	No.	Stakeholders	Channels of & personal communication
1	Sponsor	- Physical & Virtual meetings - Phone - Emails	4	NUPCO	- Authorization letters. - Physical and Virtual Meetings. - Phone: +966 9200 18184
2	Project Manager	- Physical & Virtual meetings - Phone - Emails	5	CBAHI	- Virtual Meetings. - Phone: 920012512 - Email: cbahi@cbahi.gov.sa
3	Ministry of Health	- Authorization letters. - Physical and Virtual Meetings. - Email: 937@moh.gov.sa - Phone: 937	6	Ministry of municipality and accommodation	- Authorization letters. - Physical and Virtual Meetings. - Email: support@balady.gov.sa - Phone: 940

Table 19 shows personal communication with stakeholders and communication channels

3.3.2. Identify the personal communication and the effective communication

Communication is one of the main pillars of a standing business, and all organized activity worldwide relies on the process of business communication. This could be anything from managerial communication to technical communication with suppliers. (DINARDI, 2019)

Communication streamlines the information that helps to transmit ideas and thoughts between business members to gain the full picture of the objectives, communication is divided into two categories, the first one is formal communication which is meeting whether is a physical or a virtual document by minutes of meeting MOM.

While the informal category relies on emails and phones, Emails must be with a direct subject line, clear body in addition to closing sentences to determine the requirements of the email and expected action from the team members. While the phone conversations must be conducted in a quiet space with clear sound stating the requirements such as clarity of specific matter or feedback regarding the project's tasks.

Effective communication is defined as communication between two or more persons in which the intended message is – properly encoded, delivered through the appropriate channel, received, properly decoded, and understood by the recipient(s).

In a business organization, communication is said to be successful when the data or information shared among the team members successfully contributes towards the organization's goals. (Effective Communication, n.d.)

The successful delivery of the message depends on several influences, including clarity and transparency in the delivery of the message, commitment, personal skills of the sender, and its understanding through the receiver.

3.3.3. Identify the shapes, models, and channels of personal communication.

In reference to (table 3.2) which clarify stakeholder and the channels of communication among team members, using these communication channels will have a great impact towards achieving successful communications, a furthermore to facilitate effective communication there are many communication models to reduce time waste and failure of communications as follow:

1. Transmitter–receiver model according to Shannon.
2. Weaver, the 4–ear model according to Schulz von Thun.
3. Iceberg model according to Watzlawick.
4. Berol’s SMCR model of communication.

David K. Berlo's Model of Communication focuses on four elements:

Source (S), Message (M), Channel (C), and the Receiver (R). Under each of these are different factors that affect the communication process.

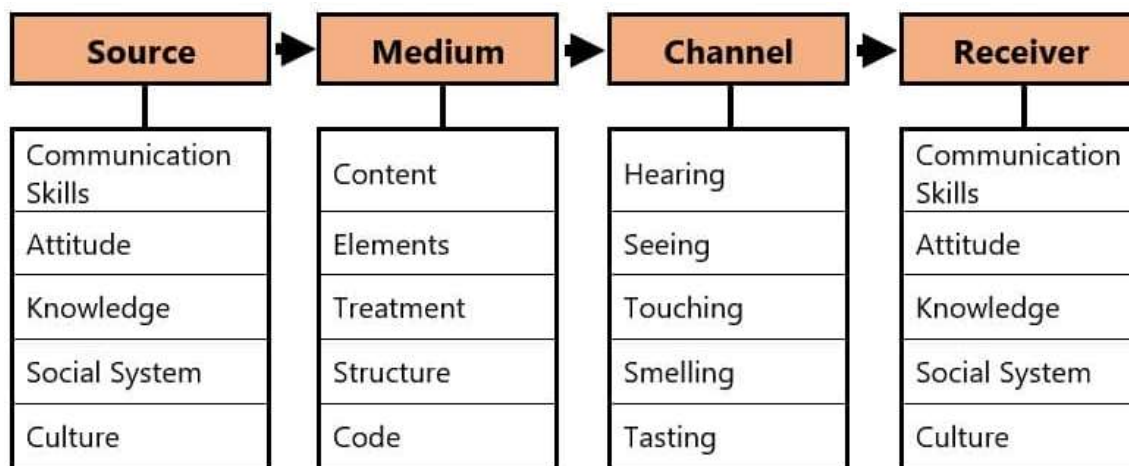


Figure 6 David K. Berlo's Model of Communication

- 1– The **Source (S)** is the **origin of the message**. Also called the speaker, sender, or encoder.
- 2– The **Medium (M)**: is the **Message** or is the **idea, opinion, emotion, or information** conveyed by the speaker.
- 3– The **Channel (C)** is the medium through which the message is delivered from the source to the receiver.
- 4– The **Receiver (R)** is the one who receives, understands, analyzes, and interprets the message. Also known as the listener, audience, or decoder.

3.3.4. Establish the communication matrix.

A communication matrix is a methodology that documents and summarizes the communication plan for the project. To stay effective and in line with the goal of the project, the communication matrix should be accessible to all stakeholders and updated throughout the project.

Information	Method of communication	Sender	Receiver	Timing of communications
Documents (draft)	Email and share drive	Documents controller	Sustainable project manager	Monthly
Documents approval	Email and share drive and meeting	Project teams leaders	Sustainable project manager	Monthly
Time usage hours	Email	Project manager and project team	Environment team	Weekly
Project status reports	Phone or meeting	Project manager	Overseeing VP	Monthly
Team status change	Phone or meeting	Team Members	Project manager	Monthly
Expense approval	Email or meeting	Project manager	Overseeing VP	Monthly

Work requests	Email or fax	Project manager	Vendors	Daily
Request of review	Email or meeting	Project manager or project team	Project team	Daily

Table 20 Communication Matrix

3.3.5. Provide 3 wrong scenarios of communication.

No business runs perfectly, therefore, the methods people communicate and work through obstacles can be a sign of a company's overall well-being. Healthy communication in the workplace is critical for driving results while also creating a positive work environment. However, wrong communication can begin to cripple an organization and have a negative impact on the entire staff. Learning to detect poor communication behavior and develop them with healthy ones will have a positive effect on productivity and even financial success

3.3.5.1. Project Intimidation

Intimidation tactics are a form of negative communication that quickly creates a toxic and often fear-filled project environment. A project manager who bullies his team members into getting things done is likely to experience high turnover rates. It can also occur between team members competing for the same promotion. This unnerving type of behavior is often in the form of direct verbal language or physically threatening actions. Examples of intimidation include loud speech, physically taking over the workspace, or standing in close physical proximity to cause discomfort.

3.3.5.2. Listening Failure

There are times to forge a path forward in business, but leaders and employees who operate as disconnected individuals and fail to listen to those around them are engaging in poor communications. In an office environment, failing to listen to co-workers is also problematic. It creates an ecosystem of disregard for individual feelings and devalues personal relationships in the workplace. For example, if employees express concern over an issue they see in the workplace, but the manager doesn't evaluate their inputs of the problem in greater detail or investigate the issue, the problem may go ignored and the employees will likely feel that their input does not matter. Workers want to feel that their ideas have value and know that they are recognized as valuable contributors to the corporate mission.

3.3.5.3. The Game of Blame

Another shape of wrong communication is closely attached to ethics and responsibility. Failing in owning a mistake or to accept the responsibility for a missed deadline shows a lack of responsibility. Yet, blaming others is counterproductive and does not work towards a solution for the common good. Learning to accept responsibility and move forward is one positive solution. However, those who continue to blame others for their mistakes will damage working relationships and may find themselves ostracized

3.3.6. Develop and prepare stakeholder assessment matrix

Stakeholders' assessments:

C: Current, D: Desired

No.	Stakeholders	Unaware	Resistant	Neutral	Supportive	Leading
1	Sponsor					C&D
2	Project manager					C&D
3	Ministry of Health				C&D	
4	NUPCO				C&D	
5	CBAHI				C&D	
6	Ministry of municipality and accommodation	C			D	
7	Consultant		C		D	
8	Contractors	C			D	

Table 21 Stakeholders' assessments

4.1. Leadership:

4.1.1. Describe and identify the leadership model, which is preferred to the project leadership.

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

4.1.3. Provide “5” proposals for the motivation methods that are compatible with the nature of the project.

The health field has a greater need for leadership than any other field. health projects are large and technically complex, and they involve a combination of specialized skills. Thus, the teams are not only large but are also multi-disciplinary and the members are from several different disciplines, and this makes leadership important in this field.

Following are some examples of leadership styles:

1) Autocratic leadership

- 2) Democratic leadership
- 3) Transformational leadership
- 4) Transactional leadership

Autocratic leaders tell others what to do and expect them to comply obediently. Although it may work in certain circumstances in the short run, but this is not effective in the long run.

Democratic leaders are those who make their decisions final only after consulting with the people they are leading based on the consensus. This style claims that popular decisions are not always the best that can be taken, so they will not produce the desired outcomes.

Transformational leaders on the other hand empower their team members to develop their own decisions based on the information provided to them and exert little control over the decision-making process. This may be a time-consuming process but works well when the team members are very committed to the best interest of the organization.

Transactional leaders are result-based leaders who ask their team members to focus only on the goals at hand. These leaders also believe in rewarding subordinates. Opponents of this leadership style say that this is too narrowly focused and often centered on the wrong concerns.

The key to being a successful leader is to have the right behavior, skills, and actions, and less on personal characteristics. To be effective, leaders must exhibit the ability to identify and apply the optimal leadership style for any given situation rather than relying on predefined personalities. The leader should be able to adapt to change and sometimes contradictory circumstances in which they need to show versatility and flexibility.

All transformational factors which are charisma, inspirational motivation, intellectual stimulation, and individualized consideration, and transactional factors which are contingent reward, management-by-exception, active, and passiveness was of great importance for the effectiveness of any leadership.

Inspirational motivation, idealized attributes, intellectual stimulation, idealized behaviors, contingent rewards, and individualized considerations are well-perceived leadership elements among our company.

As a company, we leverage transformational leadership to ensure greater employee satisfaction and performance.

In addition, below are some key points that the leader should do to motivate the team members:

- The team should be treated fairly by the leader and with a good attitude.
- Leader should recognize the accomplishments of his team members.
- Efforts by the leader to challenge the team to increase their expertise and capabilities.
- Leader should communicate to the team the big picture and what the team is expected to accomplish.

4.2 Teamwork

4.2.1 design RACI model for 3 administrative measures of the project.

RACI Model							
Project Deliverable	Executive Sponsor	Project Sponsor	Project Manager	Functional Lead	SME (Subject Matter Expert)	architect	Team Member
Initiate Phase Activities							
• Submit Project Request	A/C	R/A	R/A	A/C	C		
• Request Review by PMO			R	c			
• Research Solution	I	C	R/A	A/C	C		
• Develop Business Case	I	A/C/I	R/A	C	C		
Plan Phase Activities							
• Create Project Charter	C	C	R/A	C	C		
• Create Schedule	I	I	R/A	C	C		C
• Review Plans		R	C	I		A	
• Create Additional	I	I	R/A				I

Plans as required							
Execute Phase Activities							
• Build Deliverables	C/I	C/I		R/A	R/A		R/A
• Create Status Report	I	I	R/A	R/A	R/A		
Control Phase Activities							
• Perform Change Management		C	R	A	A		A
Close Phase Activities							
• Create Lessons Learned	C	C	R/A	C	C		C
• Estimated Budget		A	C	R	I		
• Final Review		R	A	C	I		
• Create Project Closure Report	I	I	R/A	I	I		I

Table 22RACI model

KEY	R = Responsible
	A = Accountable
	C = Consulted
	I = Informed

Table 23RACI model Key

4.3. Conflicts and Crisis

4.3.1. Identify the conflict and crisis

Social conflict is the struggle for agency or power in society. Social conflict occurs when two or more people oppose each other in social interaction, and each exerts social power with reciprocity to achieve incompatible goals but prevents the other from attaining their own. It is a social relationship in which action is intentionally oriented to carry out the actor's own will despite the resistance of others

Conflict theory emphasizes interests, rather than norms and values, in conflict. The pursuit of interests generates various types of conflict, which is thus seen as a normal aspect of social life, rather than an abnormal occurrence. Competition over resources is often the cause of conflict. The theory has three tenets

Society is composed of different groups, which compete for resources

Societies may portray a sense of co-operation, but there is a continual power struggle between social groups as they pursue their own interests. Within societies, certain groups control specific resources and means of production

Social groups will use resources to their own advantage in the pursuit of their goals and often take advantage of those who lack control over resources. As a result, many dominated groups will struggle with other groups to gain control. Most the time, the groups with the most resources will gain or maintain power since they have the resources to support their power. The idea that those who have control will maintain control is known as the Matthew effect

One branch of conflict theory is critical criminology, a term based upon the view that the fundamental cause of crime is oppression, which results from social and economic forces operating within a given society. The perspective stems from the German philosopher Karl Marx, who viewed the justice system and the laws to favor the rich and the powerful in a society and for the poor to be punished far more severely for much smaller crimes

4.3.2. Provide 3 expected scenarios of the conflict's events in the project.

conflict resolution algorithm, that, can, provide, automated separation assurance for the next generation air traffic control system. The algorithm generates resolution trajectories that can be sent to the aircraft from a ground-based system via data link. The algorithm can also be installed on board aircraft. It handles the complete spectrum of conflict types encountered in en, route airspace, including ascents and descents to arrival fixes. The resolution trajectories consist of amendments, and changes to flight plans (route changes), altitude clearances, and descent speed profiles. The trajectories are similar to those, that controllers customarily issue to pilots, in resolving, conflicts. The algorithm generates 4D resolution trajectories by evaluating, successive alternative trial resolution maneuvers.

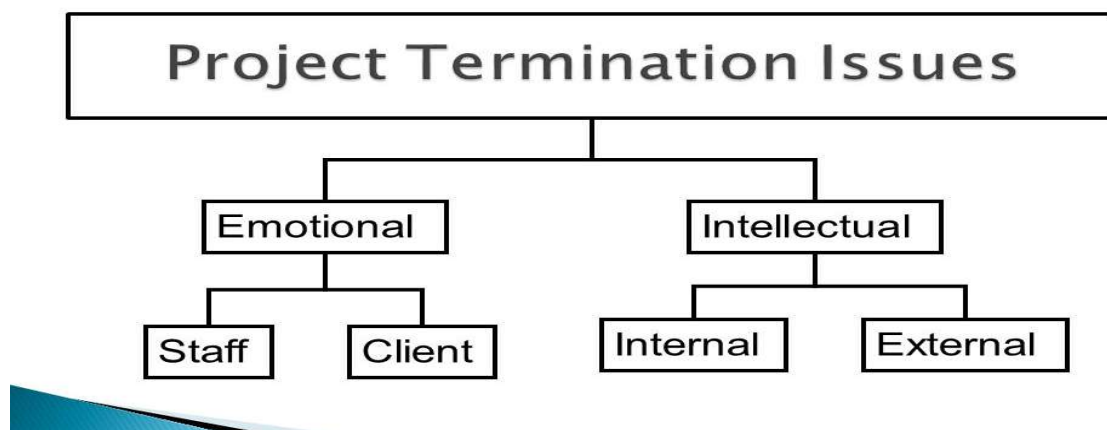


Figure 7 Project termination issues

4.3.3. Set the optimal strategies to deal with each conflict, and specify the reason for preference

It's important to remember that there are many strategies we can use in conflict situations, but each of us tends to habitually use some strategies more often than others. To resolve a conflict most effectively, we should use the strategy that is most appropriate for that conflict situation. However, that strategy might not be the strategy that we habitually use

How often do we make the mistake that Shaun Williams (celebrating in the photo above) made on Sunday, i.e., responding to a conflict situation the way we feel like responding rather than the way we should respond? The incident occurred at the end of a very close game—a time when his team could not afford any penalties. When tempers flared between one of Williams' teammates and an opponent, Williams ran across the field and began to fight. Predictably, his team was penalized, and he was ejected. The penalty was very unfortunate as his team, the Giants, narrowly lost the game. The loss brought their season to an end. Williams' poor choice of a conflict management strategy was a giant blunder

To manage conflict well, we must remember that there are several conflict management strategies. The key to managing conflict well is choosing and executing the strategy that best fits the situation

Conflict Management Strategies

There is a menu of strategies we can choose from when in conflict situations

Forcing – using formal authority or other power that you possess to satisfy your concerns without regard to the concerns of the party that you conflict with Accommodating – allowing the other party to satisfy their concerns while neglecting your own.

Avoiding – not paying attention to the conflict and not taking any action to resolve it

Compromising – attempting to resolve a conflict by identifying a solution that is partially satisfactory to both parties, but completely satisfactory to neither.

Collaborating – cooperating with the other party to understand their concerns and expressing your own concerns in an effort to find a mutually and completely satisfactory solution (win-win)

Research on conflict management styles has found that each of us tends to use one or two of the above five strategies more than the others. For instance, some people predominantly use collaborating when in interpersonal conflict situations. In other words, although there are five different ways to handle conflicts, such a person is more likely to collaborate than they are to force, accommodate, avoid, or compromise. There are many advantages to using a collaborating strategy to handle interpersonal conflict situations. Collaborating with the other party promotes creative problem solving, and it's a way of fostering mutual respect and rapport. However, collaborating takes time, and many conflict situations are either very urgent or too trivial to justify the time it takes to collaborate. There are many conflict situations that should be handled with one of the other four conflict management strategies rather than collaboration. Managers who are very skilled at conflict management are able to (a) understand interpersonal conflict situations and (b) use the appropriate conflict management strategy for each situation

4.3.4. Develop root Cause Analysis

Root cause analysis (RCA) was developed by manufacturers in the 1950s to better understand industrial events. The goal is, as the title suggests, to identify the primary, or “root,” cause of the problem under analysis. One of the first users of this technique was Toyota, who famously used the “5 whys” technique.

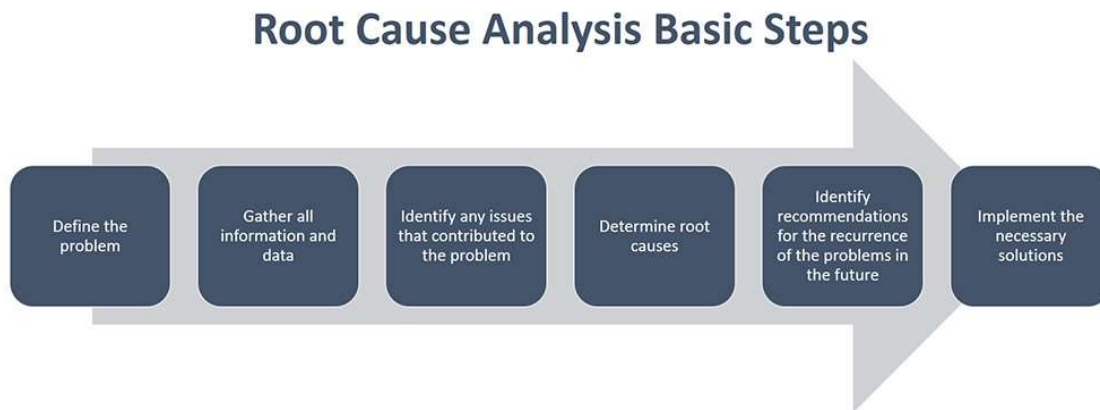


Figure 8 Root Cause Analysis Basic Steps

By asking “why” at least five times during the investigation of a breakdown or undesired event, quality personnel are forced to drill down layer by layer to understand progressively more fundamental causes

Although such charts are usually read from left to right, they are often created from right to left, starting with the event and using logic and time information to add relevant causal factors. Note also that the blood bank, hospital engineering, preoperative nursing, anesthesia, and surgery are all involved in this particular event, underscoring the multidisciplinary nature of properly performed RCAs.

Root cause analysis RCA is a process or technique used to identify the most fundamental reason or contributing causal factor as to why a problem occurred. It is a

retrospective assessment, focused on finding vulnerabilities in the system and developing countermeasures. The process of RCA addresses four basic questions. 1. What happened? 2. Why did it happen? 3. What are the contributing causal factors? 4. What can we do to prevent it from happening again? The emphasis must be on developing effective countermeasures. The RCA team must be interdisciplinary in nature, involving experts from the front line who are closest to the safety process and who have the best ideas to solve the problem. RCA is a process that continually digs deeper by asking, “Why, why, why?” at each level of an event. It is a process that identifies changes that need to be made to systems, is as impartial as possible, and moves beyond blame. The RCA process must consider human factors and other factors, related processes, and systems, and analyze the underlying cause-and-effect relationships. Relevant literature must be reviewed during the process and internal consistency must be achieved. The RCA must identify risks and their potential contributions to safety errors and must determine potential improvements in processes or systems. To be credible, an RCA must include the participation and support of the leadership of the organization and those most closely involved in the safety process and systems.

Root Cause Analysis (RCA) Team Process

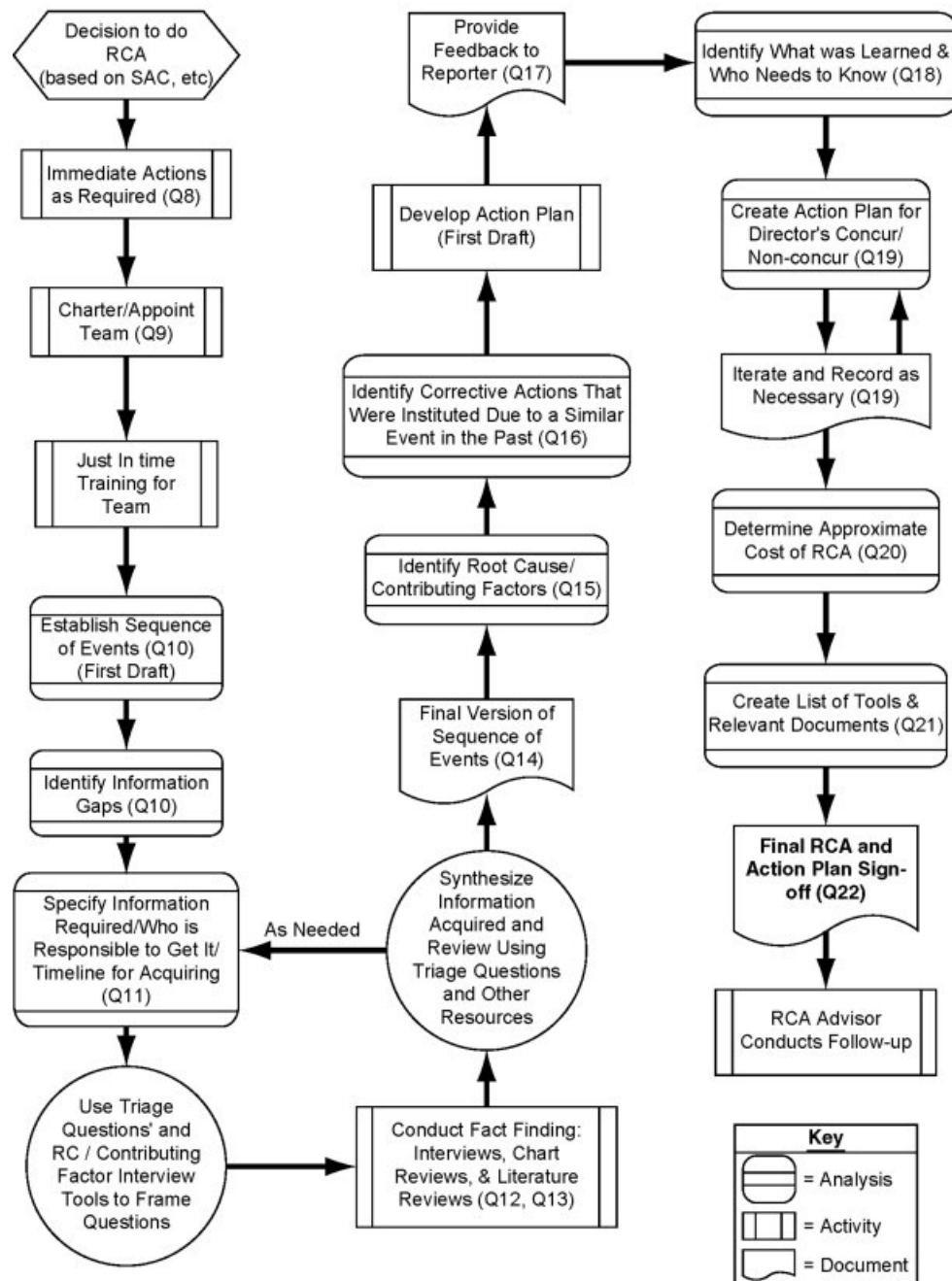


Figure 9 Team process

5.1. Resourcefulness

5.1.1 distribute the human resources on the functions.

Resourcefulness is defined as the ability and creativity to cope with difficulties.

The key to being resourceful is to ask the right questions in a positive way.

This is done by adopting an attitude of the art of the possible: extreme positive thinking.

Becoming resourceful is a journey for you, your team, and even your organization.

NO.	Functions	Resources	Time per week
1.1	Assigning a team to the inventory of the Final Project (Developing a medical center to be ECO)	3	1
1.2	Communicate with involved authorities	3	2
1.3	Get the policies of the environment & all necessary documents	3	2
1.4	get the approvals from the sponsor to provide the project charter	3	1
2.1	Studying the required jobs	4	1
2.2	Recruiting the work teams	4	2
2.3	Rehabilitation the staff	6	4
3.1	Assigning a team to study the market	4	1
3.2	make plan for delivery of materials and store it	4	1
3.3	Purchase the materials	3	1
4.1	Assign the PMO & the main contractor	2	1
4.2	Approval of designs and work plan	4	1

4.3	Kickoff the executing	300	35
4.4	furnishing work	40	12
4.5	Hand over all deliverables	3	2

Table 24 distribute the human resources on the functions

We'll be able that we're resourceful. instead of giving up when coming across an issue, we're unprepared to deal with, we become determined to find a solution.

5.1.2 Analyze the influence of conducting crashing and tracking process

Fast-tracking and Crashing techniques are used in project management and all these techniques have the same importance in the compression of the project schedule as per applicability and situations.

Fast Tracking:

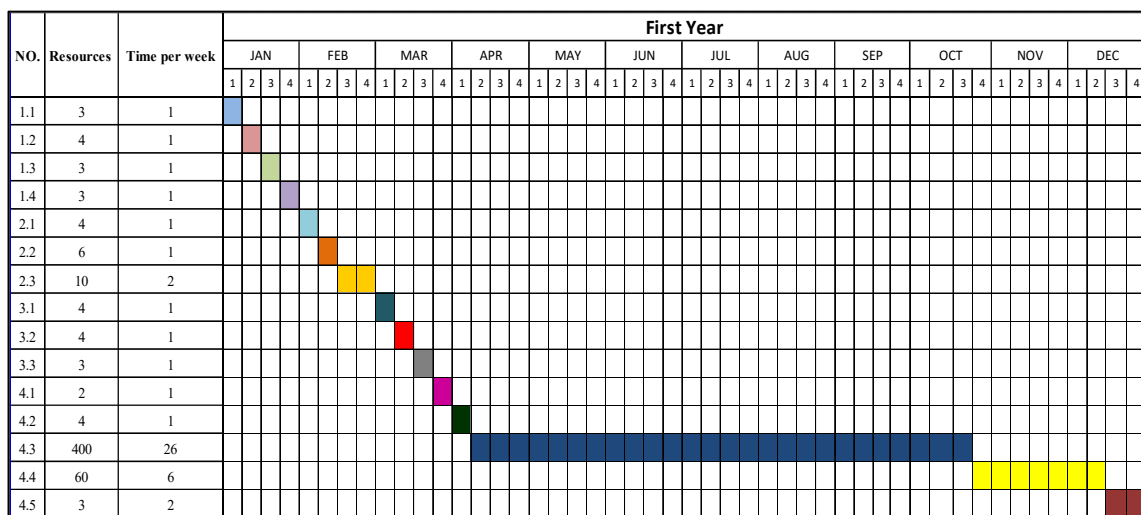
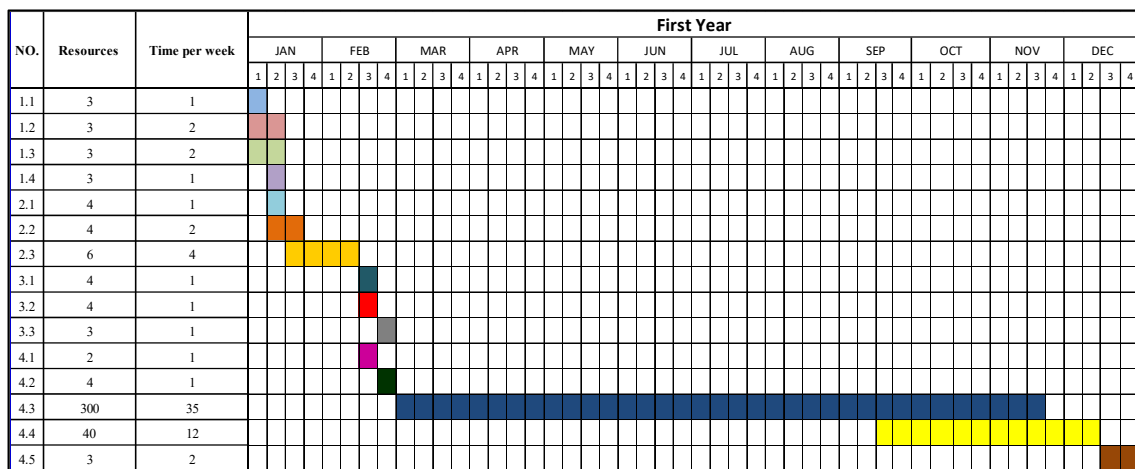
In this technique, the project manager makes the project activities in parallel instead of series and try to achieve the project timeline duration. However, risks are involved in the fast-tracking technique because parallel activities might be:

- 1- Increase the reworking some time.
- 2- Works only when the activities are independent of each other.
- 3- No change in cost but an increased risk.

Crashing:

Crashing is a technique which use for meeting the deadline of the project. This technique is based on increasing the resources in some phases to complete the work earlier or on time.

However, risks are involved in the crashing technique might be:



5.2. Negotiations

5.2.1. Develop general rules for the negotiation process.

The major components are a detailed plan of all project requirements, as well as a negotiation agreement to avoid any potential conflicts of interest both internally and outside.

In addition, we will successfully lead the two parties' matching concepts.

Internal negotiations are a part of gathering all departmental requirements, discussing the project's values, and completing it by resolving all points.

External negotiations will necessitate the participation of other entities, and our relationship value and project strategies will provide us with the opportunity to explore future requirements and match interests to a perfect negotiation.



Figure 12 Negotiation process

5.2.2. Prepare 2 negotiation plans

First, we've decided to apply the BATNA (Best alternative to a negotiated agreement) to our agreement to make our negotiations much more powerful, and it will serve as a framework for our strategy.

Second, we focus on adding our project aim to persuade of our project's conclusion, and we explain the worth of the result in terms of bringing sustainability to our buildings during our strategy discussion. We also demonstrated our dedication to this initiative by providing scientific evidence of the cost-effectiveness of implementing our vision's sustainability.